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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with
 a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
 serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing Battery Terminal

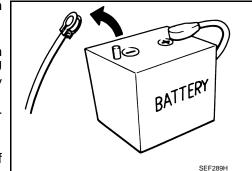
 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
 NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
 NOTE:

The removal of 12V battery may cause a DTC detection error.

Precautions For Harness Repair

INFOID:0000000011285901

INFOID:0000000011519311

ITS communication uses a twisted pair line. Be careful when repairing it.

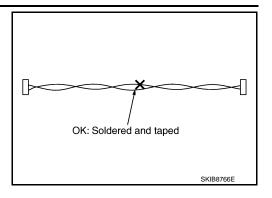
PRECAUTIONS

< PRECAUTION >

[ADAS CONTROL UNIT]

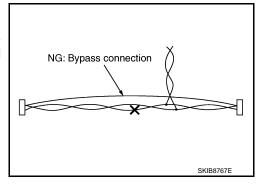
Solder the repaired area and wrap tape around the soldered area.
 NOTE:

A fray of twisted lines must be within 110 mm (4.33 in).



Bypass connection is never allowed at the repaired area.
 NOTE:

Bypass connection may cause ITS communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



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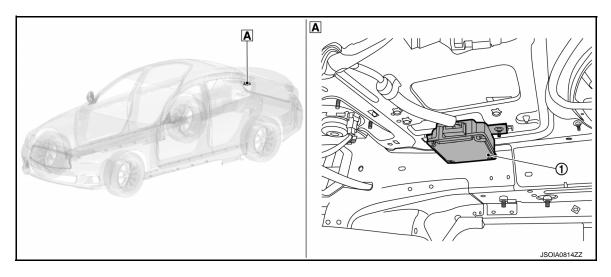
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011285902



Trunk side of rear parcel shelf

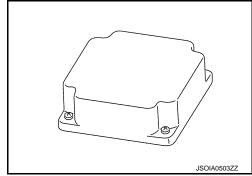
No.	Component	Description
1	ADAS control unit	 Controls each system, based on CAN communication, ITS communication, and chassis communication signals received from each control unit Transmits signals necessary for control between CAN communication, ITS communication, and Chassis communication

ADAS Control Unit

INFOID:0000000011285903

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- ADAS control unit is installed at trunk side of the parcel shelf.
- Communicates with each control unit via CAN communication/ITS communication/Chassis communication.
- ADAS control unit included gateway function, and necessary for system control signals are transmitted to each control unit between CAN communication and ITS communication by the ADAS control unit.
- ADAS control unit controls the each system, based on ITS communication signal, CAN communication signal, and chassis communication signal from each control unit.



SYSTEM

System Description

INFOID:0000000011285904

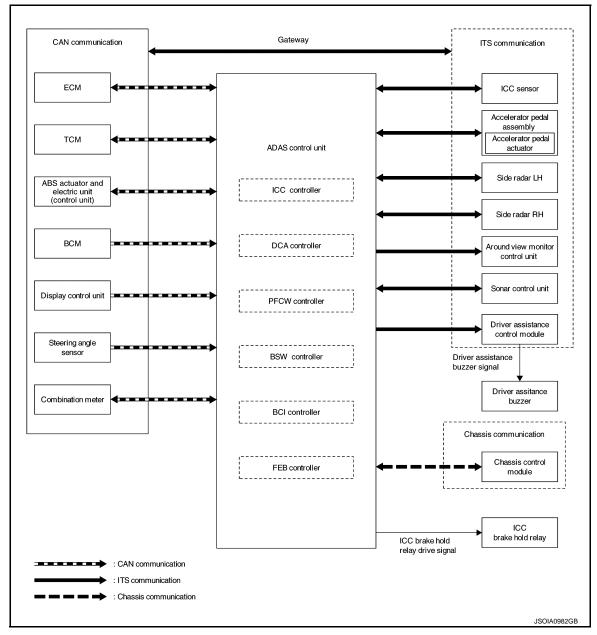
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SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

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Transmit unit		Signal name	e	Description
	Closed throttle position signal F		on signal	Receives idle position state (ON/OFF)
		Accelerator pedal po	sition signal	Receives accelerator pedal position (angle)
		ICC prohibition signa	al	Receives an operable/inoperable state of the ICC system
		Engine speed signal		Receives engine speed
			MAIN switch signal	
			SET/COAST switch signal	
ECM	CAN com- munica-		CANCEL switch sig- nal	Receives the operational state of the ICC steering switch
	tion	ICC steering switch signal	RESUME/ACCEL- ERATE switch signal	
			DISTANCE switch signal	
			Dynamic driver as- sistance switch sig- nal	
		Stop lamp switch sig	nal	Receives an operational state of the brake pedal
		Brake pedal position switch signal		Receives an operational state of the brake pedal
		Input speed signal		Receives the number of revolutions of input shaft
TOM	CAN com-		n signal	Receives a current gear position
TCM	munica- tion	Shift position signal		Receives a select lever position
		Output shaft revolution	on signal	Receives the number of revolutions of output shaft
		ABS malfunction sign	nal	Receives a malfunction state of ABS
ABS actuator		ABS operation signa	I	Receives an operational state of ABS
		ABS warning lamp s	ignal	Receives an ON/OFF state of ABS warning lamp
		TCS malfunction sign	nal	Receives a malfunction state of TCS
	0.4.1	TCS operation signa	I	Receives an operational state of TCS
	CAN com- munica-	VDC OFF switch sig	nal	Receives an ON/OFF state of VDC
(control unit)	tion	VDC malfunction sig	nal	Receives a malfunction state of VDC
		VDC operation signa	al	Receives an operational state of VDC
		Vehicle speed signal	(ABS)	Receives wheel speeds of four wheels
		Yaw rate signal		Receives yaw rate acting on the vehicle
		Side G sensor signa	l	Receives lateral G acting on the vehicle
		Stop lamp switch signal		Receives an operational state of the brake pedal
Combination meter	CAN com- munica- tion	Parking brake switch signal		Receives an operational state of the parking brake
	CAN com- munica- tion	Front wiper request s	signal	Receives an operational state of front wiper(s)
ВСМ		Turn indicator signal		Receives an operational state of the turn signal lamp and the hazard lamp
	30	Dimmer signal		Receives ON/OFF state of dimmer signal
		Steering angle senso	or malfunction signal	Receives a malfunction state of steering angle sensor
Steering angle sensor	CAN com- munica- tion	Steering angle senso	or signal	Receives the number of revolutions, turning direction of the steering wheel
	1011	Steering angle speed	d signal	Receives the turning angle speed of the steering whee

SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Transmit unit		Signal name	Description
Display control unit	CAN com- munica- tion	System selection signal	Receives a selection state of each item in "Driving Aids" selected with the integral switch Receives a selection state of BCI in "Camera" selected with the integral switch
ICC sensor	ITS com- munica- tion	ICC sensor signal	Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle
Accelerator pedal actuator	ITS com- munica- tion	Accelerator pedal actuator operation status signal	Receives an operational state of accelerator pedal actuator
Side radar LH, RH	ITS com- munica- tion	Vehicle detection signal	Receives vehicle detection condition of detection zone
Sonar control unit	ITS com- munica- tion	Rear object detection signal	Receives objects detection result of rear area behind vehicle
Chassis control module	Chassis communi- cation	Drive mode signal	Receives on operational state of the drive mode select switch

Output Signal Item

Reception unit	Signal name		Description
ECM	CAN commu- nication	ICC operation signal	Transmits an ICC operation signal necessary for intelligent cruise control
ABS actuator and electric unit (via chas- sis control module)	CAN communication	Brake fluid pressure control signal	Transmits a brake fluid pressure control signal to activates the brake

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[ADAS CONTROL UNIT]

Reception unit		Signal na	me	Description	
			Vehicle ahead detection indicator signal		
			Set vehicle speed indi- cator signal		
			Set distance indicator signal		
			SET switch indicator signal		
			MAIN switch indicator signal		
			DCA system display signal		
Combination	CAN commu-	Meter display signal	FEB system display signal	Transmits a signal to display a state of the system of the information display	
meter	nication		PFCW system display signal		
			LDW system display signal		
			LDP system display signal		
			BSW system display signal		
			Blind Spot Intervention system display signal		
			BCI system display signal		
		FEB warning la	mp signal	Transmits a signal to turn ON the lamp Transmits an ON/OFF state of the Forward Emergency Brake Transmits a signal to turn ON the lamp	
ICC sensor	ITS communication	Vehicle speed s	ignal	Transmits a vehicle speed calculated by the ADAS control unit	
100 301301		Steering angle	sensor signal	Transmits a steering angle sensor signal received from the steering angle sensor	
Accelerator	ITS commu-	Accelerator ped	lal position signal	Transmits an accelerator pedal angle calculated by the ADAS control unit	
pedal actuator	nication	Accelerator ped signal	lal feedback force control	Transmits a target actuation force value calculated b the ADAS control unit	
Side radar LH, RH		Vehicle speed s	ignal	Transmits a vehicle speed calculated by the ADAS control unit	
	ITS commu- nication	Blind Spot Warr tion indicator sig	ning/Blind Spot Interven- gnal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning Blind Spot Intervention indicator	
		Blind Spot Warr tion indicator di	ning/Blind Spot Interven- mmer signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator	
Sonar control unit	ITS commu- nication	Buzzer drive sig	gnal	Transmits a buzzer drive signal to activate buzzer	
Around view monitor control unit	ITS commu- nication	BCI warning sig	ınal	Transmits a BCI warning signal to indicate a yellow/ red frame on the upper display	

SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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Reception unit		Signal name	Description
Driver assis- tance buzzer control module	ITS commu- nication	Driver assistance buzzer signal	Transmits a driver assistance buzzer signal to activates the buzzer
ICC brake hold relay	ICC brake hole	d relay drive signal	Activates the brake hold relay and turns ON the stop lamp

DESCRIPTION

 ADAS^{*} control unit controls the following systems, based on ITS communication signal, CAN communication signal, and chassis communication signal from each control unit.
 NOTE:

- *: Advanced Driver Assistance Systems
- Intelligent Cruise Control (ICC)
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

System	Reference
Intelligent Cruise Control (ICC)	CCS-12, "System Description"
Distance Control Assist (DCA)	DAS-171, "DCA : System Description"
Forward Emergency Braking (FEB)	BRC-187, "System Description"
Predictive Forward Collision Warning (PFCW)	DAS-175, "PFCW : System Description"
Blind Spot Warning (BSW)	DAS-182, "BSW : System Description"
Back-up Collision Intervention (BCI)	DAS-189, "BCI : System Description"

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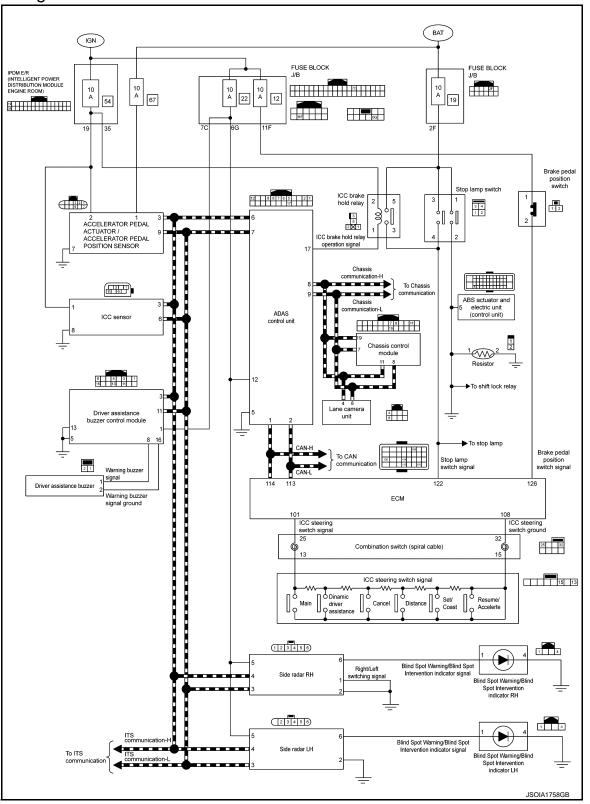
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Circuit Diagram

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Fail-safe (ADAS Control Unit)

INFOID:0000000011285906

If a malfunction occurs in each system, ADAS control unit cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

SYSTEM

[ADAS CONTROL UNIT]

System	Buzzer	Warning lamp/Warning dis- play	Description
Vehicle-to-vehicle distance control mode	High- pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High- pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High- pitched tone	FEB warning lamp Warning systems indicator (Forward position: Yellow)	Cancel
Predictive Forward Collision Warning (PFCW)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Distance Control Assist (DCA)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Blind Spot Warning (BSW)	_	Warning systems indicator (Blind spot position: Yellow)	Cancel
Back-up Collision Intervention (BCI)	High- pitched tone	BCI system warning	Cancel

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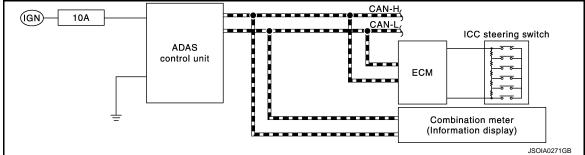
On Board Diagnosis Function

INFOID:0000000011285907

DESCRIPTION

The DTC is displayed on the information display by operating the ICC steering switch.

On Board Self-diagnosis System Diagram



METHOD OF STARTING

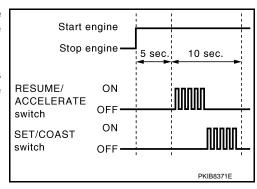
CAUTION:

Start condition of on board self-diagnosis

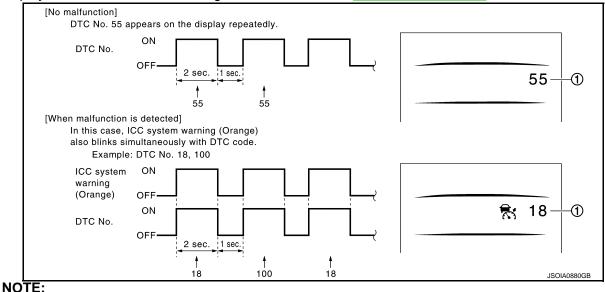
- ICC system OFF
- DCA system OFF
- Vehicle speed 0 km/h (0 MPH)
- 1. Turn the ignition switch OFF.
- 2. Start the engine.
- Wait for 5 seconds after starting the engine. Push up the RESUME/ACCELERATE switch 5 times and push down the SET/COAST switch 5 times within 10 seconds.

NOTE:

If the above operation cannot be performed within 10 seconds after waiting for 5 seconds after starting the engine, repeat the procedure from step 1.



 The DTC is displayed on the set vehicle speed indicator (1) on the ICC system display on the information display when the on board self-diagnosis starts. Refer to <u>DAS-45</u>, "<u>DTC Index</u>".



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[ADAS CONTROL UNIT]

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- It displays for up to 5 minutes and then stops.
- If multiple malfunctions exist, up to 6 DTCs can be stored in memory at the most, and the most recent one is displayed first.

WHEN THE ON BOARD SELF-DIAGNOSIS DOES NOT START

If the on board self-diagnosis does not start, check the following items.

	Assumed abnormal part	Inspection item	
Information display	Combination meter malfunction	Check that the self-diagnosis function of the combination meter operates. Refer to MWI-62, "On Board Diagnosis Function".	
ICC steering switch male	unction		
Harness malfunction be	ween ICC steering switch and ECM	Perform the inspection for DTC "C1A06". Refer to DA 80, "DTC Logic".	
ECM malfunction			
ADAS control unit malfu	nction	 Check power supply and ground circuit of ADAS control unit. Refer to <u>DAS-160</u>, "<u>Diagnosis Procedure</u>". Perform SELF-DIAGNOSIS for "ICC/ADAS" with CONSULT, and then check the malfunctioning parts. Refer to <u>DAS-45</u>, "<u>DTC Index</u>". 	

HOW TO ERASE ON BOARD SELF-DIAGNOSIS

- Turn the ignition switch OFF.
- Start the engine, and then start the on board self-diagnosis.
- 3. Press the CANCEL switch 5 times, and then press the DIS-TANCE switch 5 times under the condition that the on board self-diagnosis starts.

NOTE:

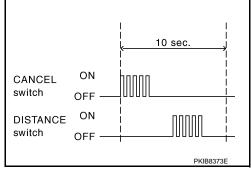
- Complete the operation within 10 seconds after pressing the CANCEL switch first.
- If the operation is not completed within 10 seconds, repeat the procedure from step 1.
- 4. DTC 55 is displayed after erasing.

NOTE:

DTCs for existing malfunction can not be erased.

5. Turn ignition switch OFF, and finish the diagnosis.

CONSULT Function (ICC/ADAS)



INFOID:0000000011285908

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication using ADAS control unit.

Diagnosis mode	Description
Configuration	 The vehicle specification that is written in ADAS control unit can be displayed or stored The vehicle specification can be written when ADAS control unit is replaced
Work Support	Displays causes of automatic system cancellation occurred during system control
Self Diagnostic Result	Displays the name of a malfunctioning system stored in the ADAS control unit
Data Monitor	Displays ADAS control unit input/output data in real time
Active Test	Enables an operational check of a load by transmitting a driving signal from the ADAS control unit to the load
ECU Identification	Displays ADAS control unit part number
CAN Diag Support Monitor	Displays a reception/transmission state of CAN communication and ITS communication

CONFIGURATION

Configuration includes functions as follows.

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Fu	nction	Description
Dood Mitta Configuration	Before Replace ECU	Allows the reading of vehicle specification written in ADAS control unit to store the specification in CONSULT.
Read/Write Configuration	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the ADAS control unit.
Manual Configuration		Allows the writing of the vehicle specification into the ADAS control unit by hand.

WORK SUPPORT

Work support items	Description		
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Vehicle-to-vehicle control mode • Conventional (fixed speed) control mode • Distance Control Assist (DCA) • Forward Emergency Braking (FEB)		
CAUSE OF AUTO-CANCEL 2	NOTE: The item is displayed, but it is not monitored		
CAUSE OF AUTO-CANCEL 3	Displays causes of automatic system cancellation occurred during control of the Back-up Collision Intervention (BCI)		

NOTE:

- Causes of the maximum five cancellations (system cancel) are displayed.
- The displayed cancellation causes display the number of the ignition switch ON/OFF up to 254. It is fixed to 254 if it is over 254. It returns to 0 when the same cancellation cause is detected again.

Display Items for The Cause of Automatic Cancellation 1

Cause of cancellation	Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Distance Control Assist	Forward Emergency Braking	Description
OPERATING ABS	×		×	×	ABS function was operated
OPERATING TCS	×	×	×		TCS function was operated
OPERATING VDC	×	×	×	×	VDC function was operated
ECM CIRCUIT	×	×			ECM did not permit ICC operation
OPE SW VOLT CIRC	×	×	×		The ICC steering switch input voltage is not within standard range
SNOW MODE SW	×		×		Shifting of the drive mode selector to SNOW position
OP SW DOUBLE TOUCH	×	×			ICC steering switches were pressed at the same time
VHCL SPD DOWN	×	×	×		Vehicle speed lower than the speed as follows Vehicle-to-vehicle distance control mode is 24 km/h (15 MPH) Conventional (fixed speed) cruise control mode is 32 km/h (20 MPH)

WHL SPD ELEC NOISE	×	×	×		Wheel speed sensor signal caught electromagnetic noise
VDC/TCS OFF SW	×		×	×	VDC OFF switch was pressed
VHCL SPD UNMATCH	×	×	×		Wheel speed became different from A/T vehicle speed
TIRE SLIP	×	×			Wheel slipped
IGN LOW VOLT	×	×	×	×	Decrease in ADAS control unit ignition voltage
PARKING BRAKE ON	×	×			The parking brake is operating
WHEEL SPD UNMATCH	×	×	×		The wheel speeds of 4 wheels are out of the specified values
INCHING LOST	×				A vehicle ahead is not detected during the following driving when the vehicle speed is approximately 24 km/h (15 MPH) or less
CAN COMM ERROR	×	×	×	×	ADAS control unit received an abnormal signal with CAN communication
ABS/TCS/VDC CIRC	×	×	×	×	An abnormal condition occurs in VDC/TCS/ABS system
ECD CIRCUIT	×	×	×	×	An abnormal condition occurs in ECD system
ENG SPEED DOWN	×	×			Engine speed became extremely low while controlling ICC system
ASCD VHCL SPD DTAC		×			Vehicle speed is detached from set vehicle speed
ASCD DOUBLE COMD		×			Cancel switch and operation switch are detected simultaneously
APA HI TEMP			×		The accelerator pedal actuator integrated motor temperature is high
ICC SENSOR CAN COMM ERR	×		×	×	Communication error between ADAS control unit and the ICC sensor
ABS WARNING LAMP	×		×		ABS warning lamp ON
FR RADAR BLOCKED	×		×	×	Inclusion of dirt or stains on the ICC sensor area of the front bumper
FEB) CURVATURE				×	Road curve was more than the specified value
FEB) YAW RATE				×	Detected yawing speed was more than the specified value
FEB) LTRL ACCELERA- TION				×	Detected lateral speed is the specified value or more
RADAR INTERFER- ENCE	×		×	×	ICC sensor receives electromagnetic interference
NO RECORD	×	×	×		_

Back-up Collision Intervention	Description	M N
×	ADAS control unit received an abnormal signal with CAN communication	
×	ADAS control unit received an abnormal signal with CAN communication	
×	Decrease in ADAS control unit ignition voltage	— Р
×	Vehicle speed higher than 8 km/h (5 MPH)	
×	Accelerator pedal was depressed	
×	Brake pedal was operated	
×	The accelerator pedal actuator integrated motor temperature is high	
	× × × × × × ×	X ADAS control unit received an abnormal signal with CAN communication X ADAS control unit received an abnormal signal with CAN communication X Decrease in ADAS control unit ignition voltage X Vehicle speed higher than 8 km/h (5 MPH) X Accelerator pedal was depressed X Brake pedal was operated

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[ADAS CONTROL UNIT]

Cause of cancellation	Back-up Collision Intervention	Description
APA POWER	×	Decrease in accelerator pedal actuator ignition or battery voltage
NO RECORD	×	-

SELF DIAGNOSTIC RESULT

Refer to DAS-45, "DTC Index".

NOTE:

- The details of time display are as per the following.
- CRNT: A malfunction is detected now
- PAST: A malfunction was detected in the past
- IGN counter is displayed on FFD (Freeze Frame Data).
- 0: The malfunctions that are detected now CAN communication system (U1000, U1010)
- 1 39: It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased. Other than CAN communication system (Other than U1000, U1010)
- 1 49: It increases like 0 → 1 → 2 ··· 38 → 49 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
MAIN SW [On/Off]	×	×	×	×		Indicates [On/Off] status as judged from ICC steering switch
SET/COAST SW [On/Off]	×	×				Indicates [On/Off] status as judged from ICC steering switch
CANCEL SW [On/Off]	×	×				Indicates [On/Off] status as judged from ICC steering switch
RESUME/ACC SW [On/Off]	×	×				Indicates [On/Off] status as judged from ICC steering switch
DISTANCE SW [On/Off]	×					Indicates [On/Off] status as judged from ICC steering switch
CRUISE OPE [On/Off]	×	×				Indicates whether controlling or not (ON means "controlling")
BRAKE SW [On/Off]	×	×	×	×	×	Indicates [On/Off] status as judged from ICC brake switch signal (ECM transmits ICC brake switch signal through CAN communication)
STOP LAMP SW [On/Off]	×	×	×	×	×	Indicates [On/Off] status as judged from stop lamp switch signal (ECM transmits stop lamp switch signal through CAN communication)
IDLE SW [On/Off]	×				×	Indicates [On/Off] status of idle switch read from ADAS control unit through CAN communication (ECM transmits On/Off status through CAN communication)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description	
SET DISTANCE [Short/Mid/Long]	×	×				Indicates set distance memorized in ADAS control unit	
CRUISE LAMP [On/Off]	×	×				Indicates [On/Off] status of MAIN switch indicator output	
OWN VHCL [On/Off]	×					NOTE: The item is displayed, but it is not monitored	
VHCL AHEAD [On/Off]	×					Indicates [On/Off] status of vehicle ahead detection indicator output	
ICC WARNING [On/Off]	×					Indicates [On/Off] status of ICC system warning lamp output	
VHCL SPEED SE [km/h] or [mph]	×	×	×	×	×	Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication]	
SET VHCL SPD [km/h] or [mph]	×	×				Indicates set vehicle speed memorized in ADAS control unit	
BUZZER O/P [On/Off]	×				×	Indicates [On/Off] status of ICC warning chime output	
THRTL SENSOR [deg]	×	×				NOTE: The item is displayed, but it is not monitored	
ENGINE RPM [rpm]	×					Indicates engine speed read from ADAS control unit through CAN communication (ECM transmits engine speed signal through CAN communication)	
WIPER SW [OFF/LOW/HIGH]	×					Indicates wiper [OFF/LOW/HIGH] status (BCM transmits front wiper request signal through CAN communication)	
YAW RATE [deg/s]	×					NOTE: The item is displayed, but it is not monitored	
BA WARNING [On/Off]	×					Indicates [On/Off] status of FEB indicator lamp output	
STP LMP DRIVE [On/Off]	×	×			×	Indicates [On/Off] status of ICC brake hold relay drive output	
D RANGE SW [On/Off]	×					Indicates [On/Off] status of "D" or "M" positions read from ADAS control unit through CAN communication; ON when position "D" or "M" (TCM transmits shift position signal through CAN communication).	
NP RANGE SW [On/Off]	×					Indicates shift position signal read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)	
PKB SW [On/Off]	×					Parking brake switch status [On/Off] judged from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)	
PWR SUP MONI [V]	×	×				Indicates IGN voltage input by ADAS control unit	
VHCL SPD AT [km/h] or [mph]	×					Indicates vehicle speed calculated from A/T vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits A/T vehicle speed sensor signal through CAN communication)	
THRTL OPENING [%]	×	×			×	Indicates throttle position read from ADAS control unit through CAN communication (ECM transmits accelerator pedal position signal through CAN communication).	
GEAR [1, 2, 3, 4, 5, 6, 7]	×					Indicates A/T gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)	

[ADAS CONTROL UNIT]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description	
CLUTCH SW SIG [On/Off]	×	×	×	×		Indicates [On/Off] status as judged from clutch pedal position signal (ECM transmits ICC clutch switch signal through CAN communication)	
NP SW SIG [On/Off]	×					Indicates [On/Off] status as judged from park/neutral position switch signal (ECM transmits park/neutral position switch signal through CAN communication).	
MODE SIG [OFF, ICC, ASCD]	×					Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode]	
SET DISP IND [On/Off]	×					Indicates [On/Off] status of SET switch indicator output	
DISTANCE [m]	×					Indicates the distance from the vehicle ahead	
RELATIVE SPD [m/s]	×					Indicates the relative speed of the vehicle ahead	
ON ROOT GUID- ANCE [On/Off]	×					NOTE: The item is displayed, but it is not monitored	
DYNA ASIST SW [On/Off]	×	×		×		Indicates [On/Off] status as judged from ICC steering switch signal (ECM transmits ICC steering switch signal through CAN communication)	
DCA ON IND [On/Off]	×					The status [ON/OFF] of DCA system switch indicator output is displayed	
DCA VHL AHED [On/Off]	×					The status [ON/OFF] of vehicle ahead detection indicator output in DCA system is displayed	
IBA SW [On/Off]	×	×				NOTE: The item is displayed, but it is not monitored	
APA TEMP [°C]	×				×	Accelerator pedal actuator integrated motor temperature that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the integrated motor temperature via ITS communication)	
APA PWR [V]	×				×	Accelerator pedal actuator power supply voltage that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the power supply voltage via ITS communication)	
NAVI ICC DISP [On/Off]						NOTE: The item is displayed, but it is not monitored	
LDW SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDW system	
LDW ON LAMP [On/Off]			×			Indicates [On/Off] status of LDW system display output	
LDP ON IND [On/Off]			×			Indicates [On/Off] status of LDP system display output	
LANE DPRT W/L [On/Off]			×			Indicates [On/Off] status of LDW/LDP warning display (Yellow) output	
LDW BUZER OUT- PUT [On/Off]			×			Indicates [On/Off] status of warning buzzer output	
LDP SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDP system	
WARN REQ [On/Off]			×			Indicates an ADAS control unit judged warning state (ON/OFF) of LDP system	
READY signal [On/Off]			×			Indicates LDP system settings	

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Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description	
Camera lost [Detect/Deviate/Both]			×	×		Indicates a lane marker detection state judged from a lane marker detection signal read by the ADAS control unit via ITS communication (Lane camera unit transmits a lane marker signal via ITS communication)	
Lane unclear [On/Off]			×	×		Indicates an ON/OFF state of the lane marker. The ON/OFF state is judged from a detected lane condition signal read by the ADAS control unit via ITS communication (The lane camera unit transmits a detected lane condition signal via ITS communication)	
STATUS signal [Stnby/Warn/Cancl/ Off]			×			Indicates a control state of LDP system	
Shift position [Off, P, R, N, D, M/T1 - 7]			×	×	×	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)	
Turn signal [OFF/LH/RH/LH&RH]			×	×		Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication)	
SIDE G [G]			×	×		Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication)	
FUNC ITEM (FCW) [On/Off]	×	×	×	×		Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Emergency Assist" of the integral switch Forward Emergency Braking	
FUNC ITEM (LDW) [On/Off]	×	×	×	×		Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Lane" of the integral switch Lane Departure Warning	
FUNC ITEM (BSW) [On/Off]	×	×	×	×		Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Blind spot" of the integral switch Blind Spot Warning	
FUNC ITEM (NV-ICC) [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored	
FUNC ITEM (NV- DCA) [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored	
DCA SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the DCA system. The DCA system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Front assist" of the integral switch	
LDP SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of LDP system. LDP system can be set to ON/OFF by selecting "Driving Aids" \Rightarrow "Lane" of the integral switch	
BSI SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of Blind Spot Intervention system. Blind Spot Intervention system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Blind Spot" of the integral switch	
FCW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the PFCW system. The PFCW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Emergency Assist" of the integral switch	
LDW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Lane" of the integral switch	
BSW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Blind spot" of the integral switch	
NAVI ICC SELECT [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored	

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[ADAS CONTROL UNIT]

< SYSTEM DESCR	[ADAS CONTROL ONIT]						
Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description	
NAVI DCA SELECT [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored	
SYS SELECTABILITY [On/Off]	×	×	×	×		Indicates the availability of ON/OFF switching for "Driving Aids" items received from the integral switch via CAN communication	
DRIVE MODE STATS [STD/SPORT/ECO/ SNOW/MID/ERROR]	×	×	×	×		Indicates a drive mode selector select position judged from a drive mode select switch position signal read by the ADAS control unit via CAN communication (The chassis control module transmits a switch position signal of the drive mode select switch signal via CAN communication)	
WARN SYS SW [On/Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored	
BSW/BSI WARN LMP [On/Off]				×		Indicates [On/Off] status of Blind Spot warning malfunction	
BSI ON IND [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system display	
BSW SYSTEM ON [On/Off]				×		Indicates [On/Off] status of BSW system	
BSI SYSTEM ON [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system	
FCW SYSTEM ON [On/Off]	×	×				Indicates [On/Off] status of PFCW system	
BCI SYSTEM ON [On/Off]					×	Indicates [On/Off] status of BCI system	
BCI SWITCH [On/Off]					×	NOTE: The item is displayed, but it is not monitored	
BATTERY CIRCUIT OFF [On/Off]	×					NOTE: The item is displayed, but it is not used	
LDP WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDP warning display (Yellow) output	
LDW ON INDICATOR [On/Off]			×			Indicates [On/Off] status of LDW system ON display output	
LDW WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDW system warning display output	
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/ SNOW/VDC OFF]	×	×	×	×		Indicates [On/Off] status of system cancel display output	
CAMERA HI TEMP MSG [On/Off]			×	×		Indicates [On/Off] status of lane camera unit high temperature warning display output	
ITS SETTING ITEM(DCA) [On/Off]	×	×	×	×		Indicates the presence or absence of DCA system.	
ITS SETTING ITEM(LDP) [On/Off]	×	×	×	×		Indicates the presence or absence of LDP system.	
ITS SETTING ITEM(BSI) [On/Off]	×	×	×	×		Indicates the presence or absence of Blind Spot Intervention system.	

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Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description	
BSI WARNING INDI- CATOR [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention warning display output	
BSW ON INDICATOR [On/Off]				×		Indicates [On/Off] status of BSW system ON display output	
SIDE RADAR BLOCK COND [On/Off]				×		Indicates [On/Off] status of side radar with dirt or foreign materials	
LDW WARNING ALERT TIMING [Nothing/Early/Late]			×			NOTE: The item is displayed, but it is not monitored	
BSW IND BRIGHT- NESS [Nothing/Bright/Nor- mal/Dark]				×		Indicates status of brightness of Blind Spot Warning/Blind Spot Intervention indicator	
SL MAIN SW [On/Off]		×				Indicates [On/Off] status as judged from steering switch	
FUNC ITEM(FEB) [On/Off]	×					Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Emergency Assist" of the integral switch Forward Emergency Braking	
FEB SELECT [On/Off]	×					Indicates an ON/OFF state of the FEB system. The FEB system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Emergency Assist" of the integral switch	
FEB SW [On/Off]	×					Indicates [On/Off] status of FEB system	
SL TARGET VEHI- CLE SPEED [km/h]	×					Indicates set vehicle speed memorized in ADAS control unit	
SL SET LAMP [On/Off]	×					Indicates [On/Off] status of speed limiter SET display output	
SL LIMIT LAMP [On/Off]	×					Indicates [On/Off] status of speed limiter MAIN switch display output	
ASCD CANCEL (LOW SPEED) [NON/CUT]	×					Indicates the vehicle cruise condition. NON: Vehicle speed is maintained at the ASCD set speed. CUT: Vehicle speed decreased to excessively low, and ASCD operation is cut off.	
ASCD CANCEL (SPEED DIFF) [NON/CUT]	×					 Indicates the vehicle cruise condition. NON: Vehicle speed is maintained at the ASCD set speed. CUT: Vehicle speed decreased to excessively low compared with the ASCD set speed, and ASCD operation is cut off. 	
KICK DOWN [On/Off]	×					Display Kick Down decision state. On: Accelerator pedal is depressed Off: Accelerator pedal is fully released	

ACTIVE TEST

CAUTION:

- Never perform "Active Test" while driving the vehicle.
- The "Active Test" cannot be performed when the following systems malfunction is displayed.
- ICC system
- DCA
- LDW
- LDP
- Blind Spot Warning
- Blind Spot Intervention

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[ADAS CONTROL UNIT]

- BCI
- The "Active Test" cannot be performed when the FEB warning lamp is illuminated.
 Shift the selector lever to "P" position, and then perform the test.

Test item	Description
METER LAMP	The MAIN switch indicator and FEB warning lamp can be illuminated by ON/OFF operations as necessary
STOP LAMP	The ICC brake hold relay can be operated by ON/OFF operations as necessary, and the stop lamp can be illuminated
ICC BUZZER	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Intelligent Cruise Control (ICC) Distance Control Assist (DCA) Predictive Forward Collision Warning (PFCW) Forward Emergency Brake (FEB)
BRAKE ACTUATOR	Activates the brake by an arbitrary operation
ACTIVE PEDAL	The accelerator pedal actuator can be operated as necessary
DCA INDICATOR	The DCA system display can be illuminated by ON/OFF operations as necessary
LDP BUZZER	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Lane Departure Warning (LDW) • Lane Departure Prevention (LDP) • Blind Spot Warning (BSW) • Blind Spot Intervention
LDP ON IND	The LDP system display can be illuminated by ON/OFF operations as necessary
LANE DEPARTURE W/L	The LDW/LDP warning can be illuminated by ON/OFF operations as necessary
BSW ON INDICATOR	The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary
BSI ON INDICATOR	The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary
LDW ON INDICATOR	The LDW system display can be illuminated by ON/OFF operations as necessary
LDP WARNING INDICATOR	The LDP malfunction can be illuminated by ON/OFF operations as necessary
LDW WARNING INDICATOR	The LDW malfunction can be illuminated by ON/OFF operations as necessary
BSW WARNING INDICATOR	The BSW malfunction can be illuminated by ON/OFF operations as necessary
BSI WARNING INDICATOR	The Blind Spot Intervention malfunction can be illuminated by ON/OFF operations as necessary

METER LAMP

NOTE:

The test can be performed only when the engine is running.

Test item	Oper- ation	Description	MAIN switch indicator ICC system warning FEB warning lamp
METER LAMP	Off	Stops sending the following signals to exit from the test • Meter display signal • FEB warning lamp signal	OFF
	On	Transmits the following signals to the combination meter via CAN communication • Meter display signal • FEB warning lamp signal	ON

STOP LAMP

Test item	Oper- ation	Description	Stop lamp
STOP LAMP	Off	Stops transmitting the ICC brake hold relay drive signal below to end the test	OFF
	On	Transmits the ICC brake hold relay drive signal	ON

ICC BUZZER

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Test item	Operation	Description	Operation sound
	MODE1	Transmits the buzzer output signals to the driver assistance buzzer control module via ITS communication	Intermittent beep sound
ICC BUZZER	Test start	Starts the tests of "MODE1"	_
ICC BUZZER	Reset	Stops transmitting the buzzer output signal below to end the test	_
	End	Returns to the "SELECT TEST ITEM" screen	_

BRAKE ACTUATOR

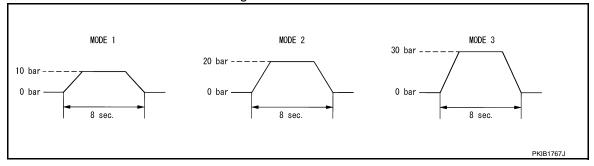
NOTE:

The test can be performed only when the engine is running.

Test item	Operation	Description	"PRESS SENS" value
	MODE1	Transmits the brake fluid pressure control signal to the	10 bar
	MODE2	ABS actuator and electric unit (control unit) via chassis	20 bar
	MODE3	control module	30 bar
BRAKE ACTUATOR	Test start	Starts the tests of "MODE1", "MODE2" and "MODE3"	_
	Reset	Stops transmitting the brake fluid pressure control signal below to end the test	_
	End	Returns to the "SELECT TEST ITEM" screen	_

NOTE:

The test is finished in 10 seconds after starting



Active Pedal

CAUTION:

- Shift the selector lever to "P" position, and then perform the test.
- Never depress the accelerator pedal excessively. (The engine speed may rise unexpectedly when finishing the test.)

NOTE:

- Depress the accelerator pedal to check when performing the test.
- The test can be performed only when the engine is running.

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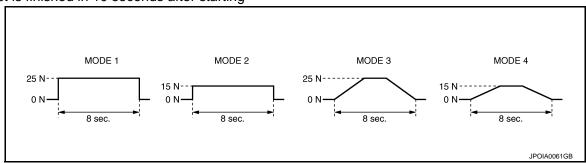
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[ADAS CONTROL UNIT]

Test item	Operation	Description	Accelerator pedal operation
	MODE1		Constant with a force of 25 N for 8 seconds
	MODE2	Transmit the accelerator pedal feedback force control signal	Constant with a force of 15 N for 8 seconds
	MODE3	to the accelerator pedal actuator via ITS communication.	Change up to a force of 25 N for 8 seconds
ACTIVE PEDAL	MODE4		Change up to a force of 15 N for 8 seconds
	Test start	Starts the tests of "MODE1", "MODE2", "MODE3" and "MODE4"	_
	Reset	Stops transmitting the accelerator pedal feedback force control signal below to end the test.	_
	End	Returns to the "SELECT TEST ITEM" screen	_

NOTE:

The test is finished in 10 seconds after starting



DCA INDICATOR

NOTE:

The test can be performed only when the engine is running.

Test item	Opera- tion	Description	DCA system display
DCA INDICATOR	Off	Stops transmitting the meter display signal below to end the test	_
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDP BUZZER

Test item	Opera- tion	Description	Warning buzzer
LDP BUZZER	Off	Stops transmitting the warning buzzer signal below to end the test	_
	On	Transmits the warning buzzer signal to the warning buzzer	ON

LDP ON IND

Test item	Oper- ation	Description	LDP system display (Green)
LDP ON IND	Off	Stops transmitting the meter display signal below to end the test	_
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LANE DEPARTURE W/L

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[ADAS CONTROL UNIT]

IPTION		[ADAG CONTROL ON
Oper-	Description	Lane departure system display (Yellow
Off	Stops transmitting the meter display signal below to end	_
On	Transmits the meter display signal to the combination	ON
Oper- ation	Description	Blind Spot Warning system display (Yellow)
Off	Stops transmitting the meter display signal below to end the test	_
On	Transmits the meter display signal to the combination meter via CAN communication	ON
Oper- ation	Description	Blind Spot Intervention system display (Green)
Off	Stops transmitting the meter display signal below to end the test	_
On	Transmits the meter display signal to the combination meter via CAN communication	ON
Oper- ation	Description	LDW system display (White)
Off	Stops transmitting the meter display signal below to end the test	_
On	Transmits the meter display signal to the combination meter via CAN communication	ON
CATOR		
Oper- ation	Description	LDP malfunction (Yellow)
Off	Stops transmitting the meter display signal below to end the test	_
On	Transmits the meter display signal to the combination meter via CAN communication	ON
CATOR		
Oper- ation	Description	LDW malfunction (Yellow)
Off	Stops transmitting the meter display signal below to end the test	_
On	Transmits the meter display signal to the combination meter via CAN communication	ON
	Operation Off On Operation Off On Operation Off On Operation Off On CATOR Operation Off On Off Off	Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication CATOR Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication CATOR Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication CATOR Operation Off Stops transmitting the meter display signal below to end the test On Transmits the meter display signal to the combination meter via CAN communication CATOR Operation Transmits the meter display signal to the combination meter via CAN communication CATOR

BSW WARNING INDICATOR

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[ADAS CONTROL UNIT]

Test item	Oper- ation	Description	BSW malfunction (Yellow)
BSW WARNING IN- DICATOR	Off	Stops transmitting the meter display signal below to end the test	_
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

BSI WARNING INDICATOR

Test item	Oper- ation	Description	Blind Spot Intervention malfunction (Yellow)
BSI WARNING INDI- CATOR	Off	Stops transmitting the meter display signal below to end the test	_
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

ECU IDENTIFICATION

Displays ADAS control unit parts number.

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ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item		Condition	Value/Status
MAIN SW	Ignition quitab ON	When MAIN switch is pressed	On
IVIAIN SVV	Ignition switch ON	When MAIN switch is not pressed	Off
SET/COAST SW	Ignitian quitab ON	When SET/COAST switch is pressed	On
SEI/COAST SW	Ignition switch ON	When SET/COAST switch is not pressed	Off
CANCEL CW	Ignitian quitab ON	When CANCEL switch is pressed	On
CANCEL SW	Ignition switch ON	When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition quitab ON	When DISTANCE switch is pressed	On
DISTANCE SW	Ignition switch ON	When DISTANCE switch is not pressed	Off
	Drive the vehicle and activate	When ICC system is controlling	On
CRUISE OPE	the vehicle-to-vehicle distance control mode	When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed	Off
BRARE SW		When brake or clutch pedal is not depressed	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed	On
		When brake pedal is not depressed	Off
IDLE SW	Engine waning	Idling	On
IDLE SW Engine running		Except idling (depress accelerator pedal)	Off
	Start the engine and turn the ICC system ON Press the DISTANCE	When set to "long"	Long
		When set to "middle"	Mid
SET DISTANCE	switch to change the vehi- cle-to-vehicle distance set- ting	When set to "short"	Short
CRUISE LAMP	Start the engine and press	ICC system ON (MAIN switch indicator ON)	On
CRUISE LAWIF	MAIN switch	ICC system OFF (MAIN switch indicator OFF)	Off
OWN VHCL	NOTE: The item is indicated, but not not not not not not not not not no	nonitored	Off
VHCL AHEAD	Drive the vehicle and activate	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
VITOL AITEAU	the vehicle-to-vehicle distance control mode	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
	Start the engine and press	When ICC system is malfunctioning (ICC system malfunction ON)	On
ICC WARNING	MAIN switch	When ICC system is normal (ICC system malfunction OFF)	Off

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[ADAS CONTROL UNIT]

Monitor item		Condition	Value/Status
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
SET VHCL SPD	While driving	When vehicle speed is set	Displays the set vehicle speed
		When the buzzer of the following system operates Vehicle-to-vehicle distance control mode DCA system PFCW system FEB system	On
BUZZER O/P	Engine running	When the buzzer of the following system not operates Vehicle-to-vehicle distance control mode DCA system PFCW system FEB system	Off
THRTL SENSOR	NOTE: The item is indicated, but not n	nonitored	0.0
ENGINE RPM	Engine running		Equivalent to ta- chometer read- ing
		Wiper not operating	Off
WIPER SW	Ignition switch ON	Wiper LO operation	Low
		Wiper HI operation	High
YAW RATE	NOTE: The item is indicated, but not not not not not not not not not no	0.0	
DA WA DNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
BA WARNING		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
	Drive the vehicle and activate	When ICC brake hold relay is activated	On
STP LMP DRIVE	the vehicle-to-vehicle distance control mode	When ICC brake hold relay is not activated	Off
D DANIOE OW	Foionain	When the selector lever is in "D" position or manual mode	On
D RANGE SW	Engine running	When the selector lever is in any position other than "D" or manual mode	Off
		When the selector lever is in "N", "P" position	On
NP RANGE SW	Engine running	When the selector lever is in any position other than "N", "P"	Off
PKB SW	Ignition switch ON	When the parking brake is applied	On
FND SW	Ignition Switch ON	When the parking brake is released	Off
PWR SUP MONI	Engine running	Power supply voltage value of ADAS control unit	
VHCL SPD AT	While driving	g	
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Monitor item	Condition		Value/Status	
GEAR	While driving		Displays the gear position	
CLUTCH SW SIG	Ignition switch ON	When clutch or brake pedal is depressed	On	
CLOTCITOW SIG	ignition switch Oiv	When clutch or brake pedal is not depressed	Off	
NP SW SIG	Ignition switch ON	When the shift lever is in neutral position	On	
NF SW SIG	Ignition Switch ON	When the shift lever is in any position other than neutral	Off	
		When ICC system is deactivated	Off	
MODE SIG	Start the engine and press MAIN switch	When vehicle-to-vehicle distance control mode is activated	ICC	
		When conventional (fixed speed) cruise control mode is activated	ASCD	
SET DISP IND	Drive the vehicle and acti- vate the conventional (fixed)	SET switch indicator ON	On	
OLI DIGI IND	speed) cruise control mode • Press SET/COAST switch	SET switch indicator OFF	Off	
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle	
		When a vehicle ahead is not detected	0.0	
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance	When a vehicle ahead is detected	Displays the relative speed.	
	control mode	When a vehicle ahead is not detected	0.0	
ON ROOT GUID- ANCE	NOTE: The item is indicated, but not n	NOTE: The item is indicated, but not monitored		
DYNA ASIST SW	Ignition switch ON	When dynamic driver assistance switch is pressed	On	
DTNA ASIST SW		When dynamic driver assistance switch is not pressed	Off	
	Start the engine and press dy-	DCA system OFF	Off	
DCA ON IND	namic driver assistance switch (When DCA setting is ON)	DCA system ON	On	
DCA VHL AHED	Drive the vehicle and activate	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off	
DON WILL MILED	the DCA system	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On	
IBA SW	NOTE: The item is indicated, but not n	nonitored	Off	
FCW SYSTEM ON	Ignition switch ON	When the PFCW system is ON	On	
TOW STSTEWION	Ignition switch ON	When the PFCW system is OFF	Off	
АРА ТЕМР	Engine running	Display the accelerator pedal actuator integrated motor temperature		
APA PWR	Ignition switch ON	Power supply voltage value of accelerator pedal actuator		
NAVI-ICC DISP	NOTE: The item is indicated, but not n	nonitored	Off	
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On	
LDW SISIEM ON	Ignition switch ON	When the LDW system is OFF	Off	

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[ADAS CONTROL UNIT]

Monitor item		Condition	Value/Status
LDW/ONLLAMD	landition questale ON	When the LDW system is ON	On
LDW ON LAMP	Ignition switch ON	When the LDW system is OFF	Off
	Start the engine and press dy-	LDP ON indicator lamp ON	On
LDP ON IND	namic driver assistance switch (When LDP system setting is ON)	LDP ON indicator lamp OFF	Off
	Drive the vehicle and activate	Lane departure warning lamp ON	On
LANE DPRT W/L	the LDW system or LDP system	Lane departure warning lamp OFF	Off
LDW BUZER OUT- PUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning/Blind Spot Inter-	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system When the buzzer of the following system does not oper-	On
	vention system	ateLDW/LDP systemBlind Spot Warning/Blind Spot Intervention system	Off
	Start the engine and press dy- namic driver assistance switch	When the LDP system is ON	On
LDP SYSTEM ON	(When LDP system setting is ON)	When the LDP system is OFF	Off
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
WARN REQ		Lane departure warning is not operating	Off
	Start the engine and press dy- namic driver assistance switch (When LDP system setting is ON)		
READY signal		When the LDP system is OFF	Off
	Drive the vehicle and activate the LDW system, LDP system or Blind Spot Intervention sys- tem	Both side lane markers are detected	Detect
Camera lost		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both
Longundoor	While driving	Lane marker is unclear	On
Lane unclear		Lane marker is clear	Off
	Drive the vehicle and activate	When the LDP system is ON	Stnby
STATUS signal		When the LDP system is operating	Warn
STATUS Signal	the LDP system	When the LDP system is canceled	Cancl
		When the LDP system is OFF	Off
Shift position	Engine running While driving		Displays the shift position
	Turn signal lamps OFF		Off
Turn signal	Turn signal lamp LH blinking		LH
rum signal	Turn signal lamp RH blinking		RH
	Turn signal lamp LH and RH bl	inking	LH&RH
SIDE G	While driving	Vehicle turning right	Negative value
OIDE O	wille driving	Vehicle turning left	Positive value
FUNC ITEM	Ignition switch ON		FUNC3
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (LDW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
FUNC ITEM (NV-ICC)	NOTE: The item is indicated, but not n	Off	

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Monitor item		Value/Status		
FUNC ITEM (NV- DCA)	NOTE: The item is indicated, but not n	nonitored	Off	
DOA OFLECT	"Distance Control Assist" set with the integral switch is ON		On	
DCA SELECT	Ignition switch ON	"Distance Control Assist" set with the integral switch is OFF	Off	
L DD OF LEGT	Leaving and ON	"Lane Departure Intervention" set with the integral switch is ON	On	
LDP SELECT	Ignition switch ON	"Lane Departure Intervention" set with the integral switch is OFF	Off	
DOLOGI ECT	Ignition quitch ON	"Blind Spot Intervention" set with the integral switch is ON	On	
BSI SELECT	Ignition switch ON	"Blind Spot Intervention" set with the integral switch is OFF	Off	
FCW SELECT	Ignition quitch ON	"Forward Emergency Braking" set with the integral switch is ON	On	
FCW SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is OFF	Off	
LDW SELECT	Ignition quitch ON	"Lane Departure Warning" set with the integral switch is ON	On	
LDW SELECT	Ignition switch ON	"Lane Departure Warning" set with the integral switch is OFF	Off	
BSW SELECT	Ignition switch ON	"Blind Spot Warning" set with the integral switch is ON	On	
BOW SELECT	Ignition switch ON	"Blind Spot Warning" set with the integral switch is OFF	Off	
NAVI ICC SELECT	NOTE: The item is indicated, but not not not not not not not not not no	but not monitored		
NAVI DCA SELECT	NOTE: The item is indicated, but not n	nonitored	Off	
SYS SELECTABILITY	Ignition quitch ON	Items set with the integral switch can be switched normally	On	
313 SELECTABILITY	Ignition switch ON	Items set with the integral switch cannot be switched normally	Off	
		When drive mode select switch position is STANDARD	STD	
		When drive mode select switch position is in SPORT	SPORT	
		When drive mode select switch position is in ECO	ECO	
DRIVE MODE STATS	Ignition switch ON	When drive mode select switch position is in SNOW	SNOW	
		When drive mode select switch position is in PERSON-AL	STD	
		A signal other than those above is input	ERROR	
WARN SYS SW	NOTE: The item is indicated, but not n	nonitored	Off	
BSW/BSI WARN LMP	Engine running	When the BSW system is malfunctioning	On	
DOW/DOI WAININ LIVIE	Engine running	When the BSW system is normal	Off	
BSI ON IND	Engine running	Blind Spot Intervention warning ON	On	
20. 0.1 110	g	Blind Spot Intervention warning OFF	Off	
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On	
5517 51 51 EINI 614	ignition owiton Ort	When the BSW system is OFF	Off	
BSI SYSTEM ON	Start the engine and press dy- namic driver assistance switch	When the Blind Spot Intervention system is ON	On	
DOI OT OT LIVE OIL	(When Blind Spot Intervention system setting is ON)	When the Blind Spot Intervention system is OFF	Off	

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[ADAS CONTROL UNIT]

Monitor item		Condition	Value/Status
FCW SYSTEM ON	Engine rupping	When the FEB/PFCW system is ON	On
FCW SYSTEM ON	Engine running	When the FEB/PFCW system is OFF	Off
DOLOVOTEM ON	Engine rupping	When the BCI system is ON	On
BCI SYSTEM ON	Engine running	When the BCI system is OFF	Off
BCI SWITCH	NOTE: The item is indicated, but no	ot monitored	Off
BATTERY CIRCUIT OFF	NOTE: The item is indicated, but no	ot used	Off
LDP WARNING INDI-	Engine running	When the LDP system is malfunctioning	On
CATOR	Engine running	When the LDP system is normal	Off
	Engine rupping	LDW system display ON	On
LDW ON INDICATOR	Engine running	LDW system display OFF	Off
LDW WARNING INDI-	Facina suppina	When the LDW system is malfunctioning	On
CATOR	Engine running	When the LDW system is normal	Off
SYSTEM CANCEL	Engine rupping	System cancel display ON	On
MESSAGE	Engine running	System cancel display OFF	Off
		Lane camera unit high temperature warning display ON	On
CAMERA HI TEMP MSG	Engine running	Lane camera unit high temperature warning display OFF	Off
TS SETTING TEM(DCA)	Ignition switch ON		On
TS SETTING TEM(LDP)	Ignition switch ON		On
TS SETTING TEM(BSI)	Ignition switch ON		On
BSI WARNING INDI-	Engine rupping	When the Blind Spot Intervention is malfunctioning	On
CATOR	Engine running	When the Blind Spot Intervention is normal	Off
BSW ON INDICATOR	Facine amaine	BSW system display ON	On
BSW ON INDICATOR Engine running		BSW system display OFF	Off
SIDE RADAR BLOCK	Engine running	Front bumper or side radar is dirty	On
COND		Front bumper and side radar is clean	Off
		LDW system OFF	Nothing
LDW WARNING ALERT TIMING	Ignition switch ON	Lane departure warning timing is early setting	Early
KEETKT THVIIIVO		Lane departure warning timing is late setting	Late
		BSW system OFF	Nothing
		Blind Spot Warning/Blind Spot Intervention indicator brightness bright	Bright
BSW IND BRIGHT- NESS	Ignition switch ON	Blind Spot Warning/Blind Spot Intervention indicator brightness normal	Normal
		Blind Spot Warning/Blind Spot Intervention indicator brightness dark	Dark
SI MAINI SW	Engine russing	When speed limiter MAIN switch is pressed	On
SL MAIN SW	Engine running	When speed limiter MAIN switch is not pressed	Off
FUNC ITEM (FEB)	Engine running		On
EED OEL ECT		"Forward Emergency Braking" set with the integral switch is ON	On
FEB SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is OFF	Off

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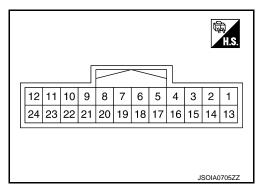
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Monitor item		Condition	Value/Status
FEB SW	Engine rupping	FEB system ON	On
LED 244	Engine running	FEB system OFF	Off
SL TARGET VEHI- CLE SPEED	While driving	When vehicle speed is set	Displays the set vehicle speed
	Drive the vehicle and acti-	Speed limiter SET indicator ON	On
SL SET LAMP	SL SET LAMP vate the speed limiter • Press speed limiter MAIN switch	Speed limiter SET indicator OFF	Off
	Drive the vehicle and acti-	Speed limiter system ON	On
SL LIMIT LAMP vate the speed limit • Press speed limiter switch	Press speed limiter MAIN	Speed limiter system OFF	Off
ASCD CANCEL	Drive the vehicle and activate	ASCD cancelled by low vehicle speed	On
(LOW SPEED)	the ASCD	Other than above	Off
ASCD CANCEL (SPEED DIFF)	Drive the vehicle and activate	ASCD cancelled by difference between set speed and vehicle speed	On
	the ASCD	Other than above	Off
KICK DOWN	Drive the vehicle and activate	When accelerator pedal is full depressed	On
KICK DOWN	the speed limiter	Other than above	Off

TERMINAL LAYOUT PHYSICAL VALUES



	nal No. color)	Description		Condition	Standard value	Reference value
+	_	Signal name	Input/ Output	Condition	Standard value	Reference value
1 (L)		CAN -H	_	_	_	_
2 (R)		CAN -L	_	_	_	_
5 (B)	Ground	Ground	_	Ignition switch ON	0 - 0.1 V	Approx. 0 V
6 (L)		ITS communication-H	_	_	_	_
7 (P)		ITS communication-L	_	_	_	_
8 (L)		Chassis communication-H	_	_	_	_
9 (R)		Chassis communication-L	_	_	_	_

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	nal No. color)	Description		Condition		Standard value	Reference value
+	_	Signal name	Input/ Output			Glandard value	Reference value
12 (GR)	5	Ignition power supply	Input	Ignition switch ON	_	10 - 16 V	Battery voltage
17	(B)		_	10 - 16 V	Approx. 12 V		
(V)		drive signal	Output	Output switch ON	At "STOP LAMP" test of "Active test"	0 - 0.1 V	Approx. 0 V

Fail-safe (ADAS Control Unit)

INFOID:0000000011285910

If a malfunction occurs in each system, ADAS control unit cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning dis- play	Description
Vehicle-to-vehicle distance control mode	High- pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High- pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High- pitched tone	FEB warning lamp Warning systems indicator (Forward position: Yellow)	Cancel
Predictive Forward Collision Warning (PFCW)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Distance Control Assist (DCA)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Blind Spot Warning (BSW)	_	Warning systems indicator (Blind spot position: Yellow)	Cancel
Back-up Collision Intervention (BCI)	High- pitched tone	BCI system warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000011285911

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1507: LOST COMM (SIDE RDR R) U1508: LOST COMM (SIDE RDR L)
2	1CA0A: CONFIG UNFINISHED U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	 C1F02: APA C/U MALF C1B53: SIDE RDR R MALF C1B54: SIDE RDR L MALF C1B84: DIST SEN MALFUNCTION

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Priority	Detected items (DTC)			
4	 C1A01: POWER SUPPLY CIR C1A02: POWER SUPPLY CIR 2 C1A04: ABS/TCS/VDC CIRC C1A05: BRAKE SW/STOP L SW C1A06: OPERATION SW CIRC C1A13: STOP LAMP RLY FIX C1A14: ECM CIRCUIT C1A24: NP RANGE C1A26: ECD MODE MALF C1A27: ECD PWR SUPLY CIR C1A33: CAN TRANSMISSION ERR C1A34: COMMAND ERROR C1A35: APA CIR C1A36: APA CAN COMM CIR C1A37: APA CAN CIR 2 C1A38: APA CAN CIR 1 C1A39: STRG SEN CIR C1B5D: FEB OPE COUNT LIMIT C1B56: SONAR CIRCUIT C1B57: AVM CIRCUIT C1B59: CCM CIRCUIT C1B82: DIST SEN OFF-CENTER C1B85: DIST SEN ABNORMAL TEMP C1B86: DIST SEN PWR SUP CIR C1F01: APA MOTOR MALF C1F05: APA PWR SUPLY CIR 	 U0121: VDC CAN CIR 2 U0126: STRG SEN CAN CIR 1 U0235: ICC SENSOR CAN CIRC 1 U0401: ECM CAN CIR 1 U0402: TCM CAN CIR 1 U0415: VDC CAN CIR 1 U0424: HVAC CAN CIR 1 U0428: STRG SEN CAN CIR 2 U1502: ICC SEN CAN COMM CIR U1503: SIDE RDR L CAN CIR 2 U1504: SIDE RDR L CAN CIR 1 U1505: SIDE RDR R CAN CIR 2 U1506: SIDE RDR R CAN CIR 1 U1508: ECM CAN CIRC 3 U1500: VDC CAN CIRC 3 U1500: VDC CAN CIRC 3 U150E: BCM CAN CIRC 3 U150E: BCM CAN CIRC 3 U1512: HVAC CAN CIRC 3 U1512: HVAC CAN CIRC 3 U1513: METER CAN CIRC 3 U1514: STRG SEN CAN CIRC 3 U1515: ICC SENSOR CAN CIRC 3 U1517: APA CAN CIRC 3 U1518: SIDE RDR L CAN CIRC 3 U1519: SIDE RDR CAN CIRC 3 U1521: SONAR CAN COMMUNICATION 3 U1522: SONAR CAN COMMUNICATION 3 U1523: SONAR CAN COMMUNICATION 2 U1524: AVM CAN COMMUNICATION 3 U1525: AVM CAN COMMUNICATION 3 U1527: CCM CAN CIR 1 U1536: CCM CAN CIR 2 U1530: DR ASSIST BUZZER CAN CIR 1 U1541: DAST 3 CAN CIR 1 U1541: DAST 3 CAN CIR 2 		
5	C1A03: VHCL SPEED SE CIRC			
6	C1A15: GEAR POSITION			
7	C1A00: CONTROL UNIT			

DTC Index

Systems for fail-safe

• A: Vehicle-to-vehicle distance control mode

• B: Conventional (fixed speed) cruise control mode

• C: Distance Control Assist (DCA)

• D: Forward Emergency Braking (FEB)

• E: Predictive Forward Collision Warning (PFCW)

• F: Blind Spot Warning (BSW)

• G: Back-up Collision Intervention (BCI)

DTC			Fail-safe	
CONSULT	On board display	CONSULT display	System	Reference
NO DTC IS DE- TECTED. FUR- THER TESTING MAY BE RE- QUIRED	55	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	_	
C1A0A	41	CONFIG UNFINISHED	A, B, C, D, E, F, G	DAS-69
C1A00	0	CONTROL UNIT	A, B, C, D, E, F, G	DAS-70

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Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)
- G: Back-up Collision Intervention (BCI)

DTC			Fail-safe	
CONSULT	On board display	CONSULT display	System	Reference
C1A01	1	POWER SUPPLY CIR	A, B, C, D, E, F, G	DAS-71
C1A02	2	POWER SUPPLY CIR 2	A, B, C, D, E, F, G	DAS-71
C1A03	3	VHCL SPEED SE CIRC	A, B, C, D, E, F, G	DAS-72
C1A04	4	ABS/TCS/VDC CIRC	A, B, C, D, E, F, G	DAS-74
C1A05	5	BRAKE SW/STOP L SW	A, B, C, D, G	DAS-75
C1A06	6	OPERATION SW CIRC	A, B, C, D, E	DAS-80
C1A13	13	STOP LAMP RLY FIX	A, B, C, D, E, G	DAS-83
C1A14	14	ECM CIRCUIT	A, B, C, D, E	DAS-89
C1A15	15	GEAR POSITION	A, B, C, D, E	DAS-91
C1A24	24	NP RANGE	A, B, C, D, E, F, G	DAS-93
C1A26	26	ECD MODE MALF	A, B, C, D, G	DAS-95
C1A27	27	ECD PWR SUPLY CIR	A, B, C, D, G	DAS-97
C1A33	33	CAN TRANSMISSION ERR	A, B, C, D, E	DAS-99
C1A34	34	COMMAND ERROR	A, B, C, D, E	DAS-100
C1A35	35	APA CIR	A, C, D, E	DAS-101
C1A36	36	APA CAN COMM CIR	A, C, D, E	DAS-102
C1A37	133	APA CAN CIR 2	A, C, D, E	DAS-103
C1A38	132	APA CAN CIR 1	A, C, D, E	DAS-104
C1A39	39	STRG SEN CIR	A, B, C, D, E, F, G	DAS-105
C1B5D	198	FEB OPE COUNT LIMIT	C, D, E	DAS-106
C1B53	84	SIDE RDR R MALF	F, G	DAS-107
C1B54	85	SIDE RDR L MALF	F, G	DAS-108
C1B56	86	SONAR CIRCUIT	G	DAS-109
C1B57	87	AVM CIRCUIT	G	DAS-110
C1B59	184	CCM CIRCUIT	A, B, C, F, G	DAS-111
C1B82	12	DIST SEN OFF-CENTER	A, C, D, E	DAS-112
C1B84	17	DIST SEN MALFUNCTION	A, C, D, E	DAS-113
C1B85	21	DIST SEN ABNORMAL TEMP	A, C, D, E	DAS-114
C1B86	80	DIST SEN PWR SUP CIR	A, C, D, E	DAS-115
C1F01	91	APA MOTOR MALF	A, C, D, E	DAS-117
C1F02	92	APA C/U MALF	A, C, D, E	DAS-118
C1F05	95	APA PWR SUPLY CIR	A, C, D, E	DAS-119
U0121	127	VDC CAN CIR 2	A, B, C, D, E, F, G	DAS-120
U0126	130	STRG SEN CAN CIR 1	A, B, C, D, E, F, G	DAS-121
U0235	144	ICC SENSOR CAN CIRC 1	A, C, D, E	DAS-122
U0401	120	ECM CAN CIR 1	A, B, C, D, E, F, G	DAS-123
U0402	122	TCM CAN CIR 1	A, B, C, D, E, F, G	DAS-124

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< ECU DIAGNOSIS INFORMATION >

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)
- G: Back-up Collision Intervention (BCI)

DTC	;		Fail-safe	
CONSULT	On board display	CONSULT display	System	Reference
U0415	126	VDC CAN CIR 1	A, B, C, D, E, F, G	DAS-125
U0424	156	HVAC CAN CIR 1		DAS-126
U0428	131	STRG SEN CAN CIR 2	A, B, C, D, E, F, G	DAS-127
U1000 ^{NOTE}	100	CAN COMM CIRCUIT	A, B, C, D, E, F, G	DAS-128
U1010	110	CONTROL UNIT (CAN)	A, B, C, D, E, F, G	DAS-130
U150B	157	ECM CAN CIRC 3	A, B, C, D, E, F, G	DAS-131
U150C	158	VDC CAN CIRC 3	A, B, C, D, E, F, G	DAS-132
U150D	159	TCM CAN CIRC 3	A, B, C, D, E, F, G	DAS-133
U150E	160	BCM CAN CIRC 3	A, B, C, D, F, G	DAS-134
U150F	161	AV CAN CIRC 3		DAS-135
U1502	147	ICC SEN CAN COMM CIR	A, C, D, E	DAS-136
U1503	150	SIDE RDR L CAN CIR 2	F, G	DAS-137
U1504	151	SIDE RDR L CAN CIR 1	F, G	DAS-138
U1505	152	SIDE RDR R CAN CIR 2	F, G	DAS-139
U1506	153	SIDE RDR R CAN CIR 1	F, G	DAS-140
U1507	154	LOST COMM (SIDE RDR R)	F, G	DAS-141
U1508	155	LOST COMM (SIDE RDR L)	F, G	DAS-142
U1512	162	HVAC CAN CIRC3		DAS-143
U1513	163	METER CAN CIRC 3	A, B, C, D, E, F, G	DAS-144
U1514	164	STRG SEN CAN CIRC 3	A, B, C, D, E, F, G	DAS-145
U1515	165	ICC SENSOR CAN CIRC 3	A, C, D, E	DAS-146
U1517	167	APA CAN CIRC 3	A, C, D, E	DAS-147
U1518	168	SIDE RDR L CAN CIRC 3	F, G	DAS-148
U1519	169	SIDE RDR R CAN CIRC 3	F, G	DAS-149
U1521	177	SONAR CAN COMMUNICATION 2	G	DAS-150
U1522	178	SONAR CAN COMMUNICATION 1	G	DAS-151
U1523	179	SONAR CAN COMMUNICATION 3	G	DAS-152
U1524	180	AVM CAN COMMUNICATION 1	G	DAS-153
U1525	181	AVM CAN COMMUNICATION 3	G	DAS-154
U1527	185	CCM CAN CIR1	A, B, C, F, G	DAS-155
U153F	186	CCM CAN CIR2	A, B, C, F, G	DAS-156
U1530	183	DR ASSIST BUZZER CAN CIR1		DAS-157
U1540	200	DAST CAN CIR 1	C, D, E	DAS-158
U1541	201	DAST CAN CIR 2	C, D, E	DAS-159

NOTE:

With the detection of "U1000" some systems do not perform the fail-safe operation.

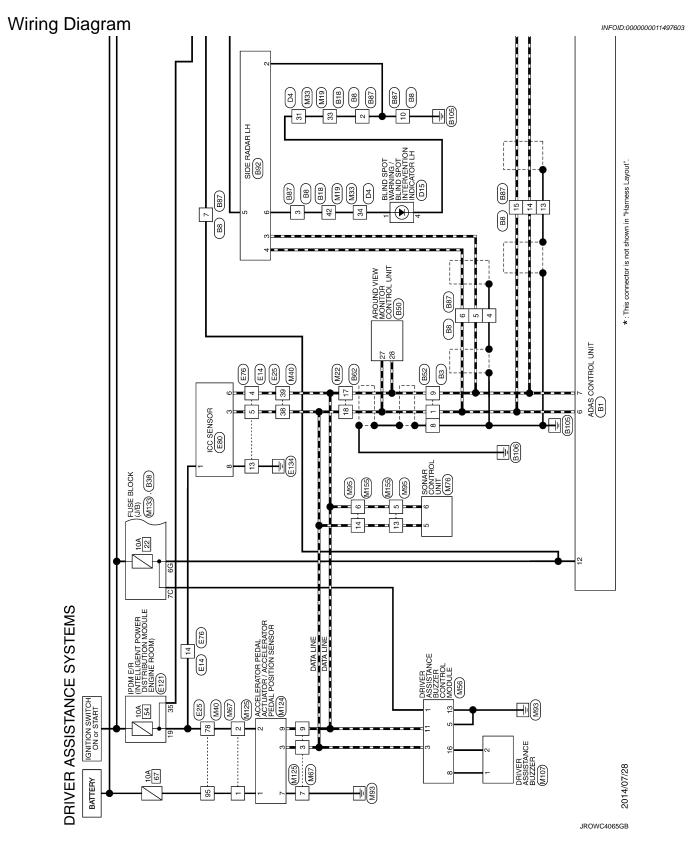
A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the ADAS control unit becomes inoperable.

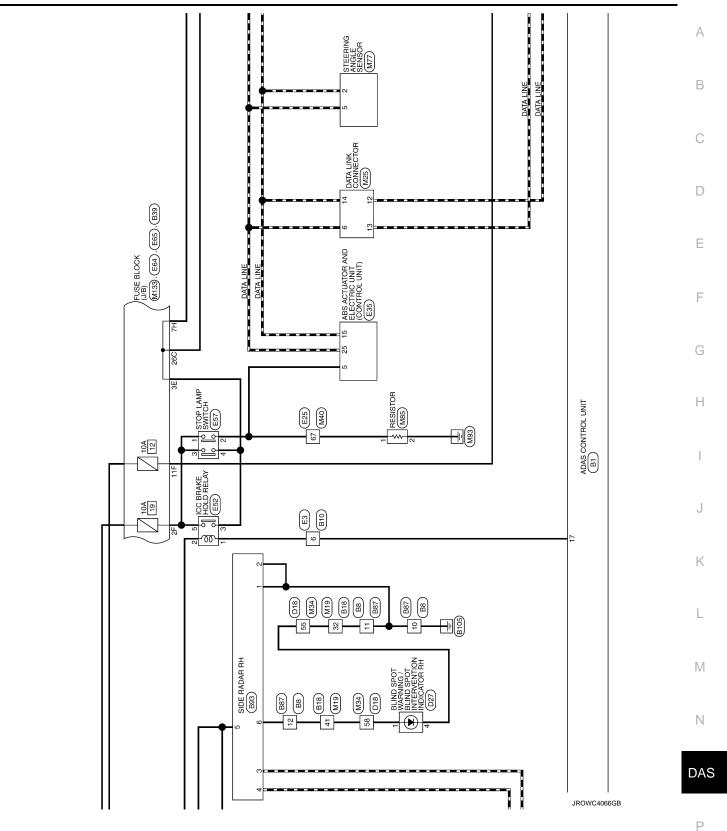
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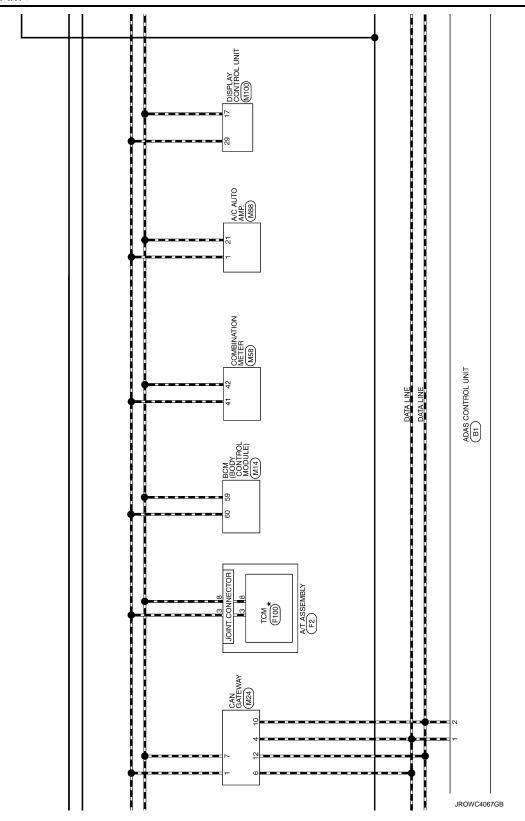
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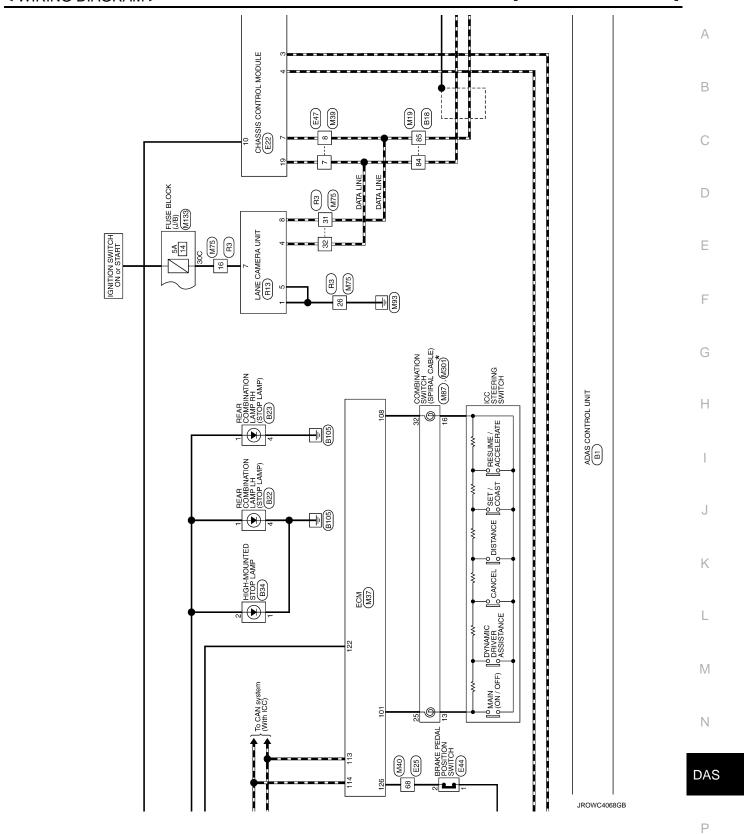
WIRING DIAGRAM

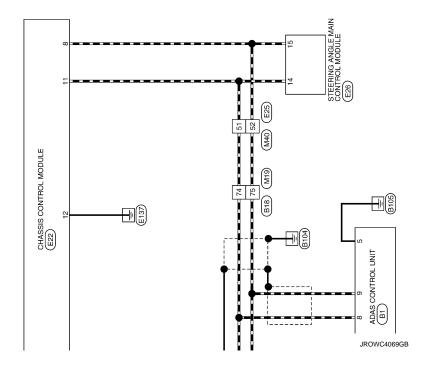
DRIVER ASSISTANCE SYSTEMS











	Connector Name	WIRE TO WIRE	16	Pl		4 8	: œ	
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	٦.	LINIAN INC				8 %	> 2	
	E		Connector No.	Ш	B18	62	BG	1
	N H	l	Connect	Connector Name	WIRE TO WIRE	83	H :	-
8 / 6 5 2 1		1 2 3 4 5 6 7 8	Journal	Connector Type	THB0EW-CS16-TM4	4 8	> 3	
17		9 10 11 12 13 14 15 16				2	2	
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			Ŧ			72	В	
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CAN-L	3 BR					77	a c	,
COON	Ť		1	20		6	2 م	
ITS COMM-H	v 0		No.	No. Wire	Signal Name [Specification]	£ 2	2 _	
SIS COMM-H	7 GR		-	>		82	~	
SIS COMM-L	10 B		7	U		88	<u> </u>	-
IGNITION	11 B		က	7		88	O	
BRAKE HOLD RLY DRIVE SIGNAL	12 SB		4	PT		91	GR	
	13 SHIELD	,	9	ď		94	GR	
	14 P	,	7	>		96	Υ	-
	15 L	,	00	PC		97	>	
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			9	۵ ۽				
7	Connector No.	810	= !	28		Į		
J	Connector Name	WIRE TO WIRE	2 5	၅ ၉		Connector No.	or No.	B22
	Connector Type	THOAEWINH	2 72	<u></u> 5 >		Connect	tor Name	Connector Name REAR COMBINATION LAMP LH(BODY SIDE)
321	٦.	124 00-141	25	- 3		Connec	or Tyne	Connector Type NS04MW-CS
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0 0 0 1	ALT		32	6		Œ	•	
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		24 23 22 21 20 19 18 17 16 15 14 13	35	۵			ı	1 2 2 1
Signal Name [Specification]			ş	. 3		_		1 7 6 +
			37	: 8				
	Terminal Color Of		S C	3 9				
		Signal Name [Specification]	8 €	3 0		Tormin	Torminal Color Of	
	+		; ;	. 6				Signal Name [Specification]
	+	,	4	93		į	MIG	
	Λ 6		45	R	-	-	9	
	10 B		43	BG		2	۵	
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	Connector No.	S :	838	Connector No.	850	Conne			
Connector Name REAR COMBINATION LAMP RH(BODY SIDE)	Connect	Connector Name	FUSE BLOCK (J/B)	Connector Name	AROUND VIEW MONITOR CONTROL UNIT	Conne	- 1	WIRE TO WIRE	
Connector Type NS04MW-CS	Connect	Connector Type	NS10FW-CS	Connector Type	TH40FW-NH	Conne	Connector Type TH80	TH80FW-CS16-TM4	
\$ H	唐 R	N vi	36 12616	優 S		Œ	S. E.		
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Terminal Color Of Signal Name (Specification)	Termina No.	Ferminal Color Of No. Wire	f Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	Terminal No.	al Color Of Wire	Signal Name [Specification]	
Н	16	В		1 B	GND	-	ď		
2 R	2G	>		2 Y	BAT	2	_	•	
	36	BR		3 FG	IGN	က	ĸ	- [With BOSE system]	
4 B -	2G	*	•	H	ACC	9	Μ	- [Without BOSE system]	
	9	O		4	AV COMM (H)	4	SHIELD		
Connector No. B34				20 P	AV COMM (L)	ഗ	υ §	•	
±500	Connector No.	or No	B39	25 SMELD		0 1	8	- [Without BOSE system]	
Connector Name HIGH-MOUNTED STOP LAMP		2		+	CAN-H	. ~	í ×	- [With BOSE system]	
Connector Type TK02MBR-P	Connect	Connector Name	FUSE BLOCK (J/B)	28 P	CAN-L [With ADAS]	00	В	- [With BOSE system]	
4	Connect	Connector Type	TH10FB-NH	28 R	CAN-L [With ASCD]	80	>	- [Without BOSE system]	
	ą					6	SHIELD		
	唐	_	<u> </u>			9	>		
_	SH/	v	7	Connector No.	B52	=	GR	i	
2.1		5	5H4H3H	Connector Name	WIRE TO WIRE	7 5	> (
			חשות ביים וושי		00 7070707	2 ;	¥ 8		
			01/10	Connector Type	NSTBMW-CS	<u>4</u> τ	5 B		
Terminal Color Of				Œ		16	5 >		
No. Wire Signal Name (Specification)	Terminal	I Color Of	f Simul Namo [Specification]	2	100	17	А		
1 B	Š	Wire	ogna i varire [opeoiiication]	ė.	7 0 6 4 0 0 /	18	7		
2 LG .	Đ	۵			8 9 10 11 12 13 14 15 16	19	ď		
	돐 :	- 1				5 20	GR.		
	4 E	¥ :				5 8	× (
	E 5	> -		Terminal Color Of	L	3 8	ı >		
	F	. 9			Signal Name [Specification]	24	: >	,	
	₩	۵		1 L		25	SB		
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	21	23 82	52	44 6	22	97	27	28	58	30	7	5 8	32	8	34	32	36	37	40	41	43	44	46	47	49	20	52	53	22	26	22	28	29	9	61	62	63	2	92	99	89	69	70	71	72							
-	B93	Connector Name SIDE RADAR RH	GW GEOOGA	Connector Type AACUOFB-WP			[الراقية الراقية	(123456)					Signal Name [Specification]	_	RIGHT/LEFT SWITCHING SIGNAL	GROUND	ITS COMM-L	ITS COMM-H		BLIND SPOT WARNING			D4	MIDE TO MIDE	WINE 10 WINE	Connector Type NH60FW-TS12		h	<u> </u>	MSTSS1918181200000000000000000000000000000000	27 N 8 8 8 N N N N N N N N N N N N N N N					olgnal Name [opecification]					- q							,			
	Connector No.	Connector Name	T. control	onnector Lype	Q	至	Ę						0.00	<u> </u>	No. Wire	1 B	2 B	3	4 L	5 GR	e SB			Connector No.	Connector Name		Connector Type	4	F	Ě	2					Terminal Color Of	No. Wire	9	9 8	9 GR	10 Y	11 SHIELD	12 BG	13 L	14 B	L	16 GR	H	ŀ	H	┞	┨
	Connector No. B87	Connector Name WIRE TO WIRE	THE WOOD F	Connector Type THIBPW-NH	1	[1 6 6 7 8 9 1	> +	16 15 14 13 12 11 10 9				<u> </u>	Wire	2 B -	3 BR -	4 SHELD -	E .	L	7 GR -	10 B -	11 B -	12 SB -	13 SHIELD -	14 P -	15 L -			Connector No. B92	Connector Name		Connector Type AAC06FB-WP-5P	q				((2 3 4 5 6))				nal Color Of	No. Wire olgrid Name [opecimication]	2 B GROUND		_	5 GR IGNITION	BR BLIND SPOT WARNI				
DRIVER ASSISTANCE SYSTEMS															1		1				-			-									-		-																	
Y AS	0	SHELD	5 6	ျွန	: او	۔	[ي	쏬	œ	۵.	9	۽ ارد	۱.	ᅵ	≥	ဖျ	_	a.	œ	ပ	፱	띮	38	စ္ကု	≥	이	P	>	≷	œ١	œ	≻	≥	_	BR	38	ı															

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ŀ	4	16 V	H	T	굜	Z3 P	+	+	+	28 B -		- 1	Connector No. E22	Connector Name CHASIS CONTROL MODILIE		Connector Type TH24FW-NH				3 4 5 6 7 8 1011112	· Ç	82)	g g	No. Wire Ognarian Lope annuaring	3 P CANL	4 L CAN-H	5 V DRIVE MODE SELECT SW (UP)	6 G DRIVE MODE SELECT SW (DOWN)	7 W CHASSIS COMM-L	8 W CHASSIS COMM-L	10 G IGN	11 L CHASSIS COMM-H	12 B GROUND	19 L CHASSIS COMM-H														
	Connector No. E3	Connector Name WIRE TO WIRE	Connector Type TH24MW-NH	Q	「」	1	1 2 3 4 5 6	13 14 15 16 17 18 19 19 29 23 24	2			<u>a</u>	Wire	+	9 W	10 B .	11 6 .	12 R .	13 GR -	14 G	15 V		24 SHIELD .		-	Connector No. E14	Opposition Name TAIN OF TAIN O		Connector Type SAA18MB-RS10-SJZ2		123456789	Ľ		26 27 28 29 30				lal	No. Wire Signal Manne [Specification]	- · ·	2 F	. В	F		╀	H	12 R	┝	╀	$\frac{1}{2}$
ŀ	+	25 BR -	27 G -	+	+	+	7	52 P	+	+	+	+	4	\dashv	63 B -	64 Y -	65 BR -	66 GR -	- M 69	D	71 BG -	72 Y -			Connector No. D27	Connector Name BLIND SPOT WARNING/BLIND SPOT INTERVENTION		Connector Type TH04MW-NH	4		K	1.5					Terminal Color Of Signal Name (Specification)	No. Wire olgikal realie [opecification]	1 SB	4 L										
21	Connector No. D15	Connector Name BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR LH	Connector Type TH04MW-NH	d	医	\$ *		4 1				<u>e</u>	No. Wire	\dashv	4 P			Connector No. D18	Construction Name of Total State of	CONTROLL INSIDE WITHE 10 WITHE	Connector Type NH60FW-TS12		þ,			[2] [1] [2] [3] [4] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4				la		\dashv	2 P -	5 BR -		8 W 8	- П 6	10 L	11 GR .	H	L	16 R	L	H	L	╀	φ	-	23 BG	4

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8		9	Ī	TORQUE SENSOR POWER SUPPLY	% 0	
80 > 8 8 0 9		,	<u>د</u> 8	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (R1-R2)		
~ m c o o o		14	۲ J	CHASSIS COMMUNICATION-H	Connector No.	E44
m & 0 0 0	1	15	Ν	CHASSIS COMMUNICATION-L	Connector Name	BRAKE PEDAL POSITION SWITCH
x (1) (2) (1		17	8	BACK UP SIDWL (FROM STHERM) ANGLE SUB CONTROL MODULE)		
		£ 0	g >	BACK UP SIGNAL (PROM STEERING FORCE CONTROL MODULE) FI EXIRAY COMMINICATION H	Connector Type	e S02FL
ł		20	. B	FLEXBAY COMMUNICATION-L	Œ	
		22	GR	BACK UP SIGNAL (TO STEERING ANGLE SUB CONTROL MODULE)		
Н		23	R	CAN WAKE UP	Ŕ.	€
Н	-	24	а	BACK UP SIGNAL (TO STEERING FORCE CONTROL MODULE)		2 1
4	,	25	o l	IONITION POWER SUPPLY (PROM STERRING ANGLE SUB-CONTROL MCCULE)		
┸		3 8	a &	GROUND		
Ļ					Terminal Color Of	
L					No. Wire	Signal Name [Specification]
Ц		Connector No.		E35	1 G	
	•	Connector Name	ą.	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)	2 BG	
_			Т			
_		Connector Type		SAZ30FB-SJZ4-U		
4		ą			Connector No.	E47
4		厚			Connector Name	ne WIRE TO WIRE
		Y S		2 15 17 18 19 20 4	Connector Type	e TH32MW-NH
				,		1
				5 7 8 9 10 13 5	修	
					H.S.	
E26		Terminal	Terminal Color Of	Control of the Contro		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
STE	STEERING ANGLE MAIN CONTROL MODULE	No.	Wire	ognal valle [Specification]		11/118118701711747317417377178178131137
Ä	Connector Type RH24FB-RZ8-L-LH	- 2		GROUND		
		က	O	VALVE BATTERY	Terminal Color Of	r Of
	112131415161251	4	> <u>-</u>	MOTOR BATTERY	No. Wire	
	7 8 1011	0 1	3 8	RR LH WHEEL SENSOR SIGNAL	- 2	,
	14 15 17 18 30	œ	9	RR LH WHEEL SENSOR POWER SUPPLY	e	
	19 20 22 23 24 32	6	æ	FR RH WHEEL SENSOR SIGNAL	4	P -[Without Gateway]
		10	GR	FR RH WHEEL SENSOR POWER SUPPLY	4	
		13	œ	VACUUM SENSOR SIGNAL	7	
ı		15	۵	CAN-L	8	
	signal Name [specification]	17	>	RR RH WHEEL SENSOR SIGNAL	13 G	
L	TORQUE SENSOR MAIN SIGNAL	18	>	RR RH WHEEL SENSOR POWER SUPPLY	15 BR	
STE	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (\$1-53)	19	SB	FR LH WHEEL SENSOR SIGNAL	Н	
4	TORQUE SENSOR SUB SIGNAL	20	. BG	FR LH WHEEL SENSOR POWER SUPPLY	+	BG -
2 2	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (\$1-53)	67 %	ا ر	VACHIM SENSOR POWER SLIBBLY	20 10	

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	Connector No. E80	Connector Name ICC SENSOR	Connector Type AAZ08FB			α α	11	Terminal Color Of	No. Wire Signal Name [Specification]	1 R IGNITION	3 L ITS COMM-H	6 Y ITS COMM-L	8 B GROUND		Т	Connector No. E121	Connector Name FINSINE ROOM:	Carolina in Company	Connector Type TH32FW-NH	Ą	事	H.S.	19 22 23 27 28 29	[35 36 37 38			Ē	Wire	+	+	+	4	- LD	+	+	33 SB .	34 Y .	35 G .	36 SB -	Н	38 BR	+	43 V
	Connector No. E76	Connector Name WIRE TO WIRE	Connector Type SAA18FB-BS10-S.IZ2	987654327	v	25 24 23 22 71 20 19		Terminal Color Of	No. Wire Signal Name [Specification]					+	+	+	7	+	+	+	16 V	+	╁	퓻	23 P .	24 L -	25 V -	26 B -	28 B -														
	Connector No. E64	Connector Name FUSE BLOCK (J/B)	Connector Type NS08FW-CS				Ш	Terminal Color Of	No. Wire Signal Name [Specification]	2E P -	3E V -	4E GR -	9E		Γ	Connector No. E65	Connector Name FUSE BLOCK (J/B)		Connector Type TH12FW-NH	1		2020	당	12F 11F 9F 8F 7F			펼	Wire	4	+	+	7	+	- He	+	7F R -	8F L .	9F L -					
뿕	+	30 ×	+	1	Connector No. E52	Connector Name ICC BRAKE HOLD RELAY	Connector Type MS02FL-M2-LC	•	1.5.	1	2 📉			Terminal Color Of Signal Name [Specification]	+	+	+	> .			Commonder No.	Γ	Connector Name STOP LAMP SWITCH	Connector Type M04FW-LC	4		Ŧ	3 4	0 +	<u> </u>			Terminal Color Of Signal Name [Specification]	wire	1 G - [With ACSD]		. GR	2 LG - [With ICC]	3 BR -	4 V			

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Fig. 19 Fig.
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Signal Name Specification Specificat
Odor Off Signal Name [Specification]
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No. No.
Separate Separate
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BR CR See CR W W See W F W CR See W F W CR CR F W CR F W CR F W CR CR F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W F W W W W W W W W W
No. No.
No. No.
No. No.
P
BR Corrector No. W12
F Corrector No. M22
LG Corrector Name WIRE T Corrector N
Corrector Name Wife T
W Corrector Type TH80MM W W Corrector Type TH80MM
Y Y W W W W W W W W
W W C C C C C C C C
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B
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No. No.
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SB Color Of Colo
Line Color Of Co
LG Terminal Color Of Mare Terminal Color
No Wife
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Connector No. Speak Name Connector No.		w	H	AV COMM (L)	27	GR		
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Corrector Name Corr	Υ .	_		EARTH	29	В		
Corrector Number Control (1974) Cont		\dashv	\dashv	CAN-H	99	>		٦
Convector No. Microsoft Name (Separation) Convector No. Micros			۷ /	KLINE	3	В	-	1
Convector No. Convector No			_	IGN_SW	32	SB		
Corrector Name Connector Name Conn				AV COMM (H)	33	٦	•	
Cornector Name Control Control		NAME OF THE PROPERTY OF THE PR	H	CAN-L	34	BR		Г
Commence Type Thi 2 M		Connector Name CAIN GALEWAY	13 L	CAN-H	32	PI		
Terminal Color Maria Terminal Color of Fig. Terminal Color of Fig	_	г	L	CAN-L	98	Α		
1 2 4 5 6	. 91	1	\vdash	POWER	37	В		
Terminal Color Off Signal Name (Specification) Term					40	H		Γ
1 3 4 5 6 Corrector Name Specification	. ·				4	-		
Terring Corrector Name Corrector N	SB -	1 3 / 5		M33	43		1	Г
Terminal Color O Signal Name (Specification) No. Without DRPO Signal Name (Specification) No. Without DRPO Signal Name (Specification) No. Without DRPO Signal Name (Specification) Signal Name (Spe	. 97	t 1		L Common Charles	44	H		Γ
Triming Cornector Type NeGMAW-1512 A 1 Cornector Type NeGMAW-1512 A 1 Cornector Type NegMaw-1512 A 1 Cornector New New Negman New Ne		6	Connector Name	WIRE TO WIRE	46	H		Γ
Terrinal Color Of			П	NH60MW-TS12	47	L		
Terminal Cotor Of Sayua Name Specification	·		1		49			
1	>		Œ		20	L	,	Γ
1 L CANH HATTERY				١_	52	H		Π
1	SHIELD	1 CANTH	1.0	a particular	23	6	•	Γ
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Corrector Nume Content	BR .	_		CHARCIES I	26	P		Γ
Connector No.	. as	8			24	L		
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10 R CANH No. Wire CANH 10 R CANH 10 CANH 10 R CANH 10 C			Terminal Color Of	Signal Name [Specification]	59	9	-	
10 R CANH B R CANH B R CANH CAN	GR .	Я		ogna rame [opcomparent	9	٦	-	
11 B GND 9 GR		ĸ	Н		61		•	
12 R CANL 9 GR	SB .	8			62		•	
10 W 10 Governor No. W.25 W 10 Gos	- 91	ж	H		63		•	
Corrector No. M25	^		H		49	В		
Cornector No. M/25 12 P 668			Г		65	œ		
Cornector Name DATA LINK CONNECTOR 13 SB 68	. ·	ı	L		99	æ		
Connector Name A.A.A. LINA. CONNECTION 14 LG 669 70 70 70 70 70 70 70 7			H		89	۵		
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19 W/B 19 W/B			H		72	>		Π
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		141404044	t	- [With DRPO]				
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. 22 G C C C C C C C C C C C C C C C C C			+	- IWithout DRPO				
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	£ 4	m 12					Connect	Connector Name WIRE TO WIRE	E TO WIRE
	65	BR		Connector No.	П	M39	Connect	Connector Type TH80	TH80MW-CS16-TM4
	9 9	≻ #		Connector Name		WIRE TO WIRE	Œ		8 2
8 43 25 55 3 40 50 55 55	70	>	,	Connector Type	П	TH32FW-NH		·	ME
3424445151515151 8 48 10 11 12 1	72	SB W		(F				9	5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
				H.S.		3 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
	Connector No.		M37			0 28 27 26 25 24 23 20 20 20 20 20 20 20 20 20 20 20 20 20			
pecification]	Connect	Connector Name	ECM		21	1 2 2 2 2 2 2 2 2 2 2 2	Terminal No.	Color Of Wire	Signal Name [Specification]
П	Connecto	Connector Type	RH24FGY-RZ8-R-LH-Z				2	GR	
	1			Terminal Color Of	Color Of Wire	Signal Name [Specification]	8	۷ >	
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T	9 5	ڻ ا	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)	27	9 8		E 8	≥ >	
	102	9	EVAP CONTROL SYSTEM PRESSURE SENSOR	2 62	W/B		35 55) E8	
	103	Ŀ	SPECIAL POWER SUFFLY LACOR HEAVEN POSITION SPINGOR 2	30	>		98	o	i
	104	œ	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)	31	×		37	В	
	105	7	REFRIGERANT PRESSURE SENSOR	32	97	•	38	٦	-
	106	Ь	FUEL TANK TEMPERATURE SENSOR				39	٨	-
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	108	Υ	SENSOR GROUND (ASCD/ICC STEERING SWITCH)				41	7	
	109	BR	TRANSMISSION RANGE SWITCH				4	BR	
	110	>	ENGINE SPEED SIGNAL OUTPUT				42	8	
	112	>	GNDA PDPRES/FTPRES				46	ပ	
	113	Ь	CAN COMMUNICATION LINE				47	œ	
	114	_	CAN COMMUNICATION LINE				48	SHELD	
	117	>	DATA LINK CONNECTOR				48	В	
	121	PIC	EVAP CANISTER VENT CONTROL VALVE				20	BR	
	122	SB	STOP LAMP SWITCH				51	7	-
	123	В	ECM GROUND				52	Μ	•
	124	В	ECM GROUND				23	o	
	125	œ	POWER SUPPLY FOR ECM				25	>	
	126	BG	BRAKE PEDAL POSITION SWITCH				22	d.	
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ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT [ADAS CONTROL UNIT]

< BASIC INSPECTION >

BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT

Description INFOID:0000000011285914

Always perform the ADAS control unit configuration after replacing the ADAS control unit.

Work Procedure INFOID:0000000011285915

1. ADAS CONTROL UNIT CONFIGURATION

Perform the ADAS control unit configuration with CONSULT. Refer to DAS-67, "Description".

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

Perform the self-diagnosis of ADAS control unit with CONSULT. Check if any DTC is detected. Is any DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to <u>DAS-45</u>, "<u>DTC Index</u>".

>> INSPECTION END NO

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CONFIGURATION (ADAS CONTROL UNIT)

< BASIC INSPECTION >

[ADAS CONTROL UNIT]

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CONFIGURATION (ADAS CONTROL UNIT)

Description INFOID:0000000011285916

• Since vehicle specifications are not included in the ADAS control unit after replacement, it is required to write vehicle specifications with CONSULT.

• Configuration has three functions as follows.

Fu	nction	Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in ADAS control unit to store the specification in CONSULT.
Read/Wille Configuration	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the ADAS control unit.
Manual Configuration		Allows the writing of the vehicle specification into the ADAS control unit by hand.

Work Procedure

1. SAVING VEHICLE SPECIFICATION

(P)WITH CONSULT

Perform "READ CONFIGURATION" to save or print current vehicle specification.

Is vehicle specification saved normally?

YES >> GO TO 2.

NO >> GO TO 4.

REPLACE ADAS CONTROL UNIT

Replace ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

>> GO TO 3.

3.writing vehicle specification

(P)WITH CONSULT

Perform "WRITE CONFIGURATION - Config file" to write vehicle specification.

>> GO TO 6.

4. REPLACE ADAS CONTROL UNIT

Replace ADAS control unit. Refer to DAS-161, "Removal and Installation".

>> GO TO 5.

5.WRITING VEHICLE SPECIFICATION

(E)WITH CONSULT

Select "WRITE CONFIGURATION - Manual selection" and write in the following list at a ADAS control unit depending on a vehicle specification.

Set	ting item
Items	Setting value
POWER TRAIN	NISSAN
FOWER TRAIN	NISSAN HEV
2WD/4WD	2WD
2000/4000	4WD
CAMERA CONTROL UNIT	WITHOUT
CAIVIERA CONTROL UNIT	WITH

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CONFIGURATION (ADAS CONTROL UNIT)

< BASIC INSPECTION > [ADAS CONTROL UNIT]

Sett	ting item
BRAKE TYPE ^{NOTE}	NORMAL
DRAKE TIPE	SPORT

NOTE:

• NORMAL: Front brake caliper 2 piston type

• SPORT: Front brake caliper 4 piston type

>> GO TO 6.

6. OPERATION CHECK

Confirm that each function controlled by ADAS control unit operates normally.

>> WORK END

C1A0A CONFIG UNFINISHED

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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DTC/CIRCUIT DIAGNOSIS

C1A0A CONFIG UNFINISHED

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A0A (41)	CONFIG UNFINISH (Configuration unfinished)	The vehicle specifications of ADAS control unit is incomplete.

POSSIBLE CAUSE

Vehicle specifications for ADAS control unit is incomplete.

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A01" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A01" detected as the current malfunction?

- YES >> Refer to <u>DAS-69</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1.PERFORM CONFIGURATION OF ADAS CONTROL UNIT

Perform configuration of ADAS control unit when DTC "C1A0A" is detected.

>> Perform configuration of ADAS control unit. Refer to <u>DAS-67</u>, "<u>Description</u>".

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C1A00 CONTROL UNIT

DTC Logic (INFOID:000000011285920

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A00 (0)	CONTROL UNIT (Control unit)	ADAS control unit internal malfunction

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1A00" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A00" detected as the current malfunction?

- YES >> Refer to <u>DAS-70</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285921

1. CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC other than "C1A00" is detected in "Self Diagnostic Result" of "ICC/ADAS".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-45, "DTC Index"</u>.
- NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2 [ADAS CONTROL UNIT]

< DTC/CIRCUIT DIAGNOSIS >

C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2

DTC Logic INFOID:0000000011285922

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1A01 (1)	POWER SUPPLY CIR (Power supply circuit)	The battery voltage sent to ADAS control unit remains less than 7.9 V for 5 seconds
C1A02 (2)	POWER SUPPLY CIR 2 (Power supply circuit 2)	The battery voltage sent to ADAS control unit remains more than 19.3 V for 5 seconds

POSSIBLE CAUSE

- Connector, harness, fuse
- ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1 . PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1A01" or "C1A02" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ ADAS".

Is "C1A01" or "C1A02" detected as the current malfunction?

- >> Refer to <u>DAS-71</u>, "<u>Diagnosis Procedure</u>".
- >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident". NO-1
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK ADAS CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of ADAS control unit. Refer to DAS-160, "Diagnosis Procedure". Is the inspection result normal?

- YES >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.
- NO >> Repair or replace the malfunctioning parts.

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C1A03 VEHICLE SPEED SENSOR

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A03 (3)	VHCL SPEED SE CIRC (Vehicle speed sensor circuit)	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) and the A/T vehicle speed sensor signal (output shaft revolution signal) from TCM, received by the ADAS control unit via CAN communication, are inconsistent

POSSIBLE CAUSE

- · Wheel speed sensor
- ABS actuator and electric unit (control unit)
- Vehicle speed sensor A/T (output speed sensor)
- TCM
- ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A03" is displayed with DTC "U1000" or "C1A04", first diagnose the DTC "U1000" or "C1A04".

Is applicable DTC detected?

YES

- >> Perform diagnosis of applicable.
 - U1000: Refer to <u>DAS-128</u>, "DTC Logic"
 - C1A04: Refer to DAS-74, "DTC Logic"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- 3. Drive the vehicle at 30 km/h (19 MPH) or more.

CAUTION:

Always drive safely.

- Stop the vehicle.
- 5. Perform "All DTC Reading" with CONSULT.
- Check if the "C1A03" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A03" detected as the current malfunction?

- YES >> Refer to <u>DAS-72</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285925

1. CHECK DTC PRIORITY

If DTC "C1A03" is displayed with DTC "U1000" or "C1A04", first diagnose the DTC "U1000" or "C1A04". Is applicable DTC detected?

C1A03 VEHICLE SPEED SENSOR [ADAS CONTROL UNIT] < DTC/CIRCUIT DIAGNOSIS > YES >> Perform diagnosis of applicable. U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>" • C1A04: Refer to DAS-74, "DTC Logic" NO >> GO TO 2. 2.CHECK DATA MONITOR Start the engine. Drive the vehicle. 2. Check that the value of "VHCL SPD AT" is almost the same as the value of "VHCL SPEED SE" in "DATA MONITOR" of "ICC/ADAS". **CAUTION:** Be careful of the vehicle speed. Is the inspection result normal? YES >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO >> GO TO 3. 3.CHECK TCM SELF-DIAGNOSIS RESULTS Perform "All DTC Reading". Check if any DTC is detected in "Self Diagnostic Result" of "TRANSMISSION". Is any DTC detected? YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-84, "DTC Index". NO >> GO TO 4. 4.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS Check if any DTC is detected in "Self Diagnostic Result" of "ABS". Is any DTC detected? >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to YES BRC-58, "DTC Index". NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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[ADAS CONTROL UNIT]

C1A04 ABS/TCS/VDC SYSTEM

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A04 (4)	ABS/TCS/VDC CIRC (ABS/TCS/VDC circuit)	If a malfunction occurs in the VDC/TCS/ABS system

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A04" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A04" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A04" detected as the current malfunction?

YES >> Refer to <u>DAS-74</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285927

1. CHECK DTC PRIORITY

If DTC "C1A04" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A05 BRAKE SW/STOP LAMP SW

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A05 (5)	BRAKE SW/STOP L SW (Brake switch/Stop lamp switch)	A mismatch between a stop lamp switch signal and a brake pedal position switch signal received from ECM and a stop lamp signal received from the ABS actuator and electric unit (control unit) continues for 10 seconds or more with vehicle speeds at approximately 40 km/h or more

POSSIBLE CAUSE

- Stop lamp switch circuit
- · Brake pedal position switch circuit
- Stop lamp switch
- · Brake pedal position switch
- Incorrect stop lamp switch installation
- Incorrect brake pedal position switch installation
- ECM
- ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A05" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.perform dtc confirmation procedure

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A05" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

DAS-75

Is "C1A05" detected as the current malfunction?

YES >> Refer to DAS-75, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A05" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.CHECK STOP LAMP SWITCH AND BRAKE PEDAL POSITION SWITCH

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< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Check that "STOP LAMP SW" and "BRAKE SW" operate normally in "DATA MONITOR" of "ICC/ADAS".

Is the inspection result normal?

YES >> GO TO 3.

NO-1 >> When "BRAKE SW" operation is malfunctioning: GO TO 4.

NO-2 >> When "STOP LAMP SW" operation is malfunctioning: GO TO 9.

3.CHECK STOP LAMP SWITCH

Check that "STOP LAMP SW" operate normally in "DATA MONITOR" of "ABS".

Is the inspection result normal?

YES >> GO TO 14.

NO >> GO TO 9.

f 4.CHECK BRAKE PEDAL POSITION SWITCH INSTALLATION

- 1. Turn ignition switch OFF.
- 2. Check brake pedal position switch for correct installation. Refer to BR-22, "Inspection and Adjustment".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Adjust brake pedal position switch installation. Refer to <u>BR-9</u>, "Inspection and Adjustment".

${f 5}$.BRAKE PEDAL POSITION SWITCH INSPECTION

- 1. Disconnect brake pedal position switch connector.
- Check brake pedal position switch. Refer to <u>DAS-78</u>, "Component Inspection (Brake Pedal Position Switch)".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace brake pedal position switch.

6.CHECK BRAKE PEDAL POSITION SWITCH POWER SUPPLY CIRCUIT

- 1. Turn the ignition switch ON.
- 2. Check voltage between brake pedal position switch harness connector and ground.

(-	+)	(-)	Voltage
Brake pedal p	oosition switch		(Approx.)
Connector Terminal		Ground	
E44	1		Battery voltage

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair the harnesses or connectors.

7.CHECK HARNESS BETWEEN BRAKE PEDAL POSITION SWITCH AND ECM

- Turn ignition switch OFF
- 2. Disconnect ECM connector.
- 3. Check for continuity between brake pedal position switch harness connector and ECM harness connector.

Brake pedal position switch		ECM		Continuity
Connector	Terminal	Connector Terminal		Continuity
E114	2	M37	126	Existed

4. Check for continuity between brake pedal position switch harness connector and ground.

Brake pedal	oosition switch		Continuity
Connector	Terminal	Ground	Continuity
E114	2		Not existed

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

8.PERFORM SELF-DIAGNOSIS OF ECM

- Connect all connectors again if the connectors are disconnected.
- 2. Turn ignition switch ON.
- Perform "All DTC Reading".
- 4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to EC-108, "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.

NO >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.

9. CHECK STOP LAMP SWITCH INSTALLATION

- Turn ignition switch OFF.
- Check stop lamp switch for correct installation. Refer to BR-22, "Inspection and Adjustment".

Is the inspection result normal?

YES >> GO TO 10.

NO >> Adjust stop lamp switch installation. Refer to BR-9, "Inspection and Adjustment".

$10.\mathtt{stop}$ Lamp switch inspection

- Disconnect stop lamp switch connector.
- Check stop lamp switch. Refer to DAS-78, "Component Inspection (Stop Lamp Switch)".

Is the inspection result normal?

YES >> GO TO 11.

NO >> Replace stop lamp switch.

11. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

- Turn the ignition switch ON.
- Check voltage between stop lamp switch harness connector and ground.

(+)	(-)	Voltage	
Stop lan	np switch		(Approx.)	
Connector	Terminal	Ground		
E57	1	Glound	Battery voltage	
L37	3		Dattery Voltage	

Is the inspection result normal?

YES-1 >> GO TO 12.

>> Repair the harnesses or connectors.

12.check harness between stop lamp switch and ecm

- Turn ignition switch OFF
- Disconnect ECM, rear combination lamp and high-mounted stop lamp connectors. 2.
- Check for continuity between stop lamp switch harness connector and ECM harness connector.

Stop lamp switch		ECM		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
E57	4	E37	122	Existed	

Check for continuity between stop lamp switch harness connector and ground.

Stop lan	np switch		Continuity
Connector	Terminal	Ground	Outilifulty
E57	4		Not existed

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< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Is the inspection result normal?

YES >> GO TO 13.

NO >> Repair the harnesses or connectors.

13. Check harness between stop lamp switch and abs actuator and electric unit (control unit)

- 1. Disconnect ABS actuator and electric unit (control unit) connector and resistor.
- Check for continuity between stop lamp switch harness connector and ABS actuator and electric unit (control unit) harness connector.

Stop lamp switch		ABS actuator and electric unit (control unit)		Continuity
Connector	Terminal	Connector	Terminal	
E57	2	E35	5	Existed

3. Check for continuity between stop lamp switch harness connector and ground.

Stop lan	np switch		Continuity
Connector	Terminal	Ground	Continuity
E57	2		Not existed

Is the inspection result normal?

YES >> GO TO 14.

NO >> Repair the harnesses or connectors.

14. PERFORM SELF-DIAGNOSIS OF ECM

- 1. Connect all connectors again if the connectors are disconnected.
- 2. Turn ignition switch ON.
- 3. Perform "All DTC Reading".
- 4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to EC-108, "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.

NO >> GO TO 15.

15. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Check if any DTC is detected in "Self Diagnostic Result" of "ABS". Refer to BRC-58, "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.

NO >> Repair the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation"

Component Inspection (Brake Pedal Position Switch)

INFOID:0000000011285930

1. CHECK BRAKE PEDAL POSITION SWITCH

Check for continuity between brake pedal position switch terminals.

Terminal		Condition	Continuity
1	2	When brake pedal is depressed	Not exist- ed
		When brake pedal is released	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace brake pedal position switch.

Component Inspection (Stop Lamp Switch)

INFOID:0000000011285931

1. CHECK STOP LAMP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Check for continuity between stop lamp switch terminals.

Terminal		Condition	Continuity
		When brake pedal is depressed	Existed
1	2	When brake pedal is released	Not exist- ed
		When brake pedal is depressed	Existed
3	4	When brake pedal is released	Not exist- ed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch.

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C1A06 OPERATION SW

DTC Logic

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1A06 (6)	OPERATION SW CIRC (Operation switch circuit)	 Any switch of the ICC steering switch is detected as "ON" continuously for 60 seconds An ON/OFF state judgment of the ICC differs between ECM and ADAS control unit, and the state continues for 2 seconds or more

POSSIBLE CAUSE

- · ICC steering switch circuit
- ICC steering switch
- ECM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A06" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Wait for approximately 5 minutes after turning the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A06" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A06" detected as the current malfunction?

YES >> Refer to <u>DAS-80</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285933

1. CHECK DTC PRIORITY

If DTC "C1A06" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.check icc steering switch

- Turn the ignition switch OFF.
- Disconnect the ICC steering switch connector.
- Check the ICC steering switch. Refer to <u>DAS-81, "Component Inspection"</u>.

Is the inspection result normal?

YES >> GO TO 3.

C1A06 OPERATION SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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NO >> Replace the ICC steering switch.

3. CHECK HARNESS BETWEEN SPIRAL CABLE AND ECM

1. Disconnect the ECM connector.

2. Check for continuity between the spiral cable harness connector and ECM harness connector.

Spira	l cable	ECM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M87	25	M37	101	Existed	
IVIO	32	IVIO	108	LAISIEU	

3. Check for continuity between spiral cable harness connector and ground.

Spira	l cable		Continuity
Connector	Terminal	Ground	Continuity
M87	25	Glound	Not existed
IVIO7	32		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK SPIRAL CABLE

Check for continuity between spiral cable terminals.

Spira	Continuity		
Terr			
13	25	Existed	
15	32	Existed	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace the spiral cable.

5.PERFORM SELF-DIAGNOSIS OF ECM

- 1. Connect the connectors of ICC steering switch and ECM connector.
- 2. Turn the ignition switch ON.
- 3. Perform "All DTC Reading".
- 4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE".

Is any DTC detected?

YES >> Perform self-diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-108, "DTC Index".

NO >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.

Component Inspection

1. CHECK ICC STEERING SWITCH

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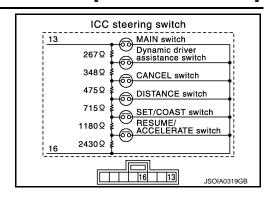
C1A06 OPERATION SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Check resistance between ICC steering switch terminals.

Terminal		Switch operation	Resistance $[\Omega]$
		When pressing MAIN switch	Approx. 0
		When pressing dynamic driver assistance switch	Approx. 267
		When pressing CANCEL switch	Approx. 615
13	15	When pressing DISTANCE switch	Approx. 1090
		When pressing SET/COAST switch	Approx. 1805
		When pressing RESUME/ACCELERATE switch	Approx. 2985
		When all switches are not pressed	Approx. 5415



Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the ICC steering switch.

[ADAS CONTROL UNIT]

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C1A13 STOP LAMP RELAY

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A13 (13)	STOP LAMP RLY FIX (Stop lamp relay fix)	 Stop lamp inactive state continues for 0.3 seconds or more despite the outputting of an ICC sensor ICC brake hold relay drive signal The stop lamp remains ON for 60 seconds or more under the following conditions: Driving at 40 km/h (25 MPH) or more No stop lamp drive signal output from ADAS control unit No brake operation

POSSIBLE CAUSE

- · Stop lamp switch circuit
- · Brake pedal position switch circuit
- · ICC brake hold relay circuit
- Stop lamp switch
- · Brake pedal position switch
- ICC brake hold relay
- Incorrect stop lamp switch installation
- Incorrect brake pedal position switch installation
- ECM
- ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A13" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.perform dtc confirmation procedure (1)

- Start the engine.
- Perform the active test item "STOP LAMP" with CONSULT.
- Perform "All DTC Reading".
- 4. Check if the "C1A13" is detected as the current malfunction in the "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A13" detected as the current malfunction?

YES >> Refer to <u>DAS-84</u>, "<u>Diagnosis Procedure</u>".

NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE (2)

 Drive at the vehicle speed of 40 km/h (25 MPH) or more for approximately 20 seconds or more without the brake pedal depressed.

CAUTION:

Always drive safely.

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< DTC/CIRCUIT DIAGNOSIS >

NOTE:

If it is outside the above condition, repeat step 1.

- 2. Perform "All DTC Reading".
- 3. Check if the "C1A13" is detected as the current malfunction in the "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A13" detected as the current malfunction?

YES >> Refer to <u>DAS-84</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285936

1. CHECK DTC PRIORITY

If DTC "C1A13" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK STOP LAMP SWITCH

Check that "STOP LAMP SW" operate normally in "DATA MONITOR" of "ICC/ADAS".

Is the inspection result normal?

YES >> GO TO 10.

NO >> GO TO 3.

${f 3.}$ check stop lamp switch installation

- 1. Turn ignition switch OFF.
- 2. Check stop lamp switch for correct installation. Refer to BR-22, "Inspection and Adjustment".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Adjust stop lamp switch installation. Refer to BR-9, "Inspection and Adjustment".

4. CHECK STOP LAMP SWITCH

- 1. Disconnect stop lamp switch connector.
- 2. Check stop lamp switch. Refer to DAS-78, "Component Inspection (Stop Lamp Switch)".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace stop lamp switch.

5.CHECK STOP LAMP FOR ILLUMINATION

- 1. Connect stop lamp switch connector.
- 2. Remove ICC brake hold relay.
- Check that the stop lamp is illuminated by depressing the brake pedal to turn the stop lamp ON.

Is the inspection result normal?

YES >> GO TO 6.

NO >> Check the stop lamp circuit, and repair or replace the malfunctioning parts.

6.CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ECM

- Turn the ignition switch OFF.
- 2. Disconnect stop lamp switch, ECM, rear combination lamp, and high-mounted stop lamp connectors.
- 3. Check for continuity between the stop lamp switch harness connector and the ECM harness connector.

Stop lamp switch		ECM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
E57	4	M37	122	Existed	

4. Check for continuity between stop lamp switch harness connector and ground.

< DTC/CIRCUIT DIAGNOSIS >

Stop lan	np switch		Continuity
Connector	Terminal	Ground	Continuity
E57	4		Not existed

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Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair the harnesses or connectors.

7.CHECK ICC BRAKE HOLD RELAY CIRCUIT

- 1. Connect ICC brake hold relay, ECM, rear combination lamp, and high-mounted stop lamp connectors.
- 2. Check that the stop lamp does not illuminate when brake pedal is not depressed.

Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

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8.CHECK ICC BRAKE HOLD RELAY

- Remove ICC brake hold relay.
- Check ICC brake hold relay. Refer to <u>DAS-88</u>, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace ICC brake hold relay. Refer to DAS-88, "Component Inspection"

9. PERFORM SELF-DIAGNOSIS OF ECM

- Connect all connectors again if the connectors are disconnected.
- Turn ignition switch ON.
- 3. Perform "All DTC Reading".
- 4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to EC-108. "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.

NO >> Replace ADAS control unit. Refer to DAS-161, "Removal and Installation".

10. CHECK ICC BRAKE HOLD RELAY POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Remove ICC brake hold relay.
- Check the voltage between ICC brake hold relay harness connector and ground.

(+)	(–)	Voltage
ICC brake	hold relay	Ground	(Approx.)
Connector	Terminal		
E52	2		Battery voltage

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Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair or replace ICC brake hold relay power supply circuit.

11.CHECK HARNESS BETWEEN AND ICC BRAKE HOLD RELAY AND ADAS CONTROL UNIT

- 1. Disconnect ADAS control unit connectors.
- Check for continuity between ICC brake hold relay harness connector and ADAS control unit harness connector.

ICC brake hold relay		ADAS control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E52	1	B1	17	Existed

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DAS

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

3. Check for continuity between ADAS control unit harness connector and ground.

ICC brake	hold relay		Continuity
Connector	Terminal	minal Ground	Continuity
E52	1		Not existed

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair the harnesses or connectors.

12. CHECK ADAS CONTROL UNIT STANDARD VOLTAGE

- 1. Connect all connectors again if the connectors are disconnected.
- 2. Turn ignition switch ON.
- Perform "STOP LAMP" on "Active Test" of "ICC/ADAS", and then check the voltage between ADAS control unit harness connector and ground.

	Terminal	Condition		
(+)	(-)	Condition	Voltage
ADAS co	ontrol unit		Active Test	(Approx.)
Connector	Terminal		item "STOP LAMP"	
B1	17	Ground	Off	Battery voltage
			On	0 V

Is the inspection result normal?

YES >> GO TO 13.

NO >> Replace ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

13. CHECK ICC BRAKE HOLD RELAY POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check the voltage between ICC brake hold relay harness connector and ground.

(-	+)	(–)	Voltage
ICC brake hold relay			(Approx.)
Connector	Terminal	Ground	
E52	5		Battery voltage

Is the inspection result normal?

YES >> GO TO 14.

NO >> Repair or replace ICC brake hold relay power supply circuit.

14. CHECK HARNESS BETWEEN ICC BRAKE HOLD RELAY AND ECM

- 1. Disconnect ECM, rear combination lamp, and high-mounted stop lamp connectors and remove ICC brake hold relay.
- 2. Check for continuity between ICC brake hold relay harness connector and ECM harness connector.

ICC brake hold relay		ECM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E52	3	M37	122	Existed

3. Check for continuity between ICC brake hold relay harness connector and ground.

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

ICC brake	hold relay			<u> </u>	
Connector	Terminal	Ground	Continui	ry	
E52	3		Not exist	ed	
the inspec	tion result n	ormal?			
	GO TO 15.				
	•	arnesses or connect	ors.		
5. CHECK	ICC BRAK	E HOLD RELAY			
	ICC brake h		C 00 "Comp.	anant Inggastian"	
	tion result n	ld relay. Refer to <u>DA</u>	<u>5-88. Comp</u>	onent inspection.	
•	30 TO 16.	ommar:			
NO >> F	Replace ICC	brake hold relay.			
6.CHECK	STOP LAN	IP SWITCH			
heck that "S	STOP LAMP	SW" operate norma	ally in "DATA I	MONITOR" of "ABS".	
•	tion result n	ormal?			
	GO TO 21.				
_	GO TO 17.	ID 014//T011 IN 0741	ATION!		
		IP SWITCH INSTALI	LATION		
	tion switch (ation Refer t	o BR-22, "Inspection and Adjustment".	
	tion result9n			<u> </u>	
	GO TO 18.				
_		-	on.Refer to E	R-9. "Inspection and Adjustment".	
8.CHECK	STOP LAN	IP SWITCH			
		p switch connector.			
	op lamp swi tion result n		<u>s, Componei</u>	nt Inspection (Stop Lamp Switch)".	
•	<u>iion result fil</u> 30 TO 19.	<u>omia:</u>			
NO >> F	Replace stop	o lamp switch.			
9.CHECK	STOP LAN	IP SWITCH POWER	SUPPLY CII	RCUIT	
. Connect	stop lamp s	witch connector.			
. Check th	ie voltage be	etween stop lamp sw	itch harness	connector and ground.	
	-			<u></u>	
		minal			
C+~	(+)	(-)	Voltag (Approx		
Connector	p lamp switch	minal	(, , , , , ,)	" /	
Connector	161	Ground	Pottor	<u></u>	

Is the inspection result normal?

YES >> GO TO 20.

E57

NO >> Repair or replace stop lamp switch power supply circuit.

20. Check harness between stop lamp switch and abs actuator and electric unit (control unit)

Battery

voltage

- Turn the ignition switch OFF.
- 2. Disconnect stop lamp switch, ABS actuator and electric unit (control unit), and resistor connectors.
- Check for continuity between the stop lamp switch harness connector and the ABS actuator and electric unit (control unit) harness connector.

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< DTC/CIRCUIT DIAGNOSIS >

Stop lamp switch		ABS actuator and electric unit (control unit)		Continuity
Connector	Terminal	Connector	Terminal	
E57	2	E35	5	Existed

Check for continuity between stop lamp switch harness connector and ground.

Stop lamp switch			Continuity
Connector	Terminal	Ground	Continuity
E57	2		Not existed

Is the inspection result normal?

YES >> GO TO 21.

NO >> Repair the harnesses or connectors.

21. PERFORM SELF-DIAGNOSIS OF ECM

- 1. Connect all connectors again if the connectors are disconnected.
- 2. Turn ignition switch ON.
- 3. Perform "All DTC Reading".
- 4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to EC-108, "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.

NO >> GO TO 22.

22.perform self-diagnosis of abs actuator and electric unit (control unit)

- 1. Connect all connectors again if the connectors are disconnected.
- 2. Turn ignition switch ON.
- 3. Perform "All DTC Reading".
- 4. Check if any DTC is detected in "Self Diagnostic Result" of "ABS". Refer to BRC-58, "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.

NO >> Replace ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

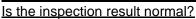
Component Inspection

INFOID:0000000011285937

1. CHECK ICC BRAKE HOLD RELAY

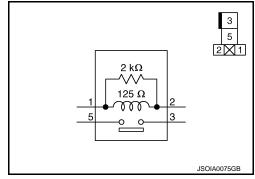
Apply battery voltage to ICC brake hold relay terminals 1 and 2, and then check for continuity under the following conditions.

Terr	minal	Condition	Continuity
		When the battery voltage is applied	Existed
3	5	When the battery voltage is not applied	Not exist- ed



YES >> INSPECTION END

NO >> Replace ICC brake hold relay.



[ADAS CONTROL UNIT]

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C1A14 ECM

DTC Logic INFOID:0000000011285938

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A14 (14)	ECM CIRCUIT (ECM circuit)	If ECM is malfunctioning

POSSIBLE CAUSE

- Accelerator pedal position sensor
- ECM
- ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A14" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Operate the ICC system and drive.

CAUTION:

Always drive safely.

- 3. Stop the vehicle.
- 4. Perform "All DTC Reading" with CONSULT.
- Check if the "C1A14" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A14" detected as the current malfunction?

- >> Refer to DAS-89. "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285939

1. CHECK DTC PRIORITY

If DTC "C1A14" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1A14" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

DAS-89 Revision: 2015 January 2015 Q50

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[ADAS CONTROL UNIT]

NO >> GO TO 3.

3. PERFORM SELF-DIAGNOSIS OF ECM

Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>EC-108</u>, "DTC Index".
- NO >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

C1A15 GEAR POSITION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A15 GEAR POSITION

Description INFOID:0000000011285940

ADAS control unit judges the gear position based on the following signals.

- Current gear position signal transmitted from TCM via CAN communication.
- Value of gear ratio calculated from input speed signal transmitted from TCM via CAN communication.
- Value of gear ratio calculated from the vehicle speed signal transmitted from ABS actuator and electric unit (control unit) via CAN communication.

DTC Logic INFOID:0000000011285941

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A15 (15)	GEAR POSITION (Gear position)	A mismatch between an current gear position signal transmitted from TCM via CAN communication and a gear position calculated by the ADAS control unit continues for approximately 11 minutes or more

POSSIBLE CAUSE

- Input speed sensor
- Vehicle speed sensor A/T (output speed sensor)
- TCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A15" is displayed with DTC "U1000" or "C1A03", or "C1A04" first diagnose the DTC "U1000", "C1A03", or "C1A04"

Is applicable DTC detected?

- >> Perform diagnosis of applicable.
 - U1000: Refer to DAS-128, "DTC Logic"
 - C1A03: Refer to DAS-72, "DTC Logic"
 - C1A04: Refer to <u>DAS-74</u>, "<u>DTC Logic</u>"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the MAIN switch of ICC system ON.
- Drive the vehicle at 10 km/h (6 MPH) or faster for approximately 15 minutes or more. **CAUTION:**

Always drive safely.

- 4. Stop the vehicle.
- 5. Perform "All DTC Reading" with CONSULT.
- Check if "C1A15" is detected as the current malfunction in the "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A15" detected as the current malfunction?

- >> Refer to DAS-92, "Diagnosis Procedure". YES
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

DAS-91 Revision: 2015 January 2015 Q50

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< DTC/CIRCUIT DIAGNOSIS >

Diagnosis Procedure

INFOID:0000000011285942

1. CHECK DTC PRIORITY

If DTC "C1A15" is displayed with DTC "U1000" or "C1A03", or "C1A04" first diagnose the DTC "U1000", "C1A03", or "C1A04"

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128, "DTC Logic"</u>
- C1A03: Refer to DAS-72, "DTC Logic"
- C1A04: Refer to DAS-74, "DTC Logic"

NO >> GO TO 2.

2.CHECK VEHICLE SPEED SIGNAL

Check that "VHCL SPEED SE" operates normally in "DATA MONITOR" of "ICC/ADAS".

CAUTION:

Be careful of the vehicle speed.

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 7.

CHECK GEAR POSITION

Check that "GEAR" operates normally in "DATA MONITOR" of "ICC/ADAS".

CAUTION:

Be careful of the vehicle speed.

Is the inspection result normal?

YES >> GO TO 5. NO >> GO TO 4.

4. CHECK GEAR POSITION SIGNAL

Check that "GEAR" operates normally in "DATA MONITOR" of "TRANSMISSION".

Is the inspection result normal?

YES >> GO TO 5. NO >> GO TO 6.

5. CHECK INPUT SPEED SENSOR SIGNAL

Check that "INPUT SPEED" operates normally in "DATA MONITOR" of "TRANSMISSION".

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> GO TO 6.

6.CHECK TCM SELF-DIAGNOSIS RESULTS

- 1. Perform "All DTC Reading".
- Check if any DTC is detected in "Self Diagnostic Result" of "TRANSMISSION".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-84, "DTC Index".

NO >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.

.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

- 1. Perform "All DTC Reading".
- Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

[ADAS CONTROL UNIT]

C1A24 NP RANGE

DTC Logic INFOID:0000000011285943

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A24 (24)	NP RANGE (NP range)	A mismatch between a shift position signal transmitted from TCM via CAN communication and an current gear position signal continues for 60 seconds or more

POSSIBLE CAUSE

- TCM
- Transmission range switch

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A24" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK DTC REPRODUCE (1)

- Start the engine.
- Turn the MAIN switch of ICC system ON. 2.
- 3. Wait for approximately 5 minutes or more after shifting the selector lever to "P" position.
- 4. Perform "All DTC Reading" with CONSULT.
- Check if the "C1A24" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A24" detected as the current malfunction?

>> Refer to DAS-93, "Diagnosis Procedure". YES

NO >> GO TO 3.

3.CHECK DTC REPRODUCE (2)

- Wait for approximately 5 minutes or more after shifting the selector lever to "N" position.
- 2. Perform "All DTC Reading".
- Check if the "C1A24" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A24" detected as the current malfunction?

- >> Refer to DAS-93, "Diagnosis Procedure". YES
- >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident". NO-1
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

Is applicable DTC detected?

If DTC "C1A24" is displayed with DTC "U1000", first diagnose the DTC "U1000".

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INFOID:0000000011285944

C1A24 NP RANGE

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. CHECK TCM DATA MONITOR

Check that "SLCT LVR POSI" operates normally in "DATA MONITOR" of "TRANSMISSION".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform diagnosis for transmission range switch circuit and repair or replace the malfunctioning parts. Refer to TM-112, "Diagnosis Procedure".

3. PERFORM TCM SELF-DIAGNOSIS

- 1. Perform "All DTC Reading".
- 2. Check if any DTC is detected in "Self Diagnostic Result" of "TRANSMISSION".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-84, "DTC Index".
- NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A26 ECD MODE MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A26 ECD MODE MALFUNCTION

DTC Logic INFOID:0000000011285945

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1A26 (26)	ECD MODE MALF (ECD mode malfunction)	If an abnormal condition occurs with ECD system

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A26" is displayed with DTC "U1000", "U0415" or "U0121", first diagnose the DTC "U1000" "U0415" or "U0121".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to DAS-128, "DTC Logic"
- U0415: Refer to <u>DAS-125</u>, "<u>DTC Logic</u>"
- U0121: Refer to <u>DAS-120</u>, "<u>DTC Logic</u>"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Wait for approximately 1 minute after turning the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1A26" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A26" detected as the current malfunction?

>> Refer to DAS-95, "Diagnosis Procedure". YES

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A26" is displayed with DTC "U1000", "U0415" or "U0121", first diagnose the DTC "U1000" "U0415" or "U0121".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U0415: Refer to <u>DAS-125</u>, "<u>DTC Logic</u>"
- U0121: Refer to DAS-120, "DTC Logic"

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

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INFOID:0000000011285946

C1A26 ECD MODE MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58, "DTC Index".
- NO >> Replace ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

C1A27 ECD POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A27 ECD POWER SUPPLY CIRCUIT

DTC Logic INFOID:0000000011285947

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1A27 (27)	ECD PWR SUPLY CIR (ECD power supply circuit)	ECD system power supply voltage is excessively low

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit) power supply circuit
- ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A27" is displayed with DTC "U1000", "U0415" or "U0121", first diagnose the DTC "U1000" "U0415" or "U0121".

Is applicable DTC detected?

YES

- >> Perform diagnosis of applicable.
 - U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
 - U0415: Refer to <u>DAS-125</u>, "<u>DTC Logic</u>"
 - U0121: Refer to DAS-120, "DTC Logic"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Wait for approximately 1 minute after turning the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1A27" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A27" detected as the current malfunction?

>> Refer to DAS-97, "Diagnosis Procedure".

>> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285948

1. CHECK DTC PRIORITY

If DTC "C1A27" is displayed with DTC "U1000", "U0415" or "U0121", first diagnose the DTC "U1000" "U0415" or "U0121".

Is applicable DTC detected?

>> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "DTC Logic"
- U0415: Refer to DAS-125, "DTC Logic"
- U0121: Refer to <u>DAS-120</u>, "<u>DTC Logic</u>"

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

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C1A27 ECD POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Check power supply circuit of ABS actuator and electric unit (control unit). Refer to <u>BRC-154</u>, "<u>Diagnosis Procedure</u>".

Is the inspection result normal?

- YES >> Perform self-diagnosis of ABS actuator and electric unit (control unit). Refer to BRC-58, "DTC <a href="Index".
- NO >> Repair the harnesses or connectors.

C1A33 CAN TRANSMISSION ERROR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A33 CAN TRANSMISSION ERROR

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A33 (33)	CAN TRANSMISSION ERR (CAN transmission error)	If an error occurs in the CAN communication signal that ADAS control unit transmits to ECM

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A33" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A33" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A33" detected as the current malfunction?

- YES >> Refer to <u>DAS-99</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A33" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1A33" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-45, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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INFOID:0000000011285950

Revision: 2015 January **DAS-99** 2015 Q50

C1A34 COMMAND ERROR

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A34 (34)	COMMAND ERROR (Command error)	If an error occurs in the command signal that ADAS control unit transmits to ECM via CAN communication

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A34" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Operate the ICC system and drive.

CAUTION:

Always drive safely.

- 3. Stop the vehicle.
- 4. Perform "All DTC Reading" with CONSULT.
- 5. Check if the "C1A34" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A34" detected as the current malfunction?

- YES >> Refer to <u>DAS-100</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285952

1. CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1A34" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A35 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A35 ACCELERATOR PEDAL ACTUATOR

DTC Logic

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1A35 (35)	APA CIR (Accelerator pedal actuator circuit)	If the accelerator pedal actuator is malfunctioning

POSSIBLE CAUSE

Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A35" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A35" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A35" detected as the current malfunction?

YES >> Refer to <u>DAS-101</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A35" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

Check if the DTC is detected in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-273, "DTC Index"</u>.

NO >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

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INFOID:0000000011285954

Revision: 2015 January **DAS-101** 2015 Q50

C1A36 ACCELERATOR PEDAL ACTUATOR CAN COMM

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A36 ACCELERATOR PEDAL ACTUATOR CAN COMM

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A36 (36)	APA CAN COMM CIR (Accelerator pedal actuator CAN circuit)	If an error occurs in the signal that the accelerator pedal actuator transmits via ITS communication

POSSIBLE CAUSE

- ADAS control unit
- Accelerator pedal actuator
- ITS communication system

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A36" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1A36" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A36" detected as the current malfunction?

YES >> Refer to <u>DAS-102</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285956

1. CHECK DTC PRIORITY

If DTC "C1A36" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

Check if the DTC is detected in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-273, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A37 ACCELERATOR PEDAL ACTUATOR CAN 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1A37 ACCELERATOR PEDAL ACTUATOR CAN 2

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A37 (133)	APA CAN CIR2 (Accelerator pedal actuator CAN circuit2)	If ADAS control unit detects an error signal that is received from accelerator pedal actuator via ITS communication

POSSIBLE CAUSE

Accelerator pedal actuator malfunction

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A37" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A37" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A37" detected as the current malfunction?

- YES >> Refer to DAS-103, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A37" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.replace accelerator pedal assembly

- Turn the ignition switch OFF.
- Replace the accelerator pedal assembly.
- 3. Turn the ignition switch ON.
- 4. Erases All self-diagnosis results.
- 5. Perform "All DTC Reading" again.
- 6. Check if the DTC "C1A37" is detected in self-diagnosis results of "ICC/ADAS".

Is "C1A37" detected?

Revision: 2015 January

YES >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> INSPECTION END

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2015 Q50

INFOID:0000000011285958

C1A38 ACCELERATOR PEDAL ACTUATOR CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A38 ACCELERATOR PEDAL ACTUATOR CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A38 (132)	APA CAN CIR1 (Accelerator pedal actuator CAN circuit1)	If ADAS control unit detects an error signal that is received from accelerator pedal actuator via ITS communication

POSSIBLE CAUSE

Accelerator pedal actuator malfunction

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A38" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the DCA system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1A38" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A38" detected as the current malfunction?

YES >> Refer to DAS-104, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285960

1. CHECK DTC PRIORITY

If DTC "C1A38" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.REPLACE ACCELERATOR PEDAL ASSEMBLY

- Turn the ignition switch OFF.
- Replace the accelerator pedal assembly.
- Turn the ignition switch ON.
- 4. Erases All self-diagnosis results.
- 5. Perform "All DTC Reading" again.
- 6. Check if the "C1A38" is detected in self-diagnosis results of "ICC/ADAS".

Is "C1A38" detected?

YES >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> INSPECTION END

C1A39 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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DTC Logic INFOID:0000000011285961

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A39 (39)	STRG SEN CIR (Steering angle sensor circuit)	If the steering angle sensor is malfunction

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1A39" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1A39" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A39" detected as the current malfunction?

>> Refer to DAS-105, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A39" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2 .CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58. "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". DAS

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INFOID:0000000011285962

C1B5D FEB OPE COUNT LIMIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B5D FEB OPE COUNT LIMIT

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B5D (198)	FEB OPE COUNT LIMIT (Forward Emergency Braking operation count limit)	FEB system operated 3 times within ignition switch ON.

NOTE:

If "C1B5D" detected, perform the ICC system action test and check ICC system operates normally.

POSSIBLE CAUSE

FEB system operated 3 times within ignition switch ON.

FAIL-SAFE

The following systems are canceled.

- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM ICC SYSTEM ACTION TEST

Perform the ICC system action test.

<u>Is there any malfunction symptom?</u>

YES >> Refer to <u>DAS-106</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011285964

1. DTC CHECK SELF-DIAGNOSIS RESULTS

- 1. Turn ignition switch OFF.
- 2. Turn ignition switch ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1B5D" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is C1B5D detected as current malfunction?

YES >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> Perform ICC system action test. Refer to CCS-96, "Description".

C1B53 SIDE RADAR RIGHT MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B53 SIDE RADAR RIGHT MALFUNCTION

DTC Logic INFOID:0000000011285965

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1B53 (84)	SIDE RDR R MALF (Side radar right malfunction)	ADAS control unit detects that side radar RH has a malfunction.

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B53" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B53" detected as the current malfunction?

- >> Refer to DAS-107, "Diagnosis Procedure". YES
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1B53" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

- >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. YES Refer to DAS-128, "DTC Logic".
- NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-275, "DTC Index" (SIDE RADAR LH), DAS-277, "DTC Index" (SIDE RADAR RH).
- >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

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DAS-107 Revision: 2015 January 2015 Q50 Α

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C1B54 SIDE RADAR LEFT MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B54 SIDE RADAR LEFT MALFUNCTION

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B54 (85)	SIDE RDR L MALF (Side radar left malfunction)	ADAS control unit detects that side radar LH has a malfunction.

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Perform "All DTC Reading" with CONSULT.
- 3. Check if the "C1B54" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B54" detected as the current malfunction?

YES >> Refer to <u>DAS-107</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285968

1. CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1B54" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-275, "DTC Index"</u> (SIDE RADAR LH), <u>DAS-277, "DTC Index"</u> (SIDE RADAR RH).

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B56 SONAR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B56 SONAR CIRCUIT

DTC Logic INFOID:0000000011285969

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B56 (86)	SONAR CIRCUIT MALF (Sonar controller circuit)	ADAS control unit detects that rear sonar control unit circuit has a malfunction.

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B56" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B56" detected as the current malfunction?

- >> Refer to <u>DAS-109</u>, "<u>Diagnosis Procedure</u>". YES
- >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1B56" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SONAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-347, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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DAS-109 Revision: 2015 January 2015 Q50 Α

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C1B57 AVM CIRCUIT

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B57 (87)	AVM CIRCUIT MALF (Around view monitor circuit)	ADAS control unit detects that around view monitor control unit has a malfunction.

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Perform "All DTC Reading" with CONSULT.
- 3. Check if the "C1B57" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B57" detected as the current malfunction?

YES >> Refer to <u>DAS-110</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285972

1. CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1B57" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128. "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "AVM".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>AV-342, "DTC Index"</u>.

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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C1B59 CCM

DTC Logic (INFOID:0000000011285973

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B59 (184)	CCM CIRCUIT (Chassis control module circuit)	ADAS control unit detects that chassis control module has a malfunction.

POSSIBLE CAUSE

- Chassis control module
- ADAS control unit

FAIL-SAFE

The following systems are canceled.

- · Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Operate the ICC system and drive.

CAUTION:

Always drive safely.

- 3. Stop the vehicle.
- 4. Perform "All DTC Reading" with CONSULT.
- 5. Check if the "C1B59" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B59" detected as the current malfunction?

- YES >> Refer to <u>DAS-111</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1B59" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS OF ECM

Check if any DTC is detected in "Self Diagnostic Result" of "CHASSIS CONTROL".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-423, "DTC Index"</u>.

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

Revision: 2015 January **DAS-111** 2015 Q50

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INFOID:000000001128597

C1B82 DISTANCE SENSOR OFF-CENTER

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B82 DISTANCE SENSOR OFF-CENTER

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B82 (12)	DIST SEN OFF-CENTER (Distance sensor off-center)	ICC sensor is off the alignment point

POSSIBLE CAUSE

Radar alignment is off the aiming point

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B82" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B82" detected as the current malfunction?

YES >> Refer to <u>DAS-112</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285976

1. CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

- 1. Perform "All DTC Reading" with CONSULT.
- Check if the "C1A12" is detected as the current malfunction in "Self Diagnostic Result" of "LASER/ RADAR".

Is "C1A12" detected?

YES >> Refer to CCS-104, "DTC Logic".

NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if the "C1B82" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B82" detected?

YES >> Replace ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> INSPECTION END

C1B84 DISTANCE SENSOR

<pre>_ DTC/CIRCI</pre>	JIT DIAGNOSIS >	[ADAS CONTROL UNIT]
	STANCE SENSOR	
DTC Logic		INFOID:000000011285977
DTC DETEC	TION LOGIC	
	11014 20010	
DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
C1B84 (17)	DIST SEN MALFUNCTION (Distance sensor malfunction)	If ICC sensor is malfunctioning
POSSIBLE C	AUSE	
ICC sensor FAIL-SAFE		
The following	systems are canceled. ehicle distance control mode	
• Distance Co	ntrol Assist (DCA)	
	ergency Braking (FEB) orward Collision Warning (PFC	sW)
DTC CONFIR	RMATION PROCEDURE	
1.PERFORM	DTC CONFIRMATION PROC	EDURE
 Start the 6 Perform " 	engine. All DTC Reading" with CONSL	II T
		current malfunction in "Self Diagnostic Result" of "ICC/ADAS".
	tected as the current malfuncti	
	efer to <u>DAS-113, "Diagnosis P</u> check malfunction symptom b	<u>rocedure".</u> before repair: Refer to <u>GI-42, "Intermittent Incident"</u> .
NO-2 >> C	onfirmation after repair: INSPE	CTION END
Diagnosis I	Procedure	INFOID:0000000011285978
1.CHECK AD	AS CONTROL UNIT SELF-D	AGNOSIS RESULTS
	All DTC Reading" with CONSU U1000" is detected other than	ILT. "C1B84" in "Self Diagnostic Result" of "ICC/ADAS".
<u>ls "C1B84" de</u>	tected?	_
VEC D	orform the CAN communication	a system increasion. Defeats DAC 420 "DTC Logic"
	O TO 2.	n system inspection. Refer to <u>DAS-128, "DTC Logic"</u> .

Check if any DTC is detected in "Self Diagnostic Result" "LASER/RADAR"

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-161, "Removal and Installation"</u>.

NO >> Replace ADAS control unit. Refer to DAS-161, "Removal and Installation".

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C1B85 DISTANCE SENSOR ABNORMAL TEMP

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B85 DISTANCE SENSOR ABNORMAL TEMP

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B85 (21)	DIST SEN ABNORMAL TEMP (Distance sensor abnormal temperature)	ICC sensor judges high temperature abnormality

POSSIBLE CAUSE

Temperature around the ICC sensor becomes high

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the ignition switch OFF.
- Wait for 10 minutes or more to cool the ICC sensor.
- 3. Start the engine.
- Turn the ICC system ON.
- 5. Perform "All DTC Reading" with CONSULT.
- 6. Check if the "C1B85" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B85" detected as the current malfunction?

YES >> Refer to <u>DAS-114</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285980

1. CHECK SELF-DIAGNOSIS RESULTS

Check if "C1B85" is detected in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B85" detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-114, "DTC Logic".

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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INFOID:0000000011285982

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

DTC Logic INFOID:0000000011285981

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B86 (80)	DIST SEN PWR SUP CIR (Distance sensor power supply circuit)	ICC sensor power supply voltage is malfunction

POSSIBLE CAUSE

- · Harness, connector, fuse
- ICC sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1B86" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B86" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A86" detected as the current malfunction?

YES >> Refer to <u>DAS-115</u>, "<u>Diagnosis Procedure</u>".

>> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1B86" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B86" is detected as the current malfunction in "Self Diagnostic Result" of "LASER/ RADAR".

Is "C1B86" detected?

YES >> Refer to DAS-115, "DTC Logic".

NO >> GO TO 3.

3.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

DAS

DAS-115 Revision: 2015 January 2015 Q50

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Check if the "C1B86" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS". <u>Is "C1B86" detected?</u>

YES >> Replace ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> INSPECTION END

C1F01 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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C1F01 ACCELERATOR PEDAL ACTUATOR

DTC Logic INFOID:0000000011285983

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1F01 (91)	APA MOTOR MALF (Accelerator pedal actuator mal- function)	If the accelerator pedal actuator motor error is detected

POSSIBLE CAUSE

Accelerator pedal actuator integrated motor malfunction

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1 . PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the ignition switch OFF.
- 2. Turn the ignition switch ON.
- Slowly depress the accelerator pedal completely, and then release it.
- 4. Repeat step 3 several times.
- Perform "All DTC Reading" with CONSULT.
- 6. Check if the DTC "C1F01" is detected as the current malfunction on the self-diagnosis results of "ICC/ ADAS".

Is "C1F01" detected as the current malfunction?

- >> Refer to DAS-117, "Diagnosis Procedure".
- >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident". NO-1
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1F01" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

Check if "C1F01" is detected in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "C1F01" detected?

YES >> Refer to DAS-273, "DTC Index".

>> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

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INFOID:0000000011285984

DAS-117 Revision: 2015 January 2015 Q50

C1F02 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1F02 ACCELERATOR PEDAL ACTUATOR

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1F02 (92)	APA C/U MALF (Accelerator pedal actuator internal malfunction)	If the accelerator pedal actuator integrated control unit error is detected

POSSIBLE CAUSE

Accelerator pedal actuator integrated control unit malfunction

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1F02" is detected as the current malfunction on the self-diagnosis results of "ICC/ADAS".

Is "C1F02" detected as the current malfunction?

YES >> Refer to <u>DAS-118</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285986

1. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1F02" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

Check if "C1F02" is detected in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "C1F02" detected?

YES >> Refer to <u>DAS-273</u>, "<u>DTC Index</u>".

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT [ADAS CONTROL UNIT]

< DTC/CIRCUIT DIAGNOSIS >

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

DTC Logic INFOID:0000000011285987

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1F05 (95)	APA PWR SUPLY CIR (Accelerator pedal actuator power supply circuit)	The battery voltage sent to accelerator pedal actuator remains less than 7.9 V or more than 19.3 V for 5 seconds

POSSIBLE CAUSE

- Harness, connector, or fuse
- Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1F05" is detected as the current malfunction on the self-diagnosis results of "ICC/ADAS".

Is "C1F05" detected as the current malfunction?

>> Refer to DAS-119, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1F05" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

>> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. YES Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.check accelerator pedal actuator self-diagnosis results

Check if "C1F05" is detected in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "C1F05" detected?

YES >> Refer to DAS-273, "DTC Index".

>> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

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INFOID:0000000011285988

DAS-119 Revision: 2015 January 2015 Q50

DAS

U0121 VDC CAN 2

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U0121 (127)	VDC CAN CIR2 (VDC CAN circuit2)	If ADAS control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0121" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U0121" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0121" detected as the current malfunction?

- YES >> Refer to <u>DAS-120</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285990

1. CHECK DTC PRIORITY

If DTC "U0121" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58, "DTC Index".

U0126 STRG SEN CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U0126 STRG SEN CAN 1

DTC Logic INFOID:0000000011285991

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U0126 (130)	STRG SEN CAN CIR1 (Steering sensor CAN circuit1)	If ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0126" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U0126" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0126" detected as the current malfunction?

>> Refer to <u>DAS-121</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0126" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2 .CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58. "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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INFOID:0000000011285992

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DAS-121 Revision: 2015 January 2015 Q50

[ADAS CONTROL UNIT]

U0235 ICC SENSOR CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition		
U0235 (144)	ICC SENSOR CAN CIR1 (ICC sensor CAN circuit1)	If ADAS control unit detects an error signal that is received from ICC sensor via ITS communication		

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0235" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U0235" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0235" detected as the current malfunction?

YES >> Refer to <u>DAS-122</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285994

1. CHECK DTC PRIORITY

If DTC "U0235" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.check icc sensor self-diagnosis results

Check if any DTC is detected in "Self Diagnostic Result" of "LASER/RADAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-63, "DTC Index".

U0401 ECM CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U0401 (120)	ECM CAN CIR1 (ECM CAN circuit1)	If ADAS control unit detects an error signal that is received from ECM via CAN communication

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled.

- · Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0401" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U0401" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0401" detected as the current malfunction?

YES >> Refer to <u>DAS-123</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

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If DTC "U0401" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ECM SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>EC-108. "DTC Index"</u>.

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

INFOID:0000000011285996

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U0402 TCM CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition		
U0402 (122)	TCM CAN CIRC1 (TCM CAN circuit1)	If ADAS control unit detects an error signal that is received from TCM via CAN communication		

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0402" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U0402" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0402" detected as the current malfunction?

- YES >> Refer to <u>DAS-124</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011285998

1. CHECK DTC PRIORITY

If DTC "U0402" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "TRANSMISSION".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-84, "DTC Index".

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[ADAS CONTROL UNIT]

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U0415 VDC CAN 1

DTC Logic INFOID:0000000011285999

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U0415 (126)	VDC CAN CIR1 (VDC CAN circuit1)	If ADAS control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0415" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U0415" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0415" detected as the current malfunction?

>> Refer to DAS-125, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0415" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2 .CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58. "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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INFOID:0000000011286000

DAS

DAS-125 Revision: 2015 January 2015 Q50

[ADAS CONTROL UNIT]

U0424 HVAC CAN CIRCUIT 1

Description INFOID:0000000011286001

ADAS control unit reads status of signal that is transmitted from A/C auto AMP. to ADAS control unit.

DTC Logic INFOID:000000011286002

DTC DETECTION LOGIC

DTC (On board dis- play)	Display Item	Malfunction detected condition
U0424 (156)	HVAC CAN CIR 1 (HVAC CAN circuit 1)	When signal that is transmitted from A/C auto amp. is not the latest information

POSSIBLE CAUSE

A/C auto amp.

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0424" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.perform dtc confirmation procedure

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U0424" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0424" detected as the current malfunction?

YES >> Refer to <u>DAS-126</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286003

1. CHECK DTC PRIORITY

If DTC "U0424" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK A/C AUTO AMP. SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "HVAC".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HAC-37, "DTC Index".

U0428 STRG SEN CAN 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U0428 STRG SEN CAN 2

DTC Logic INFOID:0000000011286004

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U0428 (131)	STRG SEN CAN CIR2 (Steering sensor CAN circuit2)	If ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0428" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U0428" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U0428" detected as the current malfunction?

>> Refer to DAS-127, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0428" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2 .CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58. "DTC Index".

DAS-127

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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INFOID:0000000011286005

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DAS

[ADAS CONTROL UNIT]

U1000 CAN COMM CIRCUIT

Description INFOID:000000011286006

CAN COMMUNICATION

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.

CAN communication signal chart. Refer to <u>LAN-42</u>, "<u>ĆAN COMMUNICATION SYŚTEM</u>: <u>CAN Communication Signal Chart</u>".

ITS COMMUNICATION

- ITS communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with 2 communication lines.
- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

CHASSIS COMMUNICATION

- Chassis communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with 2 communication lines.
- Chassis communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition		
U1000 (100)	CAN COMM CIRCUIT (CAN communication circuit)	If ADAS control unit is not transmitting or receiving CAN communication signal, ITS communication or chassis communication signal for 2 seconds or more		

NOTE:

If "U1000" is detected, first diagnose the CAN communication system.

POSSIBLE CAUSE

- CAN communication system
- ITS communication system
- Chassis communication system

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

NOTE:

With the detection of "U1000" some systems do not perform the fail-safe operation. A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the ADAS control unit becomes inoperable.

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.

U1000 CAN COMM CIRCUIT	
< DTC/CIRCUIT DIAGNOSIS >	[ADAS CONTROL UNIT]
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnost Is "U1000" detected as the current malfunction? YES >> Refer to DAS-123, "Diagnosis Procedure". NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Interm NO-2 >> Confirmation after repair: INSPECTION END	,
Diagnosis Procedure	INFOID:000000011286008
1.PERFORM THE SELF-DIAGNOSIS	
 Turn the ignition switch ON. Turn the MAIN switch of ICC system ON, and then wait for 30 seconds or mode. Perform "All DTC Reading" with CONSULT. Check if the "U1000" is detected as the current malfunction in "Self Diagnost Is "U1000" detected as the current malfunction? 	L
YES >> Refer to LAN-24, "Trouble Diagnosis Flow Chart".	ŀ
NO >> INSPECTION END	F
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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1010 CONTROL UNIT (CAN)

Description INFOID:000000011286009

CAN controller controls the communication of CAN communication signal and ITS communication signal, and the error detection.

DTC Logic (INFOID:000000011286010

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition		
U1010 (110)	CONTROL UNIT (CAN) [Control unit (CAN)]	If ADAS control unit detects malfunction by CAN controller initial diagnosis		

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

${f 1}$.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to DAS-130, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286011

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1010" detected as the current malfunction?

- YES >> Replace the ADAS control unit. Refer to <u>DAS-161</u>. "Removal and Installation".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

U150B ECM CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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DTC Logic INFOID:0000000011286012

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
U150B (157)	ECM CAN CIRC 3 (ECM CAN circuit 3)	ADAS control unit detects an error signal that is received from ECM via CAN communication

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0150B" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U150B" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U150B" detected as the current malfunction?

>> Refer to DAS-131, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0150B" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ECM SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-108. "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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INFOID:0000000011286013

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U150C VDC CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U150C (158)	VDC CAN CIRC 3 (VDC CAN circuit 3)	ADAS control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0150C" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U150C" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U150C" detected as the current malfunction?

- YES >> Refer to DAS-132, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286015

1. CHECK DTC PRIORITY

If DTC "U0150C" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58, "DTC Index".

U150D TCM CAN 3

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[ADAS CONTROL UNIT]

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DTC Logic INFOID:0000000011286016

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U150D (159)	TCM CAN CIRC 3 (TCM CAN circuit 3)	ADAS control unit detects an error signal that is received from TCM via CAN communication

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0150D" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U150D" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U150D" detected as the current malfunction?

>> Refer to DAS-133, "Diagnosis Procedure".

>> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident". NO-1

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0150D" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "TRANSMISSION".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-84, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". Α

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INFOID:0000000011286017

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DAS-133 Revision: 2015 January 2015 Q50

U150E BCM CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U150E (160)	BCM CAN CIRC 3 (BCM CAN circuit 3)	ADAS control unit detects an error signal that is received from BCM via CAN communication

POSSIBLE CAUSE

BCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0150E" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U150E" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U150E" detected as the current malfunction?

YES >> Refer to <u>DAS-134</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286019

1. CHECK DTC PRIORITY

If DTC "U0150E" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK BCM SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "BCM".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BCS-62, "DTC Index".

U150F AV CAN 3

< DTC/CIRCUIT DIAGNOSIS:	>
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[ADAS CONTROL UNIT]

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DTC Logic INFOID:0000000011286020

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
U150F (161)	AV CAN CIRC 3 (AV CAN circuit 3)	ADAS control unit detects an error signal that is received from display control unit via CAN communication

POSSIBLE CAUSE

Display

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0150F" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.perform dtc confirmation procedure

- 1. Start the engine.
- Turn the DCA, LDP, or Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U150F" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U150F" detected as the current malfunction?

YES >> Refer to DAS-135, "Diagnosis Procedure".

>> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident". NO-1

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0150F" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK AV CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "MULTI AV".

Is any DTC detected?

>> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to YES AV-89, "DTC Index".

>> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

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DAS-135 Revision: 2015 January 2015 Q50

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U1502 ICC SENSOR CAN COMM CIRC

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1502 ICC SENSOR CAN COMM CIRC

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1502 (147)	ICC SEN CAN COMM CIR (ICC sensor CAN communication circuit)	ADAS control unit detects an error signal that is received from ICC sensor via CAN communication

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1502" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1502" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1502" detected as the current malfunction?

YES >> Refer to DAS-136, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286023

1. CHECK DTC PRIORITY

If DTC "U1502" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "LASER/RADAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-63, "DTC Index".

U1503 SIDE RDR L CAN 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1503 SIDE RDR L CAN 2

DTC Logic (NFOID:0000000011286024

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1503 (150)	SIDE RDR L CAN CIR 2 (Side radar left CAN circuit 2)	ADAS control unit detects an error signal that is received from side radar LH via ITS communication

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1503" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "DTC Logic"
- U1508: Refer to DAS-142, "DTC Logic"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1503" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1503" detected as the current malfunction?

YES >> Refer to <u>DAS-137</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1503" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U1508: Refer to DAS-142, "DTC Logic"

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-275, "DTC Index".

NO >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.

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U1504 SIDE RDR L CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1504 (151)	SIDE RDR L CAN CIR 1 (Side radar left CAN circuit 1)	ADAS control unit detects an error signal that is received from side radar LH via ITS communication

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1504" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES

- >> Perform diagnosis of applicable.
 - U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
 - U1508: Refer to DAS-142, "DTC Logic"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1504" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1504" detected as the current malfunction?

YES >> Refer to <u>DAS-138</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286027

1. CHECK DTC PRIORITY

If DTC "U1504" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U1508: Refer to DAS-142, "DTC Logic"

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-275, "DTC Index".

U1505 SIDE RDR R CAN 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1505 SIDE RDR R CAN 2

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1505 (152)	SIDE RDR R CAN CIR 2 (Side radar right CAN circuit 2)	ADAS control unit detects an error signal that is received from side radar RH via ITS communication

POSSIBLE CAUSE

Side radar RH

FAIL- SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1505" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "DTC Logic"
- U1507: Refer to <u>DAS-141, "DTC Logic"</u>

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1505" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1505" detected as the current malfunction?

YES >> Refer to <u>DAS-139</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1505" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U1507: Refer to DAS-141, "DTC Logic"

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-277, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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[ADAS CONTROL UNIT]

U1506 SIDE RDR R CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1506 (153)	SIDE RDR R CAN CIR 1 (Side radar right CAN circuit 1)	ADAS control unit detects an error signal that is received from side radar RH via ITS communication

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1506" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

YES

- >> Perform diagnosis of applicable.
 - U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
 - U1507: Refer to <u>DAS-141</u>, "<u>DTC Logic</u>"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1506" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1506" detected as the current malfunction?

YES >> Refer to <u>DAS-138</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286031

1. CHECK DTC PRIORITY

If DTC "U1506" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U1507: Refer to DAS-141, "DTC Logic"

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-277, "DTC Index".

U1507 LOST COMM(SIDE RDR R)

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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U1507 LOST COMM(SIDE RDR R)

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1507 (154)	LOST COMM(SIDE RDR R) [Lost communication (Side radar right)]	ADAS control unit cannot receive ITS communication signal from side radar RH for 2 seconds or more

POSSIBLE CAUSE

- Side radar RH right/left switching signal circuit
- ITS communication system
- Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1507" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1507" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1507" detected as the current malfunction?

- YES >> Refer to DAS-141, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1507" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.check right/left switching signal circuit

Check right/left switching signal circuit. Refer to DAS-363, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to LAN-24, "Trouble Diagnosis Flow Chart".

DAS-141

NO >> Repair right/left switching signal circuit.

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2015 Q50

INFOID:0000000011286033

[ADAS CONTROL UNIT]

U1508 LOST COMM(SIDE RDR L)

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1508 (155)	LOST COMM(SIDE RDR L) [Lost communication (Side radar left)]	ADAS control unit cannot receive ITS communication signal from side radar LH for 2 seconds or more

POSSIBLE CAUSE

- Side radar LH harness connector
- ITS communication system
- Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1508" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.perform dtc confirmation procedure

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U1508" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1508" detected as the current malfunction?

YES >> Refer to DAS-142, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286035

1. CHECK DTC PRIORITY

If DTC "U1508" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SIDE RADAR HARNESS CONNECTOR

- 1. Turn the ignition switch OFF.
- Check the terminals and connectors of the side radar LH for damage, bend and short (unit side and connector side).

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to <u>LAN-24</u>, "<u>Trouble Diagnosis Flow Chart"</u>.

NO >> Repair the terminal or connector.

U1512 HVAC CAN 3

<	DTC/C	IRCUIT [DIAGNOSIS :	>
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[ADAS CONTROL UNIT]

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DTC Logic INFOID:0000000011286036

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1512 (162)	HVAC CAN CIRC 3 (HVAC CAN circuit 3)	ADAS control unit detects an error signal that is received from A/C auto amp. via CAN communication

POSSIBLE CAUSE

A/C auto amp.

FAIL- SAFE

None

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1512" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1512" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1512" detected as the current malfunction?

YES >> Refer to DAS-143, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1512" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK A/C AUTO AMP. SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "HVAC".

Is any DTC detected?

>> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to YES HAC-37, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". DAS

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DAS-143 Revision: 2015 January 2015 Q50

U1513 METER CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1513 (163)	METER CAN CIRC 3 (Meter CAN circuit 3)	ADAS control unit detects an error signal that is received from combination meter via CAN communication

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- · Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1513" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1513" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1513" detected as the current malfunction?

- YES >> Refer to <u>DAS-144</u>, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286039

1. CHECK DTC PRIORITY

If DTC "U1513" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK COMBINATION METER SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "METER/M&A".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to MWI-80, "DTC Index".

U1514 STRG SEN CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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U1514 STRG SEN CAN 3

DTC Logic INFOID:0000000011286040

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
U1514 (164)	STRG SEN CAN CIRC 3 (Steering sensor CAN circuit 3)	ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1514" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1514" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1514" detected as the current malfunction?

>> Refer to DAS-145, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1514" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2 .CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ABS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-58. "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". Ν

INFOID:0000000011286041

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DAS-145 Revision: 2015 January 2015 Q50

[ADAS CONTROL UNIT]

U1515 ICC SENSOR CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1515 (165)	ICC SENSOR CAN CIRC 3 (ICC sensor CAN circuit 3)	ADAS control unit detects an error signal that is received from ICC sensor via ITS communication

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1515" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1515" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1515" detected as the current malfunction?

YES >> Refer to <u>DAS-146</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286043

1. CHECK DTC PRIORITY

If DTC "U1515" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.check icc sensor self-diagnosis results

Check if any DTC is detected in "Self Diagnostic Result" of "LASER/RADAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-63, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1517 ACCELERATOR PEDAL ACTUATOR CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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U1517 ACCELERATOR PEDAL ACTUATOR CAN 3

DTC Logic INFOID:0000000011286044

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1517 (167)	APA CAN CIRC 3 (Accelerator pedal actuator CAN circuit 3)	ADAS control unit detects an error signal that is received from accelerator ped- al actuator via CAN communication

POSSIBLE CAUSE

Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1517" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the MAIN switch of ICC system ON. 2.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1517" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1517" detected as the current malfunction?

- >> Refer to DAS-147. "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1517" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-273, "DTC Index".

>> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

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INFOID:0000000011286045

DAS-147 Revision: 2015 January 2015 Q50

U1518 SIDE RDR L CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1518 (168)	SIDE RDR L CAN CIRC 3 (Side radar left CAN circuit 3)	ADAS control unit detects an error signal that is received from side radar LH via ITS communication

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1518" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES

- >> Perform diagnosis of applicable.
 - U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
 - U1508: Refer to DAS-142, "DTC Logic"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1518" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1518" detected as the current malfunction?

YES >> Refer to <u>DAS-148</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286047

1. CHECK DTC PRIORITY

If DTC "U1518" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U1508: Refer to DAS-142, "DTC Logic"

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-275, "DTC Index".

NO >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1519 SIDE RDR R CAN 3

DTC Logic INFOID:0000000011286048

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
U1519 (169)	SIDE RDR R CAN CIRC 3 (Side radar right CAN circuit 3)	ADAS control unit detects an error signal that is received from side radar RH via ITS communication

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

If DTC "U1519" is detected along with DTC "U1000", or "U1507", first diagnose the DTC "U1000" or "U1507".

- Refer to <u>DAS-128</u>, "<u>DTC Logic</u>" for DTC "U1000".
- Check if "U1000" or "U1507" is detected other than "U1519" in "Self Diagnostic Result" of "ICC/ADAS".

1. CHECK DTC PRIORITY

If DTC "U1519" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to DAS-128, "DTC Logic"
- U1507: Refer to DAS-141, "DTC Logic"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U1519" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1519" detected as the current malfunction?

>> Refer to DAS-149, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1519" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to <u>DAS-128</u>, "<u>DTC Logic</u>"
- U1507: Refer to DAS-141, "DTC Logic"

NO >> GO TO 2.

2.check side radar rh self-diagnosis results

Check if any DTC is detected in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-277, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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DAS-149 Revision: 2015 January 2015 Q50

U1521 SONAR CAN 2

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1521 (177)	SONAR CAN COMMUNICATION 2 (Sonar CAN communication 2)	ADAS control unit detects an error signal that is received from sonar control unit via ITS communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

If DTC "U1521" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to <u>DAS-128</u>, "DTC <u>Logic"</u>.

1. CHECK DTC PRIORITY

If DTC "U1521" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Backup Collision Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1521" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1521" detected as the current malfunction?

YES >> Refer to <u>DAS-150</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286051

1. CHECK DTC PRIORITY

If DTC "U1521" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. CHECK SONAR SYSTEM SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SONAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-347, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1522 SONAR CAN 1

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DTC Logic INFOID:0000000011286052

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
U1522 (178)	SONAR CAN COMMUNICATION 1 (Sonar CAN communication 1)	ADAS control unit detects an error signal that is received from sonar control unit via ITS communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled. Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1522" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the Backup Collision Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U1522" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1522" detected as the current malfunction?

- >> Refer to <u>DAS-151</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY If DTC "U1522" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SONAR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SONAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-347, "DTC Index".

>> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>. NO

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DAS-151 Revision: 2015 January 2015 Q50

U1523 SONAR CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1523 (179)	SONAR CAN COMMUNICATION 3 (Sonar CAN communication 3)	ADAS control unit detects an error signal that is received from sonar control unit via ITS communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled. Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1523" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.perform dtc confirmation procedure

- Start the engine.
- 2. Turn the Backup Collision Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1523" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1523" detected as the current malfunction?

YES >> Refer to <u>DAS-152</u>, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286055

1. CHECK DTC PRIORITY

If DTC "U1523" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SONAR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "SONAR".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-347, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1524 AVM CAN 1

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[ADAS CONTROL UNIT]

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DTC Logic INFOID:000000011286056

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1524 (180)	AVM CAN COMMUNICATION 1 (Around view monitor CAN communication 1)	ADAS control unit detects an error signal that is received from around view monitor control unit via ITS communication

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1524" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1524" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1524" detected as the current malfunction?

- YES >> Refer to <u>DAS-153</u>, "<u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1524" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2. CHECK SONAR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "AVM".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-342, "DTC Index".

DAS-153

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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2015 Q50

U1525 AVM CAN 3

DTC Logic

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition
U1525 (181)	AVM CAN COMMUNICATION 3 (Around view monitor CAN communication 3)	ADAS control unit detects an error signal that is received from around view monitor control unit via ITS communication

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1525" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the Back-up Collision Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1525" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1525" detected as the current malfunction?

YES >> Refer to <u>DAS-154</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286059

1. CHECK DTC PRIORITY

If DTC "U1525" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2. CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "AVM".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-342, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1527 CCM CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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INFOID:000000001128606

U1527 CCM CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board display) Trouble diagnosis name		DTC detecting condition	
U1527 (185)	CCM CAN CIR 1 (Chassis control module CAN circuit 1)	ADAS control unit detects that chassis control module has a malfunction.	

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Perform "All DTC Reading" with CONSULT.
- Check if the "U1527" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1527" detected as the current malfunction?

YES >> Refer to <u>DAS-155</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "U1527" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "CHASSIS CONTROL".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-423</u>, "<u>DTC Index</u>".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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[ADAS CONTROL UNIT]

U153F CCM CAN 2

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition	
U153F (186)	CCM CAN CIR 2 (Chassis control module CAN circuit 2)	ADAS control unit detects that chassis control module has a malfunction.	

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Blind Spot Warning (BSW)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U153F" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the DCA system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U153F" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U153F" detected as the current malfunction?

YES >> Refer to <u>DAS-156</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286063

1. CHECK DTC PRIORITY

If DTC "U153F" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.CHECK CHASSIS CONTROL MODULE SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "CHASSIS CONTROL".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-423</u>, "<u>DTC Index</u>".

NO >> Replace the ADAS control unit. Refer to <u>DAS-161, "Removal and Installation"</u>.

U1530 DR ASSIST BUZZER CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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INFOID:0000000011286065

U1530 DR ASSIST BUZZER CAN 1

DTC Logic INFOID:0000000011286064

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition	
U1530 (183)	DR ASSIST BUZZER CAN CIR 1 (Driver assistance buzzer CAN circuit 1)	ADAS control unit detects an error signal that is received from driver assistance buzzer control module via ITS communication	

POSSIBLE CAUSE

Driver assistance buzzer control module

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1530" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

>> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic". YES

>> GO TO 2. NO

2.perform dtc confirmation procedure

- Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1530" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1530" detected as the current malfunction?

>> Refer to DAS-157, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

If DTC "U1530" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to DAS-128, "DTC Logic".

1. CHECK DTC PRIORITY

If DTC "U1530" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.check driver assistance buzzer control module self-diagnosis results

Check if any DTC is detected in "Self Diagnostic Result" of "BSW/BUZZER".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-281, "DTC Index".

>> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

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DAS-157 Revision: 2015 January 2015 Q50

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U1540 DAST 3 CAN 1

DTC Logic

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition	
U1540 (200)	DAST 3 CAN CIR 1 (Direct adaptive steering 3 controller area network circuit 1)	ADAS control unit detects that chassis control module has a malfunction.	

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following systems are canceled.

- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1540" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Perform "All DTC Reading" with CONSULT.
- 3. Check if the "U1540" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1540" detected as the current malfunction?

YES >> Refer to DAS-158, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286067

1. CHECK DTC PRIORITY

If DTC "U1540" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "CHASSIS CONTROL".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-423, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1541 DAST 3 CAN 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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U1541 DAST 3 CAN 2

DTC Logic INFOID:0000000011286068

DTC DETECTION LOGIC

DTC (On board dis- play)	Trouble diagnosis name	DTC detecting condition	
U1541 (201)	DAST 3 CAN CIR 2 (Direct adaptive steering 3 controller area network circuit 2)	ADAS control unit detects an error signal that is received from chassis control module via CAN communication	

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following systems are canceled.

- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1541" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1541" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1541" detected as the current malfunction?

>> Refer to DAS-159, "Diagnosis Procedure". YES

>> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U1541" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.check bcm self-diagnosis results

Check if any DTC is detected in "Self Diagnostic Result" of "CHASSIS CONTROL".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-423, "DTC Index".

>> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation". NO

DAS-159 Revision: 2015 January 2015 Q50

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000011286070

1. CHECK FUSES

Check if any of the following fuses are blown:

Signal name	Fuse No.	
Ignition power supply	22	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2. CHECK ADAS CONTROL UNIT POWER SUPPLY CIRCUIT

Check voltage between ADAS control unit harness connector and ground.

Terminal			Condition	
(-	+)	(-)	Condition	Voltage (Approx.)
ADAS co	ontrol unit		Ignition	
Connector	Terminal		switch	
		Ground	OFF	0 V
B1	12		ON	Battery volt- age

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the ADAS control unit power supply circuit.

3. CHECK ADAS CONTROL UNIT GROUND CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the ADAS control unit connector.
- 3. Check for continuity between ADAS control unit harness connector and ground.

ADAS co	ontrol unit		Continuity	
Connector	Connector Terminal		Continuity	
B1	B1 5		Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the ADAS control unit ground circuit.

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REMOVAL AND INSTALLATION

ADAS CONTROL UNIT

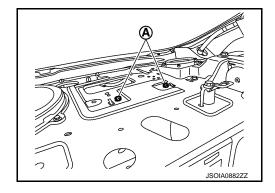
Removal and Installation

REMOVAL

CAUTION:

Before replacing ADAS control unit, perform "Read/Write Configuration" to save or print current vehicle specification. For details, refer to DAS-66, "Work Procedure".

- 1. Remove the rear parcel shelf finisher. Refer to INT-33, "Removal and Installation".
- 2. Remove the trunk finisher front upper Refer to INT-53, "Removal and Installation".
- 3. Disconnect ADAS control unit connector.
- 4. Remove mounting bolts from ADAS control unit.
- 5. Remove ADAS control unit.



INSTALLATION

CAUTION:

Be sure to perform "Read/Write Configuration" when replacing ADAS control unit. For details, refer to <u>DAS-67</u>, "Work <u>Procedure"</u>.

Install in the reverse order of removal.

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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with
 a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
 serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing Battery Terminal

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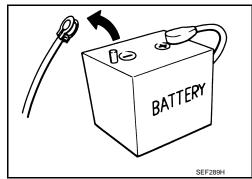
 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
 NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
 NOTE:

The removal of 12V battery may cause a DTC detection error.

Precautions For Harness Repair

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ITS communication uses a twisted pair line. Be careful when repairing it.

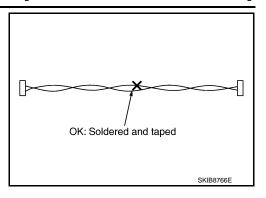
PRECAUTIONS

< PRECAUTION >

[DRIVER ASSISTANCE SYSTEM]

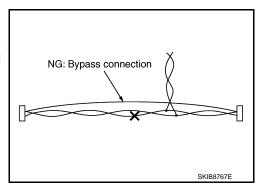
 Solder the repaired area and wrap tape around the soldered area. NOTE:

A fray of twisted lines must be within 110 mm (4.33 in).



 Bypass connection is never allowed at the repaired area. NOTE:

Bypass connection may cause ITS communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



DCA System Service

CAUTION:

 Turn the DCA system OFF in conditions similar to driving, such as free rollers or a chassis dynamometer.

Never use the ICC sensor removed from vehicle. Never disassemble or remodel.

 Erase DTC when replacing parts of DCA system, then check the operation of DCA system after radar alignment if necessary.

PFCW System Service

CAUTION:

 Turn the PFCW/FEB system OFF in conditions similar to driving, such as free rollers or a chassis dvnamometer.

Never use the ICC sensor removed from vehicle. Never disassemble or remodel.

 Erase DTC when replacing parts of ICC system, then check the operation of ICC system after radar alignment if necessary.

LDW/LDP System Service

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test.

- Never use the LDP system when driving with free rollers or a chassis dynamometer.
- Never perform the active test while driving.
- Never disassemble and remodel the lane camera unit.
- Do not use the lane camera unit that is removed from the vehicle.

Blind Spot Warning/Blind Spot Intervention System Service

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test. CAUTION:

- Never use the Blind Spot Intervention system when driving with free rollers or a chassis dynamome-

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Never perform the active test while driving.

DAS-163

Revision: 2015 January

< PRECAUTION >

- · Never disassemble and remodel the lane camera unit.
- Do not use the lane camera unit that is removed from the vehicle.
- Never change BSW initial state ON ⇒ OFF without the consent of the customer.

TO KEEP THE BLIND SPOT WARNING/BLIND SPOT INTERVENTION SYSTEM OPERATING PROPERLY, BE SURE TO OBSERVE THE FOLLOWING ITEMS:

Lane Camera Unit Maintenance

The lane camera unit for the LDW/LDP system is located above the inside mirror. To keep the proper operation of the LDW/LDP systems and prevent a system malfunction, be sure to observe the following:

- Always keep the windshield clean.
- Do not attach a sticker (including transparent material) or install an accessory near the camera unit.
- Do not place reflective materials, such as white paper or a mirror, on the instrument panel. The reflection of sunlight may adversely affect the camera unit capability of detecting the lane markers.
- Do not strike or damage the areas around the camera unit.
- Do not touch the camera lens or remove the screw located on the camera unit.

System Maintenance

The two side radar for the Blind Spot Warning and Blind Spot Intervention systems are located near the rear bumper.

- Always keep the area near the side radar clean.
- Do not attach stickers (including transparent material), install accessories or apply additional paint near the side radar.
- Do not strike or damage the area around the side radar.

BCI system service

INFOID:0000000011286078

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test.

- Never use the BCI system when driving with free rollers or a chassis dynamometer.
- Never perform the active test while driving.
- Never change BCI initial state ON ⇒ OFF without the consent of the customer.

TO KEEP THE BCI SYSTEM OPERATING PROPERLY, BE SURE TO OBSERVE THE FOLLOWING ITEMS:

System Maintenance

The two side radars for the BCI system are located near the rear bumper.

- Always keep the area near the side radars clean.
- Do not attach stickers (including transparent material), install accessories or apply additional paint near the side radars.
- Do not strike or damage the area around the side radars.

System Maintenance

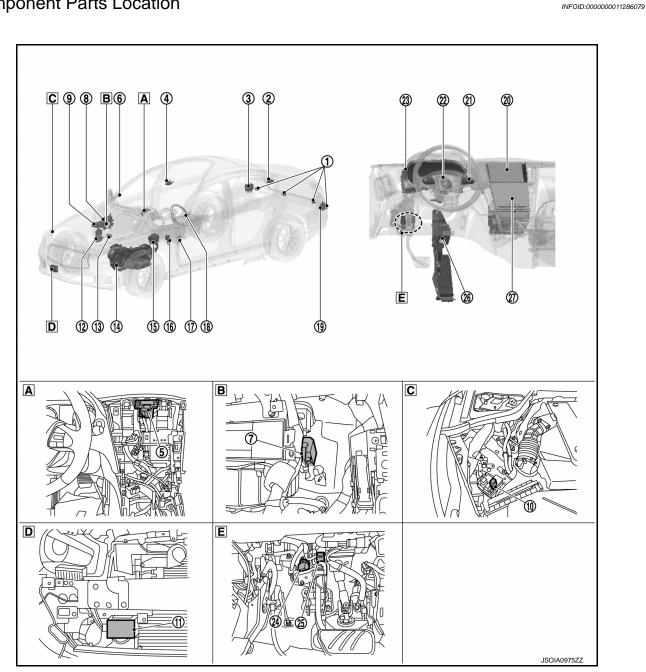
The four rear sonars for the BCI system are located in the rear bumper.

- Always keep the area near the rear sonars clean.
- Do not attach stickers (including transparent material), install accessories or apply additional paint near the rear sonars.
- Do not strike or damage the area around the rear sonars.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



- Instrument panel (Center) Α
- Front bumper (RH)
- Instrument lower panel (RH) В
- Upper side of brake pedal
- Engine room (RH) С

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No.	Component	Description	
1	Sonar sensor (rear)	 When a distance from an obstacle is detected, a distance signal is transmitted to the sonar control unit. Refer to <u>AV-296, "Component Parts Location"</u> for detailed installation location. 	
2	ADAS control unit	 ADAS control unit calculates a target distance between vehicles and a target speed, based on signals received from each sensor and switch to transmit a brake fluid pressure control signal to ABS actuator and electric unit (control unit) via CAN communication ADAS control unit transmits the buzzer output signal to the combination meter via CAN communication ADAS control unit transmits an accelerator pedal feedback force control signal to the accelerator pedal actuator via ITS communication Refer to AV-296, "Component Parts Location" for detailed installation location. 	
3	Side radar RH	Refer to DAS-170, "Side Radar LH/RH"	
4	Lane camera unit	Refer to DAS-169, "Lane Camera Unit"	
(5)	Driver assistance buzzer	Refer to DAS-169, "Driver Assistance Buzzer"	
6	Blind Spot Warning/Blind Spot Intervention indicator RH	Refer to DAS-170, "Blind Spot Warning/Blind Spot Intervention Indicator LH/RH"	
7	Driver assistance buzzer control module	Refer to DAS-169, "Driver Assistance Buzzer Control Module"	
8	Steeling angle main control module	 Direct adaptive steering system is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module. Receives steering reaction force request signal and controls the steering reaction force Refer to STC-36. "Component Parts Location" for detailed installation location. 	
9	ECM	 ECM transmits the accelerator pedal position signal, ICC brake switch signal, stop la switch signal, ICC steering switch signal, etc. to ADAS control unit via CAN commucation Refer to EC-17, "ENGINE CONTROL SYSTEM: Component Parts Location" for detailed installation location. 	
10	ICC brake hold relay	Refer to DAS-168, "ICC Brake Hold Relay"	
11)	ICC sensor	Refer to DAS-167, "ICC Sensor"	
12	ВСМ	 Transmits the turn indicator signal and position light request signal to ADAS control unit via CAN communication Refer to <u>BCS-4</u>, "<u>BODY CONTROL SYSTEM</u>: <u>Component Parts Location</u>" for detailed installation location. 	
13	Sonar control unit	 The warning buzzer outputs by inputting the sensor signal from sonar sensors. Sensor signal that corresponds to the detected distance to an obstacle is transmitted to around view monitor control unit via can communication. Refer to AV-296, "Component Parts Location" for detailed installation location. 	
14)	TCM	 TCM transmits the signal related to A/T control to ADAS control unit. Refer to TM-12, "A/T CONTROL SYSTEM: Component Parts Location" for detailed in stallation location. 	
15	ABS actuator and electric unit (control unit)	 ABS actuator and electric unit (control unit) transmits the vehicle speed signal (wheel speed), stop lamp signal and VDC/TCS/ABS system operation condition to ADAS control unit via CAN communication ABS actuator and electric unit (control unit) controls the brake, based on a brake fluid pressure control signal received from ADAS control unit via CAN communication Refer to BRC-10, "Component Parts Location" for detailed installation location. 	
16	Chassis control module	 Chassis control module transmits the drive mode signal to ADAS control unit via CAN communication Refer to <u>DAS-394</u>, "Component Parts Location" for detailed installation location. 	
17	Buzzer	 The warning buzzer sounds with the signal from the sonar control unit. Refer to <u>AV-296</u>, "<u>Component Parts Location</u>" for detailed installation location. 	
18	Blind Spot Warning/Blind Spot Intervention indicator LH	Refer to DAS-170, "Blind Spot Warning/Blind Spot Intervention Indicator LH/RH"	

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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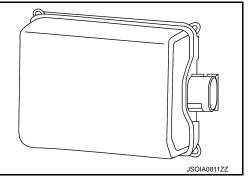
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No.	Component	Description		
19	Side radar LH	Refer to DAS-170, "Side Radar LH/RH"		
20	Display control unit	 Display control unit transmits the system selection signal to ADAS control unit via CAN communication Refer to <u>AV-14</u>, "Component Parts Location" for detailed installation location. 		
21)	Dynamic driver assistance switch (On the ICC steering switch)	ECM receives an ICC steering switch (dynamic driver assistance switch) signal and transmits the signal to ADAS control unit via CAN communication		
22	Steering angle sensor	 Measures the rotation amount, rotation speed, and rotation direction of steering wheel, and then transmits them to ADAS control unit via CAN communication Refer to <u>BRC-10</u>, "Component Parts <u>Location</u>" for detailed installation location. 		
23	Combination meter	Performs the following operations using the signals received from the ADAS control unit via the CAN communication Displays the system operation status using the meter display signal Illuminates the system FEB warning lamp using the FEB warning lamp signal Operates the buzzer using the buzzer output signal Refer to MWI-7, "METER SYSTEM: Component Parts Location" for detailed installation location.		
24)	Stop lamp switch			
25	Brake pedal position switch	Refer to DAS-168, "Brake Pedal Position Switch / Stop Lamp Switch"		
26	Accelerator pedal actuator	Refer to DAS-169, "Accelerator Pedal Actuator"		
27	Integral switch	 Change each system setting by switch operation Refer to <u>AV-14</u>, "<u>Component Parts Location</u>" for detailed installation location. 		

ICC Sensor

• ICC sensor is installed on the back of the front bumper and detects a vehicle ahead by using millimeter waves.

- ICC sensor detects radar reflected from a vehicle ahead by irradiating radar forward and calculates a distance from the vehicle ahead and relative speed, based on the detected signal.
- ICC sensor transmits the presence/absence of vehicle ahead and the distance from the vehicle to ADAS control unit via ITS communication.



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ICC Steering Switch

- ICC steering switch is installed to the steering wheel and allows the driver to operate the ICC system by using this switch.
- ICC steering switch allows the ON/OFF of the Intelligent Cruise Control and the settings of a vehicle speed and distance between vehicles.
- ICC steering switch signal is transmitted to ECM. ECM transmits the signal to the ADAS control unit via CAN
 communication.

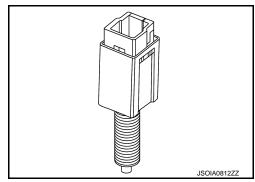
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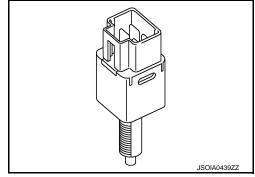
Brake Pedal Position Switch / Stop Lamp Switch

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 Brake pedal position switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.



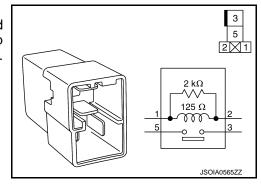
- Brake pedal position switch is turned OFF when depressing the brake pedal.
- Brake pedal position switch signal is input to ECM. Brake pedal position switch signal is transmitted from ECM to ADAS control unit via CAN communication.
- Stop lamp switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.
- Stop lamp switch is turned ON, when depressing the brake pedal.
- Stop lamp switch signal is input to ECM and ABS actuator and electric unit (control unit). Stop lamp switch signals are transmitted from ECM and ABS actuator and electric unit (control unit) to ADAS control unit via CAN communication.



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ICC Brake Hold Relay

- ICC brake hold relay is installed in the engine room (right side).
- When the brake is activated by the system, the ICC brake hold relay turns ON the stop lamp by bypassing the circuit of the stop lamp, according to a signal transmitted from the ADAS control unit.



Combination Meter

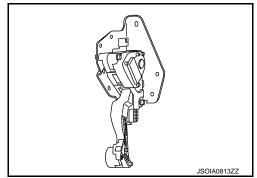
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- Receives meter display signal from ADAS control unit via CAN communication.
- Displays the system status according to a signal received from the ADAS control unit.

Accelerator Pedal Actuator

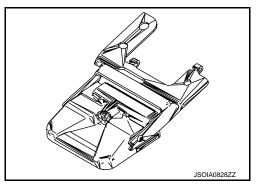
• Installed to the upper portion of the accelerator pedal, this consists of the accelerator pedal actuator together with the accelerator pedal position sensor, and is linked with the accelerator pedal.

 If accelerator pedal feedback force control signal is received from ADAS control unit via ITS communication, it operates the integrated motor for applying control to move the accelerator pedal upward.



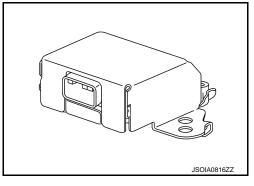
Lane Camera Unit

- · Lane camera unit is located above the inside mirror and detects the lane marker in travel lane.
- Transmits lane marker signal to chassis control module via chassis communication.



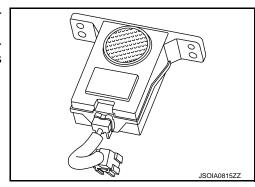
Driver Assistance Buzzer Control Module

- Driver assistance buzzer control module is installed at the behind of glove box.
- When driver assistance buzzer signal is received from the ADAS control unit, the driver assistance buzzer control module transmits the warning buzzer signal to driver assistance buzzer.



Driver Assistance Buzzer

- · Driver assistance buzzer is installed at the behind the display con-
- When a warning buzzer signal is received from the driver assistance buzzer control module, the driver assistance buzzer sounds a buzzer.



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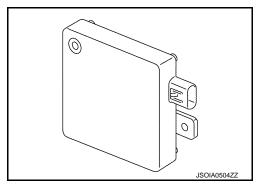
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DAS-169 Revision: 2015 January 2015 Q50

Side Radar LH/RH

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- Installed near the rear bumper, the side radar detects other vehicles beside own vehicle in an adjacent lane.
- Connected with the ADAS control unit via ITS communication, the side radar transmits a vehicle detection signal.
- Receives a Blind Spot Warning/Blind Spot Intervention indicator signal and a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal from the ADAS control unit and transmits an indicator operation signal to the Blind Spot Warning/Blind Spot Intervention indicator LH/RH.
- Since side radar RH and side radar LH have the same specifications, side radar RH has the right/left switching signal circuit for identification.



Blind Spot Warning/Blind Spot Intervention Indicator LH/RH

INFOID:0000000011286090

- Installed on the front door corner cover, the Blind Spot Warning/Blind Spot Intervention indicator warns the driver by lighting/blinking.
- Receives a Blind Spot Warning/Blind Spot Intervention indicator operation signal from the side radar LH/RH and blinks or turns ON/OFF the Blind Spot Warning/Blind Spot Intervention indicator.

Dynamic Driver Assistance Switch

INFOID:0000000011286091

- Dynamic driver assistance switch is integrated in ICC steering switch.
- ICC steering switch is input to ADAS control unit.

NOTE

Dynamic driver assistance switch is shared with following systems.

- Distance Control Assist (DCA)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

SYSTEM

DCA

DCA: System Description

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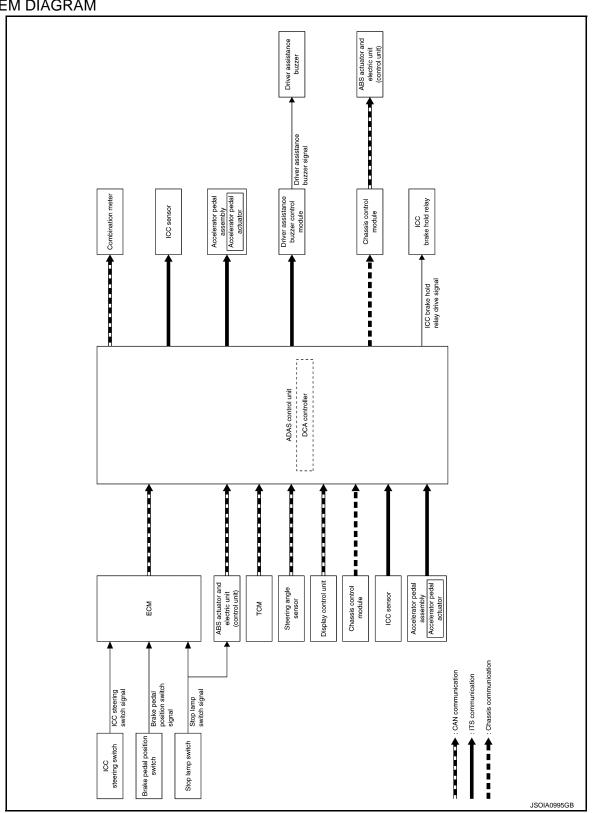
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SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		e	Description	
		Closed throttle position signal		Receives idle position state (ON/OFF)	
	•	Accelerator pedal position signal		Receives accelerator pedal position (angle)	
	CAN com-	Engine speed signal		Receives engine speed	
ECM	munica-	Stop lamp switch sig	nal	Receives an operational state of the brake pedal	
	tion	Brake pedal position	switch signal	Receives an operational state of the brake pedal	
		ICC steering switch signal	Dynamic driver as- sistance switch sig- nal	Receives the operational state of the dynamic driver assistance switch	
		Input speed signal		Receives the number of revolutions of input shaft	
TOM	CAN com-	Current gear position	n signal	Receives a current gear position	
TCM	munica- tion	Shift position signal		Receives a selector lever position	
		Output shaft revoluti	on signal	Receives the number of revolutions of output shaft	
_		ABS malfunction signal		Receives a malfunction state of ABS	
		ABS operation signal		Receives an operational state of ABS	
		ABS warning lamp signal		Receives an ON/OFF state of ABS warning lamp	
		TCS malfunction signal		Receives a malfunction state of TCS	
ABS actuator	CAN com-	TCS operation signal		Receives an operational state of TCS	
and electric unit (control unit)	munica- tion	VDC OFF switch signal		Receives an ON/OFF state of VDC	
(control arm)		VDC malfunction signal		Receives a malfunction state of VDC	
		VDC operation signa	al	Receives an operational state of VDC	
		Vehicle speed signal (ABS)		Receives wheel speeds of four wheels	
		Yaw rate signal		Receives yaw rate acting on the vehicle	
		Stop lamp switch signal		Receives an operational state of the brake pedal	
		Steering angle sense	or malfunction signal	Receives a malfunction state of steering angle sensor	
Steering angle sensor	CAN com- munica- tion	Steering angle sensor signal		Receives the number of revolutions, turning direction of the steering wheel	
	uon	Steering angle speed	d signal	Receives the turning angle speed of the steering wheel	
Display control unit	CAN com- munica- tion	System selection signal		Receives a selection state of each item in "Driver Aids" selected with the integral switch	
ICC sensor	ITS com- munica- tion	ICC sensor signal		Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle	
Accelerator pedal actuator	ITS com- munica- tion	Accelerator pedal actuator operation status signal		Receives an operational state of accelerator pedal actuator	

Output Signal Item

Reception unit	Signal name			Description
ABS actuator and electric unit (control unit)	CAN commu- nication	Brake fluid pressure control signal		Transmits a brake fluid pressure control signal to activates the brake
Combination	CAN commu-	Meter display	Vehicle ahead detection indicator signal	Transmits a signal to display a state of the system on the
meter	nication	signal	DCA system display signal	information display

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Reception unit		Signal name	Description
ICC sensor	ITS commu-	Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
	nication	Steering angle sensor signal	Transmits a steering angle sensor signal received from the steering angle sensor
Accelerator pedal actuator	ITS communication	Accelerator pedal position signal	Transmits an accelerator pedal angle calculated by the ADAS control unit
		Accelerator pedal feedback force control signal	Transmits a target actuation force value calculated by the ADAS control unit
Driver assis- tance buzzer control module	ITS communication Driver assistance buzzer signal		Transmits a driver assistance buzzer signal to active the buzzer
ICC brake hold relay	ICC brake hole	d relay drive signal	Activates the brake hold relay and turns ON the stop lamp

FUNCTION DESCRIPTION

When a vehicle is detected ahead

The vehicle ahead detection indicator comes ON.

When vehicle approaches a vehicle ahead

- If the driver is not depressing the accelerator pedal, the system activates the brakes to decelerate smoothly
 as necessary. If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system.
- If the driver is depressing the accelerator pedal, the system moves the accelerator pedal upward to assist the driver to release the accelerator pedal.

When brake operation by driver is required

The system alerts the driver by a warning chime and blinking the vehicle ahead detection indicator. If the
driver is depressing the accelerator pedal after the warning, the system moves the accelerator pedal upward
to assist the driver to switch to the brake pedal.

CAUTION:

If the vehicle ahead comes to a standstill, the vehicle decelerates to a standstill within the limitations of the system. The system will release brake control with a warning chime once it judges the vehicle is at a standstill. To prevent the vehicle from moving, the driver must depress the brake pedal. [The system will resume control automatically once the system reaches 5 km/h (3 MPH)].

- NOTE:
- Depending on the position of the accelerator pedal, the system may not be able to assist the driver to release the accelerator pedal appropriately.
- When the driver depresses the accelerator pedal even further while the system is moving the accelerator pedal upward, the accelerator pedal control will be canceled.
- When the driver is depressing the accelerator pedal, the brake control by the system is not operated.
- When the driver is depressing the brake pedal, neither the brake control nor the alert by the system operates.
- When the ICC system is set, the DCA system will be canceled.
- Setting of DCA is performed in synchronization with the log-in function of on-board personal assistant. For details of the log-in function, refer to <u>DMS-9</u>, "<u>LOG-IN FUNCTION</u>: <u>System Description</u>".

OPERATION DESCRIPTION

ICC sensor calculates a distance from a vehicle ahead and a relative speed to transmit the ICC sensor signal to the ADAS control unit via ITS communication. Based on the received signal, the ADAS control unit transmits a control signal to the accelerator pedal actuator via ITS communication and to the ABS actuator control unit (control unit) via CAN communication.

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When vehicle approaches a vehicle ahead		If the driver is not depressing the accelerator pedal, the system activates the brakes to decelerate smoothly as necessary	Û Û ♥ ININ JSOIA0222ZZ
		If the driver is depressing the accelerator pedal, the system moves the accelerator pedal upward to assist the driver to release the accelerator pedal	₩ JSOIA0094ZZ
When brake operation by driver is required		The system alerts the driver by a warning chime and blinking the vehicle ahead detection indicator. If the driver is depressing the accelerator pedal after the warning, the system moves the accelerator pedal upward to assist the driver to switch to the brake pedal	Warn by blinking indicator and chime sound JPOIA0170GB
	It transmits th	o brake fluid proceure control signal to the AE	25 actuator and alactric unit (control unit) via
Lieceleration control		e brake fluid pressure control signal to the AE ol module and performs the brake control	oo actuator and electric unit (control unit) via
Accelerator pedal actuation control		e accelerator pedal feedback force control siς on and controls the accelerator pedal in the ι	

Operation Condition

ADAS control unit performs the control when the following conditions are satisfied.

- When the dynamic driver assistance switch is turned to ON.
- When the DCA system display is ON (green). (Dynamic driver assistance icon ON in "Forward" position)
- When the brake pedal is not depressed.
- When the vehicle speed is above approximately 5 km/h (3 MPH).
- · When the vehicle ahead is detected.
- · When the ICC system is not set.

No Operation Condition

The ADAS control unit is not operate when the system is under any conditions of the no operation condition.

- When the brake pedal depressed.
- When the ICC system is set.
- When the system judges that the vehicle comes to a standstill by the system control.
- When the vehicle ahead is not detected.

Operation Cancellation Condition

The ADAS control unit cancels the operation when the system is under any conditions of the operation cancellation condition.

- When the dynamic driver assistance switch is turned to OFF.
- When the system malfunction occurs.
- When ABS or VDC (including the TCS) operates.
- When the VDC is turned OFF.
- When the drive mode select switch is in SNOW position.
- When the front bumper grille near the ICC sensor is dirty and the measurement of the distance between the vehicles becomes difficult.

Operation At The Driver Operation

Give priority to the driver operation in the following situation.

- When the accelerator pedal is depressed again.
- When the brake pedal is depressed.

PFCW

PFCW: System Description

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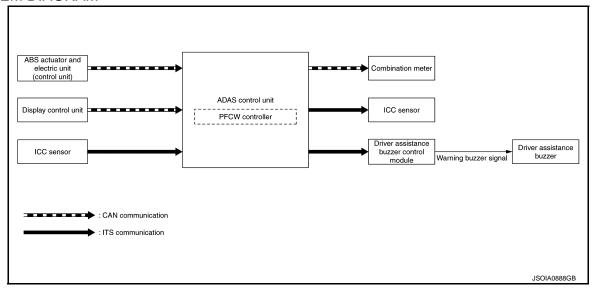
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SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit		Signal name	Description
ABS actuator and electric unit (control unit)	CAN com- munica- tion	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Display control unit	CAN com- munica- tion	System selection signal	Receives a selection state each item in "Driver Aids" selected with the integral switch
ICC sensor	ITS com- munica- tion	ICC sensor signal	Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle

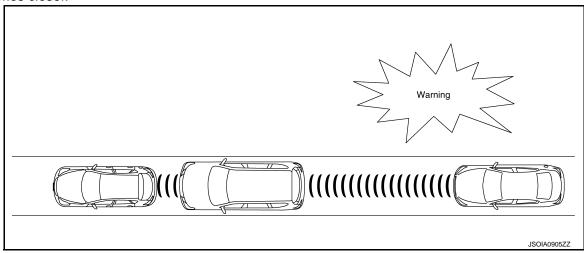
Output Signal Item

Reception unit	Signal name			Description
Combination meter	CAN commu- nication	Meter display signal	Vehicle ahead detection indicator signal	Transmits a signal to display a state of the system on the information display
			PFCW/FEB system indicator signal	Transmits a signal to turn ON the PFCW/FEB system indicator
ICC sensor	ITS commu- nication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
Driver assis- tance buzzer control module	ITS commu- nication	Driver assistance buzzer signal		Transmits a driver assistance buzzer signal to activate the buzzer

DESCRIPTION

• The PFCW system will function when own vehicle is driven at speeds of approximately 5 km/h (3 MPH) and above.

• The Predictive Forward Collision Warning (PFCW) System alerts the driver by the vehicle ahead detection indicator and chime when the distance between own vehicle and a vehicle in front of the vehicle ahead becomes closer.



NOTE:

The PFCW/FEB system shares the diagnosis function with ICC/DCA system.

FUNCTION DESCRIPTION

The distance from the vehicle in front of the vehicle ahead and a relative speed are calculated by using the ICC sensor and an ICC sensor signal is transmitted to the ADAS control unit via ITS communication. When judging the necessity of warning according to the received ICC sensor signal, the ADAS control unit transmits a driver assistance buzzer signal to the chassis control module via ITS CAN and meter display signal to the combination meter via CAN communication.

PFCW Operating Condition

- PFCW/FEB system display (white): ON (Speaker icon ON in "Forward" position)
- Vehicle speed: Approximately 5 km/h (3 MPH) and above.
- Vehicle in front of the vehicle ahead: Detected.

NOTE:

- ON/OFF of PFCW/FEB system is performed with the integral switch.
- Setting of PFCW/FEB is performed in synchronization with the log-in function of on-board personal assistant. For details of the log-in function, refer to DMS-9, "LOG-IN FUNCTION: System Description".

LDW

LDW: System Description

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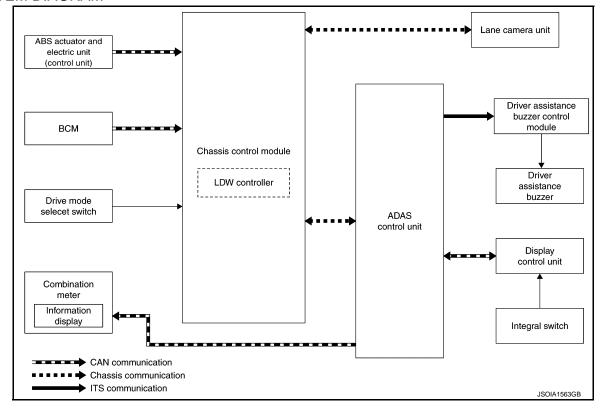
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SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL ITEM

Reception unit	Transmit unit		Signal name	Description
Chassis control module	Lane camera unit	Chassis communi- cation	Detected lane condition signal	Receives detection results of lane marker
			Lane camera unit condition signal	Receives lane camera unit condition
	ABS actuator and electric unit (control unit)	CAN com- munication	Vehicle speed signal (ABS)	Receives wheel speeds of front wheels
	ВСМ	CAN com- munication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
			Front wiper request signal	Receives an operational state of the front wiper
	ADAS control unit	Chassis communi- cation	LDW ON signal	Receives an ON/OFF state of LDW
	Drive mode se- lect switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.

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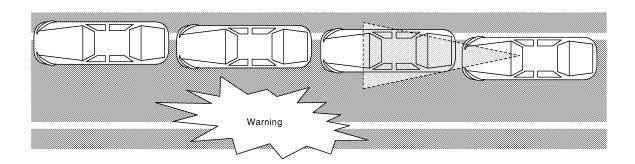
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Reception unit	Transmit unit	Signal name		Description
Lane camera	Chassis control module	Chassis communi- cation	Vehicle speed signal	Transmits a vehicle speed calculated by the chassis control module
unit			Turn indicator signal	Transmits a turn indicator signal received from BCM
Combination meter (Via ADAS con- trol unit)			LDW system display signal	Transmits a signal to display a state of the system on the information display
Driver assistance buzzer control module (Via ADAS control unit)			Warning buzzer signal	Transmits warning buzzer signal to activates the warning buzzer

FUNCTION DESCRIPTION

- Lane Departure Warning (LDW) system provides a lane departure warning function when the vehicle is driven at speeds of approximately 70 km/h (45 MPH) or more.
- When the vehicle approaches either the left or the right side of the traveling lane, a warning will sound and LDW system display on the combination meter will blink to alert the driver.
- The warning does not occur during turn signal operation (Lane change side).
- The warning function will stop when the vehicle returns inside of the lane markers.

EXAMPLE



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When the vehicle approaches the right lane marker, the driver is alerted by the buzzer and the blinking of LDW system display.

NOTE:

For details of LDW system indication on the combination meter, refer to <u>DAS-200, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch"</u>.

OPERATION DESCRIPTION

- LDW system is controlled by chassis control module and ADAS control unit.
- When the system is turned ON by operating the warning systems switch, ADAS control transmits LDW ON signal to combination meter via CAN communication.
- Lane camera unit monitors lane markers of the traveling lane and transmits the detected lane condition signal to chassis control module via chassis communication.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, chassis control module controls the following items.
- Transmits LDW system display signal and warning buzzer signal to ADAS control unit via chassis communication
- ADAS control unit controls the following items according to the signals from chassis control module.
- Transmits warning buzzer signal to warning buzzer through driver assistance buzzer control module via ITS communication.
- Transmits LDW system display signal to combination meter via CAN communication.
- Combination meter displays LDW system display on the vehicle information display.

OPERATING CONDITION

- LDW system display (white): ON (Speaker icon ON in "Lane" position)
- Vehicle speed: approximately 70 km/h (45 MPH) or more
- Turn indicator signal: After 2 seconds or more from turned OFF

NOTE:

- LDW system ON/OFF can be set on the integral switch.
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (37 MPH)
- LDP system is OFF. (Dynamic driver assistance icon OFF in "Lane" position).
- LDW system may not function properly, depending on the situation. Refer to DAS-217, "Precautions for Lane <a href="Departure Warning/Lane Departure Prevention"

LDP

LDP: System Description

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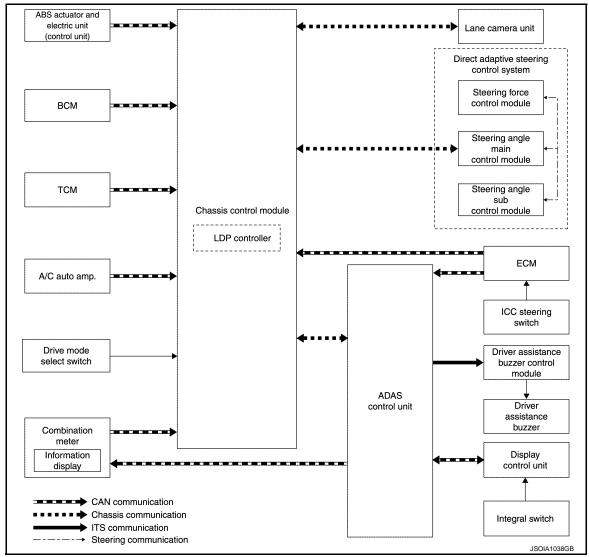
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SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL ITEM

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Reception unit	Transmit unit		Signal name	Description
	Lane camera unit	Chassis	Detected lane condition signal	Receives detection results of lane marker
		communi- cation	Lane camera unit condition signal	Receives lane camera unit condition
	Steering angle main control	Chassis communication	Direct adaptive steering status signal	Receives status of Direct Adaptive Steering
			Direct adaptive steering malfunction signal	Receives a malfunction state of Direct Adaptive Steering
	module		Steering force actuator status signal	Receives torque state of steering force actuator.
			ALC permission signal	Receives a permission state of the ALC.
			ABS malfunction signal	Receives a malfunction state of ABS
			ABS operation signal	Receives an operational state of ABS
			VDC OFF switch signal	Receives an ON/OFF state of VDC
			VDC malfunction signal	Receives a malfunction state of VDC
	ABS actuator	CAN com-	VDC operation signal	Receives an operational state of VDC
	and electric unit (control unit)	munication	EBD operation signal	Receives an operational state of EBD
			Vehicle speed signal (ABS)	Receives wheel speeds of front wheels
Chassis control			Yaw rate signal	Receives yaw rate acting on the vehicle
module			Side G sensor signal	Receives lateral G acting on the vehicle
			Stop lamp switch	Receives stop lamp switch state
	ECM	CAN com- munication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
	BCM	CAN com- munication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
			Front wiper request signal	Receives an operational state of the front wiper
	ТСМ	CAN com- munication	Current gear position signal	Receives a current gear position
			Shift position signal	Receives a selector lever position
	A/C auto amp.	CAN com- munication	Ambient temperature signal	Receives an ambient temperature
	ADAS control unit	Chassis communi- cation	LDP ON signal	Receives an ON/OFF state of LDP
	Combination meter	CAN com- munication	Parking brake switch signal	Receives an operational state of the parking brake
	Drive mode se- lect switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.

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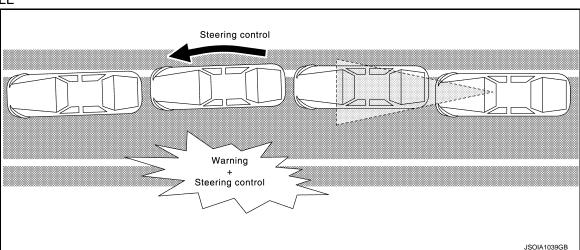
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Reception unit	Transmit unit		Signal name	Description
Steering angle main control module		Chassis communi- cation	Steering angle request signal	Transmits steering angle request signal
Lane camera		Chassis communi-	Vehicle speed signal	Transmits a vehicle speed calculated by the chassis control module
unit		cation	Turn indicator signal	Transmits a turn indicator signal received from BCM
Combination meter (Via ADAS con- trol unit)	Chassis control module	Chassis	LDP system display signal	Transmits a signal to display a state of the system on the information display
Driver assis- tance buzzer control module (Via ADAS con- trol unit)		communi- cation	Warning buzzer signal	Transmits warning buzzer signal to activates the warning buzzer

FUNCTION DESCRIPTION

- Lane Departure Prevention (LDP) system provides a lane departure warning and steering control assistance when the vehicle is driven at speeds of approximately 70 km/h (45 MPH) or more.
- When the vehicle approaches either the left or the right side of the traveling lane, a warning sounds and the LDP system display on the combination meter blinks to alert the driver. Then, the LDP system automatically applies the steering to help assist the driver to return the vehicle to the center of the traveling lane.
- Warning and steering control are not performed during turn signal operation (lane change side).
- The warning and assist functions stop when the vehicle returns to a position inside of the lane marker.

EXAMPLE



When the vehicle approaches the right lane marker, the driver is alerted by the buzzer and the blinking of LDP system display. Simultaneously, the steering is controlled to return the vehicle to the lane.

NOTE:

For details of LDP system indication on the combination meter, refer to DAS-206, "DCA/LDP/BLIND SPOT INTERVENTION: Switch Name and Function".

OPERATION DESCRIPTION

- LDP system is controlled by chassis control module and ADAS control unit.
- When the system is turned ON by dynamic driver assistance switch, ADAS control unit transmits LDP ON signal to chassis control module via chassis communication.
- Lane camera unit monitors lane markers of the traveling lane and transmits the detected lane condition signal to chassis control module via chassis communication.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, chassis control module controls the following items.
- Transmits LDP system display signal and warning buzzer signal to ADAS control unit via chassis communication.

DAS-181 Revision: 2015 January 2015 Q50

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< SYSTEM DESCRIPTION >

- Calculates necessary steering angle to transmit steering angle signal to steering angle main control module via chassis communication.
- ADAS control unit controls the following items according to the signals from chassis control module.
- Transmits warning buzzer signal to warning buzzer through driver assistance buzzer control module via ITS
 communication.
- Transmits LDP system display signal to combination meter via CAN communication.
- Direct Adaptive Steering* controls steering angle according to the steering angle signal.
- *: Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module.
- Combination meter displays LDP system display on the information display.

OPERATING CONDITION

- LDP system display (green): ON (Dynamic driver assistance icon ON "Lane" position and dynamic driver assistance switch ON)
- Vehicle speed: approximately 70 km/h (45 MPH) or more
- Turn indicator signal: After 2 seconds or more from turned OFF

NOTE:

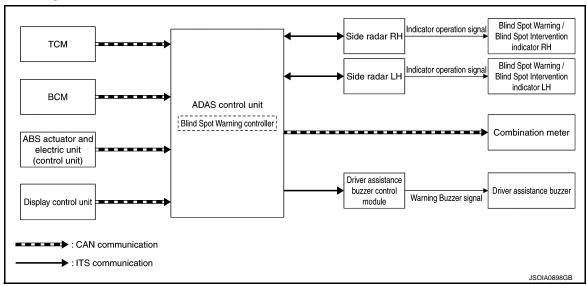
- LDP system ON/OFF can be set on the integral switch.
- After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 60 km/h (37 MPH).
- LDP system may not function properly, depending on the situation. Refer to <u>DAS-217</u>, "<u>Precautions for Lane Departure Warning/Lane Departure Prevention</u>".

BSW

BSW: System Description

INFOID:0000000011286096

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

ADAS control unit receives signals via CAN communication. It also detects vehicle conditions that are necessary for Blind Spot Warning control.

Input Signal Item

Transmit unit	S	ignal name	Description
TCM	CAN communication	Shift position signal	Receives a selector lever position
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
ВСМ	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
		Dimmer signal	Receives ON/OFF state of dimmer signal

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[DRIVER ASSISTANCE SYSTEM]

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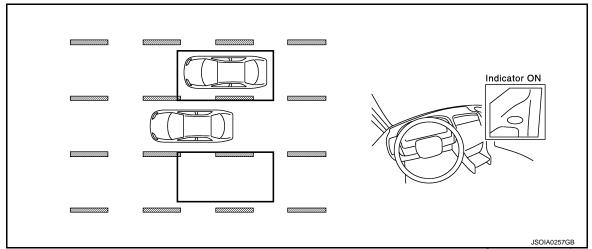
Transmit unit	Signal name		Description
Display control unit	CAN communication	System selection signal	Receives a selection state of each item in "Driver Aids" selected with the integral switch
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.

Output Signal Item

Reception unit		Signal name		Description
Combination meter	CAN communi- cation	Meter display signal	BSW system dis- play	Transmits a meter display signal to turn ON the Blind Spot Warning system display
		Blind Spot Warning/Blind Spot In tion indicator signal		Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
Side radar LH, RH ITS commu cation	ITS communi- cation	Blind Spot Warning/E tion indicator dimmer	•	Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator
		Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
Driver assis- tance buzzer control module	ITS communication	Driver assistance but	zzer signal	Transmits a driver assistance buzzer signal to activates the buzzer

FUNCTION DESCRIPTION

- The BSW system can help alert the driver of other vehicles in adjacent lanes when changing lanes.
- The BSW system uses side radar installed near the rear bumper to detect vehicles in an adjacent lane.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- This detection zone starts from the outside mirror of vehicle and extends approximately 10 ft (3.0 m) behind the rear bumper, and approximately 10 ft (3.0 m) sideways.
- The BSW system operates above approximately 32 km/h (20 MPH).
- If the side radar detects vehicles in the detection zone, the Blind Spot Warning/Blind Spot Intervention indicator illuminates.



• If the driver then activates the turn signal, a buzzer will sound twice and the Blind Spot Warning/Blind Spot Intervention indicator will blink.

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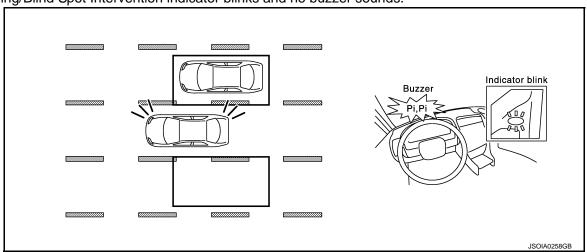
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A buzzer sounds if the side radar have already detected vehicles when the driver activates the turn signal. If a vehicle comes into the detection zone after the driver activates the turn signal, then only the Blind Spot Warning/Blind Spot Intervention indicator blinks and no buzzer sounds.



BLIND SPOT WARNING SYSTEM OPERATION DESCRIPTION

- ADAS control unit enables BSW system.
- The ADAS control unit turns on the BSW system when the turned ON by integral switch.
- Side radar detects a vehicle in the adjacent lane, and transmits the vehicle detection signal to ADAS control unit via ITS communication.
- ADAS control unit starts the control as follows, based on a vehicle detection signal, turn signal and dimmer signal transmitted from BCM via CAN communication:
- Blind Spot Warning/Blind Spot Intervention indicator signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal transmission to side radar.
- Activates warning buzzer by driver assistance buzzer control module.
- Side radar transmits an indicator operation signal to the Blind Spot Warning/Blind Spot Intervention indicator according to Blind Spot Warning/Blind Spot Intervention indicator signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal.

OPERATING CONDITION

- Blind Spot Warning system display (white): ON (Speaker icon ON in "Blind spot" position)
- Vehicle speed: Approximately 32 km/h (20 MPH) or more.

NOTE

ON/OFF of Blind Spot Warning system is performed with the integral switch.

- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 29 km/h (18 MPH)
- The Blind Spot Warning system may not function properly, depending on the situation. Refer to <u>DAS-218</u>, "Precautions for Blind Spot Warning/Blind Spot Intervention".
- Setting of BSW is performed in synchronization with the log-in function of on-board personal assistant. For details of the log-in function, refer to DMS-9, "LOG-IN FUNCTION: System Description".

BLIND SPOT INTERVENTION

BLIND SPOT INTERVENTION: System Description

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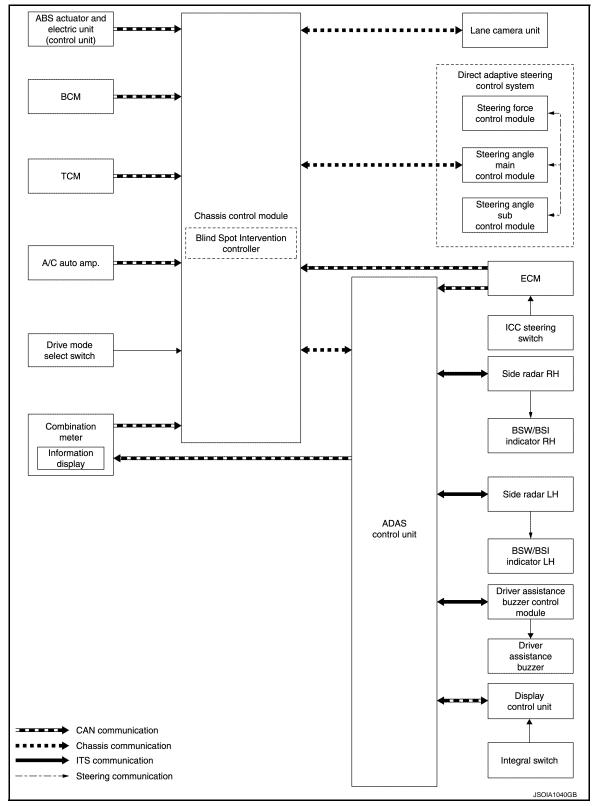
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SYSTEM DIAGRAM



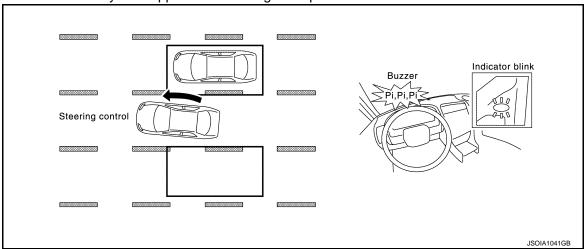
INPUT/OUTPUT SIGNAL ITEM

Reception unit	Transmit unit		Signal name	Description
	Lane camera	Chassis .	Detected lane condition signal	Receives detection results of lane marker
	unit	communi- cation	Lane camera unit condition signal	Receives lane camera unit condition
		Chassis communi-	Direct adaptive steering status signal	Receives status of Direct Adaptive Steering
	Steering angle main control		Direct adaptive steering malfunction signal	Receives a malfunction state of Direct Adaptive Steering
	module	cation	Steering force actuator status signal	Receives torque state of steering force actuator.
			ALC permission signal	Receives a permission state of the ALC.
			ABS malfunction signal	Receives a malfunction state of ABS
			ABS operation signal	Receives an operational state of ABS
			VDC OFF switch signal	Receives an ON/OFF state of VDC
			VDC malfunction signal	Receives a malfunction state of VDC
	ABS actuator	CAN com-	VDC operation signal	Receives an operational state of VDC
	and electric unit (control unit)	munication	EBD operation signal	Receives an operational state of EBD
			Vehicle speed signal (ABS)	Receives wheel speeds of front wheels
			Yaw rate signal	Receives yaw rate acting on the vehicle
			Side G sensor signal	Receives lateral G acting on the vehicle
Chassis control module			Stop lamp switch	Receives stop lamp switch state
module	ECM	CAN com- munication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
	BCM	CAN com- munication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
			Front wiper request signal	Receives an operational state of the front wiper
	TCM	CAN com- munication	Current gear position signal	Receives a current gear position
	TOW		Shift position signal	Receives a selector lever position
	A/C auto amp.	CAN com- munication	Ambient temperature signal	Receives an ambient temperature
	ADAS control unit	Chassis communi- cation	BSI ON signal	Receives an ON/OFF state of BSI
	Combination meter	CAN com- munication	Parking brake switch signal	Receives an operational state of the parking brake
	Side radar RH/ LH (Via ADAS con- trol unit)	Chassis communi- cation	Vehicle detection signal	Receives vehicle detection condition of detection zone.
	Drive mode se- lect switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.

Reception unit	Transmit unit		Signal name	Description
Steering angle		Chassis	Steering angle request signal	Transmits steering angle request signal
main control module		communi- cation	Steering reaction force request signal	Transmits steering reaction force request signal
Lane camera		Chassis communi-	Vehicle speed signal	Transmits a vehicle speed calculated by the chassis control module
unit	cation	Turn indicator signal	Transmits a turn indicator signal received from BCM	
Combination meter (Via ADAS con- trol unit)	Chassis control module		Blind Spot Intervention system display signal	Transmits a signal to display a state of the system on the information display
Driver assis- tance buzzer control module (Via ADAS con- trol unit)		Chassis communi- cation	Warning buzzer signal	Transmits warning buzzer signal to activates the warning buzzer
Side radar RH/ LH (Via ADAS con- trol unit)			Blind Spot Intervention indication signal	Transmits Blind Spot Intervention indication signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator

FUNCTION DESCRIPTION

- The Blind Spot Intervention system can help alert the driver of other vehicles in adjacent lanes when changing lanes. Blind Spot Intervention always operates together with Blind Spot Warning.
- The Blind Spot Intervention system operates above approximately 60 km/h (37 MPH).
- The Blind Spot Intervention system uses side radar installed near the rear bumper to detect other vehicles beside vehicle in an adjacent lane.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- This detection zone starts from the outside mirror of vehicle and extends approximately 10 ft (3.0 m) behind the rear bumper, and approximately 10 ft (3.0 m) sideways.
- If the Blind Spot Warning/Blind Spot Intervention indicator is illuminated while vehicle is approaching a lane
 marker, the Blind Spot Warning/Blind Spot Intervention indicator blinks and an audible warning will sound
 three times. Then the system applies the steering to help return the vehicle back to the center of the lane.



Blind Spot Intervention operates regardless of turn signal usage.

• The brightness of Blind Spot Warning/Blind Spot Intervention indicator lights is adjusted automatically depending on the brightness of the ambient light.

NOTE:

- Blind Spot Intervention is typically activated earlier than LDP when getting closer to the lane marker.
- Warning and steering control will only be activated if the Blind Spot Warning/Blind Spot Intervention indicator is already illuminated when vehicle approaches a lane marker.
- If another vehicle comes into the detection zone after vehicle has crossed a lane marker, no warning or steering control will be activated.

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< SYSTEM DESCRIPTION >

For details of Blind Spot Intervention system indication on the combination meter, refer to <u>DAS-206</u>, "<u>DCA/LDP/BLIND SPOT INTERVENTION</u>: Menu <u>Displayed by Pressing Each Switch</u>".

BLIND SPOT INTERVENTION SYSTEM OPERATION DESCRIPTION

- Blind Spot Intervention system is controlled by chassis control module and ADAS control unit.
- When dynamic driver assistance switch is turned ON and Blind Spot Intervention system setting ON the integral switch. Then Blind Spot Intervention ON indicator comes on.
- Combination meter displays Blind Spot Intervention system display according to the signals from ADAS control unit via CAN communication.
- Side radar detects a vehicle in the adjacent lane, and transmits the vehicle detection signal to chassis control module through ADAS control unit via chassis communication and ITS communication.
- Side radar receives vehicle speed signal from ADAS control unit and changes its detecting function.
- Lane camera unit monitors lane markers of the traveling lane and transmits the detected lane condition signal to chassis control module via chassis communication.
- Chassis control module starts the control as follows, based on a vehicle detection signal, lane condition signal, turn signal and position light request signal transmitted from each unit;
- Calculates necessary steering angle to transmit steering angle signal to steering angle main control module via chassis communication.
- Transmits Blind Spot Intervention indication signal and warning buzzer signal to ADAS control unit via chassis communication.
- ADAS control unit controls the following items according to the signals from chassis control module.
- Transmits warning buzzer signal to warning buzzer through driver assistance buzzer control module via ITS communication.
- Transmits Blind Spot Warning/Blind Spot Intervention indicator signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to side radar via ITS communication.
- Transmits a Blind Spot Intervention system display signal to combination meter via CAN communication.
- Direct Adaptive Steering* controls steering angle according to the steering angle signal.
 - *: Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module.
- Side radar turns ON the Blind Spot Warning/Blind Spot Intervention indicator according to Blind Spot Warning/Blind Spot Intervention indicator operation signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal.
- Combination meter displays the Blind Spot Intervention system display and the vehicle information display.

Operation Condition of Blind Spot Intervention System

Chassis control module performs the control when the following conditions are satisfied.

- Blind Spot Intervention system display (green): ON (Dynamic driver assistance icon ON in "Blind spot" position)
- When the vehicle drives at 60 km/h (37 MPH) or more.

NOTE:

- Blind Spot Intervention system ON/OFF can be set on the integral switch.
- The Blind Spot Intervention system may not function properly, depending on the situation. Refer to DAS-218, <a href="Percautions for Blind Spot Warning/Blind Spot Intervention".
- Blind Spot Intervention steering will not operate or will stop operating and only a warning chime will sound under the following conditions.
- When the brake pedal is depressed.
- When the accelerator pedal is depressed while steering control assist is provided.
- When steering quickly.
- When the ICC, DCA, PFCW or FEB warnings sound.
- When the hazard warning flashers are operated.
- When driving on a curve at a high speed.
- Under the following conditions, the Blind Spot Intervention system will be turned off automatically, a beep will sound and the Blind Spot Intervention system display will change color to yellow. The BSW system is still available, but the Blind Spot Intervention system will not be available until the conditions no longer exist.
- When the VDC system (except TCS function) or ABS operates.
- When the VDC system is turned OFF.
- When the drive mode select switch is turned to the SNOW mode.

BCI

BCI: System Description

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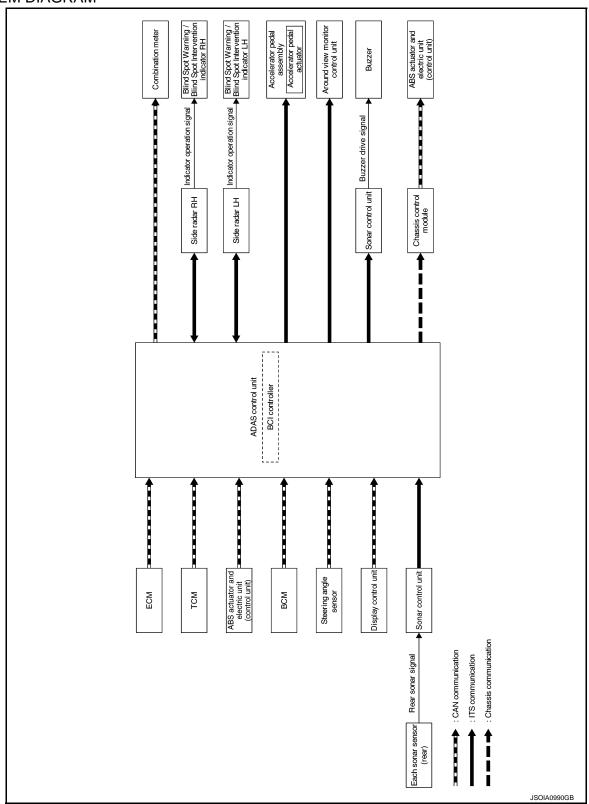
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SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit		Signal name	Description
ECM	CAN communi-	Accelerator pedal position signal	Receives accelerator pedal position (angle)
ECIVI	cation	Engine speed signal	Receives engine speed
TCM	CAN communi-	Current gear position signal	Receives a current gear position
TCIVI	cation	Shift position signal	Receives a select lever position
ABS actuator		ABS malfunction signal	Receives a malfunction state of ABS
and electric unit	CAN communi- cation	VDC malfunction signal	Receives a malfunction state of VDC
(control unit)		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Display control unit	ITS communica- tion	System selection signal	Receives a selection state of each item in "Camera" selected with the integral switch
Sonar control unit	ITS communica- tion	Rear object detection signal	Receives objects detection result of rear area behind vehicle
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.

Output Signal Item

Reception unit		Signal name		Description
ABS actuator and electric unit (control unit)	CAN communi- cation	Brake fluid pressu	re control signal.	Transmits a brake fluid pressure control signal to activate the brake.
Combination meter	CAN communi- cation	Meter display sig- nal	BCI system dis- play	Transmits a meter display signal to turn ON the BCI system display
Sonar control unit	ITS communica- tion	Buzzer drive signal		Transmits a buzzer drive signal to activate buzzer
Around view monitor control unit	ITS communica-	BCI warning signal		Transmits a BCI warning signal to indicate a yellow/red frame on the upper display
Accelerator pedal actuator	ITS communica- tion	Accelerator pedal feedback force control signal		Transmits an accelerator pedal feedback force control signal to activate the accelerator pedal actuator
		Blind Spot Warning vention indicator s	• ,	Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
Side radar LH, RH	ITS communica- tion	Blind Spot Warning vention indicator d	• •	Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator
		Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit

FUNCTION DESCRIPTION

- The Back-up Collision Intervention system can help alert the driver of approaching vehicles or rear objects when the driver is backing out of a parking space.
- The BCI system comprise of to main detection systems. The side radar LH/RH, and the four sonar sensors mounted on the rear bumper.
- The BCI system operates at speeds below 8 km/h (5 MPH) whenever the vehicle is in reverse.

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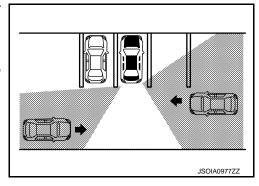
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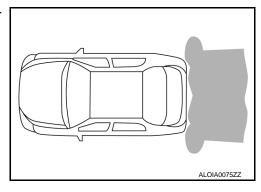
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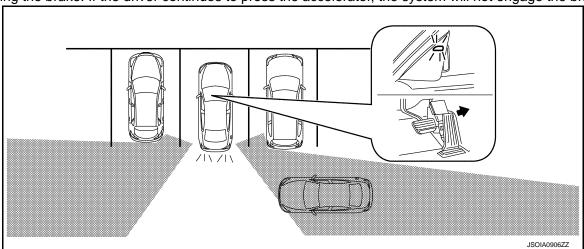
- The BCI system uses the side radar LH/RH installed near the rear bumper to detect approaching vehicles and rear obstacles.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- The radar sensors detect the approaching vehicle from up to approximately 15 m (49 ft) away.



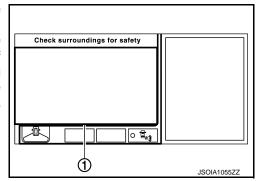
The sonar sensors can detect rear obstacles of up to approximately 1.5 m (4.9 ft).



If the radar detects a vehicle approaching from the side or the sonar detects close objects in the rear, the
system gives visual and audible warnings, and applies the brake for a moment when the vehicle is moving
backwards. If the driver's foot is on the accelerator pedal, the system pushes the accelerator upward before
applying the brake. If the driver continues to press the accelerator, the system will not engage the brake.



• If the side radar detects an approaching vehicle from the side, the BCI system sounds a beep (single beep), the Blind spot warning indicator on the side of the approaching vehicle flashes and the frame of the around view monitor screen ① is shown in yellow. If the detected vehicle approaches closer and own vehicle is backing up toward the detected vehicle, the system sounds a beep (three times) and the frame of the around view monitor screen ① is shown in red.



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BACK-UP COLLISION INTERVENTION SYSTEM OPERATION DESCRIPTION

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[DRIVER ASSISTANCE SYSTEM]

- ADAS control unit enables Back-up Collision Intervention system.
- The BCI system is automatically turned ON every time the engine is started.
- Side radar detects a vehicle approaching, and transmits the vehicle detection signal to ADAS control unit via ITS communication.
- Side radar receives vehicle speed signal from ADAS control unit and changes its detecting function.
- ADAS control unit starts the control as follows, based on a vehicle detection signal.

Operation Condition of Back-up Collision Intervention System

ADAS control unit performs the control when the following conditions are satisfied.

- Back-up Collision Intervention: ON (Selected by integral switch)
- When the vehicle is moving in reverse at 8 km/h (5 MPH) or less.

NOTE:

- When the Back-up Collision Intervention system setting is ON in the integral switch.
- Setting of BCI is performed in synchronization with the log-in function of on-board personal assistant. For details of the log-in function, refer to DMS-9, "LOG-IN FUNCTION: System Description".

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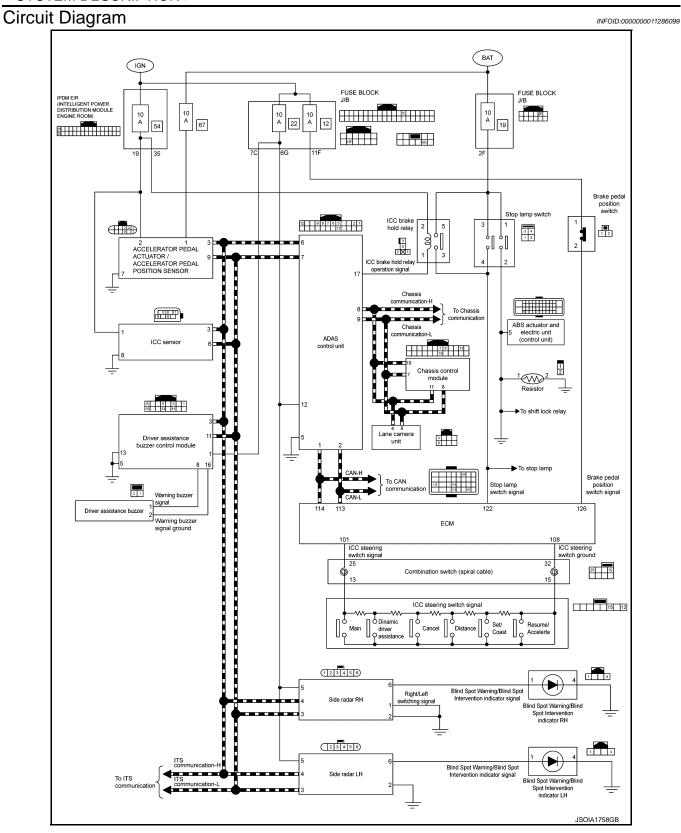
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Fail-safe (ADAS Control Unit)

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If a malfunction occurs in each system, ADAS control unit cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning dis- play	Description
Vehicle-to-vehicle distance control mode	High- pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High- pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High- pitched tone	FEB warning lamp Warning systems indicator (Forward position: Yellow)	Cancel
Predictive Forward Collision Warning (PFCW)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Distance Control Assist (DCA)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Blind Spot Warning (BSW)	_	Warning systems indicator (Blind spot position: Yellow)	Cancel
Back-up Collision Intervention (BCI)	High- pitched tone	BCI system warning	Cancel

Fail-safe (ICC Sensor)

INFOID:0000000011286101

If a malfunction occurs in the ICC sensor, ADAS control unit cancels control, sounds a beep, and turns ON the ICC system warning in the information display.

Fail-safe (Side Radar)

INFOID:0000000011286102

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning/Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Blind Spot Intervention

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds and then the Blind Spot Intervention malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Back-up Collision Intervention (BCI)

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Fail-safe (Lane Camera Unit)

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FAIL-SAFE CONTROL BY DTC

SYSTEM

[DRIVER ASSISTANCE SYSTEM]

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Active Lane Control

If a malfunction occurs in the lane camera unit, chassis control module cancels control, and turns ON the Chassis Control Module malfunction in information display.

Lane Departure Warning (LDW)

If a malfunction occurs in the lane camera unit, chassis control module cancels control, and turns ON the LDW malfunction in information display.

Lane Departure Prevention (LDP)

If a malfunction occurs in the lane camera unit, chassis control module cancels control, sounds a beep, and turns ON the LDP malfunction in information display.

Blind Spot Intervention

If a malfunction occurs in the lane camera unit, chassis control module cancels control, sounds a beep, and turns ON the Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

Lane Departure Warning (LDW)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the LDW malfunction in information display.
- When interior temperature is reduced, the system will resume operation automatically and the LDW malfunction in the combination meter will stop blinking.

Lane Departure Prevention (LDP)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and LDP malfunction in information display.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned ON.

Blind Spot Intervention

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and Blind Spot Intervention malfunction in information display.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned ON.

Fail-Safe (Chassis Control Module)

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

DTC	Vehicle condition	
C1B90-00	The following functions are suspended.	L
C1B91-00	 Active lane control function LDW function LDP function Blind spot intervention function 	M
C1B92-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function	N DAS
C1B93-00	The following functions are suspended.	DAX
C1B94-00	 Active trace control function LDW function LDP function Blind spot intervention function 	Р

DTC	Vehicle condition
C1B95-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function Intelligent cruise control function
C1B96-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function
C1B98-00	Normal control
C1B99-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function
C1BA0-00	The following functions are suspended.
C1BA2-00	Active trace control function
C1BA5-00	Normal control
C1BA6-00	The following functions are suspended. Infiniti InTuition function
C1BA7-00	The following functions are suspended. • Active lane control function
C1BA9-00	The following functions are suspended.
C1BAA-00	LDW function LDP function Blind spot intervention function
C1BAB-00	The following functions are suspended. • Active trace control function
C1BAC-00	The following functions are suspended.
C1BAD-00	LDP function
C1BAE-00	Blind spot intervention function
C1BAF-00	The following functions are suspended. • Blind spot intervention function
C1BB0-06	Normal control
C1BB2-00	The following functions are suspended.
C1BB3-00	Active trace control function Active lane control function
C1BB4-00	LDW function LDP function
C1BB5-00	Blind spot intervention function Infiniti InTuition function
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended.
C1BB8-00	Active trace control function Active lane control function
C1BB9-00	LDW function
C1BBA-00	LDP function Blind spot intervention function
C1BBB-00	Infiniti InTuition function
C1BBC-00	Normal control

SYSTEM

[DRIVER ASSISTANCE SYSTEM]

DTC	Vehicle condition	
C1BBD-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function	
C1BC0-00	The following functions are suspended.	
C1BC1-00	Active trace control function Active lane control function	
C1BC2-00	The following functions are suspended.	
C1BC3-00	Active trace control function	
C1BC4-00	Normal control	
C1BC5-00		
C1BC6-00	The following functions are suspended. • Active trace control function	
U1000-00		
U1010-49	The following functions are suspended.Active trace control functionActive lane control function	
U1A30-00	The following functions are suspended.	
U1A31-00	Active lane control function LDW function	
U1A32-00	LDP functionBlind spot intervention function	
U1A34-00	The following functions are suspended.	
U1A35-00	 Active trace control function Active lane control function LDW function LDP function Blind spot intervention function 	
U1A36-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function	
U1A39-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function	
U1A3B-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function	
U1A3D-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function	
U1A3E-00	Normal control	
U1A3F-00	The following functions are suspended. Infiniti InTuition function	
U1A42-00	The following functions are suspended.	
U1A43-00	Active trace control function	
U1A45-00	The following functions are suspended. • Active lane control function	

DTC	Vehicle condition
U1A48-00	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-00	The following functions are suspended. Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function
U1A4B-00	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-00	Normal control
U1A4E-00	The following functions are suspended. • Active trace control function

WARNING/INDICATOR/CHIME LIST

WARNING/INDICATOR/CHIME LIST: Warning/Indicator (On Information Display)

INFOID:0000000011286105

Name	Design	Function
Following system display PFCW (FEB) LDW BSW	Driving Aids (() Forward (() Lane Blind spot	Withe: DAS-200, "PFCW/LDW/BSW: Menu Displayed by Pressing Each Switch" Green: DAS-206, "DCA/LDP/BLIND SPOT INTERVENTION: Menu Displayed by Pressing Each Switch"
Following system display DCA LDP Blind Spot Intervention	Driving Aids Forward Lane Blind spot	Withe: DAS-200, "PFCW/LDW/BSW: Menu Displayed by Pressing Each Switch" Green: DAS-206, "DCA/LDP/BLIND SPOT INTERVENTION: Menu Displayed by Pressing Each Switch"

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Name	Design	Function	
Following system malfunction/warning • PFCW (FEB) • DCA • LDW		Withe: DAS-200, "PFCW/LDW/BSW: Menu Displayed by Pressing Each Switch" Green: DAS-206 "DCA/, DP/BLIND SPOT IN-	
LDP BSW Blind Spot Intervention	JSOIA0959ZZ	Green: DAS-206, "DCA/LDP/BLIND SPOT IN- TERVENTION: Menu Displayed by Pressing Each Switch"	
		1	
BCI malfunction/ warning		DAS-213, "BCI : Menu Displayed by Pressing Each Switch"	
	JSOIA0960ZZ	<u> </u>	

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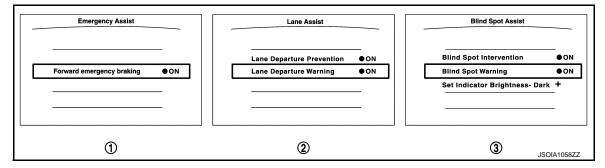
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PFCW/LDW/BSW

PFCW/LDW/BSW: Switch Name and Function

INFOID:0000000011286106

PFCW/LDW/BSW



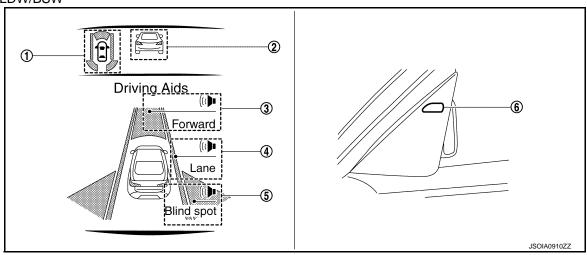
No.	Switch name	Description
1	PFCW/FEB system setting screen (Integral switch settings screen)	The setting of PFCW/FEB system can be switched between ON and OFF
2	LDW system setting screen (Integral switch settings screen)	The setting of LDW system can be switched between ON and OFF
3	BSW system setting screen (Integral switch settings screen)	The setting of BSW system can be switched between ON and OFF

PFCW/LDW/BSW: Menu Displayed by Pressing Each Switch

INFOID:0000000011286107

SYSTEM DISPLAY

PFCW/LDW/BSW



No.	Switch name	Description	
1	Warning systems indicator	Indicates that PFCW/FEB/LDW/BSW systems are ON	
2	Vehicle ahead detection indicator	Indicates whether it detects a vehicle ahead NOTE: The vehicle ahead detection indicator turns OFF when the no operation condition is satisfied	
3	Warning systems indicator "Forward" position (Speaker icon)	Indicates that PFCW/FEB system is ON	

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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No.	Switch name	Description
4	Warning systems indicator "Lane" position (Speaker icon)	Indicates that LDW system is ON
(5)	Warning systems indicator "Blind spot" position (Speaker icon)	Indicates that BSW system is ON
6	Blind Spot Warning/Blind Spot Intervention indicator LH/RH	 Illuminates when detect other vehicles beside vehicle in an adjacent lane Blinks when BSW system is warning to driver

DISPLAY AND WARNING (PFCW/LDW/BSW)

System Display

The PFCW/LDW/BSW systems operate when ON is selected with the integral switch.

System status	Condition	Display on combination meter	Indicator color	Е
PFCW/LDW/BSW OFF	_	Driving Aids OFF Forward OFF Lane OFF Blind spot JSOIA0911ZZ	_	F
PFCW/LDW/BSW ON	System ON	Driving Aids Forward Lane Blind spot JSOIA0912ZZ	White	I
PFCW ON (FEB ON)	System ON	Driving Aids OFF Lane OFF Blind spot JSOIA0913ZZ	White	K
LDW ON	System ON	Driving Aids OFF Forward Ithe Lane OFF Blind spot JSOIA0914ZZ	White	N
BSW ON	System ON	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0915ZZ	White	DA

[DRIVER ASSISTANCE SYSTEM]

System status	Condition	Display on combination meter	Indicator color
PFCW/LDW/BSW are malfunction	System malfunction	Forward Lane Blind spot JSOIA0916ZZ	Yellow
		Driving Aids Forward OFF Lane OFF Blind spot JSOIA1129ZZ	Yellow
Operation conditions not satisfied (dirt around the ICC sensor)	The PFCW/FEB system is automatically canceled.	JSOIA0932ZZ Unavailable Front Radar Obstruction	White
		Driving Aids Forward OFF Lane OFF Blind spot JSOIA0913ZZ	White (Blink)
Accelerator pedal high temperature		JSOIA0932ZZ Unavailable High Accelerator Temperature	White

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

System status	Condition	Display on combination meter	Indicator color
		Driving Aids Forward With Lane OFF Blind spot JSOIA0914ZZ	White (Blink)
Lane camera unit high tempera- ture	The LDW system is automatically canceled.		
		JSOIA0931ZZ	White
		Unavailable High Cabin Temperature	
		Driving Aids OFF Forward OFF Lane Blind spot JSOIA0915ZZ	White (Blink)
Dirt around the side radar	The BSW system is automatically canceled.	⊕	White
		JSOIA0936ZZ Unavailable Side Radar Obstruction	VIIIC

Warning Operation

• PFCW operation

Condition	Ac	tion	
Condition	Indication on the combination meter	Indicator color	Buzzer
System ON	Driving Aids Forward OFF Lane	White	OFF
	Blind spot JSOIA0913ZZ		

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Condition	Action			
Condition	Indication on the combination meter	Indicator color	Buzzer	
When judged that the distance between own vehicle and a vehicle in front of the ve-	JSOIA0921ZZ	Yellow (Blink)	- Beep	
hicle ahead becomes closer	Driving Aids Forward OFF Lane OFF Blind spot JSOIA1123ZZ	Yellow (Blink)	Беер	
Operation conditions not satisfied (dirt around the ICC sensor)	JSOIA0932ZZ Unavailable Front Radar Obstruction	Yellow	Веер	

• LDW operation

Vehicle condition/ Driver's operation		Action	1		
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condi- tion	Status of vehi- cle close to lane marker	Indication on the combination meter Indicator colo		Buzzer
Less than Approx. 60 km/h (37 MPH)	_	Close to lane marker	Driving Aids OFF Forward (I) Lane OFF Blind spot JSOIA0914ZZ	White	OFF
Approx. 70 km/h (45 MPH) or more	OFF ON (Opposite to the deviate side)	Close to lane marker	Driving Aids OFF Forward (I) Anne OFF Blind spot JSOIA1124ZZ	Yellow (Blink)	Short continuous beeps
	ON (Deviate side)	Close to lane marker	Driving Aids OFF Forward Lane OFF Blind spot	White	OFF

NOTE:

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After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (37 MPH). Refer to <u>DAS-177, "LDW: System Description"</u>.

BSW operation

Vehicle condition/ Driver's operation			Action				
Vehicle speed (Approx.) [km/h (MPH)]	Turn sig- nal condi- tion	Status of vehi- cle detection within detec- tion area	Indication on the Blind Spot Warning/ Blind Spot Intervention indicator	Indication on the combination meter	Indicator color	Buzzer	_
Less than approx. 29 (18)	-	_	OFF	Driving Aids OFF OFF Lane Blind spot JSOIA0915ZZ		OFF	
		Vehicle is not detected	OFF	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0915ZZ	White	OFF	_
Approx. 32 (20)	OFF	Vehicle is detected	ON	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0915ZZ	White	OFF	
or more	ON (vehicle	Before turn signal oper- ates Vehicle is de- tected	Blink	Driving Aids OFF Forward OFF Blind spot	Yellow (Blink)	Short continu- ous beeps	_
	detected direction) Vehicle is detected after turn signal operates Blink		Blink	Driving Aids OFF Forward OFF Blind spot	Yellow (Blink)	OFF	

NOTE:

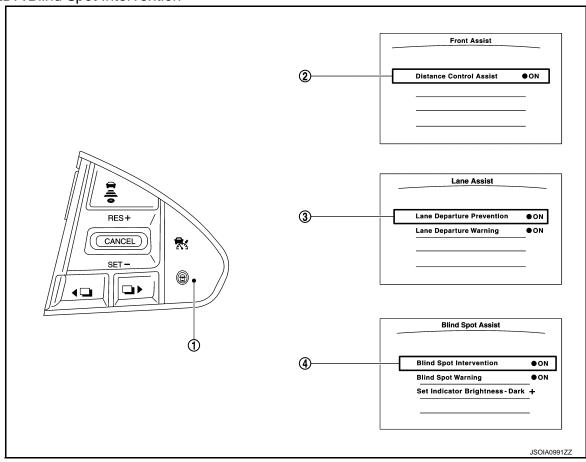
- If vehicle speed exceeds approximately 32 km/h (20MPH), BSW function operates until the vehicle speed becomes lower than approximately 29km/h (18MPH).
- Time shown in the figure is approximate time.
- Always Blind Spot Intervention system operates together with BSW system. Whenever Blind Spot Intervention system is turned ON by pushing the dynamic driver assistance switch, BSW system also be turned on even if the BSW system is turned off.

DCA/LDP/BLIND SPOT INTERVENTION

DCA/LDP/BLIND SPOT INTERVENTION: Switch Name and Function

INFOID:0000000011286108

DCA/LDP/Blind Spot Intervention



No.	Switch name	Description
1	Dynamic driver assistance switch	Turns DCA/LDP/Blind Spot Intervention system ON/OFF (When the setting of system on the navigation system setting screen is ON)
2	DCA system setting screen (Integral switch)	The setting of DCA system can be switched between ON and OFF
3	LDP system setting screen (Integral switch)	The setting of LDP system can be switched between ON and OFF
4	Blind Spot Intervention system set- ting screen (Integral switch)	The setting of Blind Spot Intervention system can be switched between ON and OFF

DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch

INFOID:0000000011286109

SYSTEM DISPLAY

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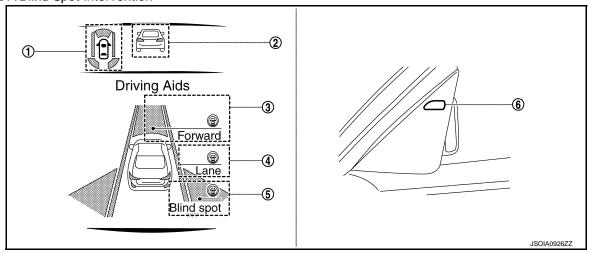
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DCA/LDP/Blind Spot Intervention



No.	Switch name	Description
1	Dynamic driver assistance systems indicator	Indicates that DCA/LDP/Blind Spot Intervention systems are ON
2	Vehicle ahead detection indicator	Indicates whether it detects a vehicle ahead NOTE: The vehicle ahead detection indicator turns OFF when the no operation condition is satisfied
3	Dynamic driver assistance systems indicator "Forward" position (Dynamic driver assistance icon)	Indicates that DCA systems are ON
4	Dynamic driver assistance systems indicator "Lane" position (Dynamic driver assistance icon)	Indicates that LDP systems are ON
(5)	Dynamic driver assistance systems indicator "Blind spot" position (Dynamic driver assistance icon)	Indicates that Blind Spot Intervention systems are ON
6	Blind Spot Warning/Blind Spot Intervention indicator LH/RH	 Illuminates when detect other vehicles beside vehicle in an adjacent lane Blinks when Blind Spot Intervention system is warning to driver

DISPLAY AND WARNING (DCA/LDP/BLIND SPOT INTERVENTION)

System Display

When the dynamic driver assistance switch is pressed while the engine is running, the DCA/LDP/Blind Spot Intervention system operates the system for which ON is selected with the integral switch.

					M
System status	Condition	Display on combination meter	Indicator	Buzzer	="
When the dynamic driver assistance switch is turned ON with settings of DCA system, LDP system and Blind Spot Intervention system OFF	_	JSOIA0920ZZ Unavailable Select Driving Aids in	White	Веер	N DAS

< 3131EW DESCRIPTION >	Display on combination mater	lo ali a a ta	D	
System status	Condition	Display on combination meter	Indicator	Buzzer
DCA/LDP/Blind Spot Intervention OFF (PFCW/LDW/BSW are OFF)	_	Driving Aids OFF Forward OFF Lane OFF Blind spot JSOIA0911ZZ	_	_
DCA/LDP/Blind Spot Intervention ON	System ON	Driving Aids Forward Blind spot JSOIA0927ZZ	Green	_
DCA ON	System ON	Driving Aids Forward OFF Blind spot JSOIA0928ZZ	Green	_
LDP ON	System ON	Driving Aids OFF Forward Lane OFF Blind spot JSOIA0929ZZ	Green	_
Blind Spot Intervention ON	System ON	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0930ZZ	Green	_
DCA/LDP/Blind Spot Intervention are malfunction	System malfunction	Forward Lane Blind spot JSOIA0916ZZ	Yellow	Веер
		JSOIA0931ZZ Malfunction See Owner's Manual		

[DRIVER ASSISTANCE SYSTEM]

System status	Condition	Display on combination meter	Indicator	Buzzer	
		_	OFF	_	F
Operation conditions not satisfied (dirt around the ICC sensor)	The DCA system is automatically canceled.	JSOIA0932ZZ Unavailable Front Radar Obstruction	Green	Beep	
	The system operates if the dy- namic driver assistance switch is turned OFF⇒ON after the	_	OFF		
Accelerator pedal high temperature	condition improves		Green	Beep	F
		JSOIA0932ZZ Unavailable High Accelerator Temperature			(
		_	OFF		H
Lane camera unit high temperature	The LDP/Blind Spot Intervention system is automatically canceled. NOTE: The system operates if the dy-		Green	Beep	ı
	namic driver assistance switch is turned OFF⇒ON after the condition improves	JSOIA0931ZZ Unavailable High Cabin Temperature	Green		ŀ
		-	OFF		
Dirt around the side radar	The Blind Spot Intervention system is automatically canceled. NOTE: The system operates if the dynamic driver assistance switch is turned OFF⇒ON after the		Green	Beep	L
	condition improves	Unavailable Side Radar Obstruction			١
		_	OFF		DA
 When the VDC or ABS (including the TCS) operates When the VDC is turned OFF When the drive mode select switch is in SNOW position 	The DCA/LDP/Blind Spot Intervention system is automatically canceled. NOTE: The system operates if the dynamic driver assistance switch is turned OFF⇒ON after the condition improves	JSOIA0931ZZ	Green	Beep	F

• DCA operation

Approach Warning

- If own vehicle comes closer to the vehicle ahead due to rapid deceleration of that vehicle or if another vehicle cuts in, the system warns the driver with the chime and DCA system display. Decelerate by depressing the brake pedal to maintain a safe vehicle distance if:
- The vehicle ahead detection indicator blinks.
- The chime sounds.
- The warning chime may not sound in some cases when there is a short distance between vehicles. Some examples are:
- When the vehicles are traveling at the same speed and the distance between vehicles is not changing
- When the vehicle ahead is traveling faster and the distance between vehicles is increasing
- When a vehicle cuts in near own vehicle
- The warning chime will not sound when own vehicle approaches vehicles that are parked or moving slowly.

Condition	Action							
Condition	Dynamics action	Display on combination meter	Indicator	Buzzer				
System ON	_	Driving Aids Forward OFF Blind spot JSOIA0928ZZ	Green	_				
 When the system detected vehicle ahead When the system judges that 	Accelerator pedal actuation	JSOIA0921ZZ	Yellow (Blink)	Beep				
the brake operation by the driver is necessary	Operates brake	Driving Aids Forward OFF Lane OFF Blind spot JSOIA1126ZZ	Yellow (Blink)	Беер				

• LDP operation

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehic	cle condition/ Driver's	operation	Action				
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle close to lane marker	Yawing con- trol	Indication on the combination meter	Indicator	Buzzer	В
Less than Approx. 60 km/h (37 MPH)	_	Close to lane marker	OFF	Driving Aids OFF Forward OFF Blind spot JSOIA0929ZZ	Green	_	C
	Turn signal OFF Turn signal ON (Opposite to the deviate side)	Close to lane marker	ON	Driving Aids OFF Forward OFF Blind spot JSOIA1127ZZ	Yellow (Blink)	Short con- tinuous beeps	E
Approx. 70 km/h (45 MPH) or more	Turn signal ON (Deviate side)	Close to lane marker	OFF	Driving Aids OFF Forward OFF Blind spot JSOIA0929ZZ	Green	_	G H
	Turn signal OFF Turn signal ON (Opposite to the deviate side)	Close to lane marker with soft braking	OFF	Driving Aids OFF Forward OFF Blind spot JSOIA1127ZZ	Yellow (Blink)	Short con- tinuous beeps	J K

NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (37 MPH). Refer to DAS-179, "LDP: System Description".

• Blind Spot Intervention operation

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Vehicle condition/ Driver's operation			Action					
Vehicle speed (Approx.) [km/h (MPH)]	Status of vehicle detection within detection area	Status of ap- proach to ad- jacent lane	Indication on the Blind Spot Intervention indicator	Yaw con- trol	Indication on the combination meter	Indicator	Buzzer	
Less than approx. 60 (37)	_	_	OFF	OFF	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0930ZZ	Green	OFF	
	Vehicle is not detected	_	OFF	OFF	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0930ZZ	Green	OFF	
Approx. 60 (37) or more	Vehicle is detected	Not approaching	ON	OFF	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0930ZZ	Green	OFF	
	Vehicle is detected	Approaching	Blink	ON	Driving Aids _{OFF} Forward OFF Blind spot JSOIA1128ZZ	Yellow (Blink)	Short continu- ous beeps	

NOTE:

- If vehicle speed exceeds approximately 32 km/h (20MPH), BSW function operates until the vehicle speed becomes lower than approximately 29km/h (18MPH).
- Time shown in the figure is approximate time.
- Always Blind Spot Intervention system operates together with BSW system. Whenever Blind Spot Intervention system is turned ON by pushing the dynamic driver assistance switch, BSW system also be turned on even if the BSW system is turned off.

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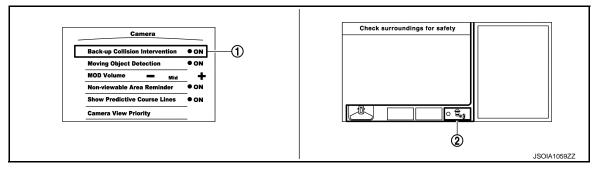
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BCI: Switch Name and Function

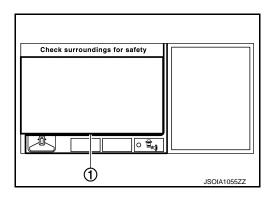
BCI



No.	Switch name	Description
1	BCI system setting screen (Integral switch)	The setting of BCI system can be switched between ON and OFF
2	BCI system temporary switch (Navigation screen)	Turns BCI system temporarily OFF

BCI: Menu Displayed by Pressing Each Switch

SYSTEM DISPLAY



No.	Name	Description		
	BCI warning frame (yellow)	Blinks when BCI system is warning to driver (Detecting vehicle)		
(I)	BCI warning frame (red)	Blinks when BCI system is warning to driver (Vehicle approaching)		

DISPLAY AND WARNING (BCI)

Vehicle condition/Driver's operation	Status of de- tection within detection area	Vehicle speed	Blind Spot Warning/ Blind Spot In- tervention in- dicator	Action	Indication on the combination meter
BCI system OFFShift lever in reverse	_	_	OFF	_	JSOIA0941ZZ System OFF

Vehicle condition/Driver's operation	Status of de- tection within detection area	Vehicle speed	Blind Spot Warning/ Blind Spot In- tervention in- dicator	Action	Indication on the combination meter
BCI system ON Engine running Shift lever in reverse	Vehicle is absent	_	OFF	_	_
	Vehicle is de- tected	0 km/h (0 MPH)	Blink	Buzzer sounds (single beep) Display frame is yellow	_
		8 km/h (5.0 MPH) or less	Blink	Buzzer sounds (3 times) Display frame is red Accelerator pedal is pushed upward NOTE: When accelerator pedal is depressed Brake operation NOTE: When accelerator pedal is released	
BCI system malfunction	_	_	OFF	Beep Temporary switch (navigation dis- play) is deactivat- ed	JSOIA0941ZZ Malfunction See Owner's Manual
When radar blockage is detected	_	_	OFF	Beep Temporary switch (navigation display) is deactivated	JSOIA0941ZZ Unavailable Side Radar Obstruction
When the accelerator pedal actuator detects that the internal motor temperature is high.	_	_	OFF	Beep Temporary switch (navigation dis- play) is deactivat- ed	JSOIA0941ZZ Unavailable High Accelerator Temperature

Under the following conditions, the BCI system will be turned off automatically, a beep will sound. The BCI system will not be available until the conditions no longer exist.

• When the accelerator pedal actuator detects that the internal motor temperature is high.

• When side radar blockage is detected.

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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INFOID:0000000011286112

HANDLING PRECAUTION

Precautions for Distance Control Assist

• If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill with a warning chime. To prevent the vehicle from moving, the driver must depress the brake pedal.

The DCA system will not apply brake control while the driver's foot is on the accelerator pedal.

- This system is only an aid to assist the driver and is not a collision warning or avoidance device. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- This system will not adapt automatically to road conditions. Do not use the system on roads with sharp curves, or on icy roads, in heavy rain or in fog.
- The distance sensor will not detect the following object.
- Stationary and slow moving vehicles
- Pedestrians or objects in the roadway
- Oncoming vehicles in the same lane
- Motorcycles traveling offset in the travel lane
- As there is a performance limit to the distance control function, never rely solely on the DCA system. This
 system does not correct careless, inattentive or absent-minded driving, or overcome poor visibility in rain,
 fog, or other bad weather. Decelerate the vehicle speed by depressing the brake pedal, depending on the
 distance to the vehicle ahead and the surrounding circumstances in order to maintain a safe distance
 between vehicles.
- The system may not detect the vehicle in front of own vehicle in certain road or weather conditions. To avoid accidents, never use the DCA system under the following conditions.
- On roads with sharp curves
- On slippery road surfaces such as on ice or snow, etc.
- During bad weather (rain, fog, snow, etc.)
- When rain, snow or dirt adhere to the system sensor
- On steep downhill roads (frequent braking may result in overheating the brakes)
- On repeated uphill and downhill roads
- In some road or traffic conditions, a vehicle or object can unexpectedly come into the sensor detection zone
 and cause automatic braking. Driver may need to control the distance from other vehicles using the accelerator pedal. Always stay alert and avoid using the DCA system when it is not recommended in this section.
- The following are some conditions in which the sensor cannot detect the signals.
- When the snow or road spray from traveling vehicles reduces the sensor's visibility
- When excessively heavy baggage is loaded in the rear seat or the luggage room of own vehicle
- The DCA system is designed to automatically check the sensor's operation. When the sensor area of front bumper is covered with dirt or is obstructed, the system will automatically be canceled. If the sensor is covered with ice, a transparent or translucent vinyl bag, etc., the DCA system may not detect them. In these instances, the DCA system may not be able to decelerate the vehicle properly. Be sure to check and clean the sensor regularly.
- The DCA system is designed to help assist the driver to maintain a following distance from the vehicle ahead. The system will decelerate as necessary and if the vehicle ahead comes to a stop, the vehicle decelerates to standstill. However, the DCA system can only apply up to approximately 40% of the vehicles total braking power. If a vehicle moves into the traveling lane ahead or if a vehicle traveling ahead rapidly decelerates, the distance between vehicles may become closer because the DCA system cannot decelerate the vehicle quickly enough. If this occurs, the DCA system will sound a warning chime and blink the system display to notify the driver to take necessary action.
- The DCA system does not control vehicle speed or warn when driver approach stationary and slow moving vehicles. Driver must pay attention to vehicle operation to maintain proper distance from vehicles ahead.

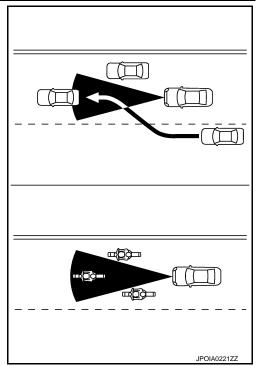
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< SYSTEM DESCRIPTION >

- The detection zone of the sensor is limited. A vehicle ahead must be in the detection zone for the system to operate.
- A vehicle ahead may move outside of the detection zone due to its position within the same lane of travel. Motorcycles may not be detected in the same lane ahead if they are traveling offset from the center line of the lane. A vehicle that is entering the lane ahead may not be detected until the vehicle has completely moved into the lane. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime. The driver may have to manually control the proper distance away from vehicle traveling ahead.



- When driving on some roads, such as winding, hilly, curved, narrow roads, or roads which are under construction, the sensor may detect vehicles in a different lane, or may temporarily not detect a vehicle traveling ahead. This may cause the system to work inappropriately. The detection of vehicles may also be affected by vehicle operation (steering maneuver or traveling position in the lane, etc.) or vehicle condition. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime unexpectedly. The driver will have to manually control the proper distance away from the vehicle traveling ahead.
- The approach warning chime may sound and the driver assist system forward indicator (orange) may blink when the radar sensor detects objects on the side of the vehicle or on the side of the road. This may cause the DCA system to decelerate or accelerate the vehicle. The radar sensor may detect these objects when the vehicle is driven on winding roads, narrow roads, hilly roads or when entering or exiting a curve. In these cases driver will have to manually control the proper distance ahead of own vehicle. Also, the sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle condition (for example, if a vehicle is being driven with some damage).
- The DCA system automatically decelerates own vehicle to help assist the driver to maintain a following distance from the vehicle ahead. Manually brake when deceleration is required to maintain a safe distance upon sudden braking by the vehicle ahead or when a vehicle suddenly appears in front of own

vehicle. Always stay alert when using the DCA system.

- JPOIA0220ZZ
- When the vehicle ahead detection indicator lamp is not illuminated, system will not control or warn the driver.
- Never place a foot under the brake pedal. A foot may be caught when the system controls the brake.
- Depending on the position of the accelerator pedal, the system may not be able to assist the driver to release the accelerator pedal appropriately.
- If the vehicle ahead comes to a standstill, the vehicle decelerates to a standstill within the limitations of the system. The system will release brake control with a warning chime once it judges the vehicle is at a standstill. To prevent the vehicle from moving, the driver must depress the brake pedal. [The system will resume control automatically once the system reaches 5 km/h (3 MPH)].

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Precautions for Predictive Forward Collision Warning

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- The predictive forward collision warning system is designed to warn driver before a collision but will not avoid a collision. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all
- The radar sensor does not detect the following objects.
- Pedestrians, animals, or obstacles in the roadway.
- Oncoming vehicles
- Crossing vehicles
- The predictive forward collision warning system does not function when a vehicle ahead is a narrow vehicle, such as a motorcycle.
- The radar sensor may not detect a second vehicle ahead in the following conditions:
- Snow or heavy rain
- Dirt, ice, snow or other material covering the radar sensor
- Interference by other radar sources
- Snow or road spray from traveling vehicles is splashed
- Driving in a tunnel
- The radar sensor may not detect a second vehicle when the vehicle ahead is being towed.
- When the distance to the vehicle ahead is too close, the beam of the radar sensor is obstructed.
- The radar sensor may not detect a second vehicle when driving on a steep downhill slope or on roads with
- Excessive noise will interfere with the warning tone sound, and it may not be heard.

Precautions for Lane Departure Warning/Lane Departure Prevention

INFOID:0000000011286114

LANE CAMERA UNIT HANDLING

To keep the proper operation of the LDW/LDP systems and prevent a system malfunction, be sure to observe the following:

- · Always keep the windshield clean.
- Do not attach a sticker (including transparent material) or install an accessory near the lane camera unit.
- Do not place reflective materials, such as white paper or a mirror, on the instrument panel. The reflection of sunlight may adversely affect the lane camera unit capability of detecting the lane markers.
- Do not strike or damage the areas around the camera unit. Do not touch the camera lens or remove the screw located on the camera unit. If the camera unit is damaged due to an accident.

LANE DEPARTURE WARNING (LDW)

- If the LDW system malfunctions, it will cancel automatically, and the LDW malfunction message will appear in the vehicle information display.
- LDW system is only a warning device to inform the driver of a potential unintended lane departure. It will not steer the vehicle or prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of the vehicle at all times.
- LDW system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- LDW system may not function properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers; or lane markers covered with water, dirt or snow, etc.
- On roads where the discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. (The LDW system could detect these items as lane markers.)
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)

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[DRIVER ASSISTANCE SYSTEM]

LANE DEPARTURE PREVENTION (LDP)

- If the LDP system malfunctions, it will cancel automatically, and the LDP malfunction message will appear in the vehicle information display.
- The LDP system will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- LDP system is primarily intended for use on well-developed freeways or highways. It may not detect the lane
 markers in certain roads, weather or driving conditions.
- Using the LDP system under some conditions of road, lane marker or weather, or when driver change lanes without using the turn signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- The LDP system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Do not use the LDP system under the following conditions as it may not function properly:
- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake or steering parts or suspension parts.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- The functions of the LDP system (warning and, system application of the steering or brakes) may or may not operate properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (The LDP system could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)

Precautions for Blind Spot Warning/Blind Spot Intervention

INFOID:0000000011286115

LANE CAMERA UNIT HANDLING

Refer to DAS-217, "Precautions for Lane Departure Warning/Lane Departure Prevention".

SIDE RADAR HANDLING

- Side radar for Blind Spot Warning/Blind Spot Intervention system is located inside the rear bumper.
- Always keep the rear bumper near the side radar clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work near the side radar.
- Do not strike or damage the areas around the side radar.
- Do not strike, damage, and scratch the side radar, especially the vent seal (gray circular) area, under repair.

BLIND SPOT WARNING & BLIND SPOT INTERVENTION

The Blind Spot Warning and Blind Spot Intervention systems are not a replacement for proper driving procedure and are not designed to prevent contact with vehicles or objects. When changing lanes, always use the side and rear mirrors and turn and look in the direction driver will move to ensure it is safe to change lanes. Never rely solely on the Blind Spot Warning or Blind Spot Intervention system.

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- Using the Blind Spot Intervention system under some road, lane marker or weather conditions could lead to improper system operation. Always rely on driver's own steering and braking operation to avoid accidents.
- The Blind Spot Warning and Blind Spot Intervention systems may not provide the warning or the control for vehicles that pass through the detection zone quickly.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.
- The side radar may not be able to detect and activate Blind Spot Warning/Blind Spot Intervention when certain objects are present such as:
- Pedestrians, bicycles, animals.
- Several types of vehicles such as motorcycles.
- Oncoming vehicles.
- Vehicles remaining in the detection zone when driver accelerate from a stop.
- A vehicle merging into an adjacent lane at a speed approximately the same as vehicle.
- A vehicle approaching rapidly from behind.
- A vehicle which vehicle overtakes rapidly.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The side radar detection zone is designed based on a standard lane width. When driving in a wider lane, the side radar may not detect vehicles in an adjacent lane. When driving in a narrow lane, the side radar may detect vehicles driving two lanes away.
- The side radar are designed to ignore most stationary objects, however objects such as guardrails, walls, foliage and parked vehicles may occasionally be detected. This is a normal operating condition.

BLIND SPOT INTERVENTION

- Do not use the Blind Spot Intervention system under the following conditions because the system may not function properly.
- During bad weather (for example. rain, fog, snow, etc.)
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original steering parts, brake parts or suspension parts.
- The camera may not detect lane markers in the following situations and the Blind Spot Intervention system may not operate properly.
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; nonstandard lane markers; lane markers covered with water, dirt, snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs.
- On roads where the traveling lane merges or separates.
- When the vehicle is traveling direction does not align with the lane markers.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of a lane camera unit.
- When the headlights are not bright due to dirt on the lens or if aiming is not adjusted properly.
- When strong light enters a lane camera unit. (for example, light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs. (for example, when the vehicle enters or exits a tunnel or under a bridge.)
- The Blind Spot Intervention system will not operate if own vehicle is on a lane marker when another vehicle enters the detection zone. In this case only the BSW system operates.
- Blind Spot Intervention assist will not operate or will stop operating and only a warning chime will sound under the following conditions.
- When the accelerator pedal is depressed while the assist is provided.
- When steering quickly.
- When the ICC, DCA, predictive forward collision warning or forward emergency braking warnings sound.
- When the hazard warning flashers are operated.
- When driving on a curve at a high speed.

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< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Precautions for Back-up Collision Intervention

INFOID:0000000011286116

SONAR HANDLING

- Always keep the sonar sensors clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work over any of the sonar sensors.
- Do not strike or scratch any of the sonar sensors causing physical damage. to a sensor or the surrounding area

SIDE RADAR HANDLING

- Always keep the rear bumper near the side radar clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work near the side radar.
- Do not strike or damage the areas around the side radar.

BACK-UP COLLISION INTERVENTION

- The Back-up Collision Intervention system is not a replacement for proper driving procedure and is not designed to prevent contact with vehicles or objects. When backing out of parking space, always use the inside and outside rear view mirrors and turn and look in the direction own vehicle will move. Never rely solely on the Back-up Collision Intervention system.
- There is a limitation to the detection capability of the radar and the sonar. Using the BCI system under some road, ground, lane marker, traffic or weather conditions could lead to improper system operation. Always rely on driver operation to avoid accidents.
- In the case of several vehicles approaching in a row or in the opposite direction, a chime may not be issued
 to the BCI system after the first vehicle passes the sensors.
- When the sonar sounds a tone, the BCI system does not chime a sound (single beep).
- The BCI system does not operate if the object is very close to the bumper.
- The radar sensor may not be able to detect certain objects are present such as:
- Pedestrians, bicycles or animals.
- A vehicle that is passing at a speed greater than approximately 24 km/h (15 MPH).
- The radar sensor may not detect approaching vehicles in certain situations:
- When the vehicle parked next to own vehicle obstructs the beam of the radar sensor.
- When the vehicle is parked in an angled parking space.
- When the vehicle is parked on inclined ground.
- When the vehicle turns around into own vehicle's aisle.
- When the angle formed by own vehicle and approaching vehicle is small.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The sonar sensor system may not detect:
- Small or moving object.
- Wedge-shaped objects.
- Object closer to the bumper [less than approximately 30 cm (10 in)].
- Thin objects such as rope, wire, chain, etc...
- The brakes engaged by the BCI system is not as effective on a slope as it is on flat ground. When on a steep slope, the system may not function properly.
- Do not use the BCI system under the following conditions because the system may not function properly:
- When driving with a tire that is not the within normal tire condition (example: tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake parts or suspension parts.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.

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[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

On Board Diagnosis Function

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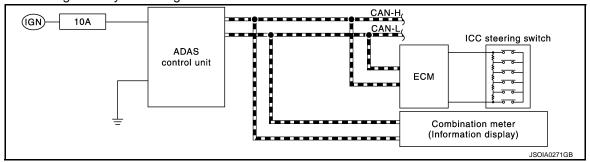
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DESCRIPTION

The DTC is displayed on the information display by operating the ICC steering switch.

On Board Self-diagnosis System Diagram



METHOD OF STARTING

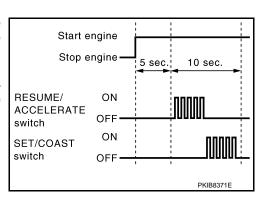
CAUTION:

Start condition of on board self-diagnosis

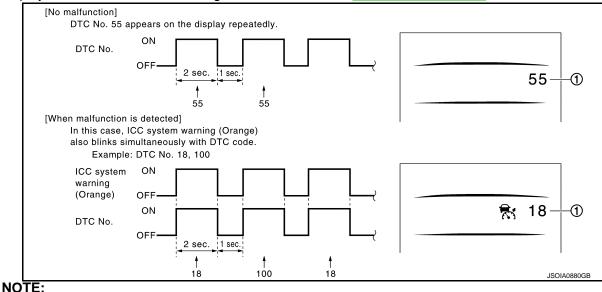
- ICC system OFF
- DCA system OFF
- Vehicle speed 0 km/h (0 MPH)
- 1. Turn the ignition switch OFF.
- Start the engine.
- Wait for 5 seconds after starting the engine. Push up the RESUME/ACCELERATE switch 5 times and push down the SET/COAST switch 5 times within 10 seconds.

NOTE:

If the above operation cannot be performed within 10 seconds after waiting for 5 seconds after starting the engine, repeat the procedure from step 1.



4. The DTC is displayed on the set vehicle speed indicator (1) on the ICC system display on the information display when the on board self-diagnosis starts. Refer to <u>DAS-45</u>, "<u>DTC Index</u>".



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[DRIVER ASSISTANCE SYSTEM]

- It displays for up to 5 minutes and then stops.
- If multiple malfunctions exist, up to 6 DTCs can be stored in memory at the most, and the most recent one is displayed first.

WHEN THE ON BOARD SELF-DIAGNOSIS DOES NOT START

If the on board self-diagnosis does not start, check the following items.

	Assumed abnormal part	Inspection item
Information display	Combination meter malfunction	Check that the self-diagnosis function of the combination meter operates. Refer to MWI-62 , "On Board Diagnosis Function".
ICC steering switch male	function	
Harness malfunction bet	ween ICC steering switch and ECM	Perform the inspection for DTC "C1A06". Refer to <u>DAS-</u> 80, "DTC Logic".
ECM malfunction		30, 2:0 2030
ADAS control unit malfu	nction	 Check power supply and ground circuit of ADAS control unit. Refer to <u>DAS-160</u>, "<u>Diagnosis Procedure</u>". Perform SELF-DIAGNOSIS for "ICC/ADAS" with CONSULT, and then check the malfunctioning parts. Refer to <u>DAS-45</u>, "<u>DTC Index</u>".

HOW TO ERASE ON BOARD SELF-DIAGNOSIS

- 1. Turn the ignition switch OFF.
- 2. Start the engine, and then start the on board self-diagnosis.
- 3. Press the CANCEL switch 5 times, and then press the DIS-TANCE switch 5 times under the condition that the on board self-diagnosis starts.

NOTE:

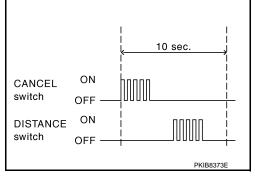
- Complete the operation within 10 seconds after pressing the CANCEL switch first.
- If the operation is not completed within 10 seconds, repeat the procedure from step 1.
- 4. DTC 55 is displayed after erasing.

NOTE:

DTCs for existing malfunction can not be erased.

5. Turn ignition switch OFF, and finish the diagnosis.

CONSULT Function (ICC/ADAS)



INFOID:0000000011286118

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication using ADAS control unit.

Diagnosis mode	Description
Configuration	The vehicle specification that is written in ADAS control unit can be displayed or stored The vehicle specification can be written when ADAS control unit is replaced
Work Support	Displays causes of automatic system cancellation occurred during system control
Self Diagnostic Result	Displays the name of a malfunctioning system stored in the ADAS control unit
Data Monitor	Displays ADAS control unit input/output data in real time
Active Test	Enables an operational check of a load by transmitting a driving signal from the ADAS control unit to the load
ECU Identification	Displays ADAS control unit part number
CAN Diag Support Monitor	Displays a reception/transmission state of CAN communication and ITS communication

CONFIGURATION

Configuration includes functions as follows.

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[DRIVER ASSISTANCE SYSTEM]

F	unction	Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in ADAS control unit to store the specification in CONSULT.
	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the ADAS control unit.
Manual Configuration		Allows the writing of the vehicle specification into the ADAS control unit by hand.

WORK SUPPORT

Work support items	Description
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Vehicle-to-vehicle control mode • Conventional (fixed speed) control mode • Distance Control Assist (DCA) • Forward Emergency Braking (FEB)
CAUSE OF AUTO-CANCEL 2	NOTE: The item is displayed, but it is not monitored
CAUSE OF AUTO-CANCEL 3	Displays causes of automatic system cancellation occurred during control of the Back-up Collision Intervention (BCI)

NOTE:

- Causes of the maximum five cancellations (system cancel) are displayed.
- The displayed cancellation causes display the number of the ignition switch ON/OFF up to 254. It is fixed to 254 if it is over 254. It returns to 0 when the same cancellation cause is detected again.

Display Items for The Cause of Automatic Cancellation 1

Cause of cancellation	Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Distance Control Assist	Forward Emergency Braking	Description
OPERATING ABS	×		×	×	ABS function was operated
OPERATING TCS	×	×	×		TCS function was operated
OPERATING VDC	×	×	×	×	VDC function was operated
ECM CIRCUIT	×	×			ECM did not permit ICC operation
OPE SW VOLT CIRC	×	×	×		The ICC steering switch input voltage is not within standard range
SNOW MODE SW	×		×		Shifting of the drive mode selector to SNOW position
OP SW DOUBLE TOUCH	×	×			ICC steering switches were pressed at the same time
VHCL SPD DOWN	×	×	×		Vehicle speed lower than the speed as follows Vehicle-to-vehicle distance control mode is 24 km/h (15 MPH) Conventional (fixed speed) cruise control mode is 32 km/h (20 MPH)

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[DRIVER ASSISTANCE SYSTEM]

WHL SPD ELEC NOISE	×	×	×		Wheel speed sensor signal caught electromagnetic noise
VDC/TCS OFF SW	×		×	×	VDC OFF switch was pressed
VHCL SPD UNMATCH	×	×	×		Wheel speed became different from A/T vehicle speed
TIRE SLIP	×	×			Wheel slipped
IGN LOW VOLT	×	×	×	×	Decrease in ADAS control unit ignition voltage
PARKING BRAKE ON	×	×			The parking brake is operating
WHEEL SPD UNMATCH	×	×	×		The wheel speeds of 4 wheels are out of the specified values
INCHING LOST	×				A vehicle ahead is not detected during the following driving when the vehicle speed is approximately 24 km/h (15 MPH) or less
CAN COMM ERROR	×	×	×	×	ADAS control unit received an abnormal signal with CAN communication
ABS/TCS/VDC CIRC	×	×	×	×	An abnormal condition occurs in VDC/TCS/ABS system
ECD CIRCUIT	×	×	×	×	An abnormal condition occurs in ECD system
ENG SPEED DOWN	×	×			Engine speed became extremely low while controlling ICC system
ASCD VHCL SPD DTAC		×			Vehicle speed is detached from set vehicle speed
ASCD DOUBLE COMD		×			Cancel switch and operation switch are detected simultaneously
APA HI TEMP			×		The accelerator pedal actuator integrated motor temperature is high
ICC SENSOR CAN COMM ERR	×		×	×	Communication error between ADAS control unit and the ICC sensor
ABS WARNING LAMP	×		×		ABS warning lamp ON
FR RADAR BLOCKED	×		×	×	Inclusion of dirt or stains on the ICC sensor area of the front bumper
FEB) CURVATURE				×	Road curve was more than the specified value
FEB) YAW RATE				×	Detected yawing speed was more than the specified value
FEB) LTRL ACCELERA- TION				×	Detected lateral speed is the specified value or more
RADAR INTERFER- ENCE	×		×	×	ICC sensor receives electromagnetic interference
NO RECORD	×	×	×		_

Display Items for The Cause of Automatic Cancellation 3

Cause of cancellation	Back-up Collision Intervention	Description
CAN COMM ERROR (CAN)	×	ADAS control unit received an abnormal signal with CAN communication
CAN COMM ERROR (ECD)	×	ADAS control unit received an abnormal signal with CAN communication
IGN LOW VOLT	×	Decrease in ADAS control unit ignition voltage
VEHICLE SPEED UP	×	Vehicle speed higher than 8 km/h (5 MPH)
ACCEL IS OPERATED	×	Accelerator pedal was depressed
BRAKE IS OPERATED	×	Brake pedal was operated
APA HI TEMP	×	The accelerator pedal actuator integrated motor temperature is high

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[DRIVER ASSISTANCE SYSTEM]

Cause of cancellation	Back-up Collision Intervention	Description
APA POWER	×	Decrease in accelerator pedal actuator ignition or battery voltage
NO RECORD	×	_

SELF DIAGNOSTIC RESULT

Refer to DAS-45, "DTC Index".

NOTE:

- The details of time display are as per the following.
- CRNT: A malfunction is detected now
- PAST: A malfunction was detected in the past
- IGN counter is displayed on FFD (Freeze Frame Data).
- 0: The malfunctions that are detected now CAN communication system (U1000, U1010)
- 1 39: It increases like $0 \to 1 \to 2 \cdots 38 \to 39$ after returning to the normal condition whenever the ignition switch OFF \to ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased.
 Other than CAN communication system (Other than U1000, U1010)
- 1 49: It increases like 0 → 1 → 2 ··· 38 → 49 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
MAIN SW [On/Off]	×	×	×	×		Indicates [On/Off] status as judged from ICC steering switch
SET/COAST SW [On/Off]	×	×				Indicates [On/Off] status as judged from ICC steering switch
CANCEL SW [On/Off]	×	×				Indicates [On/Off] status as judged from ICC steering switch
RESUME/ACC SW [On/Off]	×	×				Indicates [On/Off] status as judged from ICC steering switch
DISTANCE SW [On/Off]	×					Indicates [On/Off] status as judged from ICC steering switch
CRUISE OPE [On/Off]	×	×				Indicates whether controlling or not (ON means "controlling")
BRAKE SW [On/Off]	×	×	×	×	×	Indicates [On/Off] status as judged from ICC brake switch signal (ECM transmits ICC brake switch signal through CAN communication)
STOP LAMP SW [On/Off]	×	×	×	×	×	Indicates [On/Off] status as judged from stop lamp switch signal (ECM transmits stop lamp switch signal through CAN communication)
IDLE SW [On/Off]	×				×	Indicates [On/Off] status of idle switch read from ADAS control unit through CAN communication (ECM transmits On/Off status through CAN communication)

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[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
SET DISTANCE [Short/Mid/Long]	×	×				Indicates set distance memorized in ADAS control unit
CRUISE LAMP [On/Off]	×	×				Indicates [On/Off] status of MAIN switch indicator output
OWN VHCL [On/Off]	×					NOTE: The item is displayed, but it is not monitored
VHCL AHEAD [On/Off]	×					Indicates [On/Off] status of vehicle ahead detection indicator output
ICC WARNING [On/Off]	×					Indicates [On/Off] status of ICC system warning lamp output
VHCL SPEED SE [km/h] or [mph]	×	×	×	×	×	Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication]
SET VHCL SPD [km/h] or [mph]	×	×				Indicates set vehicle speed memorized in ADAS control unit
BUZZER O/P [On/Off]	×				×	Indicates [On/Off] status of ICC warning chime output
THRTL SENSOR [deg]	×	×				NOTE: The item is displayed, but it is not monitored
ENGINE RPM [rpm]	×					Indicates engine speed read from ADAS control unit through CAN communication (ECM transmits engine speed signal through CAN communication)
WIPER SW [OFF/LOW/HIGH]	×					Indicates wiper [OFF/LOW/HIGH] status (BCM transmits front wiper request signal through CAN communication)
YAW RATE [deg/s]	×					NOTE: The item is displayed, but it is not monitored
BA WARNING [On/Off]	×					Indicates [On/Off] status of FEB indicator lamp output
STP LMP DRIVE [On/Off]	×	×			×	Indicates [On/Off] status of ICC brake hold relay drive output
D RANGE SW [On/Off]	×					Indicates [On/Off] status of "D" or "M" positions read from ADAS control unit through CAN communication; ON when position "D" or "M" (TCM transmits shift position signal through CAN communication).
NP RANGE SW [On/Off]	×					Indicates shift position signal read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
PKB SW [On/Off]	×					Parking brake switch status [On/Off] judged from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)
PWR SUP MONI [V]	×	×				Indicates IGN voltage input by ADAS control unit
VHCL SPD AT [km/h] or [mph]	×					Indicates vehicle speed calculated from A/T vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits A/T vehicle speed sensor signal through CAN communication)
THRTL OPENING [%]	×	×			×	Indicates throttle position read from ADAS control unit through CAN communication (ECM transmits accelerator pedal position signal through CAN communication).
GEAR [1, 2, 3, 4, 5, 6, 7]	×					Indicates A/T gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)

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[DRIVER ASSISTANCE SYSTEM]

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Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
CLUTCH SW SIG [On/Off]	×	×	×	×		Indicates [On/Off] status as judged from clutch pedal position signal (ECM transmits ICC clutch switch signal through CAN communication)
NP SW SIG [On/Off]	×					Indicates [On/Off] status as judged from park/neutral position switch signal (ECM transmits park/neutral position switch signal through CAN communication).
MODE SIG [OFF, ICC, ASCD]	×					Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode]
SET DISP IND [On/Off]	×					Indicates [On/Off] status of SET switch indicator output
DISTANCE [m]	×					Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]	×					Indicates the relative speed of the vehicle ahead
ON ROOT GUID- ANCE [On/Off]	×					NOTE: The item is displayed, but it is not monitored
DYNA ASIST SW [On/Off]	×	×		×		Indicates [On/Off] status as judged from ICC steering switch signal (ECM transmits ICC steering switch signal through CAN communication)
DCA ON IND [On/Off]	×					The status [ON/OFF] of DCA system switch indicator output is displayed
DCA VHL AHED [On/Off]	×					The status [ON/OFF] of vehicle ahead detection indicator output in DCA system is displayed
IBA SW [On/Off]	×	×				NOTE: The item is displayed, but it is not monitored
APA TEMP	×				×	Accelerator pedal actuator integrated motor temperature that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the integrated motor temperature via ITS communication)
APA PWR [V]	×				×	Accelerator pedal actuator power supply voltage that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the power supply voltage via ITS communication)
NAVI ICC DISP [On/Off]						NOTE: The item is displayed, but it is not monitored
LDW SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]			×			Indicates [On/Off] status of LDW system display output
LDP ON IND [On/Off]			×			Indicates [On/Off] status of LDP system display output
LANE DPRT W/L [On/Off]			×			Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
LDW BUZER OUT- PUT [On/Off]			×			Indicates [On/Off] status of warning buzzer output
LDP SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDP system
WARN REQ [On/Off]			×			Indicates an ADAS control unit judged warning state (ON/OFF) of LDP system
READY signal [On/Off]			×			Indicates LDP system settings

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[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
Camera lost [Detect/Deviate/Both]			×	×		Indicates a lane marker detection state judged from a lane marker detection signal read by the ADAS control unit via ITS communication (Lane camera unit transmits a lane marker signal via ITS communication)
Lane unclear [On/Off]			×	×		Indicates an ON/OFF state of the lane marker. The ON/OFF state is judged from a detected lane condition signal read by the ADAS control unit via ITS communication (The lane camera unit transmits a detected lane condition signal via ITS communication)
STATUS signal [Stnby/Warn/Cancl/ Off]			×			Indicates a control state of LDP system
Shift position [Off, P, R, N, D, M/T1 - 7]			×	×	×	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
Turn signal [OFF/LH/RH/LH&RH]			×	×		Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication)
SIDE G [G]			×	×		Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication)
FUNC ITEM (FCW) [On/Off]	×	×	×	×		Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Emergency Assist" of the integral switch Forward Emergency Braking
FUNC ITEM (LDW) [On/Off]	×	×	×	×		Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Lane" of the integral switch Lane Departure Warning
FUNC ITEM (BSW) [On/Off]	×	×	×	×		Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Blind spot" of the integral switch Blind Spot Warning
FUNC ITEM (NV-ICC) [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored
FUNC ITEM (NV- DCA) [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored
DCA SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the DCA system. The DCA system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Front assist" of the integral switch
LDP SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of LDP system. LDP system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Lane" of the integral switch
BSI SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of Blind Spot Intervention system. Blind Spot Intervention system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Blind Spot"of the integral switch
FCW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the PFCW system. The PFCW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Emergency Assist" of the integral switch
LDW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting "Driving Aids" \Rightarrow "Lane" of the integral switch
BSW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Blind spot" of the integral switch
NAVI ICC SELECT [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
NAVI DCA SELECT [Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored
SYS SELECTABILITY [On/Off]	×	×	×	×		Indicates the availability of ON/OFF switching for "Driving Aids" items received from the integral switch via CAN communication
DRIVE MODE STATS [STD/SPORT/ECO/ SNOW/MID/ERROR]	×	×	×	×		Indicates a drive mode selector select position judged from a drive mode select switch position signal read by the ADAS control unit via CAN communication (The chassis control module transmits a switch position signal of the drive mode select switch signal via CAN communication)
WARN SYS SW [On/Off]	×	×	×	×		NOTE: The item is displayed, but it is not monitored
BSW/BSI WARN LMP [On/Off]				×		Indicates [On/Off] status of Blind Spot warning malfunction
BSI ON IND [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system display
BSW SYSTEM ON [On/Off]				×		Indicates [On/Off] status of BSW system
BSI SYSTEM ON [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system
FCW SYSTEM ON [On/Off]	×	×				Indicates [On/Off] status of PFCW system
BCI SYSTEM ON [On/Off]					×	Indicates [On/Off] status of BCI system
BCI SWITCH [On/Off]					×	NOTE: The item is displayed, but it is not monitored
BATTERY CIRCUIT OFF [On/Off]	×					NOTE: The item is displayed, but it is not used
LDP WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDP warning display (Yellow) output
LDW ON INDICATOR [On/Off]			×			Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/ SNOW/VDC OFF]	×	×	×	×		Indicates [On/Off] status of system cancel display output
CAMERA HI TEMP MSG [On/Off]			×	×		Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(DCA) [On/Off]	×	×	×	×		Indicates the presence or absence of DCA system.
ITS SETTING ITEM(LDP) [On/Off]	×	×	×	×		Indicates the presence or absence of LDP system.
ITS SETTING ITEM(BSI) [On/Off]	×	×	×	×		Indicates the presence or absence of Blind Spot Intervention system.

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
BSI WARNING INDI- CATOR [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention warning display output
BSW ON INDICATOR [On/Off]				×		Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]				×		Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]			×			NOTE: The item is displayed, but it is not monitored
BSW IND BRIGHT- NESS [Nothing/Bright/Nor- mal/Dark]				×		Indicates status of brightness of Blind Spot Warning/Blind Spot Intervention indicator
SL MAIN SW [On/Off]		×				Indicates [On/Off] status as judged from steering switch
FUNC ITEM(FEB) [On/Off]	×					Indicates systems which can be set to ON/OFF by selecting "Driver Aids" ⇒ "Emergency Assist" of the integral switch Forward Emergency Braking
FEB SELECT [On/Off]	×					Indicates an ON/OFF state of the FEB system. The FEB system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Emergency Assist" of the integral switch
FEB SW [On/Off]	×					Indicates [On/Off] status of FEB system
SL TARGET VEHI- CLE SPEED [km/h]	×					Indicates set vehicle speed memorized in ADAS control unit
SL SET LAMP [On/Off]	×					Indicates [On/Off] status of speed limiter SET display output
SL LIMIT LAMP [On/Off]	×					Indicates [On/Off] status of speed limiter MAIN switch display output
ASCD CANCEL (LOW SPEED) [NON/CUT]	×					Indicates the vehicle cruise condition. NON: Vehicle speed is maintained at the ASCD set speed. CUT: Vehicle speed decreased to excessively low, and ASCD operation is cut off.
ASCD CANCEL (SPEED DIFF) [NON/CUT]	×					Indicates the vehicle cruise condition. NON: Vehicle speed is maintained at the ASCD set speed. CUT: Vehicle speed decreased to excessively low compared with the ASCD set speed, and ASCD operation is cut off.
KICK DOWN [On/Off]	×					Display Kick Down decision state. On: Accelerator pedal is depressed Off: Accelerator pedal is fully released

ACTIVE TEST

CAUTION:

- Never perform "Active Test" while driving the vehicle.
- The "Active Test" cannot be performed when the following systems malfunction is displayed.
- ICC system
- DCA
- LDW
- LDP
- Blind Spot Warning
- Blind Spot Intervention

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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- BCI
- The "Active Test" cannot be performed when the FEB warning lamp is illuminated.
- Shift the selector lever to "P" position, and then perform the test.

METER LAMP The MAIN switch indicator and FEB warning lamp can be illuminated by ON/OFF operations as necessary The ICC brake hold relay can be operated by ON/OFF operations as necessary, and the stop lamp can be illuminated Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Intelligent Cruise Control (ICC) Distance Control Assist (DCA) Predictive Forward Collision Warning (PFCW) Forward Emergency Brake (FEB) BRAKE ACTUATOR Activates the brake by an arbitrary operation ACTIVE PEDAL The accelerator pedal actuator can be operated as necessary DCA INDICATOR The DCA system display can be illuminated by ON/OFF operations as necessary Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Lane Departure Warning (LDW) Lane Departure Prevention (LDP) Blind Spot Warning (BSW) Blind Spot Warning (BSW) Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	Test item	Description
can be illuminated Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Intelligent Cruise Control (ICC) Distance Control Assist (DCA) Predictive Forward Collision Warning (PFCW) Forward Emergency Brake (FEB) BRAKE ACTUATOR Activates the brake by an arbitrary operation ACTIVE PEDAL The accelerator pedal actuator can be operated as necessary DCA INDICATOR The DCA system display can be illuminated by ON/OFF operations as necessary Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Lane Departure Warning (LDW) Lane Departure Prevention (LDP) Blind Spot Warning (BSW) Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary LANE DEPARTURE W/L The LDW/LDP warning can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary	METER LAMP	
Intelligent Cruise Control (ICC) Distance Control Assist (DCA) Predictive Forward Collision Warning (PFCW) Forward Emergency Brake (FEB) BRAKE ACTUATOR Activates the brake by an arbitrary operation ACTIVE PEDAL The accelerator pedal actuator can be operated as necessary DCA INDICATOR The DCA system display can be illuminated by ON/OFF operations as necessary Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Lane Departure Warning (LDW) Blind Spot Warning (BSW) Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	STOP LAMP	
ACTIVE PEDAL The accelerator pedal actuator can be operated as necessary DCA INDICATOR The DCA system display can be illuminated by ON/OFF operations as necessary Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Lane Departure Warning (LDW) Lane Departure Prevention (LDP) Blind Spot Warning (BSW) Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary LANE DEPARTURE W/L The LDW/LDP warning can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary The BSW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	ICC BUZZER	 Intelligent Cruise Control (ICC) Distance Control Assist (DCA) Predictive Forward Collision Warning (PFCW)
DCA INDICATOR The DCA system display can be illuminated by ON/OFF operations as necessary Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Lane Departure Warning (LDW) Blind Spot Warning (BSW) Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary LANE DEPARTURE W/L The LDW/LDP warning can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary The BSW malfunction can be illuminated by ON/OFF operations as necessary	BRAKE ACTUATOR	Activates the brake by an arbitrary operation
Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Lane Departure Warning (LDW) • Lane Departure Prevention (LDP) • Blind Spot Warning (BSW) • Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary LANE DEPARTURE W/L BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	ACTIVE PEDAL	The accelerator pedal actuator can be operated as necessary
Lane Departure Warning (LDW) Lane Departure Prevention (LDP) Blind Spot Warning (BSW) Blind Spot Intervention LDP ON IND The LDP system display can be illuminated by ON/OFF operations as necessary LANE DEPARTURE W/L The LDW/LDP warning can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	DCA INDICATOR	The DCA system display can be illuminated by ON/OFF operations as necessary
LANE DEPARTURE W/L The LDW/LDP warning can be illuminated by ON/OFF operations as necessary BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	LDP BUZZER	 Lane Departure Warning (LDW) Lane Departure Prevention (LDP) Blind Spot Warning (BSW)
BSW ON INDICATOR The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	LDP ON IND	The LDP system display can be illuminated by ON/OFF operations as necessary
BSI ON INDICATOR The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	LANE DEPARTURE W/L	The LDW/LDP warning can be illuminated by ON/OFF operations as necessary
LDW ON INDICATOR The LDW system display can be illuminated by ON/OFF operations as necessary LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	BSW ON INDICATOR	The Blind Spot Warning system display can be illuminated by ON/OFF operations as necessary
LDP WARNING INDICATOR The LDP malfunction can be illuminated by ON/OFF operations as necessary LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	BSI ON INDICATOR	The Blind Spot Intervention system display can be illuminated by ON/OFF operations as necessary
LDW WARNING INDICATOR The LDW malfunction can be illuminated by ON/OFF operations as necessary BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	LDW ON INDICATOR	The LDW system display can be illuminated by ON/OFF operations as necessary
BSW WARNING INDICATOR The BSW malfunction can be illuminated by ON/OFF operations as necessary	LDP WARNING INDICATOR	The LDP malfunction can be illuminated by ON/OFF operations as necessary
	LDW WARNING INDICATOR	The LDW malfunction can be illuminated by ON/OFF operations as necessary
BSI WARNING INDICATOR The Blind Spot Intervention malfunction can be illuminated by ON/OFF operations as necessary	BSW WARNING INDICATOR	The BSW malfunction can be illuminated by ON/OFF operations as necessary
	BSI WARNING INDICATOR	The Blind Spot Intervention malfunction can be illuminated by ON/OFF operations as necessary

METER LAMP

NOTE:

The test can be performed only when the engine is running.

Test item	Oper- ation	Description	MAIN switch indicator ICC system warning FEB warning lamp
	Off	Stops sending the following signals to exit from the test • Meter display signal • FEB warning lamp signal	OFF
METER LAMP	On	Transmits the following signals to the combination meter via CAN communication • Meter display signal • FEB warning lamp signal	ON

STOP LAMP

Test item	Oper- ation	Description	Stop lamp
STOP LAMP	Off	Stops transmitting the ICC brake hold relay drive signal below to end the test	OFF
	On	Transmits the ICC brake hold relay drive signal	ON

ICC BUZZER

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Test item	Operation	Description	Operation sound
	MODE1	Transmits the buzzer output signals to the driver assistance buzzer control module via ITS communication	Intermittent beep sound
ICC BUZZER	Test start	Starts the tests of "MODE1"	_
IOO BUZZER	Reset	Stops transmitting the buzzer output signal below to end the test	_
	End	Returns to the "SELECT TEST ITEM" screen	_

BRAKE ACTUATOR

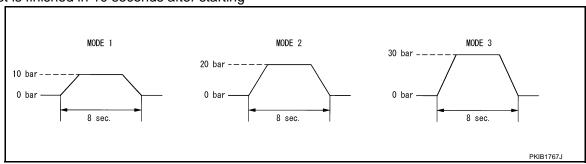
NOTE:

The test can be performed only when the engine is running.

Test item	Operation	Description	"PRESS SENS" value
	MODE1	Transmits the brake fluid pressure control signal to the	10 bar
	MODE2	ABS actuator and electric unit (control unit) via chassis	20 bar
	MODE3	control module	30 bar
BRAKE ACTUATOR	Test start	Starts the tests of "MODE1", "MODE2" and "MODE3"	_
	Reset	Stops transmitting the brake fluid pressure control signal below to end the test	_
	End	Returns to the "SELECT TEST ITEM" screen	_

NOTE:

The test is finished in 10 seconds after starting



Active Pedal

CAUTION:

- Shift the selector lever to "P" position, and then perform the test.
- Never depress the accelerator pedal excessively. (The engine speed may rise unexpectedly when finishing the test.)

NOTE:

- Depress the accelerator pedal to check when performing the test.
- The test can be performed only when the engine is running.

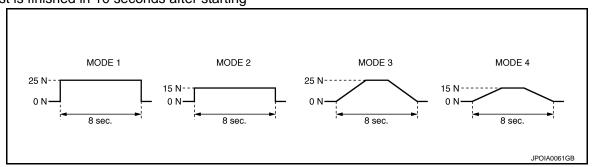
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Test item	Operation	Description	Accelerator pedal operation
	MODE1		Constant with a force of 25 N for 8 seconds
	MODE2	Transmit the accelerator pedal feedback force control signal	Constant with a force of 15 N for 8 seconds
	MODE3	to the accelerator pedal actuator via ITS communication.	Change up to a force of 25 N for 8 seconds
ACTIVE PEDAL	MODE4		Change up to a force of 15 N for 8 seconds
Test start Reset	Starts the tests of "MODE1", "MODE2", "MODE3" and "MODE4"	_	
	Reset	Stops transmitting the accelerator pedal feedback force control signal below to end the test.	_
	End	Returns to the "SELECT TEST ITEM" screen	_

NOTE:

The test is finished in 10 seconds after starting



DCA INDICATOR

NOTE:

The test can be performed only when the engine is running.

Test item	Opera- tion	Description	DCA system display
DCA INDICATOR	Off	Stops transmitting the meter display signal below to end the test	_
DOA INDICATOR	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDP BUZZER

Test item	Opera- tion	Description	Warning buzzer
LDP BUZZER	Off	Stops transmitting the warning buzzer signal below to end the test	_
	On	Transmits the warning buzzer signal to the warning buzzer	ON

LDP ON IND

Test item	Oper- ation	Description	LDP system display (Green)
I DD ON IND	Off	Stops transmitting the meter display signal below to end the test	_
LDP ON IND	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LANE DEPARTURE W/L

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[DRIVER ASSISTANCE SYSTEM]

Test item	Oper- ation	Description	Lane departure system display (Yellow
LANE DEPARTURE	Off	Stops transmitting the meter display signal below to end the test	_
W/L	On	Transmits the meter display signal to the combination meter via CAN communication	ON
BSW ON INDICATOR			
Test item	Oper- ation	Description	Blind Spot Warning system display (Yellow)
BSW ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	_
BSW ON INDICATOR	On	Transmits the meter display signal to the combination meter via CAN communication	ON
BSI ON INDICATOR			
Test item	Oper- ation	Description	Blind Spot Intervention system display (Green)
DOLON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	_
BSI ON INDICATOR	On	Transmits the meter display signal to the combination meter via CAN communication	ON
LDW ON INDICATOR			
Test item	Oper- ation	Description	LDW system display (White)
L DW ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	-
LDW ON INDICATOR	On	Transmits the meter display signal to the combination meter via CAN communication	ON
DP WARNING INDIC	CATOR		
Test item	Oper- ation	Description	LDP malfunction (Yellow)
LDP WARNING INDI-	Off	Stops transmitting the meter display signal below to end the test	_
CATOR	On	Transmits the meter display signal to the combination meter via CAN communication	ON
DW WARNING INDI	CATOR		
Test item	Oper- ation	Description	LDW malfunction (Yellow)
LDW WARNING IN-	Off	Stops transmitting the meter display signal below to end the test	_
DICATOR	On	Transmits the meter display signal to the combination	ON

BSW WARNING INDICATOR

meter via CAN communication

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Test item	Oper- ation	Description BSW malfunction (Yellow)	
BSW WARNING IN- DICATOR	Off	Stops transmitting the meter display signal below to end the test	_
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

BSI WARNING INDICATOR

Test item	Oper- ation	Description	Blind Spot Intervention malfunction (Yellow)
BSI WARNING INDI- CATOR	Off	Stops transmitting the meter display signal below to end the test	_
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

ECU IDENTIFICATION

Displays ADAS control unit parts number.

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DIAGNOSIS SYSTEM (ICC SENSOR)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (ICC SENSOR)

CONSULT Function (LASER/RADAR)

INFOID:0000000011286119

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with ICC sensor.

Diagnosis mode	Description		
Work Support	It can monitor the adjustment direction indication in order to perform the radar alignment operation smoothly		
Self Diagnostic Result	Displays malfunctioning system memorized in ICC sensor		
Data Monitor	Displays real-time input/output data of ICC sensor		
ECU Identification	Displays ICC sensor part number		
CAN Diag Support Monitor	The results of transmit/receive diagnosis of ITS communication can be read		

WORK SUPPORT

Work support items	Description
MILLIWAVE RADAR ADJUST	Outputs millimeter waves, calculates dislocation of the millimeter waves, and indicates adjustment direction

Radar Alignment

Refer to CCS-84, "TYPE 1: Description".

SELF DIAGNOSTIC RESULT

Refer to CCS-63, "DTC Index".

NOTE:

- The details of time display are as per the following.
- 0: The malfunctions that are detected now CAN communication system (U1000, U1010)
- 1 39: It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased. Other than CAN communication system (Other than U1000, U1010)
- 1 49: It increases like 0 → 1 → 2 ··· 38 → 49 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored item [Unit]	Description	
VHCL SPEED SE [km/h] or [mph]	Vehicle speed judged from a vehicle speed signal read by the ICC sensor via ITS communication is displayed [ADAS control unit receives a vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the calculated vehicle speed to ICC sensor via ITS communication]	
YAW RATE [deg/s]	Indicates yaw rate read from ADAS control unit through ITS communication (ADAS control unit receives yaw rate signal from ABS actuator and electric unit (control unit) via CAN communication and transmits yaw rate calculated by the ADAS control unit) Yaw rate judged from a yaw rate signal read by ICC sensor via ITS communication is displayed [ADAS control unit receives a yaw rate signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the calculated yaw rate to ICC sensor via ITS communication]	
PWR SUP MONI [V]	Indicates IGN voltage input by ICC sensor	

DIAGNOSIS SYSTEM (ICC SENSOR)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	Description		
DISTANCE [m]	Indicates the distance from the vehicle ahead		
RELATIVE SPD [m/s]	Indicates the relative speed of the vehicle ahead		
RADAR OFFSET [m]	NOTE: The item is indicated, but not used		
RADAR HEIGHT [m]	NOTE: The item is indicated, but not used		
STEERING ANGLE [deg]	The steering angle is displayed		
STRG ANGLE SPEED [deg/s]	The steering angle speed is displayed		
L/R ADJUST	The horizontal correction value of the radar is displayed		
U/D ADJUST	The vertical correction value of the radar is displayed		

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DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR)

CONSULT Function (ACCELERATOR PEDAL ACT)

INFOID:0000000011286120

DESCRIPTION

CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with accelerator pedal actuator.

Test mode	Function		
Self Diagnostic Result	 Displays malfunctioning system memorized in accelerator pedal actuator Displays the Freeze Frame Data when the malfunction is detected 		
DATA MONITOR	Displays real-time input/output data of accelerator pedal actuator		
ACTIVE TEST	Enables operation check of electrical loads by sending driving signal to them		
ECU Identification	Displays accelerator pedal actuator parts number		
CAN Diag Support Monitor	The results of transmit/receive diagnosis of ITS communication can be read		

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Refer to DAS-273, "DTC Index".

FFD (Freeze Frame Data)

The accelerator pedal actuator records the following data when the malfunction is detected.

Freeze Frame Data item [Unit]	Description		
TGT FBK FRC [N]	It displays the target accelerator pedal actuation force that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication at the time when the malfunction is detected		
TGT MOT POSI [%]	It displays the target motor position that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication at the time when the malfunction is detected		
ACT MOT POSI [%]	It displays the integrated motor position that the accelerator pedal actuator read out at the time when the malfunction is detected		
AP OPEN [%]	It displays the accelerator pedal position signal that the accelerator pedal actuator read out via ITS communication at the time when the malfunction is detected		
APA TEMP [°C]	It displays the integrated motor temperature that the accelerator pedal actuator read out at the time when the malfunction is detected		
APA CURRENT [A]	It displays the integrated motor consumption current that the accelerator pedal actuator read out at the time when the malfunction is detected		
APA PWR [V]	It displays the power supply voltage that the accelerator pedal actuator read out at the time when the malfunction is detected		
APA OPE STATS [On/Off]	It displays the activation permission status of accelerator pedal actuator at the time when the mal- function is detected		
APA STATS [READY/NG/TP NG/INIT]	It displays the condition of accelerator pedal actuator at the time when the malfunction is detected		
ODO/TRIP METER	Total mileage (Odometer value) of the moment a particular.		

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR) [DRIVER ASSISTANCE SYSTEM]

< SYSTEM DESCRIPTION >

Monitor item [Unit]	FUNCTION DESCRIPTION		
TGT FBK FRC [N]	It displays the target accelerator pedal actuation force that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication (The ADAS control unit transmits the accelerator pedal feedback force control signal via ITS communication)		
TGT MOT POSI [%]	It displays the target motor position that the accelerator pedal actuator read out from the accelerate pedal feedback force control signal received via ITS communication (The ADAS control unit transmits the accelerator pedal feedback force control signal via ITS communication)		
ACT MOT POSI [%]	It displays the integrated motor position that the accelerator pedal actuator read out		
AP OPEN [%]	It displays the accelerator pedal position signal that the accelerator pedal actuator read out vi communication (The ADAS control unit transmits with ITS communication the accelerator pedal position signal is received from ECM via CAN communication)		
APA TEMP [°C]	It displays the accelerator pedal actuator integrated motor temperature		
APA CURRENT [A]	It displays the accelerator pedal actuator integrated motor consumption current		
APA PWR [V]	It displays the power supply voltage that the accelerator pedal actuator read out		
APA OPE STATS [On/Off]	It displays the activation permission status of accelerator pedal actuator		
APA STATS [READY/NG/TP NG/INIT]	It displays the condition of accelerator pedal actuator		

ACTIVE TEST

CAUTION:

Never perform ACTIVE TEST while driving the vehicle.

The active test cannot be performed when the ICC system warning lamp is illuminated.

Item list

Active test item	Description
ACCELERATOR PEDAL ACTUATOR TEST1	Drive the accelerator pedal actuator and generate the constant accelerator pedal actuation force
ACCELERATOR PEDAL ACTUATOR TEST2	Drive the accelerator pedal actuator and generate the vibration

ACCELERATOR PEDAL ACTUATOR TEST 1

NOTE:

Check the accelerator pedal by depressing when performing the test.

Active test item	Operation	Description
ACCELERATOR PEDAL ACTUATOR TEST1	STOP	Finish the test
	START	Generate the constant accelerator pedal actuation force for accelerator pedal

ACCELERATOR PEDAL ACTUATOR TEST 2

Check the accelerator pedal by depressing when performing the test.

Active test item	Operation	Description
ACCELERATOR PEDAL ACTUATOR TEST 2	STOP	Finish the test
	START	Generate the vibration for accelerator pedal

ECU IDENTIFICATION

Displays accelerator pedal assembly parts number.

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DIAGNOSIS SYSTEM (SIDE RADAR LH)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (SIDE RADAR LH)

CONSULT Function (SIDE RADAR LEFT)

INFOID:0000000011286121

DESCRIPTION

CONSULT performs the following functions by communicating with the side radar LH.

Select diag mode	Function
Self Diagnostic Result	Displays memorized DTC in the side radar.
Data Monitor	Displays real-time data of side radar.
Active Test	Enables operation check of electrical loads by sending driving signal to them.
ECU Identification	Displays part number of side radar.

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Displays memorized DTC in side radar LH. Refer to DAS-275, "DTC Index".

FFD (Freeze Frame Data)

The side radar records the following data when the malfunction is detected.

Freeze Frame Data item	Description
VHCL SP from ADAS	The vehicle speed (from ADAS control unit) at the moment a malfunction is detected is displayed
TURN SIG STATUS	Turn signal status at the moment a malfunction is detected is displayed

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored Iter	n [unit]	Description
BEAM DISTANCE	_	The item is displayed, but it is not used.
BEAM POSITION	_	The item is displayed, but it is not used.
SIDE RADAR MALF	Off	Side radar is normal.
	On	Side radar is malfunctioning.
BLOCKAGE COND	Off	Side radar is not blocked.
BLOCKAGE COND	On	Side radar is blocked.
ACTIVATE OPE	_	The item is displayed, but it is not used.
VEHICLE DETECT	Off	Does not detect a vehicle within detection area.
	On	Detects a vehicle within detection area.

ACTIVE TEST

CAUTION:

- Never perform the active test while driving.
- Active test cannot be started while the Blind Spot Warning/Blind Spot Intervention indicator is illuminated.

Active test item	Operation	Description
BSW/BSI INDICATOR	On	Outputs the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.
DRIVE	Off	Stops the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.

DIAGNOSIS SYSTEM (SIDE RADAR RH)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (SIDE RADAR RH)

CONSULT Function (SIDE RADAR RIGHT)

INFOID:0000000011286122

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DESCRIPTION

CONSULT performs the following functions by communicating with the side radar RH.

Select diag mode	Function
Self Diagnostic Result	Displays memorized DTC in the side radar.
Data Monitor	Displays real-time data of side radar.
Active Test	Enables operation check of electrical loads by sending driving signal to them.
ECU Identification	Displays part number of side radar.

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Displays memorized DTC in side radar RH. Refer to DAS-277, "DTC Index".

FFD (Freeze Frame Data)

The side radar records the following data when the malfunction is detected.

Freeze Frame Data item	Description
VHCL SP from ADAS	The vehicle speed (from ADAS control unit) at the moment a malfunction is detected is displayed
TURN SIG STATUS	Turn signal status at the moment a malfunction is detected is displayed

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored Ite	m [unit]	Description
BEAM DISTANCE	_	The item is displayed, but it is not used.
BEAM POSITION	_	The item is displayed, but it is not used.
SIDE RADAR MALF	Off	Side radar is normal.
	On	Side radar is malfunctioning.
BLOCKAGE COND	Off	Side radar is not blocked.
	On	Side radar is blocked.
ACTIVATE OPE	_	The item is displayed, but it is not used.
VEHICLE DETECT	Off	Does not detect a vehicle within detection area.
	On	Detects a vehicle within detection area.

ACTIVE TEST

CAUTION:

- Never perform the active test while driving.
- Active test cannot be started while the Blind Spot Warning/Blind Spot Intervention indicator is illuminated.

Active test item	Operation	Description
BSW/BSI INDICATOR	On	Outputs the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.
DRIVE	Off	Stops the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.

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DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE) [DRIVER ASSISTANCE SYSTEM]

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MOD-ULE)

CONSULT Function (BSW/BUZZER)

INFOID:0000000011286123

DESCRIPTION

CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with driver assistance buzzer control module.

Test mode	Function
Self Diagnostic Result	 Displays malfunctioning system memorized in driver assistance buzzer control module Displays the Freeze Frame Data when the malfunction is detected
DATA MONITOR	Displays real-time input/output data of driver assistance buzzer control module
ACTIVE TEST	Enables operation check of electrical loads by sending driving signal to them
ECU Identification	Displays driver assistance buzzer control module parts number

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Refer to DAS-281, "DTC Index".

FFD (Freeze Frame Data)

The drive assistance buzzer control module records the following data when the malfunction is detected.

Freeze Frame Data item [Unit]	Description
IGN Counter ^{Note}	It displays number of ignition switch OFF $ ightarrow$ ON after the malfunction is detected

NOTE:

- The number is 0 when is detected now.
- The number increases like $1 \rightarrow 2 \cdots 38 \rightarrow 39$ after returning to the normal condition whenever IGN OFF \rightarrow
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	FUNCTION DESCRIPTION
Buzzer 1 request (ADAS) [Off/TYPE 1 - 3/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 1 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 1 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 2 request (ADAS) [Off/TYPE 1 - 3/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 2 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 2 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 3 request (ADAS) [Off/TYPE 1/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 3 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE) < SYSTEM DESCRIPTION > [DRIVER ASSISTANCE SYSTEM]

Monitor item [Unit]	FUNCTION DESCRIPTION
Buzzer 3 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 4 request (ADAS) [Off/TYPE 1 - 7/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 4 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 4 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 1 request (CCM) [Off/TYPE 1 - 3/Cancel]	Indicates buzzer request type status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 1 volume (CCM) [Vol. 1- 16]	Indicates buzzer volume status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 1 stop (CCM) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 2 request (CCM) [Off/TYPE 1 - 3/Cancel]	Indicates buzzer request type status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 2 volume (CCM) [Vol. 1- 16]	Indicates buzzer volume status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 2 stop (CCM) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 3 request (CCM) [Off/TYPE 1/Cancel]	Indicates buzzer request type status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 3 volume (CCM) [Vol. 1-16]	Indicates buzzer volume status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 3 stop (CCM) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 4 request (CCM) [Off/TYPE 1 - 7/Cancel]	Indicates buzzer request type status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 4 volume (CCM) [Vol. 1-16]	Indicates buzzer volume status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
Buzzer 4 stop (CCM) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from chassis control module through chassis communication (The ADAS control unit transmits the driver assistance buzzer signal via chassis communication)
ADAS MALFUNCTION [Off/On]	Indicates ADAS control unit status
CCM MALFUNCTION [Off/On]	Indicates chassis control module status
DR ASSIST BUZZ MALF [Off/On]	Indicates driver assistance control buzzer module status
DR ASSIST BUZZ STATUS [1/2/3/1, 2/2, 4/1, 4/4]	Indicates driver assistance control buzzer sound status

ACTIVE TEST

CAUTION:

Never perform ACTIVE TEST while driving the vehicle.

Item list

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DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE) [DRIVER ASSISTANCE SYSTEM]

< SYSTEM DESCRIPTION >

Active test item	Description	
BUZZER 1 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Lane Departure Warning (LDW) • Blind Spot Warning (BSW) • Blind Spot Intervention	
BUZZER 2 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Intelligent Cruise Control (ICC) Predictive Forward Collision Warning (PFCW) Distance Control Assist (DCA)	
BUZZER 3 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Forward Emergency Braking (FEB)	
BUZZER 4 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Predictive Forward Collision Warning (PFCW)	
BUZZER 1 (CCM)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Lane Departure Warning (LDW) • Blind Spot Warning (BSW) • Blind Spot Intervention	
BUZZER 2 (CCM)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF Intelligent Cruise Control (ICC) Predictive Forward Collision Warning (PFCW) Distance Control Assist (DCA)	
BUZZER 3 (CCM)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Forward Emergency Braking (FEB)	
BUZZER 4 (CCM)	Sounds a buzzer used for following systems by arbitrarily operating ON/O • Predictive Forward Collision Warning (PFCW)	

BUZZER 1 (ADAS)

Active test item	Operation	Description
BUZZER 1 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test
	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 2 (ADAS)

Active test item	Operation	Description
BUZZER 2 (ADAS)	Off Stops transmitting the warning buzzer signal below to end of the test	
BUZZEN Z (ADAS)	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 3 (ADAS)

Active test item	Operation	Description
BUZZER 3 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test
BUZZER 3 (ADA3)	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 4 (ADAS)

Active test item	Operation	Description	
BUZZER 4 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test	
	On	Transmits the warning buzzer signal to the warning buzzer	

BUZZER 1 (CCM)

Active test item	Operation	Description
BUZZER 1 (CCM)	Off	Stops transmitting the warning buzzer signal below to end of the test
BOZZER I (COM)	On	Transmits the warning buzzer signal to the warning buzzer

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE) [DRIVER ASSISTANCE SYSTEM]

< SYSTEM DESCRIPTION >

BUZZER 2 (CCM)

Active test item	Operation	Description
BUZZER 2 (CCM)	Off	Stops transmitting the warning buzzer signal below to end of the test
BOZZEN Z (GOW)	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 3 (CCM)

Active test item	Operation	Description
BUZZER 3 (CCM)	Off	Stops transmitting the warning buzzer signal below to end of the test
	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 4 (CCM)

Active test item	Operation	Description
BUZZER 4 (CCM)	Off	Stops transmitting the warning buzzer signal below to end of the test
BOZZEN 4 (CCM)	On	Transmits the warning buzzer signal to the warning buzzer

ECU IDENTIFICATION

Displays driver assistance buzzer control module parts number.

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DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000011286124

APPLICATION ITEMS

CONSULT performs the following functions by communicating with the lane camera unit.

Diagnosis mode	Description		
Work Support	Performs the camera aiming.		
Self Diagnostic Result	Displays the name of a malfunctioning system stored in the lane camera unit		
Data Monitor	Displays lane camera unit input/output data in real time		
Ecu Identification	Displays lane camera unit part number		
CAN Diag Support Monitor	Displays a reception/transmission state of chassis communication		

WORK SUPPORT

Work support items	Description
AUTO AIM	Outputs camera unit, calculates dislocation of the camera, and displays adjustment direction.

SELF DIAGNOSTIC RESULT

Refer to DAS-574, "DTC Index".

FREEZE FRAME DATA (FFD)

Lane camera unit records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description
Detailed Code	_	NOTE: The item is indicated, but not used.
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected.
Steering Pinion Angle	deg	Steering pinion angle of the moment a particular DTC is detected.
Market Information & Camera Height	_	NOTE: The item is indicated, but not used.
Ambient Temperature & Snow Mode	_	NOTE: The item is indicated, but not used.
Image Processing Time	m/s	Image processing time of the moment a particular DTC is detected
Shutter Speed	_	Camera shutter speed of the moment a particular DTC is detected

DATA MONITOR

Monitored item [Unit]		Description	
LDW SW PORT	[On/Off]	NOTE: The item is indicated, but not used.	
LDP ON IND	[On/Off]	NOTE: The item is indicated, but not used.	
LANE DPRT W/L	[On/Off]	NOTE: The item is indicated, but not used.	
CAM HIGH TEMP	[NORMAL/HIGH]	Displays status of lane camera unit high temperature judgment	
VHCL SPD SE	[km/h] or [mph]	Displays vehicle speed received from chassis control module via chassis communication	
TURN SIGNAL	[Off, LH, RH, LH/RH]	Displays status of "Turn signal" determined from chassis control module via chassis communication	
LANE DETCT LH	[On/Off]	Displays left side lane marker detection	

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

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[DRIVER ASSISTANCE SYSTEM]

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Monitored [Unit]		Description
LANE DETCT RH	[On/Off]	Displays right side lane marker detection
CROSS LANE LH	[On/Off]	Displays condition that the vehicle is crossing left lane marker
CROSS LANE RH	[On/Off]	Displays condition that the vehicle is crossing right lane marker
WARN LANE LH	[On/Off]	Displays warning for left lane marker
WARN LANE RH	[On/Off]	Displays warning for right lane marker
VALID POS LH	[VLD/INVLD]	Displays lateral position for left lane marker is valid
VALID POS RH	[VLD/INVLD]	Displays lateral position for right lane marker is valid
LATERL POS LH	[m]	Displays the distance from a lane camera to the left lane marker.
LATERL POS RH	[m]	Displays the distance from a lane camera to the right lane marker.
CURVATURE	[1/m]	Displays the road curvature that a lane camera detected.
LATERAL SPEED	[m/s]	Displays lateral speed for the lane of the vehicle.
YAW ANGLE	[deg]	Displays yaw angle for the lane of the vehicle.
CAM DTC CODE	[—]	NOTE: The item is indicated, but not used.
AIMING DONE	[OK/NG]	Displays status that camera aiming is done
AIMING RESULT	[OK/NOK]	Displays result of camera aiming
AIM NG REASON	[TARGET / YAW / ROLL / PITCH / IMAGE / LIGHT / 1-SIDE / OTHERS]	Displays the reason that can not complete the camera aiming.
RUNTIME AIM	[On/Off]	NOTE: The item is indicated, but not used.
INITIALIZE	[On/Off]	Displays an initialization state of lane camera.
RUNTIME AIM OFFSET (YAW)	[deg]	NOTE: The item is indicated, but not used.
RUNTIME AIM WORK COND	[NO-WRK/ GOOD]	NOTE: The item is indicated, but not used.
RUNTIME AIM MEMORIZING	[NO-WRIT/ WRITING]	NOTE: The item is indicated, but not used.
XOFFSET	[mm]	NOTE: The item is indicated, but not used.
RUNTIME AIM OFF- SET(PITCH)	[deg]	NOTE: The item is indicated, but not used.
AIM CHECK YAW	[deg]	NOTE: The item is indicated, but not used.
AIM CHECK ROLL	[deg]	NOTE: The item is indicated, but not used.
AIM CHECK PITCH	[deg]	NOTE: The item is indicated, but not used.
FOE X	[deg]	NOTE: The item is indicated, but not used.
FOE Y	[deg]	NOTE: The item is indicated, but not used.
RUNTIME FOE X	[deg]	NOTE: The item is indicated, but not used.
RUNTIME FOE Y	[deg]	NOTE: The item is indicated, but not used.
FCTRY AIM YAW	[deg]	Displays check result of camera aiming
FCTRY AIM ROL	[deg]	Displays check result of camera aiming
FCTRY AIM PIT	[deg]	Displays check result of camera aiming

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DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]		Description
RUNTIME AIM COUNT	[—]	NOTE: The item is indicated, but not used.
ROM WRITING COUNT	[—]	NOTE: The item is indicated, but not used.
CAMERA START	[START/COMP]	Displays a start state of the lane camera.
GIVE UP	[OK/NG]	Displays a detection state of the lane marker.
READY	[NOT/ COMP]	Displays a controllable state.
MARK TYPE LH	[NONE / SOLID / DASHED / BOTT's / FORK / SLOW/ TAR / IRGLTY]	Displays the type of left side lane marker.
MARK TYPE RH	[NONE / SOLID / DASHED / BOTT's / FORK / SLOW/ TAR / IRGLTY]	Displays the type of right side lane marker.
CAMERA OFFSET HEIGHT (Dh)	[mm]	Displays camera height correction value (Dh).
TARGET HEIGHT (Ht)	[mm]	Displays height (Ht) of the aiming target.
TARGET DISTANCE (Dt)	[mm]	Displays the distance (Dt) from front axle to a target.

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

APPLICATION ITEM

CONSULT can display each diagnostic item using the diagnostic test modes as follows.

Mode	Function description	
ECU identification	Parts number of chassis control module can be read.	
Self Diagnostic Results	Self-diagnostic results and freeze frame data can be read and erased quickly.*1	
DATA MONITOR	Input/Output data in chassis control module can be read.	
ACTIVE TEST	Send the drive signal from CONSULT to the actuator. The operation check can be performed.	
Work Support	Components can be quickly and accurately adjusted.	
Re/programming, Configuration	 Read and save the vehicle specification (TYPE ID). Write the vehicle specification (TYPE ID) when replacing chassis control module. 	

^{*1:} The following diagnosis information is erased by erasing.

- DTC
- Freeze frame data (FFD)

ECU IDENTIFICATION

Chassis control module part number can be read.

SELF DIAGNOSTIC RESULT

Refer to DAS-300, "DTC Index".

When "CRNT" is displayed on self-diagnosis result

The system is presently malfunctioning.

When "PAST" is displayed on self-diagnosis result

System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)

When DTC is detected, a vehicle state shown below is recorded and displayed on CONSULT.

Item name	Indication/Unit	Display item
Odometer/Trip meter	km	Total mileage (Odometer value) of the moment a particular.
DTC LOCAL CODE	_	DTC code is displayed but not used.
CAN DIAG PERMIS CONDITION	Off / On	Displays CAN network diagnosis status.
BRAKE SWITCH 1	Off / On	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 2	Off / On	Displays brake switch operating status (Off: open / On: close).
ABS	NORMAL / ABNOR	Displays ABS function status.
TCS	NORMAL / ABNOR	Displays TCS function status.
VDC	NORMAL / ABNOR	Displays VDC function status.
VEHICLE SPEED	km	Displays the vehicle speed.
FR WHEEL SPEED	rpm	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	rpm	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	rpm	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	rpm	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	deg	Displays the steering angle from the steering angle sensor.
SIDE G SENSOR	G	Displays the side G.
DECEL G SENSOR	G	Displays the decel G.
YAW RATE SENSOR	deg/s	Displays the yaw rate.
THRTL OPENING	%	Displays the electric throttle position.

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[DRIVER ASSISTANCE SYSTEM]

Item name	Indication/Unit	Display item
SHIFT POSITION	Off/P/R/N/D(A) /S/L/B/1-6/M 1-M8/A1-A6	Displays the shift position.
PRESS SENSOR	bar	Displays the brake fluid pressure.
DRIVE MODE SELECTOR	STD / SPORT / ECO / SNOW / PERSO	Displays the drive mode select switch selection status.
LANE MARKER (LH)*	NOT / DETECT	Displays the lane marker (LH) detection status.
LANE MARKER (RH)*	NOT / DETECT	Displays the lane marker (RH) detection status.
TURN SIGNAL (LH)*	Off / On	Displays the turn signal switch (LH) operating status.
TURN SIGNAL (RH)*	Off / On	Displays the turn signal switch (RH) operating status.
TURN SIGNAL SWITCH*	Off / LEFT / RIGHT / MALF	Displays the turn signal switch operating status.
DAST*	Off / On	Displays the operation request status to Direct Adaptive Steering.
ROAD DISTORTION*	1/m	Displays the road distortion rate radius.
ALC COMMAND ST ANG*	rad	Displays the steering command value to Direct Adaptive Steering.
ST WHL FORCE TORQUE*	Nm	Displays the estimated value for the steering wheel force torque.
ALC COMMAND ST WHL FORCE*	N	Displays the steering reaction force command value to Direct Adaptive Steering.
ADAS COND*	NORMAL / ABNOR	Displays ADAS control unit function status.
WIPER STATUS*	Off / LOW / HIGH / MALF	Displays wiper operating status.

^{*:} Models with Active Lane Control

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

•	tem Jnit]	Description
IGN VOLT	[V]	Displays the ignition power supply voltage.
CONTROL MODULE MALF	[Off / On]	Displays chassis control module malfunction.
CAN DIAG STATUS	[Off / On]	Displays CAN network diagnosis status.
STP LAMP OFF RELAY 1	[Off / On]	Displayed but not used.
STP LAMP OFF RELAY 2	[Off / On]	Displayed but not used.
ESS RELAY	[Off / On]	Displayed but not used.
VEHICLE SPEED	[km/m]	Displays the vehicle speed.
FR WHEEL SPEED	[rpm]	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	[rpm]	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	[rpm]	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	[rpm]	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	[deg]	Displays the steering angle from the steering angle sensor.
DECEL G SENSOR	[G]	Displays the decel G.
SIDE G SENSOR	[G]	Displays the side G.
YAW RATE SENSOR	[deg/s]	Displays the yaw rate.
ACCELE PEDAL POSITION	[%]	Displays the accelerator pedal position.

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	tem Jnit]	Description
THROTTLE CONTROL	[NORMAL/INCORR/PREV/INPOSSI]	Displays the electric throttle status.
SHIFT POSITION	[Off/P/R/N/D(A)/S/L/B /1-6/M1-M8/A1-A6]	Displays the shift position.
BRAKE SWITCH 2	[Off / On]	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 1	[Off / On]	Displays brake switch operating status (Off: open / On: close).
PRESS SENSOR	[bar]	Displays the brake fluid pressure.
ABS	[NORMAL / ABNOR]	Displays ABS function status.
ABS MALF	[NORMAL / ABNOR]	Displays ABS function status.
EBD	[NORMAL / ABNOR]	Displays EBD function status.
ACCELE PEDAL MALF	[NORMAL / ABNOR]	Displays the accelerator pedal status.
TCS	[NORMAL / ABNOR]	Displays TCS function status.
TCS MALF	[NORMAL / ABNOR]	Displays TCS function status.
VDC	[NORMAL / ABNOR]	Displays VDC function status.
VDC MALF	[NORMAL / ABNOR]	Displays VDC function status.
VDC OFF SWITCH	[Off / On]	Displays VDC OFF switch status.
PARKING BRAKE	[Off / On]	Displays the parking brake operating status.
DRV TRQ CTRL MODE	[INITIAL/NORMAL/STOP 1/ STOP 2 / LIMIT 1 / PROHIBI]	Displays the status of correction to slightly increase/decrease the drive torque.
DRV TRQ CTRL PERMIS 1	[NO PER / PERMIS]	Displays the permission status (basic requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PERMIS 2	[NO PER / PERMIS]	Displays the permission status (system requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL STOP	[REQ / NO REQ]	Displays the stop request status of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PROHIBIT	[REQ / NO REQ]	Displays the prohibition request status of correction to slightly increase/decrease drive torque.
DRIVE MODE SELECTOR	[STD/SPORT/SNOW/ECO/PERSO/NOT SET]	Displays the drive mode select switch selection status.
LOG-IN PERMIS	[NO PER / PERMIS]	Displays the login authority status of Infiniti InTuition function.
I-KEY LINK	[Off / On]	Displays the Intelligent Key linking status of Infiniti InTuition function.
USER	[USER A / USER B / USER C / GUEST]	Displays the current user status of Infiniti InTuition function.
ENGINE/TM SETTING	[SPORT/STD/ECO/SNOW]	Displays the engine/transmission setting status with Infiniti drive mode selector function.
STRG SETTING	[STD / SPT / TOUR / SPT-L]	Displays steering characteristic.
ALC SETTING	[Off / LOW / HIGH]	Displays Active Lane Control setting status with Infiniti drive mode selector function.
ATC SETTING	[Off / On]	Displays active trace control function setting status with Infiniti drive mode selector function.
COMBI METER	[STD/SPORT/SNOW/ECO/PERSO]	Displays the combination meter function setting status with Infiniti drive mode selector function.
ATC 1	[Off / On]	Displays active trace control function operating status.
ATC 2	[Off / On]	Displays active trace control function operating status.
ATC 4	[Off / On]	Displays active trace control function operating status.
FL TIRE DISP	[DEF / 1]	Displays the status of front LH tire displayed on the information display in the combination meter.

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< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Item [Unit]		Description
FR TIRE DISP	[DEF / 1]	Displays the status of front RH tire displayed on the information display in the combination meter.
RL TIRE DISP	[DEF / 1]	Displays the status of rear LH tire displayed on the information display in the combination meter.
RR TIRE DISP	[DEF / 1]	Displays the status of rear RH tire displayed on the information display in the combination meter.
TURN DISP	[N STEER / LEFT / RIGHT]	Displays the turning direction of active trace control function on the information display in the combination meter.
ALC LEVEL	[0 - 4]	Displays active/inactive status of Active Lane Control.
ALC STATUS	[INACT / ACT]	Display Active Lane Control operating status.
ATC DISP	[Off / On]	Displays the operating status of active trace control function on the information display in the combination meter.
ALC DISP	[Off / On]	Displays the operating status of Active Lane Control on the information display in the combination meter.
ALC SYSTEM	[Off / On]	Display Active Lane Control activation status.
LANE MARKER (LH)	[NOT / DETECT]	Displays the lane marker (LH) detection status.
LANE MARKER (RH)	[NOT / DETECT]	Displays the lane marker (RH) detection status.
TURN SIGNAL (LH)	[Off / On]	Displays the turn signal switch (LH) operating status.
TURN SIGNAL (RH)	[Off / On]	Displays the turn signal switch (RH) operating status.
TURN SIGNAL SWITCH	[Off / LEFT / RIGHT / MALF]	Displays the turn signal switch operating status.
DAST	[Off / On]	Displays Direct Adaptive Steering operating status.
ROAD DISTORTION	[1/m]	Displays the road curvature.
COMMAND ST ANG	[rad]	Displays the steering command value to Direct Adaptive Steering.
ST PINION ANG	[rad]	Displays the steering pinion angle.
ST WHL FORCE TORQUE	[Nm]	Displays the steering wheel force torque.
COMMAND ST WHL FORCE	[N]	Displays the reaction force command value to Direct Adaptive Steering.
LDW DISP	[On / MALF]	Displays LDW status received from ADAS control unit.
LDP DISP	[On / MALF]	Displays LDP status received from ADAS control unit.
BSI DISP	[On / MALF]	Displays Blind spot intervention function status received from ADAS control unit.
ST SWITCH COND	[OK / NG 1 / NG 2]	Displays the steering switch status received from ADAS control unit
BSW COND	[NORMAL / ABNOR]	Displays BSW status received from ADAS control unit.
ADAS COND	[NORMAL / ABNOR]	Displays ADAS status received from ADAS control unit.
COLLISION WARN	[Off / On]	Displays collision warning status received from ADAS control unit.
ICC ACTIVE	[Off / On]	Displays ICC operating status received from ADAS control unit.
IBA ACTIVE	[Off / On]	Displays intelligent brake assist operating status received from ADAS control unit.
DR BUZZER STATUS	[NO/1/2/3/1,2/2,3/1,3/4]	Displayed but not used.
LDW COND	[On / MALF]	Displays LDW status transmitted to ADAS control unit.
LDP COND	[On / MALF]	Displays LDP status transmitted to ADAS control unit.
BSI COND	[On / MALF]	Displays blind spot intervention function status transmitted to ADAS control unit.
LDP BRAKE CANCEL	[NONE / SLIP / SNOW / VDC OF]	Displays LDP cancel cause transmitted to ADAS control unit.
BSI BRAKE CANCEL	[NONE / SLIP / SNOW / VDC OF]	Displays blind spot intervention function cancel cause transmitted to ADAS control unit.

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[DRIVER ASSISTANCE SYSTEM]

	em nit]	Description
CAMERA COND	[NORMAL / ABNOR]	Displays the lane camera unit status.
CAMERA TEMP COND	[NORMAL / ABNOR]	Displays the lane camera unit status by temperature.
CAMERA COMM COND	[NORMAL / ABNOR]	Displays the communication status with the lane camera unit status.
CAMERA AIMING	[INCOMP / COMP]	Displays the lane camera unit aiming status.
CAMERA HIGH TEMP (LDW)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (LDW).
CAMERA HIGH TEMP (LDP)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (LDP)
CAMERA HIGH TEMP (BSI)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (Blind spot intervention)
SIDE RADAR BLOCK CAN- CEL	[NORMAL / BLOCK]	Displays the side radar status.
BSI LAMP REQ (LH)	[Off / On]	Displays blind spot intervention indicator blink request at blind spot intervention operation (LH).
BSI LAMP REQ (RH)	[Off / On]	Displays blind spot intervention indicator blink request at blind spot intervention operation (RH).
LANE DEPARTURE DISP (LH)	[NO DISP / DEVIAT]	Displays the deviating status on the LH side lane.
LANE DEPARTURE DISP (RH)	[NO DISP / DEVIAT]	Displays the deviating status on the RH side lane.
LDP/BSI ACTIVE	[Off / On]	Displays LDP/blind spot intervention function operation status.
ADAS COND	[NORMAL / ABNOR]	Displayed, but not used
DR BUZZER COND	[NORMAL / ABNOR]	Displayed, but not used
OUTSIDE TEMP	[°C]	Displays the ambient temperature.
WIPER STATUS	[Off / LOW / HIGH / MALF]	Displays the front wiper operating status.

ACTIVE TEST

The active test is used to determine and identify details of a malfunction, based on self-diagnosis test results and data obtained in the DATA MONITOR. In response to instructions from CONSULT, instead of those from chassis control module on the vehicle, a drive signal is sent to the actuator to check its operation.

CAUTION:

- Never perform ACTIVE TEST while driving the vehicle.
- Always bleed air from brake system before active test.
- Never perform active test when system is malfunctioning.

• When active test is performed while depressing the brake pedal, the brake pedal depressing stroke may change. This is not a malfunction.

• During an active test, sometimes a chassis control warning is displayed and the master warning lamp illuminates on the information display in the combination meter; however, this is not a malfunction.

Test item	Operation	Description
BRAKE ACTUATOR 1 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 3	Start	Controls brake fluid pressure.

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< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Test item	Operation	Description
COMMAND STEERING ANGLE	Start	Transmits the steering command value 0 deg \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0 deg (hold it for approximately 2 seconds) \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0 deg to the steering force control module.
COMMAND ST WHL FORCE	Start	Transmits the steering reaction force command value 0 N \rightarrow 0.6 N (hold it for approximately 2 seconds) \rightarrow 0 N (hold it for approximately 2 seconds) \rightarrow 0.6 N (hold it for approximately 2 seconds) \rightarrow 0 N to the steering force control module.
MASTER WARNING ACTIVE	On	If touching "On" with the master warning lamp not illuminated, the master warning lamp illuminates. Stops in approximately 1 minute.
	Off	The master warning lamp turns OFF. (vehicle in normal state)
ALC DICE	On	Displays Active Lane Control active status on the information display in the combination meter.
ALC DISP	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
EL TIDE DIOD	On	Displays the front LH tire on the information display in the combination meter.
FL TIRE DISP	Off	Does not display the front LH tire on the information display in the combination meter.
ED TIDE DIOD	On	Displays the front RH tire on the information display in the combination meter.
FR TIRE DISP	Off	Does not display the front RH tire on the information display in the combination meter.
DI TIDE DICO	On	Displays the rear LH tire on the information display in the combination meter.
RL TIRE DISP	Off	Does not display the rear LH tire on the information display in the combination meter.
	On	Displays the rear RH tire on the information display in the combination meter.
RR TIRE DISP	Off	Does not display the rear RH tire on the information display in the combination meter.
	NO DISP	Does not display the turning status on the information display in the combination meter.
TURN DISP	LH	Displays the LH turning status on the information display in the combination meter.
	RH	Displays the RH turning status on the information display in the combination meter.
	LEVEL 1	
ALC LEVEL	LEVEL 2	Displays Active Lane Control corresponding to the selected level on the in-
ALC LEVEL	LEVEL 3	formation display in the combination meter.
	LEVEL 4	
ALC SETTING	On	Displays Active Lane Control active status on the information display in the combination meter.
ALC SETTING	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
ATO A DIOD	On	Displays active trace control function active status on the information display in the combination meter.
ATC 1 DISP	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATO O DIOD	On	Displays active trace control function active status on the information display in the combination meter.
ATC 2 DISP	Off	Displays active trace control function inactive status on the information display in the combination meter.

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[DRIVER ASSISTANCE SYSTEM]

Test item	Operation	Description
ATC 4 DISP	On	Displays active trace control function active status on the information display in the combination meter.
ATO 4 DIOF	Off	Displays active trace control function inactive status on the information display in the combination meter.

WORK SUPPORT

Work support items	Description
ERASE LAST DRIVER INFORMATION	Erases the information for the previous driver.
ERASE KEY ALLOTEMENT USER	Erases all user information.
ERASE PERSONAL SETTINGS	Erases all user information (personal settings only).
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Lane Departure Prevention (LDP) • Blind Spot Intervention

NOTE:

- Causes of the maximum five cancellations (system cancel) are displayed.
- The displayed cancellation causes display the number of the ignition switch ON/OFF up to 254. It is fixed to 254 if it is over 254. It returns to 0 when the same cancellation cause is detected again.

Display Items for The Cause of Automatic Cancellation 1

Cause of cancellation	Lane departure prevention	Blind spot intervention	Description
OPE VDC/TCS/ABS 1	×		The activation of VDC, TCS, or ABS during LDP system control
Vehicle dynamics	×		Vehicle behavior exceeds specified value
Steering speed	×		Steering speed was more than the specified value in evasive direction
End by yaw angle	×		Yaw angle was the end of LDP control
Departure yaw large	×		Detected more than the specified value of yaw angle in departure direction
ICC WARNING	×		Target approach warning of ICC system, IBA system, or FCW system was activated
CURVATURE	×		Road curve was more than the specified value
Steering angle large	×		Steering angle was more than the specified value
Brake is operated	×		Brake pedal was operated
IGN LOW VOLT	×		Decrease in ADAS control unit IGN voltage
Lateral offset	×		Distance of vehicle and lane was detached in lateral direction more than the specified value
Lane marker lost	×		Lane camera unit lost the trace of lane marker
Lane marker unclear	×		Detected lane marker was unclear
Yaw acceleration	×		Detected yawing speed was more than the specified value
Deceleration large	×		Deceleration in a longitudinal direction was more than the specified value
Accel is operated	×		Accelerator pedal was depressed
Departure steering	×		Steering wheel was steered more than the specified value in departure direction
Evasive steering	×		Steering wheel was steered more than the specified value in the evasive direction
R range	×		Selector lever was operated to R range

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[DRIVER ASSISTANCE SYSTEM]

Cause of cancellation	Lane departure prevention	Blind spot intervention	Description
Parking brake drift	×		Rear wheels lock was detected
Not operating condition	×		Did not meet the operating condition (vehicle speed, turn signal operation, etc.)
SNOW MODE SW	×		Shifting of the drive mode selector to SNOW position
VDC OFF SW	×		VDC OFF switch was pressed
OPE VDC/ABS 2	×		The activation of VDC or ABS during a standby time of LDP or blind spot intervention system control
BSI) OPE VDC/TCS/ ABS 1		×	The activation of VDC, TCS, or ABS during blind spot intervention system control
BSI) Vehicle dynamics		×	Vehicle behavior exceeds specified value
BSI) Steering speed		×	Steering speed was more than the specified value in evasive direction
BSI) End by yaw angle		×	Yaw angle was the end of blind spot intervention control
BSI) Departure yaw large		×	Detected more than the specified value of yaw angle in departure direction
BSI) ICC WARNING		×	Target approach warning of ICC system, IBA system or FCW system was activated
BSI) CURVATURE		×	Road curve was more than the specified value
BSI) Steering angle large		×	Steering angle was more than the specified value
BSI) Brake is operated		×	Brake pedal was operated
BSI) IGN LOW VOLT		×	Decrease in chassis control module IGN voltage
BSI) Lateral offset		×	Distance of vehicle and lane was detached in lateral direction more than the specified
BSI) Lane marker lost		×	Lane camera unit lost the trace of lane marker
BSI) Lane marker unclear		×	Detected lane marker was unclear
BSI) Yaw acceleration		×	Detected yawing speed was more than the specified value
BSI) Deceleration large		×	Deceleration in a longitudinal direction was more than the specified value
BSI) Accel is operated		×	Accelerator pedal was depressed
BSI) Departure steering		×	Steering wheel was steered more than the specified value in departure direction
BSI) Evasive steering		×	Steering wheel was steered more than the specified value in the evasive direction
BSI) R range		×	Selector lever was operated to R range
BSI) Parking brake drift		×	Rear wheels lock was detected
BSI) SNOW MODE SW		×	Shifting of the drive mode selector to SNOW position
BSI) VDC OFF SW		×	VDC OFF switch was pressed
BSI) OPE VDC/ABS 2		×	The activation of VDC or ABS during a standby time of blind spot intervention system control
BSI) Not operating condition		×	Did not meet the operating condition (vehicle speed, turn signal operation, etc.)
Side Radar Lost		×	Unrecognized side radar LH or RH by the ADAS control unit
NO RECORD	×	×	_

RE/PROGRAMMING, CONFIGURATION

Configuration includes the following functions.

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[DRIVER ASSISTANCE SYSTEM]

Function		Description
Read/Write Configuration	Before replacing ECU	Allows the reading of vehicle specification (Type ID) written in chassis control module to store the specification in CONSULT.
	After replacing ECU	Allows the writing of vehicle information (Type ID) stored in CONSULT into the chassis control module.
Manual Configuration		Allows the writing of vehicle specification (Type ID) into the chassis control module by hand.

CAUTION:

Use "Manual Configuration" only when "TYPE ID" of chassis control module cannot be read.

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ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item		Condition	Value/Status
MAIN SW	Ignition switch ON	When MAIN switch is pressed	On
WAIN SW	Ignition switch ON	When MAIN switch is not pressed	Off
SET/COAST SW	Ignition quitab ON	When SET/COAST switch is pressed	On
SET/COAST SW	Ignition switch ON	When SET/COAST switch is not pressed	Off
CANCEL CVA	Legities exitely ON	When CANCEL switch is pressed	On
CANCEL SW	Ignition switch ON	When CANCEL switch is not pressed	Off
DECLIME (A CC CVA)	Legities exitely ON	When RESUME/ACCELERATE switch is pressed	On
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is not pressed	Off
DICTANCE CW	Legities exitely ON	When DISTANCE switch is pressed	On
DISTANCE SW	Ignition switch ON	When DISTANCE switch is not pressed	Off
	Drive the vehicle and activate	When ICC system is controlling	On
CRUISE OPE	the vehicle-to-vehicle distance control mode	When ICC system is not controlling	Off
		When brake or clutch pedal is depressed	Off
BRAKE SW	Ignition switch ON	When brake or clutch pedal is not depressed	On
	Ignition switch ON	When brake pedal is depressed	On
STOP LAMP SW		When brake pedal is not depressed	Off
		Idling	On
DLE SW	Engine running	Except idling (depress accelerator pedal)	Off
SET DISTANCE	Start the engine and turn the ICC system ON Press the DISTANCE switch to change the vehicle-to-vehicle distance setting	When set to "long"	Long
		When set to "middle"	Mid
		When set to "short"	Short
CRUISE LAMP	Start the engine and press	ICC system ON (MAIN switch indicator ON)	On
CRUISE LAIVIP	MAIN switch	ICC system OFF (MAIN switch indicator OFF)	Off
OWN VHCL	NOTE: The item is indicated, but not monitored		Off
	Drive the vehicle and activate	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
VHCL AHEAD	the vehicle-to-vehicle distance control mode	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
ICC WARNING	Start the engine and press	When ICC system is malfunctioning (ICC system malfunction ON)	On
ICC WARNING	MAIN switch	When ICC system is normal (ICC system malfunction OFF)	Off

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
SET VHCL SPD	While driving	When vehicle speed is set	Displays the set vehicle speed
BUZZER O/P	Engine rupping	When the buzzer of the following system operates Vehicle-to-vehicle distance control mode DCA system PFCW system FEB system	On
BUZZER U/P	Engine running	When the buzzer of the following system not operates Vehicle-to-vehicle distance control mode DCA system PFCW system FEB system	Off
THRTL SENSOR	NOTE: The item is indicated, but not n	nonitored	0.0
ENGINE RPM	Engine running		Equivalent to ta- chometer read- ing
		Wiper not operating	Off
WIPER SW	Ignition switch ON	Wiper LO operation	Low
		Wiper HI operation	High
YAW RATE	NOTE: The item is indicated, but not n	nonitored	0.0
DA WADNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
BA WARNING		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
	Drive the vehicle and activate	When ICC brake hold relay is activated	On
STP LMP DRIVE	the vehicle-to-vehicle distance control mode	When ICC brake hold relay is not activated	Off
D DANOE OW	F . i.e.	When the selector lever is in "D" position or manual mode	On
D RANGE SW	Engine running	When the selector lever is in any position other than "D" or manual mode	Off
-		When the selector lever is in "N", "P" position	On
NP RANGE SW	Engine running	When the selector lever is in any position other than "N", "P"	Off
DKB 6/W	Ignition quitch ON	When the parking brake is applied	On
PKB SW	Ignition switch ON	When the parking brake is released	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit
VHCL SPD AT	While driving	Value of A/T ve- hicle speed sen- sor signal	
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position

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[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
GEAR	While driving		Displays the gear position
CLUTCH SW SIG	Ignition switch ON	When clutch or brake pedal is depressed	On
CLOTOITSW SIG	ignition switch ON	When clutch or brake pedal is not depressed	Off
NP SW SIG	Ignition switch ON	When the shift lever is in neutral position	On
141 000 010	ignition switch Oiv	When the shift lever is in any position other than neutral	Off
		When ICC system is deactivated	Off
MODE SIG	Start the engine and press MAIN switch	When vehicle-to-vehicle distance control mode is activated	ICC
		When conventional (fixed speed) cruise control mode is activated	ASCD
SET DISP IND	Drive the vehicle and acti- vate the conventional (fixed)	SET switch indicator ON	On
OLI DIOI IND	speed) cruise control mode • Press SET/COAST switch	SET switch indicator OFF	Off
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the relative speed.
		When a vehicle ahead is not detected	0.0
ON ROOT GUID- ANCE	NOTE: The item is indicated, but not m	nonitored	Off
DYNA ASIST SW	Ignition switch ON	When dynamic driver assistance switch is pressed	On
DINA ASIST SW		When dynamic driver assistance switch is not pressed	Off
	Start the engine and press dy- namic driver assistance switch (When DCA setting is ON)	DCA system OFF	Off
DCA ON IND		DCA system ON	On
	Drive the vehicle and activate	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
DCA VHL AHED	the DCA system	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
IBA SW	NOTE: The item is indicated, but not m	nonitored	Off
ECM SVSTEM ON	Ignition quitab ON	When the PFCW system is ON	On
FCW SYSTEM ON	Ignition switch ON	When the PFCW system is OFF	Off
АРА ТЕМР	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA PWR	Ignition switch ON		Power supply voltage value of accelerator ped- al actuator
NAVI-ICC DISP	NOTE: The item is indicated, but not m	nonitored	Off
I DW SVSTEM ON	Ignition switch ON	When the LDW system is ON	On
LDW SYSTEM ON	Ignition switch ON	When the LDW system is OFF	Off

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
	Ignition switch ON	When the LDW system is OFF	Off
	Start the engine and press dy-	LDP ON indicator lamp ON	On
LDP ON IND	namic driver assistance switch (When LDP system setting is ON)	LDP ON indicator lamp OFF	Off
	Drive the vehicle and activate	Lane departure warning lamp ON	On
LANE DPRT W/L	the LDW system or LDP system	Lane departure warning lamp OFF	Off
LDW BUZER OUT-	Drive the vehicle and activate the LDW/LDP system or Blind	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	On
PUT	Spot Warning/Blind Spot Intervention system	When the buzzer of the following system does not operate LDW/LDP system Blind Spot Warning/Blind Spot Intervention system	Off
	Start the engine and press dy-	When the LDP system is ON	On
LDP SYSTEM ON	namic driver assistance switch (When LDP system setting is ON)	When the LDP system is OFF	Off
WADN DEO	Drive the vehicle and activate	Lane departure warning is operating	On
WARN REQ	the LDP system	Lane departure warning is not operating	Off
	Start the engine and press dy-	When the LDP system is ON	On
READY signal	namic driver assistance switch (When LDP system setting is ON)	When the LDP system is OFF	Off
	Drive the vehicle and activate the LDW system, LDP system or Blind Spot Intervention sys-	Both side lane markers are detected	Detect
Camera lost		Deviate side lane marker is lost	Deviate
	tem	Both side lane markers are lost	Both
Lane unclear	While driving	Lane marker is unclear	On
Lane unclear		Lane marker is clear	Off
	Drive the vehicle and activate the LDP system	When the LDP system is ON	Stnby
STATUS signal		When the LDP system is operating	Warn
OTATOO Signal		When the LDP system is canceled	Cancl
		When the LDP system is OFF	Off
Shift position	Engine runningWhile driving		Displays the shift position
	Turn signal lamps OFF	Off	
Turn signal	Turn signal lamp LH blinking		LH
. diri digilal	Turn signal lamp RH blinking		RH
	Turn signal lamp LH and RH blinking		LH&RH
SIDE G	While driving	Vehicle turning right	Negative value
	9	Vehicle turning left	Positive value
FUNC ITEM	Ignition switch ON		FUNC3
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (LDW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
FUNC ITEM (NV-ICC)	NOTE: The item is indicated, but not n		Off

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[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
FUNC ITEM (NV- DCA)	NOTE: The item is indicated, but not m	nonitored	Off
DCA SELECT	Ignition switch ON	"Distance Control Assist" set with the integral switch is ON	On
DOA SELECT	ignition switch on	"Distance Control Assist" set with the integral switch is OFF	Off
LDD SELECT	Ignition quitab ON	"Lane Departure Intervention" set with the integral switch is ON	On
LDP SELECT	Ignition switch ON	"Lane Departure Intervention" set with the integral switch is OFF	Off
BSI SELECT	Ignition quitab ON	"Blind Spot Intervention" set with the integral switch is ON	On
BSI SELECT	Ignition switch ON	"Blind Spot Intervention" set with the integral switch is OFF	Off
ECW SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is ON	On
FCW SELECT	ignition switch on	"Forward Emergency Braking" set with the integral switch is OFF	Off
LDW SELECT	Ignition switch ON	"Lane Departure Warning" set with the integral switch is ON	On
		"Lane Departure Warning" set with the integral switch is OFF	Off
DOW SELECT	Ignition awitch ON	"Blind Spot Warning" set with the integral switch is ON	On
BSW SELECT	Ignition switch ON	"Blind Spot Warning" set with the integral switch is OFF	Off
NAVI ICC SELECT	NOTE: The item is indicated, but not m	Off	
NAVI DCA SELECT	NOTE: The item is indicated, but not m	nonitored	Off
CVC CELECTABILITY	Ignition switch ON	Items set with the integral switch can be switched normally	On
SYS SELECTABILITY		Items set with the integral switch cannot be switched normally	Off
		When drive mode select switch position is STANDARD	STD
		When drive mode select switch position is in SPORT	SPORT
		When drive mode select switch position is in ECO	ECO
DRIVE MODE STATS	Ignition switch ON	When drive mode select switch position is in SNOW	SNOW
		When drive mode select switch position is in PERSON-AL	STD
		A signal other than those above is input	ERROR
WARN SYS SW	NOTE: The item is indicated, but not monitored		Off
		When the BSW system is malfunctioning	On
BSW/BSI WARN LMP	Engine running	When the BSW system is normal	Off
		Blind Spot Intervention warning ON	On
BSI ON IND	Engine running	Blind Spot Intervention warning OFF	Off
		When the BSW system is ON	On
BSW SYSTEM ON	Ignition switch ON	When the BSW system is OFF	Off
	Start the engine and press dy- namic driver assistance switch	When the Blind Spot Intervention system is ON	On
BSI SYSTEM ON	(When Blind Spot Intervention system setting is ON)	When the Blind Spot Intervention system is OFF	Off

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[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	
FCW SYSTEM ON	Engine rupping	When the FEB/PFCW system is ON	On
FCW SYSTEM ON	Engine running	When the FEB/PFCW system is OFF	Off
DOLCYCTEM ON	Engine rupping	When the BCI system is ON	On
BCI SYSTEM ON	Engine running	When the BCI system is OFF	Off
BCI SWITCH	NOTE: The item is indicated, but not n	nonitored	Off
BATTERY CIRCUIT OFF	NOTE: The item is indicated, but not u	sed	Off
LDP WARNING INDI-	When the LDP system is malfunctioning		On
CATOR	Engine running	When the LDP system is normal	Off
LDW ON INDICATOR	Engine rupping	LDW system display ON	On
LDW ON INDICATOR	Engine running	LDW system display OFF	Off
LDW WARNING INDI-	Facing supplies	When the LDW system is malfunctioning	On
CATOR	Engine running	When the LDW system is normal	Off
SYSTEM CANCEL	Facility and a second	System cancel display ON	On
MESSAGE	Engine running	System cancel display OFF	Off
OAMEDA III TEMB		Lane camera unit high temperature warning display ON	On
CAMERA HI TEMP MSG	Engine running Lane camera unit high temperature warning display OFF		Off
ITS SETTING ITEM(DCA)	Ignition switch ON	On	
ITS SETTING ITEM(LDP)	Ignition switch ON	On	
ITS SETTING ITEM(BSI)	Ignition switch ON	On	
BSI WARNING INDI-	Facing supplies	When the Blind Spot Intervention is malfunctioning	On
CATOR	Engine running	When the Blind Spot Intervention is normal	Off
DOW ON INDICATOR	Engine rupping	BSW system display ON	On
BSW ON INDICATOR	Engine running	BSW system display OFF	Off
SIDE RADAR BLOCK	Facine supplies	Front bumper or side radar is dirty	On
COND	Engine running	Front bumper and side radar is clean	Off
		LDW system OFF	Nothing
LDW WARNING ALERT TIMING	Ignition switch ON	Lane departure warning timing is early setting	Early
ALEKT TIMINO		Lane departure warning timing is late setting	Late
		BSW system OFF	Nothing
		Blind Spot Warning/Blind Spot Intervention indicator brightness bright	Bright
BSW IND BRIGHT- NESS	Ignition switch ON	Blind Spot Warning/Blind Spot Intervention indicator brightness normal	Normal
		Blind Spot Warning/Blind Spot Intervention indicator brightness dark	Dark
		When speed limiter MAIN switch is pressed	On
SL MAIN SW	Engine running	When speed limiter MAIN switch is not pressed	Off
FUNC ITEM (FEB)	Engine running		
. , ,	Ignition quitch CNI	"Forward Emergency Braking" set with the integral switch is ON	On
FEB SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is OFF	Off

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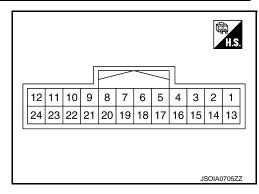
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[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
FEB SW	Facine washing	FEB system ON	On
LER 244	Engine running	FEB system OFF	Off
SL TARGET VEHI- CLE SPEED	While driving	When vehicle speed is set	Displays the set vehicle speed
	Drive the vehicle and acti-	Speed limiter SET indicator ON	On
SL SET LAMP	vate the speed limiterPress speed limiter MAIN switch	Speed limiter SET indicator OFF	Off
	Drive the vehicle and activate the speed limiter Press speed limiter MAIN switch	Speed limiter system ON	On
SL LIMIT LAMP		Speed limiter system OFF	Off
ASCD CANCEL	Drive the vehicle and activate	ASCD cancelled by low vehicle speed	On
(LOW SPEED)	the ASCD	Other than above	Off
ASCD CANCEL	Drive the vehicle and activate the ASCD	ASCD cancelled by difference between set speed and vehicle speed	On
(SPEED DIFF)	IIIE AOOD	Other than above	Off
KICK DOWN	Drive the vehicle and activate	When accelerator pedal is full depressed	On
KICK DOWN	the speed limiter	Other than above	Off

TERMINAL LAYOUT PHYSICAL VALUES



	nal No. color)	Lleccrintion		Condition	Standard value	Reference value
+	_	Signal name	Input/ Output	Condition	Standard value	Reference value
1 (L)		CAN -H	_	_	_	_
2 (R)		CAN -L	_	_	_	_
5 (B)	Ground	Ground	_	Ignition switch ON	0 - 0.1 V	Approx. 0 V
6 (L)		ITS communication-H	_	_	_	_
7 (P)		ITS communication-L	_	_	_	_
8 (L)		Chassis communication-H	_	_	_	_
9 (R)		Chassis communication-L	_	_	_	_

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[DRIVER ASSISTANCE SYSTEM]

	nal No. color)	Description		Standard value	Reference value			
+	-	Signal name	Input/ Output	Condition		Standard value	Neierence value	
12 (GR)	5	Ignition power supply	Input	Ignition switch ON	_	10 - 16 V	Battery voltage	
17	(B)	ICC brake hold relay		Ignition	_	10 - 16 V	Approx. 12 V	
(V)		drive signal	Output switch ON	Output	1	At "STOP LAMP" test of "Active test"	0 - 0.1 V	Approx. 0 V

Fail-safe (ADAS Control Unit)

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If a malfunction occurs in each system, ADAS control unit cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning dis- play	Description
Vehicle-to-vehicle distance control mode	High- pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High- pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High- pitched tone	FEB warning lamp Warning systems indicator (Forward position: Yellow)	Cancel
Predictive Forward Collision Warning (PFCW)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Distance Control Assist (DCA)	High- pitched tone	Warning systems indicator (Forward position: Yellow)	Cancel
Blind Spot Warning (BSW)	_	Warning systems indicator (Blind spot position: Yellow)	Cancel
Back-up Collision Intervention (BCI)	High- pitched tone	BCI system warning	Cancel

DTC Inspection Priority Chart

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If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1507: LOST COMM (SIDE RDR R) U1508: LOST COMM (SIDE RDR L)
2	1CA0A: CONFIG UNFINISHED U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	C1F02: APA C/U MALF C1B53: SIDE RDR R MALF C1B54: SIDE RDR L MALF C1B84: DIST SEN MALFUNCTION

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[DRIVER ASSISTANCE SYSTEM]

C1A01: POWER SUPPLY CIR C1A02: POWER SUPPLY CIR 2 C1A04: ABS/TCS/VDC CIRC C1A05: BRAKE SW/STOP L SW	 U0121: VDC CAN CIR 2 U0126: STRG SEN CAN CIR 1 U0235: ICC SENSOR CAN CIRC 1
 C1A06: OPERATION SW CIRC C1A13: STOP LAMP RLY FIX C1A14: ECM CIRCUIT C1A24: NP RANGE C1A26: ECD MODE MALF C1A27: ECD PWR SUPLY CIR C1A33: CAN TRANSMISSION ERR C1A34: COMMAND ERROR C1A35: APA CIR C1A36: APA CAN COMM CIR C1A37: APA CAN CIR 2 C1A38: APA CAN CIR 1 C1A39: STRG SEN CIR C1B5D: FEB OPE COUNT LIMIT C1B56: SONAR CIRCUIT C1B57: AVM CIRCUIT C1B59: CCM CIRCUIT C1B82: DIST SEN OFF-CENTER C1B85: DIST SEN ABNORMAL TEMP C1B86: DIST SEN PWR SUP CIR C1F01: APA MOTOR MALF C1F05: APA PWR SUPLY CIR 	 U0401: ECM CAN CIR 1 U0402: TCM CAN CIR 1 U0415: VDC CAN CIR 1 U0424: HVAC CAN CIR 1 U0428: STRG SEN CAN CIR 2 U1502: ICC SEN CAN COMM CIR U1503: SIDE RDR L CAN CIR 2 U1504: SIDE RDR L CAN CIR 1 U1505: SIDE RDR R CAN CIR 1 U1506: SIDE RDR R CAN CIR 1 U1506: SIDE RDR R CAN CIR 1 U1508: ECM CAN CIRC 3 U1500: VDC CAN CIRC 3 U1500: TCM CAN CIRC 3 U1501: TCM CAN CIRC 3 U1501: HVAC CAN CIRC 3 U1512: HVAC CAN CIRC 3 U1513: METER CAN CIRC 3 U1514: STRG SEN CAN CIRC 3 U1515: ICC SENSOR CAN CIRC 3 U1517: APA CAN CIRC 3 U1518: SIDE RDR L CAN CIRC 3 U1519: SIDE RDR L CAN CIRC 3 U1521: SONAR CAN COMMUNICATION 3 U1523: SONAR CAN COMMUNICATION 1 U1524: AVM CAN COMMUNICATION 1 U1525: AVM CAN COMMUNICATION 3 U1527: CCM CAN CIR 1 U1530: DR ASSIST BUZZER CAN CIR 1 U1540: DAST 3 CAN CIR 2
C1A03: VHCL SPEED SE CIRC	
	 C1A14: ECM CIRCUIT C1A24: NP RANGE C1A26: ECD MODE MALF C1A27: ECD PWR SUPLY CIR C1A33: CAN TRANSMISSION ERR C1A34: COMMAND ERROR C1A35: APA CIR C1A36: APA CAN COMM CIR C1A37: APA CAN CIR 2 C1A38: APA CAN CIR 1 C1A39: STRG SEN CIR C1B5D: FEB OPE COUNT LIMIT C1B57: AVM CIRCUIT C1B59: CCM CIRCUIT C1B82: DIST SEN OFF-CENTER C1B85: DIST SEN ABNORMAL TEMP C1B86: DIST SEN PWR SUP CIR C1F01: APA MOTOR MALF C1F05: APA PWR SUPLY CIR

DTC Index

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)
- G: Back-up Collision Intervention (BCI)

DTC			Fail-safe	
CONSULT	On board display	CONSULT display	System	Reference
NO DTC IS DE- TECTED. FUR- THER TESTING MAY BE RE- QUIRED	55	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	_	_
C1A0A	41	CONFIG UNFINISHED	A, B, C, D, E, F, G	DAS-69
C1A00	0	CONTROL UNIT	A, B, C, D, E, F, G	<u>DAS-70</u>

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[DRIVER ASSISTANCE SYSTEM]

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
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DTC	;		Fail-safe	
CONSULT	On board display	CONSULT display	System	Reference
C1A01	1	POWER SUPPLY CIR	A, B, C, D, E, F, G	DAS-71
C1A02	2	POWER SUPPLY CIR 2	A, B, C, D, E, F, G	DAS-71
C1A03	3	VHCL SPEED SE CIRC	A, B, C, D, E, F, G	DAS-72
C1A04	4	ABS/TCS/VDC CIRC	A, B, C, D, E, F, G	DAS-74
C1A05	5	BRAKE SW/STOP L SW	A, B, C, D, G	DAS-75
C1A06	6	OPERATION SW CIRC	A, B, C, D, E	DAS-80
C1A13	13	STOP LAMP RLY FIX	A, B, C, D, E, G	DAS-83
C1A14	14	ECM CIRCUIT	A, B, C, D, E	DAS-89
C1A15	15	GEAR POSITION	A, B, C, D, E	DAS-91
C1A24	24	NP RANGE	A, B, C, D, E, F, G	DAS-93
C1A26	26	ECD MODE MALF	A, B, C, D, G	DAS-95
C1A27	27	ECD PWR SUPLY CIR	A, B, C, D, G	DAS-97
C1A33	33	CAN TRANSMISSION ERR	A, B, C, D, E	DAS-99
C1A34	34	COMMAND ERROR	A, B, C, D, E	DAS-100
C1A35	35	APA CIR	A, C, D, E	DAS-101
C1A36	36	APA CAN COMM CIR	A, C, D, E	DAS-102
C1A37	133	APA CAN CIR 2	A, C, D, E	DAS-103
C1A38	132	APA CAN CIR 1	A, C, D, E	DAS-104
C1A39	39	STRG SEN CIR	A, B, C, D, E, F, G	DAS-105
C1B5D	198	FEB OPE COUNT LIMIT	C, D, E	DAS-106
C1B53	84	SIDE RDR R MALF	F, G	DAS-107
C1B54	85	SIDE RDR L MALF	F, G	DAS-108
C1B56	86	SONAR CIRCUIT	G	DAS-109
C1B57	87	AVM CIRCUIT	G	DAS-110
C1B59	184	CCM CIRCUIT	A, B, C, F, G	DAS-111
C1B82	12	DIST SEN OFF-CENTER	A, C, D, E	DAS-112
C1B84	17	DIST SEN MALFUNCTION	A, C, D, E	DAS-113
C1B85	21	DIST SEN ABNORMAL TEMP	A, C, D, E	DAS-114
C1B86	80	DIST SEN PWR SUP CIR	A, C, D, E	DAS-115
C1F01	91	APA MOTOR MALF	A, C, D, E	DAS-117
C1F02	92	APA C/U MALF	A, C, D, E	DAS-118
C1F05	95	APA PWR SUPLY CIR	A, C, D, E	DAS-119
U0121	127	VDC CAN CIR 2	A, B, C, D, E, F, G	DAS-120
U0126	130	STRG SEN CAN CIR 1	A, B, C, D, E, F, G	DAS-121
U0235	144	ICC SENSOR CAN CIRC 1	A, C, D, E	DAS-122
U0401	120	ECM CAN CIR 1	A, B, C, D, E, F, G	DAS-123
U0402	122	TCM CAN CIR 1	A, B, C, D, E, F, G	DAS-124

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Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
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- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)
- G: Back-up Collision Intervention (BCI)

DTC			Fail-safe	
CONSULT	On board display	CONSULT display	System	Reference
U0415	126	VDC CAN CIR 1	A, B, C, D, E, F, G	DAS-125
U0424	156	HVAC CAN CIR 1		DAS-126
U0428	131	STRG SEN CAN CIR 2	A, B, C, D, E, F, G	DAS-127
U1000 ^{NOTE}	100	CAN COMM CIRCUIT	A, B, C, D, E, F, G	DAS-128
U1010	110	CONTROL UNIT (CAN)	A, B, C, D, E, F, G	DAS-130
U150B	157	ECM CAN CIRC 3	A, B, C, D, E, F, G	DAS-131
U150C	158	VDC CAN CIRC 3	A, B, C, D, E, F, G	DAS-132
U150D	159	TCM CAN CIRC 3	A, B, C, D, E, F, G	DAS-133
U150E	160	BCM CAN CIRC 3	A, B, C, D, F, G	DAS-134
U150F	161	AV CAN CIRC 3		DAS-135
U1502	147	ICC SEN CAN COMM CIR	A, C, D, E	DAS-136
U1503	150	SIDE RDR L CAN CIR 2	F, G	DAS-137
U1504	151	SIDE RDR L CAN CIR 1	F, G	DAS-138
U1505	152	SIDE RDR R CAN CIR 2	F, G	DAS-139
U1506	153	SIDE RDR R CAN CIR 1	F, G	DAS-140
U1507	154	LOST COMM (SIDE RDR R)	F, G	DAS-141
U1508	155	LOST COMM (SIDE RDR L)	F, G	DAS-142
U1512	162	HVAC CAN CIRC3		DAS-143
U1513	163	METER CAN CIRC 3	A, B, C, D, E, F, G	DAS-144
U1514	164	STRG SEN CAN CIRC 3	A, B, C, D, E, F, G	DAS-145
U1515	165	ICC SENSOR CAN CIRC 3	A, C, D, E	DAS-146
U1517	167	APA CAN CIRC 3	A, C, D, E	DAS-147
U1518	168	SIDE RDR L CAN CIRC 3	F, G	DAS-148
U1519	169	SIDE RDR R CAN CIRC 3	F, G	DAS-149
U1521	177	SONAR CAN COMMUNICATION 2	G	DAS-150
U1522	178	SONAR CAN COMMUNICATION 1	G	DAS-151
U1523	179	SONAR CAN COMMUNICATION 3	G	DAS-152
U1524	180	AVM CAN COMMUNICATION 1	G	DAS-153
U1525	181	AVM CAN COMMUNICATION 3	G	DAS-154
U1527	185	CCM CAN CIR1	A, B, C, F, G	DAS-155
U153F	186	CCM CAN CIR2	A, B, C, F, G	DAS-156
U1530	183	DR ASSIST BUZZER CAN CIR1		DAS-157
U1540	200	DAST CAN CIR 1	C, D, E	DAS-158
U1541	201	DAST CAN CIR 2	C, D, E	DAS-159

NOTE:

With the detection of "U1000" some systems do not perform the fail-safe operation.

A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the ADAS control unit becomes inoperable.

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ICC SENSOR

Reference Value

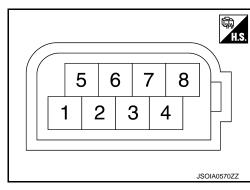
VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item		Condition	Value/Status
VHCL SPEED SE	While driving		Value of vehicle speed signal (wheel speed)
		Vehicle stopped	0.0
YAW RATE	While driving	Vehicle turning right	Positive value
		Vehicle turning left	Negative value
PWR SUP MONI	Ignition switch ON		Power supply voltage value of ICC sensor
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance	When a vehicle ahead is detected	Displays the relative speed
	control mode	When a vehicle ahead is not detected	0.0
RADAR OFFSET	NOTE: The item is indicated, but not u	_	
RADAR HEIGHT	NOTE: The item is indicated, but not u	sed	_
		When setting the steering wheel in straight-ahead position	0.0
STEERING ANGLE	Ignition switch ON	When turning the steering wheel 90° rightward	+90
		When turning the steering wheel 90° leftward	-90
STRG ANGLE SPEED	Ignition switch ON	At the time of turning the steering wheel	Steering wheel turning speed is displayed
L/R ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Horizontal cor- rection value is displayed
U/D ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Vertical correction value is displayed

TERMINAL LAYOUT



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Revision: 2015 January

PHYSICAL VALUES

	inal No. e color)	Description		Condition	Standard value	Reference value
+	_	Signal name	Input/ Output	Condition	Standard value	Treference value
1 (R)		Ignition power supply	Input	Ignition switch ON	10 - 16 V	Battery voltage
3 (L)	8 (B)	ITS communication-H	_	_	_	_
6 (Y)		ITS communication-L	_	_	_	_
8 (B)	Ground	Ground	_	Ignition switch ON	0 - 0.1 V	Approx. 0 V

Fail-safe (ICC Sensor)

INFOID:0000000011286131

If a malfunction occurs in the ICC sensor, ADAS control unit cancels control, sounds a beep, and turns ON the ICC system warning in the information display.

DTC Inspection Priority Chart

INFOID:0000000011286132

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	C1A50: ADAS MALFUNCTION
3	 C1A01: POWER SUPPLY CIR C1A02: POWER SUPPLY CIR 2 C1A12: RADAR OFF-CENTER C1A16: RADAR BLOCKED C1A21: UNIT HIGH TEMP C1A23: UNIT LOW TEMP C1A39: STRG SEN CIR U0104: ADAS CAN CIR1 U0121: VDC CAN CIR2 U0126: STRG SEN CAN CIR1 U0405: ADAS CAN CIR2 U0415: VDC CAN CIR2 U0428: STRG SEN CAN CIR2
4	C1A00: CONTROL UNIT

DTC Index

x: Applicable

ICC SENSOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

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DTC			Fail-safe Fail-safe			
CONSULT	CONSULT display	Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Distance Control Assist (DCA)	Forward Emergency Braking (FEB) /Predictive Forward Collision Warning (PFCW)	Reference
C1A00	CONTROL UNIT	×	×	×	×	CCS-102
C1A01	POWER SUPPLY CIR	×	×	×	×	CCS-103
C1A02	POWER SUPPLY CIR2	×	×	×	×	CCS-103
C1A12	RADAR OFF-CENTER	×		×	×	CCS-104
C1A16	RADAR BLOCKED	×		×	×	CCS-105
C1A21	UNIT HIGH TEMP	×	×	×	×	CCS-107
C1A23	UNIT LOW TEMP	×	×	×	×	CCS-108
C1A39	STRG SEN CIR	×	×	×	×	CCS-109
C1A50	ADAS MALFUNCTION	×	×	×	×	CCS-110
U0104	ADAS CAN CIR1	×	×	×	×	CCS-111
U0121	VDC CAN CIR2	×	×	×	×	CCS-112
U0126	STRG SEN CAN CIR1	×	×	×	×	CCS-113
U0405	ADAS CAN CIR2	×	×	×	×	CCS-114
U0415	VDC CAN CIR1	×	×	×	×	CCS-115
U0428	STRG SEN CAN CIR2	×	×	×	×	CCS-116
U1000	CAN COMM CIRCUIT	×	×	×	×	CCS-117
U1010	CONTROL UNIT (CAN)	×	×	×	×	CCS-118

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ACCELERATOR PEDAL ACTUATOR

Reference Value

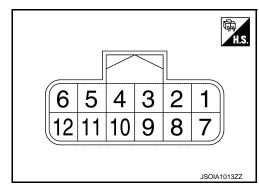
VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item		Condition	Value/Status
TGT FBK FRC	Drive the vehicle and operate the DCA system	When the ADAS control unit is control- ling the accelerator pedal actuator	It changes with the demand from the ADAS control unit
TGT MOT POSI	NOTE: The item is indicated,	but not used.	_
ACT MOT POSI	Engine running	Depress accelerator pedal	It changes according to the de- pressed amount of accelerator pedal
AP OPEN	Engine running	Depress accelerator pedal	It changes according to the de- pressed amount of accelerator pedal
APA TEMP	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA CURRENT	Drive the vehicle and operate the DCA system	When the ADAS control unit is control- ling the accelerator pedal actuator	Display the accelerator pedal actuator motor operation consumption current
APA PWR	Ignition switch ON		Battery voltage
APA OPE STATS	Engine rupping	When the accelerator pedal actuator control is permitted	On
APA OPE STATS	Engine running	When the accelerator pedal actuator control is invalid	Off
		When the accelerator pedal actuator is normal	Ready
APA STATS	Engine rupping	When the accelerator pedal actuator is temporarily malfunctioning	TP NG
AFA SIAIS	Engine running	When the accelerator pedal actuator is malfunctioning	NG
		During the accelerator pedal actuator operation preparations	Init

TERMINAL LAYOUT



PHYSICAL VALUES

ACCELERATOR PEDAL ACTUATOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

	inal No. e color)	Description		Condition	Standard value	Reference value
+	_	Signal name	Input/ Output	Condition	Standard value	Neierence value
1 (BR)		Battery power supply	Input	Ignition switch OFF	8 - 16 V	Battery voltage
2 (G)	7 (B)	Ignition power supply	Input	Ignition switch ON	8 - 16 V	Battery voltage
3 (L)		ITS communication-H	_	_	_	_
7 (B)	Ground	Ground	_	Ignition switch ON	0 - 0.1 V	Approx. 0 V
9 (Y)	7 (B)	ITS communication-L	_	_	_	_

DTC Inspection Priority Chart

INFOID:0000000011286135

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If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	C1F02: APA C/U MALF
3	 C1F01: APA MOTOR MALF C1F03: APA HI TEMP C1F05: APA PWR SUPLY CIR C1F06: CAN CIR2 C1F07: CAN CIR1

DTC Index

x: Applicable

CONSULT display	Fail-safe function	Reference
C1F01: APA MOTOR MALF	×	DAS-342
C1F02: APA C/U MALF	×	DAS-343
C1F03: APA HI TEMP	_	DAS-344
C1F05: APA PWR SUPLY CIR	×	DAS-345
C1F06: CAN CIR2	×	DAS-346
C1F07: CAN CIR1	×	DAS-347
U1000: CAN COMM CIRCUIT	×	DAS-351
U1010: CONTROL UNIT (CAN)	×	DAS-355

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SIDE RADAR LH

Reference Value

VALUES ON THE DIAGNOSIS TOOL

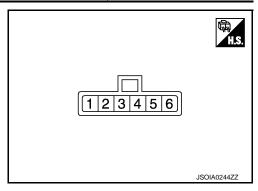
NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
BEAM DISTANCE	NOTE: The item is displayed, but it is not used.	_
BEAM POSITION	NOTE: The item is displayed, but it is not used.	_
SIDE RADAR MALF	Side radar is normal.	Off
SIDE NADAN WALI	Side radar is malfunctioning.	On
BLOCKAGE COND	Side radar is not blocked.	Off
BLOCKAGE COND	Side radar is blocked.	On
ACTIVATE OPE	NOTE: The item is displayed, but it is not used.	_
VEHICLE DETECT	Radar does not detect a vehicle.	Off
VEHICLE DETECT	Radar detects a vehicle.	On

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Standard val-	Reference val-
+	_	Signal name	Input/ Output	Condition	ue	ue
2 (B)	Ground	Ground	_	_	0 - 0.1 V	0 V
3 (R)	_	ITS communication-L	_	_		_
4 (L)	_	ITS communication-H	_	_	_	_
5 (GR)	2 (B)	Ignition power supply	Input	Ignition switch ON	10 - 16 V	Approx. 12 V
6 (BR)	2 (B)	Blind Spot Warning/Blind Spot Intervention indicator	Output	Approx. 2 sec. after ignition switch OFF \Rightarrow ON (bulb check)	5.5 - 16 V	Approx. 6 V

[DRIVER ASSISTANCE SYSTEM]

Fail-safe (Side Radar)

INFOID:0000000011286138

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning/Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Blind Spot Intervention

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds and then the Blind Spot Intervention malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Back-up Collision Intervention (BCI)

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

DTC Inspection Priority Chart

INFOID:0000000011286139

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	U0104: ADAS CAN CIR 1 U0405: ADAS CAN CIR 2
3	C1B50: SIDE RDR MALFUNCTION
4	C1B51: BSW/BSI IND SHORT CIR C1B52: BSW/BSI IND OPEN CIR C1B55: RADAR BLOCKAGE

DTC Index

×: Applicable

DTC		Fail		
		Blind Spot Warning/ Blind Spot Intervention	BCI	Reference page
C1B50	SIDE RDR MALFUNCTION	×	×	DAS-335
C1B51	BSW/BSI IND SHORT CIR	×	×	DAS-336
C1B52	BSW/BSI IND OPEN CIR	×	×	DAS-338
C1B55	RADAR BLOCKAGE	×	×	DAS-340
U1000	CAN COMM CIRCUIT	×	×	DAS-352
U1010	CONTROL UNIT (CAN)	×	×	DAS-355
U0104	ADAS CAN CIR1	×	×	DAS-348
U0405	ADAS CAN CIR2	×	×	DAS-350

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SIDE RADAR RH

Reference Value

VALUES ON THE DIAGNOSIS TOOL

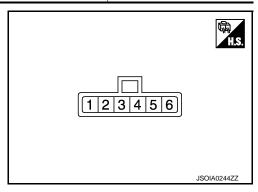
NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
BEAM DISTANCE	NOTE: The item is displayed, but it is not used.	_
BEAM POSITION	NOTE: The item is displayed, but it is not used.	_
SIDE RADAR MALF	Side radar is normal.	Off
SIDE KADAK WALI	Side radar is malfunctioning.	On
BLOCKAGE COND	Side radar is not blocked.	Off
BEOCKAGE COND	Side radar is blocked.	On
ACTIVATE OPE	NOTE: The item is displayed, but it is not used.	_
VEHICLE DETECT	Radar does not detect a vehicle.	Off
VEHICLE DETECT	Radar detects a vehicle.	On

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No. color)	Description		Condition	Standard value	Reference
+	_	Signal name	Input/ Output	Condition	Standard value	value
1 (B)	2 (B)	Right/Left switching signal	Input	_	0 - 0.1 V	0 V
2 (B)	Ground	Ground	_	_	0 - 0.1 V	0 V
3 (P)	_	ITS communication-L	_	_	_	_
4 (L)	_	ITS communication-H	_	_	_	_
5 (GR)	2 (B)	Ignition power supply	Input	Ignition switch ON	10 - 16 V	_
6 (SB)	2 (B)	Blind Spot Warning/Blind Spot Intervention indicator	Output	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	5.5 - 16 V	6 V

[DRIVER ASSISTANCE SYSTEM]

Fail-safe (Side Radar)

INFOID:0000000011286142

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning/Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Blind Spot Intervention

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds and then the Blind Spot Intervention malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Back-up Collision Intervention (BCI)

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

DTC Inspection Priority Chart

INFOID:0000000011286143

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	U0104: ADAS CAN CIR 1 U0405: ADAS CAN CIR 2
3	C1B50: SIDE RDR MALFUNCTION
4	C1B51: BSW/BSI IND SHORT CIR C1B52: BSW/BSI IND OPEN CIR C1B55: RADAR BLOCKAGE

DTC Index

×: Applicable

		Fail-sa		
	DTC	Blind Spot Warning/Blind Spot Intervention warning	BCI	Reference page
C1B50	SIDE RDR MALFUNCTION	×	×	DAS-335
C1B51	BSW/BSI IND SHORT CIR	×	×	DAS-336
C1B52	BSW/BSI IND OPEN CIR	×	×	DAS-338
C1B55	RADAR BLOCKAGE	×	×	DAS-340
U1000	CAN COMM CIRCUIT	×	×	DAS-353
U1010	CONTROL UNIT (CAN)	×	×	DAS-356
U0104	ADAS CAN CIR1	×	×	DAS-348
U0405	ADAS CAN CIR2	×	×	DAS-350

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< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE BUZZER CONTROL MODULE

Reference Value

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item		Condition	Value/Status
		Except for the LDW/LDP/Blind Spot Warning/Blind Spot Intervention warning condition	Off
D 4 (ADAC)	Drive the vehicle and	When the LDW warning condition	TYPE 1
Buzzer 1 request (ADAS)	operate each system	When the BSW warning condition	TYPE 2
		When the Blind Spot Intervention warning condition	TYPE 3
		When the warning condition cancel	Cancel
Buzzer 1 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 1 stop (ADAS)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
		Except for the ICC/PFCW/DCA warning condition	Off
	Drive the vehicle and operate each system	When the approach warning condition	TYPE 1
Buzzer 2 request (ADAS)		When the PFCW warning condition	TYPE 2
		When the DCA condition	TYPE 3
		When the warning condition cancel	Cancel
Buzzer 2 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 2 stop (ADAS)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
		Except for the FEB warning condition	Off
Buzzer 3 request (ADAS)	Drive the vehicle and operate each system	When the FEB warning condition	TYPE 1
		When the warning condition cancel	Cancel
Buzzer 3 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 3 stop (ADAS)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
		Except for the PFCW warning condition	Off
Buzzer 4 request (ADAS)	Drive the vehicle and operate each system	When the PFCW warning condition	TYPE 1
	,	When the warning condition cancel	Cancel
Buzzer 4 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 4 stop (ADAS)	Ignition switch ON	When the buzzer cancel other than above	CYCLE

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
		Except for the LDW/LDP/Blind Spot Warning/Blind Spot Intervention warning condition	Off
	Drive the vehicle and	When the LDW warning condition	TYPE 1
Buzzer 1 request (CCM)	operate each system	When the BSW warning condition	TYPE 2
		When the Blind Spot Intervention warning condition	TYPE 3
		When the warning condition cancel	Cancel
Buzzer 1 volume (CCM)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 1 stop (CCM)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
		Except for the ICC/PFCW/DCA warning condition	Off
D., 0 (OOM)	Drive the vehicle and	When the approach warning condition	TYPE 1
Buzzer 2 request (CCM)	operate each system	When the PFCW warning condition	TYPE 2
		When the DCA condition	TYPE 3
		When the warning condition cancel	Cancel
Buzzer 2 volume (CCM)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 2 stop (CCM)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
	Drive the vehicle and operate each system	Except for the FEB warning condition	Off
Buzzer 3 request (CCM)		When the FEB warning condition	TYPE 1
	, , , , , , , , , , , , , , , , , , , ,	When the warning condition cancel	Cancel
Buzzer 3 volume (CCM)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 3 stop (CCM)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
	5:	Except for the PFCW warning condition	Off
Buzzer 4 request (CCM)	Drive the vehicle and operate each system	When the PFCW warning condition	TYPE 1
		When the warning condition cancel	Cancel
Buzzer 4 volume (CCM)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
		When the buzzer cancel immediate	IMEDIAT
Buzzer 4 stop (CCM)	Ignition switch ON	When the buzzer cancel other than above	CYCLE
ADAS MALFUNCTION	Ignition switch ON	When the ADAS control unit malfunction	On
ADAG WALL GING HON	Iginuon switch ON	When the ADAS control unit normal	Off
CCM MALFUNCTION	Ignition switch ON	When the chassis control module mal- function	On
		When the chassis control module normal	Off
DD ACCICT DUTZ MAN F	Ignition quital ON	When the driver assistance control module malfunction	On
DR ASSIST BUZZ MALF	Ignition switch ON	When the driver assistance control module normal	Off

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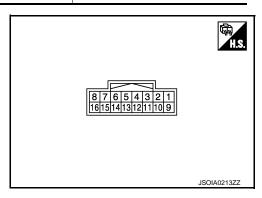
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< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item		Condition	Value/Status
		Except for the warning condition	Off
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention system warning in progress	1
	S Drive the vehicle and operate each system	ICC/PFCW/DCA system warning in progress	2
		FEB system warning in progress	3
DR ASSIST BUZZ STATUS		LDW/LDP//Blind Spot Warning/Blind Spot Intervention/ICC/PFCW/DCA sys- tem warning in progress	1, 2
		ICC/PFCW/DCA system warning in progress.	2, 4
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention/PFCW system warning in progress	1, 4
		PFCW system	4

TERMINAL LAYOUT



PHYSICAL VALUES

	inal No. e color)	L)escription			Condition	Standard value	Reference value
+	_	Signal name	Input/Out- put				
1 (G)	5 (B)	Ignition power supply	Input	Ignition switch ON	_	10 - 16 V	Battery voltage
3 (L)	_	ITS communication-H	_	_	_		_
5 (B)	Groun d	Ground	_	Ignition switch ON	_	0 - 0.1 V	Approx. 0 V

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

	inal No. e color)	Description			Condition	Standard value	Reference value
+	_	Signal name	Input/Out- put		Condition	Standard value	Reference value
					Driver assistance buzzer OFF	0 - 0.1 V	Approx. 0 V
					At "BUZZER 1" test of "Active test"	(V) 4 0 -4	500µS JSOIA0949ZZ
8 (R)	16 (G)	Warning buzzer signal	Output Ignition switch ON	Ignition switch ON	At "BUZZER 2" test of "Active test"	(V) 4 0 -4	500µS JSOIA0950ZZ
					At "BUZZER 3" test of "Active test"	(V) 4 0 -4	500µS JSOIA0951ZZ
11 (Y)	_	ITS communication-L	_	_	_	_	_
13 (B)	Groun d	Ground	_	Ignition switch ON	_	0 - 0.1 V	Approx. 0 V
16 (G)	5 (B)	Warning buzzer signal ground	Output	Ignition switch ON	_	0 - 0.1 V	Approx. 0 V

DTC Inspection Priority Chart

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	U0104: ADAS CAN CIR2 U1527: CCM CAN CIRCUIT 1
3	C1B20: CONTROL MODULE

DTC Index

NOTE:

- The details of time display are as per the following.
- CRNT: A malfunction is detected now
- PAST: A malfunction was detected in the past
- IGN counter is displayed in FFD (Freeze Frame Data).
- 0: The malfunctions that are detected now

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[DRIVER ASSISTANCE SYSTEM]

- 1 39: It increases like $0 \to 1 \to 2 \cdots 38 \to 39$ after returning to the normal condition whenever the ignition switch OFF \to ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased.

×: Applicable

	Reference	
C1B20	CONTROL MODULE	DAS-333
U0104	ADAS CAN CIR2	DAS-349
U1527	CCM CAN CIRCUIT 1	DAS-359
U1000	CAN COMM CIRCUIT	DAS-354
U1010	CONTROL UNIT (CAN)	DAS-357

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LANE CAMERA UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
LDW SW PORT	NOTE: The item is indicated, but not used	_
LDP ON IND	NOTE: The item is indicated, but not used	_
LANE DPRT W/L	NOTE: The item is indicated, but not used	_
CAM HIGH TEMP	When the temperature around lane camera unit is adequate	NORMAL
CAWTHOTTTEIN	When the temperature around the lane camera unit is high	High
VHCL SPD SE	While driving	Approximately equivalent to speedometer reading
	Turn signal lamp LH and RH blinking	LH/RH
TUDNI CICNIAI	Turn signal lamp LH blinking	LH
TURN SIGNAL	Turn signal lamp RH blinking	RH
	Turn signal lamps OFF	Off
LANE DETCT LH	Left side lane marker is detected	On
LANE DETCT LH	Left side lane marker is not detected	Off
LANE DETCT DIL	Right side lane marker is detected	On
LANE DETCT RH	Right side lane marker is not detected	Off
ODOGG LANE LLI	The vehicle is crossing left side lane marker	On
CROSS LANE LH	The vehicle is not crossing left side lane marker	Off
ODOGG LANE DU	The vehicle is crossing right side lane marker	On
CROSS LANE RH	The vehicle is not crossing right side lane marker	Off
WADNII AND III	The vehicle is traveling on the left side lane marker.	On
WARN LANE LH	The vehicle is traveling the center of traffic lane.	Off
WADALL AND DIL	The vehicle is traveling on the right side lane marker.	On
WARN LANE RH	The vehicle is traveling the center of traffic lane.	Off
VALID POS LH	Lateral position for left side lane marker is valid	VLD
VALID POS LN	Lateral position for left side lane marker is invalid.	INVLD
VALID DOS BU	Lateral position for right side lane marker is valid.	VLD
VALID POS RH	Lateral position for right side lane marker is invalid.	INVLD
LATERL POS LH	Left side lane marker is detecting.	Displays the distance from a lane camera to the left lane marker.
LATERL POS RH	Right side lane marker is detecting.	Displays the distance from a lane camera to the right lane marker.
CURVATURE	Lane marker is detecting.	Displays the road curvature that a lane camera detected.
LATERAL SPEED	Lane marker is detecting.	Displays lateral speed for the lane of the vehicle.
YAW ANGLE	Lane marker is detecting.	Displays yaw angle for the lane of the vehicle.

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[DRIVER ASSISTANCE SYSTEM]

Monitor Item	Condition	Value/Status
CAM DTC CODE	NOTE: The item is indicated, but not used.	
AIMING DONE	Camera aiming is completed	OK
AIIVIING DONE	Camera aiming is not adjusted	NG
AIMING RESULT	Camera aiming is completed	OK
Aliviling RESULI	Camera aiming is not completed	NOK
	No target is detected.	TARGET
	Yaw angle beyond the allowable range is detected.	YAW
	Roll angle beyond the allowable range is detected.	ROLL
AIM NO DEACON	Pitch angle beyond the allowable range is detected.	PITCH
AIM NG REASON	The target is unclear.	IMAGE
	Lighting is insufficient.	LIGHT
	One side target is not detected.	1-SIDE
	Other NG is detected.	OTHERS
RUNTIME AIM	NOTE: The item is indicated, but not used	_
INITIALIZE	NOTE: The item is indicated, but not used	_
RUNTIME AIMOFFSET (YAW)	NOTE: The item is indicated, but not used	_
RUNTIME AIM WORK COND	NOTE: The item is indicated, but not used	_
RUNTIME AIM MEMORIZING	NOTE: The item is indicated, but not used	_
XOFFSET	NOTE: The item is indicated, but not used	_
RUNTIME AIMOFFSET(PITCH)	NOTE: The item is indicated, but not used	_
AIM CHECK YAW	NOTE: The item is indicated, but not used	_
AIM CHECK ROLL	NOTE: The item is indicated, but not used	_
AIM CHECK PITCH	NOTE: The item is indicated, but not used	_
FOE X	NOTE: The item is indicated, but not used	_
FOE Y	NOTE: The item is indicated, but not used	_
RUNTIME FOE X	NOTE: The item is indicated, but not used	
RUNTIME FOE Y	NOTE: The item is indicated, but not used	_
FCTRY AIM YAW	Camera aiming is completed	0 ± 2.0 deg
FCTRY AIM ROL	Camera aiming is completed	0 ± 2.0 deg
FCTRY AIM PIT	Camera aiming is completed	0 ± 2.0 deg
RUNTIME AIM COUNT	NOTE: The item is indicated, but not used	_
ROM WRITING COUNT	NOTE: The item is indicated, but not used	_

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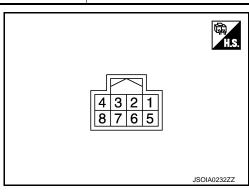
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Monitor Item	Condition	Value/Status		
CAMERA START	Lane camera unit is starting.	START		
CAMERA START	Lane camera unit starting is completed.	COMP		
GIVE UP	Lane marker can be detected.	OK		
GIVE OF	Lane marker can not be detected.	NG		
READY	Operating conditions are not satisfied.	NOT		
READT	Operating conditions are satisfied.	COMP		
	Lane marker is not detected	NONE		
	Solid line is detected.	SOLID		
	Dashed line is detected.	DASHED		
MADIZ TYPE I I I	Bott's dots is detected.	BOTT's		
MARK TYPE LH	Fork road (bifurcation) is detected.	FORK		
	Slow down area is detected.	SLOW		
	Tar strips is detected.	TAR		
	Irregularity road is detected.	IRGLTY		
	Lane marker is not detected	NONE		
	Solid line is detected.	SOLID		
	Dashed line is detected.	DASHED		
MARK TYPE RH	Bott's dots is detected.	BOTT's		
WARK TYPE KH	Fork road (bifurcation) is detected.	FORK		
	Slow down area is detected.	SLOW		
	Tar strips is detected.	TAR		
	Irregularity road is detected.	IRGLTY		
CAMERA OFFSET HEIGHT (Dh)	Camera aiming is completed Displays camer rection value (I			
TARGET HEIGHT (Ht)	Camera aiming is completed	Displays height (Ht) of the aiming target.		
TARGET DISTANCE (Dt)	RGET DISTANCE (Dt) Camera aiming is completed Displays the distar front axle to a target			

TERMINAL LAYOUT



PHYSICAL VALUES

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	nal No. color)	Description		Condition	Value	
+	_	Signal name	Input/ Output	Condition	(Approx.)	
1 (B)		Ground			0 V	
4 (L)		Chassis communication-H	_	_	_	
5 (B)	Ground	Ground	_	_	0 V	
7 (V)		Ignition power supply	Input	Ignition switch ON or START	12 V – 14 V	
8 (W)		Chassis communication-L	_	_	_	

Fail-safe (Lane Camera Unit)

INFOID:0000000011286149

FAIL-SAFE CONTROL BY DTC

Active Lane Control

If a malfunction occurs in the lane camera unit, chassis control module cancels control, and turns ON the Chassis Control Module malfunction in information display.

Lane Departure Warning (LDW)

If a malfunction occurs in the lane camera unit, chassis control module cancels control, and turns ON the LDW malfunction in information display.

Lane Departure Prevention (LDP)

If a malfunction occurs in the lane camera unit, chassis control module cancels control, sounds a beep, and turns ON the LDP malfunction in information display.

Blind Spot Intervention

If a malfunction occurs in the lane camera unit, chassis control module cancels control, sounds a beep, and turns ON the Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

Lane Departure Warning (LDW)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the LDW malfunction in information display.
- When interior temperature is reduced, the system will resume operation automatically and the LDW malfunction in the combination meter will stop blinking.

Lane Departure Prevention (LDP)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and LDP malfunction in information display.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned ON.

Blind Spot Intervention

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and Blind Spot Intervention malfunction in information display.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned ON.

DTC Inspection Priority Chart

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If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	C1B01: CAM AIMING INCMP C1B03: ABNRML TEMP DETECT
3	C1B00: CAMERA UNIT MALF

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		Warning display			Fail-safe				
	DTC	Chassis control warning message	LDW system warning	LDP system warning	Blind Spot Intervention system warning	Active Lane Control	LDW/LDP	Blind Spot Intervention	Reference
C1B00	CAMERA UNIT MALF	ON	ON	ON	ON	×	×	×	DAS-614
C1B01	CAM AIMING INCMP	ON	ON	ON	ON	×	×	×	DAS-615
C1B03	ABNRML TEMP DETECT	_	Message ↓ Blink	Message ↓ OFF	Message ↓ OFF	×	×	×	DAS-616
U1000	CAN COMM CIRCUIT	ON	ON	ON	ON	×	×	×	DAS-612
U1010	CONTROL UNIT (CAN)	ON	ON	ON	ON	×	×	×	DAS-613

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[DRIVER ASSISTANCE SYSTEM]

CHASSIS CONTROL MODULE

Reference Value

CONSULT DATA MONITOR STANDARD VALUE

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Reference values in normal operation			
IGN VOLT	Ignition switch ON	10 – 16 V			
	When chassis control module is normal	Off			
CONTROL MODULE MALF	When chassis control module malfunction is detected	On			
CAN DIAG STATUS	When diagnosis of CAN communication mal- function is detected	Off			
CAN DIAG STATUS	When diagnosis of CAN communication is normal	On			
STP LAMP OFF RELAY 1	Displayed but not used.	_			
STP LAMP OFF RELAY 2	Displayed but not used.	_			
ESS RELAY	Displayed but not used.	_			
	Vehicle Stopped	0 km/h (0 MPH)			
VEHICLE SPEED	Driving*	Almost same reading as speedometer (within ±10%)			
ED WILEEL ODEED	Vehicle stopped	0 rpm			
FR WHEEL SPEED	Driving [*]	Increases according to vehicle speed			
	Vehicle stopped	0 rpm			
FL WHEEL SPEED	Driving*	Increases according to vehicle speed			
	Vehicle stopped	0 rpm			
RR WHEEL SPEED	Driving [*]	Increases according to vehicle speed			
	Vehicle stopped	0 rpm			
RL WHEEL SPEED	Driving [*]	Increases according to vehicle speed			
	When driving straight	0±3.5 deg			
STEERING ANG SENSOR	When steering wheel is steered to RH by 90°	Approx. +90 deg			
	When steering wheel is steered to LH by 90°	Approx. –90 deg			
	Vehicle stopped	Approx. 0 G			
DECEL G SENSOR	When during acceleration	Positive value			
	When during deceleration	Negative value			
	Vehicle stopped	Approx. 0 G			
SIDE G SENSOR	When right turn	Negative value			
	When left turn	Positive value			
	Vehicle stopped	Approx. 0 deg/s			
YAW RATE SENSOR	When right turn	Negative value			
	When left turn	Positive value			
ACCELE PEDAL POSITION	When accelerator pedal is released	0%			
ACCELE FEDAL FOOTHON	When accelerator pedal is depressed	0 – 100%			

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Monitor item	Condition	Reference values in normal operation
	When electric throttle control actuator is normal	NORMAL
THROTTLE CONTROL	When the electric throttle control actuator does not achieve the requirement (measured value is inaccurate)	INCORR
THROTTLE CONTROL	When the electric throttle control actuator does not achieve the requirement (temporary prevention)	PREV
	When the electric throttle control actuator does not achieve the requirement (impossible)	INPOSSI
SHIFT POSITION	Selector lever in any position	Indicates selected selector lever position
DDAKE CMITCH O	When brake pedal is not depressed	Off
BRAKE SWITCH 2	When brake pedal is depressed	On
	When brake pedal is depressed	Off
BRAKE SWITCH 1	When brake pedal is not depressed	On
	When brake pedal is not depressed	Approx. 0 bar
PRESS SENSOR	when brake pedal is depressed	0 – 255 bar
	When ABS function is normal	NORMAL
ABS	When ABS function malfunction is detected	ABNOR
	When ABS function is normal	NORMAL
ABS MALF	When ABS function malfunction is detected	ABNOR
	When EBD function is normal	NORMAL
EBD	When EBD function malfunction is detected	ABNOR
	When accelerator pedal is normal	NORMAL
ACCELE PEDAL MALF	When accelerator pedal malfunction is detected	ABNOR
	When TCS function is normal	NORMAL
TCS	When TCS function malfunction is detected	ABNOR
T00 1411 F	When TCS function is normal	NORMAL
TCS MALF	When TCS function malfunction is detected	ABNOR
	When VDC function is normal	NORMAL
VDC	When VDC function malfunction is detected	ABNOR
	When VDC function is normal	NORMAL
VDC MALF	When VDC function malfunction is detected	ABNOR
	When VDC OFF switch is OFF	Off
VDC OFF SWITCH	When VDC OFF switch is ON	On
	When parking brake is inactive	Off
PARKING BRAKE	When parking brake is active	On
	When correction coefficients are initialized	INITIAL
	When correction is executed	NORMAL
DDV TD0 0751 11055	When correction is stopped (computing is impossible)	STOP 1
DRV TRQ CTRL MODE	When correction is stopped (computing is possible)	STOP 2
	When correction is limited	LIMIT 1
	When correction is prohibited	PROHIBI

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Monitor item	Monitor item Condition	
DRV TRQ CTRL PERMIS 1	When correction is permitted (basic requirement)	PERMIS
DIV TIQUINET ENMIST	When correction is not permitted (basic requirement)	NO PER
DRV TRQ CTRL PERMIS 2	When correction is permitted (system requirement)	PERMIS
DIV TIQ OTILI LIMIO 2	When correction is not permitted (system requirement)	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop	REQ
DIV INQUINESTOI	When correction is not requested to stop	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ
DIV INQUINE FROIIBII	When prohibition of correction is not requested	NO REQ
	When drive mode select switch is "STAN-DARD" mode	STD
	When drive mode select switch is "SPORT" mode	SPORT
DRIVE MODE SELECTOR	When drive mode select switch is "SNOW" mode	SNOW
	When drive mode select switch is "ECO" mode	ECO
	When drive mode select switch is "PERSON-AL" mode	PERSO
	When drive mode select switch is not select	NOT SET
LOG-IN PERMIS	When log-in is possible	NO PER
LOG-IN PERIVIS	When log-in is not possible	PERMIS
LVEVLINIV	When Intelligent Key is not linked	Off
I-KEY LINK	When Intelligent Key is linked	On
	When logged in with "USER A" Intelligent Key	USER A
	When logged in with "USER B" Intelligent Key	USER B
USER	When logged in with "USER C" Intelligent Key	USER C
	When logged in with an Intelligent Key without user registration	GUEST
	When the engine/transmission setting with drive mode select switch is in "SPORT" mode	SPORT
ENGINE/TM SETTING	When the engine/transmission setting with drive mode select switch is in "STANDARD" mode	STD
	When the engine/transmission setting with drive mode select switch is in "ECO" mode	ECO
	When the engine/transmission setting with drive mode select switch is in "SNOW" mode	SNOW

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition	Reference values in normal operation	^
	When the steering system setting with drive mode select switch is in "STANDARD" mode (Effort: Middle /Response: Middle)	STD	- A
STRG SETTING	When the steering system setting with drive mode select switch is in "SPORT" mode (Effort: Heavy / Response: Quick)	SPT	В
STAG SETTING	When the steering system setting with drive mode select switch is in "TOURING" mode (Effort: Light / Response: Casual)	TOUR	С
	When the steering system setting with drive mode select switch is in "SPORT-L" mode (Effort: Middle / Response: Quick)	SPT-L	D
	When Active Lane Control setting with drive mode select switch is "OFF"	Off	Е
ALC SETTING	When Active Lane Control setting with drive mode select switch is "LOW"	LOW	_
	When Active Lane Control setting with drive mode select switch is "HIGH"	HIGH	-
ATC SETTING	When active trace control function setting with drive mode select switch is "OFF"	Off	G
	When active trace control function setting with drive mode select switch is "ON"	On	- 1
	When drive mode select switch is "STAN-DARD" mode	STD	- F
	When drive mode select switch is "SNOW" mode	SNOW	ı
COMBI METER	When drive mode select switch is "PERSON-AL" mode	PERSO	
	When drive mode select switch is "SPORT" mode	SPORT	J
	When drive mode select switch is "ECO" mode	ECO	_
ATC 1	When active trace control function is inactive	Off	K
ATO I	When active trace control function is active	On	-
ATC 2	When active trace control function is inactive	Off	<u> </u>
ATC 2	When active trace control function is active	On	
ATC 4	When active trace control function is inactive	Off	-
A10 4	When active trace control function is active	On	IV
FL TIRE DISP	When the front LH tire is not displayed on the information display in the combination meter	DEF	-
L TIKE DIOF	When the front LH tire is displayed on the information display in the combination meter	1	N
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter	DEF	DA
IN TIME DIGI	When the front RH tire is displayed on the information display in the combination meter	1	
RL TIRE DISP	When the rear LH tire is not displayed on the information display in the combination meter	DEF	Р
NL TINE DISF	When the rear LH tire is displayed on the information display in the combination meter	1	_

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Monitor item	Condition	Reference values in normal operation	
RR TIRE DISP	When the rear RH tire is not displayed on the information display in the combination meter	DEF	
KK TIKE DISP	When the rear RH tire is displayed on the information display in the combination meter	1	
	When the straight-ahead status is displayed on the information display in the combination meter	N STEER	
TURN DISP	When the left turning status is displayed on the information display in the combination meter	LEFT	
	When the right turning status is displayed on the information display in the combination meter	RIGHT	
	When Active Lane Control is turned ON.	0	
ALC LEVEL	When Active Lane Control is operational or is operating.	1 – 4	
ALC STATUS	When Active Lane Control is OFF	INACT	
ALC STATUS	When Active Lane Control is ON	ACT	
ATC DISD	When the activation of active trace control function is not displayed on the information display in the combination meter	Off	
ATC DISP	When the activation of active trace control function is displayed on the information display in the combination meter	On	
	When the activation of Active Lane Control is not displayed on the information display in the combination meter	Off	
ALC DISP	When the activation of Active Lane Control is displayed on the information display in the combination meter	On	
ALC SYSTEM	When Active Lane Control is OFF	Off	
ALC STSTEW	When Active Lane Control is ON	On	
I ANE MARKER (LU)	When left side lane marker is not detected.	NOT	
LANE MARKER (LH)	when left side lane marker is detected.	DETECT	
LANE MADIZED (DLI)	When right side lane marker is not detected.	NOT	
LANE MARKER (RH)	When right side lane marker is detected.	DETECT	
TUDNI CIONAL (LLI)	When turn signal lamps is OFF	Off	
TURN SIGNAL (LH)	When turn signal lamp LH is blinking	On	
TUDNI CIONAL (DUI)	When turn signal lamps is OFF	Off	
TURN SIGNAL (RH)	When turn signal lamp RH is blinking	On	
	When turn signal lamps is OFF	Off	
	When turn signal lamp LH is blinking	LEFT	
TURN SIGNAL SWITCH	When turn signal lamp RH is blinking	RIGHT	
	When turn signal lamp system malfunction is detected.	MALF	
DAST	When the Active Lane Control request to transmit to the steering force control module is OFF	Off	
DAGI	When the Active Lane Control request to transmit to the steering force control module is ON	On	
ROAD DISTORTION	Driving	Depends on the radius of curve	

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Monitor item	Condition	Reference values in normal operation
	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	Approx. 0 rad
COMMAND ST ANG	Active Lane Control is active with yaw angle formed on the left of the lane.	Max 0.05 rad
	Active Lane Control is active with yaw angle formed on the right of the lane.	Max -0.05 rad
	When driving straight	Approx. 0 rad
ST PINION ANG	when steering wheel is steered to LH by 90°	Approx. –1.6 rad
	when steering wheel is steered to RH by 90°	Approx. 1.6 rad
ST WHL FORCE TORQUE	When driving straight	0 N·m
31 WHL FORCE TORQUE	When steering wheel is steered	MAX ± 32 N·m
	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	0 N·m
COMMAND ST WHL FORCE	When the Active Lane Control is active and the vehicle is drifting to the left end of the lane	Approx. –6 N
	When the Active Lane Control is active and the vehicle is drifting to the right end of the lane	Approx. 6 N
LDW DISP	When LDW function is ON	On
EDW DIOI	When LDW function malfunction is detected	MALF
LDP DISP	When LDP function is ON	On
בטו טוטו	When LDP function malfunction is detected	MALF
	When blind spot intervention function is ON	On
BSI DISP	When blind spot intervention function malfunction is detected	MALF
	When steering switch is normal	OK
ST SWITCH COND	ADAS control unit sends malfunction information of the steering switch to the chassis control module. (During the judgment of malfunction.)	NG 1
	ADAS control unit sends malfunction information of the steering switch to the chassis control module. (Malfunction confirmed)	NG 2
BSW COND	When BSW function is normal	NORMAL
	When BSW function malfunction is detected	ABNOR
ADAS COND	When ADAS control unit is normal	NORMAL
	When ADAS control malfunction is detected	ABNOR
COLLISION WARN	When the collision warning is OFF	Off
OCENOIOI WINI	When the collision warning is ON	On
ICC ACTTIVE	When ICC function is inactive	Off
	When ICC function is active	On
IBA ACTIVE	When forward emergency brake function is inactive	Off
ISA MOTIVE	When forward emergency brake function is active	On
DR BUZZER STATUS	Displayed but not used	
LDW COND	When LDW function is ON	On
LDVV COND	When LDW function malfunction is detected	MALF

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Monitor item	Condition	Reference values in normal operation
LDP COND	When LDP function is ON	On
LDF COND	When LDP function malfunction is detected	MALF
	When blind spot intervention function is ON	On
BSI COND	When blind spot intervention function malfunction is detected	MALF
	When not cancel	NONE
	When slippery road	SLIP
LDP BRAKE CANCEL	When drive mode select switch is "SNOW" mode	SNOW
	When VDC OFF switch is OFF	VDC OF
	When not cancel	NONE
	When slippery road	SLIP
BSI BRAKE CANCEL	When drive mode select switch is "SNOW" mode	SNOW
	When VDC OFF switch is OFF	VDC OF
	When Lane camera unit is normal	NORMAL
CAMERA COND	When Lane camera unit malfunction is detected.	ABNOR
CAMEDA TEMP COND	When the temperature around lane camera unit is normal	NORMAL
CAMERA TEMP COND	When the temperature around the lane camera unit is high	ABNOR
	When communication between chassis control module and lane camera unit is normal	NORMAL
CAMERA COMM COND	When communication between chassis control module and lane camera unit malfunction is detected	ABNOR
CAMERA AIMING	When lane camera aiming is completed	COMP
CAMERA AIMING	When lane camera aiming is not completed	INCOMP
CAMERA HIGH TEMP (LDW)	When the temperature around lane camera unit is normal. (LDW ON)	NORMAL
CAMERA HIGH TEMP (LDW)	When the temperature around the lane camera unit is high. (LDW ON)	ABNOR
CAMERA HIGH TEMP (LDP)	When the temperature around lane camera unit is normal. (LDP ON)	NORMAL
CAMERATION TEMP (EDF)	When the temperature around the lane camera unit is high. (LDP ON)	ABNOR
CAMERA LIICH TEMP (PCI)	When the temperature around lane camera unit is normal. (Blind spot intervention ON)	NORMAL
CAMERA HIGH TEMP (BSI)	When the temperature around the lane camera unit is high. (Blind spot intervention ON)	ABNOR
	When the side radar is normal	NORMAL
SIDE RADAR BLOCK CANCEL	Side radar is blocked and temporarily deactivated.	BLOCK
POLLAMB DEO (LLO	When blind spot intervention function (LH) is inactive	Off
BSI LAMP REQ (LH)	When blind spot intervention function (LH) is active	On

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

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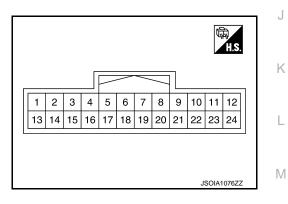
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Monitor item Condition		Reference values in normal operation
BSI LAMP REQ (RH)	When blind spot intervention function (RH) is inactive	Off
BSI LAIMF NEQ (NTI)	When blind spot intervention function (RH) is active	On
LANE DEPARTURE DISP (LH)	When not deviating the LH side lane	NO DISP
LANE DEFAITIONE DIGF (EII)	When deviating the LH side lane	DEVIAT
LANE DEPARTURE DISP (RH)	When not deviating the RH side lane	NO DISP
LANE DEPARTORE DISP (RH)	When deviating the RH side lane	DEVIAT
LDP/BSI ACTIVE	When LDP function and blind spot intervention function are inactive	Off
LDF/BSI ACTIVE	When LDP function or blind spot intervention function are active	On
	When diagnosis of ADAS control unit is normal	NORMAL
ADAS COND	When diagnosis of ADAS control unit malfunction is detected	ABNOR
	When driver assistance buzzer is normal	NORMAL
DR BUZZER COND	when driver assistance buzzer malfunction is detected	ABNOR
OUTSIDE TEMP Ignition switch ON		(-40°C) - (+72°C)
	When front wiper is inactive	Off
WIPER STATUS	When front wiper is active (low and intermittent)	LOW
	When front wiper is active (high)	HIGH
	When front wiper malfunction is detected	MALF

^{*:} Check tire pressure under normal conditions.

TERMINAL LAYOUT



PHYSICAL VALUES

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< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

	inal No. e color)	Description		Condition		Value
+	_	Signal name	Input/ Output			(Approx.)
3 (P)		CAN-L	_	_	_	_
4 (L)		CAN-H	_	_	_	_
5			_	Ignition	Up switch is not pressed	6.4 – 16 V
(V)		DRIVE MODE SELECT SWITCH (UP)	Input	switch ON	Up switch is pressed	0 V
6 (G)		DRIVE MODE SELECT SWITCH (DOWN)	Input	Ignition switch	Down switch is not pressed	6.4 – 16 V
(0)				ON	Down switch is pressed	0 V
7 (W)	Ground	CHASSIS COMM-L	_	_	_	_
8 (W)		CHASSIS COMM-L	_	_	_	_
10 (G)		IGN	Input	I	gnition switch ON	6.4 – 16 V
11 (L)		CHASSIS COMM-H	_	_	_	_
12 (B)		GROUND	_	Ignition switch ON	_	0 V
19 (L)		CHASSIS COMM-H	_	_	_	_

Fail-Safe (Chassis Control Module)

INFOID:0000000011286153

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

DTC	Vehicle condition
C1B90-00	The following functions are suspended.
C1B91-00	 Active lane control function LDW function LDP function Blind spot intervention function
C1B92-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-00	The following functions are suspended.
C1B94-00	 Active trace control function LDW function LDP function Blind spot intervention function
C1B95-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function Intelligent cruise control function

< ECU DIAGNOSIS INFORMATION >

DTC	Vehicle condition	
C1B96-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function	- А В
C1B98-00	Normal control	-
C1B99-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	C
C1BA0-00	The following functions are suspended.	E
C1BA2-00	Active trace control function	
C1BA5-00	Normal control	=-
C1BA6-00	The following functions are suspended. Infiniti InTuition function	F
C1BA7-00	The following functions are suspended. • Active lane control function	G
C1BA9-00	The following functions are suspended.	
C1BAA-00	 LDW function LDP function Blind spot intervention function 	Н
C1BAB-00	The following functions are suspended. • Active trace control function	
C1BAC-00	The following functions are suspended.	
C1BAD-00	 LDP function Blind spot intervention function 	
C1BAE-00	Billiu Spot intervention function	J
C1BAF-00	The following functions are suspended. • Blind spot intervention function	- 1/
C1BB0-06	Normal control	- K
C1BB2-00	The following functions are suspended. • Active trace control function	
C1BB3-00	Active lane control function	L
C1BB4-00	LDW function LDP function	
C1BB5-00	Blind spot intervention function Infiniti InTuition function	N
C1BB6-00	Normal control	_
C1BB7-00	The following functions are suspended.	N
C1BB8-00	Active trace control function Active lane control function	
C1BB9-00	LDW function	
C1BBA-00	LDP function Blind spot intervention function	DA
C1BBB-00	Infiniti InTuition function	
C1BBC-00	Normal control	- - P
C1BBD-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	

< ECU DIAGNOSIS INFORMATION >

DTC		Vehicle condition
C1BC0-00	The following functions are suspended.	
C1BC1-00	Active trace control function Active lane control function	
C1BC2-00	The following functions are suspended.	
C1BC3-00	Active trace control function	
C1BC4-00	Normal control	
C1BC5-00		
C1BC6-00	The following functions are suspended. Active trace control function	
U1000-00		
U1010-49	The following functions are suspended.Active trace control functionActive lane control function	
U1A30-00	The following functions are suspended.	
U1A31-00	Active lane control function LDW function	
U1A32-00	LDP function Blind spot intervention function	
U1A34-00 U1A35-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function	
U1A36-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function	
U1A39-00	The following functions are suspended. LDW function LDP function Blind spot intervention function	
U1A3B-00	The following functions are suspended. Active trace control function Active lane control function LDW function DP function Blind spot intervention function	
U1A3D-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function	
U1A3E-00	Normal control	
U1A3F-00	The following functions are suspended. Infiniti InTuition function	
U1A42-00	The following functions are suspended.	
U1A43-00	Active trace control function	
U1A45-00	The following functions are suspended. • Active lane control function	
U1A48-00	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function	

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC	Vehicle condition	
U1A4A-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function	
U1A4B-00	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function	
U1A4C-00	Normal control	
U1A4E-00	The following functions are suspended. • Active trace control function	

DTC Inspection Priority Chart

INFOID:0000000011286154

When multiple DTCs are displayed simultaneously, check them one by one according to the following priority list.

Priority	Detected item (DTC)	-
1	U1000-00 CAN COMM CIRCUIT U1010-49 CONTROL UNIT (CAN)	G
	 U1A30-00 DAST COMM U1A31-00 DAST COMM U1A32-00 CAMERA COMM U1A34-00 BRAKE CONTROL COMM U1A35-00 BRAKE CONTROL COMM 	Н
	U1A36-00 BCM/IPDM COMM U1A39-00 COMBINATION METER COMM U1A3B-00 TCM COMM	I
2	 U1A3D-00 TCM COMM U1A3E-00 ADAS COMM U1A3F-00 AV COMM 	J
	 U1A42-00 STEERING ANGLE SENSOR COMM U1A43-00 STEERING ANGLE SENSOR COMM U1A45-00 DR BUZZER COMM U1A48-00 ECM/HPCM COMM 	K
	 U1A4A-00 CONTROL MODULE (CAN) U1A4B-00 CONTROL MODULE (CAN) U1A4C-00 A/C AUTO AMP. COMM U1A4E-00 ECM/HPCM COMM 	L
3	C1BBD-00 VARIANT CODING	M
4	C1B98-00 ADAS SYSTEM	_

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[DRIVER ASSISTANCE SYSTEM]

Priority	Detected item (DTC)
5	C1B90-00 DAST SYSTEM C1B91-00 CAMERA SYSTEM C1B92-00 BRAKE CONTROL SYSTEM C1B93-00 ENGINE/HEV SYSTEM C1B93-00 ENGINE/HEV SYSTEM C1B96-00 ADAS SYSTEM C1B96-00 ADAS SYSTEM C1BA0-00 ADAS/CHASSIS CTRL BRAKE SYS C1BA2-00 STEERING ANGLE SENSOR C1BA5-00 ADAS/CHASSIS CTRL ENGINE SYS C1BA6-00 AV SYSTEM C1BA7-00 ALC SYSTEM C1BA7-00 ALC SYSTEM C1BA7-00 AND SYSTEM C1BA7-00 AND SYSTEM C1BA7-00 AND SYSTEM C1BA7-00 AND SYSTEM C1BA7-00 CEAR POSITION C1BA7-00 BEAR POSITION C1BA7-00 OPERATION SW CIRC C1BA7-00 ACCELERATER PEDAL C1BA7-00 BSW SYSTEM C1BA7-00 BSW SYSTEM C1BA7-00 BSW SYSTEM C1BA7-00 BSW SYSTEM C1BC0-00 FR WHEEL SENSOR C1BC1-00 FL WHEEL SENSOR C1BC1-00 FL WHEEL SENSOR C1BC3-00 RL WHEEL SENSOR C1BC3-00 RL WHEEL SENSOR C1BC5-00 SIDE G SENSOR C1BC6-00 PRESSURE SENSOR
6	 C1BB5-00 IGN POWER SUPPLY C1BB6-00 IGN POWER SUPPLY
7	 C1B95-00 CONTROL MODULE C1B99-00 CONTROL MODULE C1BB2-00 CONTROL MODULE C1BB3-00 CONTROL MODULE C1BB4-00 CONTROL MODULE C1BB7-00 CONTROL MODULE C1BB8-00 CONTROL MODULE C1BB9-00 CONTROL MODULE C1BBA-00 CONTROL MODULE C1BBA-00 CONTROL MODULE C1BBB-00 CONTROL MODULE C1BBB-00 CONTROL MODULE C1BBC-00 CONTROL MODULE

DTC Index

DTC	Display item	Refer to
C1B90-00	DAST SYSTEM	DAS-437, "DTC Description"
C1B91-00	CAMERA SYSTEM	DAS-439, "DTC Description"
C1B92-00	BRAKE CONTROL SYSTEM	DAS-441, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-443, "DTC Description"
C1B94-00	TM SYSTEM	DAS-445, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-447, "DTC Description"
C1B96-00	ADAS SYSTEM	DAS-448, "DTC Description"
C1B98-00	ADAS SYSTEM	DAS-450, "DTC Description"
C1B99-00	CONTROL NODULE	DAS-452, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-453, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-455, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-456, "DTC Description"
C1BA6-00	AV SYSTEM	DAS-457, "DTC Description"

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

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DTC	Display item	Refer to
C1BA7-00	ALC SYSTEM	DAS-459, "DTC Description"
C1BA9-00	NP RANGE	DAS-461, "DTC Description"
C1BAA-00	GEAR POSITION	DAS-463, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-465, "DTC Description"
C1BAC-00	OPERATION SW CIRC	DAS-467, "DTC Description"
C1BAD-00	ACCELERATER PEDAL	DAS-469, "DTC Description"
C1BAE-00	ACCELERATER PEDAL	DAS-471, "DTC Description"
C1BAF-00	BSW SYSTEM	DAS-473, "DTC Description"
C1BB0-06	DR BUZZER SYSTEM	DAS-475, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-476, "DTC Description"
C1BB3-00	CONTROL MODULE	DAS-477, "DTC Description"
C1BB4-00	CONTROL MODULE	DAS-478, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-479, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-482, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-484, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-485, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-486, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-487, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-488, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-489, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-490, "DTC Description"
C1BC0-00	FR WHEEL SENSOR	DAS-491, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-493, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-495, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-497, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-499, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-500, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-502, "DTC Description"
U1000-00	CAN COMM CIRCUIT	DAS-503, "DTC Description"
U1010-49	CONTROL UNIT (CAN)	DAS-504, "DTC Description"
U1A30-00	DAST COMM	DAS-505, "DTC Description"
U1A31-00	DAST COMM	DAS-508, "DTC Description"
U1A32-00	CAMERA COMM	DAS-510, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-512, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-514, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-516, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-518, "DTC Description"
U1A3B-00	TCM COMM	DAS-520, "DTC Description"
U1A3D-00	ADAS COMM	DAS-522, "DTC Description"
U1A3E-00	ADAS COMM	DAS-524, "DTC Description"
U1A3F-00	AV COMM	DAS-526, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-528, "DTC Description"
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-530, "DTC Description"
U1A45-00	DR BUZZER COMM	DAS-532, "DTC Description"

Revision: 2015 January **DAS-301** 2015 Q50

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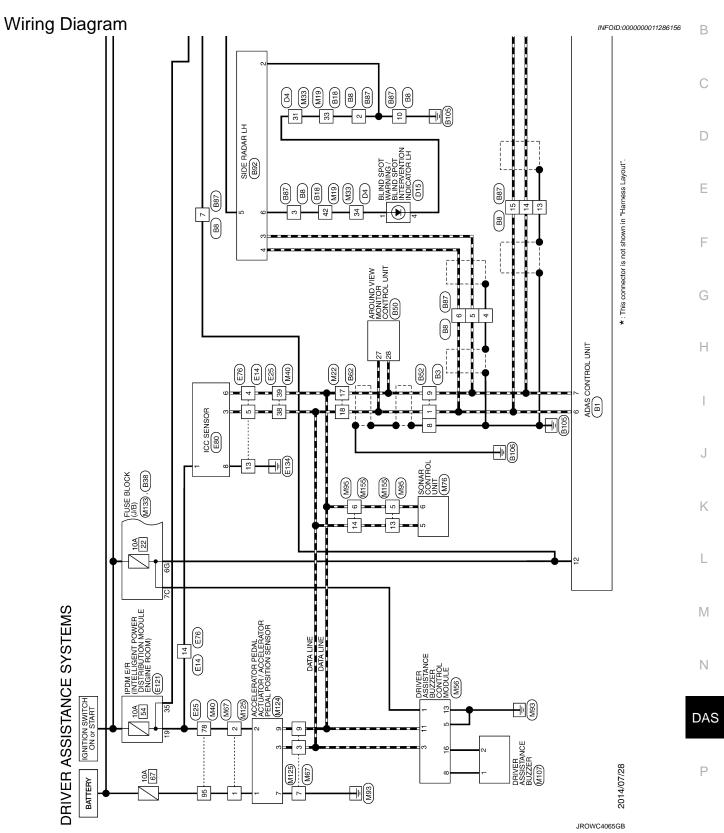
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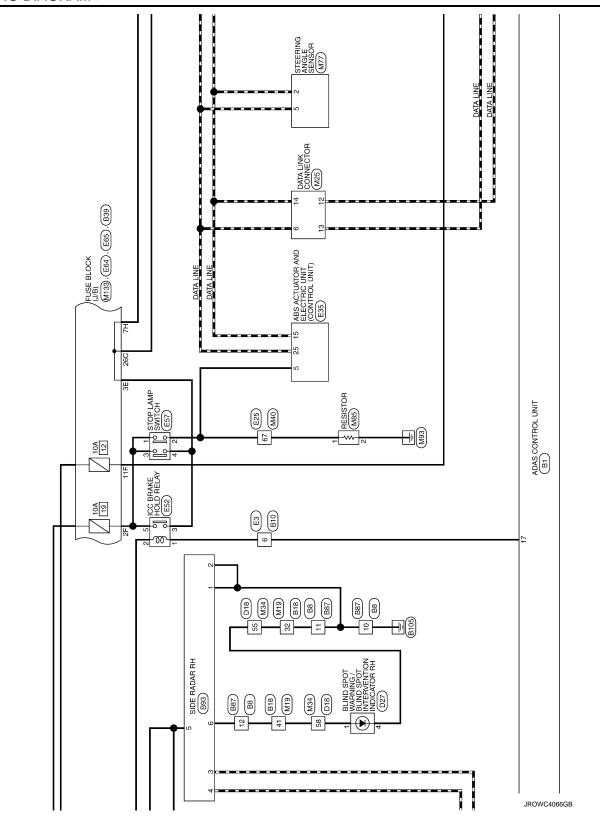
< ECU DIAGNOSIS INFORMATION >

DTC	Display item	Refer to
U1A48-00	ECM/HPCM COMM	DAS-534, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-536, "DTC Description"
U1A4B-00	CONTROL MODULE (CAN)	DAS-537, "DTC Description"
U1A4C-00	A/C AUTO AMP. COMM	DAS-538, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-540, "DTC Description"

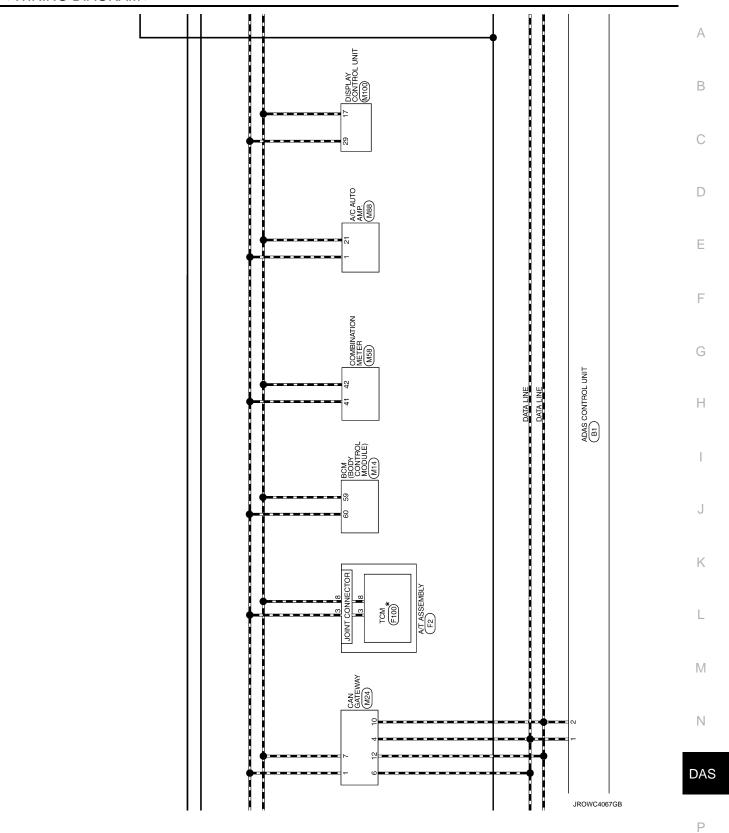
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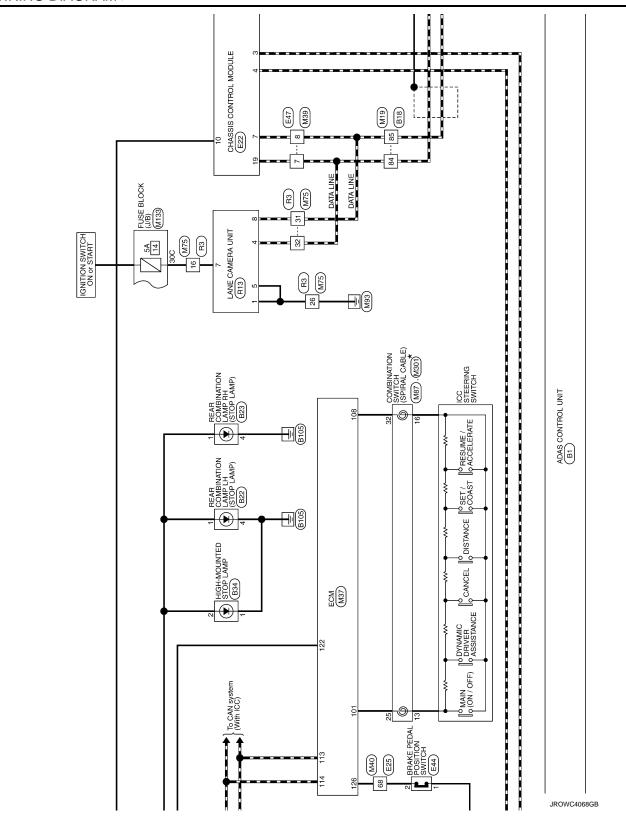
WIRING DIAGRAM

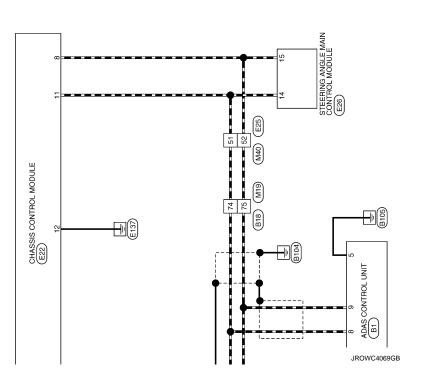




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Connector Name REAR COMBINATION LAMP RH(BODY SIDE)	Connector Name	FUSE BLOCK (J/B)	Connector Name	AROUND VIEW MONITOR CONTROL UNIT	Connector Name		WIRE TO WIRE	
Connector Type NS04MW-CS	Connector Type	NS10FW-CS	Connector Type	TH40FW-NH	Connector Type	Type TH8	TH80FW-CS16-TM4	
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4 B -	-		-	ACC	9	Α	- [Without BOSE system]	
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Connector No. B34		200	n	AV COMIM GND	۱ ۵	A 6	LO CO	
Connector Name HIGH-MOUNTED STOP LAMP	Connector No.		72 BC	REVERSE SIGNAL	, ,	¥ ≥	- [With BOSE system]	
Connector Line TV03MBB B	Connector Name	FUSE BLOCK (J/B)	+	CANI DAGE ADASI	- 0	۵ م	- [With BOSE system]	
Collingual Type Trockwister	Connector Type	TH10FB-NH	+	CAN-L [With ASCD]	0 00	a >-	- [Without BOSE system]	
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DRI	/ER A	DRIVER ASSISTANCE SYSTEMS									
Connector No.	or No.	E25	22	BG -		1 9	L STEERING	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (\$2-84)	30	œ	
, touron	Connector Name	HOW OF HOM	28			7 S	SB	TORQUE SENSOR GROUND	32	SHIELD	VACUUM SE
			29				\dashv	TORQUE SENSOR POWER SUPPLY	g	O	IGN
Connector Type	or Type	TH80FW-CS16-TM4	61	ď		4	┪	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (R1-R2)			
1			62	SB		+	BR STEERING	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (R1-R2)			
手			æ	. Pl		+	4	CHASSIS COMMUNICATION-H	Connec	Connector No.	E44
S II	œ	X (3)	49	<u>`</u>		+	+	CHASSIS COMMUNICATION-L	Connec	Connector Name	BRAKE PEDAL POSITION SWITCH
	9		92	SB		+	+	BACK UP SIGNAL (FROM STEFFING ANGLE SUB CONTROL MODULE)			
		20 E	99	GR -		+	SB BACK UP 8	BACK UP SIGNAL (FROM STEERING FORCE CONTROL MODULE)	Connec	Connector Type S02FL	S02FL
		8 8	29	- PI		-	∠	FLEXRAY COMMUNICATION-H	þ		
			88	BG .		\dashv	GR	FLEXRAY COMMUNICATION-L	B	_	[
			7.1	- re		22 G	GR BACK UPS	BACK UP SIGNAL (TO STEERING ANGLE SUB CONTROL MODULE)	Ę	e	<u></u>
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Š	Wire	oignal Ivanie [opecinication]	73			24 E	P BACK UP 8	BACK UP SIGNAL (TO STEERING FORCE CONTROL MODULE)			2 1
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m	SJ.		75	>		30	8	GROUND			
4	R		78	٠		H	GR	GROUND			
ď	>		02	as as		┨			Terminal	Color	L
,	-		83						2	Wire	Signal Name [Specification]
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2 ;	Ľ		8 3	39		COLLINECTOR INC.	ı		-	9 8	
= :	7 5		5 6	: פ		Connector Name		ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)	7	2	
12	GR.		95	· >-							
13	≥		94	GR -		Connector Type	pe SAZ301	SAZ30FB-SJZ4-U			
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17	BR		86	- I		Ź	<u>- </u>	F 115 117 18 19 20 T	Connec	Connector Type	TH32MW-NH
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36	œ		Connector No.	No. E26		Terminal Color Of	ır Of				3 4 3 0 7 8 9 10 11
37	>			LINGUIS COLLEGE LINGUIS COMMUNICATION	1 1001	No.	Wire	Signal Name [Specification]			11/118/13/20/21/23/23/23/23/24/28/28/28/28/29/31/37
38	٦		Connector Name		I ROL MODULE	-	В	GROUND			
39	>		Connector Type	Type RH24FB-RZ8-L-LH		2 E	8	GROUND			
40	SB		١			3	9	VALVE BATTERY	Terming	erminal Color Of	Simul Nama (Specification)
41	97					4		MOTOR BATTERY	ž	Wire	orginal name [opeomoanori]
44	Υ.		ŧ	123456	9 25	2	PI	STOP LAMP SW SIGNAL	-	ල	
45	W		5	7 8 1011		7 6	GR RF	RR LH WHEEL SENSOR SIGNAL	2	^	
46	В			14 15 17 18	18 30	8	G RRLH	RR LH WHEEL SENSOR POWER SUPPLY	3	٦	
47	9			19 20 22 23 24	32	6	BR FR	FR RH WHEEL SENSOR SIGNAL	4	Ь	-[Without Gateway]
48	SHIELD	-				10 G	GR FRRH	FR RH WHEEL SENSOR POWER SUPPLY	4	œ	-[With Gateway]
49	œ]	7)	13	œ	VACUUM SENSOR SIGNAL	_	٦	
22	H		Terminal Color Of	L		L		CAN-L	00	>	
51	٦		ġ	Wire Signal Name [Specification]	ecilication	17	Y	RR RH WHEEL SENSOR SIGNAL	13	O	,
25	×		-	BR TORQUE SENSOR MAIN SIGNAL	MAIN SIGNAL	18	V RR RH	RR RH WHEEL SENSOR POWER SUPPLY	15	æ	
53	۸		2	Y STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (\$1.53)	ESOLVER SIGNAL (\$1.53)	19 S	SB FR	FR LH WHEEL SENSOR SIGNAL	17	٨	
54	Ь		က	LG TORQUE SENSOR SUB SIGNAL	SUB SIGNAL	H	П	FR LH WHEEL SENSOR POWER SUPPLY	18	BG	
22	M		4	G STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (\$1-53)	ESOLVER SIGNAL (S1-S3)	25 1	1	CAN-H	27	97	
26	SB		2	W STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (\$2-54)	ESOLVER SIGNAL (\$2-54)	28	G VAC	VACUUM SENSOR POWER SUPPLY	28	BR	

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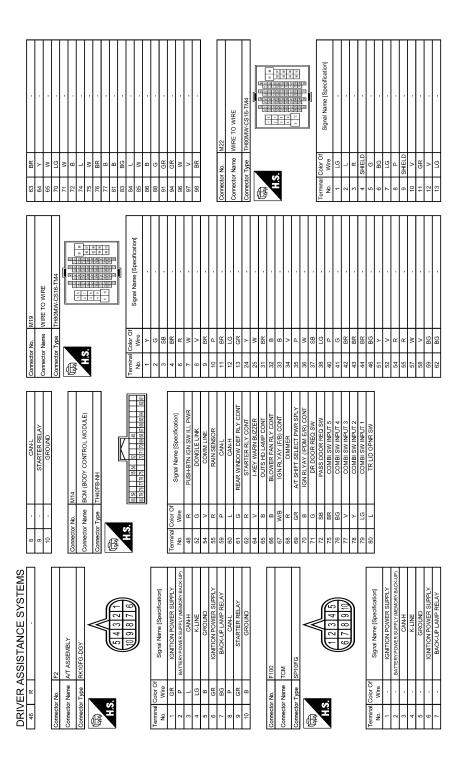
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	Connector No. E80	Connector Name ICC SENSOR	Connector Type AAZ08FB				11	Tarminal Calor Of	No. Wire Signal Name [Specification]	1 R IGNITION	3 L ITS COMM-H	6 Y ITS COMM-L	8 B GROUND			Connector No. E121	Connector Name FRAME BOOM:	CHOCKE NOOM)	Connector Type TH32FW-NH	Q				35 36 37 38 41 43 44 46			Terminal Color Of	No. Wire olgikal realite [obecilication]	19 P	22 BG .	23 LG .	27 GR -	28 P .	29 L	31 6	33 SB .		35 G	36 SB	37 GR .	38 BR	41 GR -	\dashv	44 GR
	Connector No. E/6	Connector Name WIRE TO WIRE	Connector Type SAA18FB-RS10-SJZ2	987654321	v	25 24 23 22 21 21		Terminal Color Of	No. Wire Signal Name [Specification]	4 Y		6 B -	7 V -	+	+	+	7	+	+	+	+	+	24 P	1	T	24 L	25 V -	26 B -	28 B -															
	Connector No. E64	Connector Name FUSE BLOCK (J/B)	Connector Type NS08FW-CS	1] <u> </u>		Terminal Color Of	No. Wire Signal Name [Specification]	2E P .	3E v -	4E GR -	9E L -			Connector No. E65	Connector Name FUSE BLOCK (J/B)		Connector Type TH12FW-NH	1		Ī	6F 5F 3F 2F 1F	125 11F 9F 8F 7F	5		Terminal Color Of	No. Wire olgikal realite [obecilication]	11F G .	12F W -	1F V -	2F BR -	3F P .	5F P .		7F R -	8F L	- J 46						
까	4	30 Y	+		Connector No. E52	Connector Name ICC BRAKE HOLD RELAY	Connector Type MS02FL-M2-LC	8	H.S.		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Terminal Color Of Signal Name [Specification]	+	+	+	3 \				ı	Connector Name STOP LAMP SWITCH	Connector Type M04EW-I C	_			3.4		711			a	No. Wire ognal valle [Specification]	1 G - [With ACSD]	1 L - [With ICC]	2 GR - [With ACSD]	PT	BR	_ ^ 4				

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DRIVER ASSISTANCE SYSTEMS

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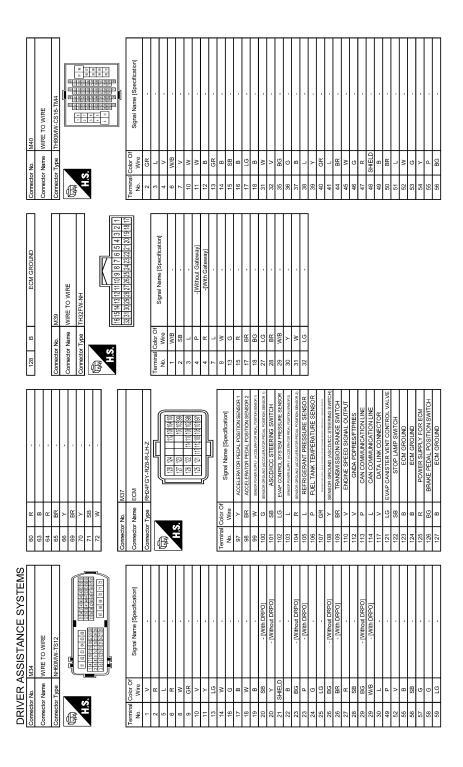
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- [With DRPO]			-	-		1		-	•	-	·				1														i				-	,		•											
Н	Н	GR	>	В	Μ	æ	SB	+	H.	+	4	\dashv	+	+	+	BG	+	+	+	-	╀	BG	PT	> 0	x (-	Н	œ	_	+	œ	R	Ь	>	Н		۸										
25	26	27	28	29	30	31	32	33	8	32	98	37	40	4	43	44	46	9	50	52	53	22	26	57	8 4	9	61	62	63	64	92	99	89	69	70	71	72										
Signal Name (Specification)	Olgital Natile [Openitoation]	AV COMM (L)	EARTH	EARTH	CAN-H	KLINE	IGN SW	AV COMM (H)	CAN-L	CAN-H	CAN-L	POWER			M33	WIRE TO WIRE	Connector Time NIEGOMIN/ TC12	W DOWN - 1012		の 日本	226	258 114 17 2 2 3 3 3 3 3 3	(K) (2) (3)			Signal Name [Specification]	-				-			-	•				- [With DRPO]	[OdBd thortiWi -			- [Mithout DRPO]	FOGBO WINT			
Terminal Color Of	Wire	SB	В	В	٦	>	Α	Pl	œ	٦	۵	×		-		Connector Name	Type	3,28			7.				Terminal Color Of	Wire	œ	GR	GR	≥	SHIELD	Ь	SB	ΓG	Υ	>	Ь	W/B	9	>	>	œ	ű	e e	_	>	-
Termina	ė.	က	4	5	9	7	80	Ξ	12	13	14	16			Connector No.	Connecto	,	8	1	‡	E S				Termina	Š	9	∞	6	10	Ξ	12	13	14	15	16	17	18	19	6	20	21	2	33	23	74	5
																			Г		Γ		П	T	Τ	l					ſ									_	_		_				
	•			-	,			M24	CAN GATEWAY		TH12FW-NH		<u> </u>	[1 3 4 5 6	1			L	Signal Name [Specification]	CAN-H	BATTERY	CAN-H	GND	CAN-	NSI	CAN-L	GND	CAN-L		-	M25	DATA LINK CONNECTOR		BD16FW				141404044	+	0 2 3 4 5 5 7 0	4 O C 4					
œ	Α.		- 1	BR -	BR .		- 1	- 1			tor Type TH12FW-NH		<u> </u>	ł	1 3 4 5				L			W BATTERY	L CAN-H	B GND	L NAC				R CAN-L		-	tor No. M25	Nome Name DATA LINK CONNECTOR						181010111	+	7 5 5 7	4 O C 4					
Н	Н	- M 96	- T 26	Н	100 BR		- 1	Connector No. M24	Connector Name CAN GATEWAY		Connector Type TH12FW-NH	Į (F		1 3 4 5				Terminal Color Of				4 L CAN-H	ю -							-	Connector No. M25	Opposite Name		Connector Type BD16FW	4			111	+	7 5 5 7	4 O C 4					
94	96	DCM] 96	- [Without DCM] 97 L	66	\dashv		- 1	- 1		-	- Connector Type TH12FW-NH	4	 	ł	1 3 4 5				L			M	٦	ю -	۵ ـ	. 02	æ	80	æ			- Connector No. M25			- Connector Type				1.5.	+	7 5 5 7	4 O C 4					
- 84	- 68	DCM] 96	- [Without DCM]	66	- 100			- Connector No.	Connector Name	-			R CR		11 3 4 5			- M	Terminal Color Of	No. Wire	1 1	3 W	- 4 L	ю -	00 -		- 10 R	- 11 B	- 12 R			W - Connector No. M25		T - TIME CONTROL OF THE CONTROL OF T	- Connector Type				1.5.	+	7 2 2 1 6 1					3	

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	Connector No. M76	Connector Name SONAR CONTROL UNIT	Connector Type TH24FW-NH				12 109 654321	22 24 10 18 15 14/13	01 01 01			<u>a</u>	+	\dashv	PI	+	GR CORNER SENS	5 L CAN-H		+	ŋ	10 BG CORNER SENSOR SIGNAL REAR RH	12 R IGN	В	14 B REAR SENSOR GND	15 B GND	18 GR FRONT BUZZER DRIVE SIGNAL	۵	BR	22 W CORNER SENSOR SIGNAL REAR LH		Connector No M27	Τ	Connector Name STEERING ANGLE SENSOR	Connector Type TH08FW-NH	1			S.E.	4 7 1	ıc.			Terminal Color Of	No. Wire Signal Name [Specification]	1 B GROUND		2 R CAN-L [With Gateway]
	m :	÷	. t	F			Connector No. M75	Connector Name WIRE TO WIRE		Connector Type TH32FW-NH	ģ	[]		1161514131211110 9 8 7 8 5 4 3 2 1	0 28 27 26 25 24 23 22 24 20				nal	ø.	π.	2 W -	3 W	4 BR	5 R		7 B .	10 V -	11 LG .	\dashv	14 B -	7	Ť	20 - 62	20 W	H	H	23 V	25 W	26 B	╀	Ľ	H	╀	╁			
-	9	16 G WARNING BUZZEK SIGNAL GRUUND		Connector No. M58	CL SINICIPAL CO.		Connector Type TH12FW-NH		P 手		41 42 43 44 45 46	2 2	21 22		-	la I	Wire	41 L CAN-H	۵	В	>	W BAT	46 R IGNITION SIGNAL	PI	48 SB AV COMMUNICATION SIGNAL (L)	51 BR FUEL LEVEL SENSOR SIGNAL	52 B GROUND			Connector No. M67	Connector Name WIRE TO WIRE	Compactor Time	Т.			H.S.	t 4	77 8 8 2			Terminal Color Of	No. Wire Signal Name [Specification]	- BR		+	4 W		· ·
뿔	+	20.00	H	H		Н	\dashv	+	+	7	\dashv	+	+	7	+	+	+	83 R	\dashv	4	\dashv		_	4	97 LG -	- × 86		100 SHIELD -		١	Connector No. M56	Connector Name DRIVER ASSISTANCE BUZZER CONTROL MODULE	THE PERSON OF TH	7			, C E O	n	16 13 11	31		Terminal Color Of	No. Wire Signal Name [Specification]	NOILION	,]	5 B GROUND	۳	>

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DRIVER ASSISTANCE SYSTEMS A G IGN I	Connector No.	-		Connec	Connector No.	M95	28	BR CAMERA SWITCH SIGNAL IG AV COMM (H)
	Connector Name		A/C AUTO AMP.	Connec	Connector Name	WIRE TO WIRE	H	
	Connector Type	pe TH40FW-NH	HN-M:	Connec	Connector Type	TH16MW-NH	3 3	R VEHICLE SPEED SIGNAI (8-PLII SE)
	匮			售	T		Н	Н
	Ċ	123	7 9 13 16	•	ć E	12345678		
		2020	28 27 28 40 1 1 20 38 40			9 10 11 12 13 14 15 16	Connector No.	M107 CENTED CDEANED
		ŀ					COILIECTOLINE	CENIER SPEANER
	Terminal Color Of No. Wire	Solor Of Wire	Signal Name [Specification]	Termin No.	Terminal Color Of No. Wire	Signal Name [Specification]	Connector Ty	Connector Type NS02FW-CS
	-		CAN-H	-	œ		F	
	2 1	В	GND	7	æ	•	Š	
Signal Name (Specification)	3	W	BAT	က	Ж		2	<u>T</u>
	+	0 0	AMBIENT SENS	9	۵ ۵	- [Without Gateway]		2 1
	0 0	د >	ION SM ACC	n (4	< >	- [with Gateway]		
	+	, a	200	^	- -	- [Without Gateway]		
	╁	. 02	DOOR MOTOR PWR SPLY	_	. α	- [With Gateway]	Terminal Color Of	
	╀	: a	BLOWER MOTOR CONT	o	RW	(Concerned)	Š	Wire Signal Name [Specification]
COMBINATION SWITCH (SDIDAL CABLE)	70		HEAT STRG WHL RLY CONT	10	2		-	
(Appre)	Н	Ь	CAN-L	11	SHIELD	-	2	. 9
	+	В	GND	13	_			
	+	>	IGN SW ON	4	_			
	+	8	SENS GND	12	_		Connector No.	
	+	9 8	IN-VEHICLE SENS				Connector Name	ACCELERATOR PEDAL ACTUATOR/ACCELERATOR PEDAL POSMON SENSOR
	20 00	+	INTAKE SENS	Journal	Octoborous No	M100	Tagoodoo	Compart Time DU19ED
	+	+	CASOUI ODOR DICI SENS	200	CIOI INC.	ON INC	COLLINECTOR 13	pe knizrb
	+	BG a	IONIZER CONT	Connec	Connector Name	DISPLAY CONTROL UNIT	Œ.	E
	H	BG	ECV CONT	Connec	Connector Type	TH24FW-NH	\	
Signal Name [Specification]				q			6	654321
				季				7 0 11110 0
				7	S. E.S.	16 17 19 20		
						25 26 28 29 30 31 33 34	Terminal Color Of	color Of Signal Name [Specification]
							t	BR BATTERY
				Termin	Terminal Color Of	Sinnal Name [Specification]	2	
				Š	Wire	ognal Name [openication]	е	L ITS COMM-H
				16	SB	AV COMM (L)	\dashv	
				17	۱	CAN-L	-	9
				9	œ 8	DIMMER SIGNAL	9 1	
				22	Ę a	REVERSE SIGNAL GND	╁	Y ITS COMM-L
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DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

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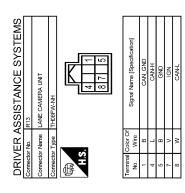
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	- 17	18 -	20 -		Γ	Connector No. R3	Connector Name WIRE TO WIRE	Connector Type TH32MW-NH		· · · · · · · · · · · · · · · · · · ·		1121314151617181910111213141516	22/10/01/21/21		T	Torminal Color Of	No Wire Signal Name [Specification]	t	2 GR		4 BR	5 R	. 9 9	7 B .	+	+	12 GR .	+	P.	18 R		+	7	22	+	+	27 29	+	28 BG	+		. 32 L		Ţ
,		M466	CCIM	WIRE TO WIRE	TH16FW-NH		<u> </u>	9781127	7 0 4 0 7	16 15 14 13 12 11 10 9			Signal Name [Specification]				- [With Cateway]	- [With ADAS]		- [Without Gateway]	- [With Gateway]		í	-		1			M301	COMBINATION COMPINED CARLES		TK08FGY				20 10 12 17 16 15 14 11	1 +1 0 0 1 1 0 6 07				Signal Name [Specification]			
> 26	1	Consorter No.	Officetor No.	Connector Name WIRE TO WIRE	Connector Type TH16FW-NH	Œ	Athly	H.S.					a a	No.	$^{+}$	x 0	+	+	> 9	7 P	٦ ٣	9 R/W	10 R	11 SHIELD	13 L	14 L	15 L		Connector No.	Omela Pomo	Solinector regime	Connector Type T	q)		S						<u>e</u>	No.	-	
Connector No M133	1 8	Company Two TLANDIN NIL		修		02 05 0+ 05 0+ 01 00 01 01 01 01 01 01 01 01 01 01 01				nal	Wire	4	11C V -	130 .	4	19C X	7 - 72	18C BG - [Without DRPO]	۵	8	20C W -	21C L -	22C L -	23C L -	4	4	27C P .	+	╀	H	Н	+	+	34C W/B -	+	+	+	+	+	4	+	4C P	4	4
∹⊢	12 BR	ı	Connector No. M125	Connector Name WIRE TO WIRE	_	Connector Lype RH12MB			ता । अतिहास					Terminal Color Of Signal Name [Specification]	a Me	+	5 -	4 I - IWith ASCDI	W - IWith	ø	W	ď		7 B .	>	GR	10 L - [With ADAS]	۷ >	BR	H														

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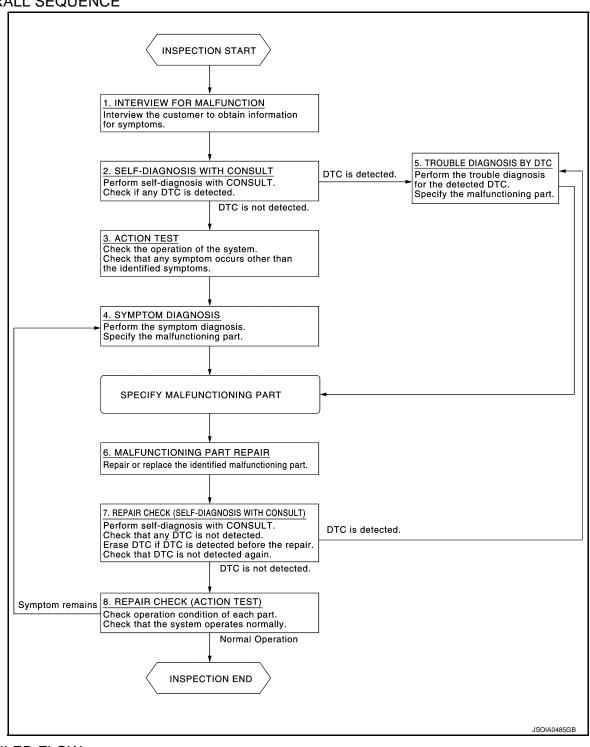
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

It is also important to clarify the customer concerns before starting the inspection. Interview the customer about the concerns carefully and understand the symptoms fully.

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

NOTE:

The customers are not professionals. Never assume that "maybe the customer means..." or "maybe the customer mentioned this symptom".

>> GO TO 2.

2.self-diagnosis with consult

- 1. Perform "All DTC Reading" with CONSULT.
- 2. Check if the DTC is detected on the self-diagnosis results of following.
- "ICC/ADAS"
- "CHASSIS CONTROL"
- "LASER/RADAR"
- "ACCELE PEDAL ACT"
- "LANE CAMERA"
- "SIDE RADAR LEFT"
- "SIDE RADAR RIGHT"
- "BSW/BUZZER"

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 3.

3. ACTION TEST

Perform Following system action test to check the operation status. Refer to <u>DAS-326</u>. "<u>DCA</u>: <u>Description</u>". Check if any other malfunctions occur.

>> GO TO 4.

4.SYMPTOM DIAGNOSIS

Perform the applicable diagnosis according to the diagnosis chart by symptom. Refer to DAS-366, "Symptom Table".

>> GO TO 6.

TROUBLE DIAGNOSIS BY DTC

- Check the DTC in the self-diagnosis results.
- Perform trouble diagnosis for the detected DTC following.
- "ICC/ADAS": Refer to DAS-266, "DTC Index"
- "CHASSIS CONTROL" Refer to DAS-300, "DTC Index"
- "LASER/RADAR" Refer to <u>DAS-270, "DTC Index"</u>
- "ACCELE PEDAL ACT": Refer to DAS-273, "DTC Index"
- "LANE CAMERA": Refer to DAS-287, "DTC Index"
- "SIDE RADAR LEFT": Refer to <u>DAS-275</u>, "<u>DTC Index</u>"
- "SIDE RADAR RIGHT": Refer to <u>DAS-277, "DTC Index"</u>
- "BSW/BUZZER": Refer to <u>DAS-281, "DTC Index"</u>

NOTE:

If "DTC: U1000" is detected, first diagnose the CAN communication system or ITS communication system.

>> GO TO 6.

6. MALFUNCTIONING PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 7.

7.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

- Erases self-diagnosis results.
- 2. Perform "All DTC Reading" again after repairing or replacing the specific items.
- Check if any DTC is detected in self-diagnosis results of following.

DIAGNOSIS AND REPAIR WORK FLOW < BASIC INSPECTION > [DRIVER ASSISTANCE SYSTEM]	
- "ICC/ADAS" - "CHASSIS CONTROL" - "LASER/RADAR" - "ACCELE PEDAL ACT"	А
- "LANE CAMERA" - "SIDE RADAR LEFT" - "SIDE RADAR RIGHT" - "BSW/BUZZER"	В
Is any DTC detected? YES >> GO TO 5. NO >> GO TO 8.	С
8. REPAIR CHECK (ACTION TEST)	D
Perform the Following system action test. Check that the malfunction symptom is solved or no other symptoms occur. • DCA • LDW/LDP	Е
 Blind Spot Warning/Blind Spot Intervention BCI Is there a malfunction symptom? 	F
YES >> GO TO 4. NO >> INSPECTION END	G
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ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

Description INFOID:000000011286158

Always perform the radar alignment after removing and installing or replacing the ICC sensor.
 CAUTION:

The system does not operate normally unless the laser beam aiming adjustment is performed. Always perform it.

Perform the DCA system action test check that the DCA system operates normally.

Work Procedure

1. RADAR ALIGNMENT

Perform the radar alignment. Refer to CCS-84, "TYPE 1: Description".

>> GO TO 2.

2.DCA SYSTEM ACTION TEST

- 1. Perform the DCA system action test. Refer to DAS-326, "DCA: Description".
- 2. Check that the DCA system operates normally.

>> INSPECTION END

ADDITIONAL SERVICE WHEN REPLACING ACCELERATOR PEDAL ASSEM-**BLY**

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING ACCELERATOR PEDAL AS-**SEMBLY**

Description INFOID:0000000011286160

- · Always perform accelerator pedal released position learning when replacing the accelerator pedal assembly or disconnecting the accelerator pedal position sensor connector.
- Perform the DCA system action test check that the DCA system operates normally.

Work Procedure INFOID:0000000011286161

1. ACCELERATOR PEDAL RELEASED POSITION LEARNING

Perform accelerator pedal released position learning. Refer to <u>DAS-325</u>, "<u>Description</u>".

>> GO TO 2.

2.DCA SYSTEM ACTION TEST

- Perform the DCA system action test. Refer to <u>DAS-326</u>, "DCA: <u>Description</u>".
- 2. Check that the DCA system operates normally.

>> INSPECTION END

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DAS-325 Revision: 2015 January 2015 Q50

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< BASIC INSPECTION >

ACTION TEST

DCA

DCA: Description

INFOID:0000000011286162

Always perform the DCA system action test to check that the system operates normally after replacing the ICC sensor, replacing the accelerator pedal assembly, or repairing any DCA system malfunction.

CAUTION:

Perform the DCA system action test after checking that the ICC system operates normally because the DCA system shares components with the ICC system.

DCA: Work Procedure

INFOID:0000000011286163

NOTE:

When the ICC system is set, the information display changes to the ICC system display.

1.ICC SYSTEM ACTION TEST

Perform the ICC system action test. Refer to CCS-96, "Description".

>> GO TO 2.

2. CHECK DCA SYSTEM SETTING

- 1. Start the engine.
- After starting the engine wait for 30 seconds or more.
- Check that the DCA system setting can be enabled/disabled on the integral switch.
- 4. Turn OFF the ignition switch and wait for 5 seconds or more.
- 5. Check that the previous setting is saved when the engine starts again.

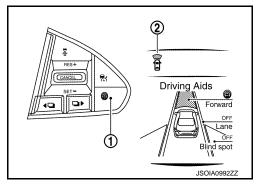
>> GO TO 3.

3.check driver assistance systems switch

- Start the engine.
- 2. After starting the engine wait for 30 seconds or more.
- 3. Enable the setting of the DCA system on the integral switch.
- 4. Press the dynamic driver assistance switch (1).
- 5. Check that the DCA system display ② on the information display illuminates.
- 6. Check that the DCA system display turns OFF when the system is turned OFF by pressing the dynamic driver assistance switch.
- 7. Check that the DCA system display turns OFF when the engine starts again.

NOTE:

The DCA system display does not illuminate even when the dynamic driver assistance switch is turned ON within approximately 5 seconds after starting the engine.



If the accelerator pedal assembly is not replaced>>INSPECTION END

If the accelerator pedal assembly is replaced>>GO TO 4.

4. CHECK DCA SYSTEM OPERATION

Check that the accelerator pedal actuator operates by the "Active Test" items "ACCELERATOR PEDAL ACTUATOR TEST1" and "ACCELERATOR PEDAL ACTUATOR TEST2" of "ACCELE PEDAL ACT" with CONSULT.

>> INSPECTION END

LDW/LDP

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

LDW/LDP: Description INFOID:0000000011286164 Α Perform action test to verify the customer's concern. Perform action test and check the system operation after system diagnosis. Be careful of traffic conditions and safety around the vehicle when performing road test. **CAUTION:** Fully understand the following items well before the road test; Precautions: Refer to <u>DAS-163</u>, "<u>LDW/LDP System Service</u>". System description for LDW: Refer to <u>DAS-177</u>, "LDW: System Description". System description for LDP: Refer to <u>DAS-179</u>, "LDP: System Description". - Handling precaution: Refer to DAS-217, "Precautions for Lane Departure Warning/Lane Departure Prevention". LDW/LDP: Inspection Procedure INFOID:0000000011286165 Е **WARNING:** Be careful of traffic conditions and safety around the vehicle when performing road test. **CAUTION:** F Fully understand the following items well before the road test: Precautions: Refer to <u>DAS-163</u>, "<u>LDW/LDP System Service</u>". System description for LDW: Refer to <u>DAS-177</u>, "<u>LDW</u>: <u>System Description</u>". System description for LDP: Refer to <u>DAS-179</u>, "<u>LDP</u>: <u>System Description</u>". - Handling precaution: Refer to DAS-217, "Precautions for Lane Departure Warning/Lane Departure Prevention". 1. CHECK LDW SYSTEM SETTING Н Start the engine. 2. Check that the LDW system setting can be enabled/disabled on the integral switch. Turn OFF the ignition switch and wait for 30 seconds or more. 4. Check that the previous setting is saved when the engine starts again. >> GO TO 2. 2.action test for LDW Enable the setting of the LDW system on the integral switch. Turn LDW system display ON (Speaker icon is ON at the "Lane" position). NOTE: LDP system is OFF. 3. Check the LDW operation according to the following table. Ν

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Vehicle c	ondition/ Driver's oper	ration	Action			
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condi- tion	Status of vehi- cle close to lane marker	Indication on the combination meter	Indicator color	Buzzer	
Less than Approx. 60 km/h (37 MPH)	_	Close to lane marker	Driving Aids OFF Forward Lane OFF Blind spot JSOIA0914ZZ	White	OFF	
Approx. 70 km/h (45	OFF ON (Opposite to the deviate side)	Close to lane marker	Driving Aids OFF Forward OFF Blind spot JSOIA1124ZZ	Yellow (Blink)	Short continuous beeps	
MPH) or more	ON (Deviate side)	Close to lane marker	Driving Aids OFF Forward (t) Lane OFF Blind spot JSOIA0914ZZ	White	OFF	

NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (37 MPH). Refer to DAS-177, "LDW: System Description".

>> GO TO 3.

3. CHECK LDP SYSTEM SETTING

- 1. Start the engine.
- Check that the LDP system setting can be enabled/disabled on the integral switch.
- 3. Turn OFF the ignition switch and wait for 30 seconds or more.
- 4. Check that the previous setting is saved when the engine starts again.

>> GO TO 4.

4. ACTION TEST FOR LDP

- 1. Enable the setting of the LDP system on the integral switch.
- 2. Turn dynamic driver assistance switch ON (dynamic driver assistance icon is ON at the "Lane" position).
- 3. Check the LDP operation according to the following table.

Vehic	cle condition/ Driver's	operation		Action			Α
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle close to lane marker	Yawing con- trol	Indication on the combination meter	Indicator	Buzzer	В
Less than Approx. 60 km/h (37 MPH)	_	Close to lane marker	OFF	Driving Aids OFF Forward Lane OFF Blind spot JSOIA0929ZZ	Green	_	C
	Turn signal OFF Turn signal ON (Opposite to the deviate side)	Close to lane marker	ON	Driving Aids Forward Forward Forward Forward Forward Forward JSOIA1127ZZ	Yellow (Blink)	Short con- tinuous beeps	E
Approx. 70 km/h (45 MPH) or more	Turn signal ON (Deviate side)	Close to lane marker	OFF	Driving Aids OFF Forward OFF Blind spot JSOIA0929ZZ	Green	_	G H
	 Turn signal OFF Turn signal ON (Opposite to the deviate side) 	Close to lane marker with soft braking	OFF	Driving Aids OFF Forward ORI Blind spot JSOIA1127ZZ	Yellow (Blink)	Short con- tinuous beeps	J K

NOTE:

After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 60 km/h (37 MPH). Refer to <u>DAS-179</u>, "<u>LDP</u>: <u>System Description</u>".

>> INSPECTION END

BLIND SPOT WARNING/BLIND SPOT INTERVENTION

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description

Always perform the Blind Spot Warning and Blind Spot Intervention system action test to check that the system operates normally after replacing the lane camera unit, replacing the side radar left (right), or repairing any Blind Spot Intervention system malfunction.

NOTE:

Perform the Blind Spot Intervention system action test after checking that the LDP system operates normally because the Blind Spot Intervention system shares components with the LDP system.

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test. CAUTION:

Fully understand the following items well before the road test;

- Precautions: Refer to <u>DAS-163</u>, "<u>Blind Spot Warning/Blind Spot Intervention System Service</u>".
- System description for Blind Spot Warning: Refer to <u>DAS-182, "BSW: System Description"</u>.

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INFOID:0000000011286166

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ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

- System description for Blind Spot Intervention: Refer to DAS-185, "BLIND SPOT INTERVENTION: System Description".
- Normal operating condition: Refer to <u>DAS-379</u>, "<u>Description</u>".

BLIND SPOT WARNING/BLIND SPOT INTERVENTION: Work Procedure INFOID:000000011286167

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test.

CAUTION:

Fully understand the following items well before the road test;

- Precautions: Refer to DAS-163, "Blind Spot Warning/Blind Spot Intervention System Service".
- System description for Blind Spot Warning: Refer to <u>DAS-182, "BSW: System Description"</u>.
- System description for Blind Spot Intervention: Refer to DAS-185, "BLIND SPOT INTERVENTION: System Description".
- Normal operating condition: Refer to DAS-379, "Description".

1.LDW/LDP SYSTEM ACTION TEST

Perform the LDW/LDP system action test. Refer to DAS-327, "LDW/LDP: Inspection Procedure".

>> GO TO 2.

2. CHECK BSW SYSTEM SETTING

- 1. Start the engine.
- 2. Check that the BSW system setting can be enabled/disabled on the integral switch.
- 3. Turn OFF the ignition switch and wait for 5 seconds or more.
- 4. Check that the previous setting is saved when the engine starts again.

>> GO TO 3.

3.BSW SYSTEM ACTION TEST

- 1. Enable the setting of the BSW system on the integral switch.
- Turn BSW system display ON (Speaker icon is ON at the "Blind spot").

NOTE:

Blind Spot Intervention system is OFF.

3. Check BSW operation according to the following table.

Vehicle con	Vehicle condition/ Driver's operation		Action				
Vehicle speed (Approx.) [km/h (MPH)]	Turn sig- nal condi- tion	Status of vehi- cle detection within detec- tion area	' Indication on the combination meter		Indicator color	Buzzer	
Less than approx. 29 (18)	_	_	OFF	Driving Aids OFF OFF Lane Blind spot JSOIA0915ZZ	White	OFF	
Approx. 32 (20) or more	_	Vehicle is absent	OFF	Driving Aids OFF OFF Lane Blind spot JSOIA0915ZZ	White	OFF	

[DRIVER ASSISTANCE SYSTEM]

Vehicle con	ndition/ Drive	r's operation		Action			,
Vehicle speed (Approx.) [km/h (MPH)]	Turn sig- nal condi- tion	Status of vehi- cle detection within detec- tion area	Indication on the Blind Spot Warning/ Blind Spot Intervention indicator	Indication on the combination meter	Indicator color	Buzzer	E
	OFF	Vehicle is detected	ON	Driving Aids OFF Forward OFF Lane Blind spot JSOIA0915ZZ	White	OFF	
	ON (vehicle	Before turn signal oper- ates Vehicle is de- tected	Blink	Driving Aids OFF FORWARD Blind spot JSOIA1125ZZ	Yellow (Blink)	Short continu- ous beeps	E
	detected direction)	Vehicle is de- tected after turn signal op- erates	Blink	Driving Aids OFF Forward Blind spot JSOIA1125ZZ	Yellow (Blink)	OFF	ŀ

>> GO TO 4.

4. CHECK BLIND SPOT INTERVENTION SYSTEM SETTING

- 1. Start the engine.
- 2. Check that the Blind Spot Intervention system setting can be enabled/disabled on the integral switch.
- Turn OFF the ignition switch and wait for 5 seconds or more.
- 4. Check that the previous setting is saved when the engine starts again.

>> GO TO 5.

$5. \mathsf{CHECK}$ DYNAMIC DRIVER ASSISTANCE SWITCH

- Start the engine.
- After starting the engine wait for 5 seconds or more.
- Enable the setting of the Blind Spot Intervention system on the integral switch.
- 4. Press the dynamic driver assistance switch.
- Check that the Blind Spot Intervention system display on the combination meter illuminates.
- 6. Check that the Blind Spot Intervention system display turns OFF when the system is turned OFF by pressing the dynamic driver assistance switch.
- 7. Check that the Blind Spot Intervention ON indicator turns OFF when the engine starts again.

NOTE:

- The Blind Spot Intervention system display does not illuminate even when the dynamic driver assistance switch is turned ON within approximately 5 seconds after starting the engine.
- When the Blind Spot Intervention system setting is disabled on the integral switch, the Blind Spot Intervention system display is not turned ON by pressing the dynamic driver assistance switch.

>> INSPECTION END

BCI

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[DRIVER ASSISTANCE SYSTEM]

BCI: Description

INFOID:0000000011286168

Always perform the BCI system action test to check that the system operates normally after replacing the side radar (left or right), or repairing any BCI system malfunction.

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test. **CAUTION:**

Fully understand the following items well before the road test;

- Precautions: Refer to <u>DAS-164</u>, "<u>BCI system service</u>".
- System description for BCI: Refer to <u>DAS-189</u>, "<u>BCI</u>: <u>System Description</u>".
 Normal operating condition: Refer to <u>DAS-379</u>, "<u>Description</u>".

BCI: Work Procedure

INFOID:0000000011286169

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test. **CAUTION:**

Fully understand the following items well before the road test;

- Precautions: Refer to DAS-164, "BCI system service".
- System description for BCI: Refer to DAS-189, "BCI: System Description".
- Normal operating condition: Refer to DAS-379, "Description".

CHECK BCI SYSTEM SETTING

Check the sonar system operation. Refer to AV-301, "System Description".

>> GO TO 2.

2.CHECK BCI SYSTEM SETTING

- Start the engine.
- 2. Check that the BCI system setting can be enabled/disabled on the integral switch.
- Turn OFF the ignition switch and wait for 30 seconds or more.
- Check that the previous setting is saved when the engine starts again.

>> GO TO 3.

3. ACTION TEST FOR BCI

- Enable the setting of the BCI system on the integral switch.
- Check the BCI operation according to the following table.

Vehicle condition		Action	Buzzer
• R range • 0 km/h (0 MPH)	If the radar detects an approaching vehicle from the side	Chime sound (single beep) Flashes Blind Spot Warning/Blind Spot Intervention indicator on the side of the approaching vehicle is detected Yellow rectangular frame appears in the display	Single beep
	No approaching vehicle	No action	_

>> INSPECTION END

DTC/CIRCUIT DIAGNOSIS

C1B20 CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE: DTC Logic

INFOID:0000000011286170

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DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B20	CONTROL MODULE (Control module)	If driver assistance buzzer control module is malfunctioning Malfunction is detected buzzer signal circuits between driver assistance buzzer control module and driver assistance buzzer

POSSIBLE CAUSE

- Driver assistance buzzer control module
- Driver assistance buzzer
- Driver assistance buzzer circuit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B20" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "C1B20" detected as the current malfunction?

>> Refer to DAS-333, "DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Proce-YES dure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure

INFOID:000000001128617

1. CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC other than "C1B20" is detected in "Self Diagnostic Result" of "BSW/BUZZER".

Is any DTC detected?

>> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to YES DAS-281, "DTC Index".

NO >> GO TO 2.

2.check driver assistance buzzer signal circuit for open

- Turn ignition switch OFF.
- Disconnect the driver assistance buzzer connector.
- Disconnect the driver assistance buzzer control module connector.
- 4. Check continuity between the driver assistance buzzer control module harness connector and driver assistance buzzer harness connector.

Driver assistance buzzer control module		Driver assistance buzzer		Continuity
Connector	Terminal	Connector Terminal		
M56	8	M107	1	Existed
IVIOO	16	IVITO7	2	LAISIEU

Is the inspection result normal?

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C1B20 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

${f 3.}$ CHECK DRIVER ASSISTANCE BUZZER SIGNAL CIRCUIT FOR SHORT

Check continuity between the driver assistance buzzer control module harness connector and ground.

	ce buzzer control dule		Continuity
Connector	Terminal	Ground	
M56	8		Not existed
IVIO	16		NOT EXISTED

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK DRIVER ASSISTANCE BUZZER

Check driver assistance buzzer. Refer to <u>DAS-334</u>, "<u>DRIVER ASSISTANCE BUZZER CONTROL MODULE</u>: <u>Component Inspection</u>".

Is the inspection result normal?

YES >> Replace the driver assistance buzzer control module. Refer to <u>DAS-390</u>, "Removal and Installation".

NO >> Replace the driver assistance buzzer. Refer to <u>DAS-391</u>, "Removal and Installation".

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Component Inspection

INFOID:0000000011286172

1. CHECK DRIVER ASSISTANCE BUZZER

- Turn ignition switch OFF.
- 2. Disconnect driver assistance buzzer connector.
- 3. Check resistance between driver assistance buzzer terminals.

Terminal		Resistance	
1	2	Approx. 6 Ω	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace driver assistance buzzer.

C1B50 SIDE RADAR MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B50 SIDE RADAR MALFUNCTION

SIDE RADAR

SIDE RADAR : DTC LOGIC INFOID:0000000011286173

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B50	SIDE RDR MALFUNCTION (Side radar malfunction)	Side radar malfunction

POSSIBLE CAUSE

Side radar

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B50" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the "C1B50" detected as the current malfunction?

- >> Refer to DAS-335, "SIDE RADAR: Diagnosis Procedure".
- >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

CHECK SELF-DIAGNOSIS RESULT

Check if any DTC other than "C1B50" is detected in "Self Diagnostic Result" of "SIDE RADAR LEFT/RIGHT" Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunction part. Refer to DAS-275, "DTC Index" (SIDE RADAR RIGHT) or DAS-277, "DTC Index" (SIDE RADAR LEFT).
- >> Replace the side radar. Refer to DAS-387, "Removal and Installation". NO

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C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000011286175

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B51	BSW/BSI IND SHORT CIR (Blind Spot Warning/Blind Spot Intervention indicator short circuit)	Short circuit in Blind Spot Warning/Blind Spot Intervention indicator circuit is detected. (Over current is detected)

POSSIBLE CAUSE

- Blind Spot Warning/Blind Spot Intervention indicator circuit.
- Blind Spot Warning/Blind Spot Intervention indicator.
- · Side radar.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Perform "All DTC Reading" with CONSULT.
- Check if the "C1B51" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the "C1B51" detected as the current malfunction?

YES >> Refer to <u>DAS-336</u>, "SIDE RADAR: Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000011286176

1.check blind spot warning/blind spot intervention indicator circuit for short

- Turn ignition switch OFF.
- Disconnect side radar harness connector and Blind Spot Warning/Blind Spot Intervention indicator harness connector.
- 3. Check continuity between side radar harness connector and ground.

Side	radar		Continuity
Connector	Terminal	Ground	Continuity
B92 (LH)	6	Giodila	Not existed
B93 (RH)	· · ·		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2.REPLACE THE SIDE RADAR

- Replace the side radar.
- Perform "All DTC Reading" with CONSULT.
- 3. Check if the "C1B51" is detected in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT"

C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Is the DTC "C1B51" detected?

YES >> Replace the side radar. Refer to <u>DAS-387</u>, "Removal and Installation".

NO >> INSPECTION END

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C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000011286177

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B52	BSW/BSI IND OPEN CIR (Blind Spot Warning/Blind Spot Intervention indicator open circuit)	Open circuit in Blind Spot Warning/Blind Spot Intervention indicator circuit is detected.

POSSIBLE CAUSE

- Blind Spot Warning/Blind Spot Intervention indicator circuit.
- Blind Spot Warning/Blind Spot Intervention indicator.
- · Side radar.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Perform "All DTC Reading" with CONSULT.
- Check if the "C1B52" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the "C1B52" detected as the current malfunction?

- YES >> Refer to DAS-338, "SIDE RADAR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000011286178

${f 1}.$ check blind spot warning/blind spot intervention indicator circuit for open 1

- Turn ignition switch OFF.
- Disconnect side radar harness connector and Blind Spot Warning/Blind Spot Intervention indicator harness connector.
- 3. Check continuity between side radar harness connector and Blind Spot Warning/Blind Spot Intervention indicator harness connector.

Side radar		•	Varning/Blind ntion indicator	Continuity
Connector	Terminal	Connector	Terminal	
B92 (LH)	6	D15 (LH)	1	Existed
B93 (RH)	0	D27 (RH)	1	LXISIEU

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2.CHECK BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR CIRCUIT FOR OPEN 2

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C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Check continuity between Blind Spot Warning/Blind Spot Intervention indicator harness connector and ground.

•	Varning/Blind ntion indicator		Continuity
Connector	Terminal	Ground	
D15 (LH)	4		Existed
D27 (RH)	4		LXISIGU

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.check side radar voltage output

- 1. Connect side radar harness connector.
- 2. Check voltage between Blind Spot Warning/Blind Spot Intervention indicator harness connector and ground.

•	Varning/Blind ntion indicator		Condition	Voltage (Approx.)
Connector	Terminal	Ground		(дрргох.)
D15 (LH)			Ignition switch	
D27 (RH)	1		OFF ⇒ ON (Approx. 2 sec.)	6 V

Is the inspection result normal?

YES >> Replace Blind Spot Warning/Blind Spot Intervention indicator.

NO >> Replace side radar. Refer to <u>DAS-387</u>. "Removal and Installation".

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[DRIVER ASSISTANCE SYSTEM]

C1B55 RADAR BLOCKAGE

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000011286179

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition
C1B55	RADAR BLOCKAGE (Radar blockage)	Side radar is blocked.

NOTE:

DTC "C1B55" may be detected under the following conditions except for possible cause. (Explain to the customer about the difference between the contamination detection function and the indication when the malfunction is detected and tell them "This is not malfunction".)

- · The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.
- Due to the nature of radar technology it is possible to get a blockage warning and not actually be blocked. This is rare and is known as a false blockage warning. A false blocked condition either self-clears or clears after an ignition cycle.

POSSIBLE CAUSE

Stain or foreign materials is deposited.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the C1B55 is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the DTC "C1B55" detected?

YES >> Refer to DAS-340, "SIDE RADAR : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000011286180

1. CHECK THE REAR BUMPER

Check rear bumper near the side radar contaminated with foreign materials.

>> GO TO 2.

2.CHECK THE SIDE RADAR

Check side radar and the side radar outskirts contaminated with foreign materials.

>> GO TO 3.

3.CHECK THE SIDE RADAR INSTALL CONDITION

Check side radar installation condition (installation position, properly tightened, a bent bracket).

>> GO TO 4.

C1B55 RADAR BLOCKAGE

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

4.INTERVIEW

- 1. Ask if there is stain or foreign materials.
- 2. Ask if there is any temporary ambient condition such as splashing water, mist or fog.
- 3. Ask if there is any object such as ice, frost or dirt obstructing the side radar.

Is any of above conditions seen?

- YES >> Explain to the customer about the difference between the blockage detection function and the indication when the malfunction is detected and tell them "This is not malfunction".
- NO >> INSPECTION END

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C1F01 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F01 ACCELERATOR PEDAL ACTUATOR ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: DTC Logic

INFOID:0000000011286181

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F01	APA MOTOR MALF (Accelerator pedal actuator motor malfunction)	If the accelerator pedal actuator motor error is detected

POSSIBLE CAUSE

Accelerator pedal actuator integrated motor malfunction

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the ignition switch OFF.
- 2. Turn the ignition switch ON.
- 3. Slowly depress the accelerator pedal completely, and then release it.
- 4. Repeat step 3 several times.
- 5. Perform "All DTC Reading" with CONSULT.
- Check if the DTC "C1F01" is detected as the current malfunction on the self-diagnosis results of "ICC/ ADAS" or "ACCELE PEDAL ACT".

Is "C1F01" detected as the current malfunction?

- YES >> Refer to DAS-342, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000011286182

1. REPLACE ACCELERATOR PEDAL ASSEMBLY

Perform DTC confirmation procedure. If "C1F01" is detected, replace the accelerator pedal assembly. Refer to DAS-385, "Exploded View".

>> INSPECTION END

C1F02 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F02 ACCELERATOR PEDAL ACTUATOR ACCELERATOR PEDAL ACTUATOR

INFOID:0000000011286183

ACCELERATOR PEDAL ACTUATOR: DTC Logic

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F02	APA C/U MALF (Accelerator pedal actuator control unit malfunction)	If the accelerator pedal actuator integrated control unit error is detected

POSSIBLE CAUSE

Accelerator pedal actuator integrated control unit malfunction

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FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the DCA system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "C1F02" is detected as the current malfunction on the self-diagnosis results of "ACCELE PEDAL ACT" or "ICC/ADAS".

Is "C1F02" detected as the current malfunction?

- >> Refer to DAS-343, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident"
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure

INFOID:0000000011286184

1. CHECK SELF-DIAGNOSIS RESULTS

- Perform "All DTC Reading" with CONSULT.
- Check if the "C1F02" is detected as the current malfunction on the self-diagnosis results of "ACCELE PEDAL ACT" or "ICC/ADAS".

Is "C1F02" detected as the current malfunction?

>> Replace the accelerator pedal assembly. Refer to DAS-385, "Exploded View". YES

NO >> INSPECTION END

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C1F03 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F03 ACCELERATOR PEDAL ACTUATOR ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: DTC Logic

INFOID:0000000011286185

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F03	APA HI TEMP (Accelerator pedal actuator high temperature)	 The temperature of the motor integrated in the accelerator pedal actuator remains 100°C (212°F) or more for 0.4 seconds or more. The temperature of the motor drive circuit integrated in the accelerator pedal actuator remains 120°C (248°F) or more for 0.4 seconds or more.

NOTE:

When the accelerator pedal actuator operates excessively, "C1F03" may be detected temporarily.

POSSIBLE CAUSE

Accelerator pedal actuator integrated motor malfunction

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the ignition switch OFF.
- 2. Wait for 10 minutes or more and cool the accelerator pedal actuator integrated motor.
- 3. Drive the vehicle with DCA system ON and operate the system.

CAUTION:

Always drive safely.

- 4. Stop the vehicle.
- 5. Perform "All DTC Reading" with CONSULT.
- Check if the DTC "C1F03" is detected as the current malfunction in self-diagnosis results of "ACCELE PEDAL ACT".

Is "C1F03" detected as the current malfunction?

- YES >> Refer to DAS-344, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure

INFOID:0000000011286186

1. REPLACE ACCELERATOR PEDAL ASSEMBLY

Perform DTC confirmation procedure. If "C1F03" is detected, replace the accelerator pedal assembly. Refer to DAS-385, "Exploded View".

>> INSPECTION END

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT [DRIVER ASSISTANCE SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: DTC Logic

INFOID:0000000011286187

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F05	APA PWR SUPLY CIR (Accelerator pedal actuator power supply circuit)	The battery voltage sent to accelerator pedal actuator remains less than 7.9 V or more than 19.3 V for 5 seconds

POSSIBLE CAUSE

- · Harness, connector, or fuse
- Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1F05" is detected as the current malfunction on the self-diagnosis results of "ACCELE PEDAL ACT".

Is "C1F05" detected as the current malfunction?

- >> Refer to DAS-345, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure". YES
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure

1. CHECK POWER SUPPLY CIRCUIT

Check the accelerator pedal actuator power supply circuit. Refer to DAS-345, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".

Is the inspection result normal?

- YES >> Replace the accelerator pedal assembly. Refer to <u>DAS-385</u>, "Exploded View".
- NO >> Repair or replace the malfunctioning parts.

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[DRIVER ASSISTANCE SYSTEM]

C1F06 CAN CIRCUIT2 ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: DTC Logic

INFOID:0000000011286189

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F06	CAN CIR 2 (CAN Circuit 2)	If accelerator pedal actuator detects an error signal that is received from ADAS control unit via ITS communication

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1F06" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the DCA system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1F06" is detected as the current malfunction in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "C1F06" detected as the current malfunction?

YES >> Refer to DAS-346, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure

INFOID:0000000011286190

1. CHECK DTC PRIORITY

If DTC "C1F06" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.REPLACE ADAS CONTROL UNIT

- 1. Turn the ignition switch OFF.
- 2. Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".
- 3. Erases all self-diagnosis results.
- 4. Perform "All DTC Reading" again.
- Check if the "C1F06" is detected in self-diagnosis results of "ACCELE PEDAL ACT".

Is "C1F06" detected?

YES >> Replace the accelerator pedal assembly. Refer to DAS-385, "Exploded View".

NO >> INSPECTION END

C1F07 CAN CIRCUIT1

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F07 CAN CIRCUIT1

ACCELERATOR PEDAL ACTUATOR

INFOID:0000000011286191

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ACCELERATOR PEDAL ACTUATOR: DTC Logic

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F07	CAN CIR 1 (CAN Circuit1)	If accelerator pedal actuator detects an error signal that is received from ADAS control unit via ITS communication

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "C1F07" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-128</u>, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the DCA system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "C1F07" is detected as the current malfunction in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "C1F07" detected as the current malfunction?

- YES >> Refer to DAS-347, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000011286192

1. CHECK DTC PRIORITY

If DTC "C1F07" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-128, "DTC Logic".

NO >> GO TO 2.

2.replace adas control unit

- 1. Turn the ignition switch OFF.
- Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".
- 3. Erases all self-diagnosis results.
- 4. Perform "All DTC Reading" again.
- 5. Check if the "C1F07" is detected in self-diagnosis results of "ACCELE PEDAL ACT".

Is "C1F07" detected?

YES >> Replace the accelerator pedal assembly. Refer to DAS-385, "Exploded View".

NO >> INSPECTION END

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[DRIVER ASSISTANCE SYSTEM]

U0104 ADAS CAN 1

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000011286193

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0104	ADAS CAN CIR1 (ADAS control unit CAN circuit 1)	Side radar detected an error of ITS communication signal that was received from ADAS control unit.

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-352</u>, "<u>SIDE RADAR LH</u>: <u>DTC Logic</u>" (SIDE RADAR RH).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the U0104 is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the DTC "U0104" detected?

YES >> Refer to DAS-348, "SIDE RADAR : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000011286194

1. CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-352</u>, "<u>SIDE RADAR LH</u>: <u>DTC Logic</u>" (SIDE RADAR LH) or DAS-353, "SIDE RADAR RH: DTC Logic" (SIDE RADAR RH).

NO >> GO TO 2.

2.check adas control unit self-diagnosis results

Check if any DTC is detected in "Self Diagnostic Result" of "ICC/ADAS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-266, "DTC Index".

NO >> Replace side radar LH or RH. Refer to DAS-387, "Removal and Installation"

DRIVER ASSISTANCE BUZZER CONTROL MODULE

U0104 ADAS CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE BUZZER	CONTROL MO	

INFOID:0000000011286195

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0104	ADAS CAN CIR 1 (ADAS control unit CAN circuit 1)	If driver assistance buzzer control module detects an error signal that is received from ADAS control unit via ITS communication

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

CHECK DTC PRIORITY

1. CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

>> Perform diagnosis of applicable. Refer to DAS-354, "DRIVER ASSISTANCE BUZZER CONTROL MODULE: DTC Logic".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

Start the engine.

- Turn the MAIN switch of ICC system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U0104" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "U0104" detected as the current malfunction?

YES >> Refer to DAS-349, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-354, "DRIVER ASSISTANCE BUZZER CONTROL

MODULE: DTC Logic". NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ICC/ADAS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-266, "DTC Index"

NO >> Replace the driver assistance buzzer control module. Refer to DAS-390, "Removal and Installation".

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[DRIVER ASSISTANCE SYSTEM]

U0405 ADAS CAN 2

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000011286197

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0405	ADAS CAN CIR2 (ADAS control unit CAN circuit 2)	Side radar detected an error of ITS communication signal that was received from ADAS control unit.

POSSIBLE CAUSE

ADAS control unit.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U0405" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-352</u>, "<u>SIDE RADAR LH</u>: <u>DTC Logic</u>" (SIDE RADAR RH).

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the U0405 is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the DTC "U0405" detected?

YES >> Refer to DAS-350, "SIDE RADAR : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000011286198

1. CHECK DTC PRIORITY

If DTC "U0405" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to <u>DAS-352</u>, "<u>SIDE RADAR LH</u>: <u>DTC Logic"</u> (SIDE RADAR RH).

NO >> GO TO 2.

2. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ICC/ADAS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-351, "ACCELERATOR PEDAL ACTUATOR: DTC Logic".

NO >> Replace side radar LH or RH. Refer to DAS-387, "Removal and Installation".

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U1000 CAN COMM CIRCUIT ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: Description

INFOID:0000000011286199

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ITS COMMUNICATION

- ITS communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with 2 communication lines.
- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

ACCELERATOR PEDAL ACTUATOR: DTC Logic

INFOID:0000000011286200

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If accelerator pedal actuator is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- 2. Turn the DCA system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to DAS-351, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure

INFOID:0000000011286201

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1.PERFORM THE SELF-DIAGNOSIS

- Turn the ignition switch ON.
- 2. Turn the DCA system ON, and then wait for 2 seconds or more.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "U1000" detected as the current malfunction?

- YES >> Refer to LAN-24, "Trouble Diagnosis Flow Chart".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH

SIDE RADAR LH: Description

INFOID:0000000011286202

CAN COMMUNICATION

Revision: 2015 January

DAS-351

2015 Q50

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.

CAN communication signal chart. Refer to <u>LAN-42</u>, "CAN COMMUNICATION SYSTEM: CAN Communication Signal Chart".

ITS COMMUNICATION

- ITS communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting plural units with 2 communication lines.
- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

SIDE RADAR LH : DTC Logic

INFOID:0000000011286203

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If Side radar LH is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to DAS-352, "SIDE RADAR LH: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH: Diagnosis Procedure

INFOID:0000000011286204

1. PERFORM THE SELF-DIAGNOSIS

- Start the engine.
- 2. Turn the Blind Spot Intervention system ON, and then wait for 30 seconds or more.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is "U1000" detected as the current malfunction?

- YES >> Refer to LAN-24, "Trouble Diagnosis Flow Chart".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH

SIDE RADAR RH: Description

INFOID:0000000011286205

CAN COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.

CAN communication signal chart. Refer to <u>LAN-42</u>, "CAN COMMUNICATION SYSTEM: CAN Communication Signal Chart".

ITS COMMUNICATION

- ITS communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting plural units with 2 communication lines.
- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

SIDE RADAR RH : DTC Logic

INFOID:0000000011286206

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DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If Side radar RH is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

${f 1}$.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- 2. Turn the Blind Spot Intervention system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to <u>DAS-353</u>, "<u>SIDE RADAR RH</u>: <u>Diagnosis Procedure</u>".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000011286207

${f 1}$.PERFORM THE SELF-DIAGNOSIS

- Start the engine.
- 2. Turn the Blind Spot Intervention system ON, and then wait for 30 seconds or more.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is "U1000" detected as the current malfunction?

- YES >> Refer to LAN-24, "Trouble Diagnosis Flow Chart".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description

INFOID:0000000011286208

ITS COMMUNICATION

Revision: 2015 January **DAS-353** 2015 Q50

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< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- ITS communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with 2 communication lines.
- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

DRIVER ASSISTANCE BUZZER CONTROL MODULE: DTC Logic

INFOID:0000000011286209

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If driver assistance buzzer control module is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to <u>DAS-354</u>, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure

INFOID:0000000011286210

1.PERFORM THE SELF-DIAGNOSIS

- Turn the ignition switch ON.
- 2. Turn the MAIN switch of ICC system ON, and then wait for 2 seconds or more.
- 3. Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "U1000" detected as the current malfunction?

- YES >> Refer to LAN-24, "Trouble Diagnosis Flow Chart".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U1010 CONTROL UNIT (CAN)

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: Description

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CAN controller controls the communication of ITS communication signal and the error detection.

ACCELERATOR PEDAL ACTUATOR: DTC Logic

INFOID:0000000011286212

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If accelerator pedal actuator detects malfunction by CAN controller initial diagnosis

POSSIBLE CAUSE

Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the DCA system ON.
- 3. Perform "All DTC Reading" with CONSULT.
- Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- >> Refer to DAS-355, "ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000011286213

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn the DCA system ON. Perform "All DTC Reading" with CONSULT.
- Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "ACCELE PEDAL ACT".

Is "U1010" detected as the current malfunction?

>> Replace the accelerator pedal actuator. Refer to DAS-385, "Exploded View".

NO >> INSPECTION END

SIDE RADAR LH

INFOID:0000000011286214

SIDE RADAR LH: Description

CAN controller controls the communication of ITS communication signal and the error detection.

SIDE RADAR LH : DTC Logic

INFOID:0000000011286215

DTC DETECTION LOGIC

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< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If side radar LH detects malfunction by CAN controller initial diagnosis.

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.perform dtc confirmation procedure

- 1. Start the engine.
- 2. Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- 4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to DAS-356, "SIDE RADAR LH: Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH: Diagnosis Procedure

INFOID:0000000011286216

1. CHECK SELF-DIAGNOSIS RESULT

- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is "U1010" detected as the current malfunction?

YES >> Replace the side radar LH. <u>DAS-387</u>, "Removal and Installation".

NO >> INSPECTION END

SIDE RADAR RH

SIDE RADAR RH: Description

INFOID:0000000011286217

CAN controller controls the communication of ITS communication signal and the error detection.

SIDE RADAR RH : DTC Logic

INFOID:0000000011286218

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If Side radar RH detects malfunction by CAN controller initial diagnosis.

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- >> Refer to DAS-357, "SIDE RADAR RH: Diagnosis Procedure".
- >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident" NO-1
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH : Diagnosis Procedure

1. CHECK SELF-DIAGNOSIS RESULT

- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is "U1010" detected as the current malfunction?

YES >> Replace the side radar RH. <u>DAS-387</u>, "Removal and Installation".

NO >> INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Description

CAN controller controls the communication of ITS communication signal and the error detection.

DRIVER ASSISTANCE BUZZER CONTROL MODULE: DTC Logic

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DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If driver assistance buzzer control module detects malfunction by CAN control- ler initial diagnosis

POSSIBLE CAUSE

Driver assistance buzzer control module

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

YES >> Refer to DAS-357, "DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure

INFOID:0000000011286222

1. PERFORM DTC CONFIRMATION PROCEDURE

Turn the MAIN switch of ICC system ON.

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< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- Perform "All DTC Reading" with CONSULT.
- 3. Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER". <u>Is "U1010" detected as the current malfunction?</u>
- YES >> Replace the driver assistance buzzer control module. Refer to <u>DAS-390</u>, "Removal and Installation".
- NO >> INSPECTION END

U1527 CCM CAN 1

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[DRIVER ASSISTANCE SYSTEM]

U1527 CCM CAN 1

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE: DTC Logic

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DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1527	CCM CAN CIRCUIT 2 (CCM CAN Circuit 2)	If driver assistance buzzer control module detects an error signal that is received from chassis control module via ADAS control unit

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1527" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

>> Perform diagnosis of applicable. Refer to DAS-354, "DRIVER ASSISTANCE BUZZER CONTROL YES MODULE: DTC Logic".

NO >> GO TO 2.

2 Perform DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the MAIN switch of ICC system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1527" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "U0428" detected as the current malfunction?

YES >> Refer to DAS-359, "DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure

INFOID:0000000011286224

CHECK DTC PRIORITY

If DTC "U1527" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-354, "DRIVER ASSISTANCE BUZZER CONTROL MODULE: DTC Logic".

NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ICC/ADAS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-266. "DTC Index".

NO >> Replace the lane camera unit. Refer to <u>DAS-621, "Removal and Installation"</u>. DAS

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR: Diagnosis Procedure

INFOID:0000000011286225

1. CHECK FUSES

Check if any of the following fuses are blown:

Signal name	Fuse No.
Battery power supply	67
Ignition power supply	54

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2. CHECK ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

Check voltage between accelerator pedal actuator harness connector and ground.

	Terminal	Condition		
(-	+)	(-)	Condition	Voltage
Accelerator pedal actuator			Ignition	(Approx.)
Connector	Terminal	Ground	switch	
M124	1	Giodila	OFF	Battery volt-
	2		ON	age

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the accelerator pedal actuator power supply circuit.

3.check accelerator pedal actuator ground circuit

- 1. Turn the ignition switch OFF.
- 2. Disconnect the accelerator pedal actuator connector.
- 3. Check for continuity between accelerator pedal actuator harness connector and ground.

Accelerator p	pedal actuator	Ground	Continuity	
Connector	Terminal		Continuity	
M124	7		Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the accelerator pedal actuator ground circuit.

SIDE RADAR LH

SIDE RADAR LH: Diagnosis Procedure

INFOID:0000000011286226

1.CHECK FUSES

Check if any of the following fuses are blown:

Signal name	Fuse No.
Ignition power supply	22

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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INFOID:0000000011286227

$\overline{2}$.check power supply circuit

- 1. Turn ignition switch OFF.
- Disconnect the side radar LH connector.
- Check voltage between side radar LH harness connector and ground.

Terminals		Condition		
(-	(+) (-)		Condition	Voltage
Side ra	adar LH	- Ground -	Ignition switch	(Approx.)
Connector	Terminal		ignition switch	
B92	5	Giodila	OFF	OFF 0 V
	3		ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the side radar LH power supply circuit.

3.CHECK GROUND CIRCUIT

Check continuity between side radar LH harness connectors and ground.

Side ra	adar LH		Continuity
Connector	Terminal	Ground	Continuity
B92	2		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the side radar LH ground circuit.

SIDE RADAR RH

SIDE RADAR RH: Diagnosis Procedure

1.CHECK FUSES

Check if any of the following fuses are blown:

Signal name	Fuse No.
Ignition power supply	22

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect the side radar RH connector.
- Check voltage between side radar RH harness connector and ground.

Terminals		Condition		
(-	+)	(-)	Condition	Voltage
Side ra	ıdar RH		Ignition switch	(Approx.)
Connector	Terminal	Ground	Igrillon Switch	
B93	5	OFF 0 V	0 V	
	5		ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the side radar RH power supply circuit.

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

3. CHECK GROUND CIRCUIT

Check continuity between side radar RH harness connectors and ground.

Side ra	Side radar RH		Continuity	
Connector	Terminal	Ground	Continuity	
B93	2		Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the side radar RH ground circuit.

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE: Diagnosis Procedure

INFOID:0000000011286228

1. CHECK FUSES

Check if any of the following fuses are blown:

Signal name	Fuse No.
Ignition power supply	22

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK DRIVER ASSISTANCE BUZZER CONTROL MODULE POWER SUPPLY CIRCUIT

Check voltage between driver assistance buzzer control module harness connector and ground.

Terminal			Condition		
(+)		(-)	Condition	Voltage (Approx.)	
Driver assistance buzzer control module			Ignition switch		
Connector	Terminal	Ground	SWILCIT		
M56	1		ON	Battery volt- age	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the driver assistance buzzer control module power supply circuit.

3.check driver assistance buzzer control module ground circuit

- Turn the ignition switch OFF.
- 2. Disconnect the driver assistance buzzer control module.
- 3. Check for continuity between driver assistance buzzer control module harness connector and ground.

	Oriver assistance buzzer control mod- ule		Continuity
Connector	Terminal	Ground	
M156	5		Existed
101130	13		LAISIEU

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the driver assistance buzzer control module.

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Diagnosis Procedure

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1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Check the terminals and connectors of the side radar RH for damage, bend and short (unit side and connector side).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal or connector.

2.check continuity right/left switching signal circuit

- 1. Disconnect side radar RH connector.
- 2. Check continuity between side radar RH harness connectors and ground.

Side radar RH			Continuity
Connector	Terminal	Ground	Continuity
B93	6		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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DRIVER ASSISTANCE BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE BUZZER CIRCUIT

Component Function Check

INFOID:0000000011286230

1. CHECK WARNING BUZZER

- 1. Turn the ignition switch ON.
- 2. Select the active test item "BUZZER 1 (ADAS)" of "BSW/BUZZER" with CONSULT.
- 3. With operating the test item, check the operation.

On : Warning buzzer is activated.

Off : Warning buzzer is not activated.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to <u>DAS-364</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000011286231

1. CHECK DRIVER ASSISTANCE BUZZER SIGNAL CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- Disconnect the driver assistance buzzer connector.
- 3. Disconnect the driver assistance buzzer control module connector.
- Check continuity between the driver assistance buzzer control module harness connector and driver assistance buzzer harness connector.

Driver assistance buzzer control module		Driver assistance buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M56	8	M107	1	Existed
	16	WITO	2	LAISIGU

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2.CHECK DRIVER ASSISTANCE BUZZER SIGNAL CIRCUIT FOR SHORT

Check continuity between the driver assistance buzzer control module harness connector and ground.

	Driver assistance buzzer control module		Continuity
Connector	Terminal	Ground	
M56	8		Not existed
	16		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK DRIVER ASSISTANCE BUZZER SIGNAL

- 1. Connect the driver assistance buzzer connector and driver assistance buzzer control module connector.
- 2. Turn ignition switch ON.
- Select the active test of "BSW/BUZZER" with CONSULT.
- Check waveform between the driver assistance buzzer control module harness connector and ground.

DRIVER ASSISTANCE BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Driver assis	stance buzzer con	trol module		Walter	
Connector	Terminal		Condition	Voltage (Approx.)	
Connector	+	-		(11 - 7	
			At "BUZZER 1" test of "Active test"	(V) 4 0 -4 500µS JSOIA0949ZZ	
M56	8	16	At "BUZZER 2" test of "Active test"	(V) 4 0 -4 500µ\$ JSOIA0950ZZ	
			At "BUZZER 3" test of "Active test"	(V) 4 0 -4 500µS JSOIA0951ZZ	

Is the inspection result normal?

YES >> Replace the driver assistance buzzer. Refer to <u>DAS-391</u>, "Removal and Installation".

NO >> Replace the driver assistance buzzer control module. Refer to <u>DAS-390</u>, "Removal and Installation".

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SYMPTOM DIAGNOSIS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

Symptom Table

Symptom	Confirmation item		Inspection item/Reference page
	All of system display does not illuminate		System cannot be turned ON/ OFF ON the integral switch Refer to DAS-368, "Description"
PFCW/LDW/BSW/DCA/LDP/ Blind Spot Intervention/BCI sys- tem display does not illuminate	DCA/LDP/Blind Spot Intervention system display does not illuminate		Switch does not turn ON/Switch does not turn OFF Refer to DAS-371, "Description"
	BCI system display does not illuminate		TCM Refer to TM-84, "DTC Index"
	Other information display is not illuminated		Combination meter Refer to MWI-80, "DTC Index"
PFCW/LDW/BSW/DCA/LDP/ Blind Spot Intervention/BCI	Information display is functioning normally		ADAS control unit Refer to <u>DAS-266, "DTC Index"</u>
warning display does not illuminate (Buzzer is functioning normally)	Information display is not functioning normally		Perform On Board Diagnosis of Combination meter Refer to <u>MWI-62</u> , "On Board Diagnosis Function"
PFCW/LDW/BSW/DCA/LDP/ Blind Spot Intervention warning buzzer is not sounding (Warning display is functioning normally)	_		Chime does not sound Refer to <u>DAS-369</u> , " <u>Description</u> "
BCI warning buzzer is not sounding	Buzzer of camera assistance sonar is functioning normally		ADAS control unit Refer to DAS-161, "Removal and Installation"
(Warning display is functioning normally)	Buzzer of camera assistance	ce sonar is not functioning normally	Camera assistance sonar Refer to <u>AV-446</u> , "Symptom Ta- <u>ble"</u>
	DCA is not activated	No force generated for putting back the accelerator pedal	No force generated for putting back the accelerator pedal Refer to DAS-373, "Description"
PFCW/DCA is not activated	PFCW and DCA are not activated	Frequently cannot detect the vehicle ahead/Detection zone is short	Frequently cannot detect the vehicle ahead/Detection zone is short Refer to DAS-374, "Description"
		System misidentifies a vehicle even though there is no vehicle ahead	Perform radar alignment Refer to CCS-84, "TYPE 1 : Description"
		System misidentifies a vehicle in the next lane	
		System does not detect the vehicle ahead at all	The system does not detect the vehicle ahead at all Refer to DAS-376, "Description"

DRIVER ASSISTANCE SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Symptom	Confirmation item		Inspection item/Reference page
LDW/LDP is not functioning nor- mally	The system operates once but is cancelled.		Check "Cause of auto-cancel 1" Refer to DAS-402, "CONSULT Function"
	Functions when changing the course in direction of the turn signal		Symptom operates even when using turn signal Refer to DAS-378, "Description"
	Warning functions are not timely • Does not function when driving on lane markers • Functions when driving in a lane • Functions in a different position from the actual position		Lane camera unit aiming adjustment Refer to DAS-601, "Description"
	The system operates once but is cancelled.		Check "Cause of auto-cancel 1" Refer to DAS-402, "CONSULT Function"
Blind Spot Intervention is not functioning normally	Blind Spot Intervention are not timely Does not function when approaching a lane marker while Blind Spot Warning/Blind Spot Intervention indicator is illuminated Functions when driving in the middle of lane		Lane camera unit aiming adjustment Refer to DAS-601, "Description"
BCI is not activated	The system operates once but is cancelled.		Check "Cause of auto-cancel 3" Refer to DAS-23, "CONSULT Function (ICC/ADAS)"
	Does not detect a vehicle just behind.	Blind Spot Warning/Blind Spot Intervention is activated	ADAS control unit Refer to DAS-161, "Removal and Installation"
		Blind Spot Warning/Blind Spot Intervention is not activated	Side radar Refer to DAS-387, "Removal and Installation"
	Does not detect obstacles behind the vehicle.	Buzzer of camera assistance sonar is activated	ADAS control unit Refer to DAS-161, "Removal and Installation"
		Buzzer of camera assistance sonar is not activated	Camera assistance sonar Refer to AV-446, "Symptom Ta- ble"
	No force generated for put- ting back the accelerator pedal	DCA is activated	ADAS control unit Refer to DAS-161, "Removal and Installation"
		DCA is not activated	No force generated for putting back the accelerator pedal Refer to DAS-373, "Description"

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SYSTEM SETTINGS CANNOT BE TURNED ON/OFF ON THE INTEGRAL SWITCH

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

SYSTEM SETTINGS CANNOT BE TURNED ON/OFF ON THE INTEGRAL SWITCH

Description INFOID:000000011286233

System setting is not selectable on the navigation screen.

NOTE:

When the ignition switch is in ACC position, each system settings cannot be changed.

- The switching between ON and OFF cannot be performed by operating the integral switch.
- The item on the integral switch is not active.
- After turning ON the ignition switch or starting the engine, settings of the integral switch cannot be selected for several tens of seconds under the following conditions:
- After replacing display control unit.
- After erasing connection history of the integral switch.
- After erasing self-diagnosis results.
- The system setting differs from the one set at the previous driving.

NOTE:

Turn OFF the ignition switch and wait for 5 seconds or more.

Diagnosis Procedure

INFOID:0000000011286234

1. CHECK DCA SYSTEM SETTING

- 1. Start the engine.
- 2. Check that the each system settings is selectable on the integral switch.

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

2.PERFORM THE SELF-DIAGNOSIS

- 1. Perform "All DTC Reading" with CONSULT-.
- Check if the DTC is detected in self-diagnosis results of "ICC/ADAS", "MULTI AV" and "METER/M&A". Refer to the following.
- ICC/ADAS: DAS-266, "DTC Index"
- MULTI AV: AV-342, "DTC Index"
- METER/M&A: <u>MWI-80, "DTC Index"</u>

Is any DTC detected?

YES >> Repair or replace malfunctioning parts.

NO >> INSPECTION END

3.CHECK DATA MONITOR OF ADAS CONTROL UNIT

Check that "DCA SELECT" operates normally in "DATA MONITOR" of "ICC/ADAS" with CONSULT.

Is the inspection result normal?

YES >> Refer to DAS-221, "On Board Diagnosis Function".

NO >> GO TO 4.

4. CHECK MULTIFUNCTION SWITCH

Operate the multifunction switch to check that the audio, navigation system, and air conditioner operate properly.

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

NO >> Repair or replace malfunctioning parts.

CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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INFOID:0000000011286236

CHIME DOES NOT SOUND

Description

The warning chime may not sound in some cases when there is a short distance between vehicles. Some examples are:

- When the vehicles are traveling at the same speed and the distance between vehicles is not changing.
- When the vehicle ahead is traveling faster and the distance between vehicles is increasing.
- · When a vehicle cuts in near own vehicle.
- The warning chime will not sound when own vehicle approaches vehicles that are parked or moving slowly.
- The warning chime does not sound when the system does not detect any vehicle ahead. (Diagnose the conditions under which the system is detecting the vehicle ahead and when the system is malfunctioning. If there is any malfunction in detecting the vehicle ahead, check the system following the DAS-374, "Description".)

Diagnosis Procedure

1. PERFORM ACTIVE TEST

Check if the warning chime sounds on the active test item "ICC BUZZER" of "ICC/ADAS" with CONSULT.

Does the warning chime sound?

YES >> GO TO 2. NO >> GO TO 3.

2.CHECK THE MALFUNCTION SYMPTOM DURING WARNING CHIME OPERATION

Understand the vehicle ahead detection condition when the malfunction occurred. If the warning chime should have sounded, replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

>> GO TO 9.

${f 3.}$ PERFORM THE SELF-DIAGNOSIS

- 1. Perform "All DTC Reading" with CONSULT.
- 2. Check if the "U1000" is detected in self-diagnosis results of "ICC/ADAS".

Is "U1000" detected?

YES >> GO TO 4. NO >> GO TO 5.

4.CAN COMMUNICATIONS INSPECTION

Check the CAN communication and repair or replace malfunctioning parts. Refer to DAS-128, "DTC Logic".

>> GO TO 9.

5. PERFORM THE SELF-DIAGNOSIS OF DRIVER ASSISTANCE BUZZER CONTROL MODULE

- 1. Perform "All DTC Reading" with CONSULT.
- 2. Check if any DTC is detected in self-diagnosis results of "BSW/BUZZER".

Is any DTC detected?

YES >> Repair or replace malfunctioning parts. Refer to <u>DAS-281, "DTC Index"</u>.

NO >> GO TO 6.

6.CHECK DRIVER ASSISTANCE BUZZER CIRCUIT

Check driver assistance buzzer. Refer to DAS-364, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 8. NO >> GO TO 7.

/.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts.

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CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

>> GO TO 9.

8. REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to <u>DAS-161</u>, "Removal and Installation".

>> GO TO 9.

9. CHECK EACH SYSTEM

- 1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to <u>DAS-326</u>, "<u>DCA</u>: <u>Description</u>" for action test.)
- 2. Check if the each system is normal.

>> INSPECTION END

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

Description INFOID:0000000011286237

The switch does not turn ON

 When the system setting is ON, the system display does not illuminate even if the dynamic driver assistance switch is depressed.

The switch does not turn OFF

 The system display does not turn off even if the dynamic driver assistance switch is pressed when the system display illuminates.

Diagnosis Procedure

CHECK SYSTEM SETTING

- Start the engine.
- 2. After starting the engine wait for 5 seconds or more.
- Check that system setting on the integral switch is ON.

Is system setting ON?

YES >> GO TO 2.

NO >> Enable the system setting.

2.DYNAMIC DRIVER ASSISTANCE SWITCH INSPECTION

- 1. Start the engine.
- Check that "DYNA ASIST SW" operates normally in "DATA MONITOR" of "ICC/ADAS" with CONSULT.

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 4.

${f 3.}$ PERFORM THE SELF-DIAGNOSIS OF COMBINATION METER

- Perform "All DTC Reading" with CONSULT.
- Check if the DTC is detected in self-diagnosis results of "METER/M&A". Refer to MWI-80, "DTC Index"

Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 6.

$oldsymbol{4}.$ CHECK STEERING SWITCH CIRCUIT

Check the steering switch circuit. Refer to DAS-80, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 6.

${f 5.}$ PERFORM THE SELF-DIAGNOSIS

- Perform "All DTC Reading" with CONSULT.
- Check if the DTC is detected in self-diagnosis results of "ICC/ADAS". Refer to DAS-266, "DTC Index".

Is any DTC detected?

>> GO TO 6. YES

NO >> GO TO 7.

6.REPAIR OR REPLACE MALFUNCTIONING PARTS.

Repair or replace malfunctioning parts.

>> GO TO 7.

7. CHECK EACH SYSTEM

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Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to DAS-326, "DCA: Description" for action test.)

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

2. Check that the each system is normal.

>> INSPECTION END

NO FORCE GENERATED FOR PUTTING BACK THE ACCELERATOR PEDAL [DRIVER ASSISTANCE SYSTEM]

< SYMPTOM DIAGNOSIS >

NO FORCE GENERATED FOR PUTTING BACK THE ACCELERATOR PEDAL

Description INFOID:0000000011286239

The dynamic driver assistance switch can be turned ON/OFF but the actuation force of accelerator pedal is not generated.

NOTE:

- When the vehicle ahead detection indicator does not illuminate, the control and warning with the system are not performed.
- The actuation force of accelerator pedal may not be generated sufficiently depending on depressing method or depressing amount of accelerator pedal.

Diagnosis Procedure

1.PERFORM THE SELF-DIAGNOSIS

- Perform "All DTC Reading" with CONSULT.
- Check if any DTC is detected in self-diagnosis results of "ICC/ADAS" or "ACCELE PEDAL ACT".

Is any DTC detected?

YES >> GO TO 2.

NO >> GO TO 3.

2.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts. Refer to DAS-266, "DTC Index" (ICC/ADAS) or DAS-273, "DTC Index" (ACCELE PEDAL ACT).

>> GO TO 5.

3 PERFORM ACTIVE TEST

Check if the accelerator pedal actuator operates by the active test items "ACCELERATOR PEDAL ACTUA-TOR TEST1" and "ACCELERATOR PEDAL ACTUATOR TEST2" of "ACCELE PEDAL ACT" with CONSULT.

Does it operate?

YES >> GO TO 4.

NO >> Replace the accelerator pedal assembly.

f 4.CHECK VEHICLE AHEAD DETECTION PERFORMANCE

Understand the vehicle ahead detection condition when the malfunction occurred. If the detecting function is malfunctioning, check according to DAS-374, "Description".

>> INSPECTION END

5. CHECK DCA SYSTEM

- Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to <u>DAS-326</u>, "DCA: <u>Description</u>" for action test.)
- Check if the DCA system is normal.

>> INSPECTION END

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FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

Description INFOID:0000000011286241

Symptom check: Detection function may become unstable under the following conditions.

- When the vehicle is driving on a curve such as S-curve where the curvature changes.
- When the vehicle is driving on up-and-down road or passing the peak or foot of slope or passing the break of the inclination of hill.

Diagnosis Procedure

INFOID:0000000011286242

1. VISUAL CHECK (1)

Check front bumper grille near the ICC sensor for contamination and foreign materials.

Do foreign materials adhere?

YES >> GO TO 2.

NO >> GO TO 3.

2.WIPE OUT DIRT AND FOREIGN OBJECTS

Wipe out the contamination and/or foreign materials from the front bumper grille near the ICC sensor.

>> GO TO 7.

3. VISUAL CHECK (2)

Check ICC sensor for cracks and/or scratches.

Are there cracks?

YES >> GO TO 5. NO >> GO TO 4.

4. PERFORM RADAR ALIGNMENT

- Perform radar alignment. Refer to CCS-84, "TYPE 1: Description".
- Perform action test. Refer to DAS-326, "DCA: Description".
- Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END

NO >> GO TO 5.

5. REPLACE ICC SENSOR

- Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
- Perform radar alignment. Refer to CCS-84, "TYPE 1: Description".
- Perform action test. Refer to DAS-326, "DCA: Description".
- Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END

NO >> GO TO 6.

6.REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

>> GO TO 7.

7. CHECK DCA SYSTEM

- Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to DAS-326, "DCA: Description" for action test.)
- Check that the DCA/FCW system is normal.

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

>> INSPECTION END

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THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

Description INFOID:0000000011286243

When DCA/PFCW system is active, the DCA/PFCW system does not perform any control even through there is a vehicle ahead.

Diagnosis Procedure

INFOID:0000000011286244

1. CHECK INFORMATION DISPLAY

- Start the self-diagnosis mode of combination meter. Refer to MWI-62, "On Board Diagnosis Function".
- Check that the segment of information display is displayed normally.

Is the inspection result normal?

YFS >> GO TO 2.

NO >> Replace the combination meter.

2.VISUAL CHECK (1)

Check front bumper grille near the ICC sensor for contamination and/or foreign materials.

Do foreign materials adhere?

YES >> GO TO 3.

>> GO TO 4. NO

3.WIPE OUT DIRT AND FOREIGN MATERIALS

Wipe out the contamination and/or foreign materials from the front bumper grille near the ICC sensor.

>> GO TO 8.

4. VISUAL CHECK (2)

Check ICC sensor for cracks and/or scratches.

Are there cracks?

YES >> GO TO 6.

NO >> GO TO 5.

5.PERFORM RADAR ALIGNMENT

- Perform radar alignment. Refer to CCS-84, "TYPE 1: Description".
- Perform action test. Refer to DAS-326, "DCA: Description".
- Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END

NO >> GO TO 6.

6. REPLACE ICC SENSOR

- Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
- Perform radar alignment. Refer to CCS-84, "TYPE 1: Description". Perform action test. Refer to DAS-326, "DCA: Description".
- Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END

NO >> GO TO 7.

7.REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

>> GO TO 8.

8.CHECK DCA SYSTEM

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to <u>DAS-326</u>, "DCA: <u>Description"</u> for action test.)

Check that the DCA/FCW system is normal.

>> INSPECTION END В

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THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

Description INFOID:000000011286245

The warning of Lane Departure Warning (LDW) and Lane Departure Prevention (LDP) and the yaw moment control are activated during the use of a turn signal.

NOTE:

For the operational conditions of Lane Departure Warning (LDW) and Lane Departure Prevention (LDP), refer to the following descriptions.

- LDW: DAS-177, "LDW: System Description"
- LDP: DAS-179, "LDP: System Description"

Diagnosis Procedure

INFOID:0000000011286246

1. CHECK TURN SIGNAL OPERATION

Check that both right and left turn signals are normal.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts. Refer to DAS-366, "Symptom Table".

2.CHECK SELF-DIAGNOSIS RESULTS

- 1. Perform "All DTC Reading" with CONSULT.
- 2. Check if the DTC is detected in self-diagnosis results of "ICC/ADAS" Refer to DAS-266, "DTC Index".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts.

NO >> Replace ADAS control unit. Refer to DAS-161, "Removal and Installation".

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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NORMAL OPERATING CONDITION

Description INFOID:000000011286247

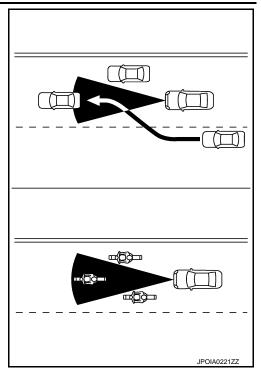
PRECAUTIONS FOR DISTANCE CONTROL ASSIST (DCA) SYSTEM

- If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill with a warning chime. To prevent the vehicle from moving, the driver must depress the brake pedal.
- The DCA system will not apply brake control while the driver's foot is on the accelerator pedal.
- This system is only an aid to assist the driver and is not a collision warning or avoidance device. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- This system will not adapt automatically to road conditions. Do not use the system on roads with sharp curves, or on icy roads, in heavy rain or in fog.
- The distance sensor will not detect the following object.
- Stationary and slow moving vehicles
- Pedestrians or objects in the roadway
- Oncoming vehicles in the same lane
- Motorcycles traveling offset in the travel lane
- As there is a performance limit to the distance control function, never rely solely on the DCA system. This
 system does not correct careless, inattentive or absent-minded driving, or overcome poor visibility in rain,
 fog, or other bad weather. Decelerate the vehicle speed by depressing the brake pedal, depending on the
 distance to the vehicle ahead and the surrounding circumstances in order to maintain a safe distance
 between vehicles.
- The system may not detect the vehicle in front of own vehicle in certain road or weather conditions. To avoid accidents, never use the DCA system under the following conditions.
- On roads with sharp curves
- On slippery road surfaces such as on ice or snow, etc.
- During bad weather (rain, fog, snow, etc.)
- When rain, snow or dirt adhere to the system sensor
- On steep downhill roads (frequent braking may result in overheating the brakes)
- On repeated uphill and downhill roads
- In some road or traffic conditions, a vehicle or object can unexpectedly come into the sensor detection zone
 and cause automatic braking. Driver may need to control the distance from other vehicles using the accelerator pedal. Always stay alert and avoid using the DCA system when it is not recommended in this section.
- The following are some conditions in which the sensor cannot detect the signals.
- When the snow or road spray from traveling vehicles reduces the sensor's visibility
- When excessively heavy baggage is loaded in the rear seat or the luggage room of own vehicle
- The DCA system is designed to automatically check the sensor's operation. When the sensor area of front
 bumper is covered with dirt or is obstructed, the system will automatically be canceled. If the sensor is covered with ice, a transparent or translucent vinyl bag, etc., the DCA system may not detect them. In these
 instances, the DCA system may not be able to decelerate the vehicle properly. Be sure to check and clean
 the sensor regularly.
- The DCA system is designed to help assist the driver to maintain a following distance from the vehicle ahead. The system will decelerate as necessary and if the vehicle ahead comes to a stop, the vehicle decelerates to standstill. However, the DCA system can only apply up to approximately 40% of the vehicles total braking power. If a vehicle moves into the traveling lane ahead or if a vehicle traveling ahead rapidly decelerates, the distance between vehicles may become closer because the DCA system cannot decelerate the vehicle quickly enough. If this occurs, the DCA system will sound a warning chime and blink the system display to notify the driver to take necessary action.
- The DCA system does not control vehicle speed or warn when driver approach stationary and slow moving vehicles. Driver must pay attention to vehicle operation to maintain proper distance from vehicles ahead.

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- The detection zone of the sensor is limited. A vehicle ahead must be in the detection zone for the system to operate.
- A vehicle ahead may move outside of the detection zone due to its position within the same lane of travel. Motorcycles may not be detected in the same lane ahead if they are traveling offset from the center line of the lane. A vehicle that is entering the lane ahead may not be detected until the vehicle has completely moved into the lane. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime. The driver may have to manually control the proper distance away from vehicle traveling ahead.



- When driving on some roads, such as winding, hilly, curved, narrow roads, or roads which are under construction, the sensor may detect vehicles in a different lane, or may temporarily not detect a vehicle traveling ahead. This may cause the system to work inappropriately. The detection of vehicles may also be affected by vehicle operation (steering maneuver or traveling position in the lane, etc.) or vehicle condition. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime unexpectedly. The driver will have to manually control the proper distance away from the vehicle traveling ahead.
- The approach warning chime may sound and the driver assist system forward indicator (orange) may blink when the radar sensor detects objects on the side of the vehicle or on the side of the road. This may cause the DCA system to decelerate or accelerate the vehicle. The radar sensor may detect these objects when the vehicle is driven on winding roads, narrow roads, hilly roads or when entering or exiting a curve. In these cases driver will have to manually control the proper distance ahead of own vehicle. Also, the sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle condition (for example, if a vehicle is being driven with some damage).
- The DCA system automatically decelerates own vehicle to help assist the driver to maintain a following distance from the vehicle ahead. Manually brake when deceleration is required to maintain a safe distance upon sudden braking by the vehicle ahead or when a vehicle suddenly appears in front of own

vehicle. Always stay alert when using the DCA system.

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- When the vehicle ahead detection indicator lamp is not illuminated, system will not control or warn the driver.
- Never place a foot under the brake pedal. A foot may be caught when the system controls the brake.
- Depending on the position of the accelerator pedal, the system may not be able to assist the driver to release the accelerator pedal appropriately.
- If the vehicle ahead comes to a standstill, the vehicle decelerates to a standstill within the limitations of the system. The system will release brake control with a warning chime once it judges the vehicle is at a standstill. To prevent the vehicle from moving, the driver must depress the brake pedal. [The system will resume control automatically once the system reaches 5 km/h (3 MPH)].

PRECAUTIONS FOR PREDICTIVE FORWARD COLLISION WARNING (PFCW)

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- The predictive forward collision warning system is designed to warn driver before a collision but will not avoid a collision. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all
- The radar sensor does not detect the following objects.
- Pedestrians, animals, or obstacles in the roadway.
- Oncoming vehicles
- Crossing vehicles
- The predictive forward collision warning system does not function when a vehicle ahead is a narrow vehicle, such as a motorcycle.
- The radar sensor may not detect a second vehicle ahead in the following conditions:
- Snow or heavy rain
- Dirt, ice, snow or other material covering the radar sensor
- Interference by other radar sources
- Snow or road spray from traveling vehicles is splashed
- Driving in a tunnel
- The radar sensor may not detect a second vehicle when the vehicle ahead is being towed.
- When the distance to the vehicle ahead is too close, the beam of the radar sensor is obstructed.
- The radar sensor may not detect a second vehicle when driving on a steep downhill slope or on roads with sharp curves.
- Excessive noise will interfere with the warning tone sound, and it may not be heard.

PRECAUTIONS FOR LANE DEPARTURE WARNING (LDW)

- If the LDW system malfunctions, it will cancel automatically, and the LDW malfunction message will appear in the vehicle information display.
- LDW system is only a warning device to inform the driver of a potential unintended lane departure. It will not steer the vehicle or prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of the vehicle at all times.
- LDW system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- LDW system may not function properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers; or lane markers covered with water, dirt or snow,
- On roads where the discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. (The LDW system could detect these items as lane markers.)
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)

PRECAUTIONS FOR LANE DEPARTURE PREVENTION (LDP)

- If the LDP system malfunctions, it will cancel automatically, and the LDP malfunction message will appear in the vehicle information display.
- The LDP system will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- LDP system is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers in certain roads, weather or driving conditions.
- Using the LDP system under some conditions of road, lane marker or weather, or when driver change lanes without using the turn signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- The LDP system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Do not use the LDP system under the following conditions as it may not function properly:

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< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake or steering parts or suspension parts.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- The functions of the LDP system (warning and, system application of the steering or brakes) may or may not
 operate properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (The LDP system could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)

PRECAUTIONS FOR BLIND SPOT WARNING & BLIND SPOT INTERVENTION

- The Blind Spot Warning and Blind Spot Intervention systems are not a replacement for proper driving procedure and are not designed to prevent contact with vehicles or objects. When changing lanes, always use the side and rear mirrors and turn and look in the direction driver will move to ensure it is safe to change lanes. Never rely solely on the Blind Spot Warning or Blind Spot Intervention system.
- Using the Blind Spot Intervention system under some road, lane marker or weather conditions could lead to improper system operation. Always rely on driver's own steering and braking operation to avoid accidents.
- The Blind Spot Warning and Blind Spot Intervention systems may not provide the warning or the control for vehicles that pass through the detection zone quickly.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.
- The side radar may not be able to detect and activate Blind Spot Warning/Blind Spot Intervention when certain objects are present such as:
- Pedestrians, bicycles, animals.
- Several types of vehicles such as motorcycles.
- Oncoming vehicles.
- Vehicles remaining in the detection zone when driver accelerate from a stop.
- A vehicle merging into an adjacent lane at a speed approximately the same as vehicle.
- A vehicle approaching rapidly from behind.
- A vehicle which vehicle overtakes rapidly.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The side radar detection zone is designed based on a standard lane width. When driving in a wider lane, the side radar may not detect vehicles in an adjacent lane. When driving in a narrow lane, the side radar may detect vehicles driving two lanes away.
- The side radar are designed to ignore most stationary objects, however objects such as guardrails, walls, foliage and parked vehicles may occasionally be detected. This is a normal operating condition.

PRECAUTIONS FOR BLIND SPOT INTERVENTION

- Do not use the Blind Spot Intervention system under the following conditions because the system may not function properly.
- During bad weather (for example. rain, fog, snow, etc.)
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original steering parts, brake parts or suspension parts.
- The camera may not detect lane markers in the following situations and the Blind Spot Intervention system
 may not operate properly.
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; nonstandard lane markers; lane markers covered with water, dirt, snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs.
- On roads where the traveling lane merges or separates.
- When the vehicle is traveling direction does not align with the lane markers.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of a lane camera unit.
- When the headlights are not bright due to dirt on the lens or if aiming is not adjusted properly.
- When strong light enters a lane camera unit. (for example, light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs. (for example, when the vehicle enters or exits a tunnel or under a bridge.)
- The Blind Spot Intervention system will not operate if own vehicle is on a lane marker when another vehicle enters the detection zone. In this case only the BSW system operates.
- Blind Spot Intervention assist will not operate or will stop operating and only a warning chime will sound under the following conditions.
- When the accelerator pedal is depressed while the assist is provided.
- When steering quickly.
- When the ICC, DCA, predictive forward collision warning or forward emergency braking warnings sound.
- When the hazard warning flashers are operated.
- When driving on a curve at a high speed.

PRECAUTIONS FOR BACKUP COLLISION INTERVENTION (BCI)

- The Back-up Collision Intervention system is not a replacement for proper driving procedure and is not
 designed to prevent contact with vehicles or objects. When backing out of parking space, always use the
 inside and outside rear view mirrors and turn and look in the direction own vehicle will move. Never rely
 solely on the Back-up Collision Intervention system.
- There is a limitation to the detection capability of the radar and the sonar. Using the BCI system under some road, ground, lane marker, traffic or weather conditions could lead to improper system operation. Always rely on driver operation to avoid accidents.
- In the case of several vehicles approaching in a row or in the opposite direction, a chime may not be issued to the BCI system after the first vehicle passes the sensors.
- When the sonar sounds a tone, the BCI system does not chime a sound (single beep).
- The BCI system does not operate if the object is very close to the bumper.
- The radar sensor may not be able to detect certain objects are present such as:
- Pedestrians, bicycles or animals.
- A vehicle that is passing at a speed greater than approximately 24 km/h (15 MPH).
- The radar sensor may not detect approaching vehicles in certain situations:
- When the vehicle parked next to own vehicle obstructs the beam of the radar sensor.
- When the vehicle is parked in an angled parking space.
- When the vehicle is parked on inclined ground.
- When the vehicle turns around into own vehicle's aisle.
- When the angle formed by own vehicle and approaching vehicle is small.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The sonar sensor system may not detect:
- Small or moving object.
- Wedge-shaped objects.
- Object closer to the bumper [less than approximately 30 cm (10 in)].
- Thin objects such as rope, wire, chain, etc...
- The brakes engaged by the BCI system is not as effective on a slope as it is on flat ground. When on a steep slope, the system may not function properly.

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< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- Do not use the BCI system under the following conditions because the system may not function properly:
- When driving with a tire that is not the within normal tire condition (example: tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake parts or suspension parts.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.

ACCELERATOR PEDAL ASSEMBLY

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

REMOVAL AND INSTALLATION

ACCELERATOR PEDAL ASSEMBLY

Exploded View

Refer to ACC-4, "MODELS WITH DISTANCE CONTROL ASSIST SYSTEM: Exploded View".

CAUTION:

Always perform accelerator pedal released position learning after replacement, removal, or installation of accelerator pedal assembly, and then check the DCA system operation. Refer to DAS-325, "Description".

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DYNAMIC DRIVER ASSISTANCE SWITCH

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

DYNAMIC DRIVER ASSISTANCE SWITCH

Exploded View

Dynamic driver assistance switch is integrated in the steering switch. Refer to <u>ST-31, "Exploded View"</u>. **NOTE:**

Always remove dynamic driver assistance switch together with steering wheel.

[DRIVER ASSISTANCE SYSTEM]

SIDE RADAR

Removal and Installation

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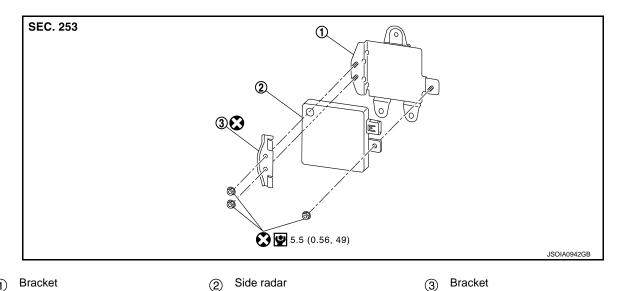
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EXPLODED VIEW

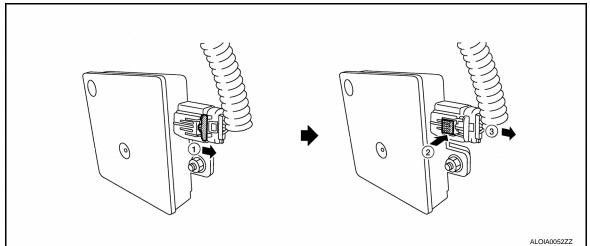


: N-m (kg-m, in-lb)

REMOVAL AND INSTALLATION

Removal

- Remove the rear bumper fascia. Refer to EXT-22, "Removal and Installation".
- Remove the side radar connector.



- Remove the mounting nut. 3.
- Remove the side radar RH/LH. 4.

Installation

Note the following, and install in the reverse order of removal.

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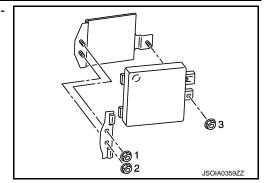
DAS-387 Revision: 2015 January 2015 Q50

SIDE RADAR

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

- Tighten mounting nuts in the numerical order as shown in the figure
- Always lock the side radar connector.



BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR

Removal and Installation

REMOVAL AND INSTALLATION

Removal

- 1. Remove the front door sash inner cover. Refer to INT-16, "FRONT DOOR SASH INNER COVER: Removal and Installation".
- 2. Remove the Blind Spot Warning/Blind Spot Intervention indicator.

Installation

Install in the reverse order of removal.

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DRIVER ASSISTANCE BUZZER CONTROL MODULE

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

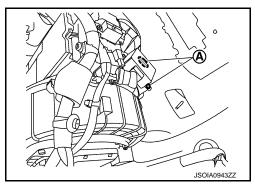
DRIVER ASSISTANCE BUZZER CONTROL MODULE

Removal and Installation

INFOID:0000000011286252

REMOVAL

- 1. Remove grove box. Refer to IP-13, "Removal and Installation".
- 2. Remove steering force control module mounting bolts and move steering force control module to obtain space for work. Refer to STC-418, "Removal and Installation".
- 3. Remove driver assistance buzzer control module mounting screw (A).
- 4. Disconnect harness connector from the driver assistance buzzer control module.
- 5. Remove driver assistance buzzer control module.



INSTALLATION

Installation is in the reverse order of removal.

DRIVER ASSISTANCE BUZZER

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

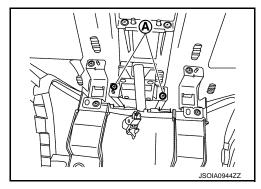
DRIVER ASSISTANCE BUZZER

Removal and Installation

INFOID:0000000011286253

REMOVAL

- 1. Remove the instrument panel. Refer to IP-13, "Removal and Installation".
- 2. Remove driver assistance buzzer mounting screw (A).
- 3. Remove driver assistance buzzer.



INSTALLATION

Install in the reverse order of removal.

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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with
 a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
 serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing Battery Terminal

INFOID:0000000011519922

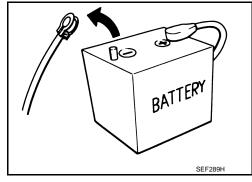
 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
 NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
 NOTE:

The removal of 12V battery may cause a DTC detection error.

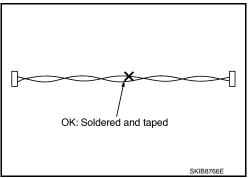
< PRECAUTION > [CHASSIS CONTROL]

Precautions for Harness Repair

NOTE:

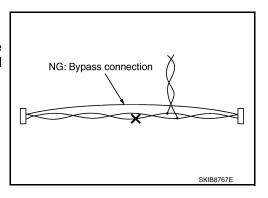
Solder the repaired area and wrap tape around the soldered area.

A fray of twisted lines must be within 110 mm (4.33 in).



Bypass connection is never allowed at the repaired area.
 NOTE:

Bypass connection may cause CAN communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



 Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

Precautions for Chassis control

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- Never disassemble the chassis control module.
- The parts must not be reused if they are dropped.
- When using a free roller, never activate the active lane control function.
- Never perform ACTIVE TEST while driving the vehicle.
- Slight vibrations are felt on the brake pedal and the operation noises occur, when active trace control function operates. This is not a malfunction because it is caused by active trace control function that is normally operated.
- Active trace control function, active lane control function, LDP function, LDW function, and blind spot intervention function are not always activated in any driving conditions.
- The settings of automatic driver positioner and combination meter are reset when the battery terminal is disconnected.
- User registration information is all reset when the display control unit is replaced.
- When a Log-in function related part is replaced, information about the replaced part is reset. Refer to <u>DMS-16</u>, "<u>Log-in Function</u>".
- When starting the vehicle or stopping the engine during Log-in function change, the operation results may not be reflected. Refer to <u>DMS-16</u>, "<u>Log-in Function</u>".
- After an Infiniti drive mode selector related part is replaced, operate the drive mode select switch to check that the indication of the information display positioned in the combination meter changes. Refer to DMS-17. "Infiniti Drive Mode Selector: Work Flow".
- After replace the chassis control module, depress brake pedal and check that the stop lamp turns ON.

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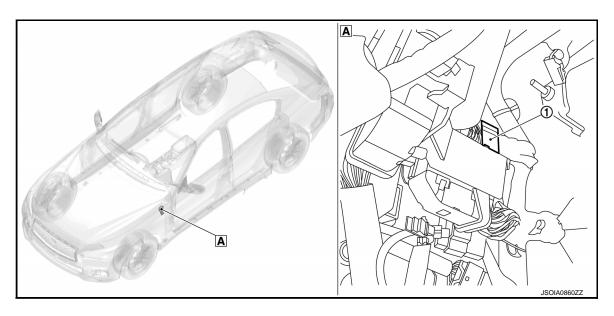
Revision: 2015 January **DAS-393** 2015 Q50

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011286257



A inside of dash side finisher LH

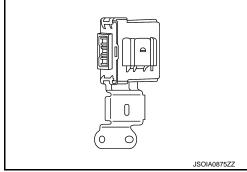
No.	Component parts	Function	
1	Chassis control module	DAS-394, "Chassis Control Module"	

Chassis Control Module

INFOID:0000000011286258

Chassis control module controls the following systems based on the signals from each sensor, switch, and control unit.

- Active trace control
- Active lane control
- Infiniti InTuition
- Infiniti drive mode selector
- Log-in function



[CHASSIS CONTROL]

SYSTEM

System Description

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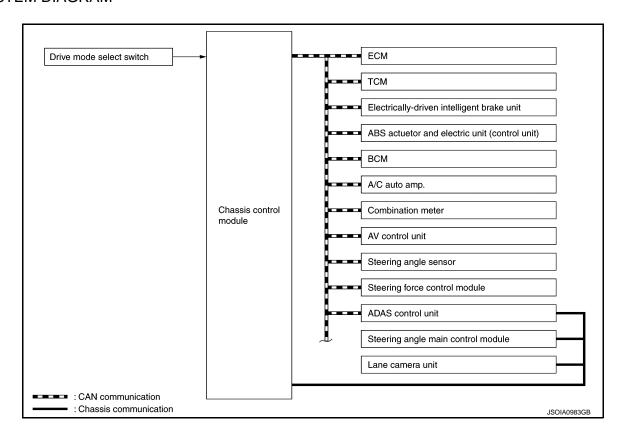
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- Chassis control to integrally control the driving system was adopted.
- Chassis control module inputs the necessary information for control from CAN communication and each switch and integrally controls each system. Refer to the following table for systems controlled and input/output signals.

System		Reference page
Active trace control		BRC-42, "ACTIVE TRACE CONTROL FUNCTION: System Description"
Active lane control		DAS-548, "ACTIVE LANE CONTROL : System Description"
Infiniti drive mode selector function Infiniti InTuition Log-in function	Infiniti drive mode selector function	DMS-7, "Infiniti Drive Mode Selector : System Description"
	DMS-9, "LOG-IN FUNCTION : System Description"	

SYSTEM DIAGRAM

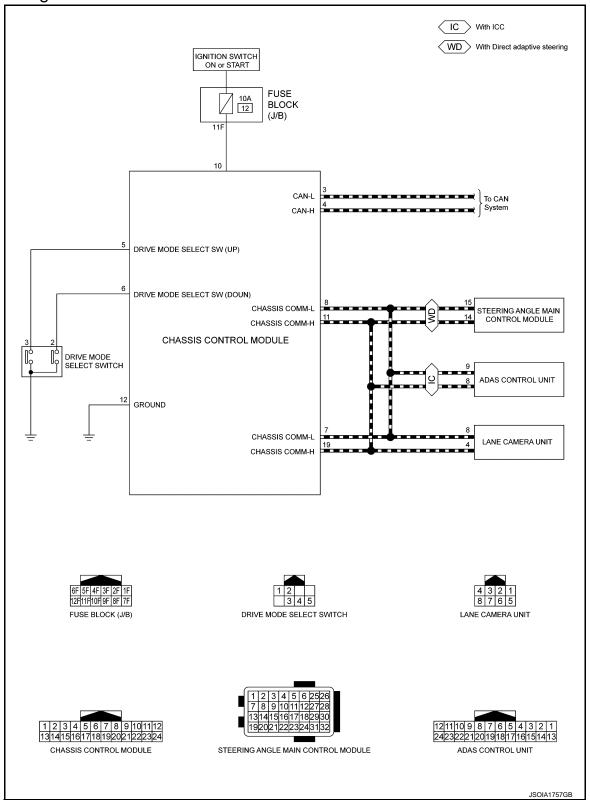


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Circuit Diagram



Fail-Safe (Chassis Control Module)

INFOID:0000000011286261

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

[CHASSIS CONTROL]

DTC	Vehicle condition	A
C1B90-00	The following functions are suspended.	
	Active lane control function	
C1B91-00	LDW functionLDP function	В
	Blind spot intervention function	
	The following functions are suspended.	
	Active trace control function	С
C1B92-00	Active lane control function	
C1B92-00	LDW function	
	LDP function Right and interpretion function	D
	Blind spot intervention function	
C1B93-00	The following functions are suspended. • Active trace control function	
	LDW function	Е
C1B94-00	• LDP function	
	Blind spot intervention function	
	The following functions are suspended.	F
	Active trace control function	
	Active lane control function Active lane control function	
C1B95-00	LDW function LDP function	
	Blind spot intervention function	
	Infiniti InTuition function	
	Intelligent cruise control function	
	The following functions are suspended.	
C1B96-00	LDW function LDP function	
C1B96-00	Blind spot intervention function	
	Intelligent cruise control function	
C1B98-00	Normal control	
	The following functions are suspended.	
	Active trace control function	
	Active lane control function	
C1B99-00	LDW functionLDP function	ŀ
	Blind spot intervention function	
	Infiniti InTuition function	
C1BA0-00	The following functions are suspended.	
C1BA2-00	Active trace control function	
C1BA5-00	Normal control	
CTBA5-00		
C1BA6-00	The following functions are suspended. • Infiniti InTuition function	
		
C1BA7-00	The following functions are suspended. • Active lane control function	1
C1BA9-00	The following functions are suspended.	
3.2, 10 00	LDW function	
C1BAA-00	LDP function	D
	Blind spot intervention function	
C1BAB-00	The following functions are suspended.	
	Active trace control function	
C1BAC-00	The following functions are suspended.	
C1BAD-00	LDP function	
C1BAE-00	Blind spot intervention function	
	The following functions are suspended.	
0.45.45.55		
C1BAF-00	Blind spot intervention function	

DTC	Vehicle	econdition
C1BB2-00	The following functions are suspended.	
C1BB3-00	Active trace control function Active lane control function	
C1BB4-00	LDW function	
	LDP function Direct conditions from the conditions	
C1BB5-00	Blind spot intervention function Infiniti InTuition function	
C1BB6-00	Normal control	
C1BB7-00	The following functions are suspended.	
C1BB8-00	Active trace control function Active lane control function	
C1BB9-00	Active lane control function LDW function	
C1BBA-00	LDP function	
C1BBB-00	Blind spot intervention function Infiniti InTuition function	
C1BBC-00	Normal control	
C1BBD-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	
C1BC0-00	The following functions are suspended.	
C1BC1-00	Active trace control function Active lane control function	
C1BC2-00	The following functions are suspended.	
C1BC3-00	Active trace control function	
C1BC4-00	Normal control	
C1BC5-00	The fellowing for extense and add	
C1BC6-00	The following functions are suspended. • Active trace control function	
U1000-00		
U1010-49	The following functions are suspended.Active trace control functionActive lane control function	
U1A30-00	The following functions are suspended.	
U1A31-00	Active lane control function LDW function	
U1A32-00	LDP function Blind spot intervention function	
U1A34-00	The following functions are suspended.	
U1A35-00	Active trace control function Active lane control function LDW function LDP function Blind spot intervention function	
U1A36-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function	
U1A39-00	The following functions are suspended. LDW function LDP function Blind spot intervention function	

[CHASSIS CONTROL]

DTC	Vehicle condition	
U1A3B-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function	В
U1A3D-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function	С
U1A3E-00	Normal control	D
U1A3F-00	The following functions are suspended. • Infiniti InTuition function	
U1A42-00	The following functions are suspended.	Е
U1A43-00	Active trace control function	
U1A45-00	The following functions are suspended. • Active lane control function	F
U1A48-00	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function	G
U1A4A-00	The following functions are suspended. Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	H
U1A4B-00	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function	J
U1A4C-00	Normal control	K
U1A4E-00	The following functions are suspended. • Active trace control function	_

INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER): Chassis Control Display

INFOID:0000000011286262

DESIGN/PURPOSE

- The warning message is displayed on the vehicle information display when chassis control detected the system malfunction.
- When the aiming of lane camera unit is incomplete, a warning message is displayed.
- Each chassis control system information is displayed on the vehicle information display.

Warning Message

Design	Warning Message
_	Chassis Control System Error See Owner's Manual

System Information

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Revision: 2015 January **DAS-399** 2015 Q50

Active trace control	(comments of the comments)
Design	Description
Chassis Control JSOIA0806ZZ	Active trace control inactive
Chassis Control JSOIA1052ZZ	Active trace control is active. (Steering angle is less than the specified angle.)
Chassis Control JSOIA0807ZZ	Active trace control is active. (Steering angle is the specified angle or more in the leftward direction.)
Chassis Control (Chassis Chassis Control (Chassis Control (Chassis Chassis Control (Chassis Chassis Chassi	Active trace control is active. (Steering angle is the specified angle or more in the rightward direction.)

Active lane control		_
Design	Description	
Chassis Control JSOIA0809ZZ	Active Lane Control is turned ON.)
Chassis Control		
JSOIA0810ZZ	Active Lane Control is operational or is operating.	(
SYNCHRONIZATION WITH MASTER Applicable Refer to MWI-34, "WARNING LAMPS/IND	WARNING LAMP DICATOR LAMPS : Master Warning Lamp".	_
WARNING/INDICATOR OPERATING	CONDITION	
Warning When all of the following conditions are sa • Ignition switch is ON	atisfied	,
 Chassis system malfunction is detected. Lane camera system malfunction is detected. 		
	ACTIVE TRACE CONTROL FUNCTION: System Description". ACTIVE LANE CONTROL: System Description".	
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< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

APPLICATION ITEM

CONSULT can display each diagnostic item using the diagnostic test modes as follows.

Mode	Function description	
ECU identification	Parts number of chassis control module can be read.	
Self Diagnostic Results	Self-diagnostic results and freeze frame data can be read and erased quickly.*1	
DATA MONITOR	Input/Output data in chassis control module can be read.	
ACTIVE TEST	Send the drive signal from CONSULT to the actuator. The operation check can be performed.	
Work Support	Components can be quickly and accurately adjusted.	
Re/programming, Configuration	 Read and save the vehicle specification (TYPE ID). Write the vehicle specification (TYPE ID) when replacing chassis control module. 	

^{*}1: The following diagnosis information is erased by erasing.

• Freeze frame data (FFD)

ECU IDENTIFICATION

Chassis control module part number can be read.

SELF DIAGNOSTIC RESULT

Refer to DAS-423, "DTC Index".

When "CRNT" is displayed on self-diagnosis result

The system is presently malfunctioning.

When "PAST" is displayed on self-diagnosis result

System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)

When DTC is detected, a vehicle state shown below is recorded and displayed on CONSULT.

Item name	Indication/Unit	Display item
Odometer/Trip meter	km	Total mileage (Odometer value) of the moment a particular.
DTC LOCAL CODE	_	DTC code is displayed but not used.
CAN DIAG PERMIS CONDITION	Off / On	Displays CAN network diagnosis status.
BRAKE SWITCH 1	Off / On	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 2	Off / On	Displays brake switch operating status (Off: open / On: close).
ABS	NORMAL / ABNOR	Displays ABS function status.
TCS	NORMAL / ABNOR	Displays TCS function status.
VDC	NORMAL / ABNOR	Displays VDC function status.
VEHICLE SPEED	km	Displays the vehicle speed.
FR WHEEL SPEED	rpm	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	rpm	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	rpm	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	rpm	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	deg	Displays the steering angle from the steering angle sensor.
SIDE G SENSOR	G	Displays the side G.
DECEL G SENSOR	G	Displays the decel G.
YAW RATE SENSOR	deg/s	Displays the yaw rate.
THRTL OPENING	%	Displays the electric throttle position.

[•] DTC

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Item name	Indication/Unit	Display item
SHIFT POSITION	Off/P/R/N/D(A) /S/L/B/1-6/M 1-M8/A1-A6	Displays the shift position.
PRESS SENSOR	bar	Displays the brake fluid pressure.
DRIVE MODE SELECTOR	STD / SPORT / ECO / SNOW / PERSO	Displays the drive mode select switch selection status.
LANE MARKER (LH)*	NOT / DETECT	Displays the lane marker (LH) detection status.
LANE MARKER (RH)*	NOT / DETECT	Displays the lane marker (RH) detection status.
TURN SIGNAL (LH)*	Off / On	Displays the turn signal switch (LH) operating status.
TURN SIGNAL (RH)*	Off / On	Displays the turn signal switch (RH) operating status.
TURN SIGNAL SWITCH*	Off / LEFT / RIGHT / MALF	Displays the turn signal switch operating status.
DAST*	Off / On	Displays the operation request status to Direct Adaptive Steering.
ROAD DISTORTION*	1/m	Displays the road distortion rate radius.
ALC COMMAND ST ANG*	rad	Displays the steering command value to Direct Adaptive Steering.
ST WHL FORCE TORQUE*	Nm	Displays the estimated value for the steering wheel force torque.
ALC COMMAND ST WHL FORCE*	N	Displays the steering reaction force command value to Direct Adaptive Steering.
ADAS COND*	NORMAL / ABNOR	Displays ADAS control unit function status.
WIPER STATUS*	Off / LOW / HIGH / MALF	Displays wiper operating status.

^{*:} Models with Active Lane Control

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Item [Unit]		Description
IGN VOLT	[V]	Displays the ignition power supply voltage.
CONTROL MODULE MALF	[Off / On]	Displays chassis control module malfunction.
CAN DIAG STATUS	[Off / On]	Displays CAN network diagnosis status.
STP LAMP OFF RELAY 1	[Off / On]	Displayed but not used.
STP LAMP OFF RELAY 2	[Off / On]	Displayed but not used.
ESS RELAY	[Off / On]	Displayed but not used.
VEHICLE SPEED	[km/m]	Displays the vehicle speed.
FR WHEEL SPEED	[rpm]	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	[rpm]	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	[rpm]	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	[rpm]	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	[deg]	Displays the steering angle from the steering angle sensor.
DECEL G SENSOR	[G]	Displays the decel G.
SIDE G SENSOR	[G]	Displays the side G.
YAW RATE SENSOR	[deg/s]	Displays the yaw rate.
ACCELE PEDAL POSITION	[%]	Displays the accelerator pedal position.

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	tem Jnit]	Description
THROTTLE CONTROL	[NORMAL/INCORR/PREV/INPOSSI]	Displays the electric throttle status.
SHIFT POSITION	[Off/P/R/N/D(A)/S/L/B /1-6/M1-M8/A1-A6]	Displays the shift position.
BRAKE SWITCH 2	[Off / On]	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 1	[Off / On]	Displays brake switch operating status (Off: open / On: close).
PRESS SENSOR	[bar]	Displays the brake fluid pressure.
ABS	[NORMAL / ABNOR]	Displays ABS function status.
ABS MALF	[NORMAL / ABNOR]	Displays ABS function status.
EBD	[NORMAL / ABNOR]	Displays EBD function status.
ACCELE PEDAL MALF	[NORMAL / ABNOR]	Displays the accelerator pedal status.
TCS	[NORMAL / ABNOR]	Displays TCS function status.
TCS MALF	[NORMAL / ABNOR]	Displays TCS function status.
VDC	[NORMAL / ABNOR]	Displays VDC function status.
VDC MALF	[NORMAL / ABNOR]	Displays VDC function status.
VDC OFF SWITCH	[Off / On]	Displays VDC OFF switch status.
PARKING BRAKE	[Off / On]	Displays the parking brake operating status.
DRV TRQ CTRL MODE	[INITIAL/NORMAL/STOP 1/ STOP 2 / LIMIT 1 / PROHIBI]	Displays the status of correction to slightly increase/decrease the drive torque.
DRV TRQ CTRL PERMIS 1	[NO PER / PERMIS]	Displays the permission status (basic requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PERMIS 2	[NO PER / PERMIS]	Displays the permission status (system requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL STOP	[REQ / NO REQ]	Displays the stop request status of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PROHIBIT	[REQ / NO REQ]	Displays the prohibition request status of correction to slightly increase/decrease drive torque.
DRIVE MODE SELECTOR	[STD / SPORT / SNOW / ECO / PERSO / NOT SET]	Displays the drive mode select switch selection status.
LOG-IN PERMIS	[NO PER / PERMIS]	Displays the login authority status of Infiniti InTuition function.
I-KEY LINK	[Off / On]	Displays the Intelligent Key linking status of Infiniti InTuition function
USER	[USER A / USER B / USER C / GUEST]	Displays the current user status of Infiniti InTuition function.
ENGINE/TM SETTING	[SPORT/STD/ECO/SNOW]	Displays the engine/transmission setting status with Infiniti drive mode selector function.
STRG SETTING	[STD / SPT / TOUR / SPT-L]	Displays steering characteristic.
ALC SETTING	[Off / LOW / HIGH]	Displays Active Lane Control setting status with Infiniti drive mode selector function.
ATC SETTING	[Off / On]	Displays active trace control function setting status with Infiniti drive mode selector function.
COMBI METER	[STD/SPORT/SNOW/ECO/PERSO]	Displays the combination meter function setting status with Infiniti drive mode selector function.
ATC 1	[Off / On]	Displays active trace control function operating status.
ATC 2	[Off / On]	Displays active trace control function operating status.
ATC 4	[Off / On]	Displays active trace control function operating status.
FL TIRE DISP	[DEF / 1]	Displays the status of front LH tire displayed on the information display in the combination meter.

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	em Init]	Description
FR TIRE DISP	[DEF / 1]	Displays the status of front RH tire displayed on the information dis play in the combination meter.
RL TIRE DISP	[DEF / 1]	Displays the status of rear LH tire displayed on the information display in the combination meter.
RR TIRE DISP	[DEF / 1]	Displays the status of rear RH tire displayed on the information display in the combination meter.
TURN DISP	[N STEER / LEFT / RIGHT]	Displays the turning direction of active trace control function on the information display in the combination meter.
ALC LEVEL	[0 – 4]	Displays active/inactive status of Active Lane Control.
ALC STATUS	[INACT / ACT]	Display Active Lane Control operating status.
ATC DISP	[Off / On]	Displays the operating status of active trace control function on the information display in the combination meter.
ALC DISP	[Off / On]	Displays the operating status of Active Lane Control on the information display in the combination meter.
ALC SYSTEM	[Off / On]	Display Active Lane Control activation status.
LANE MARKER (LH)	[NOT / DETECT]	Displays the lane marker (LH) detection status.
LANE MARKER (RH)	[NOT / DETECT]	Displays the lane marker (RH) detection status.
TURN SIGNAL (LH)	[Off / On]	Displays the turn signal switch (LH) operating status.
TURN SIGNAL (RH)	[Off / On]	Displays the turn signal switch (RH) operating status.
TURN SIGNAL SWITCH	[Off / LEFT / RIGHT / MALF]	Displays the turn signal switch operating status.
DAST	[Off / On]	Displays Direct Adaptive Steering operating status.
ROAD DISTORTION	[1/m]	Displays the road curvature.
COMMAND ST ANG	[rad]	Displays the steering command value to Direct Adaptive Steering.
ST PINION ANG	[rad]	Displays the steering pinion angle.
ST WHL FORCE TORQUE	[Nm]	Displays the steering wheel force torque.
COMMAND ST WHL FORCE	[N]	Displays the reaction force command value to Direct Adaptive Stee ing.
LDW DISP	[On / MALF]	Displays LDW status received from ADAS control unit.
LDP DISP	[On / MALF]	Displays LDP status received from ADAS control unit.
BSI DISP	[On / MALF]	Displays Blind spot intervention function status received from ADAS control unit.
ST SWITCH COND	[OK / NG 1 / NG 2]	Displays the steering switch status received from ADAS control uni
BSW COND	[NORMAL / ABNOR]	Displays BSW status received from ADAS control unit.
ADAS COND	[NORMAL / ABNOR]	Displays ADAS status received from ADAS control unit.
COLLISION WARN	[Off / On]	Displays collision warning status received from ADAS control unit.
ICC ACTIVE	[Off / On]	Displays ICC operating status received from ADAS control unit.
IBA ACTIVE	[Off / On]	Displays intelligent brake assist operating status received from ADAS control unit.
DR BUZZER STATUS	[NO/1/2/3/1,2/2,3/1,3/4]	Displayed but not used.
LDW COND	[On / MALF]	Displays LDW status transmitted to ADAS control unit.
LDP COND	[On / MALF]	Displays LDP status transmitted to ADAS control unit.
BSI COND	[On / MALF]	Displays blind spot intervention function status transmitted to ADAS control unit.
LDP BRAKE CANCEL	[NONE / SLIP / SNOW / VDC OF]	Displays LDP cancel cause transmitted to ADAS control unit.
BSI BRAKE CANCEL	[NONE / SLIP / SNOW / VDC OF]	Displays blind spot intervention function cancel cause transmitted to ADAS control unit.

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[CHASSIS CONTROL]

Item [Unit]		Description	
CAMERA COND	[NORMAL / ABNOR]	Displays the lane camera unit status.	
CAMERA TEMP COND	[NORMAL / ABNOR]	Displays the lane camera unit status by temperature.	
CAMERA COMM COND	[NORMAL / ABNOR]	Displays the communication status with the lane camera unit status.	
CAMERA AIMING	[INCOMP / COMP]	Displays the lane camera unit aiming status.	
CAMERA HIGH TEMP (LDW)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (LDW).	
CAMERA HIGH TEMP (LDP)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (LDP)	
CAMERA HIGH TEMP (BSI)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (Blind spot intervention)	
SIDE RADAR BLOCK CAN- CEL	[NORMAL / BLOCK]	Displays the side radar status.	
BSI LAMP REQ (LH)	[Off / On]	Displays blind spot intervention indicator blink request at blind spot intervention operation (LH).	
BSI LAMP REQ (RH)	[Off / On]	Displays blind spot intervention indicator blink request at blind spot intervention operation (RH).	
LANE DEPARTURE DISP (LH)	[NO DISP / DEVIAT]	Displays the deviating status on the LH side lane.	
LANE DEPARTURE DISP (RH)	[NO DISP / DEVIAT]	Displays the deviating status on the RH side lane.	
LDP/BSI ACTIVE	[Off / On]	Displays LDP/blind spot intervention function operation status.	
ADAS COND	[NORMAL / ABNOR]	Displayed, but not used	
DR BUZZER COND	[NORMAL / ABNOR]	Displayed, but not used	
OUTSIDE TEMP	[°C]	Displays the ambient temperature.	
WIPER STATUS	[Off / LOW / HIGH / MALF]	Displays the front wiper operating status.	

ACTIVE TEST

The active test is used to determine and identify details of a malfunction, based on self-diagnosis test results and data obtained in the DATA MONITOR. In response to instructions from CONSULT, instead of those from chassis control module on the vehicle, a drive signal is sent to the actuator to check its operation.

CAUTION:

- Never perform ACTIVE TEST while driving the vehicle.
- Always bleed air from brake system before active test.
- Never perform active test when system is malfunctioning.

• When active test is performed while depressing the brake pedal, the brake pedal depressing stroke may change. This is not a malfunction.

During an active test, sometimes a chassis control warning is displayed and the master warning lamp illuminates on the information display in the combination meter; however, this is not a malfunction.

Test item	Operation	Description
BRAKE ACTUATOR 1 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 3	Start	Controls brake fluid pressure.

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Test item	Operation	Description
COMMAND STEERING ANGLE	Start	Transmits the steering command value 0 deg \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0 deg to the steering force control module.
COMMAND ST WHL FORCE	Start	Transmits the steering reaction force command value 0 N \rightarrow 0.6 N (hold it for approximately 2 seconds) \rightarrow 0 N (hold it for approximately 2 seconds) \rightarrow 0 N to the steering force control module.
MASTER WARNING ACTIVE	On	If touching "On" with the master warning lamp not illuminated, the master warning lamp illuminates. Stops in approximately 1 minute.
	Off	The master warning lamp turns OFF. (vehicle in normal state)
ALC DISP	On	Displays Active Lane Control active status on the information display in the combination meter.
ALC DISP	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
EL TIDE DICD	On	Displays the front LH tire on the information display in the combination meter.
FL TIRE DISP	Off	Does not display the front LH tire on the information display in the combination meter.
ED TIDE DIOD	On	Displays the front RH tire on the information display in the combination meter.
FR TIRE DISP	Off	Does not display the front RH tire on the information display in the combination meter.
RL TIRE DISP	On	Displays the rear LH tire on the information display in the combination meter.
	Off	Does not display the rear LH tire on the information display in the combination meter.
DD TIDE DIOD	On	Displays the rear RH tire on the information display in the combination meter.
RR TIRE DISP	Off	Does not display the rear RH tire on the information display in the combination meter.
	NO DISP	Does not display the turning status on the information display in the combination meter.
TURN DISP	LH	Displays the LH turning status on the information display in the combination meter.
	RH	Displays the RH turning status on the information display in the combination meter.
	LEVEL 1	
ALC LEVEL	LEVEL 2	Displays Active Lane Control corresponding to the selected level on the in-
ALC LEVEL	LEVEL 3	formation display in the combination meter.
	LEVEL 4	
ALC OFTTING	On	Displays Active Lane Control active status on the information display in the combination meter.
ALC SETTING	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
ATO A DIOD	On	Displays active trace control function active status on the information display in the combination meter.
ATC 1 DISP	Off	Displays active trace control function inactive status on the information display in the combination meter.
470 0 0 0 0	On	Displays active trace control function active status on the information display in the combination meter.
ATC 2 DISP	Off	Displays active trace control function inactive status on the information display in the combination meter.

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Test item Operation		Description	
ATC 4 DISP	On	Displays active trace control function active status on the information display in the combination meter.	
ATC 4 DISP	Off	Displays active trace control function inactive status on the information display in the combination meter.	

WORK SUPPORT

Work support items	Description	
ERASE LAST DRIVER INFORMATION	Erases the information for the previous driver.	
ERASE KEY ALLOTEMENT USER	Erases all user information.	
ERASE PERSONAL SETTINGS	Erases all user information (personal settings only).	
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Lane Departure Prevention (LDP) • Blind Spot Intervention	

NOTE:

- Causes of the maximum five cancellations (system cancel) are displayed.
- The displayed cancellation causes display the number of the ignition switch ON/OFF up to 254. It is fixed to 254 if it is over 254. It returns to 0 when the same cancellation cause is detected again.

Display Items for The Cause of Automatic Cancellation 1

Cause of cancellation	Lane departure prevention	Blind spot intervention	Description
OPE VDC/TCS/ABS 1	×		The activation of VDC, TCS, or ABS during LDP system control
Vehicle dynamics	×		Vehicle behavior exceeds specified value
Steering speed	×		Steering speed was more than the specified value in evasive direction
End by yaw angle	×		Yaw angle was the end of LDP control
Departure yaw large	×		Detected more than the specified value of yaw angle in departure direction
ICC WARNING	×		Target approach warning of ICC system, IBA system, or FCW system was activated
CURVATURE	×		Road curve was more than the specified value
Steering angle large	×		Steering angle was more than the specified value
Brake is operated	×		Brake pedal was operated
IGN LOW VOLT	×		Decrease in ADAS control unit IGN voltage
Lateral offset	×		Distance of vehicle and lane was detached in lateral direction more than the specified value
Lane marker lost	×		Lane camera unit lost the trace of lane marker
Lane marker unclear	×		Detected lane marker was unclear
Yaw acceleration	×		Detected yawing speed was more than the specified value
Deceleration large	×		Deceleration in a longitudinal direction was more than the specified value
Accel is operated	×		Accelerator pedal was depressed
Departure steering	×		Steering wheel was steered more than the specified value in departure direction
Evasive steering	×		Steering wheel was steered more than the specified value in the evasive direction
R range	×		Selector lever was operated to R range

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Cause of cancellation	Lane departure prevention	Blind spot intervention	Description
Parking brake drift	×		Rear wheels lock was detected
Not operating condition	×		Did not meet the operating condition (vehicle speed, turn signal operation, etc.)
SNOW MODE SW	×		Shifting of the drive mode selector to SNOW position
VDC OFF SW	×		VDC OFF switch was pressed
OPE VDC/ABS 2	×		The activation of VDC or ABS during a standby time of LDP or blind spot intervention system control
BSI) OPE VDC/TCS/ ABS 1		×	The activation of VDC, TCS, or ABS during blind spot intervention system control
BSI) Vehicle dynamics		×	Vehicle behavior exceeds specified value
BSI) Steering speed		×	Steering speed was more than the specified value in evasive direction
BSI) End by yaw angle		×	Yaw angle was the end of blind spot intervention control
BSI) Departure yaw large		×	Detected more than the specified value of yaw angle in departure direction
BSI) ICC WARNING		×	Target approach warning of ICC system, IBA system or FCW system was activated
BSI) CURVATURE		×	Road curve was more than the specified value
BSI) Steering angle large		×	Steering angle was more than the specified value
BSI) Brake is operated		×	Brake pedal was operated
BSI) IGN LOW VOLT		×	Decrease in chassis control module IGN voltage
BSI) Lateral offset		×	Distance of vehicle and lane was detached in lateral direction more than the specified
BSI) Lane marker lost		×	Lane camera unit lost the trace of lane marker
BSI) Lane marker un- clear		×	Detected lane marker was unclear
BSI) Yaw acceleration		×	Detected yawing speed was more than the specified value
BSI) Deceleration large		×	Deceleration in a longitudinal direction was more than the specified value
BSI) Accel is operated		×	Accelerator pedal was depressed
BSI) Departure steering		×	Steering wheel was steered more than the specified value in departure direction
BSI) Evasive steering		×	Steering wheel was steered more than the specified value in the evasive direction
BSI) R range		×	Selector lever was operated to R range
BSI) Parking brake drift		×	Rear wheels lock was detected
BSI) SNOW MODE SW		×	Shifting of the drive mode selector to SNOW position
BSI) VDC OFF SW		×	VDC OFF switch was pressed
BSI) OPE VDC/ABS 2		×	The activation of VDC or ABS during a standby time of blind spot intervention system control
BSI) Not operating condition		×	Did not meet the operating condition (vehicle speed, turn signal operation, etc.)
Side Radar Lost		×	Unrecognized side radar LH or RH by the ADAS control unit
NO RECORD	×	×	_

RE/PROGRAMMING, CONFIGURATION

Configuration includes the following functions.

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[CHASSIS CONTROL]

Function		Description
Read/Write Configuration	Before replacing ECU	Allows the reading of vehicle specification (Type ID) written in chassis control module to store the specification in CONSULT.
Read/Write Corniguration	After replacing ECU	Allows the writing of vehicle information (Type ID) stored in CONSULT into the chassis control module.
Manual Configuration		Allows the writing of vehicle specification (Type ID) into the chassis control module by hand.

CAUTION:

Use "Manual Configuration" only when "TYPE ID" of chassis control module cannot be read.

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ECU DIAGNOSIS INFORMATION

CHASSIS CONTROL MODULE

Reference Value

CONSULT DATA MONITOR STANDARD VALUE

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Reference values in normal operation
IGN VOLT	Ignition switch ON	10 – 16 V
	When chassis control module is normal	Off
CONTROL MODULE MALF	When chassis control module malfunction is detected	On
CAN DIAG STATUS	When diagnosis of CAN communication mal- function is detected	Off
CAN DIAG STATUS	When diagnosis of CAN communication is normal	On
STP LAMP OFF RELAY 1	Displayed but not used.	_
STP LAMP OFF RELAY 2	Displayed but not used.	_
ESS RELAY	Displayed but not used.	_
	Vehicle Stopped	0 km/h (0 MPH)
VEHICLE SPEED	Driving*	Almost same reading as speedometer (within ±10%)
ED WHEEL ODEED	Vehicle stopped	0 rpm
FR WHEEL SPEED	Driving*	Increases according to vehicle speed
	Vehicle stopped	0 rpm
FL WHEEL SPEED	Driving*	Increases according to vehicle speed
DD WILES OPEN	Vehicle stopped	0 rpm
RR WHEEL SPEED	Driving [*]	Increases according to vehicle speed
	Vehicle stopped	0 rpm
RL WHEEL SPEED	Driving [*]	Increases according to vehicle speed
	When driving straight	0±3.5 deg
STEERING ANG SENSOR	When steering wheel is steered to RH by 90°	Approx. +90 deg
	When steering wheel is steered to LH by 90°	Approx. –90 deg
	Vehicle stopped	Approx. 0 G
DECEL G SENSOR	When during acceleration	Positive value
	When during deceleration	Negative value
	Vehicle stopped	Approx. 0 G
SIDE G SENSOR	When right turn	Negative value
	When left turn	Positive value
	Vehicle stopped	Approx. 0 deg/s
YAW RATE SENSOR	When right turn	Negative value
	When left turn	Positive value
ACCELE PEDAL POSITION	When accelerator pedal is released	0%

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Monitor item	Condition	Reference values in normal operation
THROTTLE CONTROL	When electric throttle control actuator is normal	NORMAL
	When the electric throttle control actuator does not achieve the requirement (measured value is inaccurate)	INCORR
	When the electric throttle control actuator does not achieve the requirement (temporary prevention)	PREV
	When the electric throttle control actuator does not achieve the requirement (impossible)	INPOSSI
SHIFT POSITION	Selector lever in any position	Indicates selected selector lever position
DDAKE CWITCH O	When brake pedal is not depressed	Off
BRAKE SWITCH 2	When brake pedal is depressed	On
DDALKE OMUTOLLA	When brake pedal is depressed	Off
BRAKE SWITCH 1	When brake pedal is not depressed	On
DDEGG GENGGE	When brake pedal is not depressed	Approx. 0 bar
PRESS SENSOR	when brake pedal is depressed	0 – 255 bar
	When ABS function is normal	NORMAL
ABS	When ABS function malfunction is detected	ABNOR
	When ABS function is normal	NORMAL
ABS MALF	When ABS function malfunction is detected	ABNOR
	When EBD function is normal	NORMAL
EBD	When EBD function malfunction is detected	ABNOR
	When accelerator pedal is normal	NORMAL
ACCELE PEDAL MALF	When accelerator pedal malfunction is detected	ABNOR
TOO	When TCS function is normal	NORMAL
TCS	When TCS function malfunction is detected	ABNOR
TOOMALE	When TCS function is normal	NORMAL
TCS MALF	When TCS function malfunction is detected	ABNOR
(DO	When VDC function is normal	NORMAL
VDC	When VDC function malfunction is detected	ABNOR
	When VDC function is normal	NORMAL
VDC MALF	When VDC function malfunction is detected	ABNOR
(DO OFF 0) ((TO))	When VDC OFF switch is OFF	Off
VDC OFF SWITCH	When VDC OFF switch is ON	On
	When parking brake is inactive	Off
PARKING BRAKE	When parking brake is active	On
DRV TRQ CTRL MODE	When correction coefficients are initialized	INITIAL
	When correction is executed	NORMAL
	When correction is stopped (computing is impossible)	STOP 1
	When correction is stopped (computing is possible)	STOP 2
	When correction is limited	LIMIT 1
	When correction is prohibited	PROHIBI

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Monitor item	Condition	Reference values in normal operation
DRV TRQ CTRL PERMIS 1	When correction is permitted (basic requirement)	PERMIS
	When correction is not permitted (basic requirement)	NO PER
DRV TRQ CTRL PERMIS 2	When correction is permitted (system requirement)	PERMIS
DITY THE OTHER ENVIOLE	When correction is not permitted (system requirement)	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop	REQ
DIV INQUINE OTO	When correction is not requested to stop	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ
DIV TIQ CTILL HOHIDH	When prohibition of correction is not requested	NO REQ
	When drive mode select switch is "STAN-DARD" mode	STD
	When drive mode select switch is "SPORT" mode	SPORT
DRIVE MODE SELECTOR	When drive mode select switch is "SNOW" mode	SNOW
	When drive mode select switch is "ECO" mode	ECO
	When drive mode select switch is "PERSON-AL" mode	PERSO
	When drive mode select switch is not select	NOT SET
LOG-IN PERMIS	When log-in is possible	NO PER
LOG-IN F LIXIMIS	When log-in is not possible	PERMIS
I-KEY LINK	When Intelligent Key is not linked	Off
I-IXL I LINK	When Intelligent Key is linked	On
	When logged in with "USER A" Intelligent Key	USER A
	When logged in with "USER B" Intelligent Key	USER B
USER	When logged in with "USER C" Intelligent Key	USER C
	When logged in with an Intelligent Key without user registration	GUEST
ENGINE/TM SETTING	When the engine/transmission setting with drive mode select switch is in "SPORT" mode	SPORT
	When the engine/transmission setting with drive mode select switch is in "STANDARD" mode	STD
	When the engine/transmission setting with drive mode select switch is in "ECO" mode	ECO
	When the engine/transmission setting with drive mode select switch is in "SNOW" mode	SNOW

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Monitor item	Condition	Reference values in normal operation
STRG SETTING	When the steering system setting with drive mode select switch is in "STANDARD" mode (Effort: Middle /Response: Middle)	STD
	When the steering system setting with drive mode select switch is in "SPORT" mode (Effort: Heavy / Response: Quick)	SPT
STRG SETTING	When the steering system setting with drive mode select switch is in "TOURING" mode (Effort: Light / Response: Casual)	TOUR
	When the steering system setting with drive mode select switch is in "SPORT-L" mode (Effort: Middle / Response: Quick)	SPT-L
	When Active Lane Control setting with drive mode select switch is "OFF"	Off
ALC SETTING	When Active Lane Control setting with drive mode select switch is "LOW"	LOW
	When Active Lane Control setting with drive mode select switch is "HIGH"	HIGH
ATC SETTING	When active trace control function setting with drive mode select switch is "OFF"	Off
ATC SETTING	When active trace control function setting with drive mode select switch is "ON"	On
	When drive mode select switch is "STAN-DARD" mode	STD
	When drive mode select switch is "SNOW" mode	SNOW
COMBI METER	When drive mode select switch is "PERSON-AL" mode	PERSO
	When drive mode select switch is "SPORT" mode	SPORT
	When drive mode select switch is "ECO" mode	ECO
ATC 4	When active trace control function is inactive	Off
ATC 1	When active trace control function is active	On
ATC 2	When active trace control function is inactive	Off
ATC 2	When active trace control function is active	On
ATC 4	When active trace control function is inactive	Off
ATC 4	When active trace control function is active	On
FL TIRE DISP	When the front LH tire is not displayed on the information display in the combination meter	DEF
I L TINE DISF	When the front LH tire is displayed on the information display in the combination meter	1
	When the front RH tire is not displayed on the information display in the combination meter	DEF
FR TIRE DISP	When the front RH tire is displayed on the information display in the combination meter	1
DI TIDE DICO	When the rear LH tire is not displayed on the information display in the combination meter	DEF
RL TIRE DISP	When the rear LH tire is displayed on the information display in the combination meter	1

< ECU DIAGNOSIS INFORMATION >

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Monitor item	Condition	Reference values in normal operation
RR TIRE DISP	When the rear RH tire is not displayed on the information display in the combination meter	DEF
KK TIKE DISP	When the rear RH tire is displayed on the information display in the combination meter	1
	When the straight-ahead status is displayed on the information display in the combination meter	N STEER
TURN DISP	When the left turning status is displayed on the information display in the combination meter	LEFT
	When the right turning status is displayed on the information display in the combination meter	RIGHT
	When Active Lane Control is turned ON.	0
ALC LEVEL	When Active Lane Control is operational or is operating.	1 – 4
ALC STATUS	When Active Lane Control is OFF	INACT
ALO STATOS	When Active Lane Control is ON	ACT
ATC DISP	When the activation of active trace control function is not displayed on the information display in the combination meter	Off
ATC DISP	When the activation of active trace control function is displayed on the information display in the combination meter	On
ALO DIOD	When the activation of Active Lane Control is not displayed on the information display in the combination meter	Off
ALC DISP	When the activation of Active Lane Control is displayed on the information display in the combination meter	On
ALC OVOTEM	When Active Lane Control is OFF	Off
ALC SYSTEM	When Active Lane Control is ON	On
ANE MARKER (LLI)	When left side lane marker is not detected.	NOT
_ANE MARKER (LH)	when left side lane marker is detected.	DETECT
ANE MADIZED (DLI)	When right side lane marker is not detected.	NOT
LANE MARKER (RH)	When right side lane marker is detected.	DETECT
TUDNI CICNIAL /LLIV	When turn signal lamps is OFF	Off
TURN SIGNAL (LH)	When turn signal lamp LH is blinking	On
TURN CIONAL (RUI)	When turn signal lamps is OFF	Off
TURN SIGNAL (RH)	When turn signal lamp RH is blinking	On
	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	LEFT
TURN SIGNAL SWITCH	When turn signal lamp RH is blinking	RIGHT
	When turn signal lamp system malfunction is detected.	MALF
DAST	When the Active Lane Control request to transmit to the steering force control module is OFF	Off
טאט ו	When the Active Lane Control request to transmit to the steering force control module is ON	On
ROAD DISTORTION	Driving	Depends on the radius of curve

Monitor item	Condition	Reference values in normal operation
COMMAND ST AND	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	Approx. 0 rad
COMMAND ST ANG	Active Lane Control is active with yaw angle formed on the left of the lane.	Max 0.05 rad
	Active Lane Control is active with yaw angle formed on the right of the lane.	Max -0.05 rad
	When driving straight	Approx. 0 rad
ST PINION ANG	when steering wheel is steered to LH by 90°	Approx. –1.6 rad
	when steering wheel is steered to RH by 90°	Approx. 1.6 rad
OT WILL FORCE TOROUT	When driving straight	0 N⋅m
ST WHL FORCE TORQUE	When steering wheel is steered	MAX ± 32 N·m
	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	0 N·m
COMMAND ST WHL FORCE	When the Active Lane Control is active and the vehicle is drifting to the left end of the lane	Approx. –6 N
	When the Active Lane Control is active and the vehicle is drifting to the right end of the lane	Approx. 6 N
LDW DISP	When LDW function is ON	On
LDW DISP	When LDW function malfunction is detected	MALF
LDP DISP	When LDP function is ON	On
LDP DISP	When LDP function malfunction is detected	MALF
	When blind spot intervention function is ON	On
BSI DISP	When blind spot intervention function malfunction is detected	MALF
	When steering switch is normal	ОК
ST SWITCH COND	ADAS control unit sends malfunction information of the steering switch to the chassis control module. (During the judgment of malfunction.)	NG 1
	ADAS control unit sends malfunction information of the steering switch to the chassis control module. (Malfunction confirmed)	NG 2
BSW COND	When BSW function is normal	NORMAL
BOW COND	When BSW function malfunction is detected	ABNOR
ADAS COND	When ADAS control unit is normal	NORMAL
ADAG COND	When ADAS control malfunction is detected	ABNOR
COLLISION WARN	When the collision warning is OFF	Off
COLLISION WARN	When the collision warning is ON	On
ICC ACTTIVE	When ICC function is inactive	Off
ICC ACTIVE	When ICC function is active	On
IBA ACTIVE	When forward emergency brake function is inactive	Off
IDA ACTIVE	When forward emergency brake function is active	On
DR BUZZER STATUS	Displayed but not used	_
I DW COND	When LDW function is ON	On
LDW COND	When LDW function malfunction is detected	MALF

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Monitor item	Condition	Reference values in normal operation	
LDP COND	When LDP function is ON	On	
LDF COND	When LDP function malfunction is detected	MALF	
	When blind spot intervention function is ON	On	
BSI COND	When blind spot intervention function malfunction is detected	MALF	
	When not cancel	NONE	
	When slippery road	SLIP	
LDP BRAKE CANCEL	When drive mode select switch is "SNOW" mode	SNOW	
	When VDC OFF switch is OFF	VDC OF	
	When not cancel	NONE	
	When slippery road	SLIP	
BSI BRAKE CANCEL	When drive mode select switch is "SNOW" mode	SNOW	
	When VDC OFF switch is OFF	VDC OF	
	When Lane camera unit is normal	NORMAL	
CAMERA COND	When Lane camera unit malfunction is detected.	ABNOR	
CAMEDA TEMP COND	When the temperature around lane camera unit is normal	NORMAL	
CAMERA TEMP COND	When the temperature around the lane camera unit is high	ABNOR	
	When communication between chassis control module and lane camera unit is normal	NORMAL	
CAMERA COMM COND	When communication between chassis control module and lane camera unit malfunction is detected	ABNOR	
CAMERA AIMING	When lane camera aiming is completed	COMP	
CAMERA AIMING	When lane camera aiming is not completed	INCOMP	
CAMEDA LIICH TEMP // DW/	When the temperature around lane camera unit is normal. (LDW ON)	NORMAL	
CAMERA HIGH TEMP (LDW)	When the temperature around the lane camera unit is high. (LDW ON)	ABNOR	
CAMERA HIGH TEMP (LDP)	When the temperature around lane camera unit is normal. (LDP ON)	NORMAL	
CAMERATION TEMP (EDF)	When the temperature around the lane camera unit is high. (LDP ON)	ABNOR	
CAMERA HIGH TEMP (BSI)	When the temperature around lane camera unit is normal. (Blind spot intervention ON)	NORMAL	
OAMERATHOLITEME (DOI)	When the temperature around the lane camera unit is high. (Blind spot intervention ON)	ABNOR	
	When the side radar is normal	NORMAL	
SIDE RADAR BLOCK CANCEL	Side radar is blocked and temporarily deactivated.	BLOCK	
DOLLAMD DEO (LL)	When blind spot intervention function (LH) is inactive	Off	
BSI LAMP REQ (LH)	When blind spot intervention function (LH) is active	On	

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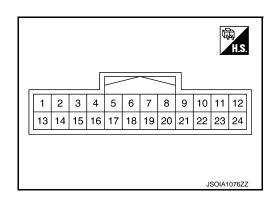
< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Monitor item	Condition	Reference values in normal operation	
BSI LAMP REQ (RH)	When blind spot intervention function (RH) is inactive	Off	
BOI LAIMIF NEW (NIT)	When blind spot intervention function (RH) is active	On	
LANE DEPARTURE DISP (LH)	When not deviating the LH side lane	NO DISP	
LANE DEPARTORE DISF (EII)	When deviating the LH side lane	DEVIAT	
LANE DEPARTURE DISP (RH)	When not deviating the RH side lane	NO DISP	
LANE DEFACTORE DISF (KH)	When deviating the RH side lane	DEVIAT	
LDP/BSI ACTIVE	When LDP function and blind spot intervention function are inactive	Off	
LDF/B3I ACTIVE	When LDP function or blind spot intervention function are active	On	
	When diagnosis of ADAS control unit is normal	NORMAL	
ADAS COND	When diagnosis of ADAS control unit malfunction is detected	ABNOR	
	When driver assistance buzzer is normal	NORMAL	
DR BUZZER COND	when driver assistance buzzer malfunction is detected	ABNOR	
OUTSIDE TEMP	Ignition switch ON	(-40°C) - (+72°C)	
	When front wiper is inactive	Off	
WIPER STATUS	When front wiper is active (low and intermittent)	LOW	
	When front wiper is active (high)	HIGH	
	When front wiper malfunction is detected	MALF	

^{*:} Check tire pressure under normal conditions.

TERMINAL LAYOUT



PHYSICAL VALUES

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

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	nal No. e color)	Description		Condition		Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
3 (P)		CAN-L	_	_	_	_	
4 (L)		CAN-H	_	_	_	_	
5				Ignition	Up switch is not pressed	6.4 – 16 V	
(V)		DRIVE MODE SELECT SWITCH (UP)	Input	switch ON	Up switch is pressed	0 V	
6	DRIVE MODE SELECT SWITCH (DOWN) Input switch	DRIVE MODE SELECT SWITCH (DOWN)	Down switch is not pressed	6.4 – 16 V			
(G)				ON	Down switch is pressed	0 V	
7 (W)	Ground	CHASSIS COMM-L	_	_	_	_	
8 (W)		CHASSIS COMM-L	_	_	_	_	
10 (G)		IGN	Input	Ignition switch ON 6.4 – 16		6.4 – 16 V	
11 (L)		CHASSIS COMM-H	_	_	_	_	
12 (B)		GROUND	_	Ignition switch ON	_	0 V	
19 (L)		CHASSIS COMM-H	_	_	_	_	

Fail-Safe (Chassis Control Module)

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

DTC	Vehicle condition
C1B90-00	The following functions are suspended. • Active lane control function
C1B91-00	LDW functionLDP functionBlind spot intervention function
C1B92-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-00	The following functions are suspended.
C1B94-00	 Active trace control function LDW function LDP function Blind spot intervention function
C1B95-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function Intelligent cruise control function

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DTC	Vehicle con	ndition
C1B96-00	The following functions are suspended. LDW function LDP function Blind spot intervention function Intelligent cruise control function	
C1B98-00	Normal control	
C1B99-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	
C1BA0-00	The following functions are suspended.	
C1BA2-00	Active trace control function	
C1BA5-00	Normal control	
C1BA6-00	The following functions are suspended. Infiniti InTuition function	
C1BA7-00	The following functions are suspended. • Active lane control function	
C1BA9-00	The following functions are suspended.	
C1BAA-00	LDW function LDP function Blind spot intervention function	
C1BAB-00	The following functions are suspended. • Active trace control function	
C1BAC-00	The following functions are suspended.	
C1BAD-00	LDP function	
C1BAE-00	Blind spot intervention function	
C1BAF-00	The following functions are suspended. • Blind spot intervention function	
C1BB0-06	Normal control	
C1BB2-00	The following functions are suspended.	
C1BB3-00	Active trace control function Active lane control function	
C1BB4-00	LDW function LDP function	
C1BB5-00	Blind spot intervention function Infiniti InTuition function	
C1BB6-00	Normal control	
C1BB7-00	The following functions are suspended.	
C1BB8-00	Active trace control function Active lane control function	
C1BB9-00	LDW function	
C1BBA-00	LDP function Blind spot intervention function	
C1BBB-00	Infiniti InTuition function	
C1BBC-00	Normal control	
C1BBD-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	

< ECU DIAGNOSIS INFORMATION >

DTC	Vehicle condition
C1BC0-00	The following functions are suspended.
C1BC1-00	 Active trace control function Active lane control function
C1BC2-00	The following functions are suspended.
C1BC3-00	Active trace control function
C1BC4-00	Normal control
C1BC5-00	
C1BC6-00	The following functions are suspended. • Active trace control function
U1000-00	
U1010-49	The following functions are suspended.Active trace control functionActive lane control function
U1A30-00	The following functions are suspended.
U1A31-00	Active lane control function LDW function
U1A32-00	LDP function Blind spot intervention function
U1A34-00	The following functions are suspended.
U1A35-00	 Active trace control function Active lane control function LDW function LDP function Blind spot intervention function
U1A36-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-00	The following functions are suspended. LDW function LDP function Blind spot intervention function
U1A3B-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function
U1A3D-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-00	Normal control
U1A3F-00	The following functions are suspended. Infiniti InTuition function
U1A42-00 U1A43-00	The following functions are suspended. • Active trace control function
U1A45-00	The following functions are suspended. • Active lane control function
U1A48-00	The following functions are suspended. Active trace control function LDW function DP function Blind spot intervention function

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

DTC	Vehicle condition	
U1A4A-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function	
U1A4B-00	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function	
U1A4C-00	Normal control	
U1A4E-00	The following functions are suspended. • Active trace control function	

DTC Inspection Priority Chart

INFOID:0000000011286266

When multiple DTCs are displayed simultaneously, check them one by one according to the following priority list.

Priority	Detected item (DTC)
1	U1000-00 CAN COMM CIRCUIT U1010-49 CONTROL UNIT (CAN)
2	 U1A30-00 DAST COMM U1A31-00 DAST COMM U1A32-00 CAMERA COMM U1A34-00 BRAKE CONTROL COMM U1A35-00 BRAKE CONTROL COMM U1A36-00 BCM/IPDM COMM U1A39-00 COMBINATION METER COMM U1A3B-00 TCM COMM U1A3D-00 ADAS COMM U1A3E-00 ADAS COMM U1A3F-00 AV COMM U1A42-00 STEERING ANGLE SENSOR COMM U1A43-00 DR BUZZER COMM U1A48-00 DR BUZZER COMM U1A48-00 CONTROL MODULE (CAN) U1A48-00 CONTROL MODULE (CAN) U1A4C-00 A/C AUTO AMP. COMM U1A4E-00 ECM/HPCM COMM U1A4E-00 ECM/HPCM COMM
3	C1BBD-00 VARIANT CODING
4	C1B98-00 ADAS SYSTEM

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[CHASSIS CONTROL]

Priority	Detected item (DTC)	
	C1B90-00 DAST SYSTEM C1B91-00 CAMERA SYSTEM C1B92-00 BRAKE CONTROL SYSTEM C1B93-00 ENGINE/HEV SYSTEM C1B94-00 TM SYSTEM	- А
	C1B96-00 ADAS SYSTEM C1BA0-00 ADAS/CHASSIS CTRL BRAKE SYS C1BA2-00 STEERING ANGLE SENSOR C1BA5-00 ADAS/CHASSIS CTRL ENGINE SYS C1BA6-00 AV SYSTEM	С
5	 C1BA7-00 ALC SYSTEM C1BA9-00 NP RANGE C1BAA-00 GEAR POSITION 	D
	C1BAB-00 STOP LAMP SW C1BAC-00 OPERATION SW CIRC C1BAD-00 ACCELERATER PEDAL C1BAE-00 ACCELERATER PEDAL C1BAF-00 BSW SYSTEM	Е
	C1BA1-00 BSW STOTEM C1BB0-06 DR BUZZER SYSTEM C1BC0-00 FR WHEEL SENSOR C1BC1-00 FL WHEEL SENSOR C1BC2-00 RR WHEEL SENSOR	F
	C1BC3-00 RK WHELE SENSOR C1BC4-00 DECEL G SENSOR C1BC5-00 SIDE G SENSOR C1BC6-00 PRESSURE SENSOR	G
6	C1BB5-00 IGN POWER SUPPLY C1BB6-00 IGN POWER SUPPLY	- H
	C1B95-00 CONTROL MODULE C1B99-00 CONTROL MODULE C1BB2-00 CONTROL MODULE C1BB3-00 CONTROL MODULE	I
7	C1BB4-00 CONTROL MODULE C1BB7-00 CONTROL MODULE C1BB8-00 CONTROL MODULE C1BB9-00 CONTROL MODULE	J
	C1BBA-00 CONTROL MODULE C1BBB-00 CONTROL MODULE C1BBC-00 CONTROL MODULE	K

DTC Index

DTC	Display item	Refer to
C1B90-00	DAST SYSTEM	DAS-437, "DTC Description"
C1B91-00	CAMERA SYSTEM	DAS-439, "DTC Description"
C1B92-00	BRAKE CONTROL SYSTEM	DAS-441, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-443, "DTC Description"
C1B94-00	TM SYSTEM	DAS-445, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-447, "DTC Description"
C1B96-00	ADAS SYSTEM	DAS-448, "DTC Description"
C1B98-00	ADAS SYSTEM	DAS-450, "DTC Description"
C1B99-00	CONTROL NODULE	DAS-452, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-453, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-455, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-456, "DTC Description"
C1BA6-00	AV SYSTEM	DAS-457, "DTC Description"

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DTC	Display item	Refer to
C1BA7-00	ALC SYSTEM	DAS-459, "DTC Description"
C1BA9-00	NP RANGE	DAS-461, "DTC Description"
C1BAA-00	GEAR POSITION	DAS-463, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-465, "DTC Description"
C1BAC-00	OPERATION SW CIRC	DAS-467, "DTC Description"
C1BAD-00	ACCELERATER PEDAL	DAS-469, "DTC Description"
C1BAE-00	ACCELERATER PEDAL	DAS-471, "DTC Description"
C1BAF-00	BSW SYSTEM	DAS-473, "DTC Description"
C1BB0-06	DR BUZZER SYSTEM	DAS-475, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-476, "DTC Description"
C1BB3-00	CONTROL MODULE	DAS-477, "DTC Description"
C1BB4-00	CONTROL MODULE	DAS-478, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-479, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-482, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-484, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-485, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-486, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-487, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-488, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-489, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-490, "DTC Description"
C1BC0-00	FR WHEEL SENSOR	DAS-491, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-493, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-495, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-497, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-499, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-500, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-502, "DTC Description"
U1000-00	CAN COMM CIRCUIT	DAS-503, "DTC Description"
U1010-49	CONTROL UNIT (CAN)	DAS-504, "DTC Description"
U1A30-00	DAST COMM	DAS-505, "DTC Description"
U1A31-00	DAST COMM	DAS-508, "DTC Description"
U1A32-00	CAMERA COMM	DAS-510, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-512, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-514, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-516, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-518, "DTC Description"
U1A3B-00	TCM COMM	DAS-520, "DTC Description"
U1A3D-00	ADAS COMM	DAS-522, "DTC Description"
U1A3E-00	ADAS COMM	DAS-524, "DTC Description"
U1A3F-00	AV COMM	DAS-526, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-528, "DTC Description"
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-530, "DTC Description"
U1A45-00	DR BUZZER COMM	DAS-532, "DTC Description"

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

DTC	Display item	Refer to
U1A48-00	ECM/HPCM COMM	DAS-534, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-536, "DTC Description"
U1A4B-00	CONTROL MODULE (CAN)	DAS-537, "DTC Description"
U1A4C-00	A/C AUTO AMP. COMM	DAS-538, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-540, "DTC Description"

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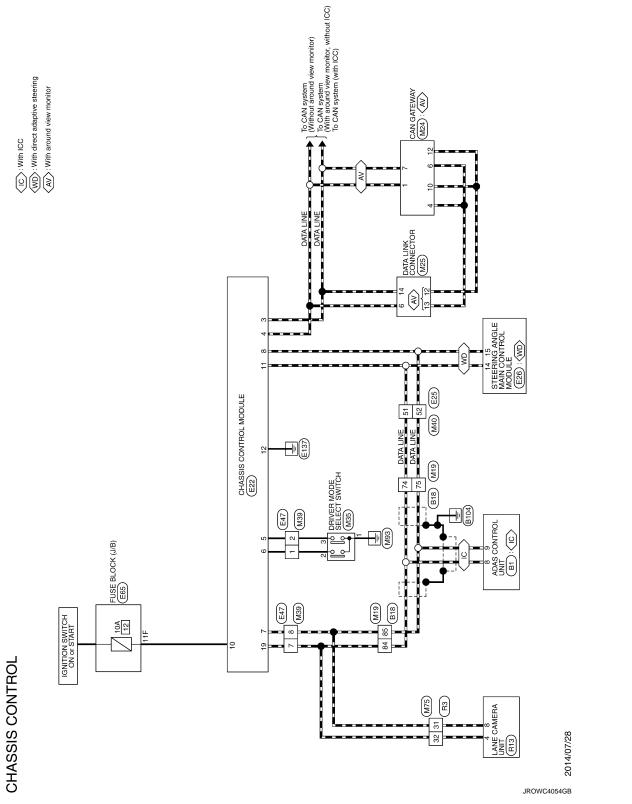
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WIRING DIAGRAM

CHASSIS CONTROL

Wiring Diagram



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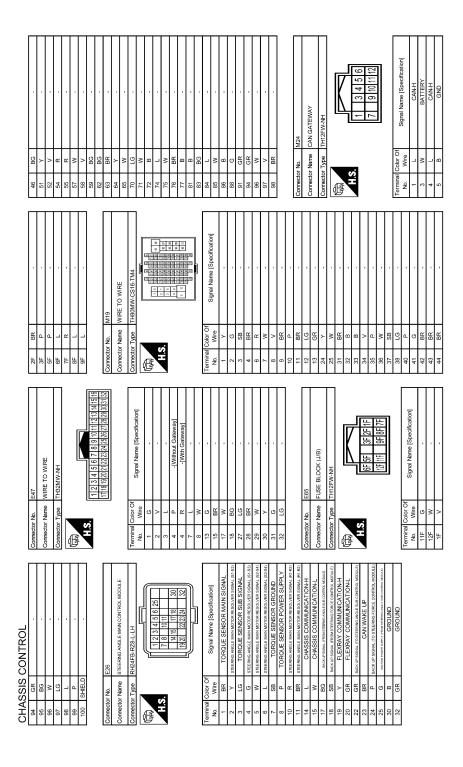
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Connector No. B1	12		Connector No.		E22	4	В	
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ē	40		Terminal	Terminal Color Of	Openal Name (Openation)	40	SB	
No. Wire Ogna rearing Operation	41	SB .	o.	Wire	Orginal realing [Openingation]	41	PC	
1 L CAN-H	45	BR -	3	Ь	CAN-L	44	٨	
2 R CANL	43	BG -	4	7	CAN-H	45	Μ	-
5 B GROUND	44	. BG	2	^	DRIVE MODE SELECT SW (UP)	46	В	
6 L ITS COMM-H	46		9	g	DRIVE MODE SELECT SW (DOWN)	47	Ø	
7 P ITS COMM-L	51	SB .	7	Α.	CHASSIS COMM-L	48	SHIELD	
8 L CHASSIS COMM-H	52	^	80	Ν	CHASSIS COMM-L	49	œ	
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	22		11	7	CHASSIS COMM-H	51	_	
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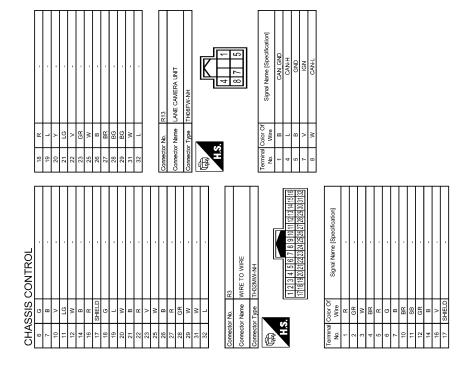
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DIAGNOSIS AND REPAIR WORK FLOW

[CHASSIS CONTROL] < BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow INFOID:0000000011286269

DETAILED FLOW

1.INTERVIEW FROM THE CUSTOMER

Clarify customer complaints before inspection. First of all, perform an interview utilizing DAS-432, "Diagnostic Work Sheet" and reproduce the symptom as well as fully understand it. Ask customer about his/her complaints carefully. Check symptoms by driving vehicle with customer, if necessary.

CAUTION:

Customers are not professional. Never guess easily like "maybe the customer means that...," or "maybe the customer mentions this symptom".

>> GO TO 2.

2.CHECK SYMPTOM

Reproduce the symptom that is indicated by the customer, based on the information from the customer obtained by the interview. Also check that the symptom is not caused by fail-safe mode. Refer to DAS-419, "Fail-Safe (Chassis Control Module)".

CAUTION:

When the symptom is caused by normal operation, fully inspect each portion and obtain the understanding of customer that the symptom is not caused by a malfunction.

>> GO TO 3.

$oldsymbol{3}$.PERFORM SELF-DIAGNOSIS

With CONSULT

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC detected?

YES >> Record or print self-diagnosis results and freeze frame data (FFD). GO TO 4.

>> INSPECTION END NO

f 4.RECHECK THE SYMPTOM

(P)With CONSULT

Perform DTC confirmation procedures for the error-detected system.

If some DTCs are detected at the some time, determine the order for performing the diagnosis based on DAS-422, "DTC Inspection Priority Chart".

Is DTC detected?

YES >> GO TO 5.

NO >> Check harness and connectors based on the information obtained by the interview. Refer to DAS-393, "Precautions for Harness Repair".

5.repair or replace error-detected parts

- 1. Repair or replace error-detected parts.
- Reconnect part or connector after repairing or replacing.
- When DTC is detected, erase self-diagnosis results for "CHASSIS CONTROL".

>> GO TO 6.

6. FINAL CHECK

(P)With CONSULT

- Check the reference value for "CHASSIS CONTROL".
- Recheck the symptom and check that the symptom is not reproduced on the same conditions.

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[CHASSIS CONTROL]

Is the symptom reproduced?

YES >> GO TO 3.

NO >> INSPECTION END

Diagnostic Work Sheet

INFOID:0000000011286270

Description

- In general, customers have their own criteria for a symptom. Therefore, it is important to understand the symptom and status well enough by interviewing the customer about the symptom carefully. To systemize all the information for the diagnosis, prepare the interview sheet referring to the interview points.
- In some cases, multiple conditions that appear simultaneously may cause a DTC to be detected.

INTERVIEW SHEET SAMPLE

		Inte	erview sheet					
Customer	MR/MS	Registration number		Initial year registration				
name		Vehicle type		VIN				
Storage date		Engine, Traction motor		Mileage	km (Mile)		
		☐ Does not oper	ate () function		
		☐ Warning lamp	for () turns ON.		
Symptom		□ Noise □ Vibration						
		☐ Other ()		
First occurren	се	☐ Recently I	☐ Other ()		
Frequency of	occurrence	□ Always □						
		☐ Irrelevant						
Climate con-	Weather	□ Fine □ C	loud □ Rain	□Snow □ Oth	ers ()		
ditions	Temperature	□ Hot □War	m □ Cool □ C	Cold Tempera	ture [Approx.	°C (°F)]		
	Relative humidity	□ High	☐ Moderate	□ Low				
Road conditions		☐ Urban area ☐ Suburb area ☐ Highway ☐ Mountainous road (uphill or downhill) ☐ Rough road						
Operating condition, etc.		□Irrelevant □When traction motor starts □ During idling □ During driving □ During acceleration □ At constant speed driving □ During deceleration □ During cornering (right curve or left curve) □ When steering wheel is steered (to right or to left)						
Other conditio	ns							

DIAGNOSIS AND REPAIR WORK FLOW

The state of the s	Interview sheet					
Vehicle type Engine, Traction motor Mileage km (Mile) hicle equipment	Customer	MR/MS	Registration number	Initial year registration		
tion motor Mileage Kill (Iville)	ane		Vehicle type	VIN		
	Storage date		Engine, Traction motor	Mileage	km (Mile)
emo	/ehicle equipment					
	четто					

ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MODULE < BASIC INSPECTION > [CHASSIS CONTROL]

ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MOD-ULE

Description INFOID:000000011286271

When replaced the chassis control module, configuration of the chassis control module is required. Refer to <u>DAS-435</u>, "Work <u>Procedure"</u>.

Revision: 2015 January **DAS-434** 2015 Q50

CONFIGURATION (CHASSIS CONTROL MODULE)

< BASIC INSPECTION > [CHASSIS CONTROL]

CONFIGURATION (CHASSIS CONTROL MODULE)

Work Procedure

CAUTION:

- Use "Manual Configuration" only when "TYPE ID" of the chassis control module cannot be read.
- After configuration, turn the ignition switch from OFF to ON and check that the chassis control warning to information display of combination meter displays OFF after staying illuminated for approximately two seconds.
- If an error occurs during configuration, start over from the beginning.

1.CHECKING TYPE ID (1)

Use FAST (service parts catalogue) to search the chassis control module of the applicable vehicle and find "Type ID".

Is "Type ID" displayed?

YES >> Print out "Type ID" and GO TO 2.

NO >> "Configuration" is not required for the chassis control module. Replace in the usual manner. Refer to DAS-543, "Removal and Installation".

2.CHECKING TYPE ID (2)

©CONSULT Configuration

- 1. Select "Before Replace ECU" of "Read/Write Configuration".
- Check that "Type ID" is displayed on the CONSULT screen.

Is "Type ID" displayed?

YES >> GO TO 3.

NO >> GO TO 7.

3.VERIFYING TYPE ID (1)

©CONSULT Configuration

Compare a "Type ID" displayed on the CONSULT screen with the one searched by using FAST (service parts catalogue) to check that these "Type ID" agree with each other.

NOTE:

For the "Type ID" searched by using FAST (service parts catalog), use the last five digits of the "Type ID".

>> GO TO 4.

4.SAVING TYPE ID

CONSULT Configuration

Save "Type ID" on CONSULT.

>> GO TO 5.

REPLACING CHASSIS CONTROL MODULE (1)

Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

>> GO TO 6.

$\mathsf{6}.\mathsf{writing}$ (automatic writing)

(P)CONSULT Configuration

- Select "After Replace ECU" of "Re/programming, Configuration" or that of "Read / Write Configuration".
- Select the "Type ID" agreeing with the one stored on CONSULT and the one searched by using FAST (service parts catalogue) to write the "Type ID" into the chassis control module.
 NOTE:

For the "Type ID" searched by using FAST (service parts catalog), use the last five digits of the "Type ID".

>> GO TO 9.

7.REPLACING CHASSIS CONTROL MODULE (2)

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CONFIGURATION (CHASSIS CONTROL MODULE)

< BASIC INSPECTION >

[CHASSIS CONTROL]

Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

>> GO TO 8.

8. WRITING (MANUAL WRITING)

©CONSULT Configuration

- 1. Select "Manual Configuration".
- 2. Select the "Type ID" searched by using FAST (service parts catalogue) to write the "Type ID" into the chassis control module.

NOTE:

For the "Type ID" searched by using FAST (service parts catalog), use the last five digits of the "Type ID".

>> GO TO 9.

9. VERIFYING TYPE ID (2)

Compare "Type ID" written into the chassis control module with the one searched by using FAST (service parts catalogue) to check that these "Type ID" agree with each other.

NOTE:

For the "Type ID" searched by using FAST (service parts catalog), use the last five digits of the "Type ID".

>> GO TO 10.

10.checking chassis control warning

- 1. Turn the ignition switch OFF.
- Turn the ignition switch ON and check that the chassis control warning to information display of combination meter displays OFF after staying illuminated for approximately two seconds.

CAUTION: Never start the engine.

Is the inspection result normal?

YES >> GO TO 11.

NO >> Perform the self-diagnosis of "CHASSIS CONTROL". Refer to DAS-402, "CONSULT Function".

11. PERFORMING SUPPLEMENTARY WORK

- Perform the self-diagnosis of all systems.
- 2. Erase self-diagnosis results.

>> End of work.

C1B90-00 DIRECT ADAPTIVE STEERING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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DTC/CIRCUIT DIAGNOSIS

C1B90-00 DIRECT ADAPTIVE STEERING SYSTEM

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition	
C1B90-0	DAST SYSTEM (Direct adaptive steering system)	When a malfunction is detected in direct adaptive steering system.	D

POSSIBLE CAUSE

- Direct adaptive steering system
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- · Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B90-00" detected?

YES >> Proceed to <u>DAS-437</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK DIRECT ADADPTIVE STEERING SYSTEM

()With CONSULT

- Perform self-diagnosis for "EPS/DAST 3".
- Perform self-diagnosis for "DAST 1".
- Perform self-diagnosis for "DAST 2".

Is DTC detected?

YES >> Check the DTC.

- "EPS/DAST 3": Refer to <u>STC-79, "DTC Index"</u>.
- "DAST 1": Refer to STC-92, "DTC Index".
- "DAST 2": Refer to STC-105, "DTC Index".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

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Revision: 2015 January **DAS-437** 2015 Q50

C1B90-00 DIRECT ADAPTIVE STEERING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1B90-00", "U1000-00" or other DTC detected?

YES ("C1B90-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1B91-00 CAMERA SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1B91-00 CAMERA SYSTEM

DTC Description

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B91-00	CAMERA SYSTEM (Camera system)	When a malfunction is detected in lane camera unit system.

POSSIBLE CAUSE

- Lane camera unit system
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B91-00" detected?

YES >> Proceed to DAS-439, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286276

1. CHECK LANE CAMERA UNIT SYSTEM

With CONSULT

Perform self-diagnosis for "LANE CAMERA".

Is DTC detected?

YES >> Check the DTC. Refer to <u>DAS-574</u>, "DTC Index".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1B91-00", "U1000-00", "U1A4B-00" or other DTC detected?

YES ("C1B91-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

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Revision: 2015 January **DAS-439** 2015 Q50

C1B91-00 CAMERA SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES ("U1A4B-00")>>Refer to DAS-537, "Diagnosis Procedure".

YES (other DTC)>>Check the DTC.

C1B92-00 BRAKE CONTROL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1B92-00 BRAKE CONTROL SYSTEM

DTC Description

INFOID:0000000011286277

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B92-00	BRAKE CONTROL SYSTEM (Brake control system)	When a malfunction is detected in ABS actuator and electric unit (control unit) system.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit) system
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B92-00" detected?

YES >> Proceed to <u>DAS-441, "Diagnosis Procedure"</u>.

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286278

${f 1}$.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

(With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2 . PERFORM SELF-DIAGNOSIS

(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1B92-00", "U1000-00" or other DTC detected?

Revision: 2015 January **DAS-441** 2015 Q50

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C1B92-00 BRAKE CONTROL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("C1B92-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1B93-00 ENGINE/HEV SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1B93-00 ENGINE/HEV SYSTEM

DTC Description

INFOID:0000000011286279

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B93-00	ENGINE/HEV SYSTEM (Engine/HEV system)	When a malfunction is detected in ECM system.

POSSIBLE CAUSE

- Engine system
- ECM
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B93-00" detected?

>> Proceed to DAS-443, "Diagnosis Procedure". YES

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286280

1.CHECK ECM SYSTEM

With CONSULT

Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> Check the DTC. Refer to EC-108, "DTC Index".

NO >> GO TO 2.

2 . PERFORM SELF-DIAGNOSIS

(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1B93-00", "U1000-00" or other DTC detected?

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C1B93-00 ENGINE/HEV SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("C1B93-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1B94-00 TRANSMISSION SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1B94-00 TRANSMISSION SYSTEM

DTC Description

INFOID:0000000011286281

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B94-00	TM SYSTEM (Transmission system)	When a malfunction is detected in transmission system.

POSSIBLE CAUSE

- Transmission system
- TCM
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B94-00" detected?

YES >> Proceed to <u>DAS-445</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286282

1. CHECK TRANSMISSION SYSTEM

(With CONSULT

Perform self-diagnosis for "TRANSMISSION".

Is DTC detected?

YES >> Check the DTC. Refer to TM-84, "DTC Index".

NO >> GO TO 2.

2 . PERFORM SELF-DIAGNOSIS

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(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1B94-00", "U1000-00" or other DTC detected?

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C1B94-00 TRANSMISSION SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("C1B94-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1B95-00 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1B95-00 CONTROL MODULE

DTC Description

INFOID:0000000011286283

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B95-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function
- Intelligent cruise control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B95-00" detected?

>> Proceed to DAS-447, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286284

1.PERFORM SELF-DIAGNOSIS

()With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B95-00" detected?

YES >> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

NO >> INSPECTION END DAS

DAS-447 Revision: 2015 January 2015 Q50

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[CHASSIS CONTROL]

C1B96-00 ADAS SYSTEM

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B96-00	ADAS SYSTEM (Advanced Driver Assistance system)	When a malfunction is detected in ADAS control unit system.

POSSIBLE CAUSE

- ADAS control unit
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- LDW function
- LDP function
- Blind spot intervention function
- Intelligent cruise control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B96-00" detected?

YES >> Proceed to <u>DAS-448</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286286

1. CHECK ADAS CONTROL UNIT SYSTEM

(With CONSULT

Perform self-diagnosis for "ICC/ADAS".

Is DTC detected?

YES >> Check the DTC. Refer to <u>DAS-45</u>, "DTC Index".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1B96-00", "U1000-00" or other DTC detected?

C1B96-00 ADAS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("C1B96-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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[CHASSIS CONTROL]

C1B98-00 ADAS SYSTEM

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B98-00	ADAS SYSTEM (Advanced Driver Assistance system)	When a signal transmitted from ADAS is malfunctioning.

POSSIBLE CAUSE

- ADAS control unit
- · Chassis control module

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(E)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B98-00" detected?

YES >> Proceed to <u>DAS-450</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286288

1. CHECK ECM SYSTEM

With CONSULT

Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> GO TO 2.

NO >> GO TO 3.

2.check adas control unit system

(With CONSULT

Perform self-diagnosis for "ICC/ADAS".

Is DTC detected?

YES >> Check the DTC. Refer to DAS-45, "DTC Index".

NO >> GO TO 3.

3. PERFORM SELF-DIAGNOSIS

(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

C1B98-00 ADAS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is DTC "C1B98-00", "U1000-00" or other DTC detected?

YES ("C1B98-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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[CHASSIS CONTROL]

C1B99-00 CONTROL MODULE

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B99-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- · Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B99-00" detected?

YES >> Proceed to <u>DAS-452</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286290

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B99-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

C1BA0-00 ADAS/CHASSIS CONTROL BRAKE SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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C1BA0-00 ADAS/CHASSIS CONTROL BRAKE SYSTEM

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS (ADAS/Chassis Control brake system)	 When receiving from ABS actuator and electric unit (control unit) that the value of the brake system signal transmitted from ADAS control unit to ABS actuator and electric unit (control unit) is malfunctioning. When receiving from ABS actuator and electric unit (control unit) that the value of the brake system signal transmitted from the chassis control module to ABS actuator and electric unit (control unit) is malfunctioning.

POSSIBLE CAUSE

- ADAS control unit
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA0-00" and/or "C1BA7-00" detected?

YES ("C1BA0-00")>>Proceed to DAS-453, "Diagnosis Procedure".

YES ("C1BA0-00" and "C1BA7-00")>>Perform self-diagnosis for "ICC/ADAS".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

 ${f 1}$.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SYSTEM

(■)With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

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Revision: 2015 January **DAS-453** 2015 Q50

C1BA0-00 ADAS/CHASSIS CONTROL BRAKE SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is DTC "C1BA0-00", "U1000-00" or other DTC detected?

YES ("C1BA0-00")>>Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BA2-00 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA2-00 STEERING ANGLE SENSOR

DTC Description

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA2-00	STEERING ANGLE SENSOR (Steering angle sensor)	When a malfunction is detected in steering angle sensor system.

POSSIBLE CAUSE

- · Steering angle sensor
- Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA2-00" detected?

YES >> Proceed to <u>DAS-455</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286294

1. CHECK STEERING ANGLE SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2 . PERFORM SELF-DIAGNOSIS

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(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1BA2-00", "U1000-00" or other DTC detected?

YES ("C1BA2-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

Revision: 2015 January **DAS-455** 2015 Q50

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C1BA5-00 ADAS/CHASSIS CONTROL ENGINE SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA5-00 ADAS/CHASSIS CONTROL ENGINE SYSTEM

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS (ADAS/Chassis control engine system)	 When receiving from ECM that the value of the engine system signal transmitted from ADAS control unit to ECM is malfunctioning. When receiving from ECM that the value of the engine system signal transmitted from the chassis control module to ECM is malfunctioning.

POSSIBLE CAUSE

- · ADAS control unit
- · Chassis control unit

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA5-00" detected?

YES >> Proceed to <u>DAS-456</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286296

1. CHECK ADAS CONTROL UNIT SYSTEM

With CONSULT

Perform self-diagnosis for "ICC/ADAS".

Is DTC detected?

YES >> Check the DTC. Refer to <u>DAS-45</u>, "<u>DTC Index</u>".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1BA5-00", "U1000-00" or other DTC detected?

YES ("C1BA5-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

[CHASSIS CONTROL]

C1BA6-00 AV SYSTEM

DTC Description

INFOID:0000000011286297

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA6-00	AV SYSTEM (AV system)	When a malfunction is detected in AV system.

POSSIBLE CAUSE

- Display control unit
- AV control unit
- NAVI control unit
- Integral switch
- Chassis control module

FAIL-SAFE

The following functions are suspended.

Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA6-00" detected?

>> Proceed to DAS-457, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286298

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CHECK AV SYSTEM

With CONSULT

1. Perform self-diagnosis for "MULTI AV".

Is DTC detected?

YES >> Check the DTC. Refer to AV-89, "DTC Index".

NO >> GO TO 2.

2. $\mathsf{perform}$ self-diagnosis

(I)With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1BA6-00", "U1000-00" or other DTC detected?

YES ("C1BA6-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

DAS-457 Revision: 2015 January 2015 Q50

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C1BA6-00 AV SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("U1000-00")>>Refer to <u>LAN-24, "Trouble Diagnosis Flow Chart"</u>.
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BA7-00 ACTIVE LANE CONTROL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA7-00 ACTIVE LANE CONTROL SYSTEM

DTC Description

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA7-00	ALC SYSTEM (Active lane control system)	When receiving signal transmitted from the chassis control module to the steering angle main control module is abnormal, from the steering angle main control module.

POSSIBLE CAUSE

- Direct adaptive steering system
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

Active lane control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA7-00" detected?

YES >> Proceed to <u>DAS-459</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286300

${f 1}$.CHECK DIRECT ADAPTIVE SETTRING SYSTEM

With CONSULT

Perform self-diagnosis for "DAST 1".

Is DTC detected?

YES >> Check the DTC. Refer to STC-92, "DTC Index".

NO >> GO TO 2.

2 . PERFORM SELF-DIAGNOSIS

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()With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1BA7-00", "U1000-00" or other DTC detected?

YES ("C1BA7-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BA7-00 ACTIVE LANE CONTROL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA9-00 NP RANGE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA9-00 NP RANGE

DTC Description

INFOID:0000000011286301

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA9-00	NP RANGE (NP range)	When a mismatch between a shift position signal transmitted from TCM and an current gear position signal continues for 60 seconds or more.

POSSIBLE CAUSE

- Transmission system
- TCM
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA9-00" detected?

>> Proceed to DAS-461, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286302

1. CHECK TRANSMISSION SYSTEM

(With CONSULT

Perform self-diagnosis for "TRANSMISSION".

Is DTC detected?

YES >> Check the DTC. Refer to TM-84, "DTC Index".

NO >> GO TO 2.

2.perform self-diagnosis

(I)With CONSULT

Revision: 2015 January

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1BA9-00", "U1000-00" or other DTC detected?

YES ("C1BA9-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

DAS-461

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C1BA9-00 NP RANGE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("U1000-00")>>Refer to <u>LAN-24, "Trouble Diagnosis Flow Chart"</u>.
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BAA-00 GEAR POSITION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAA-00 GEAR POSITION

DTC Description

INFOID:0000000011286303

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAA-00	GEAR POSITION (Gear position)	When a mismatch between a current gear position signal and shift position signal transmitted from TCM continues for approximately 60 seconds or more.

POSSIBLE CAUSE

- Transmission system
- TCM
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAA-00" detected?

YES >> Proceed to <u>DAS-463</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286304

1.PERFORM SELF-DIAGNOSIS (CHASSIS CONTROL MODULE) (1)

- 1. Start the engine.
- LDP system is ON.
- 3. Select the selector lever "D" position and wait 1 minute or more.

CAUTION:

Securely depress the brake pedal, and never move the vehicle.

4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAA-00" detected?

YES >> GO TO 3.

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS (CHASSIS CONTROL MODULE) (2)

 Select the selector lever "R" position and wait 1 minute or more. CAUTION:

Securely depress the brake pedal, and never move the vehicle.

Perform self-diagnosis for "CHASSIS CONTROL".

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C1BAA-00 GEAR POSITION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is DTC "C1BAA-00" detected?

YES >> GO TO 3. NO >> GO TO 4.

3. CHECK TRANSMISSION SYSTEM

With CONSULT

Perform self-diagnosis for "TRANSMISSION".

Is DTC detected?

YES >> Check the DTC. Refer to TM-84, "DTC Index".

NO >> GO TO 4.

4.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1BAA-00", "U1000-00" or other DTC detected?

YES ("C1BAA-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BAB-00 STOP LAMP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAB-00 STOP LAMP SWITCH

DTC Description

INFOID:0000000011286305

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAB-00	STOP LAMP SW (Stop lamp switch)	When a malfunction is detected in stop lamp switch system.

POSSIBLE CAUSE

- Stop lamp switch
- ABS actuator and electric unit (control unit) system
- Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAB-00" detected?

YES >> Proceed to DAS-465, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286306

${f 1}$.CHECK STOP LAMP SWITCH SYSTEM

With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2.perform self-diagnosis

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(■)With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1BAB-00", "U1000-00" or other DTC detected?

YES ("C1BAB-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

DAS-465

C1BAB-00 STOP LAMP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAC-00 OPERATION SWITCH SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAC-00 OPERATION SWITCH SYSTEM

DTC Description

INFOID:0000000011286307

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAC-00	OPERATION SW CIRC (Operation switch circuit)	Any switch of the ICC steering switch is detected as "ON" continuously for 60 seconds.

POSSIBLE CAUSE

- ICC steering switch
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAC-00" detected?

YES >> Proceed to DAS-467, "Diagnosis Procedure".

>> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286308

${f 1}$.CHECK STEERING SWITCH SYSTEM

With CONSULT

Perform self-diagnosis for "ICC/ADAS".

Is DTC detected?

YES >> Check the DTC. Refer to DAS-45, "DTC Index".

NO >> GO TO 2.

2.perform self-diagnosis

(■)With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "C1BAC-00", "U1000-00" or other DTC detected?

YES ("C1BAC-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

DAS-467

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C1BAC-00 OPERATION SWITCH SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAD-00 ACCELERATOR PEDAL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAD-00 ACCELERATOR PEDAL SYSTEM

DTC Description

INFOID:0000000011286309

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAD-00	ACCELERATER PEDAL (Accelerator pedal system)	When a malfunction is detected in accelerator pedal system.

POSSIBLE CAUSE

- · Accelerator pedal position sensor
- ECM
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

- Start the engine.
- 2. LDP system is ON.
- Depress the accelerator pedal for 1 second or more.
- 4. Stop the engine.
- 5. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

6. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAD-00" detected?

YES >> Proceed to DAS-469, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK ACCELERATOR PEDAL SYSTEM (ECM)

With CONSULT

Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> Check the DTC. Refer to EC-108, "DTC Index".

NO >> GO TO 2.

2 PERFORM SELF-DIAGNOSIS

(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.

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INFOID:0000000011286310

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C1BAD-00 ACCELERATOR PEDAL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

4. Perform "All DTC Reading".

Is DTC "C1BAD-00", "U1000-00" or other DTC detected?

YES ("C1BAD-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BAE-00 ACCELERATOR PEDAL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAE-00 ACCELERATOR PEDAL SYSTEM

DTC Description

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAE-00	ACCELERATER PEDAL (Accelerator pedal system)	When a malfunction is detected in distance control assist system.

POSSIBLE CAUSE

- · Accelerator pedal assembly
- ECM
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

- Start the engine.
- 2. LDP system is ON.
- 3. Depress the accelerator pedal for 1 second or more.
- 4. Stop the engine.
- 5. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

6. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAE-00" detected?

- YES >> Proceed to DAS-471, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286312

1. CHECK DISTANCE CONTROL ASSIST SYSTEM

With CONSULT

Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> Check the DTC. Refer to EC-108, "DTC Index".

NO >> GO TO 2.

2 PERFORM SELF-DIAGNOSIS

(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.

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C1BAE-00 ACCELERATOR PEDAL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Perform "All DTC Reading".

Is DTC "C1BAE-00", "U1000-00" or other DTC detected?

YES ("C1BAE-00")>>Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u>. YES ("U1000-00")>>Refer to <u>LAN-24, "Trouble Diagnosis Flow Chart"</u>.

YES (other DTC)>>Check the DTC.

>> INSPÉCTION END

C1BAF-00 BLIND SPOT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAF-00 BLIND SPOT WARNING SYSTEM

DTC Description

INFOID:0000000011286313

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAF-00	BSW SYSTEM (Blind Spot Warning system)	When a malfunction is detected in blind spot warning system.

POSSIBLE CAUSE

- · ADAS control unit
- Side radar
- Chassis control module

FAIL-SAFE

The following functions are suspended.

Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAF-00" detected?

YES >> Proceed to DAS-473, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286314

1. CHECK BLIND SPOT WARNING SYSTEM

(With CONSULT

Perform self-diagnosis for "ICC/ADAS".

Is DTC detected?

YES >> Check the DTC. Refer to DAS-45, "DTC Index".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

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(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAF-00", "U1000-00" or other DTC detected?

YES ("C1BAF-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BAF-00 BLIND SPOT WARNING SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB0-06 DRIVER ASSISTANCE BUZZER SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB0-06 DRIVER ASSISTANCE BUZZER SYSTEM

DTC Description

INFOID:0000000011286315

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB0-06	DR BUZZER SYSTEM (Driver assistance buzzer system)	When a malfunction is detected in driver assistance buzzer system.

POSSIBLE CAUSE

- Driver assistance buzzer control module
- ADAS control unit
- · Chassis control module

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(E)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB0-06" detected?

YES >> Proceed to <u>DAS-475</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286316

1. CHECK DRIVER ASSISTANCE BUZZER SYSTEM

With CONSULT

Perform self-diagnosis for "ICC/ADAS".

Is DTC detected?

YES >> Check the DTC. Refer to DAS-45, "DTC Index".

NO >> GO TO 2.

2.perform self-diagnosis

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(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "ALL DTC Reading".

Is DTC "C1BB0-06", "U1000-00" or other DTC detected?

YES ("C1BB0-06")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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Revision: 2015 January **DAS-475** 2015 Q50

[CHASSIS CONTROL]

C1BB2-00 CONTROL MODULE

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB2-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- · Active trace control function
- · Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB2-00" detected?

YES >> Proceed to <u>DAS-476</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286318

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB2-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

C1BB3-00 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB3-00 CONTROL MODULE

DTC Description

INFOID:0000000011286319

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB3-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB3-00" detected?

>> Proceed to DAS-477, "Diagnosis Procedure". YES

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286320

1. PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB3-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u>.

>> INSPECTION END NO

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DAS-477 Revision: 2015 January 2015 Q50

[CHASSIS CONTROL]

C1BB4-00 CONTROL MODULE

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB4-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

· Chassis control module

FAIL-SAFE

The following functions are suspended.

- · Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB4-00" detected?

YES >> Proceed to <u>DAS-478</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286322

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB4-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

C1BB5-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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C1BB5-00 IGNITION POWER SUPPLY

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB5-00	IGN POWER SUPPLY (Ignition power supply)	Ignition power supply voltage of chassis control module is as shown below. • Ignition power supply voltage: 6.4 V ≥ Ignition power supply voltage

POSSIBLE CAUSE

- · Harness or connector
- Fuse
- · Ignition power supply system
- Battery
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB5-00" detected?

YES >> Proceed to <u>DAS-479</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286324

1. CHECK CONNECTOR

Turn the ignition switch OFF.

- 2. Disconnect chassis control module harness connector
- 3. Check the connector for disconnection or looseness.
- Check the pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> GO TO 2.

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NO >> Repair or replace error-detected parts, securely lock the harness connector, and GO TO 2.

2.PERFORM DELF-DIAGNOSIS (1)

1. Connect chassis control module harness connector.

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C1BB5-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB5-00" detected?

YES >> GO TO 3.

NO >> INSPECTION END

${f 3.}$ CHECKCHASSIS CONTROL MODULE IGNITION POWER SUPPLY (1)

- Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the voltage between chassis control module harness connector and ground.

Chassis co	ntrol module	_	Voltage
Connector Terminal			(Approx.)
E22	10	Ground	0 V

4. Turn the ignition switch ON.

CAUTION:

Never start engine.

5. Check the voltage between chassis control module harness connector and ground.

Chassis co	ntrol module	_	Voltage
Connector Terminal			(Approx.)
E22	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY CIRCUIT

- Turn the ignition switch OFF.
- 2. Check the 10A fuse (#12).
- Check the continuity and for short circuit between chassis control module harness connector terminal (10) and 10A fuse (#12).
- 4. Check the continuity between chassis control module harness connector and the ground.

Chassis co	ntrol module	_	Continuity
Connector Terminal			Continuity
E22	10	Ground	Not existed

Is the inspection result normal?

YES >> Perform trouble diagnosis for ignition power supply.

NO >> Repair or replace error-detected parts.

${f 5.}$ CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Check the continuity between chassis control module harness connector and ground.

Chassis co	ntrol module	_	Continuity
Connector	Terminal		
E22	12	Ground	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace error-detected parts.

6.PERFORM DELF-DIAGNOSIS (2)

- 1. Connect chassis control module harness connector.
- 2. Perform self-diagnosis for "CHASSIS CONTROL".

C1BB5-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is DTC "C1BB5-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

NO >> INSPECTION END

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C1BB6-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB6-00 IGNITION POWER SUPPLY

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB6-00	IGNITION POWER SUPPLY (ignition power supply)	Ignition power supply voltage of chassis control module is as shown below. • Ignition power supply voltage: 16 V ≤ Ignition power supply voltage

POSSIBLE CAUSE

- · Harness or connector
- Fuse
- · Ignition power supply system
- Battery
- · Chassis control module

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB6-00" detected?

YES >> Proceed to <u>DAS-482</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286326

1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector
- Check the connector for disconnection or looseness.
- 4. Check the pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace error-detected parts, securely lock the harness connector, and GO TO 2.

2.perform delf-diagnosis (1)

- 1. Connect chassis control module harness connector.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB6-00" detected?

YES >> GO TO 3.

NO >> INSPECTION END

3.CHECKCHASSIS CONTROL MODULE IGNITION POWER SUPPLY (1)

- Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.

C1BB6-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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Check the voltage between chassis control module harness connector and ground.

Chassis co	ntrol module		Voltage
Connector	Terminal		(Approx.)
E22	10	Ground	0 V

Turn the ignition switch ON.

CAUTION:

Never start engine.

5. Check the voltage between chassis control module harness connector and ground.

Chassis co	ntrol module		Voltage
Connector Terminal		_	(Approx.)
E22	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Check the 10A fuse (#12).
- Check the continuity and for short circuit between chassis control module harness connector terminal (10) and 10A fuse (#12).
- 4. Check the continuity between chassis control module harness connector and the ground.

Chassis co	ntrol module	<u></u>	Continuity	
Connector Terminal			Continuity	
E22	10	Ground	Not existed	

Is the inspection result normal?

YES >> Perform trouble diagnosis for ignition power supply.

NO >> Repair or replace error-detected parts.

${f 5.}$ CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

Turn the ignition switch OFF.

Check the continuity between chassis control module harness connector and ground.

Chassis cor	ntrol module	_	Continuity
Connector Terminal			Continuity
E22	12	Ground	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace error-detected parts.

6.PERFORM DELF-DIAGNOSIS (1)

- Connect chassis control module harness connector.
- 2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB6-00" detected?

YES >> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

DAS-483

NO >> INSPECTION END DAS

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2015 Q50

[CHASSIS CONTROL]

C1BB7-00 CONTROL MODULE

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB7-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- · Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB7-00" detected?

YES >> Proceed to <u>DAS-484</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286328

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB7-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

C1BB8-00 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB8-00 CONTROL MODULE

DTC Description

INFOID:0000000011286329

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB8-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB8-00" detected?

>> Proceed to DAS-485, "Diagnosis Procedure". YES

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286330

PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB8-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u>.

>> INSPECTION END NO

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DAS-485 Revision: 2015 January 2015 Q50

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[CHASSIS CONTROL]

C1BB9-00 CONTROL MODULE

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB9-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

· Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- · Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB9-00" detected?

YES >> Proceed to <u>DAS-486</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286332

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB9-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

C1BBA-00 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BBA-00 CONTROL MODULE

DTC Description

INFOID:0000000011286333

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBA-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

· Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBA-00" detected?

YES >> Proceed to <u>DAS-487</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286334

1. PERFORM SELF-DIAGNOSIS

(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- 4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBA-00" detected?

YES >> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

NO >> INSPECTION END

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Revision: 2015 January **DAS-487** 2015 Q50

[CHASSIS CONTROL]

C1BBB-00 CONTROL MODULE

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBB-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

· Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBB-00" detected?

YES >> Proceed to <u>DAS-488</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286336

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBB-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

C1BBC-00 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BBC-00 CONTROL MODULE

DTC Description

INFOID:0000000011286337

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBC-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

Chassis control module

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBC-00" detected?

>> Proceed to <u>DAS-489</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286338

1. PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBC-00" detected?

YES >> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

NO >> INSPECTION END

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DAS-489 Revision: 2015 January 2015 Q50

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C1BBD-00 VARIANT CODING

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBD-00	VARIANT CODING (Variant coding)	When variant coding is incomplete.

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended.

- · Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBD-00" detected?

YES >> Proceed to <u>DAS-490</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286340

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBD-00" detected?

YES >> Perform configuration. Refer to <u>DAS-435</u>, "Work <u>Procedure"</u>.

C1BC0-00 FRONT RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC0-00 FRONT RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000011286341

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC0-00	FR WHEEL SENSOR (Front right wheel sensor)	When a malfunction is detected in front right wheel sensor system.

POSSIBLE CAUSE

- Front right wheel sensor
- Front right sensor rotor
- ABS actuator and electric unit (control unit)
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- · Active lane control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

- 1. Start the engine.
- 2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
- Stop the vehicle.
- 4. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC0-00" detected?

- YES >> Proceed to DAS-491, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

1. CHECK FRONT RH WHEEL SENSOR SYSTEM

Diagnosis Procedure

INFOID:0000000011286342

Perform self-diagnosis for "ABS".

Is DTC detected?

(■)With CONSULT

YES >> Check the DTC. Refer to <u>BRC-58</u>, "DTC Index".

NO >> GO TO 2.

2 PERFORM SELF-DIAGNOSIS

(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.

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Revision: 2015 January **DAS-491** 2015 Q50

C1BC0-00 FRONT RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Perform "All DTC Reading".

Is DTC "C1BC0-00", "U1000-00" or other DTC detected?

YES ("C1BC0-00")>>Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u>. YES ("U1000-00")>>Refer to <u>LAN-24, "Trouble Diagnosis Flow Chart"</u>.

YES (other DTC)>>Check the DTC.

>> INSPÉCTION END

C1BC1-00 FRONT LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC1-00 FRONT LEFT WHEEL SENSOR

DTC Description

INFOID:0000000011286343

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC1-00	FL WHEEL SENSOR (Front left wheel sensor)	When a malfunction is detected in front left wheel sensor system.

POSSIBLE CAUSE

- · Front left wheel sensor
- Front left sensor rotor
- ABS actuator and electric unit (control unit)
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

- 1. Start the engine.
- 2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
- Stop the vehicle.
- 4. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC1-00" detected?

Diagnosis Procedure

YES >> Proceed to DAS-493, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

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1. CHECK FRONT LH WHEEL SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to <u>BRC-58</u>, "<u>DTC Index</u>".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

()With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.

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Revision: 2015 January **DAS-493** 2015 Q50

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INFOID:0000000011286344

C1BC1-00 FRONT LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Perform "All DTC Reading".

Is DTC "C1BC1-00", "U1000-00" or other DTC detected?

YES ("C1BC1-00")>>Replace the chassis control module. Refer to $\underline{DAS-543}$, "Removal and Installation". YES ("U1000-00")>>Refer to $\underline{LAN-24}$, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

>> INSPÉCTION END

C1BC2-00 REAR RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC2-00 REAR RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000011286345

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC2-00	RR WHEEL SENSOR (Rear right wheel sensor)	When a malfunction is detected in rear right wheel sensor system.

POSSIBLE CAUSE

- Rear right wheel sensor
- Rear right sensor rotor
- ABS actuator and electric unit (control unit)
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

With CONSULT

- Start the engine.
- 2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
- Stop the vehicle.
- Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC2-00" detected?

>> Proceed to DAS-495, "Diagnosis Procedure". YES

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure INFOID:0000000011286346

${f 1}$.CHECK REAR RH WHEEL SENSOR SYSTEM

()With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2 PERFORM SELF-DIAGNOSIS

(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

DAS-495 2015 Q50 Revision: 2015 January

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C1BC2-00 REAR RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is DTC "C1BC2-00", "U1000-00" or other DTC detected?

YES ("C1BC2-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BC3-00 REAR LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC3-00 REAR LEFT WHEEL SENSOR

DTC Description

INFOID:0000000011286347

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC3-00	RL WHEEL SENSOR (Rear left wheel sensor)	When a malfunction is detected in rear left wheel sensor system.

POSSIBLE CAUSE

- · Rear left wheel sensor
- Rear left sensor rotor
- ABS actuator and electric unit (control unit)
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

With CONSULT

- Start the engine.
- 2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
- Stop the vehicle.
- Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC3-00" detected?

>> Proceed to DAS-497, "Diagnosis Procedure". YES

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

 ${f 1}$.CHECK REAR LH WHEEL SENSOR SYSTEM

()With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2 PERFORM SELF-DIAGNOSIS

(With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform "All DTC Reading".

DAS-497 Revision: 2015 January 2015 Q50

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INFOID:0000000011286348

C1BC3-00 REAR LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is DTC "C1BC3-00", "U1000-00" or other DTC detected?

YES ("C1BC3-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BC4-00 DECEL G SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC4-00 DECEL G SENSOR

DTC Description

INFOID:0000000011286349

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC4-00	DECEL G SENSOR (Decel G sensor)	When a malfunction is detected in decel G sensor system.

POSSIBLE CAUSE

- Yaw rate/side/decel G sensor [integrated in ABS actuator and electric unit (control unit)]
- ABS actuator and electric unit (control unit)
- · Chassis control module

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(E)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC4-00" detected?

YES >> Proceed to DAS-499, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286350

1. CHECK DECEL G SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2.perform self-diagnosis

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(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1BC4-00", "U1000-00" or other DTC detected?

YES ("C1BC4-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

DAS

Revision: 2015 January **DAS-499** 2015 Q50

C1BC5-00 SIDE G SENSOR

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC5-00	SIDE G SENSOR (Side G sensor)	When a malfunction is detected in side G sensor system.

POSSIBLE CAUSE

- Yaw rate/side/decel G sensor [integrated in ABS actuator and electric unit (control unit)]
- · ABS actuator and electric unit (control unit)
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(I) With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC5-00" detected?

YES >> Proceed to DAS-500, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286352

1. CHECK SIDE G SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1BC5-00", "U1000-00" or other DTC detected?

YES ("C1BC5-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

C1BC5-00 SIDE G SENSOR

< DTC/CIRCUIT DIAGNOSIS > [CHASSIS CONTROL]

NO >> INSPECTION END

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[CHASSIS CONTROL]

C1BC6-00 PRESSURE SENSOR

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC6-00	PRESSURE SENSOR (Pressure sensor)	When a malfunction is detected in brake fluid pressure system.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- · Chassis control module

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC6-00" detected?

YES >> Proceed to <u>DAS-502</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286354

1. CHECK BRAKE FLUID PRESSURE SYSTEM

With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-58, "DTC Index".

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- 4. Perform "All DTC Reading".

Is DTC "C1BC6-00", "U1000-00" or other DTC detected?

YES ("C1BC6-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES (other DTC)>>Check the DTC.

U1000-00 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1000-00 CAN COMM CIRCUIT

DTC Description

INFOID:0000000011286355

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1000-00	CAN COMM CIRCUIT (CAN communication circuit)	When CAN communication signal is not continuously transmitted or received for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1000-00" detected?

>> Proceed to DAS-503, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286356

Proceed to LAN-24, "Trouble Diagnosis Flow Chart".

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DAS-503 Revision: 2015 January 2015 Q50

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U1010-49 CONTROL MODULE (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1010-49 CONTROL MODULE (CAN)

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1010-49	CONTROL UNIT (CAN) [Control unit (CAN)]	When detecting error during the initial diagnosis of CAN controller of chassis control module.

POSSIBLE CAUSE

- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- · Active trace control function
- Active lane control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(I) With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1010-49" detected?

Y1ES >> Proceed to DAS-504, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286358

2015 Q50

1. CHECK CHASSIS CONTROL MODULE

Check chassis control module harness connector for disconnection and deformation.

Is the inspection result normal?

YES >> Replace chassis control module. Refer to DAS-543, "Removal and Installation".

NO >> Repair or replace error-detected parts.

U1A30-00 DIRECT ADAPTIVE STEERING COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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U1A30-00 DIRECT ADAPTIVE STEERING COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A30-00	DAST COMM (Direct adaptive steering communication)	 When chassis control module is not receiving CAN communication signal (between chassis control module and steering force control module) for 2 seconds or more. When chassis control module is not receiving chassis communication signal (between chassis control module and steering angle main control module) for 2 seconds or more.

POSSIBLE CAUSE

- · Steering force control module
- · Steering angle main control module
- CAN communication line
- Chassis communication line

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- · Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A30-00" detected?

YES >> Proceed to <u>DAS-505</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

(With CONSULT

Revision: 2015 January

- Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"EPS/DAST 3" other than "OK">>GO TO 3.

"DAST 1" other than "OK">>GO TO 4.

DAS-505 2015 Q50

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INFOID:0000000011286360

U1A30-00 DIRECT ADAPTIVE STEERING COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

2.check transmitting side unit

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- 3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)
- 4. Check the chassis control module harness connector terminals No. 8, 11, 7 and 19 for damage or loose connection. (Chassis communication line)

Is the inspection result normal?

YES >> GO TO 7.

NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u>, "<u>Precautions for Harness Repair</u>", and GO TO 7.

3.check steering force control module

- 1. Turn the ignition switch OFF.
- 2. Disconnect steering force control module harness connector.
- 3. Check steering force control module harness connector terminals (CAN communication line) or damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u>, "<u>Precautions for Harness</u> <u>Repair</u>", and GO TO 5.

4. CHECK STEERING ANGLE MAIN CONTROL MODULE

- 1. Turn the ignition switch OFF.
- 2. Disconnect steering angle main control module harness connector.
- 3. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection.

Is the inspection result normal?

YES >> GO TO 6.

NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u>, "<u>Precautions for Harness Repair</u>", and GO TO 6.

5. PFEFORM SELF-DIAGNOSIS (STEERING FORCE CONTROL MODULE)

(With CONSULT

- 1. Connect steering force control module harness connector.
- 2. Erase self-diagnosis result for "EPS/DAST 3".
- 3. Turn the ignition switch OFF and wait for 10 seconds or more.
- 4. Turn the ignition switch ON.
- Perform self-diagnosis for "EPS/DAST 3".

Is DTC detected?

YES >> Check the DTC. Refer to STC-79, "DTC Index".

NO >> GO TO 7.

6.PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE)

()With CONSULT

- 1. Connect steering angle main control module harness connector.
- 2. Erase self-diagnosis result for "DAST 1".
- 3. Turn the ignition switch OFF and wait for 10 seconds or more.
- 4. Turn the ignition switch ON.
- Perform self-diagnosis for "DAST 1".

Is DTC detected?

YES >> Check the DTC. Refer to STC-92, "DTC Index".

NO >> GO TO 7.

7. PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".

U1A30-00 DIRECT ADAPTIVE STEERING COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- Perform "All DTC Reading".

Is DTC "U1000-00", "U1A30-00" or other DTC detected?

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES ("U1A30-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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U1A31-00 DIRECT ADAPTIVE STEERING COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A31-00 DIRECT ADAPTIVE STEERING COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A31-00	DAST COMM (Direct adaptive steering communication)	A calculated signal value differs between a signal transmitted from the steering force control module and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- Steering angle main control module
- · Chassis control module
- CAN communication line
- Chassis communication line

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- · Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A31-00" detected?

YES >> Proceed to <u>DAS-508</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286362

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"DAST 1" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.

U1A31-00 DIRECT ADAPTIVE STEERING COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

connection. (Chassis communication line) the inspection result normal? YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 5. CHECK STEERING ANGLE MAIN CONTROL MODULE Turn the ignition switch OFF. Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector.	DTC/CIRCUIT DIAGNOSIS >	-1
PRES SO TO 5. NO Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 5. CHECK STEERING ANGLE MAIN CONTROL MODULE Turn the ignition switch OFF. Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? PRES SOG TO 4. NO SRecheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? PES SCheck the DTC. NO SGO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? PES ("U1000-00", "U1A31-00" or other DTC detected? PES ("U1000-00")-Refer to LAN-24. "Trouble Diagnosis Flow Chart". PES ("U1031-00")-SRefer to LAN-24. "Trouble Diagnosis Flow Chart".		se
NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 5. CHECK STEERING ANGLE MAIN CONTROL MODULE Turn the ignition switch OFF. Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. .PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00", "U1A31-00" or other DTC detected? YES ("U1001-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart".	the inspection result normal?	
NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 5. CHECK STEERING ANGLE MAIN CONTROL MODULE Turn the ignition switch OFF. Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. .PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF. DTC detected? YES >> Check the DTC. NO >> GO TO 5. .PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00", "U1A31-00" or other DTC detected? YES ("U1001-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Refer to DAS-543, "Removal and Installation".	YES >> GO TO 5.	
Turn the ignition switch OFF. Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. .PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. .PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1031-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1031-00")>> Check the DTC.	NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harne	<u>3S</u>
Turn the ignition switch OFF. Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00", "U1A31-00" or other DTC detected? YES ("U1031-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1A31-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".		
Disconnect steering angle main control module harness connector. Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00", "V1A31-00")>> Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1031-00")>> Check the DTC.	*CHECK STEERING ANGLE MAIN CONTROL MODULE	
Check steering angle main control module harness connector terminals (chassis communication line) or damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. .PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. .PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF. Turn the ignition switch OFF. DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00", "U1A31-00")>> Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1031-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1031-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".		
damage or loose connection. the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. .PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1A31-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".		٥r
the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14. "Precautions for Harness Repair", and GO TO 4. PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>> Refer to LAN-24. "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1A31-00")>> Check the DTC.		JI
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Repair", and GO TO 4. PFEFORM SELF-DIAGNOSIS (STEERING ANGLE MAIN CONTROL MODULE) With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00", "U1A31-00")>> Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1431-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1A31-00")>> Check the DTC.		38
With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>> Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES ("U1A31-00")>> Check the DTC.		<u></u>
With CONSULT Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1A31-00")>> Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>> Check the DTC.		
Connect steering angle main control module harness connector. Erase self-diagnosis result for "DAST 1". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "DAST 1". DTC detected? YES >> Check the DTC. NO >> GO TO 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>> Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>> Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>> Check the DTC.		
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Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC.		
Turn the ignition switch ON. Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC.		
Perform "All DTC Reading". DTC "U1000-00", "U1A31-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A31-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC.		
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YES ("U1000-00")>>Refer to <u>LAN-24, "Trouble Diagnosis Flow Chart"</u> . YES ("U1A31-00")>>Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u> . YES (other DTC)>>Check the DTC.		
YES ("U1A31-00")>>Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u> . YES (other DTC)>>Check the DTC.		
YES (other DTC)>>Check the DTC.		

DAS

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U1A32-00 CAMERA COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A32-00 CAMERA COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A32-00	CAMERA COMM (Camera communication)	When chassis control module is not receiving chassis communication signal (between chassis control module and lane camera unit) for 2 seconds or more.

POSSIBLE CAUSE

- Lane camera unit
- · Chassis control module
- Chassis communication line

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A32-00" detected?

YES >> Proceed to <u>DAS-510</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286364

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

- "TRANSMIT DIAG" is other than "OK">>GO TO 2.
- "LANE CAMERA" other than "OK">>GO TO 3.

- Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 8, 11, 7 and 19 for damage or loose connection.

U1A32-00 CAMERA COMMUNICATION

[CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal? Α YES >> GO TO 5. >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness NO Repair", and GO TO 5. 3. CHECK LANE CAMERA UNIT В Turn the ignition switch OFF. 2. Disconnect lane camera unit harness connector. Check lane camera harness connector terminals (chassis communication line) or damage or loose connection. Is the inspection result normal? D YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 4. Е f 4.PFEFORM SELF-DIAGNOSIS (LANE CAMERA UNIT) With CONSULT Connect lane camera harness connector. F Erase self-diagnosis result for "LANE CAMERA". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "LANE CAMERA". Is DTC detected? YES >> Check the DTC. Refer to DAS-574, "DTC Index". NO >> GO TO 5. ${f 5.}$ PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. 5. Perform "All DTC Reading". Is DTC "U1000-00", "U1A32-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A32-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. >> INSPECTION END NO Ν

DAS

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U1A34-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A34-00 BRAKE CONTROL COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A34-00	BRAKE CONTROL COMM (Brake control communication)	When chassis control module is not receiving CAN communication signal [between chassis control module and ABS actuator and electric unit (control unit)] for 2 seconds or more.

POSSIBLE CAUSE

- · ABS actuator and electric unit (control unit)
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active trace control Function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A34-00" detected?

YES >> Proceed to <u>DAS-512</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286366

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor". of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ABS" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.

U1A34-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.	А
Is the inspection result normal?	
YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 5.	В
3.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)	
 Turn the ignition switch OFF. Disconnect ABS actuator and electric unit (control unit) harness connector. Check ABS actuator and electric unit (control unit) harness connector terminals (CAN communication line) or damage or loose connection. 	C
Is the inspection result normal? YES >> GO TO 4.	
NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness Repair</u> ", and GO TO 4.	Е
4.PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]	
 With CONSULT Connect ABS actuator and electric unit (control unit) harness connector. Erase self-diagnosis result for "ABS". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "ABS". 	G
YES >> Check the DTC. Refer to <u>BRC-58, "DTC Index"</u> . NO >> GO TO 5.	
5. PERFORM SELF-DIAGNOSIS	
 With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". 	J K
Is DTC "U1000-00", "U1A34-00" or other DTC detected?	
YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A34-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. NO >> INSPECTION END	L
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U1A35-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A35-00 BRAKE CONTROL COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A35-00	BRAKE CONTROL COMM (Brake control communication)	A calculated signal value differs between a signal transmitted from the ABS actuator and electric unit (control unit) and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- · ABS actuator and electric unit (control unit)
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- · Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A35-00" detected?

YES >> Proceed to <u>DAS-514</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286368

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

(With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ABS" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.

U1A35-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection	Δ.
tion. <u>Is the inspection result normal?</u>	Α
YES >> GO TO 5.	В
3. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)	
 Turn the ignition switch OFF. Disconnect ABS actuator and electric unit (control unit) harness connector. Check ABS actuator and electric unit (control unit) harness connector terminals (CAN communication line) or damage or loose connection. 	C D
Is the inspection result normal?	
YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to <u>DAS-393</u> , " <u>Precautions for Harness</u> <u>Repair</u> ", and GO TO 4.	Е
4.PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]	
(i) With CONSULT	F
1. Connect ABS actuator and electric unit (control unit) harness connector.	
 Erase self-diagnosis result for "ABS". Turn the ignition switch OFF and wait for 10 seconds or more. 	G
4. Turn the ignition switch ON.	
5. Perform self-diagnosis for "ABS".	Н
Is DTC detected? YES >> Check the DTC. Refer to BRC-58, "DTC Index".	
NO >> GO TO 5.	
5. PERFORM SELF-DIAGNOSIS	I
(i) With CONSULT	
1. Common chacolo control modale namedo conmeden.	J
 Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 	
4. Turn the ignition switch ON.	Κ
5. Perform "All DTC Reading".	
Is DTC "U1000-00", "U1A35-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".	
YES ("U1A35-00")>>Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u> . YES (other DTC)>>Check the DTC.	L
NO >> INSPECTION END	M
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[CHASSIS CONTROL]

U1A36-00 BCM COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A36-00	BCM/IPDM COMM (BCM/IPDM communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and BCM) for 2 seconds or more.

POSSIBLE CAUSE

- BCM
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A36-00" detected?

YES >> Proceed to <u>DAS-516</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286370

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"BCM" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

U1A36-00 BCM COMMUNICATION

[CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal? Α YES >> GO TO 5. >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness NO Repair", and GO TO 5. 3.CHECK BCM В Turn the ignition switch OFF. Disconnect BCM harness connector. Check BCM harness connector terminals (CAN communication line) or damage or loose connection. Is the inspection result normal? YES >> GO TO 4. D >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness NO Repair", and GO TO 4. 4.PFEFORM SELF-DIAGNOSIS (BCM) Е With CONSULT Connect BCM harness connector. Erase self-diagnosis result for "BCM". F Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "BCM". Is DTC detected? YES >> Check the DTC. Refer to BCS-62, "DTC Index". NO >> GO TO 5. Н 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 3. Turn the ignition switch ON. Perform "All DTC Reading". Is DTC "U1000-00", "U1A36-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A36-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. NO >> INSPECTION END

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U1A39-00 COMBINATION METER COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A39-00 COMBINATION METER COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A39-00	COMBINATION METER COMM (Combination meter communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and combination meter) for 2 seconds or more.

POSSIBLE CAUSE

- Combination meter
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A39-00" detected?

YES >> Proceed to <u>DAS-518</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286372

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"METER/M&A" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

U1A39-00 COMBINATION METER COMMUNICATION

[CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal? Α YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 5. 3. CHECK COMBINATION METER В Turn the ignition switch OFF. 2. Disconnect combination meter harness connector. Check combination meter harness connector terminals (CAN communication line) or damage or loose connection. Is the inspection result normal? D YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 4. Е 4. PFEFORM SELF-DIAGNOSIS (COMBINATION METER) With CONSULT Connect combination meter harness connector. F Erase self-diagnosis result for "MATER/M&A". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "METER/M&A". Is DTC detected? YES >> Check the DTC. Refer to MWI-80, "DTC Index". NO >> GO TO 5. ${f 5.}$ PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. 5. Perform "All DTC Reading". Is DTC "U1000-00", "U1A39-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A39-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. >> INSPECTION END NO Ν

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[CHASSIS CONTROL]

U1A3B-00 TCM COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3B-00	TCM COMM (TCM communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and TCM) for 2 seconds or more.

POSSIBLE CAUSE

- TCM
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A3B-00" detected?

YES >> Proceed to <u>DAS-520</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286374

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"TRANSMISSION" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

U1A3B-00 TCM COMMUNICATION	
< DTC/CIRCUIT DIAGNOSIS > [CHASSIS CONTROL]	
Is the inspection result normal?	
YES >> GO TO 5.	4
NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness</u> <u>Repair</u> ", and GO TO 5.	
3.CHECK TCM	
1. Turn the ignition switch OFF.	
2. Disconnect TCM harness connector.	
3. Check TCM harness connector terminals (CAN communication line) or damage or loose connection.	,
Is the inspection result normal? YES >> GO TO 4.	
NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness</u>	
Repair", and GO TO 4.	
4.PFEFORM SELF-DIAGNOSIS (TCM)	
With CONSULT	
1. Connect TCM harness connector.	
 Erase self-diagnosis result for "TRANSMISSION". Turn the ignition switch OFF and wait for 10 seconds or more. 	
4. Turn the ignition switch ON.	
5. Perform self-diagnosis for "TRANSMISSION".	(
<u>Is DTC detected?</u> YES >> Check the DTC. Refer to <u>TM-84, "DTC Index"</u> .	
NO >> GO TO 5.	
5.PERFORM SELF-DIAGNOSIS	
(i)With CONSULT	
1. Connect chassis control module harness connector.	
 Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 	
4. Turn the ignition switch ON.	
5. Perform "All DTC Reading".	
Is DTC "U1000-00", "U1A3B-00" or other DTC detected?	
YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A3B-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".	
YES (other DTC)>>Check the DTC.	
NO >> INSPECTION END	

DAS

[CHASSIS CONTROL]

U1A3D-00 ADAS COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3D-00	ADAS COMM (Advanced Driver Assistance system communication)	 When chassis control module is not receiving CAN communication signal (between chassis control module and ADAS control unit) for 2 seconds or more. When chassis control module is not receiving chassis communication signal (between chassis control module and ADAS control unit) for 2 seconds or more.

POSSIBLE CAUSE

- ADAS control unit
- · Chassis control module
- Chassis communication line
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A3D-00" detected?

YES >> Proceed to <u>DAS-522</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286376

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ICC/ADAS" other than "OK">>GO TO 3.

- Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.

U1A3D-00 ADAS COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

YES (other DTC)>>Check the DTC.

>> INSPECTION END

NO

[CHASSIS CONTROL]

C DTC/CIRCUIT DIAGNOSIS >	
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)	-
 Check the chassis control module harness connector terminals No. 8, 11, 7 and 19 for damage or loose connection. (Chassis communication line) 	
Is the inspection result normal?	
YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14. "Precautions for Harness Repair"</u> , and GO TO 5.	<u>i</u>
3. CHECK ADAS CONTROL UNIT	
 Turn the ignition switch OFF. Disconnect ADAS control unit harness connector. Check ADAS control unit harness connector terminals (CAN communication line and chassis communication line) or damage or loose connection. 	-
Is the inspection result normal?	
YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14, "Precautions for Harness Repair"</u> , and GO TO 4.	<u>i</u>
4.PFEFORM SELF-DIAGNOSIS (ADAS CONTROL UNIT)	
With CONSULT 1. Connect ADAS control unit harness connector.	_
 Erase self-diagnosis result for "ICC/ADAS". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "ICC/ADAS". 	
Is DTC detected? YES >> Check the DTC. Refer to DAS-45, "DTC Index". NO >> GO TO 5.	
5.PERFORM SELF-DIAGNOSIS	
(i) With CONSULT	-
 Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 	
 Turn the ignition switch ON. Perform "All DTC Reading". 	
Is DTC "U1000-00", "U1A3D-00" other DTC detected?	
YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".	

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YES ("U1A3D-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

U1A3E-00 ADAS COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3E-00	ADAS COMM (Advanced Driver Assistance system communication)	 A calculated signal value differs between a signal transmitted from the ADAS control unit and a signal received from chassis control module via CAN communication. A calculated signal value differs between a signal transmitted from the ADAS control unit and a signal received from chassis control module via chassis communication.

POSSIBLE CAUSE

- ADAS control unit
- · Chassis control module
- Chassis communication line
- CAN communication line

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A3E-00" detected?

YES >> Proceed to <u>DAS-524</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286378

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

(With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ICC/ADAS" other than "OK">>GO TO 3.

- Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)
- 4. Check the chassis control module harness connector terminals No. 8, 11, 7 and 19 for damage or loose connection. (Chassis communication line)

U1A3E-00 ADAS COMMUNICATION

[CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal? Α YES >> GO TO 5. >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness NO Repair", and GO TO 5. 3.CHECK ADAS CONTROL UNIT В Turn the ignition switch OFF. 2. Disconnect ADAS control unit harness connector. 3. Check ADAS control unit harness connector terminals (CAN communication line) or damage or loose connection. Is the inspection result normal? D YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 4. Е 4.PFEFORM SELF-DIAGNOSIS (ADAS CONTROL UNIT) With CONSULT Connect ADAS control unit harness connector. F Erase self-diagnosis result for "ICC/ADAS". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "ICC/ADAS". Is DTC detected? YES >> Check the DTC. Refer to DAS-45, "DTC Index". NO >> GO TO 5. ${f 5.}$ PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. 5. Perform "All DTC Reading". Is DTC "U1000-00", "U1A3E-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A3E-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. >> INSPECTION END NO Ν

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[CHASSIS CONTROL]

U1A3F-00 AV COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3F-00	AV COMM (AV communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and display control unit) for 30 seconds or more.

POSSIBLE CAUSE

- · Display control unit
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A3F-00" detected?

YES >> Proceed to DAS-526, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286380

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"MALTI AV" other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

- Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.

U1A3F-00 AV COMMUNICATION

[CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 5. 3. CHECK DISPLAY CONTROL UNIT Turn the ignition switch OFF. Disconnect display control unit harness connector. 2. Check display control unit harness connector terminals (CAN communication line) or damage or loose connection. Is the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 4. 4.PFEFORM SELF-DIAGNOSIS (DISPLAY CONTROL UNIT) With CONSULT 1. Connect display control unit harness connector. Erase self-diagnosis result for "MALTI AV". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "MALTI AV". Is DTC detected? YES >> Check the DTC. Refer to AV-89, "DTC Index". NO >> GO TO 5. 5.PERFORM SELF-DIAGNOSIS With CONSULT 1. Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 4. Turn the ignition switch ON. Perform "All DTC Reading". Is DTC "U1000-00", "U1A3F-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A3F-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A42-00	STEERING ANGLE SENSOR COMM (Steering angle sensor communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and steering angle sensor) for 2 seconds or more.

POSSIBLE CAUSE

- Steering angle sensor
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A42-00" detected?

YES >> Proceed to DAS-528, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286382

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"STRG" other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

- Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection

Is the inspection result normal?

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION	
< DTC/CIRCUIT DIAGNOSIS > [CHASSIS CONTROL]	
YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness Repair</u> ", and GO TO 5.	Α
3.CHECK STEERING ANGLE SENSOR	
 Turn the ignition switch OFF. Disconnect steering angle sensor harness connector. Check steering angle sensor harness connector terminals (CAN communication line) or damage or loose connection. 	В
Is the inspection result normal?	
YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness</u> <u>Repair</u> ", and GO TO 4.	D
4.PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]	
₩ith CONSULT	Е
 Connect steering angle sensor harness connector. Erase self-diagnosis result for "ABS". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. 	F
5. Perform self-diagnosis for "ABS".	G
Is DTC detected? YES >> Check the DTC. Refer to BRC-58, "DTC Index". NO >> GO TO 5. 5.PERFORM SELF-DIAGNOSIS	Н
 With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 	I
 Turn the ignition switch ON. Perform "All DTC Reading". 	J
Is DTC "U1000-00", "U1A42-00" other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".	K
YES ("U1A42-00")>>Replace the chassis control module. Refer to <u>DAS-543, "Removal and Installation"</u> . YES (other DTC)>>Check the DTC. NO >> INSPECTION END	1 \
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U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A43-00	STEERING ANGLE SENSOR COMM (Steering angle sensor communication)	A calculated signal value differs between a signal transmitted from the steering angle sensor and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- Steering angle sensor
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A43-00" detected?

YES >> Proceed to DAS-530, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286384

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"STRG" other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

- Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

Is the inspection result normal?

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION	
< DTC/CIRCUIT DIAGNOSIS > [CHASSIS CONTROL]	
YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness</u> <u>Repair</u> ", and GO TO 5.	Α
3.CHECK STEERING ANGLE SENSOR	
 Turn the ignition switch OFF. Disconnect steering angle sensor harness connector. Check steering angle sensor harness connector terminals (CAN communication line) or damage or loose connection. 	В
Is the inspection result normal?	
YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u> , " <u>Precautions for Harness</u> <u>Repair</u> ", and GO TO 4.	D
$oldsymbol{4}.$ PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]	_
With CONSULT	Е
 Connect steering angle sensor harness connector. Erase self-diagnosis result for "ABS". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "ABS". 	F
Is DTC detected?	G
YES >> Check the DTC. Refer to BRC-58, "DTC Index". NO >> GO TO 5. 5.PERFORM SELF-DIAGNOSIS	Н
 With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 	I
4. Turn the ignition switch ON.5. Perform "All DTC Reading".	J
Is DTC "U1000-00", "U1A43-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A43-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC.	K
NO >> INSPECTION END	L
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U1A45-00 DRIVER ASSISTANCE BUZZER COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A45-00 DRIVER ASSISTANCE BUZZER COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A45-00	DR BUZZER COMM (Driver assistance buzzer commu- nication)	When chassis control module is not receiving CAN communication signal (between chassis control module and ADAS control unit) and ITS communication signal (between ADAS control unit and driver assistance buzzer control module) for 2 seconds or more.

POSSIBLE CAUSE

- Driver assistance buzzer control module
- ADAS control unit
- · Chassis control module
- ITS communication line
- Chassis communication line
- CAN communication line

FAIL-SAFE

The following functions are suspended.

· Active lane control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A45-00" detected?

YES >> Proceed to <u>DAS-532, "Diagnosis Procedure"</u>.

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286386

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- 1. Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ICC/ADAS" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.

U1A45-00 DRIVER ASSISTANCE BUZZER COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. Α Is the inspection result normal? YES >> GO TO 6. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 6. 3. CHECK ADAS CONTROL UNIT Turn the ignition switch OFF. Disconnect ADAS control unit harness connector. 3. Check ADAS control unit harness connector terminals (CAN communication line) or damage or loose con-D 4. Check ADAS control unit harness connector terminals (ITS communication line) or damage or loose connection. Is the inspection result normal? Е YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 4. F 4. CHECK DRIVER ASSISTANCE BUZZER Disconnect driver assistance buzzer harness connector. 2. Check driver assistance buzzer harness connector terminals (ITS CAN communication line) or damage or loose connection. Is the inspection result normal? Н YES >> GO TO 5. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 5. 5.PFEFORM ADAS CONTROL UNIT (■)With CONSULT Connect driver assistance buzzer harness connector. 1. Connect ADAS control unit harness connector. Erase self-diagnosis result for "ICC/ADAS". 4. Turn the ignition switch OFF and wait for 10 seconds or more. 5. Turn the ignition switch ON. 6. Perform self-diagnosis for "ICC/ADAS". Is DTC detected? YES >> Check the DTC. Refer to DAS-45, "DTC Index". NO >> GO TO 6. O.PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. 1. Erase self-diagnosis result for "CHASSIS CONTROL". Ν 3. Turn the ignition switch OFF and wait for 10 seconds or more. 4. Turn the ignition switch ON. 5. Perform "All DTC Reading".

Is DTC "U1000-00", "U1A45-00" or other DTC detected?

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES ("U1A45-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES (other DTC)>>Check the DTC.

>> INSPECTION END NO

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[CHASSIS CONTROL]

U1A48-00 ECM COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A48-00	ECM/HPCM COMM (ECM/HPCM communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and ECM) for 2 seconds or more.

POSSIBLE CAUSE

- ECM
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- LDW function
- LDP function
- Blind spot intervention function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A48-00" detected?

YES >> Proceed to <u>DAS-534</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286388

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- Select and "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

- "TRANSMIT DIAG" is other than "OK">>GO TO 2.
- "ENGINE" other than "OK">>GO TO 3.

- 1. Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

U1A48-00 ECM COMMUNICATION

[CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > Is the inspection result normal? Α YES >> GO TO 5. >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness NO Repair", and GO TO 5. 3.CHECK ECM В Turn the ignition switch OFF. Disconnect ECM harness connector. Check ECM harness connector terminals (CAN communication line) or damage or loose connection. Is the inspection result normal? YES >> GO TO 4. D >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness NO Repair", and GO TO 4. 4.PFEFORM SELF-DIAGNOSIS (ECM) Е With CONSULT Connect ECM harness connector. Erase self-diagnosis result for "ENGINE". F Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "ENGINE". Is DTC detected? YES >> Check the DTC. Refer to EC-108, "DTC Index". NO >> GO TO 5. Н 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. 3. Turn the ignition switch ON. Perform "All DTC Reading". Is DTC "U1000-00", "U1A48-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A48-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. NO >> INSPECTION END

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U1A4A-00 CONTROL MODULE (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A4A-00 CONTROL MODULE (CAN)

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4A-00	CONTROL MODULE (CAN) [Control module (CAN)]	When a malfunction is detected in chassis control module (transmission via CAN communication is impossible) When a malfunction is detected in chassis control module (transmission via chassis communication is impossible)

POSSIBLE CAUSE

· Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active lane control function
- LDW function
- LDP function
- Blind spot intervention function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4A-00" detected?

YES >> Proceed to DAS-536, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286390

1.PERFORM SELF-DIAGNOSIS

With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4A-00" detected?

YES >> Replace the chassis control module. Refer to <u>DAS-543</u>, "Removal and Installation".

NO >> INSPECTION END

U1A4B-00 CONTROL MODULE (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A4B-00 CONTROL MODULE (CAN)

DTC Description

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4B-00	CONTROL MODULE (CAN) [Control module (CAN)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

· Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active lane control function
- Infiniti InTuition function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4B-00" detected?

YES >> Proceed to DAS-537, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286392

1. PERFORM SELF-DIAGNOSIS

(With CONSULT

- 1. Erase self-diagnosis result for "CHASSIS CONTROL".
- 2. Turn the ignition switch OFF and wait for 10 seconds or more.
- 3. Turn the ignition switch ON.
- 4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4B-00" detected?

YES >> Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

NO >> INSPECTION END

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U1A4C-00 A/C AUTO AMP. COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A4C-00 A/C AUTO AMP. COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4C-00	A/C AUTO AMP. COMM (A/C auto amp. communication)	When chassis control module is receiving CAN communication signal (between chassis control module and A/C auto amp.) for 2 seconds or more.

POSSIBLE CAUSE

- A/C auto amp.
- · Chassis control module
- CAN communication line

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4C-00" detected?

YES >> Proceed to <u>DAS-538</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286394

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"HVAC" other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u>, "<u>Precautions for Harness Repair</u>", and GO TO 5.

3.CHECK A/C AUTO AMP.

1. Turn the ignition switch OFF.

U1A4C-00 A/C AUTO AMP. COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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2.	Disconnect A/C auto an	np. narness connector.

 Check A/C auto amp. harness connector terminals (CAN communication line) or damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Recheck terminals for damage or loose connection. Refer to <u>LAN-14</u>, "<u>Precautions for Harness</u> Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (A/C AUTO AMP.)

(With CONSULT

- 1. Connect A/C auto amp. harness connector.
- 2. Erase self-diagnosis result for "HVAC".
- 3. Turn the ignition switch OFF and wait for 10 seconds or more.
- 4. Turn the ignition switch ON.
- 5. Perform self-diagnosis for "HVAC".

Is DTC detected?

YES >> Check the DTC. Refer to HAC-37, "DTC Index".

NO >> GO TO 5.

PERFORM SELF-DIAGNOSIS

(With CONSULT

- Connect chassis control module harness connector.
- 2. Erase self-diagnosis result for "CHASSIS CONTROL".
- 3. Turn the ignition switch OFF and wait for 10 seconds or more.
- 4. Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1000-00", "U1A4C-00" or other DTC detected?

YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart".

YES ("U1A4C-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation".

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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[CHASSIS CONTROL]

U1A4E-00 ECM COMMUNICATION

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4E-00	ECM/HPCM COMM (ECM/HPCM communication)	A calculated signal value differs between a signal transmitted from the ECM and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- ECM
- · Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

Active trace control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4E-00" detected?

YES >> Proceed to DAS-540, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286396

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

- Select "CAN Diagnosis Support Monitor" of "CHASSIS CONTROL".
- 2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to GI-42, "Intermittent Incident".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ENGINE" other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect chassis control module harness connector.
- Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.

U1A4E-00 ECM COMMUNICATION [CHASSIS CONTROL] < DTC/CIRCUIT DIAGNOSIS > NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 5. Α 3. CHECK ECM Turn the ignition switch OFF. В Disconnect ECM harness connector. 2. Check ECM harness connector terminals (CAN communication line) or damage or loose connection. Is the inspection result normal? YES >> GO TO 4. NO >> Recheck terminals for damage or loose connection. Refer to LAN-14, "Precautions for Harness Repair", and GO TO 4. D 4.PFEFORM SELF-DIAGNOSIS (ECM) With CONSULT 1. Connect ECM harness connector. Е Erase self-diagnosis result for "ENGINE". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform self-diagnosis for "ENGINE". Is DTC detected? YES >> Check the DTC. Refer to EC-108, "DTC Index". NO >> GO TO 5. 5. PERFORM SELF-DIAGNOSIS With CONSULT Connect chassis control module harness connector. Erase self-diagnosis result for "CHASSIS CONTROL". Turn the ignition switch OFF and wait for 10 seconds or more. Turn the ignition switch ON. Perform "All DTC Reading". Is DTC "U1000-00", "U1A4E-00" or other DTC detected? YES ("U1000-00")>>Refer to LAN-24, "Trouble Diagnosis Flow Chart". YES ("U1A4E-00")>>Replace the chassis control module. Refer to DAS-543, "Removal and Installation". YES (other DTC)>>Check the DTC. >> INSPECTION END NO

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

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1. CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY

- 1. Turn the ignition switch OFF.
- Disconnect chassis control module harness connector.
- 3. Check the voltage between chassis control module harness connector and ground.

Chassis co	ntrol module		Voltage
Connector	Terminal		voltage
E22	10	Ground	Approx. 0 V

Turn the ignition switch ON

CAUTION:

Never start the engine.

5. Check the voltage between chassis control module harness connector and ground.

Chassis co	ntrol module		Voltage
Connector	Terminal		vollage
E22	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

2. CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY CIRCUIT

- 1. Turn the ignition switch OFF.
- Check the 10A fuse (#12).
- Check the continuity and short circuit between chassis control module harness connector terminal (10) and 10A fuse (#12).

Is the inspection result normal?

YES >> Perform trouble diagnosis for ignition power supply.

${f 3.}$ CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

Check the continuity between chassis control module harness connector and ground.

Chassis co	ntrol module		Continuity
Connector	Terminal		Continuity
E22	12	Ground	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace error-detected parts.

4. CHECK TERMINAL

Check the chassis control module pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace error-detected parts.

[CHASSIS CONTROL]

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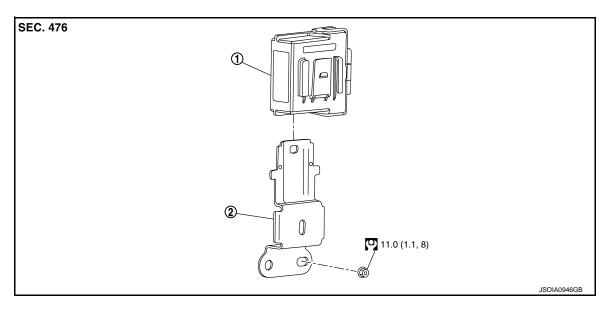
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REMOVAL AND INSTALLATION

CHASSIS CONTROL MODULE

Exploded View



Chassis control module

② Bracket



Removal and Installation

INFOID:0000000011286399

REMOVAL

CAUTION:

When replacing chassis control module, configuration of chassis control module is required. Refer to DAS-435, "Work Procedure".

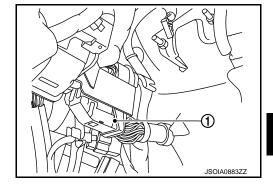
NOTE:

If the chassis control module is replaced, user registration information is erased, and all setting items for Infiniti InTuition related parts are erased.

- Remove the parking brake pedal assembly. Refer to PB-9, "Removal and Installation".
- 2. Separate the harness connector (1).
- 3. Remove the chassis control module.

CAUTION:

Never drop the chassis control module.



INSTALLATION

Note the following, install in the reverse order of removal.

- When replacing the chassis control module, be sure to perform the configuration of chassis control module.
 Refer to <u>DAS-435</u>, "Work <u>Procedure"</u>.
- After replace the chassis control module, depress brake pedal and check that the stop lamp turns ON.

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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with
 a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
 serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing Battery Terminal

INFOID:0000000011519925

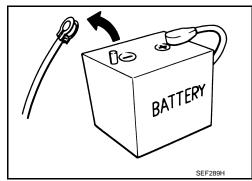
 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
 NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
 NOTE:

The removal of 12V battery may cause a DTC detection error.

Precautions For Harness Repair

INFOID:0000000011286401

Twisted pair line is used for communication lines. Be careful when repairing communication lines.

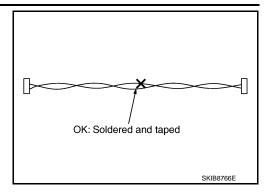
PRECAUTIONS

< PRECAUTION >

[ACTIVE LANE CONTROL]

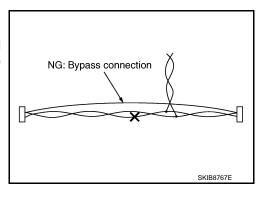
Solder the repaired area and wrap tape around the soldered area.
 NOTE:

A fray of twisted lines must be within 110 mm (4.33 in).



Bypass connection is never allowed at the repaired area.
 NOTE:

Bypass connection may cause communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



Precaution for Active Lane Control Service

INFOID:0000000011286402

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test. **CAUTION**:

- Never use the Active Lane Control when driving with free rollers or a chassis dynamometer.
- · Never perform the active test while driving.
- Never disassemble and remodel the lane camera unit.
- Do not use the lane camera unit that is removed from the vehicle.

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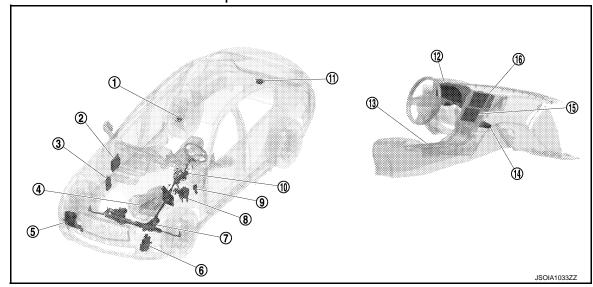
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SYSTEM DESCRIPTION

COMPONENT PARTS ACTIVE LANE CONTROL

ACTIVE LANE CONTROL: Component Parts Location

INFOID:0000000011286403



No.	Component	Function
1	Lane camera unit	Refer to DAS-547, "Lane Camera Unit".
2	Steering force control module	 Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module. Receives steering reaction force request signal and controls the steering reaction force. For the details of the location, refer to STC-36, "Component Parts Location".
3	ВСМ	 Transmits turn indicator signal and front wiper request signal to chassis control module via CAN communication. For the details of the location, refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location".
4	тсм	Transmits the signal related to A/T control to chassis control module via CAN communication.
(5)	Steering angle sub control module	 Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module. Receives steering angle request signal and controls the steering angle. For the details of the location, refer to STC-36, "Component Parts Location".
6	Steering angle main control module	 Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module. Receives steering angle request signal and controls the steering angle. For the details of the location, refer to STC-36. "Component Parts Location".
7	Steering gear assembly (Steering angle actuator)	Drives steering gear depending on the control signal from Direct Adaptive Steering.
8	ABS actuator and electric unit (control unit)	 Transmits the vehicle speed signal (wheel speed) to chassis control module via CAN communication. Transmits the yaw rate signal and side G sensor signal to chassis control module via CAN communication. For the details of the location, refer to BRC-10. "Component Parts Location".
9	Chassis control module	 Performs Active Lane Control based on the detected lane condition signal received from lane camera unit and each signal received from each unit. For the details of the location, refer to <u>DAS-394</u>, "Component Parts Location".

COMPONENT PARTS

< SYSTEM DESCRIPTION >

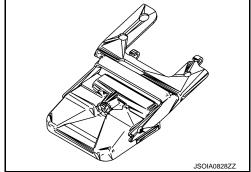
[ACTIVE LANE CONTROL]

No.	Component	Function
10	Steering column assembly (Steering force actuator)	Drives reaction force depending on the control signal from Direct Adaptive Steering.
11)	ADAS control unit	 Transmits LDP ON signal to chassis control module via chassis communication. For the details of the location, refer to <u>DAS-165</u>, "Component Parts Location".
12	Combination meter	Receives master warning signal and ALC system display signal to chassis control module via CAN communication to display the system on the information display.
13	Drive mode select switch Inputs drive mode select switch signal to chassis control module.	
14)	A/C auto amp. • Transmits ambient temperature signal to chassis control module via CAN commodation. • For the details of the location, refer to HAC-5 , "AUTOMATIC AIR CONDITIONIN SYSTEM: Component Parts Location".	
15)	Integral switch	Changes setting of Active Lane Control and transmits the setting information to the display control unit.
16	Display control unit	 Transmits the setting state of Active Lane Control to chassis control module via CAN communication. For the details of the location, refer to <u>AV-14</u>, "Component Parts Location".

Lane Camera Unit

• Lane camera unit is located above the inside mirror and detects the lane marker in travel lane.

• Transmits lane marker signal to chassis control module via chassis communication.



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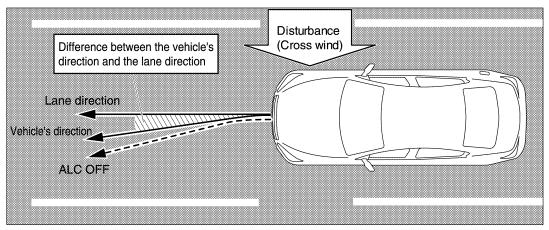
ACTIVE LANE CONTROL

ACTIVE LANE CONTROL: System Description

INFOID:0000000011286405

OUTLINE

- Active Lane Control enables the driver to make fewer steering corrections on freeways.
- Active Lane Control slightly corrects front tire angles and steering wheel torque to reduce the difference between the vehicle's direction and the lane direction which is detected by using the lane camera unit located above the inside mirror.



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NOTE:

- For the details of "Direct Adaptive Steering", Refer to <u>STC-41, "DIRECT ADAPTIVE STEERING: System Description".</u>
- Active Lane Control can be set to ON (enabled) or OFF (disabled). Refer to <u>DAS-556</u>, "ACTIVE LANE CONTROL: Menu Displayed by Pressing Each Switch".

OPERATION DESCRIPTION

- · Active Lane Control is controlled by chassis control module.
- Lane camera unit monitors lane markers of the traveling lane. It transmits the detected lane condition signal
 to chassis control module via chassis communication.
- Chassis control module calculates the difference between the vehicle's direction and the lane direction based on lane condition signal. And transmits steering angle request signal and steering reaction force request signal to steering angle main control module via chassis communication. In addition, transmits ALC system display signal to combination meter via CAN communication.
- Direct Adaptive Steering* corrects the control of steering angle and steering reaction force depending on received steering angle request signal and steering reaction force request signal.
- *: Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module.
- Combination meter displays operating conditions in information display depending on received ALC system display signal.

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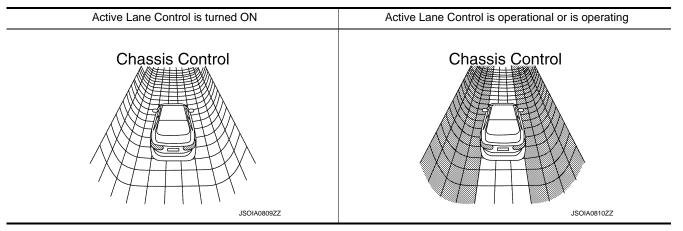
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OPARATING AND CANCELLATION CONDITION

Item	Operating condition (When all of the following conditions are satisfied)	Cancellation condition (When any of the following conditions is satisfied)
LDP system setting	ON	OFF
Active Lane Control setting	ON	OFF
Vehicle speed	Approx. 70 km/h (45 MPH) or more	Less than approx. 70 km/h (45 MPH)
Direct Adaptive Steering	The control is admitted.	The control is prohibited.
Lane marker detection	Both side lane markers are being detected.Driving in lane	Both side lane markers are lost.
Road curvature	Approx. R200 m (656 ft) or more	Less than approx. R200 m (656 ft)
VDC, EBD, ABS	Not operating	Operating
Lane camera temperature	Normal	High
VDC OFF switch	OFF	ON
Turn signal	After 2 seconds or more from turned OFF	Turned ON

NOTE:

- The effort of Active Lane Control gradually functions on approximately 80 km/h (50 MPH) from approximately 70 km/h (45 MPH).
- When all of the above conditions are satisfied after cancellation again, the system will resume operation automatically.
- Active Lane Control may not function properly, depending on the situation. Refer to <u>DAS-557</u>, "<u>Precautions</u> for Active Lane Control".

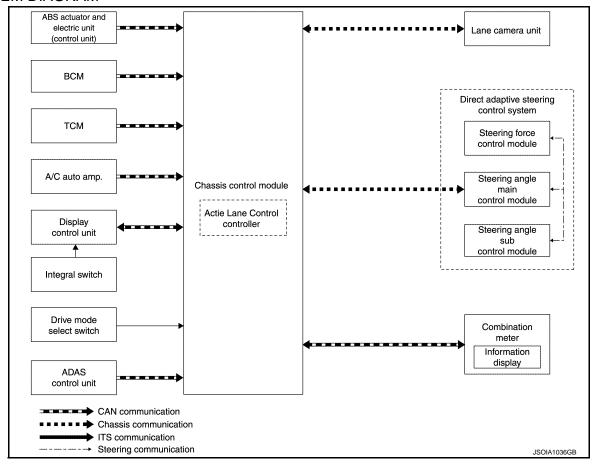
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SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL ITEM

[ACTIVE LANE CONTROL]

Reception unit	Transmit unit		Signal name	Description	
	Lane camera	Chassis .	Detected lane condition signal	Receives detection results of lane marker	
	unit	communi- cation	Lane camera unit condition signal	Receives lane camera unit condition	
			Direct adaptive steering status signal	Receives status of Direct Adaptive Steerin	
	Steering angle main control	Chassis communi- cation	Direct adaptive steering malfunction signal	Receives a malfunction state of Direct Adaptive Steering	
	module		Steering force actuator status signal	Receives torque state of steering force ac tuator.	
			ALC permission signal	Receives a permission state of the ALC.	
			ABS malfunction signal	Receives a malfunction state of ABS	
			ABS operation signal	Receives an operational state of ABS	
			VDC OFF switch signal	Receives an ON/OFF state of VDC	
			VDC malfunction signal	Receives a malfunction state of VDC	
	ABS actuator	CAN com-	VDC operation signal	Receives an operational state of VDC	
	and electric unit (control unit)	munication	EBD operation signal	Receives an operational state of EBD	
Chassis control			Vehicle speed signal (ABS)	Receives wheel speeds of front wheels	
module			Yaw rate signal	Receives yaw rate acting on the vehicle	
			Side G sensor signal	Receives lateral G acting on the vehicle	
			Stop lamp switch	Receives stop lamp switch state	
	BCM	CAN com- munication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp	
			Front wiper request signal	Receives an operational state of the front wiper	
	ТСМ	CAN com- munication	Shift position signal	Receives a selector lever position	
	A/C auto amp.	CAN com- munication	Ambient temperature signal	Receives an ambient temperature	
	Display control unit	CAN com- munication	System selection signal	Receives a selection state of each item in "Driver Assistance"	
ADA unit	ADAS control unit	Chassis communi- cation	LDP ON signal	Receives an ON/OFF state of LDP	
	Drive mode se- lect switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.	
Steering angle		Chassis	Steering angle request signal	Transmits steering angle request signal	
main control module		communi- cation	Steering reaction force request signal	Transmits steering reaction force request signal	
Lane camera unit	Chassis control module	Chassis communi- cation	Vehicle speed signal	Receives a vehicle speed calculated by the chassis control module	
			Snow mode signal	Receives a snow mode signal selected in the drive mode select switch.	
			Turn indicator signal	Receives a turn indicator signal received from BCM	
Combination		CAN com-	Master warning signal	Transmits master warning signal to indicate.	
meter			munication	ALC system display signal	Transmits a signal to display a state of the system on the information display

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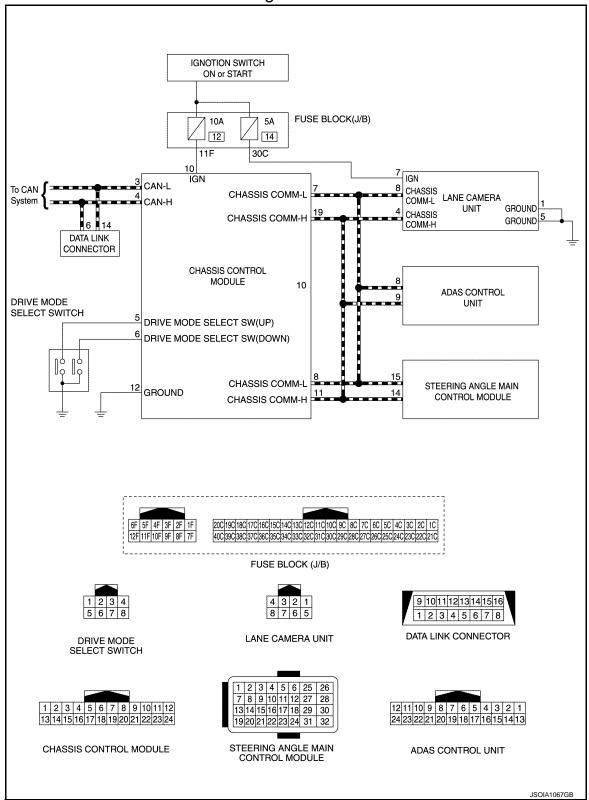
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ACTIVE LANE CONTROL: Circuit Diagram

INFOID:0000000011286406



ACTIVE LANE CONTROL: Fail-Safe (Chassis Control Module)

INFOID:0000000011286407

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

[ACTIVE LANE CONTROL]

DTC	Vehicle condition	A
C1B90-00	The following functions are suspended.	
	Active lane control function	
C1B91-00	LDW functionLDP function	В
	Blind spot intervention function	
	The following functions are suspended.	
	Active trace control function	С
C1B92-00	Active lane control function	
C1B92-00	LDW function	
	LDP function Right and interpretion function	D
	Blind spot intervention function	
C1B93-00	The following functions are suspended. • Active trace control function	
	LDW function	Е
C1B94-00	• LDP function	
	Blind spot intervention function	
	The following functions are suspended.	F
	Active trace control function	
	Active lane control function Active lane control function	
C1B95-00	LDW function LDP function	
	Blind spot intervention function	
	Infiniti InTuition function	
	Intelligent cruise control function	
	The following functions are suspended.	
C1B96-00	LDW function LDP function	
C1B96-00	Blind spot intervention function	
	Intelligent cruise control function	
C1B98-00	Normal control	
	The following functions are suspended.	
	Active trace control function	
	Active lane control function	
C1B99-00	LDW functionLDP function	ŀ
	Blind spot intervention function	
	Infiniti InTuition function	
C1BA0-00	The following functions are suspended.	
C1BA2-00	Active trace control function	
C1BA5-00	Normal control	
CTBA5-00		
C1BA6-00	The following functions are suspended. • Infiniti InTuition function	
		
C1BA7-00	The following functions are suspended. • Active lane control function	1
C1BA9-00	The following functions are suspended.	
3.2, 10 00	LDW function	
C1BAA-00	LDP function	D
	Blind spot intervention function	
C1BAB-00	The following functions are suspended.	
	Active trace control function	
C1BAC-00	The following functions are suspended.	
C1BAD-00	LDP function	
C1BAE-00	Blind spot intervention function	
	The following functions are suspended.	
0.45.45.55		
C1BAF-00	Blind spot intervention function	

< SYSTEM DESCRIPTION >

DTC	Vehicle condition
C1BB2-00	The following functions are suspended.
C1BB3-00	Active trace control function Active lane control function
C1BB4-00	LDW function
	LDP function
C1BB5-00	Blind spot intervention functionInfiniti InTuition function
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended.
C1BB8-00	Active trace control function Active lane control function
C1BB9-00	LDW function
C1BBA-00	LDP function Blind spot intervention function
C1BBB-00	Infiniti InTuition function
C1BBC-00	Normal control
C1BBD-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function
C1BC0-00	The following functions are suspended.
C1BC1-00	 Active trace control function Active lane control function
C1BC2-00	The following functions are suspended.
C1BC3-00	Active trace control function
C1BC4-00	Normal control
C1BC5-00	
C1BC6-00	The following functions are suspended. • Active trace control function
U1000-00	Active trace control function
U1010-49	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-00	The following functions are suspended.
U1A31-00	Active lane control function LDW function
U1A32-00	LDP function Blind spot intervention function
U1A34-00	The following functions are suspended.
U1A35-00	 Active trace control function Active lane control function LDW function LDP function Blind spot intervention function
U1A36-00	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-00	The following functions are suspended. LDW function LDP function Blind spot intervention function

SYSTEM

< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

DTC	Vehicle condition	0
U1A3B-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function	В
U1A3D-00	The following functions are suspended. LDW function LDP function Blind spot intervention function	C
U1A3E-00	Normal control	
U1A3F-00	The following functions are suspended. • Infiniti InTuition function	
U1A42-00	The following functions are suspended.	Е
U1A43-00	Active trace control function	
U1A45-00	The following functions are suspended. • Active lane control function	F
U1A48-00	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function	C
U1A4A-00	The following functions are suspended. Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function	ŀ
U1A4B-00	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function	
U1A4C-00	Normal control	ŀ
U1A4E-00	The following functions are suspended. • Active trace control function	1

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OPERATION

ACTIVE LANE CONTROL

ACTIVE LANE CONTROL: Menu Displayed by Pressing Each Switch

INFOID:0000000011286408

DESCRIPTION

Active Lane Control can be set to ON (enabled) or OFF (disabled) on the integral switch screen. In addition, function level (Low / High) can be set.

- · Low: Small steering feedback to aid lane tracking
- High: Additional steering feedback to aid lane tracking

NOTF:

- When Lane departure prevention (LDP) is turned OFF, Active Lane Control is turned OFF automatically.
- Also, when Lane departure prevention (LDP) is canceled by the following conditions, Active Lane Control is turned OFF automatically.
- Camera high temperature
- Snow mode selection
- VDC/ABS operation
- VDC OFF

SETTING FOLLOW

On the integral switch screen

- 1. Push the MENU button and touch "Drive Assistance" on the lower display.
- 2. Touch "Lane Assistance".
- When Active Lane Control is selected to ON (enabled) or OFF (disabled), touch "Active lane control". NOTE:
 - When "Lane Departure Prevention" is turned OFF, Active Lane Control is turned OFF automatically.
- 4. When setting of Active Lane Control is changed, touch "Active lane control setting" and select [Low] or [High].

HANDLING PRECAUTION

Precautions for Active Lane Control

INFOID:0000000011286409

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LANE CAMERA UNIT HANDLING

To keep the proper operation of Active Lane Control and prevent a system malfunction, be sure to observe the following:

- · Always keep the windshield clean.
- Do not attach a sticker (including transparent material) or install an accessory near the lane camera unit.
- Do not place reflective materials, such as white paper or a mirror, on the instrument panel. The reflection of sunlight may adversely affect the lane camera unit capability of detecting the lane markers.
- Do not strike or damage the areas around the lane camera unit.
- Do not touch the camera lens.
- Do not remove the screw located on the lane camera unit.

ACTIVE LANE CONTROL

- If Active Lane Control malfunctions, it will cancel automatically. The chassis control warning will appear in the vehicle information display.
- Active Lane Control will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- Active Lane Control is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers for certain roads, weather or driving conditions.
- Using Active Lane Control under some conditions of road, lane marker or weather, or if driver attempt to change lanes without using the lane change signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- Active Lane Control will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Active Lane Control may not operate properly under the following conditions, and do not use Active Lane
- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or a temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original steering parts or suspension parts.
- The functions of Active Lane Control may or may not operate properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; vellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow. etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (Active Lane Control could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)
- When entering or exiting tollgates.
- When driving on roads with a widening or narrowing lane width.

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DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000011286410

APPLICATION ITEMS

CONSULT performs the following functions by communicating with the lane camera unit.

Diagnosis mode	Description	
Work Support	Performs the camera aiming.	
Self Diagnostic Result	Displays the name of a malfunctioning system stored in the lane camera unit	
Data Monitor	Displays lane camera unit input/output data in real time	
Ecu Identification	Displays lane camera unit part number	
CAN Diag Support Monitor	Displays a reception/transmission state of chassis communication	

WORK SUPPORT

Work support items	Description
AUTO AIM	Outputs camera unit, calculates dislocation of the camera, and displays adjustment direction.

SELF DIAGNOSTIC RESULT

Refer to DAS-574, "DTC Index".

FREEZE FRAME DATA (FFD)

Lane camera unit records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description
Detailed Code	_	NOTE: The item is indicated, but not used.
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected.
Steering Pinion Angle	deg	Steering pinion angle of the moment a particular DTC is detected.
Market Information & Camera Height	_	NOTE: The item is indicated, but not used.
Ambient Temperature & Snow Mode	_	NOTE: The item is indicated, but not used.
Image Processing Time	m/s	Image processing time of the moment a particular DTC is detected
Shutter Speed	_	Camera shutter speed of the moment a particular DTC is detected

DATA MONITOR

Monitored item [Unit]		Description
LDW SW PORT	[On/Off]	NOTE: The item is indicated, but not used.
LDP ON IND	[On/Off]	NOTE: The item is indicated, but not used.
LANE DPRT W/L	[On/Off]	NOTE: The item is indicated, but not used.
CAM HIGH TEMP	[NORMAL/HIGH]	Displays status of lane camera unit high temperature judgment
VHCL SPD SE	[km/h] or [mph]	Displays vehicle speed received from chassis control module via chassis communication
TURN SIGNAL	[Off, LH, RH, LH/RH]	Displays status of "Turn signal" determined from chassis control module via chassis communication
LANE DETCT LH	[On/Off]	Displays left side lane marker detection

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

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Monitored item [Unit]		Description
LANE DETCT RH	[On/Off]	Displays right side lane marker detection
CROSS LANE LH	[On/Off]	Displays condition that the vehicle is crossing left lane marker
CROSS LANE RH	[On/Off]	Displays condition that the vehicle is crossing right lane marker
WARN LANE LH	[On/Off]	Displays warning for left lane marker
WARN LANE RH	[On/Off]	Displays warning for right lane marker
VALID POS LH	[VLD/INVLD]	Displays lateral position for left lane marker is valid
VALID POS RH	[VLD/INVLD]	Displays lateral position for right lane marker is valid
LATERL POS LH	[m]	Displays the distance from a lane camera to the left lane marker.
LATERL POS RH	[m]	Displays the distance from a lane camera to the right lane marker.
CURVATURE	[1/m]	Displays the road curvature that a lane camera detected.
LATERAL SPEED	[m/s]	Displays lateral speed for the lane of the vehicle.
YAW ANGLE	[deg]	Displays yaw angle for the lane of the vehicle.
CAM DTC CODE	[—]	NOTE: The item is indicated, but not used.
AIMING DONE	[OK/NG]	Displays status that camera aiming is done
AIMING RESULT	[OK/NOK]	Displays result of camera aiming
AIM NG REASON	[TARGET / YAW / ROLL / PITCH / IMAGE / LIGHT / 1-SIDE / OTHERS]	Displays the reason that can not complete the camera aiming.
RUNTIME AIM	[On/Off]	NOTE: The item is indicated, but not used.
INITIALIZE	[On/Off]	Displays an initialization state of lane camera.
RUNTIME AIM OFFSET (YAW)	[deg]	NOTE: The item is indicated, but not used.
RUNTIME AIM WORK COND	[NO-WRK/ GOOD]	NOTE: The item is indicated, but not used.
RUNTIME AIM MEMORIZING	[NO-WRIT/ WRITING]	NOTE: The item is indicated, but not used.
XOFFSET	[mm]	NOTE: The item is indicated, but not used.
RUNTIME AIM OFF-	[deg]	NOTE:
SET(PITCH) AIM CHECK YAW	[deg]	The item is indicated, but not used. NOTE: The item is indicated, but not used.
AIM CHECK ROLL	[deg]	NOTE: The item is indicated, but not used.
AIM CHECK PITCH	[deg]	NOTE: The item is indicated, but not used.
FOE X	[deg]	NOTE: The item is indicated, but not used.
FOE Y	[deg]	NOTE: The item is indicated, but not used.
RUNTIME FOE X	[deg]	NOTE: The item is indicated, but not used.
RUNTIME FOE Y	[deg]	NOTE: The item is indicated, but not used.
FCTRY AIM YAW	[deg]	Displays check result of camera aiming
FCTRY AIM ROL	[deg]	Displays check result of camera aiming
FCTRY AIM PIT	[deg]	Displays check result of camera aiming

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DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

Monitored item [Unit]		Description
RUNTIME AIM COUNT	[—]	NOTE: The item is indicated, but not used.
ROM WRITING COUNT	[—]	NOTE: The item is indicated, but not used.
CAMERA START	[START/COMP]	Displays a start state of the lane camera.
GIVE UP	[OK/NG]	Displays a detection state of the lane marker.
READY	[NOT/ COMP]	Displays a controllable state.
MARK TYPE LH	[NONE / SOLID / DASHED / BOTT's / FORK / SLOW/ TAR / IRGLTY]	Displays the type of left side lane marker.
MARK TYPE RH	[NONE / SOLID / DASHED / BOTT's / FORK / SLOW/ TAR / IRGLTY]	Displays the type of right side lane marker.
CAMERA OFFSET HEIGHT (Dh)	[mm]	Displays camera height correction value (Dh).
TARGET HEIGHT (Ht)	[mm]	Displays height (Ht) of the aiming target.
TARGET DISTANCE (Dt)	[mm]	Displays the distance (Dt) from front axle to a target.

< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function INFOID:0000000011286411

APPLICATION ITEM

CONSULT can display each diagnostic item using the diagnostic test modes as follows.

Mode	Function description	
ECU identification	Parts number of chassis control module can be read.	
Self Diagnostic Results	Self-diagnostic results and freeze frame data can be read and erased quickly.*1	
DATA MONITOR	Input/Output data in chassis control module can be read.	
ACTIVE TEST	Send the drive signal from CONSULT to the actuator. The operation check can be performed.	
Work Support	Components can be quickly and accurately adjusted.	
Re/programming, Configuration	 Read and save the vehicle specification (TYPE ID). Write the vehicle specification (TYPE ID) when replacing chassis control module. 	

^{*1:} The following diagnosis information is erased by erasing.

- DTC
- Freeze frame data (FFD)

ECU IDENTIFICATION

Chassis control module part number can be read.

SELF DIAGNOSTIC RESULT

Refer to DAS-423, "DTC Index".

When "CRNT" is displayed on self-diagnosis result

The system is presently malfunctioning.

When "PAST" is displayed on self-diagnosis result

System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)

When DTC is detected, a vehicle state shown below is recorded and displayed on CONSULT.

Item name	Indication/Unit	Display item
Odometer/Trip meter	km	Total mileage (Odometer value) of the moment a particular.
DTC LOCAL CODE	_	DTC code is displayed but not used.
CAN DIAG PERMIS CONDITION	Off / On	Displays CAN network diagnosis status.
BRAKE SWITCH 1	Off / On	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 2	Off / On	Displays brake switch operating status (Off: open / On: close).
ABS	NORMAL / ABNOR	Displays ABS function status.
TCS	NORMAL / ABNOR	Displays TCS function status.
VDC	NORMAL / ABNOR	Displays VDC function status.
VEHICLE SPEED	km	Displays the vehicle speed.
FR WHEEL SPEED	rpm	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	rpm	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	rpm	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	rpm	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	deg	Displays the steering angle from the steering angle sensor.
SIDE G SENSOR	G	Displays the side G.
DECEL G SENSOR	G	Displays the decel G.
YAW RATE SENSOR	deg/s	Displays the yaw rate.
THRTL OPENING	%	Displays the electric throttle position.

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< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

Item name	Indication/Unit	Display item
SHIFT POSITION	Off/P/R/N/D(A) /S/L/B/1-6/M 1-M8/A1-A6	Displays the shift position.
PRESS SENSOR	bar	Displays the brake fluid pressure.
DRIVE MODE SELECTOR	STD / SPORT / ECO / SNOW / PERSO	Displays the drive mode select switch selection status.
LANE MARKER (LH)*	NOT / DETECT	Displays the lane marker (LH) detection status.
LANE MARKER (RH)*	NOT / DETECT	Displays the lane marker (RH) detection status.
TURN SIGNAL (LH)*	Off / On	Displays the turn signal switch (LH) operating status.
TURN SIGNAL (RH)*	Off / On	Displays the turn signal switch (RH) operating status.
TURN SIGNAL SWITCH*	Off / LEFT / RIGHT / MALF	Displays the turn signal switch operating status.
DAST*	Off / On	Displays the operation request status to Direct Adaptive Steering.
ROAD DISTORTION*	1/m	Displays the road distortion rate radius.
ALC COMMAND ST ANG*	rad	Displays the steering command value to Direct Adaptive Steering.
ST WHL FORCE TORQUE*	Nm	Displays the estimated value for the steering wheel force torque.
ALC COMMAND ST WHL FORCE*	N	Displays the steering reaction force command value to Direct Adaptive Steering.
ADAS COND*	NORMAL / ABNOR	Displays ADAS control unit function status.
WIPER STATUS*	Off / LOW / HIGH / MALF	Displays wiper operating status.

^{*:} Models with Active Lane Control

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

	tem Jnit]	Description
IGN VOLT	[V]	Displays the ignition power supply voltage.
CONTROL MODULE MALF	[Off / On]	Displays chassis control module malfunction.
CAN DIAG STATUS	[Off / On]	Displays CAN network diagnosis status.
STP LAMP OFF RELAY 1	[Off / On]	Displayed but not used.
STP LAMP OFF RELAY 2	[Off / On]	Displayed but not used.
ESS RELAY	[Off / On]	Displayed but not used.
VEHICLE SPEED	[km/m]	Displays the vehicle speed.
FR WHEEL SPEED	[rpm]	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	[rpm]	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	[rpm]	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	[rpm]	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	[deg]	Displays the steering angle from the steering angle sensor.
DECEL G SENSOR	[G]	Displays the decel G.
SIDE G SENSOR	[G]	Displays the side G.
YAW RATE SENSOR	[deg/s]	Displays the yaw rate.
ACCELE PEDAL POSITION	[%]	Displays the accelerator pedal position.

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	tem Jnit]	Description
THROTTLE CONTROL	[NORMAL/INCORR/PREV/INPOSSI]	Displays the electric throttle status.
SHIFT POSITION	[Off/P/R/N/D(A)/S/L/B /1-6/M1-M8/A1-A6]	Displays the shift position.
BRAKE SWITCH 2	[Off / On]	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 1	[Off / On]	Displays brake switch operating status (Off: open / On: close).
PRESS SENSOR	[bar]	Displays the brake fluid pressure.
ABS	[NORMAL / ABNOR]	Displays ABS function status.
ABS MALF	[NORMAL / ABNOR]	Displays ABS function status.
EBD	[NORMAL / ABNOR]	Displays EBD function status.
ACCELE PEDAL MALF	[NORMAL / ABNOR]	Displays the accelerator pedal status.
TCS	[NORMAL / ABNOR]	Displays TCS function status.
TCS MALF	[NORMAL / ABNOR]	Displays TCS function status.
VDC	[NORMAL / ABNOR]	Displays VDC function status.
VDC MALF	[NORMAL / ABNOR]	Displays VDC function status.
VDC OFF SWITCH	[Off / On]	Displays VDC OFF switch status.
PARKING BRAKE	[Off / On]	Displays the parking brake operating status.
DRV TRQ CTRL MODE	[INITIAL/NORMAL/STOP 1/ STOP 2 / LIMIT 1 / PROHIBI]	Displays the status of correction to slightly increase/decrease the drive torque.
DRV TRQ CTRL PERMIS 1	[NO PER / PERMIS]	Displays the permission status (basic requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PERMIS 2	[NO PER / PERMIS]	Displays the permission status (system requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL STOP	[REQ / NO REQ]	Displays the stop request status of correction to slightly increase/de crease drive torque.
DRV TRQ CTRL PROHIBIT	[REQ / NO REQ]	Displays the prohibition request status of correction to slightly increase/decrease drive torque.
DRIVE MODE SELECTOR	[STD/SPORT/SNOW/ECO/PERSO/NOT SET]	Displays the drive mode select switch selection status.
LOG-IN PERMIS	[NO PER / PERMIS]	Displays the login authority status of Infiniti InTuition function.
I-KEY LINK	[Off / On]	Displays the Intelligent Key linking status of Infiniti InTuition function
USER	[USER A / USER B / USER C / GUEST]	Displays the current user status of Infiniti InTuition function.
ENGINE/TM SETTING	[SPORT/STD/ECO/SNOW]	Displays the engine/transmission setting status with Infiniti drive mode selector function.
STRG SETTING	[STD / SPT / TOUR / SPT-L]	Displays steering characteristic.
ALC SETTING	[Off / LOW / HIGH]	Displays Active Lane Control setting status with Infiniti drive mode selector function.
ATC SETTING	[Off / On]	Displays active trace control function setting status with Infiniti drive mode selector function.
COMBI METER	[STD/SPORT/SNOW/ECO/PERSO]	Displays the combination meter function setting status with Infiniti drive mode selector function.
ATC 1	[Off / On]	Displays active trace control function operating status.
ATC 2	[Off / On]	Displays active trace control function operating status.
ATC 4	[Off / On]	Displays active trace control function operating status.
FL TIRE DISP	[DEF / 1]	Displays the status of front LH tire displayed on the information display in the combination meter.

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DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE) CRIPTION > [ACTIVE LANE CONTROL]

< SYSTEM DESCRIPTION >

Item [Unit]		Description
FR TIRE DISP	[DEF / 1]	Displays the status of front RH tire displayed on the information display in the combination meter.
RL TIRE DISP	[DEF / 1]	Displays the status of rear LH tire displayed on the information display in the combination meter.
RR TIRE DISP	[DEF / 1]	Displays the status of rear RH tire displayed on the information display in the combination meter.
TURN DISP	[N STEER / LEFT / RIGHT]	Displays the turning direction of active trace control function on the information display in the combination meter.
ALC LEVEL	[0 – 4]	Displays active/inactive status of Active Lane Control.
ALC STATUS	[INACT / ACT]	Display Active Lane Control operating status.
ATC DISP	[Off / On]	Displays the operating status of active trace control function on the information display in the combination meter.
ALC DISP	[Off / On]	Displays the operating status of Active Lane Control on the information display in the combination meter.
ALC SYSTEM	[Off / On]	Display Active Lane Control activation status.
LANE MARKER (LH)	[NOT / DETECT]	Displays the lane marker (LH) detection status.
LANE MARKER (RH)	[NOT / DETECT]	Displays the lane marker (RH) detection status.
TURN SIGNAL (LH)	[Off / On]	Displays the turn signal switch (LH) operating status.
TURN SIGNAL (RH)	[Off / On]	Displays the turn signal switch (RH) operating status.
TURN SIGNAL SWITCH	[Off / LEFT / RIGHT / MALF]	Displays the turn signal switch operating status.
DAST	[Off / On]	Displays Direct Adaptive Steering operating status.
ROAD DISTORTION	[1/m]	Displays the road curvature.
COMMAND ST ANG	[rad]	Displays the steering command value to Direct Adaptive Steering.
ST PINION ANG	[rad]	Displays the steering pinion angle.
ST WHL FORCE TORQUE	[Nm]	Displays the steering wheel force torque.
COMMAND ST WHL FORCE	[N]	Displays the reaction force command value to Direct Adaptive Steer ing.
LDW DISP	[On / MALF]	Displays LDW status received from ADAS control unit.
LDP DISP	[On / MALF]	Displays LDP status received from ADAS control unit.
BSI DISP	[On / MALF]	Displays Blind spot intervention function status received from ADAS control unit.
ST SWITCH COND	[OK / NG 1 / NG 2]	Displays the steering switch status received from ADAS control unit
BSW COND	[NORMAL / ABNOR]	Displays BSW status received from ADAS control unit.
ADAS COND	[NORMAL / ABNOR]	Displays ADAS status received from ADAS control unit.
COLLISION WARN	[Off / On]	Displays collision warning status received from ADAS control unit.
ICC ACTIVE	[Off / On]	Displays ICC operating status received from ADAS control unit.
IBA ACTIVE	[Off / On]	Displays intelligent brake assist operating status received from ADAS control unit.
DR BUZZER STATUS	[NO/1/2/3/1,2/2,3/1,3/4]	Displayed but not used.
LDW COND	[On / MALF]	Displays LDW status transmitted to ADAS control unit.
LDP COND	[On / MALF]	Displays LDP status transmitted to ADAS control unit.
BSI COND	[On / MALF]	Displays blind spot intervention function status transmitted to ADAS control unit.
LDP BRAKE CANCEL	[NONE / SLIP / SNOW / VDC OF]	Displays LDP cancel cause transmitted to ADAS control unit.
BSI BRAKE CANCEL	[NONE / SLIP / SNOW / VDC OF]	Displays blind spot intervention function cancel cause transmitted to ADAS control unit.

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DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE) [ACTIVE LANE CONTROL]

< SYSTEM DESCRIPTION >

	em nit]	Description
CAMERA COND	[NORMAL / ABNOR]	Displays the lane camera unit status.
CAMERA TEMP COND	[NORMAL / ABNOR]	Displays the lane camera unit status by temperature.
CAMERA COMM COND	[NORMAL / ABNOR]	Displays the communication status with the lane camera unit status.
CAMERA AIMING	[INCOMP / COMP]	Displays the lane camera unit aiming status.
CAMERA HIGH TEMP (LDW)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (LDW).
CAMERA HIGH TEMP (LDP)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (LDP)
CAMERA HIGH TEMP (BSI)	[NORMAL / ABNOR]	Displays the lane camera unit system cancel request due to high temperature (Blind spot intervention)
SIDE RADAR BLOCK CAN- CEL	[NORMAL / BLOCK]	Displays the side radar status.
BSI LAMP REQ (LH)	[Off / On]	Displays blind spot intervention indicator blink request at blind spot intervention operation (LH).
BSI LAMP REQ (RH)	[Off / On]	Displays blind spot intervention indicator blink request at blind spot intervention operation (RH).
LANE DEPARTURE DISP (LH)	[NO DISP / DEVIAT]	Displays the deviating status on the LH side lane.
LANE DEPARTURE DISP (RH)	[NO DISP / DEVIAT]	Displays the deviating status on the RH side lane.
LDP/BSI ACTIVE	[Off / On]	Displays LDP/blind spot intervention function operation status.
ADAS COND	[NORMAL / ABNOR]	Displayed, but not used
DR BUZZER COND	[NORMAL / ABNOR]	Displayed, but not used
OUTSIDE TEMP	[°C]	Displays the ambient temperature.
WIPER STATUS	[Off / LOW / HIGH / MALF]	Displays the front wiper operating status.

ACTIVE TEST

The active test is used to determine and identify details of a malfunction, based on self-diagnosis test results and data obtained in the DATA MONITOR. In response to instructions from CONSULT, instead of those from chassis control module on the vehicle, a drive signal is sent to the actuator to check its operation.

CAUTION:

- Never perform ACTIVE TEST while driving the vehicle.
- Always bleed air from brake system before active test.
- Never perform active test when system is malfunctioning.

NOTE:

- When active test is performed while depressing the brake pedal, the brake pedal depressing stroke may change. This is not a malfunction.
- During an active test, sometimes a chassis control warning is displayed and the master warning lamp illuminates on the information display in the combination meter; however, this is not a malfunction.

Test item	Operation	Description
BRAKE ACTUATOR 1 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 3	Start	Controls brake fluid pressure.

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< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

Test item	Operation	Description
COMMAND STEERING ANGLE	Start	Transmits the steering command value 0 deg \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0 deg (hold it for approximately 2 seconds) \rightarrow 0.00349 deg (hold it for approximately 2 seconds) \rightarrow 0 deg to the steering force control module.
COMMAND ST WHL FORCE	Start	Transmits the steering reaction force command value 0 N \rightarrow 0.6 N (hold it for approximately 2 seconds) \rightarrow 0 N (hold it for approximately 2 seconds) \rightarrow 0.6 N (hold it for approximately 2 seconds) \rightarrow 0 N to the steering force control module.
MASTER WARNING ACTIVE	On	If touching "On" with the master warning lamp not illuminated, the master warning lamp illuminates. Stops in approximately 1 minute.
	Off	The master warning lamp turns OFF. (vehicle in normal state)
ALC DISP	On	Displays Active Lane Control active status on the information display in the combination meter.
ALC DIOF	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
FL TIRE DISP	On	Displays the front LH tire on the information display in the combination meter.
FL TIRE DISP	Off	Does not display the front LH tire on the information display in the combination meter.
FR TIRE DISP	On	Displays the front RH tire on the information display in the combination meter.
FR TIRE DISP	Off	Does not display the front RH tire on the information display in the combination meter.
DI TIDE DIOD	On	Displays the rear LH tire on the information display in the combination meter.
RL TIRE DISP	Off	Does not display the rear LH tire on the information display in the combination meter.
DD TIDE DICD	On	Displays the rear RH tire on the information display in the combination meter.
RR TIRE DISP	Off	Does not display the rear RH tire on the information display in the combination meter.
	NO DISP	Does not display the turning status on the information display in the combination meter.
TURN DISP	LH	Displays the LH turning status on the information display in the combination meter.
	RH	Displays the RH turning status on the information display in the combination meter.
	LEVEL 1	
ALC LEVEL	LEVEL 2	Displays Active Lane Control corresponding to the selected level on the in-
ALG LEVEL	LEVEL 3	formation display in the combination meter.
	LEVEL 4	
ALC SETTING	On	Displays Active Lane Control active status on the information display in the combination meter.
ALC SETTING	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
ATC 4 DICD	On	Displays active trace control function active status on the information display in the combination meter.
ATC 1 DISP	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATO 6 DIOD	On	Displays active trace control function active status on the information display in the combination meter.
ATC 2 DISP		Displays active trace control function inactive status on the information dis-

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DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE) [ACTIVE LANE CONTROL]

< SYSTEM DESCRIPTION >

Test item	Operation	Description	
ATC 4 DISP	On	Displays active trace control function active status on the information display in the combination meter.	
ATC 4 DISF	Off	Displays active trace control function inactive status on the information display in the combination meter.	

WORK SUPPORT

Work support items	Description
ERASE LAST DRIVER INFORMATION	Erases the information for the previous driver.
ERASE KEY ALLOTEMENT USER	Erases all user information.
ERASE PERSONAL SETTINGS	Erases all user information (personal settings only).
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Lane Departure Prevention (LDP) • Blind Spot Intervention

NOTE:

- Causes of the maximum five cancellations (system cancel) are displayed.
- The displayed cancellation causes display the number of the ignition switch ON/OFF up to 254. It is fixed to 254 if it is over 254. It returns to 0 when the same cancellation cause is detected again.

Display Items for The Cause of Automatic Cancellation 1

	1	1	
Cause of cancellation	Lane departure prevention	Blind spot intervention	Description
OPE VDC/TCS/ABS 1	×		The activation of VDC, TCS, or ABS during LDP system control
Vehicle dynamics	×		Vehicle behavior exceeds specified value
Steering speed	×		Steering speed was more than the specified value in evasive direction
End by yaw angle	×		Yaw angle was the end of LDP control
Departure yaw large	×		Detected more than the specified value of yaw angle in departure direction
ICC WARNING	×		Target approach warning of ICC system, IBA system, or FCW system was activated
CURVATURE	×		Road curve was more than the specified value
Steering angle large	×		Steering angle was more than the specified value
Brake is operated	×		Brake pedal was operated
IGN LOW VOLT	×		Decrease in ADAS control unit IGN voltage
Lateral offset	×		Distance of vehicle and lane was detached in lateral direction more than the specified value
Lane marker lost	×		Lane camera unit lost the trace of lane marker
Lane marker unclear	×		Detected lane marker was unclear
Yaw acceleration	×		Detected yawing speed was more than the specified value
Deceleration large	×		Deceleration in a longitudinal direction was more than the specified value
Accel is operated	×		Accelerator pedal was depressed
Departure steering	×		Steering wheel was steered more than the specified value in departure direction
Evasive steering	×		Steering wheel was steered more than the specified value in the evasive direction
R range	×		Selector lever was operated to R range

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[ACTIVE LANE CONTROL]

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Cause of cancellation	Lane departure prevention	Blind spot intervention	Description		
Parking brake drift	×		Rear wheels lock was detected		
Not operating condition	×		Did not meet the operating condition (vehicle speed, turn signal operation, etc.)		
SNOW MODE SW	×		Shifting of the drive mode selector to SNOW position		
VDC OFF SW	×		VDC OFF switch was pressed		
OPE VDC/ABS 2	×		The activation of VDC or ABS during a standby time of LDP or blind spot intervention system control		
BSI) OPE VDC/TCS/ ABS 1		×	The activation of VDC, TCS, or ABS during blind spot intervention system control		
BSI) Vehicle dynamics		×	Vehicle behavior exceeds specified value		
BSI) Steering speed		×	Steering speed was more than the specified value in evasive direction		
BSI) End by yaw angle		×	Yaw angle was the end of blind spot intervention control		
BSI) Departure yaw large		×	Detected more than the specified value of yaw angle in departure direction		
BSI) ICC WARNING		×	Target approach warning of ICC system, IBA system or FCW system was activated		
BSI) CURVATURE		×	Road curve was more than the specified value		
BSI) Steering angle large		×	Steering angle was more than the specified value		
BSI) Brake is operated		×	Brake pedal was operated		
BSI) IGN LOW VOLT		×	Decrease in chassis control module IGN voltage		
BSI) Lateral offset		×	Distance of vehicle and lane was detached in lateral direction more than the specified		
BSI) Lane marker lost		×	Lane camera unit lost the trace of lane marker		
BSI) Lane marker un- clear		×	Detected lane marker was unclear		
BSI) Yaw acceleration		×	Detected yawing speed was more than the specified value		
BSI) Deceleration large		×	Deceleration in a longitudinal direction was more than the specified value		
BSI) Accel is operated		×	Accelerator pedal was depressed		
BSI) Departure steering		×	Steering wheel was steered more than the specified value in departure direction		
BSI) Evasive steering		×	Steering wheel was steered more than the specified value in the evasive direction		
BSI) R range		×	Selector lever was operated to R range		
BSI) Parking brake drift		×	Rear wheels lock was detected		
BSI) SNOW MODE SW		×	Shifting of the drive mode selector to SNOW position		
BSI) VDC OFF SW		×	VDC OFF switch was pressed		
BSI) OPE VDC/ABS 2		×	The activation of VDC or ABS during a standby time of blind spot intervention system control		
BSI) Not operating condition		×	Did not meet the operating condition (vehicle speed, turn signal operation, etc.)		
Side Radar Lost		×	Unrecognized side radar LH or RH by the ADAS control unit		
NO RECORD	×	×	_		

RE/PROGRAMMING, CONFIGURATION

Configuration includes the following functions.

< SYSTEM DESCRIPTION >

[ACTIVE LANE CONTROL]

Function		Description
Read/Write Configuration	Before replacing ECU	Allows the reading of vehicle specification (Type ID) written in chassis control module to store the specification in CONSULT.
	After replacing ECU	Allows the writing of vehicle information (Type ID) stored in CONSULT into the chassis control module.
Manual Configuration		Allows the writing of vehicle specification (Type ID) into the chassis control module by hand.

CAUTION

Use "Manual Configuration" only when "TYPE ID" of chassis control module cannot be read.

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ECU DIAGNOSIS INFORMATION

LANE CAMERA UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
LDW SW PORT	NOTE: The item is indicated, but not used	_
LDP ON IND	NOTE: The item is indicated, but not used	_
LANE DPRT W/L	NOTE: The item is indicated, but not used	_
CAM HIGH TEMP	When the temperature around lane camera unit is adequate	NORMAL
CAMITIGIT TEMP	When the temperature around the lane camera unit is high	High
VHCL SPD SE	While driving	Approximately equivalent to speedometer reading
	Turn signal lamp LH and RH blinking	LH/RH
TURN SIGNAL	Turn signal lamp LH blinking	LH
TURN SIGNAL	Turn signal lamp RH blinking	RH
	Turn signal lamps OFF	Off
LANE DETOTAL	Left side lane marker is detected	On
LANE DETCT LH	Left side lane marker is not detected	Off
LANE DETOT DIL	Right side lane marker is detected	On
LANE DETCT RH	Right side lane marker is not detected	Off
CDCCC LANE LLL	The vehicle is crossing left side lane marker	On
CROSS LANE LH	The vehicle is not crossing left side lane marker	Off
CROSS LANE RH	The vehicle is crossing right side lane marker	On
	The vehicle is not crossing right side lane marker	Off
WARN LANE LH	The vehicle is traveling on the left side lane marker.	On
	The vehicle is traveling the center of traffic lane.	Off
MADNII ANE DII	The vehicle is traveling on the right side lane marker.	On
WARN LANE RH	The vehicle is traveling the center of traffic lane.	Off
VALID POS LH	Lateral position for left side lane marker is valid	VLD
VALID POS LIT	Lateral position for left side lane marker is invalid.	INVLD
VALID POS RH	Lateral position for right side lane marker is valid.	VLD
VALID POS RH	Lateral position for right side lane marker is invalid.	INVLD
LATERL POS LH	Left side lane marker is detecting.	Displays the distance from a lane camera to the left lane marker.
LATERL POS RH	Right side lane marker is detecting.	Displays the distance from a lane camera to the right lane marker.
CURVATURE	Lane marker is detecting.	Displays the road curvature that a lane camera detected.
LATERAL SPEED	Lane marker is detecting.	Displays lateral speed for the lane of the vehicle.

LANE CAMERA UNIT

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Monitor Item	Condition	Value/Status
YAW ANGLE	Lane marker is detecting.	Displays yaw angle for the lane of the vehicle.
CAM DTC CODE	NOTE: The item is indicated, but not used.	
AIMING DONE	Camera aiming is completed	OK
AIMING DONE	Camera aiming is not adjusted	NG
AIMINO DECLILT	Camera aiming is completed	OK
AIMING RESULT	Camera aiming is not completed	NOK
	No target is detected.	TARGET
	Yaw angle beyond the allowable range is detected.	YAW
	Roll angle beyond the allowable range is detected.	ROLL
AIM NG REASON	Pitch angle beyond the allowable range is detected.	PITCH
AIM NG REASON	The target is unclear.	IMAGE
	Lighting is insufficient.	LIGHT
	One side target is not detected.	1-SIDE
	Other NG is detected.	OTHERS
RUNTIME AIM	NOTE: The item is indicated, but not used	_
INITIALIZE	NOTE: The item is indicated, but not used	_
RUNTIME AIMOFFSET (YAW)	NOTE: The item is indicated, but not used	_
RUNTIME AIM WORK COND	NOTE: The item is indicated, but not used	_
RUNTIME AIM MEMORIZING	NOTE: The item is indicated, but not used	_
XOFFSET	NOTE: The item is indicated, but not used	_
RUNTIME AIMOFFSET(PITCH)	NOTE: The item is indicated, but not used	_
AIM CHECK YAW	NOTE: The item is indicated, but not used	_
AIM CHECK ROLL	NOTE: The item is indicated, but not used	_
AIM CHECK PITCH	NOTE: The item is indicated, but not used	_
FOE X	NOTE: The item is indicated, but not used	_
FOE Y	NOTE: The item is indicated, but not used	_
RUNTIME FOE X	NOTE: The item is indicated, but not used	_
RUNTIME FOE Y	NOTE: The item is indicated, but not used	_
FCTRY AIM YAW	Camera aiming is completed	0 ± 2.0 deg
FCTRY AIM ROL	Camera aiming is completed	0 ± 2.0 deg
FCTRY AIM PIT	Camera aiming is completed	0 ± 2.0 deg
RUNTIME AIM COUNT	NOTE: The item is indicated, but not used	_

Revision: 2015 January **DAS-571** 2015 Q50

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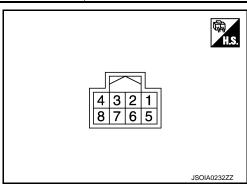
LANE CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

Monitor Item	Condition	Value/Status
ROM WRITING COUNT	NOTE: The item is indicated, but not used	_
011554 07157	Lane camera unit is starting.	START
CAMERA START	Lane camera unit starting is completed.	COMP
GIVE UP	Lane marker can be detected.	ОК
GIVE UP	Lane marker can not be detected.	NG
READY	Operating conditions are not satisfied.	NOT
READT	Operating conditions are satisfied.	COMP
	Lane marker is not detected	NONE
	Solid line is detected.	SOLID
	Dashed line is detected.	DASHED
MARK TYPE LH	Bott's dots is detected.	BOTT's
WARK TIPE LIT	Fork road (bifurcation) is detected.	FORK
	Slow down area is detected.	SLOW
	Tar strips is detected.	TAR
	Irregularity road is detected.	IRGLTY
	Lane marker is not detected	NONE
	Solid line is detected.	SOLID
	Dashed line is detected.	DASHED
MARK TYPE RH	Bott's dots is detected.	BOTT's
WARK TIPE KII	Fork road (bifurcation) is detected.	FORK
	Slow down area is detected.	SLOW
	Tar strips is detected.	TAR
	Irregularity road is detected.	IRGLTY
CAMERA OFFSET HEIGHT (Dh)	Camera aiming is completed	Displays camera height correction value (Dh).
TARGET HEIGHT (Ht)	Camera aiming is completed	Displays height (Ht) of the aiming target.
TARGET DISTANCE (Dt)	Camera aiming is completed	Displays the distance (Dt) from front axle to a target.

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No. color)	Description		Condition	Value (Approx.)
+	_	Signal name In			
1 (B)		Ground	_	_	0 V
4 (L)	Ground	Chassis communication-H	_	_	_
5 (B)		Ground	_	_	0 V
7 (V)		Ignition power supply	Input	Ignition switch ON or START	12 V – 14 V
8 (W)		Chassis communication-L	_	_	_

Fail-safe (Lane Camera Unit)

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FAIL-SAFE CONTROL BY DTC

Active Lane Control

If a malfunction occurs in the lane camera unit, chassis control module cancels control, and turns ON the Chassis Control Module malfunction in information display.

Lane Departure Warning (LDW)

If a malfunction occurs in the lane camera unit, chassis control module cancels control, and turns ON the LDW malfunction in information display.

Lane Departure Prevention (LDP)

If a malfunction occurs in the lane camera unit, chassis control module cancels control, sounds a beep, and turns ON the LDP malfunction in information display.

Blind Spot Intervention

If a malfunction occurs in the lane camera unit, chassis control module cancels control, sounds a beep, and turns ON the Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

Lane Departure Warning (LDW)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the LDW malfunction in information display.
- When interior temperature is reduced, the system will resume operation automatically and the LDW malfunction in the combination meter will stop blinking.

Lane Departure Prevention (LDP)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and LDP malfunction in information display.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned ON.

Blind Spot Intervention

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and Blind Spot Intervention malfunction in information display.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned ON.

DTC Inspection Priority Chart

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If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

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LANE CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

Priority	Detected items (DTC)
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	C1B01: CAM AIMING INCMP C1B03: ABNRML TEMP DETECT
3	C1B00: CAMERA UNIT MALF

DTC Index

×: Applicable

DTC		Warning display				Fail-safe			
		Chassis control warning message	LDW system warning	LDP system warning	Blind Spot Intervention system warning	Active Lane Control	LDW/LDP	Blind Spot Intervention	Reference
C1B00	CAMERA UNIT MALF	ON	ON	ON	ON	×	×	×	DAS-614
C1B01	CAM AIMING INCMP	ON	ON	ON	ON	×	×	×	DAS-615
C1B03	ABNRML TEMP DETECT	_	Message ↓ Blink	Message ↓ OFF	Message ↓ OFF	×	×	×	DAS-616
U1000	CAN COMM CIRCUIT	ON	ON	ON	ON	×	×	×	DAS-612
U1010	CONTROL UNIT (CAN)	ON	ON	ON	ON	×	×	×	DAS-613

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

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CHASSIS CONTROL MODULE

Reference Value

CONSULT DATA MONITOR STANDARD VALUE

NOTE

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Reference values in normal operation		
IGN VOLT	Ignition switch ON	10 – 16 V		
	When chassis control module is normal	Off		
CONTROL MODULE MALF	When chassis control module malfunction is detected	On		
CANIDIAC STATUS	When diagnosis of CAN communication mal- function is detected	Off		
CAN DIAG STATUS	When diagnosis of CAN communication is normal	On		
STP LAMP OFF RELAY 1	P LAMP OFF RELAY 1 Displayed but not used.			
STP LAMP OFF RELAY 2	Displayed but not used.	_		
ESS RELAY	Displayed but not used.	_		
	Vehicle Stopped	0 km/h (0 MPH)		
VEHICLE SPEED	Driving*	Almost same reading as speedometer (within ±10%)		
ED WILEEL ODEED	Vehicle stopped	0 rpm		
FR WHEEL SPEED	Driving [*]	Increases according to vehicle speed		
	Vehicle stopped	0 rpm		
FL WHEEL SPEED	Driving*	Increases according to vehicle speed		
	Vehicle stopped	0 rpm		
RR WHEEL SPEED	Driving*	Increases according to vehicle speed		
	Vehicle stopped	0 rpm		
RL WHEEL SPEED	Driving*	Increases according to vehicle speed		
	When driving straight	0±3.5 deg		
STEERING ANG SENSOR	When steering wheel is steered to RH by 90°	Approx. +90 deg		
	When steering wheel is steered to LH by 90°	Approx. –90 deg		
	Vehicle stopped	Approx. 0 G		
DECEL G SENSOR	When during acceleration	Positive value		
	When during deceleration	Negative value		
	Vehicle stopped	Approx. 0 G		
SIDE G SENSOR	When right turn	Negative value		
	When left turn	Positive value		
	Vehicle stopped	Approx. 0 deg/s		
YAW RATE SENSOR	When right turn	Negative value		
	When left turn	Positive value		
ACCELE PEDAL POSITION	When accelerator pedal is released	0%		
AGGLLE FLUAL FOSITION	When accelerator pedal is depressed	0 – 100%		

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

Monitor item	Condition	Reference values in normal operation		
	When electric throttle control actuator is normal	NORMAL		
THROTTLE CONTROL	When the electric throttle control actuator does not achieve the requirement (measured value is inaccurate)	INCORR		
THROTTLE CONTROL	When the electric throttle control actuator does not achieve the requirement (temporary prevention)	PREV		
	When the electric throttle control actuator does not achieve the requirement (impossible)	INPOSSI		
SHIFT POSITION	Selector lever in any position	Indicates selected selector lever position		
DDAKE CMITCH O	When brake pedal is not depressed	Off		
BRAKE SWITCH 2	When brake pedal is depressed	On		
DD ALCE CLAUTOLL 4	When brake pedal is depressed	Off		
BRAKE SWITCH 1	When brake pedal is not depressed	On		
DDECC CENCOD	When brake pedal is not depressed	Approx. 0 bar		
PRESS SENSOR	when brake pedal is depressed	0 – 255 bar		
400	When ABS function is normal	NORMAL		
ABS	When ABS function malfunction is detected	ABNOR		
400 1111 5	When ABS function is normal	NORMAL		
ABS MALF	When ABS function malfunction is detected	ABNOR		
	When EBD function is normal	NORMAL		
EBD	When EBD function malfunction is detected	ABNOR		
	When accelerator pedal is normal	NORMAL		
ACCELE PEDAL MALF	When accelerator pedal malfunction is detected	ABNOR		
T00	When TCS function is normal	NORMAL		
TCS	When TCS function malfunction is detected	ABNOR		
TOO MALE	When TCS function is normal	NORMAL		
TCS MALF	When TCS function malfunction is detected	ABNOR		
VDO	When VDC function is normal	NORMAL		
VDC	When VDC function malfunction is detected	ABNOR		
VD0 MM 5	When VDC function is normal	NORMAL		
VDC MALF	When VDC function malfunction is detected	ABNOR		
\/D0.0FF.0\\/\\T0\\	When VDC OFF switch is OFF	Off		
VDC OFF SWITCH	When VDC OFF switch is ON	On		
DADIGNO DDAGE	When parking brake is inactive	Off		
PARKING BRAKE	When parking brake is active	On		
	When correction coefficients are initialized	INITIAL		
	When correction is executed	NORMAL		
DDV TDO OTDI MODE	When correction is stopped (computing is impossible)	STOP 1		
DRV TRQ CTRL MODE	When correction is stopped (computing is possible)	STOP 2		
	When correction is limited	LIMIT 1		
	When correction is prohibited	PROHIBI		

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

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Monitor item	Condition	Reference values in normal operation
DRV TRQ CTRL PERMIS 1	When correction is permitted (basic requirement)	PERMIS
DIV ING CIRE PERIOD I	When correction is not permitted (basic requirement)	NO PER
DRV TRQ CTRL PERMIS 2	When correction is permitted (system requirement)	PERMIS
DIV TING OTHER ENWIGE	When correction is not permitted (system requirement)	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop	REQ
DIV INQUINESTOI	When correction is not requested to stop	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ
DICE TROUBLE	When prohibition of correction is not requested	NO REQ
	When drive mode select switch is "STAN-DARD" mode	STD
	When drive mode select switch is "SPORT" mode	SPORT
DRIVE MODE SELECTOR	When drive mode select switch is "SNOW" mode	SNOW
	When drive mode select switch is "ECO" mode	ECO
	When drive mode select switch is "PERSON-AL" mode	PERSO
	When drive mode select switch is not select	NOT SET
LOG-IN PERMIS	When log-in is possible	NO PER
LOG-IN PERIVIIS	When log-in is not possible	PERMIS
LVEVLINIV	When Intelligent Key is not linked	Off
I-KEY LINK	When Intelligent Key is linked	On
	When logged in with "USER A" Intelligent Key	USER A
	When logged in with "USER B" Intelligent Key	USER B
USER	When logged in with "USER C" Intelligent Key	USER C
	When logged in with an Intelligent Key without user registration	GUEST
	When the engine/transmission setting with drive mode select switch is in "SPORT" mode	SPORT
ENGINE/TM SETTING	When the engine/transmission setting with drive mode select switch is in "STANDARD" mode	STD
	When the engine/transmission setting with drive mode select switch is in "ECO" mode	ECO
	When the engine/transmission setting with drive mode select switch is in "SNOW" mode	SNOW

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< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

Monitor item	Condition	Reference values in normal operation	
	When the steering system setting with drive mode select switch is in "STANDARD" mode (Effort: Middle /Response: Middle)	STD	
STRG SETTING	When the steering system setting with drive mode select switch is in "SPORT" mode (Effort: Heavy / Response: Quick)	SPT	
STRG SETTING	When the steering system setting with drive mode select switch is in "TOURING" mode (Effort: Light / Response: Casual)	TOUR	
	When the steering system setting with drive mode select switch is in "SPORT-L" mode (Effort: Middle / Response: Quick)	SPT-L	
	When Active Lane Control setting with drive mode select switch is "OFF"	Off	
ALC SETTING	When Active Lane Control setting with drive mode select switch is "LOW"	LOW	
	When Active Lane Control setting with drive mode select switch is "HIGH"	HIGH	
ATC SETTING	When active trace control function setting with drive mode select switch is "OFF"	Off	
ATC SETTING	When active trace control function setting with drive mode select switch is "ON"	On	
	When drive mode select switch is "STAN-DARD" mode	STD	
	When drive mode select switch is "SNOW" mode	SNOW	
COMBI METER	When drive mode select switch is "PERSON-AL" mode	PERSO	
	When drive mode select switch is "SPORT" mode	SPORT	
	When drive mode select switch is "ECO" mode	ECO	
ATC 4	When active trace control function is inactive	Off	
ATC 1	When active trace control function is active	On	
ATC 2	When active trace control function is inactive	Off	
ATO 2	When active trace control function is active	On	
ATC 4	When active trace control function is inactive	Off	
A10 4	When active trace control function is active	On	
FL TIRE DISP	When the front LH tire is not displayed on the information display in the combination meter	DEF	
I L TINE DIOF	When the front LH tire is displayed on the information display in the combination meter	1	
ED TIDE DICE	When the front RH tire is not displayed on the information display in the combination meter	DEF	
FR TIRE DISP	When the front RH tire is displayed on the information display in the combination meter	1	
DI TIDE DICE	When the rear LH tire is not displayed on the information display in the combination meter	DEF	
RL TIRE DISP	When the rear LH tire is displayed on the information display in the combination meter	1	

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

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Monitor item	Condition	Reference values in normal operation
DD TIDE DICD	When the rear RH tire is not displayed on the information display in the combination meter	DEF
RR TIRE DISP	When the rear RH tire is displayed on the information display in the combination meter	1
	When the straight-ahead status is displayed on the information display in the combination meter	N STEER
TURN DISP	When the left turning status is displayed on the information display in the combination meter	LEFT
	When the right turning status is displayed on the information display in the combination meter	RIGHT
	When Active Lane Control is turned ON.	0
ALC LEVEL	When Active Lane Control is operational or is operating.	1 – 4
AL O OTATUO	When Active Lane Control is OFF	INACT
ALC STATUS	When Active Lane Control is ON	ACT
ATC DISP	When the activation of active trace control function is not displayed on the information display in the combination meter	Off
ATC DISP	When the activation of active trace control function is displayed on the information display in the combination meter	On
ALC DISP	When the activation of Active Lane Control is not displayed on the information display in the combination meter	Off
ALC DISP	When the activation of Active Lane Control is displayed on the information display in the combination meter	On
ALC SYSTEM	When Active Lane Control is OFF	Off
ALC STSTEIN	When Active Lane Control is ON	On
LANE MARKER (LH)	When left side lane marker is not detected.	NOT
LAINE WARKER (LIT)	when left side lane marker is detected.	DETECT
ANE MARKER (DU)	When right side lane marker is not detected.	NOT
LANE MARKER (RH)	When right side lane marker is detected.	DETECT
TUDN SICNAL /LU\	When turn signal lamps is OFF	Off
TURN SIGNAL (LH)	When turn signal lamp LH is blinking	On
TUDNI CIONAL (DU)	When turn signal lamps is OFF	Off
TURN SIGNAL (RH)	When turn signal lamp RH is blinking	On
	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	LEFT
TURN SIGNAL SWITCH	When turn signal lamp RH is blinking	RIGHT
	When turn signal lamp system malfunction is detected.	MALF
DACT	When the Active Lane Control request to transmit to the steering force control module is OFF	Off
DAST	When the Active Lane Control request to transmit to the steering force control module is ON	On
ROAD DISTORTION	Driving	Depends on the radius of curve

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[ACTIVE LANE CONTROL]

Monitor item	Condition	Reference values in normal operation
	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	Approx. 0 rad
COMMAND ST ANG	Active Lane Control is active with yaw angle formed on the left of the lane.	Max 0.05 rad
	Active Lane Control is active with yaw angle formed on the right of the lane.	Max -0.05 rad
	When driving straight	Approx. 0 rad
ST PINION ANG	when steering wheel is steered to LH by 90°	Approx. –1.6 rad
	when steering wheel is steered to RH by 90°	Approx. 1.6 rad
ST WHL FORCE TORQUE	When driving straight	0 N⋅m
31 WILLIONGE TONGOL	When steering wheel is steered	MAX ± 32 N⋅m
	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	0 N·m
COMMAND ST WHL FORCE	When the Active Lane Control is active and the vehicle is drifting to the left end of the lane	Approx. –6 N
	When the Active Lane Control is active and the vehicle is drifting to the right end of the lane	Approx. 6 N
LDW DISP	When LDW function is ON	On
LDW DIOI	When LDW function malfunction is detected	MALF
LDP DISP	When LDP function is ON	On
בטו טוטו	When LDP function malfunction is detected	MALF
	When blind spot intervention function is ON	On
BSI DISP	When blind spot intervention function malfunction is detected	MALF
	When steering switch is normal	ОК
ST SWITCH COND	ADAS control unit sends malfunction information of the steering switch to the chassis control module. (During the judgment of malfunction.)	NG 1
	ADAS control unit sends malfunction information of the steering switch to the chassis control module. (Malfunction confirmed)	NG 2
BSW COND	When BSW function is normal	NORMAL
BSW COND	When BSW function malfunction is detected	ABNOR
ADAS COND	When ADAS control unit is normal	NORMAL
ADAS COND	When ADAS control malfunction is detected	ABNOR
COLLISION WARN	When the collision warning is OFF	Off
COLLISION WARN	When the collision warning is ON	On
ICC ACTTIVE	When ICC function is inactive	Off
	When ICC function is active	On
IBA ACTIVE	When forward emergency brake function is inactive	Off
BANOTIVE	When forward emergency brake function is active	On
DR BUZZER STATUS	Displayed but not used	
LDW COND	When LDW function is ON	On
LD IV GOIND	When LDW function malfunction is detected	MALF

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

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Monitor item	Condition	Reference values in normal operation
LDP COND	When LDP function is ON	On
LDF COND	When LDP function malfunction is detected	MALF
	When blind spot intervention function is ON	On
BSI COND	When blind spot intervention function malfunction is detected	MALF
	When not cancel	NONE
	When slippery road	SLIP
LDP BRAKE CANCEL	When drive mode select switch is "SNOW" mode	SNOW
	When VDC OFF switch is OFF	VDC OF
	When not cancel	NONE
	When slippery road	SLIP
BSI BRAKE CANCEL	When drive mode select switch is "SNOW" mode	SNOW
	When VDC OFF switch is OFF	VDC OF
	When Lane camera unit is normal	NORMAL
CAMERA COND	When Lane camera unit malfunction is detected.	ABNOR
CAMERA TEMP COND	When the temperature around lane camera unit is normal	NORMAL
CAMERA TEMP COND	When the temperature around the lane camera unit is high	ABNOR
	When communication between chassis control module and lane camera unit is normal	NORMAL
CAMERA COMM COND	When communication between chassis control module and lane camera unit malfunction is detected	ABNOR
CAMERA AIMING	When lane camera aiming is completed	COMP
CAMERA AIMING	When lane camera aiming is not completed	INCOMP
CAMEDA HICH TEMP // DIA/)	When the temperature around lane camera unit is normal. (LDW ON)	NORMAL
CAMERA HIGH TEMP (LDW)	When the temperature around the lane camera unit is high. (LDW ON)	ABNOR
CAMERA HIGH TEMP (LDP)	When the temperature around lane camera unit is normal. (LDP ON)	NORMAL
CAMERATION TEMI (EDI)	When the temperature around the lane camera unit is high. (LDP ON)	ABNOR
CAMERA HIGH TEMP (BSI)	When the temperature around lane camera unit is normal. (Blind spot intervention ON)	NORMAL
O WILLY THOSE TEMP (DOI)	When the temperature around the lane camera unit is high. (Blind spot intervention ON)	ABNOR
	When the side radar is normal	NORMAL
SIDE RADAR BLOCK CANCEL	Side radar is blocked and temporarily deactivated.	BLOCK
BOLLAMB BEO (1 LL)	When blind spot intervention function (LH) is inactive	Off
BSI LAMP REQ (LH)	When blind spot intervention function (LH) is active	On

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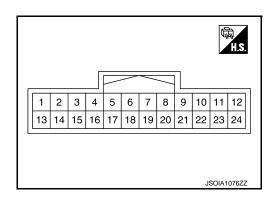
< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

Monitor item	Condition	Reference values in normal operation
BSI LAMP REQ (RH)	When blind spot intervention function (RH) is inactive	Off
BOI LAIMIF NEW (NIT)	When blind spot intervention function (RH) is active	On
LANE DEPARTURE DISP (LH)	When not deviating the LH side lane	NO DISP
LANE DEPARTORE DISF (EII)	When deviating the LH side lane	DEVIAT
LANE DEPARTURE DISP (RH)	When not deviating the RH side lane	NO DISP
LANE DEFACTORE DISF (KH)	When deviating the RH side lane	DEVIAT
LDP/BSI ACTIVE	When LDP function and blind spot intervention function are inactive	Off
LDF/B3I ACTIVE	When LDP function or blind spot intervention function are active	On
	When diagnosis of ADAS control unit is normal	NORMAL
ADAS COND	When diagnosis of ADAS control unit malfunction is detected	ABNOR
	When driver assistance buzzer is normal	NORMAL
DR BUZZER COND	when driver assistance buzzer malfunction is detected	ABNOR
OUTSIDE TEMP	Ignition switch ON	(-40°C) - (+72°C)
	When front wiper is inactive	Off
WIPER STATUS	When front wiper is active (low and intermittent)	LOW
	When front wiper is active (high)	HIGH
	When front wiper malfunction is detected	MALF

^{*:} Check tire pressure under normal conditions.

TERMINAL LAYOUT



PHYSICAL VALUES

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

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	nal No. e color)	Description		Condition		Value
+	_	Signal name	Input/ Output			(Approx.)
3 (P)		CAN-L	_	_	_	_
4 (L)		CAN-H	_	_	_	_
5				Ignition	Up switch is not pressed	6.4 – 16 V
(V)		DRIVE MODE SELECT SWITCH (UP)	Input	switch ON	Up switch is pressed	0 V
6 (G)		DRIVE MODE SELECT SWITCH (DOWN) Input Ignition switch ON	Down switch is not pressed	6.4 – 16 V		
(G)			ı	ON	Down switch is pressed	0 V
7 (W)	Ground	CHASSIS COMM-L		_	_	_
8 (W)		CHASSIS COMM-L	_	_	_	_
10 (G)		IGN	Input	I	gnition switch ON	6.4 – 16 V
11 (L)		CHASSIS COMM-H		_	_	_
12 (B)		GROUND	_	Ignition switch ON	_	0 V
19 (L)		CHASSIS COMM-H	_	_	_	_

Fail-Safe (Chassis Control Module)

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

DTC	Vehicle condition
C1B90-00	The following functions are suspended. • Active lane control function
C1B91-00	LDW function LDP function Blind spot intervention function
C1B92-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-00	The following functions are suspended.
C1B94-00	 Active trace control function LDW function LDP function Blind spot intervention function
C1B95-00	The following functions are suspended. Active trace control function Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function Intelligent cruise control function

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[ACTIVE LANE CONTROL]

DTC	Vehicle condition	
C1B96-00	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function	
C1B98-00	Normal control	
C1B99-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function	
C1BA0-00	The following functions are suspended.	
C1BA2-00	Active trace control function	
C1BA5-00	Normal control	
C1BA6-00	The following functions are suspended. • Infiniti InTuition function	
C1BA7-00	The following functions are suspended. • Active lane control function	
C1BA9-00	The following functions are suspended.	
C1BAA-00	 LDW function LDP function Blind spot intervention function 	
C1BAB-00	The following functions are suspended. • Active trace control function	
C1BAC-00	The following functions are suspended.	
C1BAD-00	LDP function	
C1BAE-00	Blind spot intervention function	
C1BAF-00	The following functions are suspended. • Blind spot intervention function	
C1BB0-06	Normal control	
C1BB2-00	The following functions are suspended.	
C1BB3-00	Active trace control function Active lane control function	
C1BB4-00	LDW function LDP function	
C1BB5-00	Blind spot intervention function Infiniti InTuition function	
C1BB6-00	Normal control	
C1BB7-00	The following functions are suspended.	
C1BB8-00	Active trace control function Active lane control function	
C1BB9-00	LDW function	
C1BBA-00	LDP function Blind spot intervention function	
C1BBB-00	Infiniti InTuition function	
C1BBC-00	Normal control	
C1BBD-00	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function	

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

DTC	Vehicle condition	
C1BC0-00	The following functions are suspended.	<u> </u>
C1BC1-00	Active trace control function Active lane control function	
C1BC2-00	The following functions are suspended.	
C1BC3-00	Active trace control function	
C1BC4-00	Normal control	
C1BC5-00		-
C1BC6-00	The following functions are suspended. • Active trace control function	
U1000-00		
U1010-49	The following functions are suspended. • Active trace control function • Active lane control function	
U1A30-00	The following functions are suspended.	
U1A31-00	Active lane control function LDW function	
U1A32-00	LDP function	
01/32-00	Blind spot intervention function	
U1A34-00	The following functions are suspended. • Active trace control function	
	Active lane control function	
U1A35-00	LDW function LDP function	
	Blind spot intervention function	
	The following functions are suspended.	
U1A36-00	Active lane control function LDW function	
	LDP function	
	Blind spot intervention function	
	The following functions are suspended. • LDW function	
U1A39-00	LDP function	
	Blind spot intervention function The first intervention function	
	The following functions are suspended. • Active trace control function	
U1A3B-00	Active lane control function	
	LDW function LDP function	
	Blind spot intervention function	
	The following functions are suspended.	
U1A3D-00	LDW function LDP function	
	Blind spot intervention function	
U1A3E-00	Normal control	
U1A3F-00	The following functions are suspended. • Infiniti InTuition function	
U1A42-00	The following functions are suspended.	
U1A43-00	Active trace control function	
U1A45-00	The following functions are suspended. • Active lane control function	
	The following functions are suspended. • Active trace control function	
U1A48-00	LDW function	
	LDP function	

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

DTC	Vehicle condition
U1A4A-00	The following functions are suspended. Active lane control function LDW function LDP function Blind spot intervention function Infiniti InTuition function
U1A4B-00	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-00	Normal control
U1A4E-00	The following functions are suspended. • Active trace control function

DTC Inspection Priority Chart

INFOID:0000000011286418

When multiple DTCs are displayed simultaneously, check them one by one according to the following priority list.

Priority	Detected item (DTC)
1	U1000-00 CAN COMM CIRCUIT U1010-49 CONTROL UNIT (CAN)
2	 U1A30-00 DAST COMM U1A31-00 DAST COMM U1A32-00 CAMERA COMM U1A34-00 BRAKE CONTROL COMM U1A35-00 BRAKE CONTROL COMM U1A36-00 BCM/IPDM COMM U1A39-00 COMBINATION METER COMM U1A3B-00 TCM COMM U1A3D-00 ADAS COMM U1A3E-00 ADAS COMM U1A3F-00 AV COMM U1A42-00 STEERING ANGLE SENSOR COMM U1A43-00 DR BUZZER COMM U1A48-00 DR BUZZER COMM U1A48-00 CONTROL MODULE (CAN) U1A48-00 CONTROL MODULE (CAN) U1A4C-00 A/C AUTO AMP. COMM U1A4E-00 ECM/HPCM COMM U1A4E-00 ECM/HPCM COMM
3	C1BBD-00 VARIANT CODING
4	C1B98-00 ADAS SYSTEM

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

Priority	Detected item (DTC)	^
5	C1B90-00 DAST SYSTEM C1B91-00 CAMERA SYSTEM C1B92-00 BRAKE CONTROL SYSTEM C1B93-00 ENGINE/HEV SYSTEM C1B93-00 ENGINE/HEV SYSTEM C1B96-00 ADAS SYSTEM C1B96-00 ADAS SYSTEM C1BA0-00 ADAS/CHASSIS CTRL BRAKE SYS C1BA2-00 STEERING ANGLE SENSOR C1BA5-00 ADAS/CHASSIS CTRL ENGINE SYS C1BA6-00 AV SYSTEM C1BA7-00 ALC SYSTEM C1BA7-00 ALC SYSTEM C1BA9-00 NP RANGE C1BA9-00 NP RANGE C1BA9-00 STOP LAMP SW C1BAC-00 OPERATION SW CIRC C1BAD-00 ACCELERATER PEDAL C1BAF-00 BSW SYSTEM C1BAF-00 BSW SYSTEM C1BB0-06 DR BUZZER SYSTEM C1BC1-00 FL WHEEL SENSOR C1BC2-00 RR WHEEL SENSOR C1BC3-00 RL WHEEL SENSOR C1BC3-00 RL WHEEL SENSOR C1BC3-00 RL WHEEL SENSOR C1BC3-00 RL WHEEL SENSOR C1BC3-00 SIDE G SENSOR C1BC5-00 SIDE G SENSOR C1BC6-00 PRESSURE SENSOR	B C D E
6	C1BB5-00 IGN POWER SUPPLY C1BB6-00 IGN POWER SUPPLY	— н
7	C1B95-00 CONTROL MODULE C1B99-00 CONTROL MODULE C1BB2-00 CONTROL MODULE C1BB3-00 CONTROL MODULE C1BB4-00 CONTROL MODULE C1BB7-00 CONTROL MODULE C1BB8-00 CONTROL MODULE C1BB9-00 CONTROL MODULE C1BB9-00 CONTROL MODULE C1BBA-00 CONTROL MODULE C1BBB-00 CONTROL MODULE C1BBB-00 CONTROL MODULE C1BBC-00 CONTROL MODULE	J

DTC Index

DTC	Display item	Refer to
C1B90-00	DAST SYSTEM	DAS-437, "DTC Description"
C1B91-00	CAMERA SYSTEM	DAS-439, "DTC Description"
C1B92-00	BRAKE CONTROL SYSTEM	DAS-441, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-443, "DTC Description"
C1B94-00	TM SYSTEM	DAS-445, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-447, "DTC Description"
C1B96-00	ADAS SYSTEM	DAS-448, "DTC Description"
C1B98-00	ADAS SYSTEM	DAS-450, "DTC Description"
C1B99-00	CONTROL NODULE	DAS-452, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-453, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-455, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-456, "DTC Description"
C1BA6-00	AV SYSTEM	DAS-457, "DTC Description"

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< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

DTC	Display item	Refer to
C1BA7-00	ALC SYSTEM	DAS-459, "DTC Description"
C1BA9-00	NP RANGE	DAS-461, "DTC Description"
C1BAA-00	GEAR POSITION	DAS-463, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-465, "DTC Description"
C1BAC-00	OPERATION SW CIRC	DAS-467, "DTC Description"
C1BAD-00	ACCELERATER PEDAL	DAS-469, "DTC Description"
C1BAE-00	ACCELERATER PEDAL	DAS-471, "DTC Description"
C1BAF-00	BSW SYSTEM	DAS-473, "DTC Description"
C1BB0-06	DR BUZZER SYSTEM	DAS-475, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-476, "DTC Description"
C1BB3-00	CONTROL MODULE	DAS-477, "DTC Description"
C1BB4-00	CONTROL MODULE	DAS-478, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-479, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-482, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-484, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-485, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-486, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-487, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-488, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-489, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-490, "DTC Description"
C1BC0-00	FR WHEEL SENSOR	DAS-491, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-493, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-495, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-497, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-499, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-500, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-502, "DTC Description"
U1000-00	CAN COMM CIRCUIT	DAS-503, "DTC Description"
U1010-49	CONTROL UNIT (CAN)	DAS-504, "DTC Description"
U1A30-00	DAST COMM	DAS-505, "DTC Description"
U1A31-00	DAST COMM	DAS-508, "DTC Description"
U1A32-00	CAMERA COMM	DAS-510, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-512, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-514, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-516, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-518, "DTC Description"
U1A3B-00	ТСМ СОММ	DAS-520, "DTC Description
U1A3D-00	ADAS COMM	DAS-522, "DTC Description"
U1A3E-00	ADAS COMM	DAS-524, "DTC Description"
U1A3F-00	AV COMM	DAS-526, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-528, "DTC Description
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-530, "DTC Description
U1A45-00	DR BUZZER COMM	DAS-532, "DTC Description"

< ECU DIAGNOSIS INFORMATION >

[ACTIVE LANE CONTROL]

DTC	Display item	Refer to
U1A48-00	ECM/HPCM COMM	DAS-534, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-536, "DTC Description"
U1A4B-00	CONTROL MODULE (CAN)	DAS-537, "DTC Description"
U1A4C-00	A/C AUTO AMP. COMM	DAS-538, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-540, "DTC Description"

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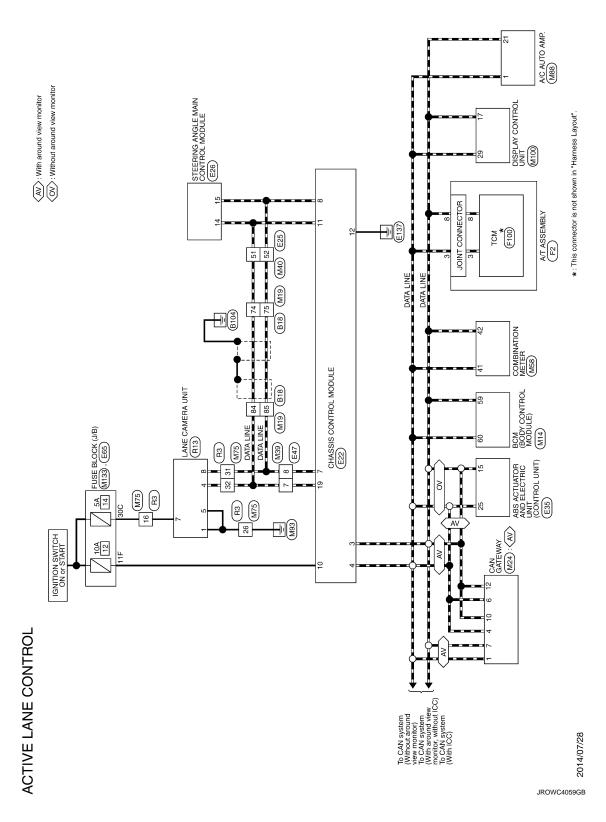
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WIRING DIAGRAM

ACTIVE LANE CONTROL

Wiring Diagram



ACTIVE LANE CONTROL

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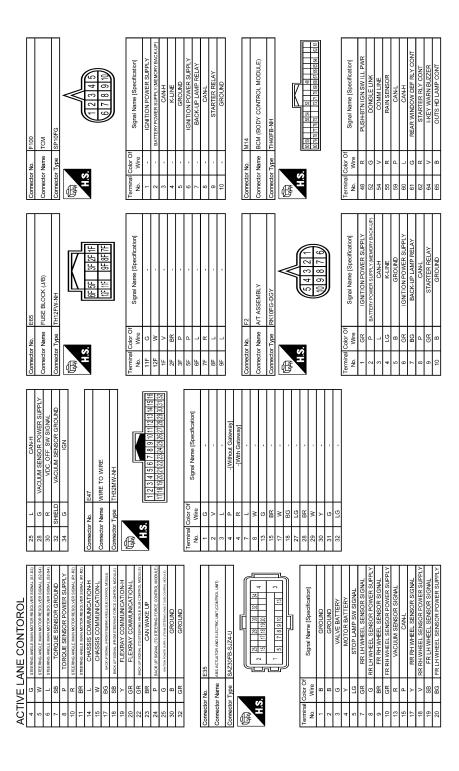
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ACTIVE LANE CONTROL

[ACTIVE LANE CONTROL]

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	Corrector Name WIRE TO WIRE Corrector Type TH-BOMW-CS16-TM4 H.S. Corrector Type TH-BOMW-CS16-TM4 Corrector Type Th-BOMW-CS16-TM4	Compared Color Of Signal Name [Specification]	
Corrector No. M24 Corrector Name CAN GATEWAY Corrector Type TH12FW-NH	1 3 4 5 6 7 9 10 11 12 12 6 6 12 13 14 5 6 14 14 14 14 14 14 14	CONNT. R GND R GND R GND CONNT. M38 CCONNT. CCONNT	Terminal Color Of Signal Name (Specification) NW WW NW Signal Name (Specification) NW Signal Name (Specification) NW Signal Name (Specification) Signal Name (Specif
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71	>	,	47	9	AV COMMUNICATION SIGNAL (H)	Connector Name	ne A/C AUTO AMP.		19 R	DIMMER SIGNAL
22	<u>.</u>		48	SB	AV COMMUNICATION SIGNAL (1)	Connector Type	e TH40FW-NH		F	REVERSE SIGNAL
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Signal Name [Specification]

Signal Name [Specification]

LANE CAMERA UNIT

WIRE TO WIRE

ACTIVE LANE CONTOROL

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DAS-595 Revision: 2015 January 2015 Q50

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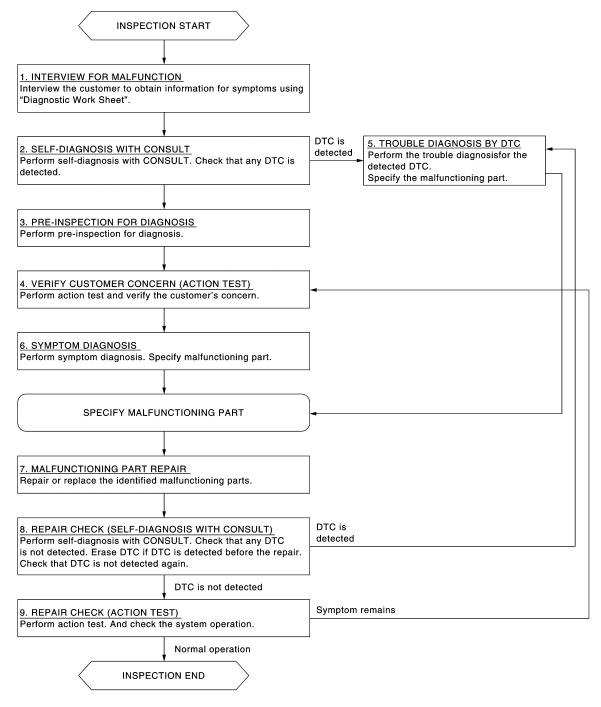
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



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DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Interview the customer to obtain information about symptoms using "Diagnostic Work Sheet". (Refer to <u>DAS-598</u>, "<u>Diagnostic Work Sheet</u>".)

NOTE:

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[ACTIVE LANE CONTROL]

The customers are not professionals. Never assume that "maybe the customer means..." or "maybe the customer mentioned this symptom". Α >> GO TO 2. 2.self-diagnosis with consult Perform "All DTC Reading" with CONSULT. Check if the DTC is detected on the self-diagnosis results of following. "CHASSIS CONTROL" "LANE CAMERA" Is any DTC detected? D YES >> GO TO 5. NO >> GO TO 3. 3.PRE-INSPECTION FOR DIAGNOSIS Е Perform pre-inspection for diagnosis. Refer to <u>DAS-600</u>, "Inspection Procedure". >> GO TO 4. 4. ACTION TEST Perform Active Lane Control action test to check the operation status. Refer to DAS-601, "Description". >> GO TO 6. TROUBLE DIAGNOSIS BY DTC Н Check the DTC in the self-diagnosis results. Perform trouble diagnosis for the detected DTC following. "CHASSIS CONTROL": Refer to DAS-574, "DTC Index". "LANE CAMERA": Refer to DAS-574, "DTC Index". If "DTC: U1000" is detected, first diagnose the CAN communication system, chassis communication system or ITS communication system. >> GO TO 7. K **6.**SYMPTOM DIAGNOSIS Perform symptom diagnosis. Specify malfunctioning part. Refer to DAS-617, "Symptom Table". >> GO TO 7. / .MALFUNCTION PART REPAIR M Repair or replace the identified malfunctioning parts. Ν >> GO TO 8. 8.repair check (self-diagnosis with consult) DAS Erases self-diagnosis results. Perform "All DTC Reading" again after repairing or replacing the specific items. Check if any DTC is detected in self-diagnosis results of following. "CHASSIS CONTROL" "LANE CAMERA" Is any DTC detected? YES >> GO TO 5. NO >> GO TO 9.

Perform the action test. Refer to <u>DAS-601. "Description"</u>.

DAS-597

9.REPAIR CHECK (ACTION TEST)

Revision: 2015 January

2015 Q50

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[ACTIVE LANE CONTROL]

2. Check that the malfunction symptom is solved or no other symptoms occur.

Is there a malfunction symptom?

YES >> GO TO 4.

NO >> INSPECTION END

Diagnostic Work Sheet

INFOID:0000000011286422

DESCRIPTION

In general, each customer feels differently about an incident. It is important to fully understand the symptoms or conditions for a customer complaint.

There are many operating conditions that lead to the malfunction. A good grasp of such conditions can make troubleshooting faster and more accurate.

Some conditions may cause the lane departure warning lamp to stay ON.

Utilize a work sheet sample to organize all of the information for troubleshooting.

KEY POINTS

- WHAT.... System and functions
- WHEN..... Date, Frequencies
- WHERE..... Road conditions
- HOW..... Operating conditions, Symptoms

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[ACTIVE LANE CONTROL]

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WORK SHEET SAMPLE

Customer name MR/MS		Model and Ye	ear		VIN	
Engine #		Trans.			Mileage	
Incident Date		Manuf. Date			In Service Date	
Symptoms						
	☐ Master warning lamp	☐ Stays ON		☐ Stays ☐ Othe)
La dia da Marania a la sara	☐ Chassis warning message	□ Displayed		□Not o	displayed	
Indicator/Warning lamps	☐ Active Lane Control display	☐ ALC OFF ☐ ALC is turn	ned ON	☐ ALC	is operational or is operating	
	☐ Other lamps ()	☐ Stays ON ☐ Turned ON	l occasionally	☐ Stays ☐ Othe)
	☐The vehicle dose not run	straight while	ALC is function	ning.		
	 ☐Steering wheel feel is not	•		•		
Functions	☐ ALC dose not function.					
	☐ ALC function is not felt.					
	☐ Others ()		
Conditions						
Frequency	□Continuously		☐ Intermitte	ntly		
Light conditions		☐ At night ☐ Backlight		□Sunrise/s	sunset (Strong light))
Driving conditions	□ Not affected □ Vehicle speed	MPH (km/h) [□Vehicle i	s stopped	
Weather conditions	□ Not affected □ Fine □ Clouding	Raining		☐Snowing ☐Others ()
Road conditions		☐ In town ☐ Winding roa	ds [□Others()
Lane maker conditions	□ Not affected □ Clear	□Unclear	[□Others()
Other conditions						
						\blacksquare

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PRE-INSPECTION FOR DIAGNOSIS

< BASIC INSPECTION >

[ACTIVE LANE CONTROL]

PRE-INSPECTION FOR DIAGNOSIS

Inspection Procedure

INFOID:0000000011286423

1. CHECK WINDSHIELD

Is windshield contaminated with foreign materials?

YES >> Clean windshield.

NO >> GO TO 2.

2. CHECK VEHICLE HEIGHT

Check vehicle height. Refer to <u>FSU-25</u>, "Wheelarch Height" (2WD) or <u>FSU-48</u>, "Wheelarch Height" (AWD). <u>Is vehicle height appropriate?</u>

YES >> INSPECTION END

NO >> Repair vehicle to appropriate height.

ACTION TEST

< BASIC INSPECTION >

[ACTIVE LANE CONTROL]

ACTION TEST

Description INFOID:0000000011286424

- Perform action test to verify the customer's concern.
- Perform action test and check the system operation after system diagnosis.

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test. **CAUTION:**

- Fully understand the following items well before the road test;
- System description for Active Lane Control: Refer to <u>DAS-548</u>, "ACTIVE LANE CONTROL: System Description".
- Handling precaution: Refer to <u>DAS-557</u>, "<u>Precautions for Active Lane Control</u>".

Inspection Procedure

INFOID:0000000011286425

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WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test.

- Fully understand the following items well before the road test;
- System description for Active Lane Control: Refer to DAS-548, "ACTIVE LANE CONTROL: System Description".
- Handling precaution: Refer to <u>DAS-557</u>, "<u>Precautions for Active Lane Control</u>".

1. CHECK ACTIVE LANE CONTROL SETTING

- 1. Start the engine.
- Check that the Active Lane Control setting can be enabled/disabled on the integral switch screen.
- Turn OFF the ignition switch and wait for 30 seconds or more.
- Check that the previous setting is saved when the engine starts again.

>> GO TO 2.

2.action test for active lane control

- Enable the setting of the Active Lane Control on the integral switch screen.
- 2. Enable the setting of the "Chassis Control" display in the vehicle information display on the integral switch screen.
- 3. Select the "Chassis Control" display on the vehicle information display.
- Turn dynamic driver assistance switch ON (LDP system is ON).
- 5. Check that the Active Lane Control operating according to the following table.

NOTE:

For the operating conditions, refer to DAS-548, "ACTIVE LANE CONTROL: System Description".

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Vehicle condition	Active Lane Control	Indication on the combination meter
_	OFF	Chassis Control JSOIA0806ZZ
Operating conditions are not satisfied	Active Lane Control is turned ON	Chassis Control JSOIA0809ZZ
Operating conditions are satisfied	Active Lane Control is operational or is operating	Chassis Control JSOIA0810ZZ

Does it operate normally?

YES >> INSPECTION END

NO >> Perform symptom diagnosis. Specify malfunctioning part. Refer to <u>DAS-617. "Symptom Table"</u>.

ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT

[ACTIVE LANE CONTROL] < BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT	А
Description	OID:0000000011286426
Always adjust the camera aiming after removing and installing or replacing the lane camera unit. CAUTION:	В
The system does not operate normally unless the camera aiming adjustment is perform perform it.	
Work Procedure	COID:0000000011286427
1.CAMERA AIMING ADJUSTMENT	D
Perform the camera aiming adjustment with CONSULT. Refer to <u>DAS-604</u> , " <u>Description</u> ".	
>> GO TO 2.	Е
2.PERFORM SELF-DIAGNOSIS	
Perform the self-diagnosis of lane camera unit with CONSULT. Check if any DTC is detected. Is any DTC detected?	F
YES >> Perform the trouble diagnosis for the detected DTC. Refer to <u>DAS-574</u> , " <u>DTC Index"</u> .	
NO >> GO TO 3.	G
3.ACTIVE LANE CONTROL ACTION TEST	
 Perform the Active Lane Control action test. Refer to <u>DAS-601</u>. "<u>Description</u>". Check that the Active Lane Control operates normally. 	Н
>> WORK END	
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DAS-603 Revision: 2015 January 2015 Q50

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[ACTIVE LANE CONTROL]

CAMERA AIMING ADJUSTMENT

Description INFOID:000000011286428

Always adjust the camera aiming after removing and installing or replacing the lane camera unit.

CAUTION:

- Place the vehicle on level ground when the camera aiming adjustment is operated.
- Be sure to place the target correctly according to work procedures because the system may not operate normally.
- Follow the CONSULT when performing the camera aiming. (Camera aiming adjustment cannot be operated without CONSULT.)

Work Procedure (Preparation)

INFOID:0000000011286429

1.PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of chassis control module and lane camera unit.

Is any DTC detected?

Except "C1B01">>Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to DAS-574, "DTC Index" (LANE CAMERA).

"C1B01" or no DTC>>GO TO 2.

2.preparation before camera aiming adjustment

- 1. Perform pre-inspection for diagnosis. Refer to <u>DAS-600</u>. "Inspection Procedure".
- 2. Adjust the tire pressure to the specified pressure value.
- 3. Maintain no-load in vehicle.
- 4. Check if coolant and engine oil are filled up to correct level and fuel tank is full.
- 5. Shift the selector lever to "P" position and release the parking brake.
- 6. Clean the windshield.
- 7. Completely clear off the instrument panel.

NOTE:

If any fixed object is put on instrument panel, cover the upper of the instrument panel with black cloth to prevent an object from reflecting in the windshield.

>> GO TO 3.

3. PREPARATION OF AIMING ADJUSTMENT JIG

Prepare the aiming adjustment jig according to the following procedure and the figure.

- Print out the target mark attached in this service manual. Refer to <u>DAS-609</u>, "Work <u>Procedure (Target Mark Sample)"</u>.
- 2. Stick a printed target mark on the board with a scotch tape or a piece of double-sided tape. CAUTION:
 - Be sure to measure dimensions correctly and make adjustment jig because the system may not operate normally.
 - Use the board that peripheral area of the target is monochrome such as a white-board.
 - Notice that the cross of the target is horizontal and vertical.
 - Notice that the target board is vertical on the ground.

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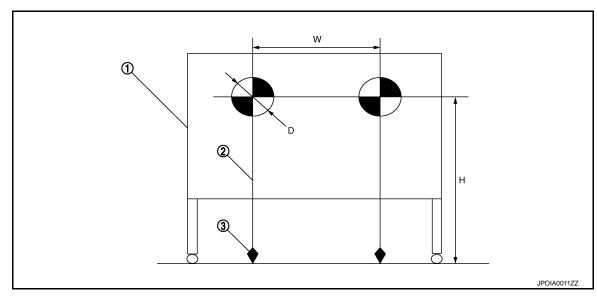
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INFOID:0000000011286430



. Board 2. String 3. Cone

: Target mark

Diameter of a target (D) : 200 mm (7.87 in)
Height of a target center (H) : 1450 mm (57.09 in)

Width between a right target cen- : 600 mm (23.62 in) ter from a left target center (W)

>> Proceed to DAS-605, "Work Procedure (Target Setting)".

Work Procedure (Target Setting)

CAUTION:

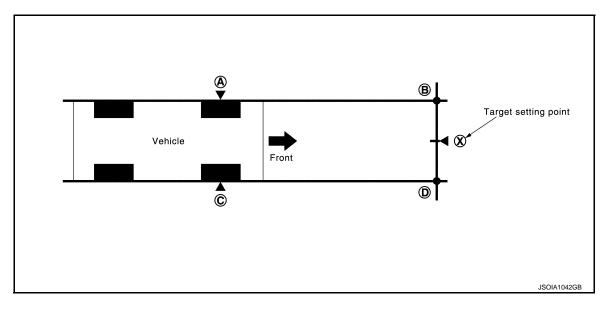
- Be sure to place the target correctly according to work procedures because the system may not operate normally.
- Perform this operation in a horizontal position where there is a clear view for 5 m (16.4 ft) forward and 3 m (9.84 ft) wide.
- Place the target in a well-lighted location. (Poor lighting may make it hard to adjust.)
- The target may not be detected when there is a light source within 1.5 m (4.92 ft) from either side and within 1 m (3.28 ft) upward/downward from the target.
- Check the location of the sun. (Sunlight should not shine directly on the front of the vehicle.)
- The target may not be detected when there is the same pattern of black and white as the target when
 the pattern is within 1 m (3.28 ft) from either side and upward/downward position from the target. (It
 is desirable that the vehicle is positioned on the opposite side of a single-color wall.)

1. TARGET SETTING

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 $\mathbb{A} - \mathbb{B} (\mathbb{C} - \mathbb{D})$

: 3850 mm (151.57 in)

- 1. Lengthen straight a measuring tape as follows. And then fix it with tapes.
- A measuring tape contacts with the side of the front left side tire from rear left side tire.
- A measuring tape lengthens approximately 4 m (13.12 ft) or more from the front end of vehicle.

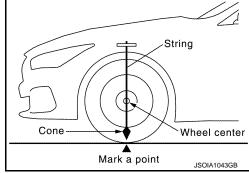
NOTE:

Use the steel tape measure which can measure 10m (32.81 ft) or more

- 3. Mark point (a) on a measuring tape at the positions 3850 mm (151.57 in) from point (a).
- 4. Remove a measuring tape.

CAUTION:

Be careful so that a marking point is not changed.



- 5. Lengthen straight a measuring tape as follows. And then fix it with tapes.
- A measuring tape contacts with the side of the front right side tire from rear right side tire.
- A measuring tape lengthens approximately 4 m (13.12 ft) or more from the front end of vehicle.

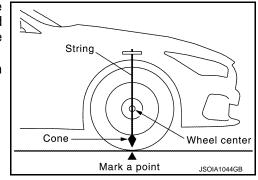
NOTE:

Use the steel tape measure which can measure 10m (32.81 ft) or more

- Mark point
 on a measuring tape. Hang a string with a cone
 from the fender so as to pass through the center of wheel, and
 then mark a point at the center of the lateral surface of the
 wheel.
- 7. Mark point ① on a measuring tape at the positions 3850 mm (151.57 in) from point ②.
- 8. Remove a measuring tape.

CAUTION:

Be careful so that a marking point is not changed.



- 9. Lengthen straight a measuring tape passing through the points (B) and (D) on the front side of vehicle. And then fix it with tapes.
- 10. Mark point (X) at the center of point (B) and (D) on a measuring tape.

< BASIC INSPECTION >

CAUTION:

Make sure that B to X is equal to D to X.

11. Remove a measuring tape.

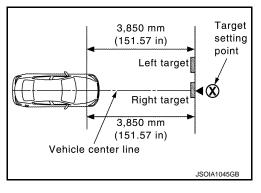
CAUTION:

Be careful so that a marking point is not changed.

12. Position the center of the right target to point of \otimes .

CAUTION:

- Be sure to place the board that the cross of the target is horizontal and vertical.
- - >> Proceed to <u>DAS-607</u>, "Work <u>Procedure</u> (<u>Camera Aiming</u> <u>Adjustment</u>)".



INFOID:0000000011286431

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Work Procedure (Camera Aiming Adjustment)

CAUTION:

Perform the adjustment under unloaded vehicle condition.

1. CHECK VEHICLE HEIGHT

Measure both side of front wheelarch height (Hf). Then calculate "Dh".

Dh [mm] = (Hfl + Hfr) \div 2 – 710 where,

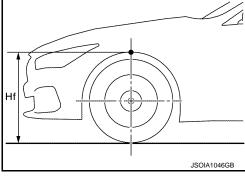
Hfl: Front left wheelarch height [mm]
Hfr: Front right wheelarch height [mm]



Be sure to measure wheelarch height correctly. NOTE:

"Dh" may be calculated as a minus value.

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>> GO TO 2.

2.CAMERA AIMING ADJUSTMENT

(P)With CONSULT

CAUTION:

Operate CONSULT outside the vehicle, and close all the doors. (To retain vehicle attitude appropriately)

- 1. Select "Work Support" on "LANE CAMERA" with CONSULT.
- Select "AUTO AIM".
- 3. Confirm the following items;
- The target should be accurately placed.
- The vehicle should be stopped.
- 4. Select "Start" to perform camera aiming.

CAUTION:

- Never select "Start" when the target is not accurately placed.
- Wait 5 seconds or more after selecting "Start".
- 5. Input "Dh", and then select "Start".

CAUTION:

Never change "Ht" and "Dt".

6. Confirm the displayed item.

Is "Normally Completed" displayed?

YES >> Select "End" to close the aiming adjustment procedure. Then GO TO 4.

NO >> GO TO 3.

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3.INCOMPLETE CAUSE CONFIRMATION

Perform the following services according to the displayed message.

Displayed message	Possible cause	Service procedure
Aiming was not able to be performed normally. Perform the aiming again.	Temporary malfunction in internal processing of the lane camera unit. Lane camera unit malfunction.	Position the target appropriately again. Then perform the aiming again.
00H Routine not activated	Temporary malfunction in internal processing of the lane camera unit. Lane camera unit malfunction.	Position the target appropriately again. Then perform the aiming again.
Writing error is detected. Perform the aiming again.	Temporary malfunction in internal processing of the lane camera unit. Lane camera unit malfunction.	Position the target appropriately again. Then perform the aiming again.
DTC is detected. Perform self diagnosis.	Any DTC is detected. (Except C1B01)	Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to <u>DAS-574</u> , "DTC Index".
No target is detected. Position the target appropriately again. Perform the aiming again.	Lane camera unit cannot detect the target. The target is not placed correctly. The target is not placed yet.	Position the target appropriately again. Then perform the aiming again.
Yaw angle beyond the allowable range is detected. Correct the possible cause. Perform the aiming again.	Aiming yaw angle is out of range. The target is not placed correctly. The position of the lane camera unit is not correct. Inappropriate vehicle condition.	Check the possible cause and correct it. Then perform the aiming again
Roll angle beyond the allowable range is detected. Correct the possible cause. Perform the aiming again.	Aiming roll angle is out of range. The target is not placed correctly. The position of the lane camera unit is not correct. Inappropriate vehicle condition.	Check the possible cause and correct it. Then perform the aiming again
Pitch angle beyond the allowable range is detected. Correct the possible cause. Perform the aiming again.	Aiming pitch angle is out of range. The target is not placed correctly. The position of the lane camera unit is not correct. Inappropriate vehicle condition.	Check the possible cause and correct it. Then perform the aiming again
The target is unclear. Correct the possible cause. Perform the aiming again.	 The target image is not clear. The windshield is not clean. The camera lens is not clean. The target is not clean. Reflective materials, such as white paper or a mirror are placed on the instrument panel. 	Check the possible cause and correct it. Then perform the aiming again
Lighting is insufficient. Light the target up.Perform the aiming again.	Lighting around the target is insufficient.	Light the target up. Then perform the aiming again.
One side target is not detected. Position the target appropriately again. Perform the aiming again.	Lane camera unit cannot detect the both side target. The target is not placed correctly.	Position the target appropriately again. Then perform the aiming again.
Other NG is detected. Perform the aiming again.	Temporary malfunction in internal processing of the lane camera unit.	Perform the aiming again.

NOTE:

Replace camera unit if "00H Routine not activated" or "Writing error is detected." are repeatedly indicated during the above two services are performed.

>> Correct the displayed possible cause. Then perform the aiming again. Refer to DAS-605, "Work <a href="Procedure (Target Setting)". or GO TO 2.

4. PERFORM SELF-DIAGNOSIS

CAMERA AIMING ADJUSTMENT

[ACTIVE LANE CONTROL] < BASIC INSPECTION > Perform self-diagnosis of lane camera unit with CONSULT. Α Is any DTC detected? YES >> Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to DAS-574, "DTC Index". NO >> WORK END В Work Procedure (Target Mark Sample) INFOID:0000000011286432 C NOTE: D Е F Н

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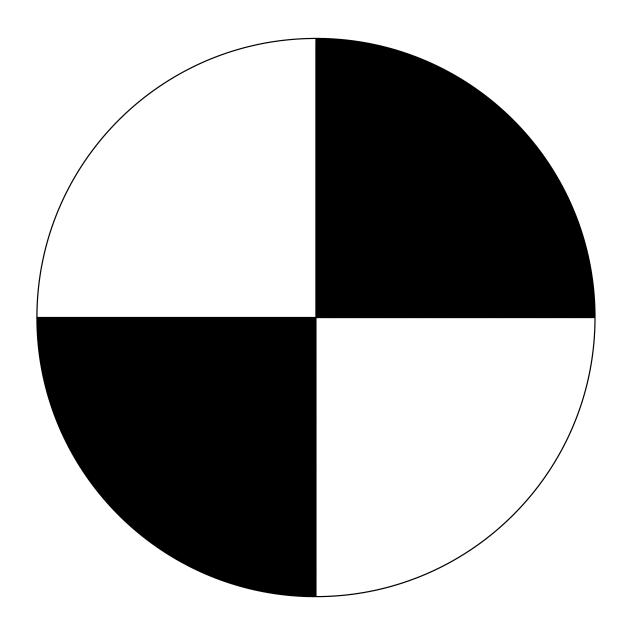
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Print this illustration so that the diameter of the circle is 200 mm (7.87 in).



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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ACTIVE LANE CONTROL]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

LANE CAMERA UNIT

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000011286433

1.CHECK FUSES

Check if any of the following fuses are blown:

Signal name	Fuse No.	
Ignition power supply	14	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

2.CHECK LANE CAMERA UNIT POWER SUPPLY CIRCUIT

Check voltage between lane camera unit harness connector and ground.

Terminal			Condition		
(+)		(-)	Condition	Voltage	
Lane ca	ane camera unit		Ignition (Approx.)		
Connector	Terminal	Ground	switch		
R13	7	Oround	OFF	0 V	
	7		ON	12 V	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the lane camera unit power supply circuit.

${f 3.}$ CHECK LANE CAMERA UNIT GROUND CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect the lane camera unit connector.
- Check for continuity between lane camera unit harness connector and ground.

Lane ca	mera unit	Ground	Continuity	
Connector	Terminal			
R13	1	Olouliu	Existed	
	5		LXISIGU	

Is the inspection result normal?

>> INSPECTION END YES

NO >> Repair the lane camera unit ground circuit.

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U1000 CAN COMM CIRCUIT

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	When chassis communication signal is not continuously transmitted or received for 2 seconds or more.

POSSIBLE CAUSE

• Chassis communication system

FAIL-SAFE

The following functions are suspended.

- Active Lane Control
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "LANE CAMERA".

Is DTC "U1000" detected?

YES >> Proceed to <u>DAS-612</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011286435

Perform the Chassis communication (CAN communication) system trouble diagnosis. Then repair or replace the malfunctioning parts.

Refer to LAN-24, "Trouble Diagnosis Flow Chart".

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[ACTIVE LANE CONTROL]

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000011286436

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	When detecting error during the initial diagnosis of CAN controller of lane camera unit.

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following functions are suspended.

- Active Lane Control
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If "DTC CONFIRMATION PROCEDURE" has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.check dtc detection

(P)With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "LANE CAMERA".

Is DTC "U1010" detected?

YES >> Proceed to <u>DAS-613</u>, "<u>Diagnosis Procedure</u>".

NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn the LDP system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAM-ERA".

Is "U1010" detected as the current malfunction?

YES >> Replace the lane camera unit. Refer to DAS-621, "Removal and Installation".

NO >> INSPECTION END

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INFOID:0000000011286437

C1B00 CAMERA UNIT MALF

< DTC/CIRCUIT DIAGNOSIS >

[ACTIVE LANE CONTROL]

C1B00 CAMERA UNIT MALF

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition	
C1B00	CAMERA UNIT MALF (Lane camera unit malfunction)	If lane camera unit is malfunctioning	

POSSIBLE CAUSE

· Lane camera unit

FAIL-SAFE

The following functions are suspended.

- Active Lane Control
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

(P)With CONSULT

- 1. Start the engine.
- 2. Perform "All DTC Reading" with CONSULT.
- Check if the "C1B00" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAM-ERA".

Is "C1B00" detected as the current malfunction?

YES >> Refer to <u>DAS-614</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011286439

1. CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC other than "C1B00" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to <u>DAS-574, "DTC Index"</u>.

NO >> Replace the lane camera unit. Refer to DAS-621, "Removal and Installation".

C1B01 CAM AIMING INCMP

< DTC/CIRCUIT DIAGNOSIS >

[ACTIVE LANE CONTROL]

C1B01 CAM AIMING INCMP

DTC Description

INFOID:0000000011286440

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DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B01	CAM AIMING INCMP (Camera aiming incomplete)	Camera aiming is not completed

POSSIBLE CAUSE

- · Lane camera aiming is not completed
- Lane camera aiming adjustment has been interrupted

FAIL-SAFE

The following functions are suspended.

- Active Lane Control
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine.
- Perform "All DTC Reading" with CONSULT.
- 3. Check if the "C1B01" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B01" detected as the current malfunction?

YES >> Refer to <u>DAS-615</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011286441

1. CAMERA AIMING ADJUSTMENT

- Perform the camera aiming. Refer to <u>DAS-604, "Description"</u>.
- Erase all self-diagnosis results with CONSULT.
- Perform "All DTC Reading".
- Check if the "C1B01" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B01" detected?

YES >> Replace the lane camera unit. Refer to <u>DAS-621, "Removal and Installation"</u>.

NO >> INSPECTION END

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C1B03 ABNRML TEMP DETECT

< DTC/CIRCUIT DIAGNOSIS >

[ACTIVE LANE CONTROL]

C1B03 ABNRML TEMP DETECT

DTC Description

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B03	ABNRML TEMP DETECT (Abnormal temperature detected)	Temperature around lane camera unit is excessively high

POSSIBLE CAUSE

· Interior room temperature is excessively high

FAIL-SAFE

The following functions are suspended.

- Active Lane Control
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

Diagnosis Procedure

INFOID:0000000011286443

1. COOLING LANE CAMERA UNIT

- 1. Wait for 10 minutes or more to cool the lane camera unit.
- 2. Erase All self-diagnosis results with CONSULT.
- 3. Perform "All DTC Reading".
- 4. Check if the "C1B03" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B03" detected?

YES >> Replace the lane camera unit. Refer to <u>DAS-621, "Removal and Installation"</u>.

NO >> INSPECTION END

ACTIVE LANE CONTROL

< SYMPTOM DIAGNOSIS >

[ACTIVE LANE CONTROL]

SYMPTOM DIAGNOSIS

ACTIVE LANE CONTROL

Symptom Table

INFOID:0000000011286444

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NOTE:

- For the operational conditions of Active Lane Control, refer to DAS-548, "ACTIVE LANE CONTROL: System Description".
- Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
	The vehicle wanders.		Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".
Hard to drive along a traffic lane during the use of Active Lane Control.			Road wheel tire condition is abnormal Road wheel tire size is abnormal.	Check the road wheel tire.
	The vehicle pulls to one direction.	Continuously	Wheel alignment Direct Adaptive Steering malfunction Lane camera unit installa- tion condition	Symptom diagnosis "THE VEHICLE PULLS TO ONE SIDE" Refer to DAS-619, "Description".
		Temporarily	Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".
	Function is not smooth		Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".
Steering effort fluctuates during Active Lane Control.	Increase in steering effort	When changing the traveling lane. (Turn signal is not used.)	Operation condition	Confirm the operating condition. Refer to DAS-548, "ACTIVE LANE CONTROL: System Description".
		After the use of turn signal	Operation condition	Confirm the operating condition. Refer to DAS-548, "ACTIVE LANE CONTROL: System Description".
		Other than above	Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".
	Steering effort fluctuates abruptly.		Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".
	Steering effort is not smooth.		Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".

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ACTIVE LANE CONTROL

< SYMPTOM DIAGNOSIS >

[ACTIVE LANE CONTROL]

	Symptom	Possible cause	Inspection item
Active Lane Control is not functioning.	Active Lane Control information is not displayed on the vehicle information display.	Active Lane Control setting	Check Active Lane Control setting Refer to DAS-556, "ACTIVE LANE CONTROL: Menu Displayed by Pressing Each Switch".
	Not functioning adequately	Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-557, "Precautions for Active Lane Control".
		The vehicle speed is low	Confirm the operating condition. Refer to DAS-548, "ACTIVE_ LANE CONTROL: System Description".

THE VEHICLE PULLS TO ONE SIDE

< SYMPTOM DIAGNOSIS >

[ACTIVE LANE CONTROL]

THE VEHICLE PULLS TO ONE SIDE

Description INFOID:0000000011286445

The vehicle pulls to one side continuously during traveling straight **NOTE:**

- For the operational conditions of Active Lane Control, refer to DAS-548, "ACTIVE LANE CONTROL: System Description".
- For the handling precautions of Active Lane Control, refer to DAS-557, "Precautions for Active Lane Control".

Diagnosis Procedure

INFOID:0000000011286446

1. DIRECT ADAPTIVE STEERING INSPECTION

- 1. Turn Active Lane Control OFF.
- 2. Perform symptom diagnosis for "the vehicle does not pull to one direction" and/or "steering wheel is off-center" based on Direct Adaptive Steering symptom table. Refer to STC-403, "Symptom Table".

>> INSPECTION END

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[ACTIVE LANE CONTROL]

NORMAL OPERATING CONDITION ACTIVE LANE CONTROL

ACTIVE LANE CONTROL: Description

INFOID:0000000011286447

- If Active Lane Control malfunctions, it will cancel automatically. The chassis control warning will appear in the vehicle information display.
- Active Lane Control will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss
 of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and
 be in control of vehicle at all times.
- Active Lane Control is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers for certain roads, weather or driving conditions.
- Using Active Lane Control under some conditions of road, lane marker or weather, or if driver attempt to change lanes without using the lane change signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- Active Lane Control will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Active Lane Control may not operate properly under the following conditions, and do not use Active Lane Control:
- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or a temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original steering parts or suspension parts.
- The functions of Active Lane Control may or may not operate properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (Active Lane Control could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)
- When entering or exiting tollgates.
- When driving on roads with a widening or narrowing lane width.

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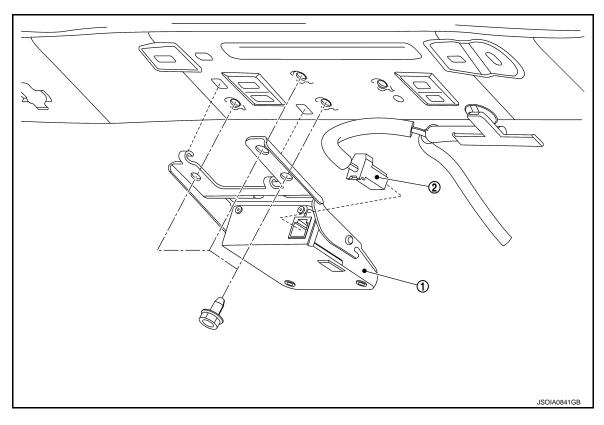
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REMOVAL AND INSTALLATION

LANE CAMERA UNIT

Exploded View



1 Lane camera unit

Lane camera unit harness connector

Removal and Installation

REMOVAL

- 1. Remove headlining assembly. Refer to INT-42, "Removal and Installation".
- 2. Remove the bolts.
- 3. Remove lane camera unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Remove the camera lens cap for replacement.
- Never give an impact to the lane camera unit.
- Perform the camera aiming every time the lane camera unit is removed and installed. Refer to <u>DAS-604</u>, "Work <u>Procedure (Preparation)</u>".

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