SECTION DAS
DRIVER ASSISTANCE SYSTEM

CONTENTS

CHASSIS CONTROL

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009726250

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.

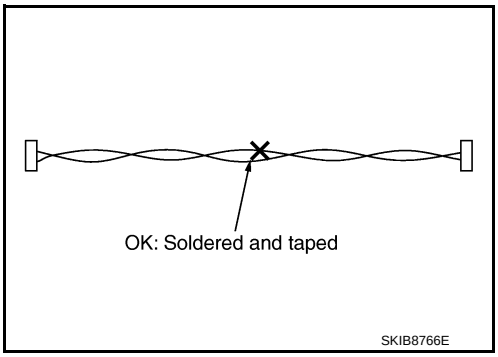
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious 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 Harness Repair

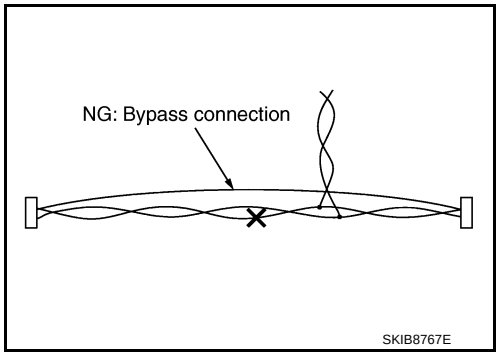
INFOID:0000000009644366

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

- 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.



SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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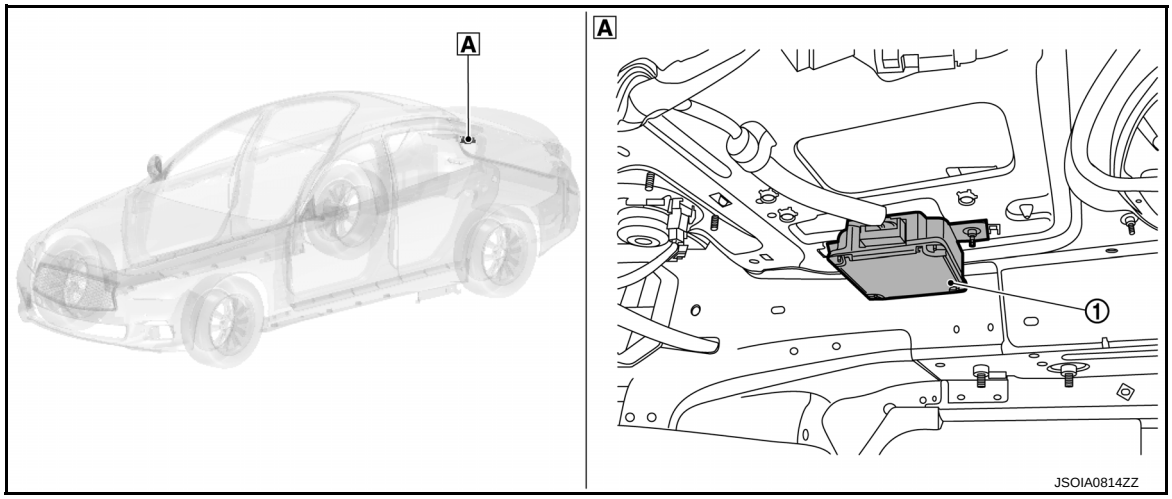

A Trunk side of rear parcel shelf

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

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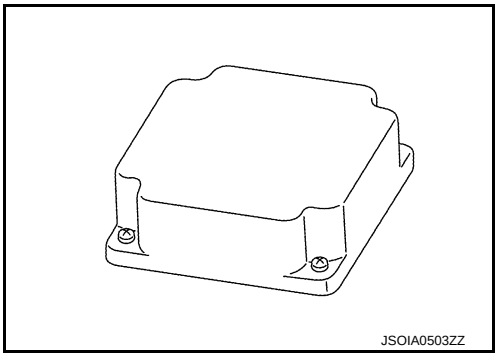
- ADAS control unit is installed at trunk side of the parcel shelf.
- Communicates with each control unit via CAN communication/ITS communication/Chassis communication.
- ADAS control unit included gateway function, and necessary for system control signals are transmitted to each control unit between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

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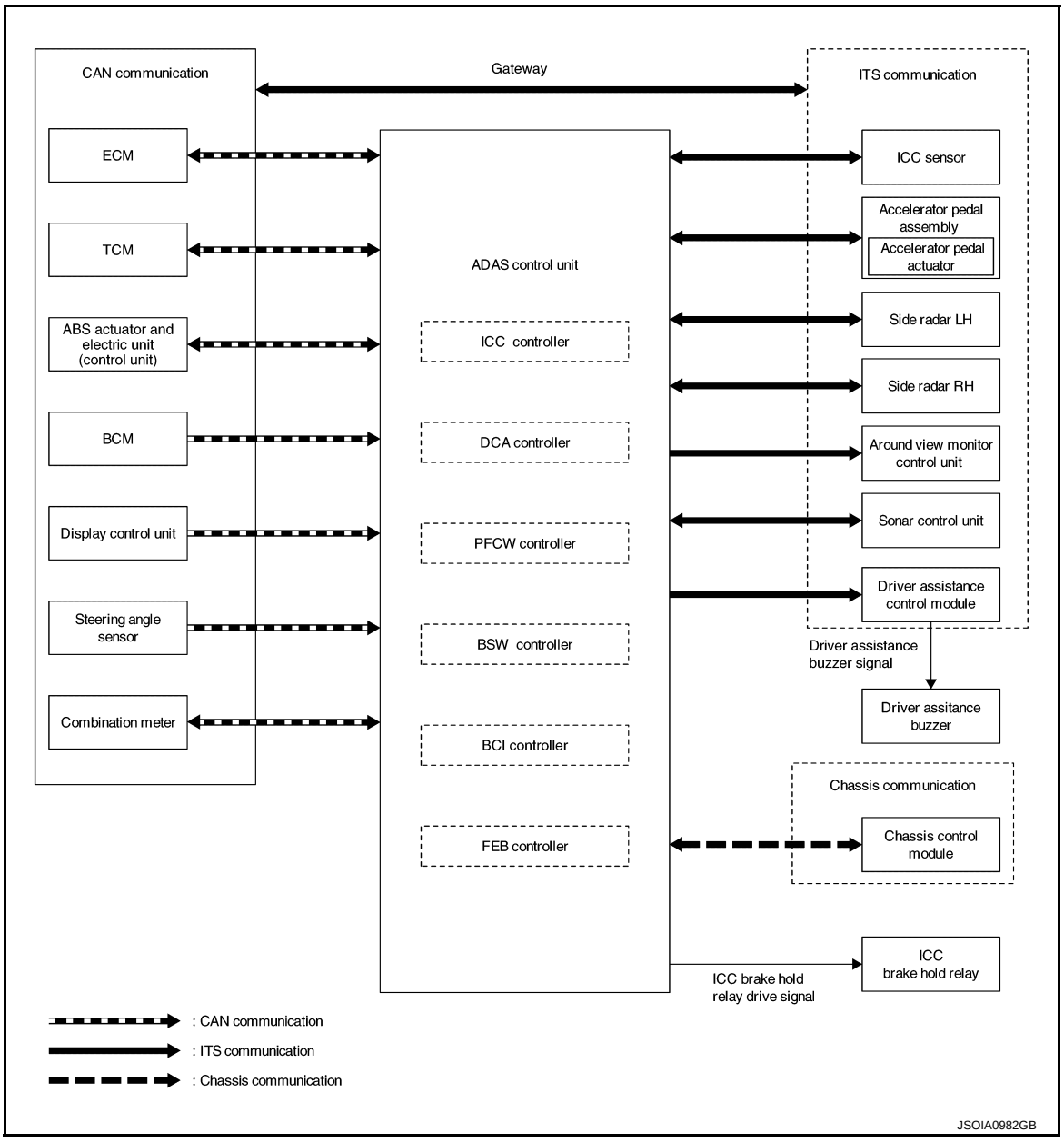
SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name			Description
ECM	CAN communication	Closed throttle position signal		Receives idle position state (ON/OFF)
		Accelerator pedal position signal		Receives accelerator pedal position (angle)
		ICC prohibition signal		Receives an operable/inoperable state of the ICC system
		Engine speed signal		Receives engine speed
		ICC steering switch signal	MAIN switch signal	Receives the operational state of the ICC steering switch
			SET/COAST switch signal	
			CANCEL switch signal	
			RESUME/ACCELERATE switch signal	
			DISTANCE switch signal	
			Dynamic driver assistance switch signal	
		Stop lamp switch signal		Receives an operational state of the brake pedal
		Brake pedal position switch signal		Receives an operational state of the brake pedal
TCM	CAN communication	Input speed signal		Receives the number of revolutions of input shaft
		Current gear position signal		Receives a current gear position
		Shift position signal		Receives a select lever position
		Output shaft revolution signal		Receives the number of revolutions of output shaft
ABS actuator and electric unit (control unit)	CAN communication	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
		TCS operation signal		Receives an operational state of TCS
		VDC OFF switch signal		Receives an ON/OFF state of VDC
		VDC malfunction signal		Receives a malfunction state of VDC
		VDC operation signal		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 signal		Receives lateral G acting on the vehicle
		Stop lamp switch signal		Receives an operational state of the brake pedal
Combination meter	CAN communication	Parking brake switch signal		Receives an operational state of the parking brake
BCM	CAN communication	Front wiper request signal		Receives an operational state of front wiper(s)
		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
Steering angle sensor	CAN communication	Steering angle sensor malfunction signal		Receives a malfunction state of steering angle sensor
		Steering angle sensor signal		Receives the number of revolutions, turning direction of the steering wheel
		Steering angle speed signal		Receives the turning angle speed of the steering wheel

Transmit unit	Signal name		Description
Display control unit	CAN communication	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 communication	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 communication	Accelerator pedal actuator operation status signal	Receives an operational state of accelerator pedal actuator
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone
Sonar control unit	ITS communication	Rear object detection signal	Receives objects detection result of rear area behind vehicle
Chassis control module	Chassis communication	Drive mode signal	Receives on operational state of the drive mode select switch

Output Signal Item

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

Reception unit	Signal name			Description
Combination meter	CAN communication	Meter display signal	Vehicle ahead detection indicator signal	Transmits a signal to display a state of the system on the information display
			Set vehicle speed indicator signal	
			Set distance indicator signal	
			SET switch indicator signal	
			MAIN switch indicator signal	
			DCA system display signal	
			FEB system display signal	
			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 lamp signal		• Transmits a signal to turn ON the lamp • Transmits an ON/OFF state of the Forward Emergency Brake
ICC sensor	ITS communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
		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
Side radar LH, RH	ITS communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
		Blind Spot Warning/Blind Spot Intervention indicator signal		Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer 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 communication	Buzzer drive signal		Transmits a buzzer drive signal to activate buzzer
Around view monitor control unit	ITS communication	BCI warning signal		Transmits a BCI warning signal to indicate a yellow/red frame on the upper display

Reception unit	Signal name		Description
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a driver assistance buzzer signal to activates the buzzer
ICC brake hold relay	ICC brake hold 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-170, "DCA : System Description"
Forward Emergency Braking (FEB)	BRC-187, "System Description"
Predictive Forward Collision Warning (PFCW)	DAS-174, "PFCW : System Description"
Blind Spot Warning (BSW)	DAS-181, "BSW : System Description"
Back-up Collision Intervention (BCI)	DAS-188, "BCI : System Description"

Circuit Diagram

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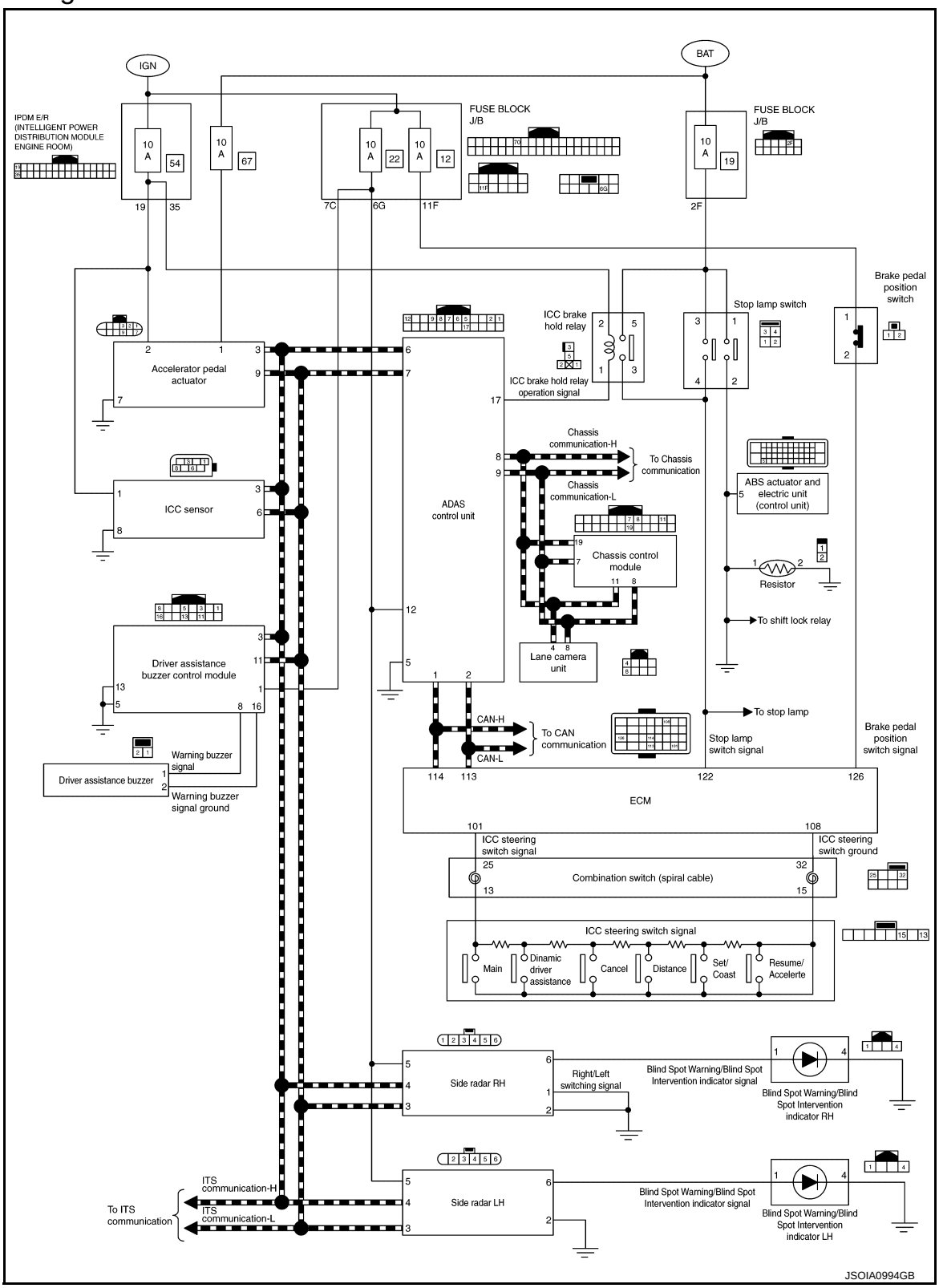

Fail-safe (ADAS Control Unit)

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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 display	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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

On Board Diagnosis Function

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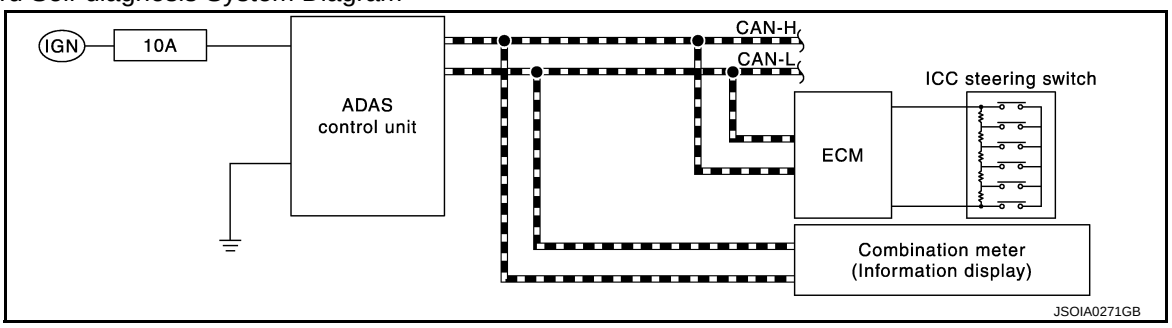
DESCRIPTION

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

On Board Self-diagnosis System Diagram



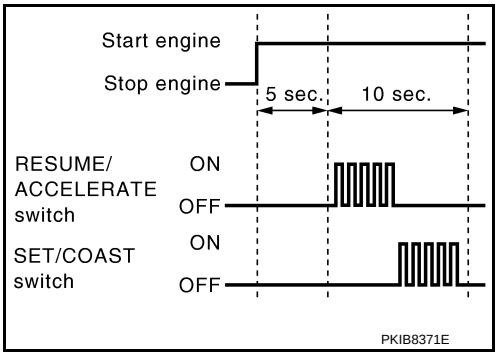
METHOD OF STARTING

CAUTION:

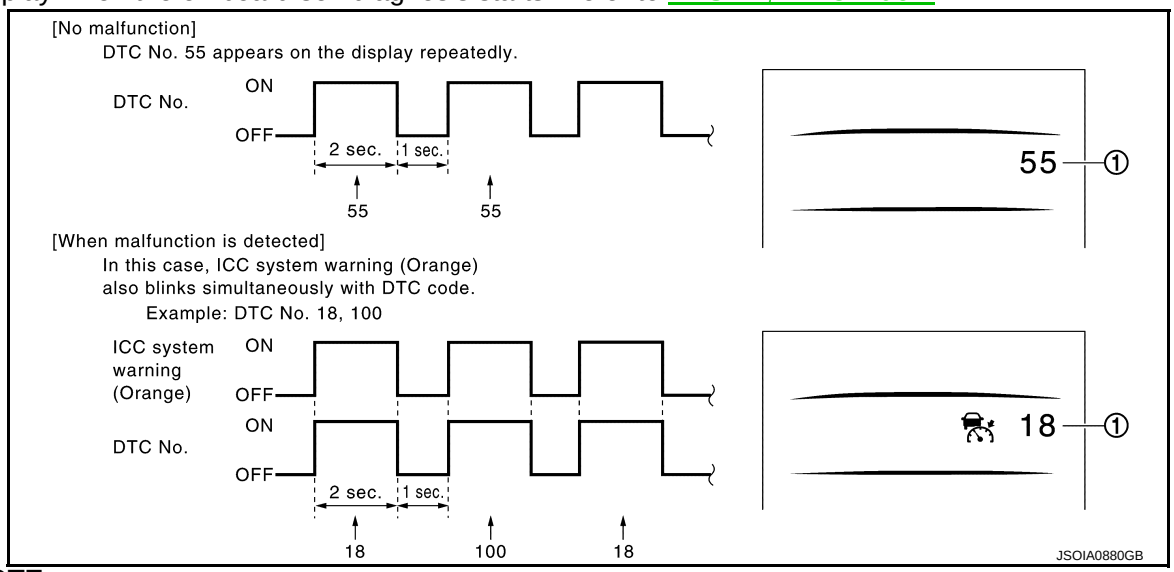
Start condition of on board self-diagnosis

- **ICC system OFF**
- **DCA system OFF**
- **Vehicle speed 0 km/h (0 MPH)**

1. Turn the ignition switch OFF.
2. Start the engine.
3. 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 DAS-44, "DTC Index".



NOTE:

- 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.

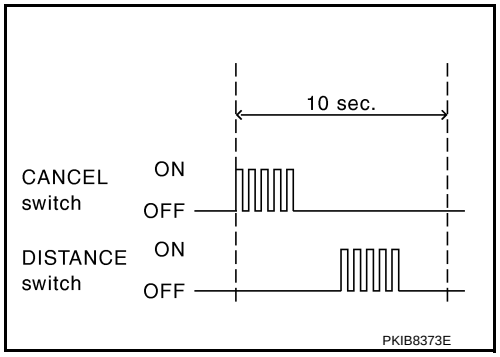
WHEN THE ON BOARD SELF-DIAGNOSIS DOES NOT START

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 malfunction		Perform the inspection for DTC “C1A06”. Refer to DAS-80, "DTC Logic".
Harness malfunction between ICC steering switch and ECM		
ECM malfunction		
ADAS control unit malfunction		• Check power supply and ground circuit of ADAS control unit. Refer to DAS-160, "Diagnosis Procedure". • Perform SELF-DIAGNOSIS for “ICC/ADAS”with CONSULT, and then check the malfunctioning parts. Refer to DAS-44, "DTC Index".

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 DISTANCE 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:0000000009644373

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.

Function		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)

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 ACCELERATION				×	Detected lateral speed is the specified value or more
RADAR INTERFERENCE	×		×	×	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

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-44, "DTC Index".

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”)
ON ROOT GUID-ANCE [On/Off]	×					**NOTE:** The item is displayed, but it is not monitored
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)
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)
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)
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]	×					Indicates [On/Off] status of own vehicle indicator output

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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)
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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
DISTANCE [m]	×					Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]	×					Indicates the relative speed of the vehicle ahead
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
FCW SYSTEM ON [On/Off]	×	×				Indicates [On/Off] status of PFCW system
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)
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 OUTPUT [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
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)
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)

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
STATUS signal [Stnby/Warn/Cancl/ Off]			×			Indicates a control state of LDP system
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)
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” ⇒ “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
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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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
BCI SYSTEM ON [On/Off]					×	Indicates [On/Off] status of BCI system
BATTERY CIRCUIT OFF [On/Off]	×					**NOTE:** The item is displayed, but it is not used
LDP WARNING INDICATOR [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 INDICATOR [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.
BSI WARNING INDICATOR [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 BRIGHTNESS [Nothing/Bright/Normal/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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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 VEHICLE 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**
  - **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

Test item	Description
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

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

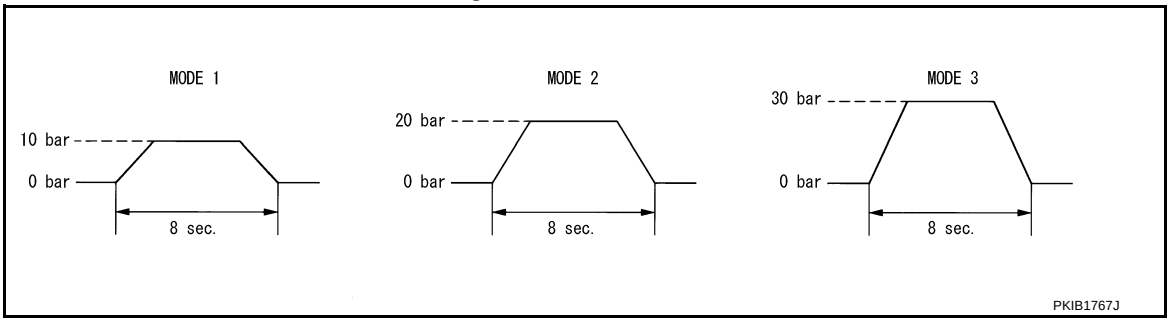
BRAKE ACTUATOR

NOTE:

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

Test item	Operation	Description	"PRESS SENS" value
BRAKE ACTUATOR	MODE1	Transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via chassis control module	10 bar
	MODE2		20 bar
	MODE3		30 bar
	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.)**

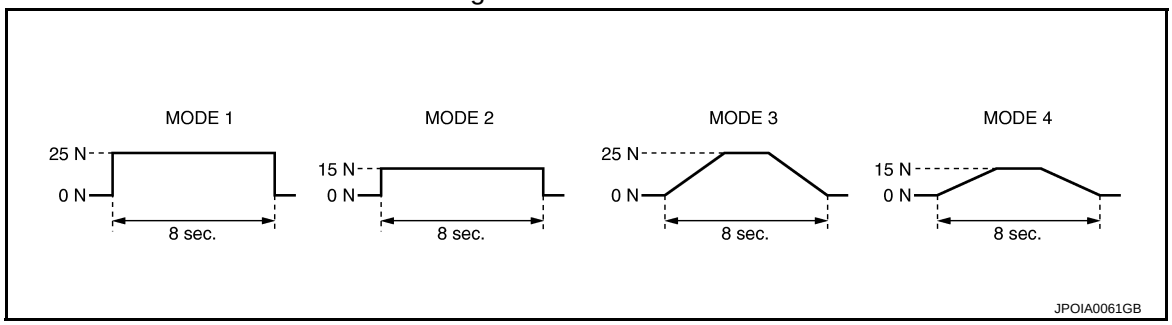
NOTE:

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

Test item	Operation	Description	Accelerator pedal operation
ACTIVE PEDAL	MODE1	Transmit the accelerator pedal feedback force control signal to the accelerator pedal actuator via ITS communication.	Constant with a force of 25 N for 8 seconds
	MODE2		Constant with a force of 15 N for 8 seconds
	MODE3		Change up to a force of 25 N for 8 seconds
	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	Operation	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	Operation	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	Operation	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

Test item	Operation	Description	Lane departure system display (Yellow)
LANE DEPARTURE W/L	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

BSW ON INDICATOR

Test item	Operation	Description	Blind Spot Warning system display (Yellow)
BSW ON 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

BSI ON INDICATOR

Test item	Operation	Description	Blind Spot Intervention system display (Green)
BSI ON 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

LDW ON INDICATOR

Test item	Operation	Description	LDW system display (White)
LDW ON 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 WARNING INDICATOR

Test item	Operation	Description	LDP malfunction (Yellow)
LDP WARNING 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

LDW WARNING INDICATOR

Test item	Operation	Description	LDW malfunction (Yellow)
LDW WARNING 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

BSW WARNING INDICATOR

Test item	Operation	Description	BSW malfunction (Yellow)
BSW WARNING 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

BSI WARNING INDICATOR

Test item	Operation	Description	Blind Spot Intervention malfunction (Yellow)
BSI WARNING 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

ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000009644374

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
		When MAIN switch is not pressed	Off
SET/COAST SW	Ignition switch ON	When SET/COAST switch is pressed	On
		When SET/COAST switch is not pressed	Off
CANCEL SW	Ignition switch ON	When CANCEL switch is pressed	On
		When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
		When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition switch ON	When DISTANCE switch is pressed	On
		When DISTANCE switch is not pressed	Off
CRUISE OPE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC system is controlling	On
		When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed	Off
		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 running	Idling	On
		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 MAIN switch	ICC system ON (MAIN switch indicator ON)	On
		ICC system OFF (MAIN switch indicator OFF)	Off
OWN VHCL	**NOTE:** The item is indicated, but not monitored		Off
VHCL AHEAD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
		When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
ICC WARNING	Start the engine and press MAIN switch	When ICC system is malfunctioning (ICC system malfunction ON)	On
		When ICC system is normal (ICC system malfunction OFF)	Off

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 running	When the buzzer of the following system operates • Vehicle-to-vehicle distance control mode • DCA system • PFCW system • FEB system	On
		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 monitored		0.0
ENGINE RPM	Engine running		Equivalent to tachometer reading
WIPER SW	Ignition switch ON	Wiper not operating	Off
		Wiper LO operation	Low
		Wiper HI operation	High
YAW RATE	**NOTE:** The item is indicated, but not monitored		0.0
BA WARNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
STP LMP DRIVE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC brake hold relay is activated	On
		When ICC brake hold relay is not activated	Off
D RANGE SW	Engine running	When the selector lever is in “D” position or manual mode	On
		When the selector lever is in any position other than “D” or manual mode	Off
NP RANGE SW	Engine running	When the selector lever is in “N”, “P” position	On
		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
		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 vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position

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
		When clutch or brake pedal is not depressed	Off
NP SW SIG	Ignition switch ON	When the shift lever is in neutral position	On
		When the shift lever is in any position other than neutral	Off
MODE SIG	Start the engine and press MAIN switch	When ICC system is deactivated	Off
		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 activate the conventional (fixed speed) cruise control mode • Press SET/COAST switch	SET switch indicator ON	On
		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
DYNA ASIST SW	Ignition switch ON	When dynamic driver assistance switch is pressed	On
		When dynamic driver assistance switch is not pressed	Off
DCA ON IND	Start the engine and press dynamic driver assistance switch (When DCA setting is ON)	DCA system OFF	Off
		DCA system ON	On
DCA VHL AHED	Drive the vehicle and activate the DCA system	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
		When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
IBA SW	**NOTE:** The item is indicated, but not monitored		Off
FCW SYSTEM ON	Ignition switch ON	When the PFCW system is ON	On
		When the PFCW system is OFF	Off
APA TEMP	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA PWR	Ignition switch ON		Power supply voltage value of accelerator pedal actuator
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off

Monitor item	Condition		Value/Status
LDP ON IND	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	LDP ON indicator lamp ON	On
		LDP ON indicator lamp OFF	Off
LANE DPRT W/L	Drive the vehicle and activate the LDW system or LDP system	Lane departure warning lamp ON	On
		Lane departure warning lamp OFF	Off
LDW BUZER OUTPUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning/Blind Spot Intervention system	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	On
		When the buzzer of the following system does not operate • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	Off
LDP SYSTEM ON	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
READY signal	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
Camera lost	Drive the vehicle and activate the LDW system, LDP system or Blind Spot Intervention system	Both side lane markers are detected	Detect
		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both
Shift position	• Engine running • While driving		Displays the shift position
Turn signal	Turn signal lamps OFF		Off
	Turn signal lamp LH blinking		LH
	Turn signal lamp RH blinking		RH
	Turn signal lamp LH and RH blinking		LH&RH
SIDE G	While driving	Vehicle turning right	Negative value
		Vehicle turning left	Positive value
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
		Lane departure warning is not operating	Off
STATUS signal	Drive the vehicle and activate the LDP system	When the LDP system is ON	Stnby
		When the LDP system is operating	Warn
		When the LDP system is canceled	Cancl
		When the LDP system is OFF	Off
Lane unclear	While driving	Lane marker is unclear	On
		Lane marker is clear	Off
FUNC ITEM	Ignition switch ON		FUNC3
FUNC ITEM (NV-ICC)	**NOTE:** The item is indicated, but not monitored		Off
FUNC ITEM (NV-DCA)	**NOTE:** The item is indicated, but not monitored		Off
DCA SELECT	Ignition switch ON	“Distance Control Assist” set with the integral switch is ON	On
		“Distance Control Assist” set with the integral switch is OFF	Off

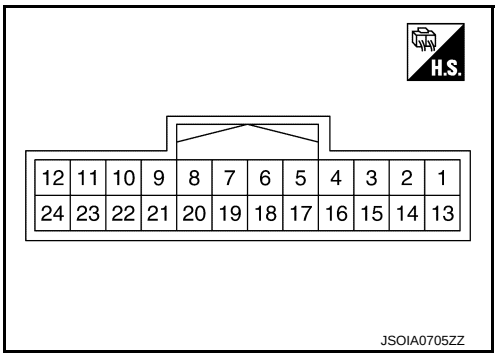
Monitor item	Condition		Value/Status
LDP SELECT	Ignition switch ON	“Lane Departure Intervention” set with the integral switch is ON	On
		“Lane Departure Intervention” set with the integral switch is OFF	Off
BSI SELECT	Ignition switch ON	“Blind Spot Intervention” set with the integral switch is ON	On
		“Blind Spot Intervention” set with the integral switch is OFF	Off
FCW SELECT	Ignition switch ON	“Forward Emergency Braking” set with the integral switch is ON	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
BSW SELECT	Ignition switch ON	“Blind Spot Warning” set with the integral switch is ON	On
		“Blind Spot Warning” set with the integral switch is OFF	Off
NAVI ICC SELECT	**NOTE:** The item is indicated, but not monitored		Off
NAVI DCA SELECT	**NOTE:** The item is indicated, but not monitored		Off
SYS SELECTABILITY	Ignition switch ON	Items set with the integral switch can be switched normally	On
		Items set with the integral switch cannot be switched normally	Off
DRIVE MODE STATS	Ignition switch ON	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
		When drive mode select switch position is in SNOW	SNOW
		When drive mode select switch position is in PERSONAL	STD
		A signal other than those above is input	ERROR
WARN SYS SW	**NOTE:** The item is indicated, but not monitored		Off
BSW/BSI WARN LMP	Ignition switch ON	When the BSW system is malfunctioning	On
		When the BSW system is normal	Off
BSI ON IND	Ignition switch ON	Blind Spot Intervention warning ON	On
		Blind Spot Intervention warning OFF	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On
		When the BSW system is OFF	Off
BSI SYSTEM ON	Start the engine and press dynamic driver assistance switch (When Blind Spot Intervention system setting is ON)	When the Blind Spot Intervention system is ON	On
		When the Blind Spot Intervention system is OFF	Off
BCI SYSTEM ON	Engine running	When the BCI system is ON	On
		When the BCI system is OFF	Off
BCI SWITCH	**NOTE:** The item is indicated, but not monitored		Off

Monitor item	Condition		Value/Status
BATTERY CIRCUIT OFF	**NOTE:** The item is indicated, but not used		Off
LDP WARNING INDICATOR	Engine running	When the LDP system is malfunctioning	On
		When the LDP system is normal	Off
LDW ON INDICATOR	Ignition switch ON	LDW system display ON	On
		LDW system display OFF	Off
LDW WARNING INDICATOR	Ignition switch ON	When the LDW system is malfunctioning	On
		When the LDW system is normal	Off
SYSTEM CANCEL MESSAGE	Ignition switch ON	System cancel display ON	On
		System cancel display OFF	Off
CAMERA HI TEMP MSG	Ignition switch ON	Lane camera unit high temperature warning display ON	On
		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 INDICATOR	Engine running	When the Blind Spot Intervention is malfunctioning	On
		When the Blind Spot Intervention is normal	Off
BSW ON INDICATOR	Ignition switch ON	BSW system display ON	On
		BSW system display OFF	Off
SIDE RADAR BLOCK COND	Ignition switch ON	Front bumper or side radar is dirty	On
		Front bumper and side radar is clean	Off
LDW WARNING ALERT TIMING	Ignition switch ON	LDW system OFF	Nothing
		Lane departure warning timing is early setting	Early
		Lane departure warning timing is late setting	Late
BSW IND BRIGHTNESS	Ignition switch ON	BSW system OFF	Nothing
		Blind Spot Warning/Blind Spot Intervention indicator brightness bright	Bright
		Blind Spot Warning/Blind Spot Intervention indicator brightness normal	Normal
		Blind Spot Warning/Blind Spot Intervention indicator brightness dark	Dark
FUNC ITEM (FEB)	Engine running	“Forward Emergency Braking” set with the integral switch is ON	On
		“Forward Emergency Braking” set with the integral switch is OFF	Off
FEB SELECT	Ignition switch ON	“Forward Emergency Braking” set with the integral switch is ON	On
		“Forward Emergency Braking” set with the integral switch is OFF	Off
FEB SW	Engine running	FEB system ON	On
		FEB system OFF	Off
SL MAIN SW	Engine running	When speed limiter MAIN switch is pressed	On
		When speed limiter MAIN switch is not pressed	Off

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

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Standard value	Reference value
+	–	Signal name	Input/ Output				
1 (L)	Ground	CAN -H	—	—		—	—
2 (R)		CAN -L	—	—		—	—
5 (B)		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 (V)		Chassis communication-L	—	—		—	—
12 (GR)		Ignition power supply	Input	Ignition switch ON	—	10 - 16 V	Battery voltage
17 (V)		ICC brake hold relay drive signal	Output	Ignition switch ON	—	10 - 16 V	Approx. 12 V
					At “STOP LAMP” test of “Active test”	0 - 0.1 V	Approx. 0 V

Fail-safe (ADAS Control Unit)

INFOID:0000000009644375

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 display	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:0000000009644376

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

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 • U150B: ECM CAN CIRC 3 • U150C: VDC CAN CIRC 3 • U150D: TCM CAN CIRC 3 • U150E: BCM CAN CIRC 3 • U150F: AV CAN CIRC 3 • U1512: HVAC CAN CIRC3 • 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 R CAN CIRC 3 • U1521: SONAR CAN COMMUNICATION 3 • U1522: SONAR CAN COMMUNICATION 3 • U1523: SONAR CAN COMMUNICATION 2 • U1524: AVM CAN COMMUNICATION 1 • U1525: AVM CAN COMMUNICATION 3 • U1527: CCM CAN CIR 1 • U153F: CCM CAN CIR 2 • U1530: DR ASSIST BUZZER CAN CIR 1 • U1540: 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

INFOID:0000000009644377

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.

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		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	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
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

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		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
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
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

Systems for fail-safe
- A: Vehicle-to-vehicle distance control mode
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- F: Blind Spot Warning (BSW)
- G: Back-up Collision Intervention (BCI)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
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.

WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

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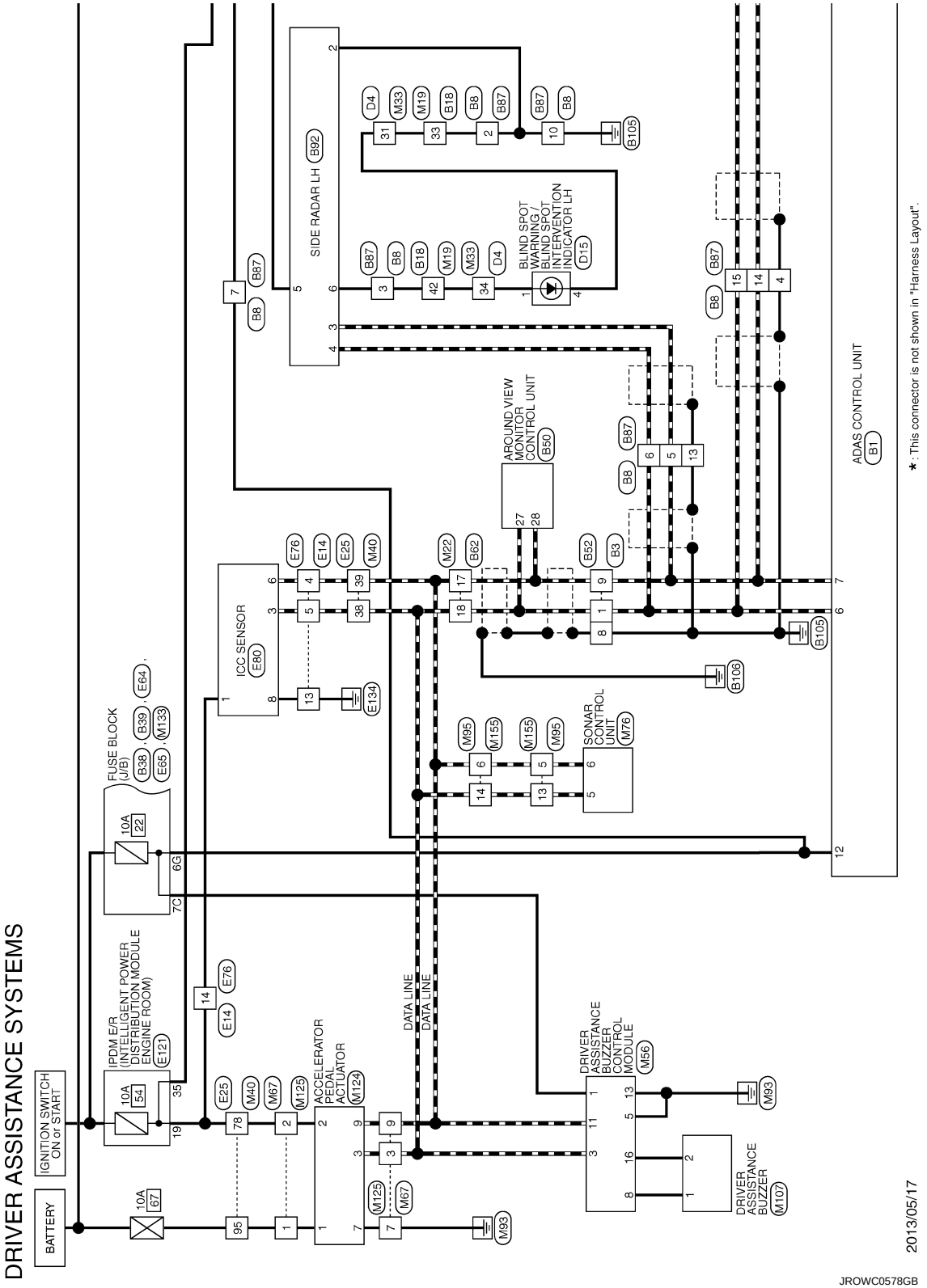
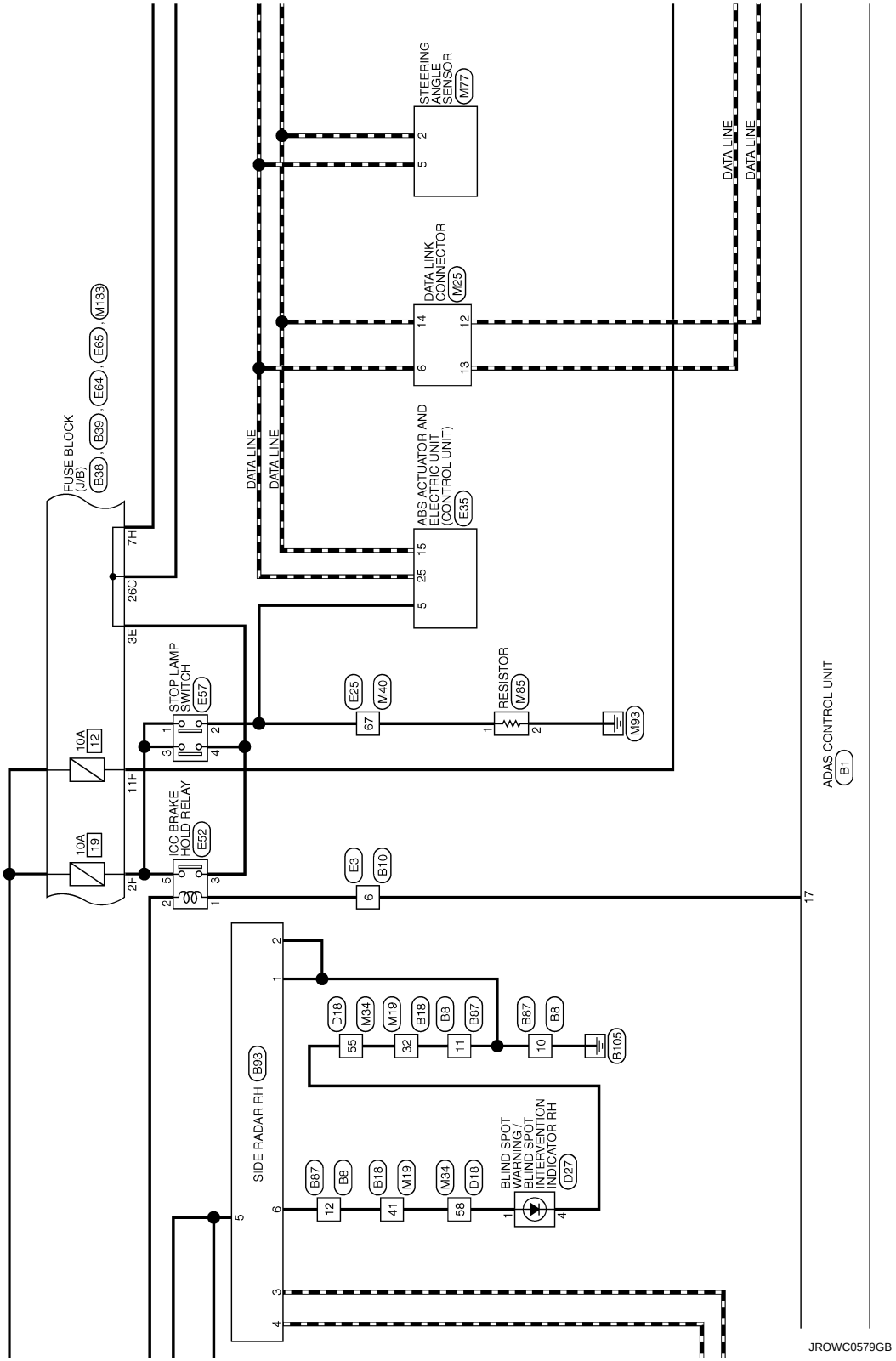
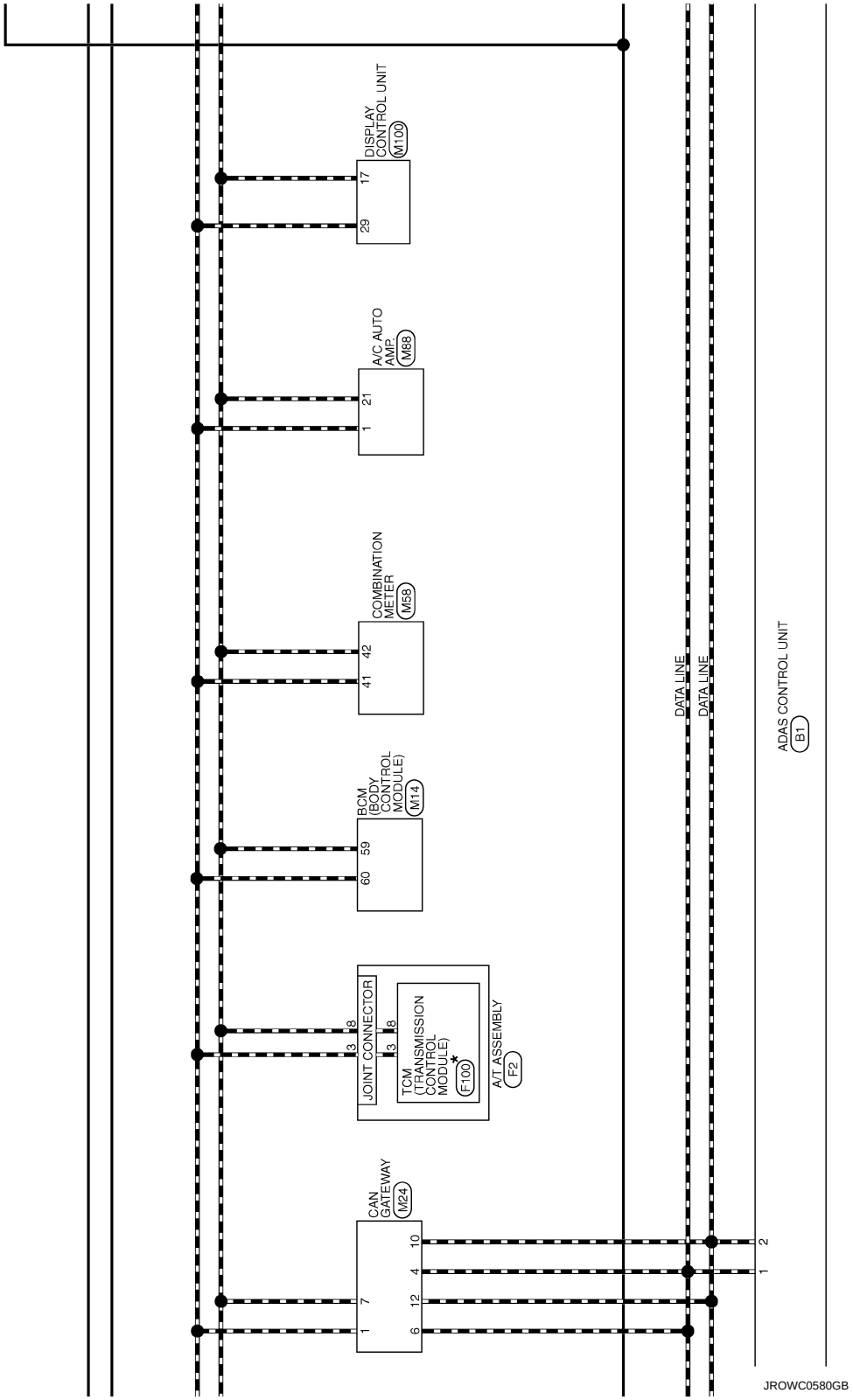
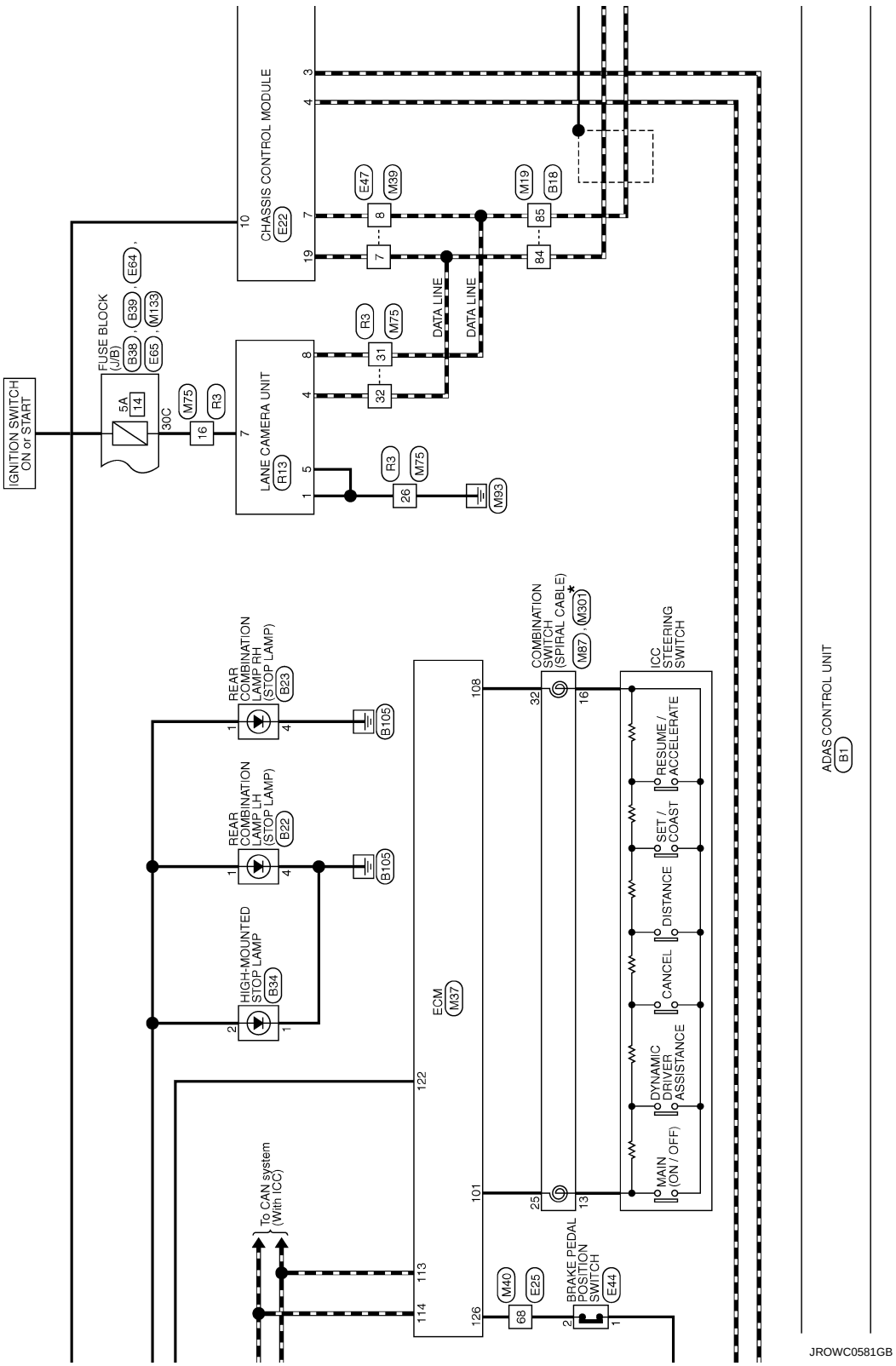
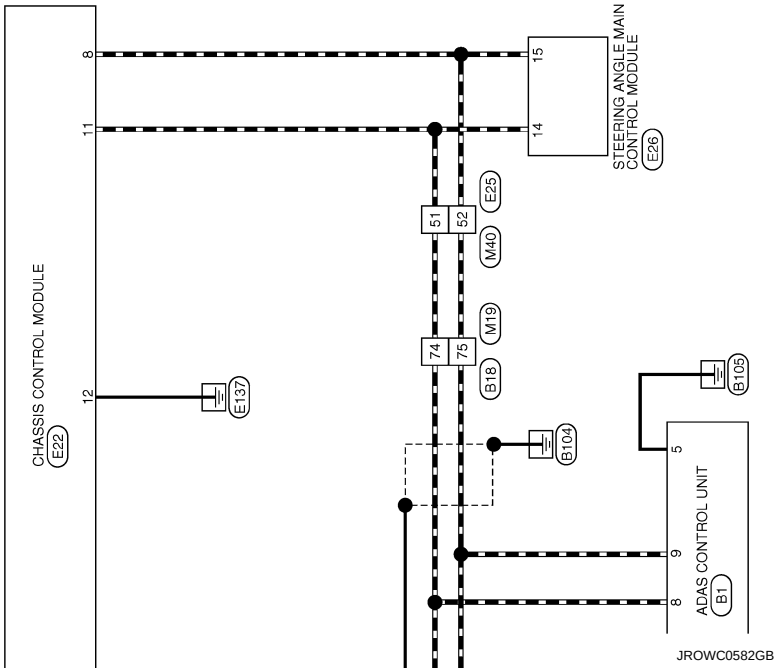
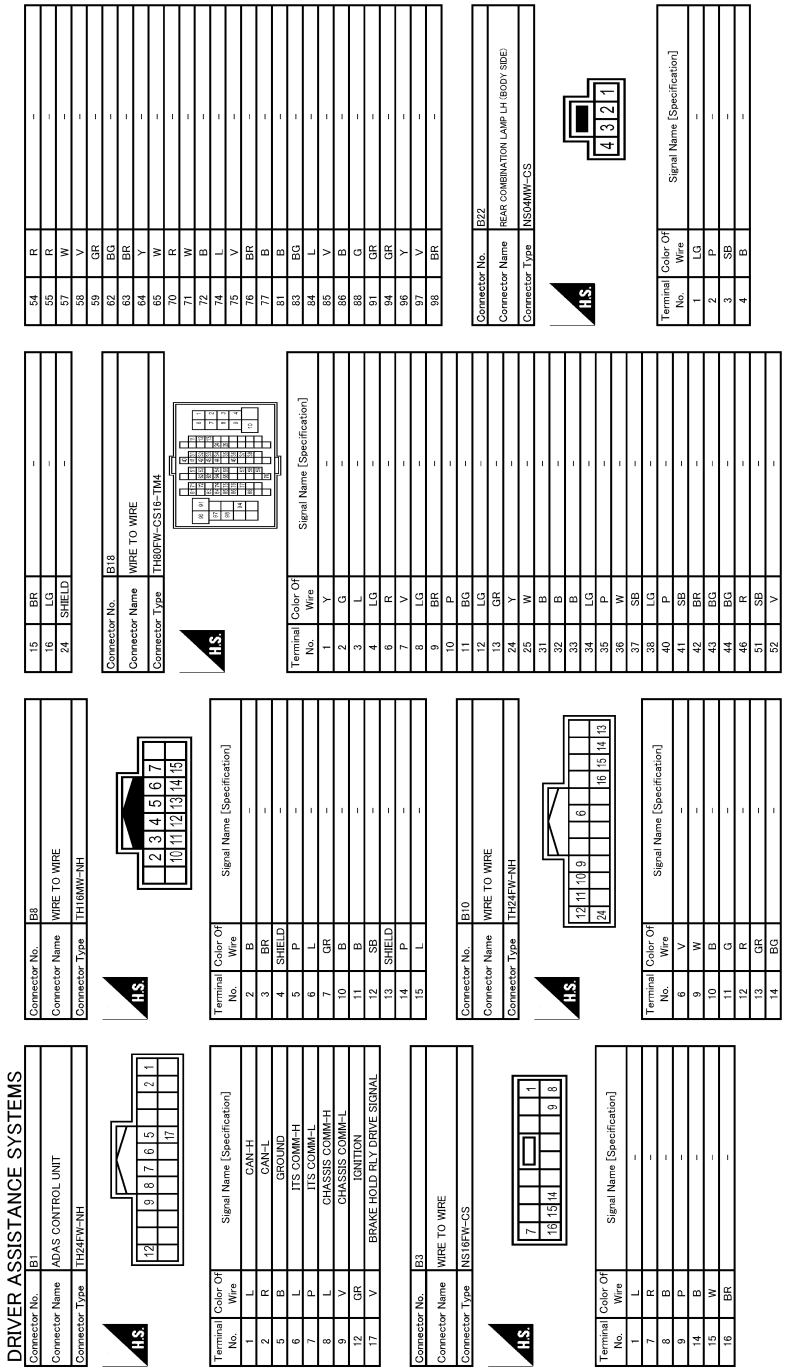



STEERING ANGLE SENSOR M77
DATA LINK CONNECTOR M25
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E35
DATA LINE
FUSE BLOCK (J/B) B38, B39, E64, E65, M133
STOP LAMP SWITCH E57
ICC BRAKE HOLD RELAY E52
RESISTOR M85
ADAS CONTROL UNIT B1
SIDE RADAR RH B93
BLIND SPOT WARNING/ BLIND SPOT INTERVENTION INDICATOR RH D27
JROWC0579GB


DISPLAY CONTROL UNIT
M100
17
29
A/C AUTO AMP.
M88
21
1
COMBINATION METER
M58
42
41
BCM (BODY CONTROL MODULE)
M14
59
60
JOINT CONNECTOR
8
3
8
3
TCM (TRANSMISSION CONTROL MODULE)
*
F100
A/T ASSEMBLY
F2
CAN GATEWAY
M24
10
4
12
6
7
1
DATA LINE
DATA LINE
ADAS CONTROL UNIT
B1
2
1
JROWC0580GB


IGNITION SWITCH ON or START
FUSE BLOCK (J/B)
B38, B39, E64, E65, M133
5A 14
30C
M75
R3
16
7
LANE CAMERA UNIT
R13
5
1
8
4
R3
M75
31
32
DATA LINE
DATA LINE
26
M93
CHASSIS CONTROL MODULE
E22
10
7
19
3
4
E47
M39
8
7
M19
B18
85
84
REAR COMBINATION LAMP RH (STOP LAMP)
B23
1
4
B105
REAR COMBINATION LAMP LH (STOP LAMP)
B22
1
4
B105
HIGH-MOUNTED STOP LAMP
B34
2
1
ECM
M37
122
113
114
126
108
101
To CAN system (With ICC)
M40
E25
68
BRAKE PEDAL POSITION SWITCH
E44
2
1
COMBINATION SWITCH (SPIRAL CABLE)
M87, M301
32
25
16
13
ICC STEERING SWITCH
RESUME / ACCELERATE
SET / COAST
DISTANCE
CANCEL
DYNAMIC DRIVER ASSISTANCE
MAIN (ON / OFF)
ADAS CONTROL UNIT
B1
JROWC0581GB


CHASSIS CONTROL MODULE
E22
8
11
12
E137
STEERING ANGLE MAIN CONTROL MODULE
E26
15
14
E25
51
52
M40
M19
74
75
B18
B105
B104
ADAS CONTROL UNIT
B1
5
9
8
JROWC0582GB



JROWC0583GB

DRIVER ASSISTANCE SYSTEMS

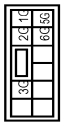
Connector No.	B23
Connector Name	REAR COMBINATION LAMP RH (BODY SIDE)
Connector Type	NS04MW-CS

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	–
2	R	–
3	V	–
4	B	–

Connector No.	B34
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Type	TK02MBR-P

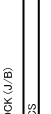
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	–
2	LG	–

Connector No.	B38
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



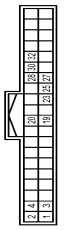
Terminal No.	Color Of Wire	Signal Name [Specification]
1G	GR	–
2G	W	–
3G	BR	–
5G	W	–
6G	G	–

Connector No.	B39
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH10FB-NH



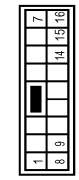
Terminal No.	Color Of Wire	Signal Name [Specification]
10H	P	–
3H	L	–
4H	R	–
6H	L	–
7H	LG	–
8H	P	–

Connector No.	B50
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH



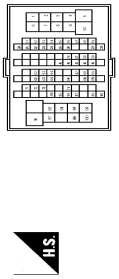
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GND
2	Y	BAT
3	LG	IGN
4	P	ACC
19	LG	AV COMM (H)
20	P	AV COMM (L)
23	SHIELD	AV COMM GND
25	BG	REVERSE SIGNAL
27	L	CAN-H
28	P	CAN-L [With ADAS]
28	R	CAN-L [With ASCD]
30	W	RETRACT MOTOR OPERATION SIGNAL (OPEN)
32	G	RETRACT MOTOR OPERATION SIGNAL (CLOSE)

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
7	R	–
8	SHIELD	–
9	P	–
14	B	–
15	W	–
16	BR	–

Connector No.	B62
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	L	–
3	R	– [With BOSE system]
3	W	– [Without BOSE system]
4	SHIELD	–
5	G	–
6	W	–
7	BR	– [Without BOSE system]
7	W	– [With BOSE system]
8	B	– [With BOSE system]
8	Y	– [Without BOSE system]
9	SHIELD	–
10	V	–
11	GR	–
12	Y	–
13	R	–
14	BG	–
15	GR	–
16	V	–
17	P	–
18	L	–
19	R	–
20	GR	–
21	R	–
22	P	–
23	W	–
24	V	–
25	SB	–
26	G	–
29	P	–
30	LG	–
36	R	–
37	R	–
38	W	–
39	W	–
45	G	–

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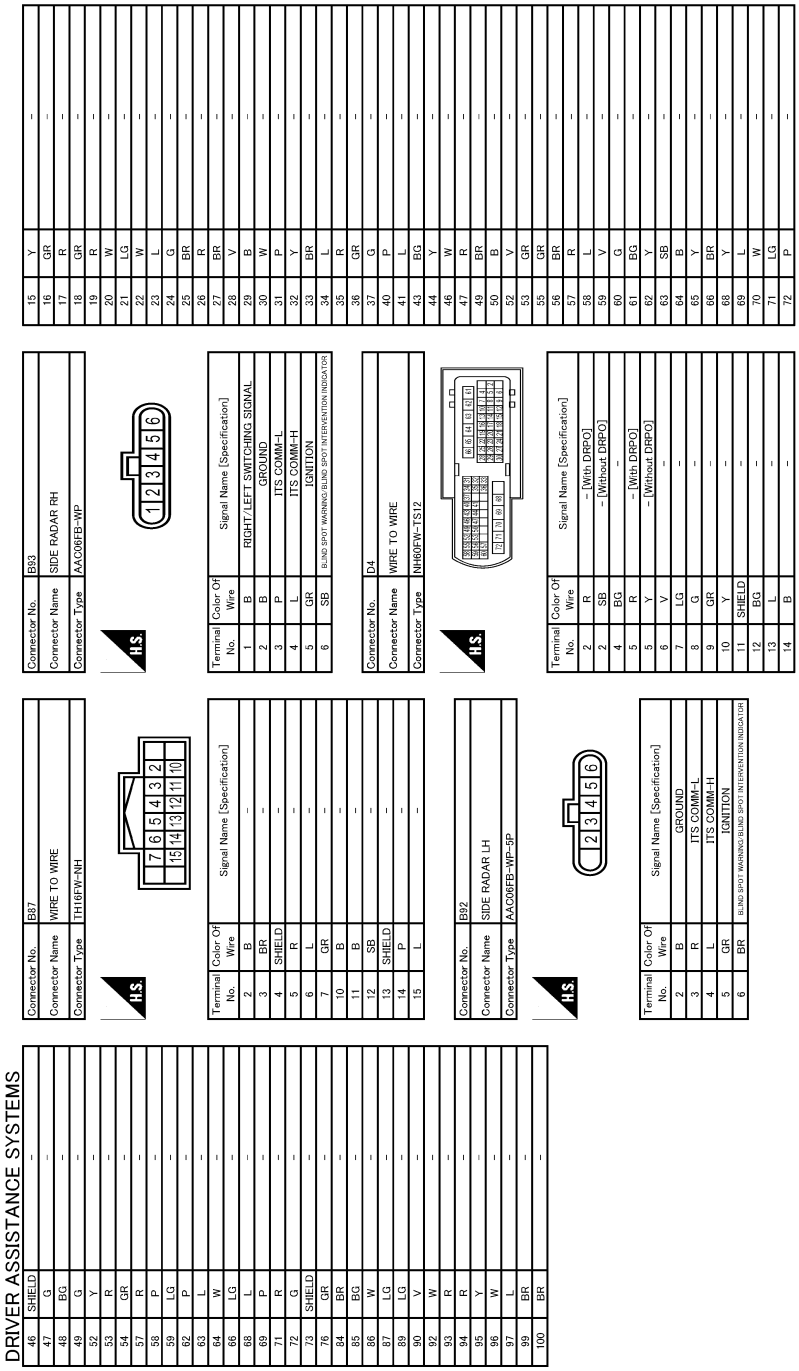

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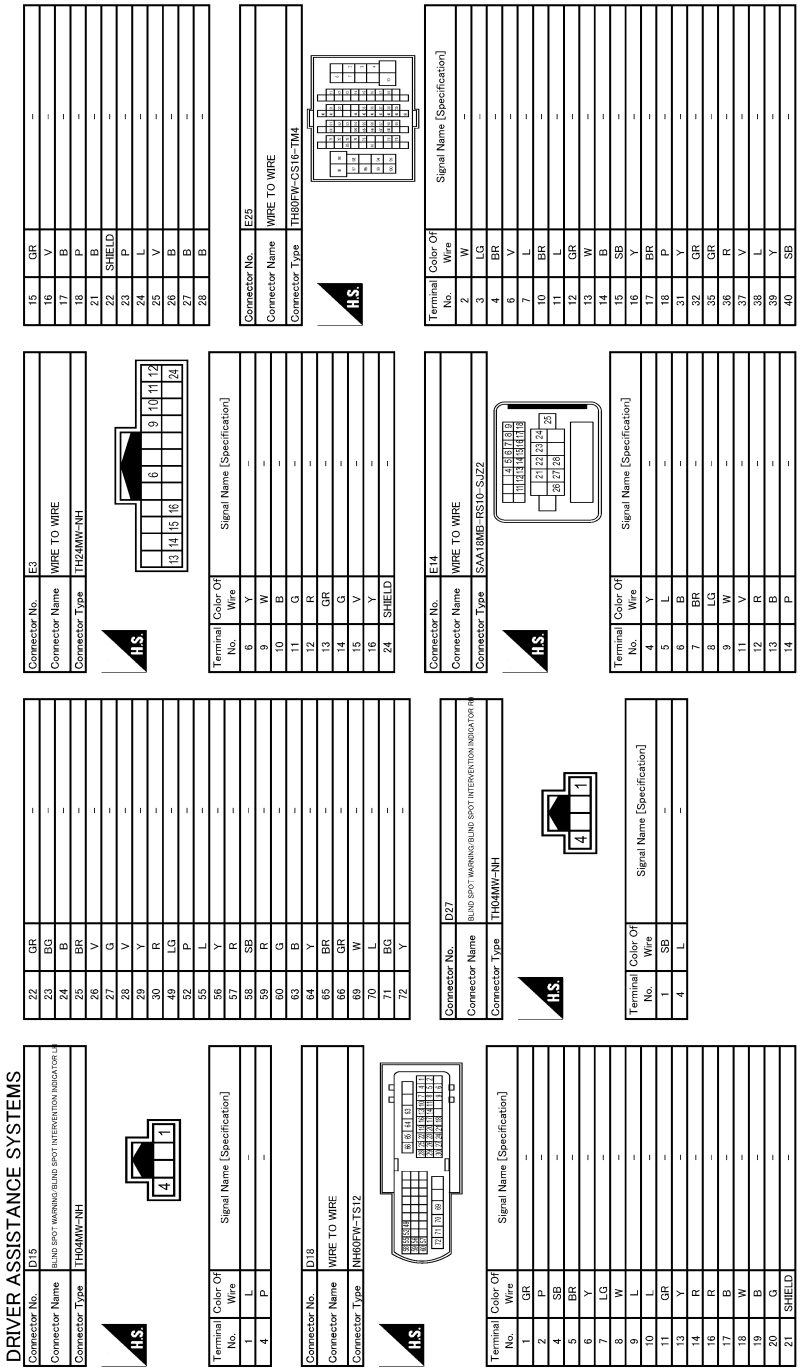

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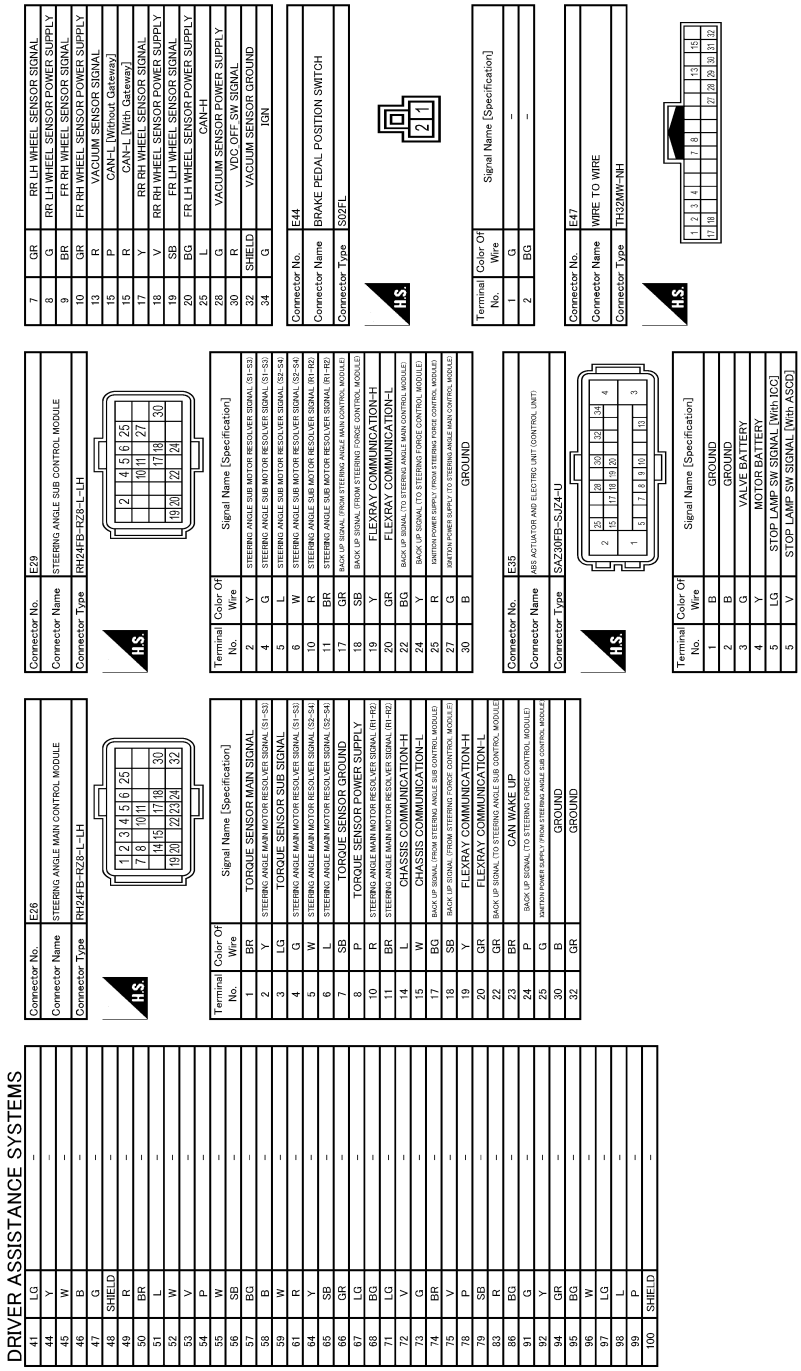

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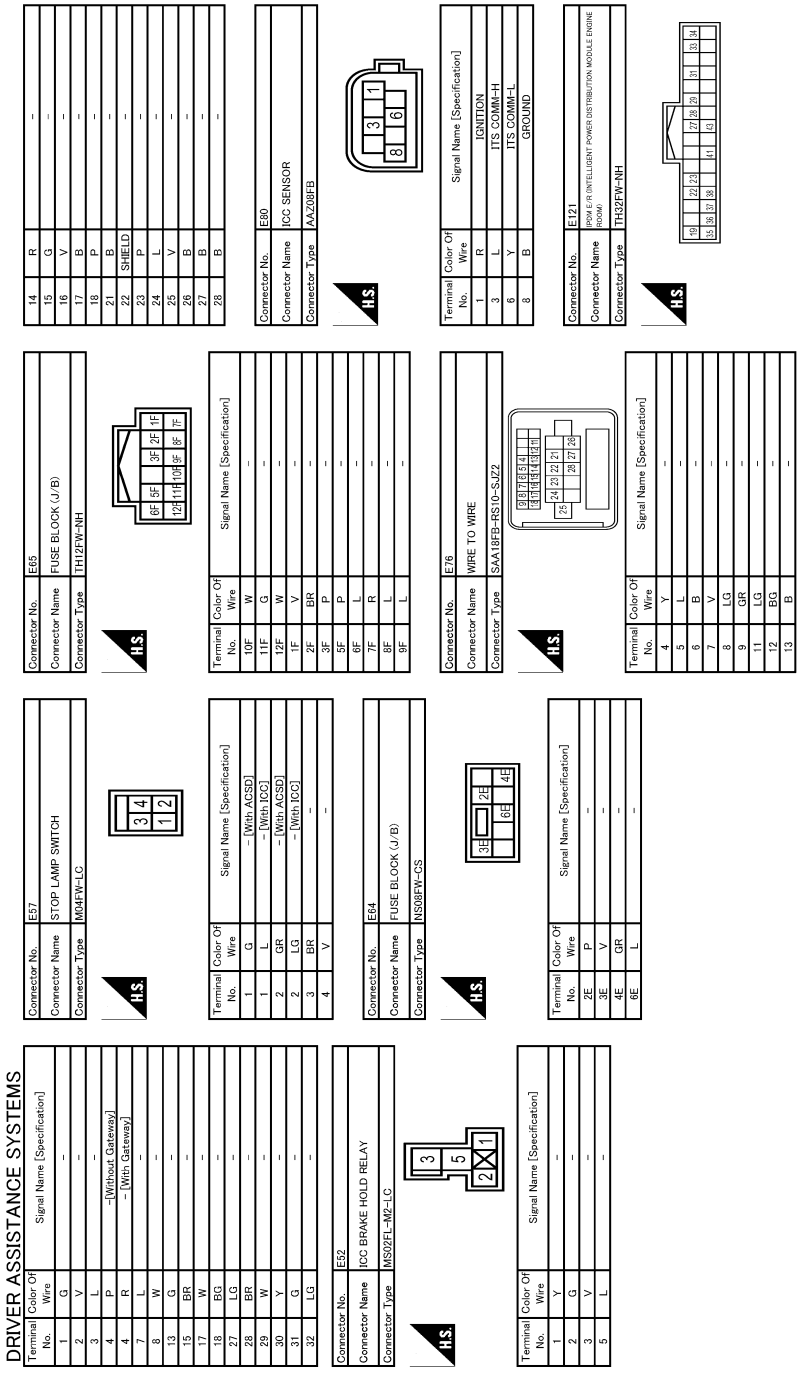

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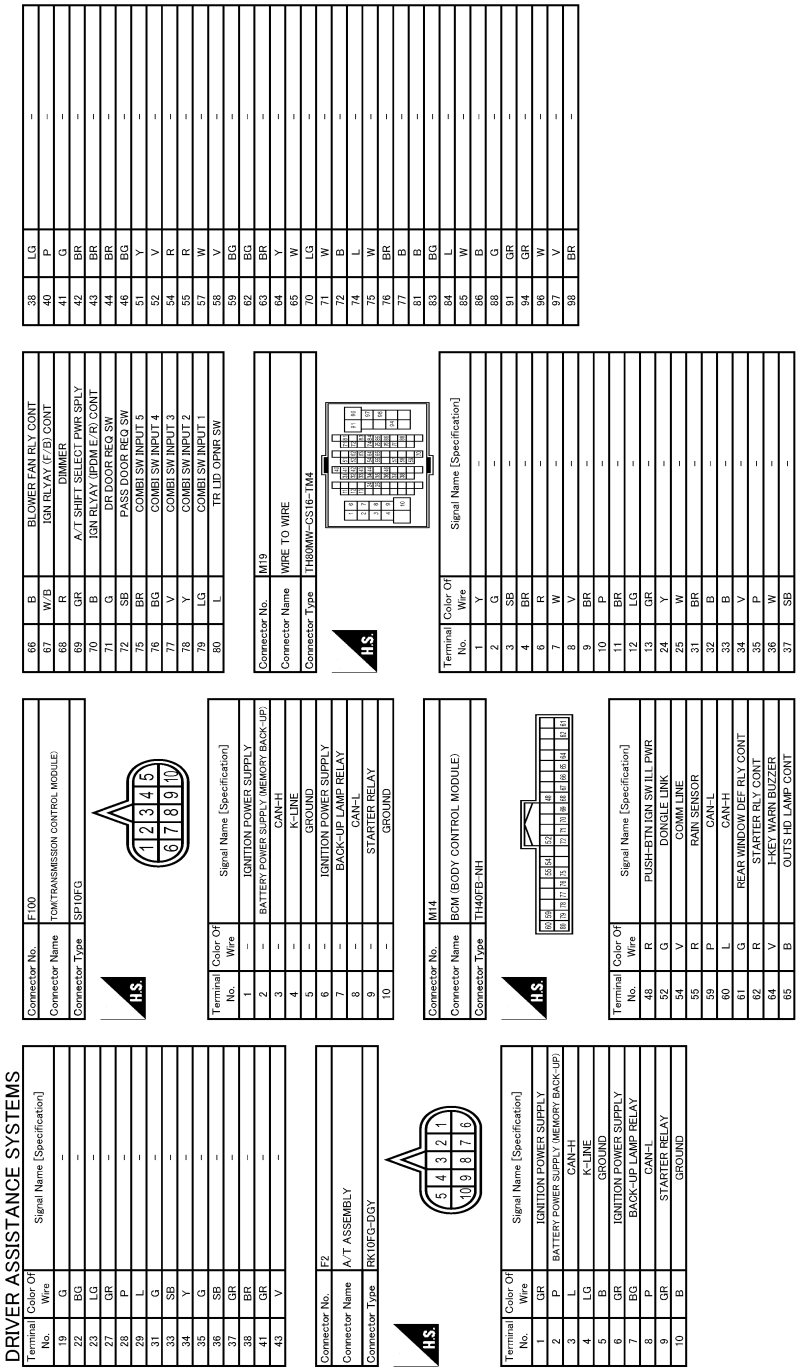

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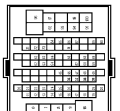
DRIVER ASSISTANCE SYSTEMS

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

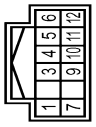
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	–
2	L	–
3	R	–
4	SHIELD	–
5	G	–
6	BG	–
7	LG	–
8	P	–
9	SHIELD	–
10	V	–
11	GR	–
12	V	–
13	LG	–
14	LG	–
15	P	–
16	SB	– [With DCM]
16	V	– [Without DCM]
17	Y	–
18	L	–
19	G	–
20	GR	–
21	R	–
22	W	–
23	L	–
24	V	–
25	LG	–
26	GR	–
29	SB	–
30	LG	–
36	R	–
37	R	–
38	W	–
39	V	–
45	G	–
46	SHIELD	–
47	G	–
48	BR	–
49	SB	–
52	Y	–
53	R	–
54	GR	–
57	R	–
58	SB	–
59	LG	–
62	V	–
63	L	–
64	W	–
66	R	–
68	L	–
69	P	–
71	R	–
72	G	–
73	SHIELD	–
76	V	–
84	BR	–
85	BR	–
86	V	–
87	LG	–
89	BR	–
90	V	–
92	W	–
93	R	–
94	R	–
95	Y	–
96	W	–
97	L	–
99	BR	–
100	BR	–

Connector No.	M24
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH

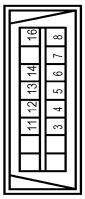
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
3	W	BATTERY
4	L	CAN2-H
5	B	GND
6	L	CAN3-H
7	P	CAN-L
9	R	IGN
10	R	CAN2-L
11	B	GND
12	R	CAN3-L

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

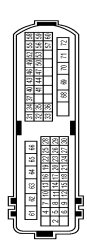
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	AV COMM (L)
4	B	EARTH
5	B	EARTH
6	L	CAN-H
7	V	KLINE
8	W	IGN SW
11	LG	AV COMM (H)
12	R	CAN-L
13	L	CAN-H
14	P	CAN-L
16	W	POWER

Connector No.	M33
Connector Name	WIRE TO WIRE
Connector Type	NH80MW-TS12

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	–
4	G	– [With DRPO]
4	SB	– [Without DRPO]
5	G	–
6	R	–
7	R	–
8	GR	–
9	GR	–
10	W	–
11	SHIELD	–
12	P	–
13	SB	–
14	LG	–
15	Y	–
16	Y	–
17	P	–
18	W/B	–
19	LG	– [With DRPO]
19	Y	– [Without DRPO]
20	V	–
21	B	–
22	BG	– [Without DRPO]
22	G	– [With DRPO]
23	L	–
24	Y	–
25	BG	– [Without DRPO]
25	L	– [With DRPO]
26	Y	–
27	GR	–
28	V	–
29	B	–
30	W	–
31	B	–
32	SB	–
33	L	–
34	BR	–

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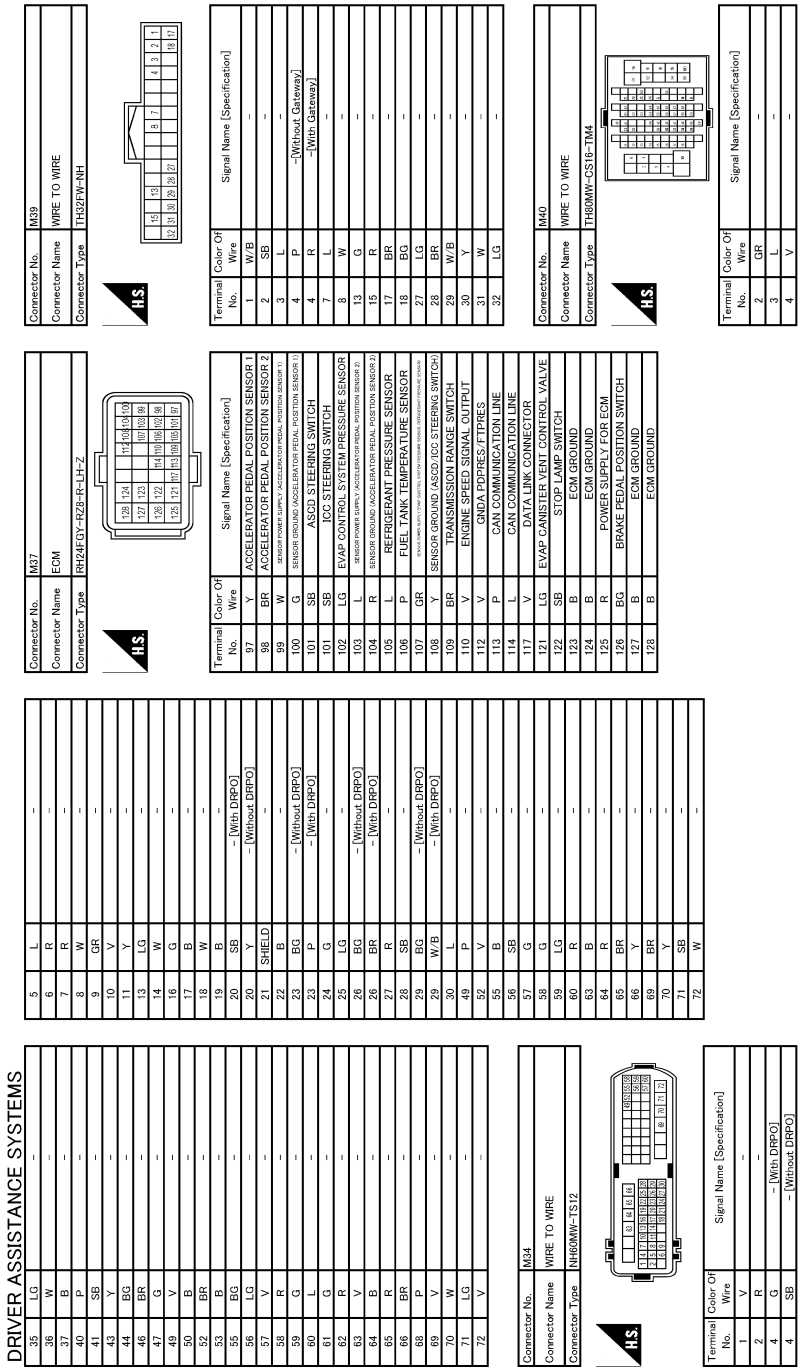

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DRIVER ASSISTANCE SYSTEMS

6	W/B	–
7	V	–
10	W	–
11	W	–
12	B	–
13	GR	–
14	B	–
15	SB	–
16	B	–
17	LG	–
18	B	–
31	W	–
32	V	–
35	BG	–
36	G	–
37	B	–
38	L	–
39	Y	–
40	GR	–
41	L	–
44	BR	–
45	W	–
46	G	–
47	R	–
48	SHIELD	–
49	B	–
50	BR	–
51	L	–
52	W	–
53	G	–
54	Y	–
55	P	–
56	BG	–
57	GR	–
58	B	–
59	SB	–
61	W/B	–
64	Y	–
65	R	–
66	V	–
67	LG	–
68	BG	–
71	V	–
72	LG	–
73	R	–
74	BR	–
75	B	–
78	G	–
79	R	–
83	R	–

86	V	–
91	W	–
92	R	–
94	BG	–
95	BR	–
96	W	–
97	LG	–
98	Y	–
99	BR	–
100	SHIELD	–

Connector No.	M56
Connector Name	DRIVER ASSISTANCE BUZZER CONTROL MODULE
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	IGNITION
3	L	ITS COMM-H
5	B	GROUND
8	R	WARNING BUZZER SIGNAL
11	Y	ITS COMM-L
13	B	GROUND
16	G	WARNING BUZZER SIGNAL GROUND

Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	B	ILLUMINATION CONTROL SIGNAL
44	Y	FUEL LEVEL SENSOR GROUND
45	W	BATTERY POWER SUPPLY
46	R	IGNITION SIGNAL
47	LG	AV COMMUNICATION SIGNAL (H)
48	SB	AV COMMUNICATION SIGNAL (L)
51	BR	FUEL LEVEL SENSOR SIGNAL GROUND
52	B	

Connector No.	M67
Connector Name	WIRE TO WIRE
Connector Type	RH12FB

H.S.

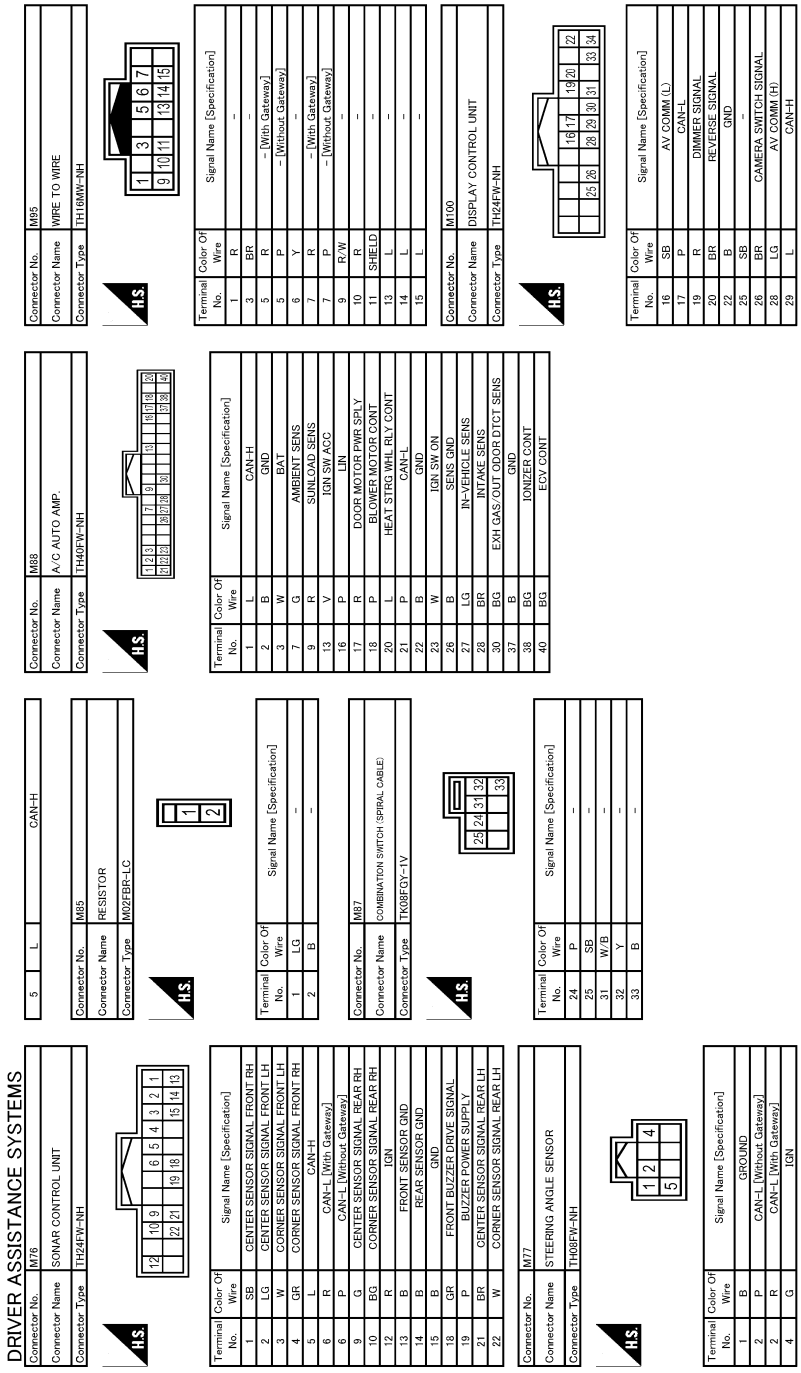
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	–
2	G	–
3	L	–
4	W	–
5	G	–
6	Y	–
7	B	–
9	Y	–
10	L	–
11	R	–
12	BR	–

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	W	–
4	BR	–
5	R	–
6	G	–
7	B	–
10	V	–
11	LG	–
12	W	–
13	G	–
14	B	–
16	R	–
17	SHIELD	–
18	G	–
19	L	–
21	B	–
22	R	–
23	V	–
25	W	–
26	B	–
27	R	–
28	GR	–
29	W	–
31	W	–
32	L	–

JROWC0592GB



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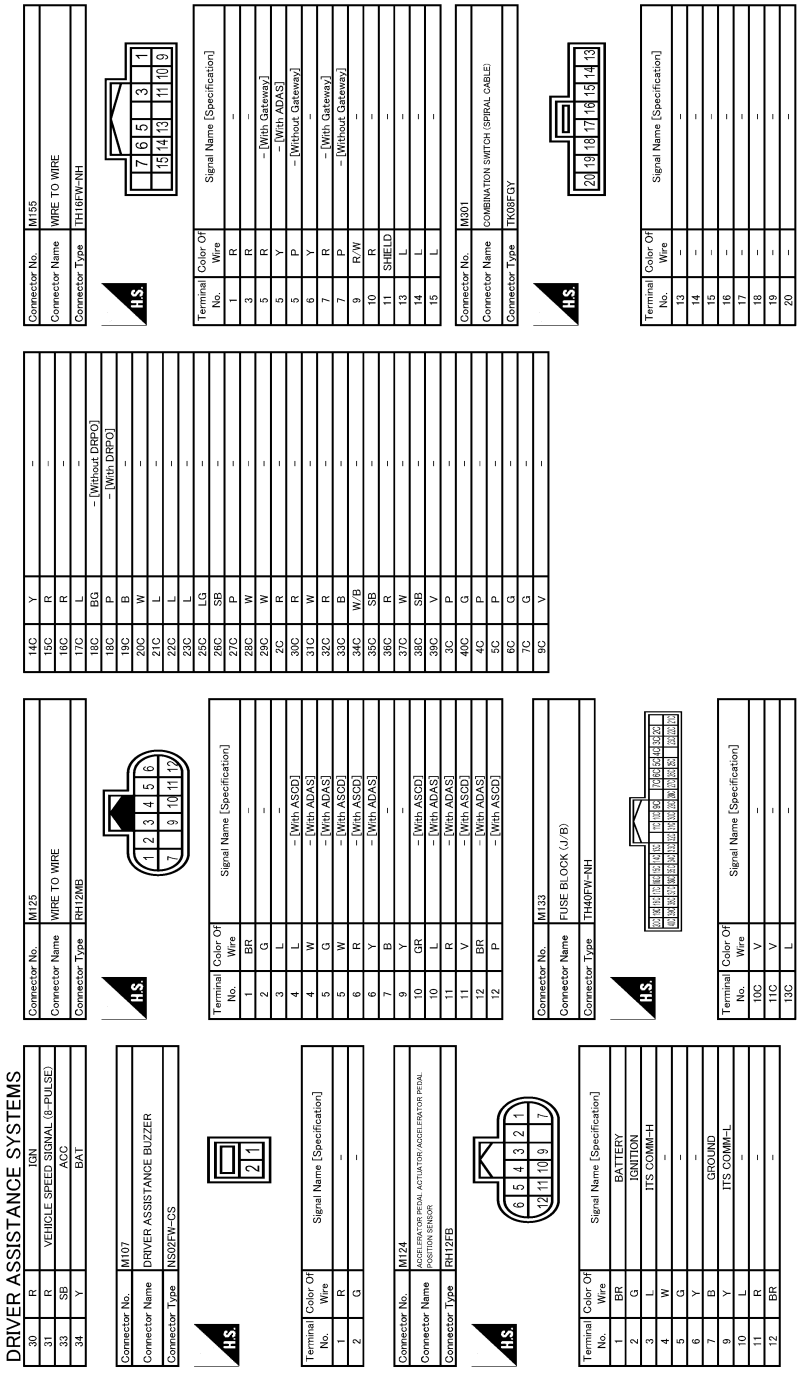

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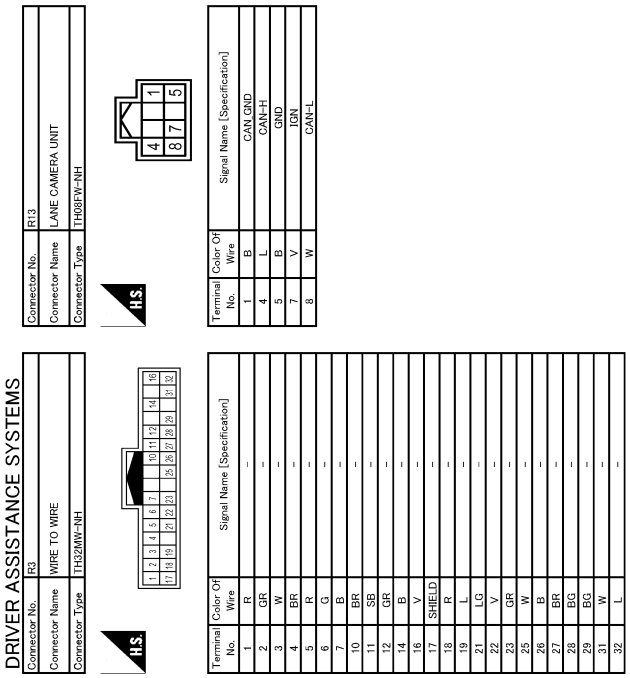

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BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT

Description

INFOID:0000000009644380

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

Work Procedure

INFOID:0000000009644381

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 DAS-44, "DTC Index".
NO >> INSPECTION END

CONFIGURATION (ADAS CONTROL UNIT)

Description

INFOID:0000000009644382

- 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.

Function		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 Procedure

INFOID:0000000009644383

1.SAVING VEHICLE SPECIFICATION

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.

2.REPLACE ADAS CONTROL UNIT

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

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

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

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

Setting item	
Items	Setting value
POWER TRAIN	NISSAN
	NISSAN HEV
2WD/4WD	2WD
	4WD
CAMERA CONTROL UNIT	WITHOUT
	WITH

Setting item	
BRAKE TYPE[NOTE]	NORMAL
	SPORT

NOTE:
- NORMAL: 2 piston type
- SPORT: 4 piston type

>> GO TO 6.

6. OPERATION CHECK

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

>> WORK END

DTC/CIRCUIT DIAGNOSIS

C1A0A CONFIG UNFINISHED

DTC Logic

INFOID:0000000009644384

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.
3. 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 DAS-69, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644385

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 DAS-67, "Description".

C1A00 CONTROL UNIT

DTC Logic

INFOID:0000000009644386

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.
2. Perform “All DTC Reading” with CONSULT.
3. 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 DAS-70, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644387

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 DAS-44, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2

DTC Logic

INFOID:0000000009644388

DTC DETECTION LOGIC

DTC (On board display)	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

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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?

YES >> Refer to DAS-71, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644389

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 DAS-161, "Removal and Installation".
NO >> Repair or replace the malfunctioning parts.

C1A03 VEHICLE SPEED SENSOR

DTC Logic

INFOID:0000000009644390

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 DAS-128, "DTC Logic"
- C1A04: Refer to DAS-74, "DTC Logic"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. 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.
4. Stop the vehicle.
5. Perform “All DTC Reading” with CONSULT.
6. 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 DAS-72, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644391

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 DAS-128, "DTC Logic"
- C1A04: Refer to DAS-74, "DTC Logic"

NO >> GO TO 2.

2.CHECK DATA MONITOR

1. Start the engine.
2. Drive the vehicle.
3. 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

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-85, "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?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A04 ABS/TCS/VDC SYSTEM

DTC Logic

INFOID:0000000009644392

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.
2. Turn the MAIN switch of ICC system ON.
3. 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 DAS-74, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644393

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A05 BRAKE SW/STOP LAMP SW

DTC Logic

INFOID:0000000009644394

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

1. 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”.

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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644395

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.CHECK STOP LAMP SWITCH AND BRAKE PEDAL POSITION SWITCH

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 3.
NO-2 >> When “STOP LAMP SW” operation is malfunctioning: GO TO 8.

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.

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 BR-9, "Inspection and Adjustment".

5. BRAKE PEDAL POSITION SWITCH INSPECTION

1. Disconnect brake pedal position switch connector.
2. Check brake pedal position switch. Refer to DAS-78, "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.

Terminals			Voltage (Approx.)
(+)		(-)	
Brake pedal position switch		Ground	
Connector	Terminal		
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

1. 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	
E114	2	M37	126	Existed

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

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

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair the harnesses or connectors.

8. 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-106, "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 DAS-161, "Removal and Installation".

9. 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 10.
NO >> Adjust stop lamp switch installation. Refer to BR-9, "Inspection and Adjustment".

10. STOP LAMP SWITCH INSPECTION

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 11.
NO >> Replace stop lamp switch.

11. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(-)	
Stop lamp switch		Ground	
Connector	Terminal		
E57	1		Battery voltage
	3		

Is the inspection result normal?

YES-1 >> GO TO 12.
NO >> Repair the harnesses or connectors.

12. CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ECM

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

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

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E57	4		Not existed

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.
2. 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 lamp switch		Ground	Continuity
Connector	Terminal		
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-106, "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-57, "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 DAS-161, "Removal and Installation"

Component Inspection (Brake Pedal Position Switch)

INFOID:0000000009644396

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 existed
		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:0000000009644397

1. CHECK STOP LAMP SWITCH

Check for continuity between stop lamp switch terminals.

Terminal		Condition	Continuity
1	2	When brake pedal is depressed	Existed
		When brake pedal is released	Not existed
3	4	When brake pedal is depressed	Existed
		When brake pedal is released	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace stop lamp switch.

C1A06 OPERATION SW

DTC Logic

INFOID:0000000009644398

DTC DETECTION LOGIC

DTC (On board display)	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

1. Start the engine.
2. 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 DAS-80, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644399

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

1. Turn the ignition switch OFF.
2. Disconnect the ICC steering switch connector.
3. Check the ICC steering switch. Refer to DAS-81, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.

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.

Spiral cable		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M87	25	M37	101	Existed
	32		108	

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

Spiral cable		Ground	Continuity
Connector	Terminal		
M87	25		Not existed
	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.

Spiral cable		Continuity
Terminal		
13	25	Existed
15	32	

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?

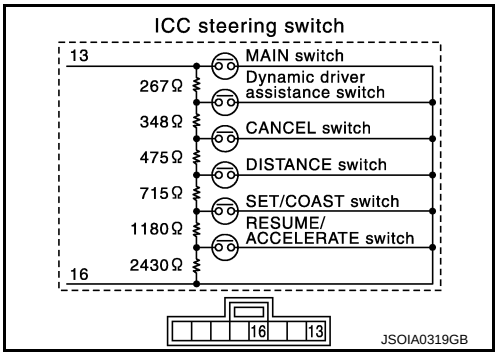
YES >> Perform self-diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-106, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

Component Inspection

INFOID:0000000009672100

1.CHECK ICC STEERING SWITCH

Check resistance between ICC steering switch terminals.



Terminal		Switch operation	Resistance [Ω]
13	15	When pressing MAIN switch	Approx. 0
		When pressing dynamic driver assistance switch	Approx. 267
		When pressing CANCEL switch	Approx. 615
		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.

C1A13 STOP LAMP RELAY

DTC Logic

INFOID:0000000009644401

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 ICC sensor - 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)

1. Start the engine.
2. Perform the active test item “STOP LAMP” with CONSULT.
3. 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 DAS-84, "Diagnosis Procedure".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE (2)

1. 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.

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 DAS-84, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer toGI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644402

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.

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.
3. 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

1. 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	
E57	4	M37	122	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E57	4		Not existed

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.

8. CHECK ICC BRAKE HOLD RELAY

1. Remove ICC brake hold relay.
2. Check ICC brake hold relay. Refer to DAS-88, "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

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-106, "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

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

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

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.
2. 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	
E52	1	B1	17	Existed

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

ICC brake hold relay		Ground	Continuity
Connector	Terminal		
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.
3. Perform “STOP LAMP” on “Active Test” of “ICC/ADAS”, and then check the voltage between ADAS control unit harness connector and ground.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
ADAS control unit		Ground	Active Test item “STOP LAMP”	
Connector	Terminal			
B1	17		Off	Battery voltage
			On	0 V

Is the inspection result normal?

YES >> GO TO 13.
NO >> Replace ADAS control unit. Refer to DAS-161, "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.

Terminal			Voltage (Approx.)
(+)		(–)	
ICC brake hold relay		Ground	
Connector	Terminal		
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	
E52	3	M37	122	Existed

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

ICC brake hold relay		Ground	Continuity
Connector	Terminal		
E52	3		Not existed

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair the harnesses or connectors.

15. CHECK ICC BRAKE HOLD RELAY

1. Remove ICC brake hold relay.
2. Check ICC brake hold relay. Refer to DAS-88, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 16.
NO >> Replace ICC brake hold relay.

16. CHECK STOP LAMP SWITCH

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

Is the inspection result normal?

YES >> GO TO 21.
NO >> GO TO 17.

17. 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 result9normal?

YES >> GO TO 18.
NO >> Adjust stop lamp switch installation. Refer to BR-9, "Inspection and Adjustment".

18. 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 19.
NO >> Replace stop lamp switch.

19. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

1. Connect stop lamp switch connector.
2. Check the voltage between stop lamp switch harness connector and ground.

Terminal			Voltage (Approx.)
(+)		(–)	
Stop lamp switch		Ground	
Connector	Terminal		
E57	1		Battery voltage

Is the inspection result normal?

YES >> GO TO 20.
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)

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

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
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-106, "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-57, "DTC Index".

Is any DTC detected?

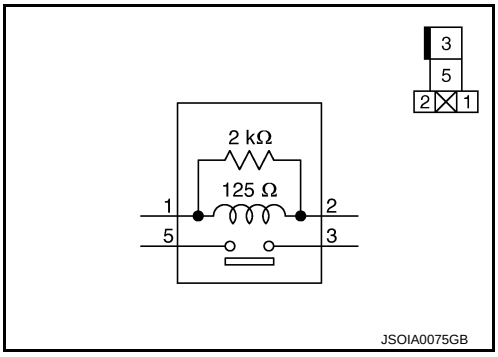
YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.
NO >> Replace ADAS control unit. Refer to DAS-161, "Removal and Installation".

Component Inspection

INFOID:0000000009644403

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.



Terminal		Condition	Continuity
3	5	When the battery voltage is applied	Existed
		When the battery voltage is not applied	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace ICC brake hold relay.

C1A14 ECM

DTC Logic

INFOID:0000000009644404

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

1. Start the engine.
2. 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 “C1A14” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “C1A14” detected as the current malfunction?

YES >> Refer to DAS-89, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644405

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 toDAS-128, "DTC Logic".

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 EC-106, "DTC Index".

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

C1A15 GEAR POSITION

Description

INFOID:0000000009644406

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:0000000009644407

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?

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

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. 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.
6. Check if “C1A15” is detected as the current malfunction in the “Self Diagnostic Result” of “ICC/ADAS”.

Is “C1A15” detected as the current malfunction?

YES >> Refer to DAS-92, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644408

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 DAS-128, "DTC Logic"
- 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.

3.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 DAS-161, "Removal and Installation".
NO >> GO TO 6.

6.CHECK TCM SELF-DIAGNOSIS RESULTS

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-85, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

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

1. Perform “All DTC Reading”.
2. 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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A24 NP RANGE

DTC Logic

INFOID:0000000009644411

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)

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

Is “C1A24” detected as the current malfunction?

YES >> Refer to DAS-93, "Diagnosis Procedure".
NO >> GO TO 3.

3.CHECK DTC REPRODUCE (2)

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

Is “C1A24” detected as the current malfunction?

YES >> Refer to DAS-93, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644412

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 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-114, "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-85, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A26 ECD MODE MALFUNCTION

DTC Logic

INFOID:0000000009644413

DTC DETECTION LOGIC

DTC (On board display)	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 DAS-125, "DTC Logic"
- U0121: Refer to DAS-120, "DTC Logic"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is “C1A26” detected as the current malfunction?

YES >> Refer to DAS-95, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644414

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 DAS-125, "DTC Logic"
- 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”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-57, "DTC Index".

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

C1A27 ECD POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000009644415

DTC DETECTION LOGIC

DTC (On board display)	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 DAS-128, "DTC Logic"
- U0415: Refer to DAS-125, "DTC Logic"
- U0121: Refer to DAS-120, "DTC Logic"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is “C1A27” detected as the current malfunction?

YES >> Refer to DAS-97, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644416

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 DAS-128, "DTC Logic"
- U0415: Refer to DAS-125, "DTC Logic"
- U0121: Refer to DAS-120, "DTC Logic"

NO >> GO TO 2.

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

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

Is the inspection result normal?

YES >> Perform self-diagnosis of ABS actuator and electric unit (control unit). Refer to BRC-57, "DTC Index".

NO >> Repair the harnesses or connectors.

C1A33 CAN TRANSMISSION ERROR

DTC Logic

INFOID:0000000009644417

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 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.
3. 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 DAS-99, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644418

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-44, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A34 COMMAND ERROR

DTC Logic

INFOID:0000000009644419

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.
2. 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 DAS-100, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644420

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 Logic

INFOID:0000000009644421

DTC DETECTION LOGIC

DTC (On board display)	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 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 “C1A35” is detected as the current malfunction in self-diagnosis results of “ICC/ADAS”.

Is “C1A35” detected as the current malfunction?

YES >> Refer to DAS-101, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644422

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 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-272, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A36 ACCELERATOR PEDAL ACTUATOR CAN COMM

DTC Logic

INFOID:0000000009644423

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.
3. Perform “All DTC Reading” with CONSULT.
4. 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 DAS-102, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644424

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-272, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1A37 ACCELERATOR PEDAL ACTUATOR CAN 2

DTC Logic

INFOID:0000000009644425

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.
3. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644426

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

1. Turn the ignition switch OFF.
2. 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?

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

C1A38 ACCELERATOR PEDAL ACTUATOR CAN 1

DTC Logic

INFOID:0000000009644427

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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644428

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

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

Is “C1A38” detected?

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

C1A39 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000009644429

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

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

Is “C1A39” detected as the current malfunction?

YES >> Refer to DAS-105, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644430

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B5D FEB OPE COUNT LIMIT

DTC Logic

INFOID:0000000009761698

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.

Is there any malfunction symptom?

YES >> Refer to DAS-106, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009761699

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 DAS-161, "Removal and Installation".
NO >> Perform ICC system action test. Refer to CCS-95, "Description".

C1B53 SIDE RADAR RIGHT MALFUNCTION

DTC Logic

INFOID:0000000009644437

DTC DETECTION LOGIC

DTC (On board display)	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

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1B53” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “C1B53” detected as the current malfunction?

YES >> Refer to DAS-107, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644438

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “C1B53” 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 RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-274, "DTC Index" (SIDE RADAR LH), DAS-276, "DTC Index" (SIDE RADAR RH).
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B54 SIDE RADAR LEFT MALFUNCTION

DTC Logic

INFOID:0000000009644439

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.
2. 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 DAS-107, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644440

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 DAS-274, "DTC Index" (SIDE RADAR LH), DAS-276, "DTC Index" (SIDE RADAR RH).
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B56 SONAR CIRCUIT

DTC Logic

INFOID:0000000009644441

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

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1B56” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “C1B56” detected as the current malfunction?

YES >> Refer to DAS-109, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644442

1.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-356, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B57 AVM CIRCUIT

DTC Logic

INFOID:0000000009644443

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 DAS-110, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644444

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 AV-351, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B59 CCM

DTC Logic

INFOID:0000000009644447

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.
2. 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 DAS-111, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009763328

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 DAS-128, "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 DAS-422, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1B82 DISTANCE SENSOR OFF-CENTER

DTC Logic

INFOID:0000000009644448

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

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. 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 DAS-112, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644449

1.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

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

Is “C1A12” detected?

YES >> Refer to CCS-103, "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 DAS-161, "Removal and Installation".
NO >> INSPECTION END

C1B84 DISTANCE SENSOR

DTC Logic

INFOID:0000000009644452

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B84 (17)	DIST SEN MALFUNCTION (Distance sensor malfunction)	If ICC sensor is malfunctioning

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.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1B84” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “C1B84” detected as the current malfunction?

YES >> Refer to DAS-113, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644453

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

1. Perform “All DTC Reading” with CONSULT.
2. Check if “U1000” is detected other than “C1B84” in “Self Diagnostic Result” of “ICC/ADAS“.

Is “C1B84” detected?

YES >> Perform the CAN communication system inspection. 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” “LASER/RADAR “

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

C1B85 DISTANCE SENSOR ABNORMAL TEMP

DTC Logic

INFOID:0000000009644454

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.
2. Wait for 10 minutes or more to cool the ICC sensor.
3. Start the engine.
4. 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 DAS-114, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644455

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

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000009644456

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

1. Start the engine.
2. Turn the DCA system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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 DAS-115, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644457

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

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

Is “C1B85” detected?

YES >> Refer to DAS-115, "DTC Logic".
NO >> GO TO 3.

3.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if the “C1B86” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “C1B86” detected?

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

C1F01 ACCELERATOR PEDAL ACTUATOR

DTC Logic

INFOID:0000000009644460

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1F01 (91)	APA MOTOR MALF (Accelerator pedal actuator 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)
- 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.
3. Slowly depress the accelerator pedal completely, and then release it.
4. Repeat step 3 several times.
5. 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?

YES >> Refer to DAS-117, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644461

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-272, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1F02 ACCELERATOR PEDAL ACTUATOR

DTC Logic

INFOID:0000000009644462

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.
2. Turn the DCA system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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 DAS-118, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644463

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 DAS-272, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000009644464

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

1. Start the engine.
2. Turn the DCA system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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?

YES >> Refer to DAS-119, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644465

1.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?

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 “C1F05” is detected in “Self Diagnostic Result” of “ACCELE PEDAL ACT”.

Is “C1F05” detected?

YES >> Refer to DAS-272, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U0121 VDC CAN 2

DTC Logic

INFOID:0000000009644466

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.
3. 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 DAS-120, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644467

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U0126 STRG SEN CAN 1

DTC Logic

INFOID:0000000009644468

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

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

Is “U0126” detected as the current malfunction?

YES >> Refer to DAS-121, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644469

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U0235 ICC SENSOR CAN 1

DTC Logic

INFOID:0000000009644470

DTC DETECTION LOGIC

DTC (On board display)	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.
2. 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 DAS-122, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644471

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

U0401 ECM CAN 1

DTC Logic

INFOID:0000000009644472

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

1. Start the engine.
2. 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 DAS-123, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644473

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.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-106, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U0402 TCM CAN 1

DTC Logic

INFOID:0000000009644474

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.
2. Turn the MAIN switch of ICC system ON.
3. 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 DAS-124, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644475

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-85, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U0415 VDC CAN 1

DTC Logic

INFOID:0000000009644476

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

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

Is “U0415” detected as the current malfunction?

YES >> Refer to DAS-125, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644477

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U0424 HVAC CAN CIRCUIT 1

Description

INFOID:0000000009644478

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

DTC Logic

INFOID:0000000009644479

DTC DETECTION LOGIC

DTC (On board display)	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.
2. Turn the MAIN switch of ICC system ON.
3. 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 DAS-126, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644480

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

U0428 STRG SEN CAN 2

DTC Logic

INFOID:0000000009644481

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

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

Is “U0428” detected as the current malfunction?

YES >> Refer to DAS-127, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644482

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000009644483

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 LAN-44, "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 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

INFOID:0000000009644484

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.

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-123, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644485

1. PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON.
2. Turn the MAIN switch of ICC 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 “ICC/ADAS”.

Is “U1000” detected as the current malfunction?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000009644486

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

DTC Logic

INFOID:0000000009644487

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

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.
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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644488

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the MAIN switch of ICC system ON.
2. Perform “All DTC Reading” with CONSULT.
3. 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 DAS-161, "Removal and Installation".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

U150B ECM CAN 3

DTC Logic

INFOID:0000000009644489

DTC DETECTION LOGIC

DTC (On board display)	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

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

Is “U150B” detected as the current malfunction?

YES >> Refer to DAS-131, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644490

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-106, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U150C VDC CAN 3

DTC Logic

INFOID:0000000009644491

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.
2. Turn the MAIN switch of ICC system ON.
3. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644492

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U150D TCM CAN 3

DTC Logic

INFOID:0000000009644493

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

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

Is “U150D” detected as the current malfunction?

YES >> Refer to DAS-133, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644494

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-85, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U150E BCM CAN 3

DTC Logic

INFOID:0000000009644495

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.
2. Turn the MAIN switch of ICC system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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 DAS-134, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644496

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

U150F AV CAN 3

DTC Logic

INFOID:0000000009644497

DTC DETECTION LOGIC

DTC (On board display)	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.
2. Turn the DCA, LDP, or Blind Spot Intervention system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644498

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?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to AV-89, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1502 ICC SENSOR CAN COMM CIRC

DTC Logic

INFOID:0000000009644503

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.
2. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644504

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

U1503 SIDE RDR L CAN 2

DTC Logic

INFOID:0000000009644505

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 DAS-128, "DTC Logic"
- U1508: Refer to DAS-142, "DTC Logic"

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.
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 DAS-137, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644506

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 DAS-128, "DTC Logic"
- 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-274, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1504 SIDE RDR L CAN 1

DTC Logic

INFOID:0000000009644507

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 DAS-128, "DTC Logic"
- U1508: Refer to DAS-142, "DTC Logic"

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.
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 DAS-138, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644508

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 DAS-128, "DTC Logic"
- 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-274, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1505 SIDE RDR R CAN 2

DTC Logic

INFOID:0000000009644509

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 DAS-128, "DTC Logic"
- U1507: Refer to DAS-141, "DTC Logic"

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.
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 DAS-139, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644510

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 DAS-128, "DTC Logic"
- 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-276, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1506 SIDE RDR R CAN 1

DTC Logic

INFOID:0000000009644511

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 DAS-128, "DTC Logic"
- U1507: Refer to DAS-141, "DTC Logic"

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.
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 DAS-138, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644512

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 DAS-128, "DTC Logic"
- 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-276, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1507 LOST COMM(SIDE RDR R)

DTC Logic

INFOID:0000000009644513

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

1. Start the engine.
2. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644514

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.CHECK RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Check right/left switching signal circuit. Refer to DAS-362, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO >> Repair right/left switching signal circuit.

U1508 LOST COMM(SIDE RDR L)

DTC Logic

INFOID:0000000009644515

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.
2. Turn the Blind Spot Intervention system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644516

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.
2. 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 LAN-26, "Trouble Diagnosis Flow Chart".
NO >> Repair the terminal or connector.

U1512 HVAC CAN 3

DTC Logic

INFOID:0000000009644517

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.
2. Turn the Blind Spot Intervention system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644518

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?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HAC-37, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1513 METER CAN 3

DTC Logic

INFOID:0000000009644519

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.
2. Turn the MAIN switch of ICC system ON.
3. 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 DAS-144, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644520

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

U1514 STRG SEN CAN 3

DTC Logic

INFOID:0000000009644521

DTC DETECTION LOGIC

DTC (On board display)	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

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if the “U1514” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1514” detected as the current malfunction?

YES >> Refer to DAS-145, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644522

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-57, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1515 ICC SENSOR CAN 3

DTC Logic

INFOID:0000000009644523

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 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.
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 DAS-146, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644524

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 Logic

INFOID:0000000009644527

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 pedal 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

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
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?

YES >> Refer to DAS-147, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644528

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-272, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1518 SIDE RDR L CAN 3

DTC Logic

INFOID:0000000009644529

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 DAS-128, "DTC Logic"
- U1508: Refer to DAS-142, "DTC Logic"

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.
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 DAS-148, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644530

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 DAS-128, "DTC Logic"
- 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-274, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1519 SIDE RDR R CAN 3

DTC Logic

INFOID:0000000009644531

DTC DETECTION LOGIC

DTC (On board display)	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 DAS-128, "DTC Logic" 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

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if the “U1519” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1519” detected as the current malfunction?

YES >> Refer to DAS-149, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644532

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.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-276, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1521 SONAR CAN 2

DTC Logic

INFOID:0000000009644533

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 DAS-128, "DTC Logic".

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.
2. Turn the Backup Collision Intervention system ON.
3. 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 DAS-150, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644534

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-356, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1522 SONAR CAN 1

DTC Logic

INFOID:0000000009644535

DTC DETECTION LOGIC

DTC (On board display)	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

1. Start the engine.
2. Turn the Backup Collision Intervention system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if the “U1522” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1522” detected as the current malfunction?

YES >> Refer to DAS-151, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644536

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-356, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1523 SONAR CAN 3

DTC Logic

INFOID:0000000009644537

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

1. 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 DAS-152, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644538

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-356, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1524 AVM CAN 1

DTC Logic

INFOID:0000000009644539

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

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. 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 DAS-153, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644540

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.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-351, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1525 AVM CAN 3

DTC Logic

INFOID:0000000009644541

DTC DETECTION LOGIC

DTC (On board display)	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 DAS-128, "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 DAS-154, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644542

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-351, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1527 CCM CAN 1

DTC Logic

INFOID:0000000009644543

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.
3. 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 DAS-155, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644544

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 DAS-422, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U153F CCM CAN 2

DTC Logic

INFOID:0000000009644545

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.
2. 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 DAS-156, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644546

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 DAS-422, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1530 DR ASSIST BUZZER CAN 1

DTC Logic

INFOID:0000000009644547

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?

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. Perform “All DTC Reading” with CONSULT.
3. Check if the “U1530” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1530” detected as the current malfunction?

YES >> Refer to DAS-157, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009644548

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-280, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1540 DAST 3 CAN 1

DTC Logic

INFOID:0000000009761694

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.
2. 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-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009761695

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.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-422, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

U1541 DAST 3 CAN 2

DTC Logic

INFOID:0000000009761696

DTC DETECTION LOGIC

DTC (On board display)	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.
2. Turn the DCA system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if the “U1541” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1541” detected as the current malfunction?

YES >> Refer to DAS-159, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009761697

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-422, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-161, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000009644551

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	Voltage (Approx.)
(+)		(–)		
ADAS control unit		Ground	Ignition switch	
Connector	Terminal			
B1	12		OFF	0 V
			ON	Battery voltage

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 control unit		Ground	Continuity
Connector	Terminal		
B1	5		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair the ADAS control unit ground circuit.

REMOVAL AND INSTALLATION

ADAS CONTROL UNIT

Removal and Installation

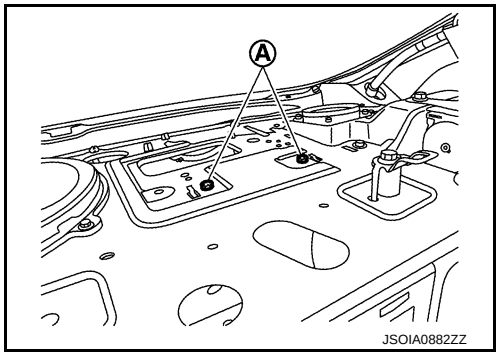
INFOID:0000000009644552

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 DAS-67, "Work Procedure".

Install in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009726447

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.

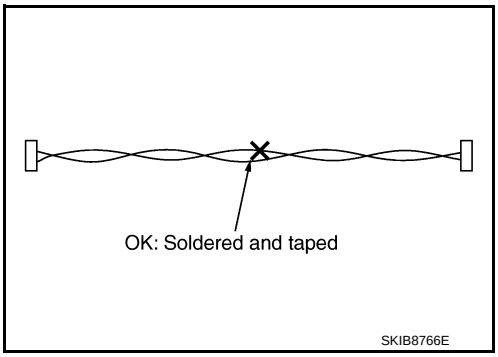
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious 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 Harness Repair

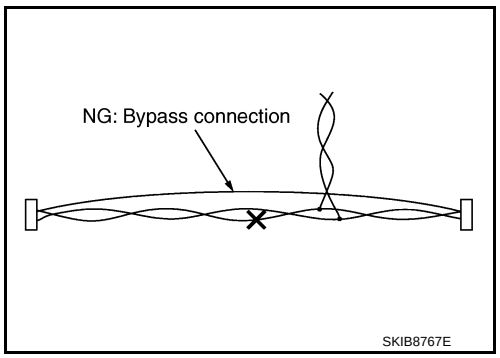
INFOID:0000000009644588

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

- 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

INFOID:0000000009644589

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.**

FCW System Service

INFOID:0000000009644590

CAUTION:
- **Turn the 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 ICC system, then check the operation of ICC system after radar alignment if necessary.**

LDW/LDP System Service

INFOID:0000000009644591

WARNING:
Be careful of traffic conditions and safety around the vehicle when performing road test.
CAUTION:
- **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

INFOID:0000000009644592

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 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.**
- **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:0000000009644593

WARNING:

Be careful of traffic conditions and safety around the vehicle when performing road test.

CAUTION:

- **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.

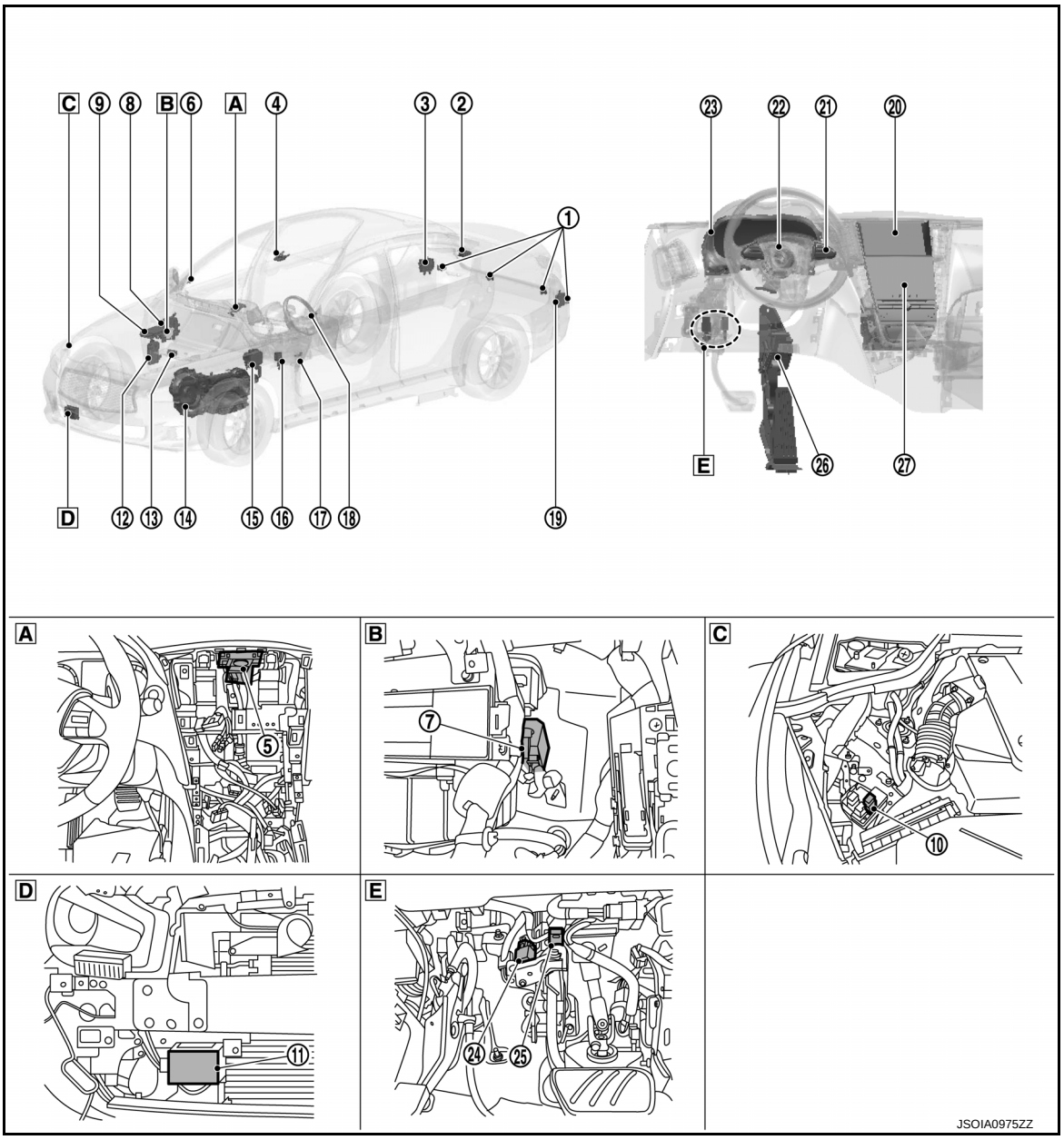
- Always keep the area near the rear sonars clean.
- Do not attach stickers (including transparent material), install accessories or apply additional paint near the rear sonars.
- Do not strike or damage the area around the rear sonars.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000009644594



A Instrument panel (Center)
B Instrument lower panel (RH)
C Engine room (RH)
D Front bumper (RH)
E Upper side of brake pedal

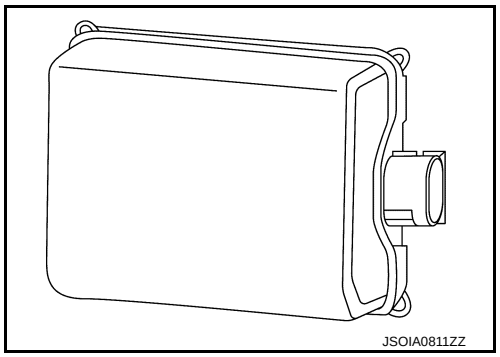
No.	Component	Description
①	Sonar sensor (rear)	• When a distance from an obstacle is detected, a distance signal is transmitted to the sonar control unit. • Refer to AV-303, "Component Parts Location" for detailed installation location.
②	ADAS control unit	• ADAS control unit calculates a target distance 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-303, "Component Parts Location" for detailed installation location.
③	Side radar RH	Refer to DAS-169, "Side Radar LH/RH"
④	Lane camera unit	Refer to DAS-168, "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-169, "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-35, "Component Parts Location" for detailed installation location.
⑨	ECM	• ECM transmits the accelerator pedal position signal, ICC brake switch signal, stop lamp switch signal, ICC steering switch signal, etc. to ADAS control unit via CAN communication • Refer to EC-16, "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	BCM	• Transmits the turn indicator signal to ADAS control unit via CAN communication • Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" 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-303, "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 installation 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-9, "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 DAS-393, "Component Parts Location" for detailed installation location.
⑰	Buzzer	• The warning buzzer sounds with the signal from the sonar control unit. • Refer to AV-303, "Component Parts Location" for detailed installation location.
⑱	Blind Spot Warning/Blind Spot Intervention indicator LH	Refer to DAS-169, "Blind Spot Warning/Blind Spot Intervention Indicator LH/RH"
⑲	Side radar LH	Refer to DAS-169, "Side Radar LH/RH"

No.	Component	Description
⑳	Display control unit	• Display control unit transmits the system selection signal to ADAS control unit via CAN communication • Refer to AV-14, "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 BRC-9, "Component Parts Location" 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 DCA system operation status using the meter display signal • Illuminates the ICC system warning lamp using the ICC warning lamp signal • Operates the buzzer (ICC warning chime) using the buzzer output signal • Refer to MWI-7, "METER SYSTEM : Component Parts Location" for detailed installation location.
㉔	Stop lamp switch	Refer to DAS-167, "Brake Pedal Position Switch / Stop Lamp Switch"
㉕	Brake pedal position switch	
㉖	Accelerator pedal actuator	Refer to DAS-168, "Accelerator Pedal Actuator"
㉗	Integral switch	• Change each system setting by switch operation • Refer to AV-14, "Component Parts Location" for detailed installation location.

ICC Sensor

INFOID:0000000009716260

- 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

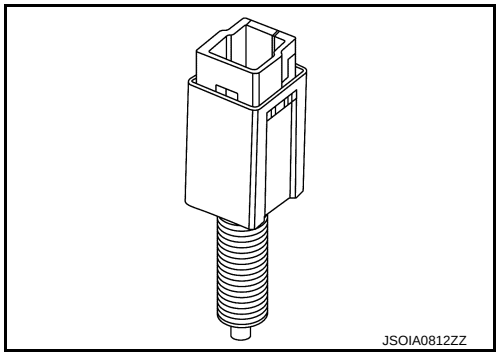
INFOID:0000000009644596

- 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.

Brake Pedal Position Switch / Stop Lamp Switch

INFOID:0000000009716261

- Brake pedal position switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.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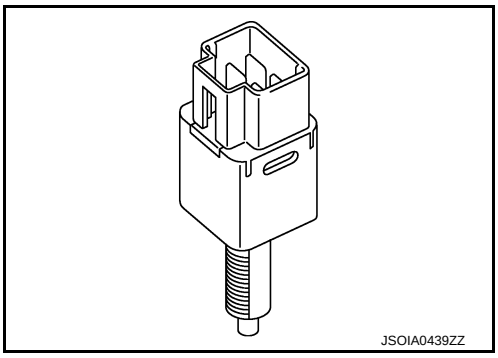
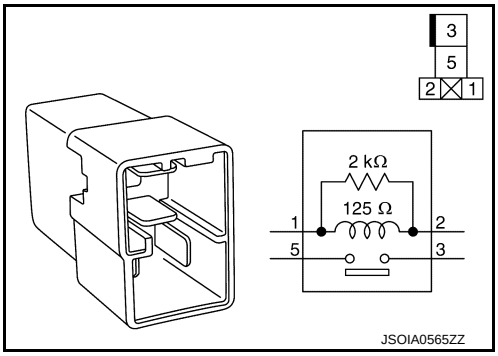
- Brake pedal position switch is turned OFF when depressing the brake pedal.
- Brake pedal position switch signal is input to ECM. Brake pedal position switch signal is transmitted from ECM to ADAS control unit via CAN communication.
- Stop lamp switch is installed at the upper part of the brake pedal 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.



ICC Brake Hold Relay

INFOID:0000000009716262

- 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

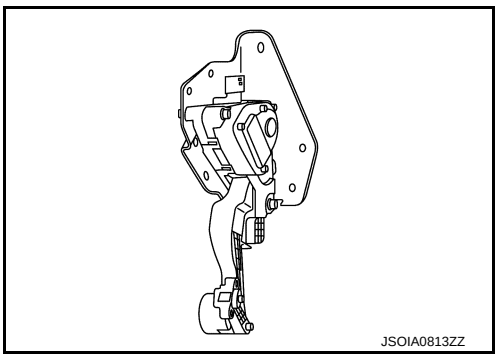
INFOID:0000000009644599

- 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

INFOID:0000000009644600

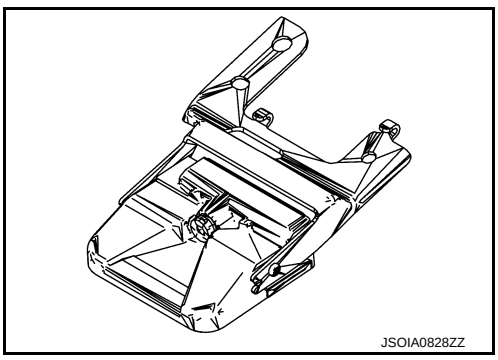
- Installed to the upper portion of the accelerator pedal, this consists of the accelerator pedal actuator together with the accelerator pedal position sensor, and is linked with the accelerator pedal.
- If accelerator pedal feedback force control signal is received from ADAS control unit via ITS communication, it operates the integrated motor for applying control to move the accelerator pedal upward.



Lane Camera Unit

INFOID:0000000009729336

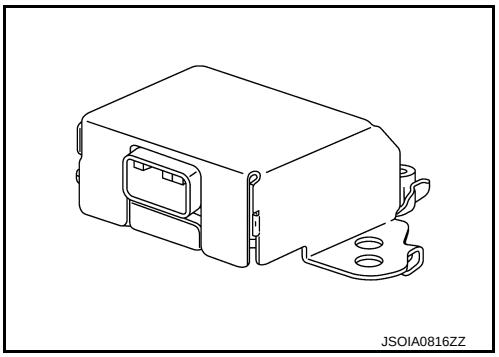
- Lane camera unit detects the lane marker in travel lane and located above the inside mirror.
- Lane camera unit transmits the detected lane condition signal to chassis control module via chassis communication
- Lane camera unit is equipped with the diagnosis function that performs the diagnosis with CONSULT.



Driver Assistance Buzzer Control Module

INFOID:0000000009644601

- 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.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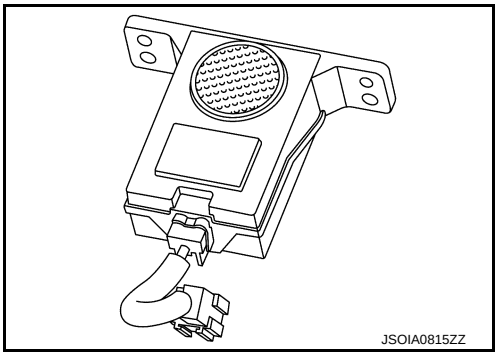
Driver Assistance Buzzer

INFOID:0000000009644602

- Driver assistance buzzer is installed at the behind the display control unit.
- 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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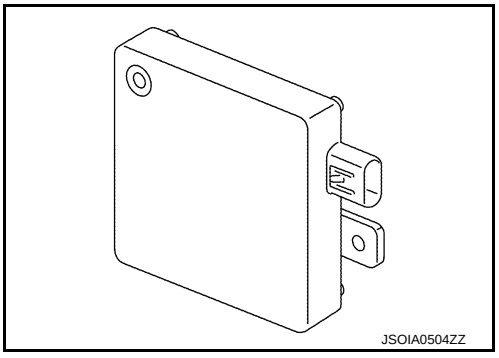
Side Radar LH/RH

INFOID:0000000009644604

- 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.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Blind Spot Warning/Blind Spot Intervention Indicator LH/RH

INFOID:0000000009644605

- 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:0000000009644606

- 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

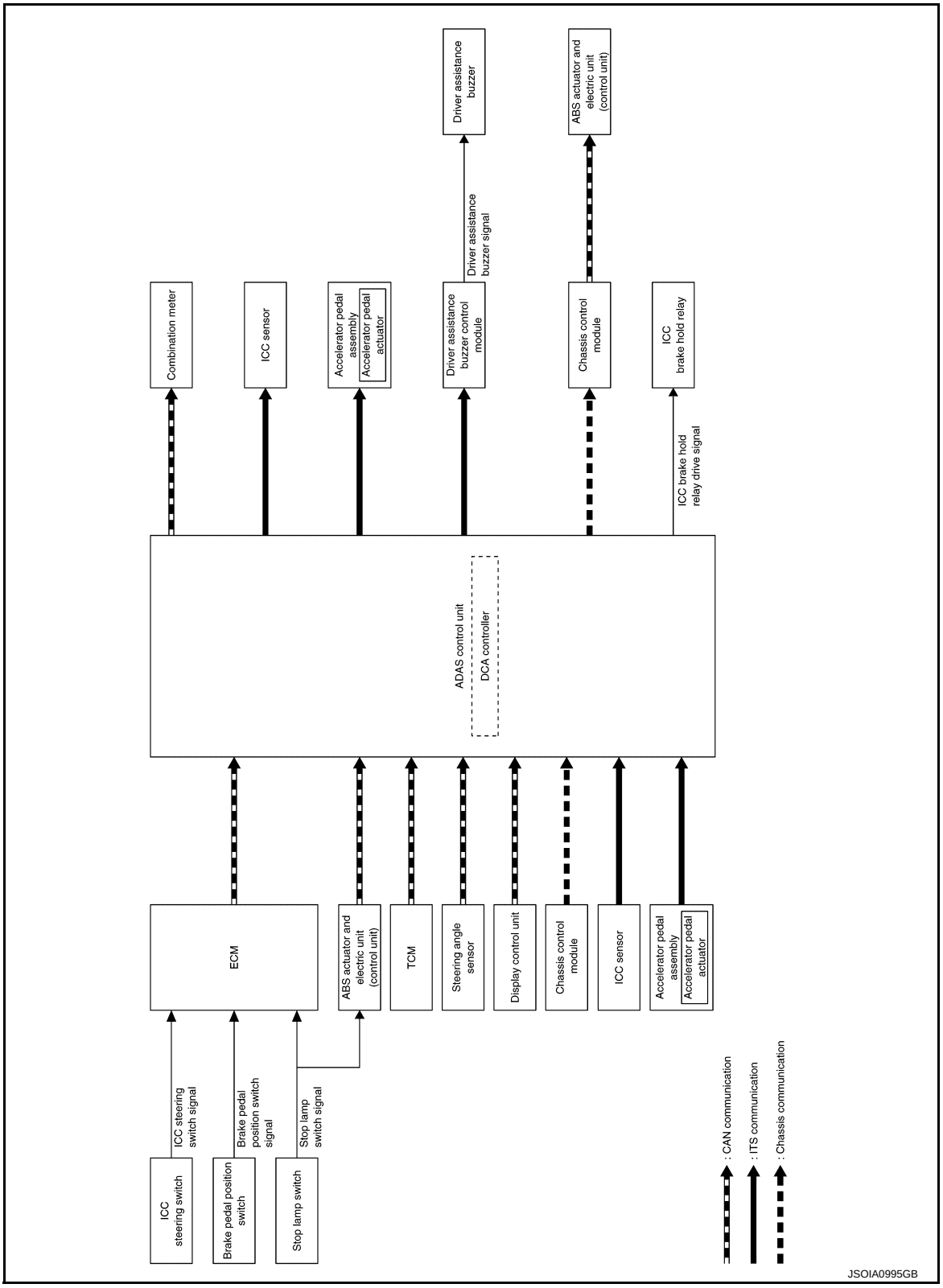
SYSTEM

DCA

DCA : System Description

INFOID:0000000009644607

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ECM	CAN communication	Closed throttle position signal	Receives idle position state (ON/OFF)
		Accelerator pedal position signal	Receives accelerator pedal position (angle)
		Engine speed signal	Receives engine speed
		Stop lamp switch signal	Receives an operational state of the brake pedal
		Brake pedal position switch signal	Receives an operational state of the brake pedal
		ICC steering switch signal / Dynamic driver assistance switch signal	Receives the operational state of the dynamic driver assistance switch
TCM	CAN communication	Input speed signal	Receives the number of revolutions of input shaft
		Current gear position signal	Receives a current gear position
		Shift position signal	Receives a selector lever position
		Output shaft revolution signal	Receives the number of revolutions of output shaft
ABS actuator and electric unit (control unit)	CAN communication	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
		TCS operation signal	Receives an operational state of TCS
		VDC OFF switch signal	Receives an ON/OFF state of VDC
		VDC malfunction signal	Receives a malfunction state of VDC
		VDC operation signal	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 sensor	CAN communication	Steering angle sensor malfunction signal	Receives a malfunction state of steering angle sensor
		Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
		Steering angle speed signal	Receives the turning angle speed of the steering wheel
Display control unit	CAN communication	System selection signal	Receives a selection state of each item in “Driver Aids” selected with the integral switch
ICC sensor	ITS communication	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 communication	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 communication	Brake fluid pressure control signal		Transmits a brake fluid pressure control signal to activates the brake
Combination meter	CAN communication	Meter display signal	Vehicle ahead detection indicator signal	Transmits a signal to display a state of the system on the information display
			DCA system display signal	

Reception unit	Signal name		Description
ICC sensor	ITS communication	Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
		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 assistance 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 hold 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.

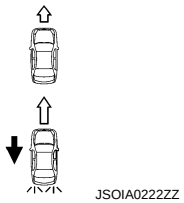
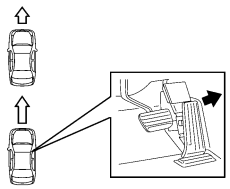
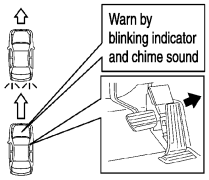
When vehicle approaches a vehicle ahead
- If the driver is not depressing the accelerator pedal, the system activates the brakes to decelerate smoothly as necessary. If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system.
- If the driver is 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 DMS-9, "LOG-IN FUNCTION : System Description".

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.

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	 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	 JPOIA0170GB

Deceleration control	It transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via chassis control module and performs the brake control
Accelerator pedal actuation control	It transmits the accelerator pedal feedback force control signal to the accelerator pedal actuator via ITS communication and controls the accelerator pedal in the upward direction

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.

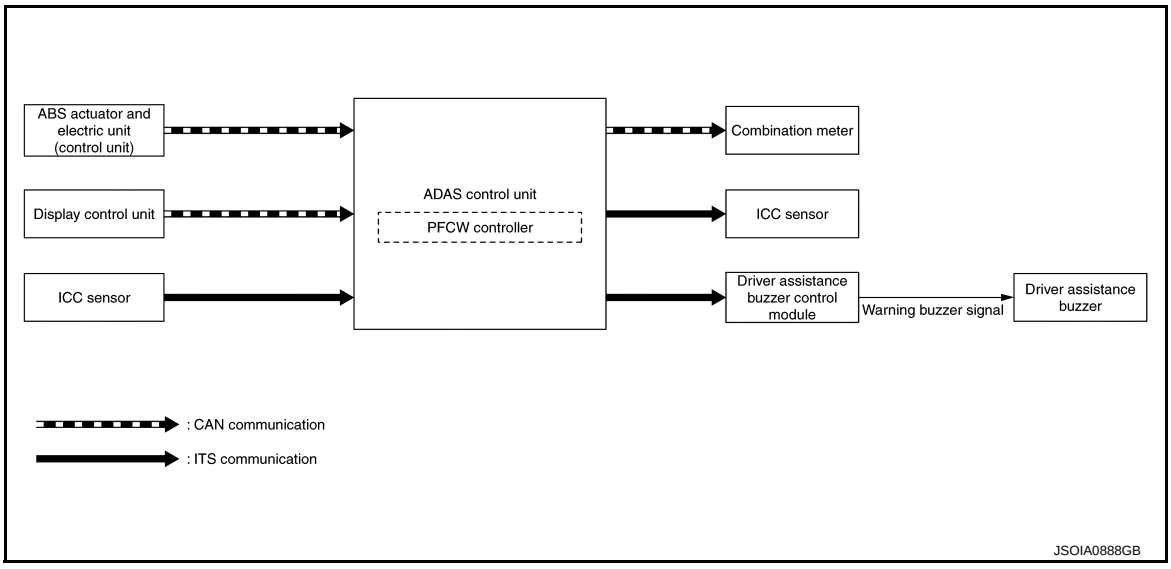
- When the accelerator pedal is depressed again.
- When the brake pedal is depressed.

PFCW

PFCW : System Description

INFOID:0000000009644608

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 communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Display control unit	CAN communication	System selection signal	Receives a selection state each item in “Driver Aids” selected with the integral switch
ICC sensor	ITS communication	ICC sensor signal	Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle

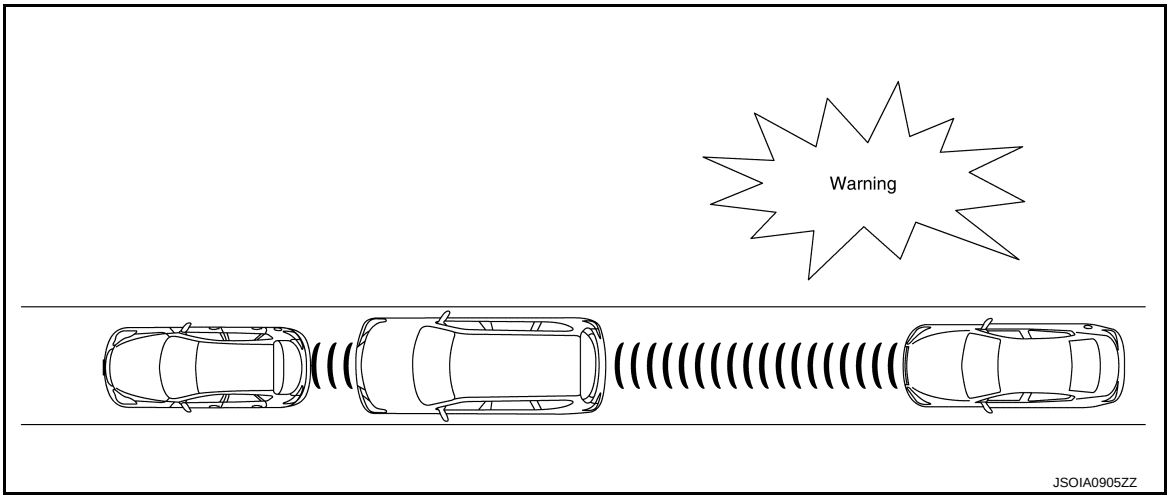
Output Signal Item

Reception unit	Signal name			Description
Combination meter	CAN communication	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 communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
Driver assistance buzzer control module	ITS communication	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:

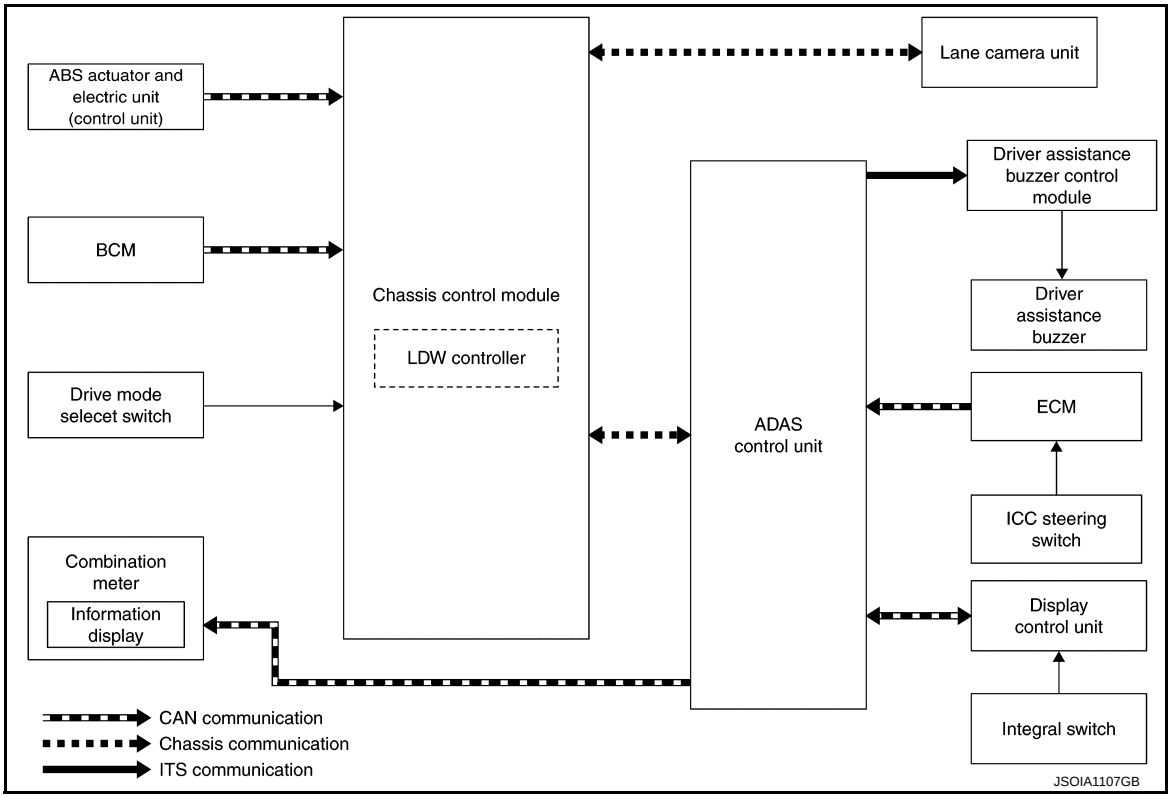
- ON/OFF of PFCW/FEB system is performed with the integral switch.
- Setting of PFCW/FEB is performed in synchronization with the log-in function of on-board personal assistant. For details of the log-in function, refer to DMS-9, "LOG-IN FUNCTION : System Description".

LDW

LDW : System Description

INFOID:0000000009729298

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL ITEM

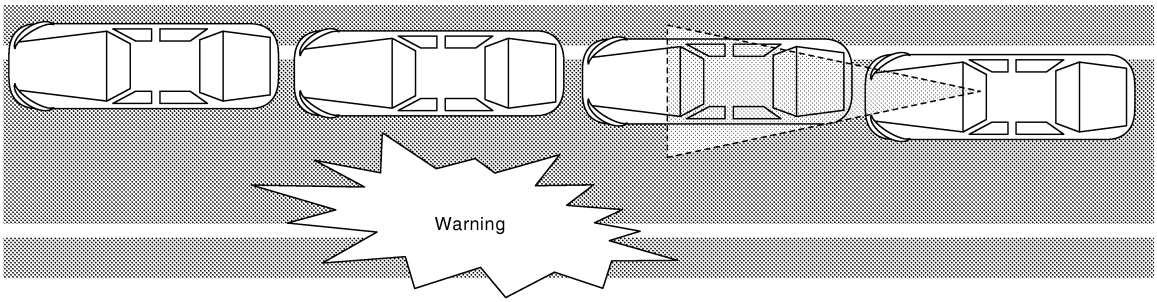
Reception unit	Transmit unit	Signal name		Description
Chassis control module	Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
			Lane camera unit condition signal	Receives lane camera unit condition
	ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of front wheels
	BCM	CAN communication	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 communication	LDW ON signal	Receives an ON/OFF state of LDW
	Drive mode select switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.

Reception unit	Transmit unit	Signal name		Description
Lane camera unit	Chassis control module	Chassis communication	Vehicle speed signal	Transmits a vehicle speed calculated by the chassis control module
			Turn indicator signal	Transmits a turn indicator signal received from BCM
Combination meter (Via ADAS control unit)		Chassis communication	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



JPOIA0014GB

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 DAS-199, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch".

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:

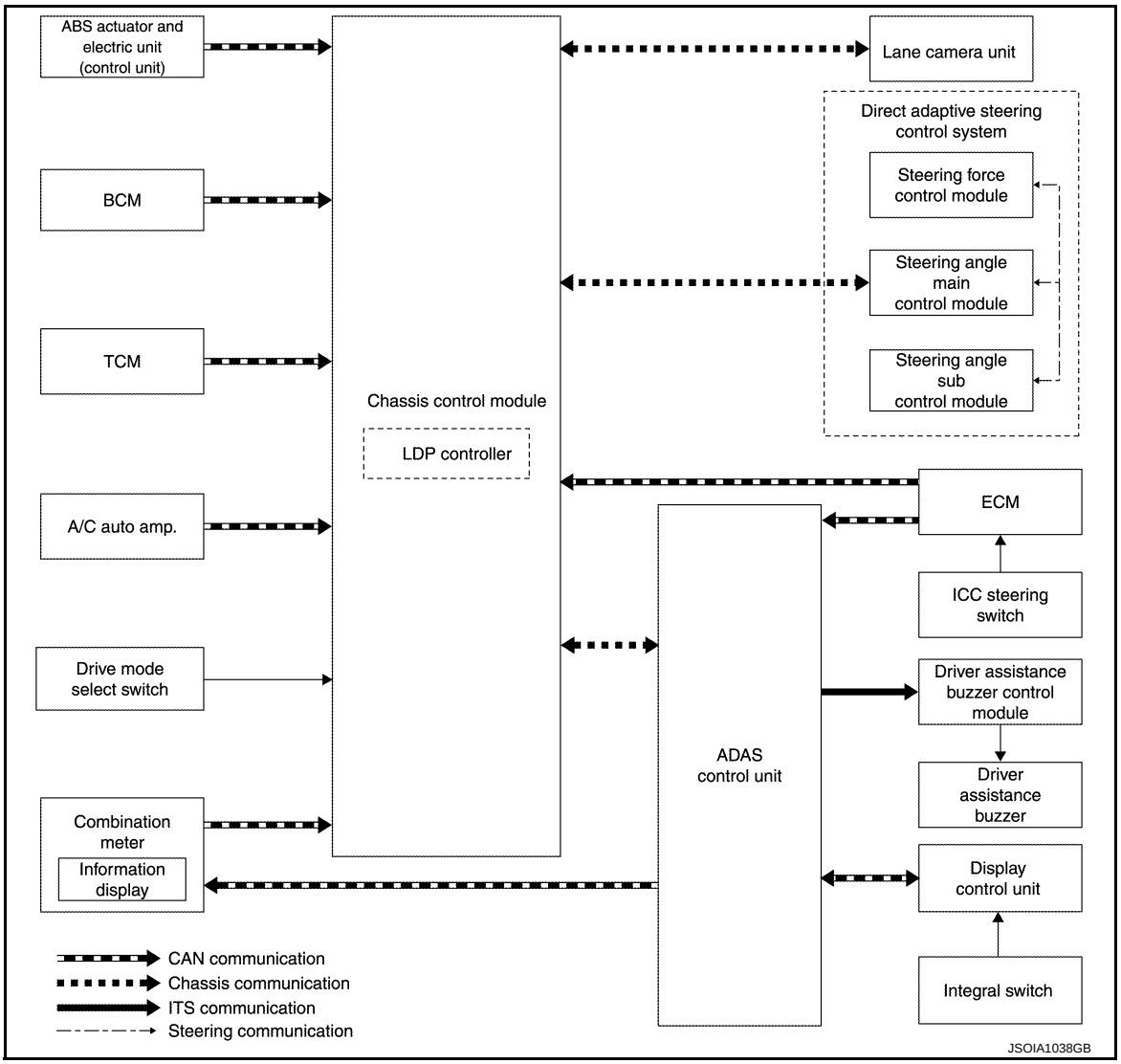
- LDW system ON/OFF can be set on the integral switch.
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (40 MPH)
- LDP system is OFF. (Dynamic driver assistance icon OFF in “Lane” position).
- LDW system may not function properly, depending on the situation. Refer to DAS-216, "Precautions for Lane Departure Warning/Lane Departure Prevention"

LDP

LDP : System Description

INFOID:0000000009729299

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL ITEM

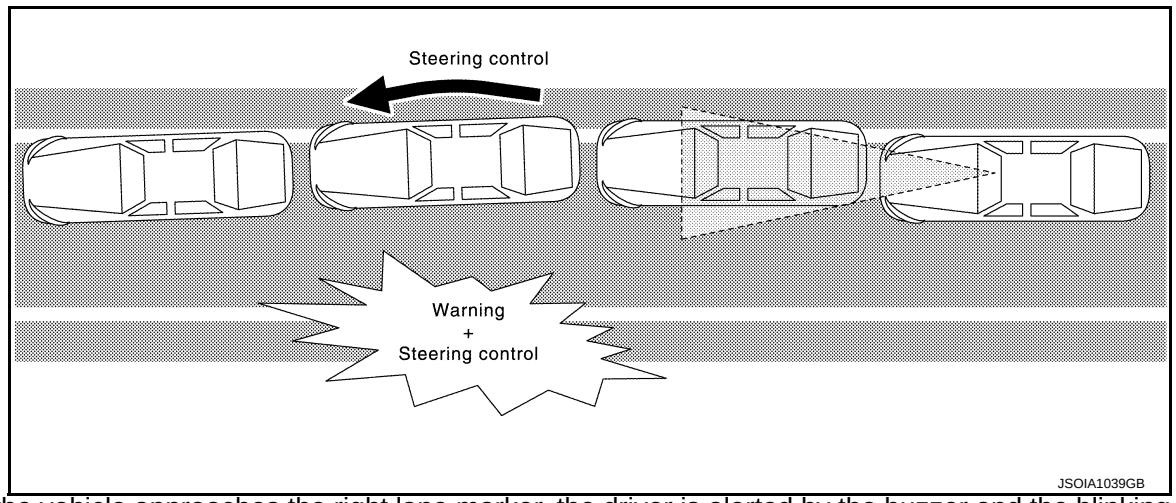
Reception unit	Transmit unit	Signal name		Description
Chassis control module	Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
			Lane camera unit condition signal	Receives lane camera unit condition
	Steering angle main control module	Chassis 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
			Steering force actuator status signal	Receives torque state of steering force actuator.
			ALC permission signal	Receives a permission state of the ALC.
	ABS actuator and electric unit (control unit)	CAN communication	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
			VDC operation signal	Receives an operational state of VDC
			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
			Stop lamp switch	Receives stop lamp switch state
	ECM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
	BCM	CAN communication	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 communication	Current gear position signal	Receives a current gear position
			Shift position signal	Receives a selector lever position
	A/C auto amp.	CAN communication	Ambient temperature signal	Receives an ambient temperature
	ADAS control unit	Chassis communication	LDP ON signal	Receives an ON/OFF state of LDP
	Combination meter	CAN communication	Parking brake switch signal	Receives an operational state of the parking brake
	Drive mode select switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.

Reception unit	Transmit unit	Signal name		Description
Steering angle main control module	Chassis control module	Chassis communication	Steering angle request signal	Transmits steering angle request signal
Lane camera unit		Chassis communication	Vehicle speed signal	Transmits a vehicle speed calculated by the chassis control module
			Turn indicator signal	Transmits a turn indicator signal received from BCM
Combination meter (Via ADAS control unit)		Chassis communication	LDP 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 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 independently to return the vehicle to the lane.

NOTE:

For details of LDP system indication on the combination meter, refer to DAS-205, "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.

- 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 respectively 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:

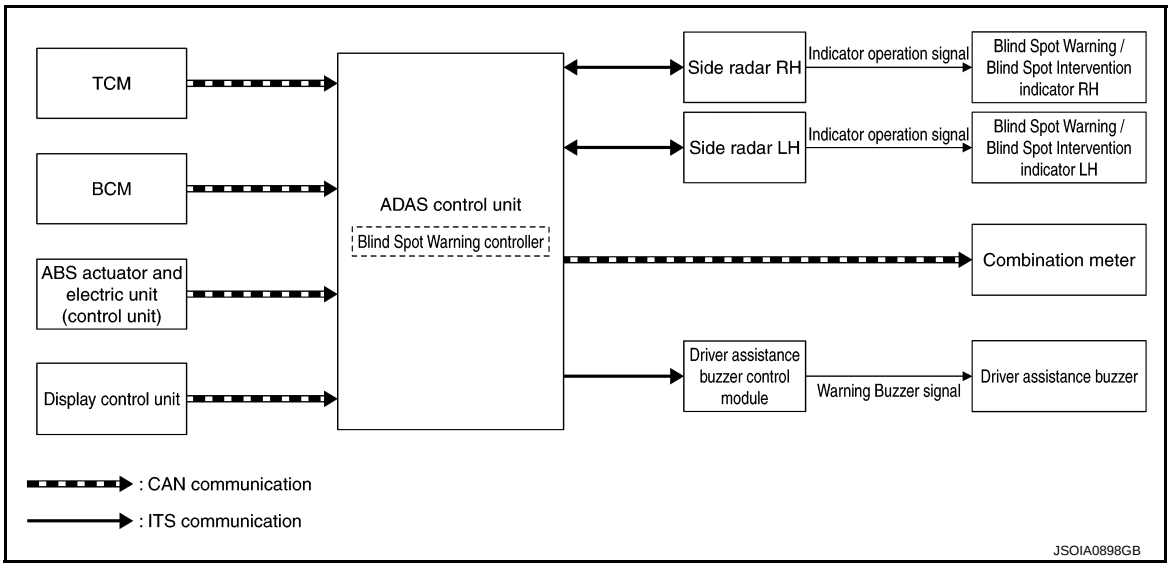
• LDP system ON/OFF can be set on the integral switch.
• After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 60 km/h (40 MPH).
• LDP system may not function properly, depending on the situation. Refer to DAS-216, "Precautions for Lane Departure Warning/Lane Departure Prevention".

BSW

BSW : System Description

INFOID:0000000009644611

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	Signal 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
BCM	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

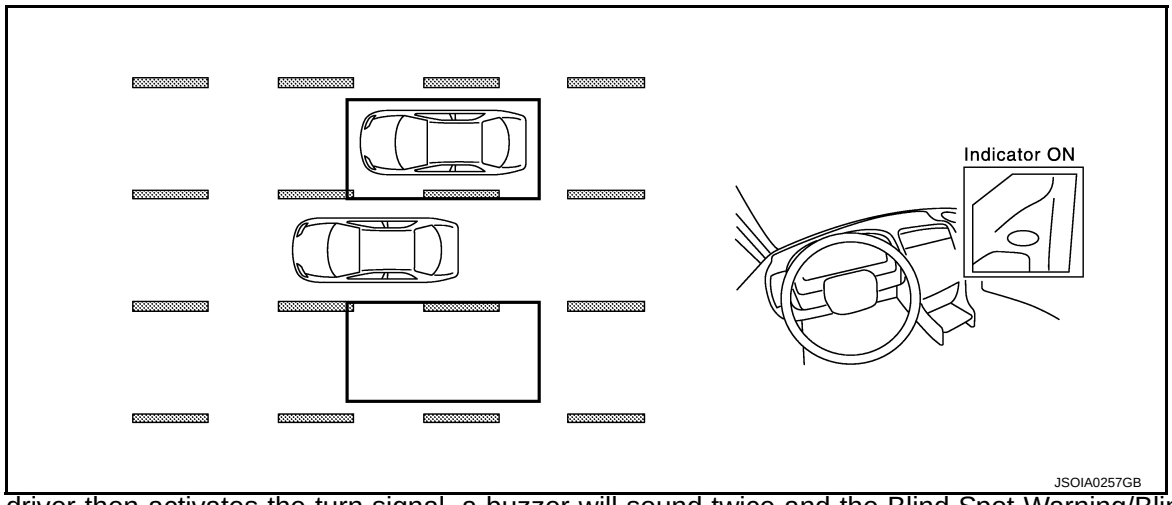
Transmit unit	Signal name		Description
Display control unit	CAN communication	System selection signal	Receives a selection state of each item in “Driver Aids” selected with the integral switch
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.

Output Signal Item

Reception unit	Signal name			Description
Combination meter	CAN communication	Meter display signal	BSW system display	Transmits a meter display signal to turn ON the Blind Spot Warning system display
Side radar LH, RH	ITS communication	Blind Spot Warning/Blind Spot Intervention indicator signal		Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/ Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer signal		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 assistance buzzer control module	ITS communication	Driver assistance buzzer signal		Transmits a driver assistance buzzer signal to activates the buzzer

FUNCTION DESCRIPTION

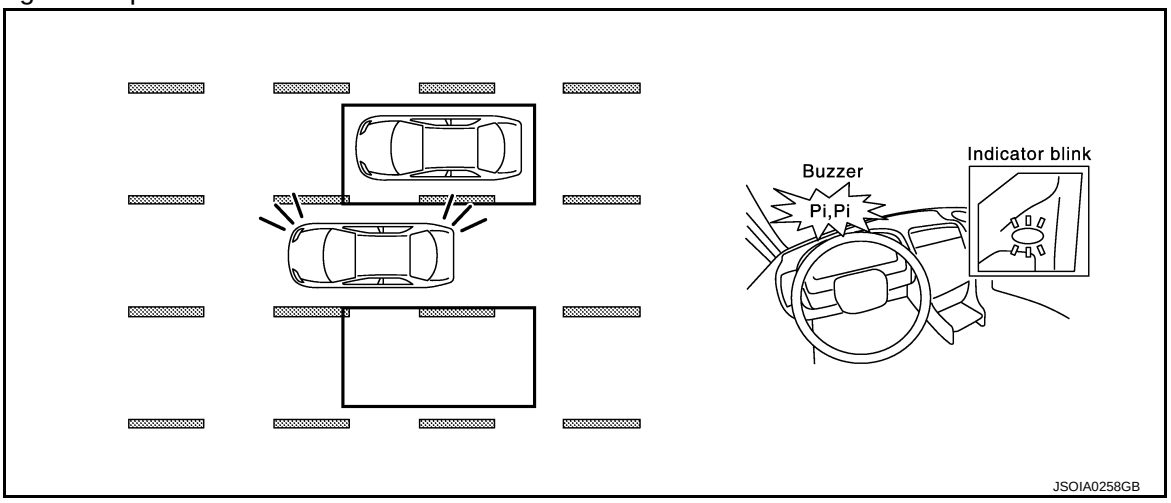
- The BSW system can help alert the driver of other vehicles in adjacent lanes when changing lanes.
- The BSW system uses side radar installed near the rear bumper to detect vehicles in an adjacent lane.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as 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.

NOTE:

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.

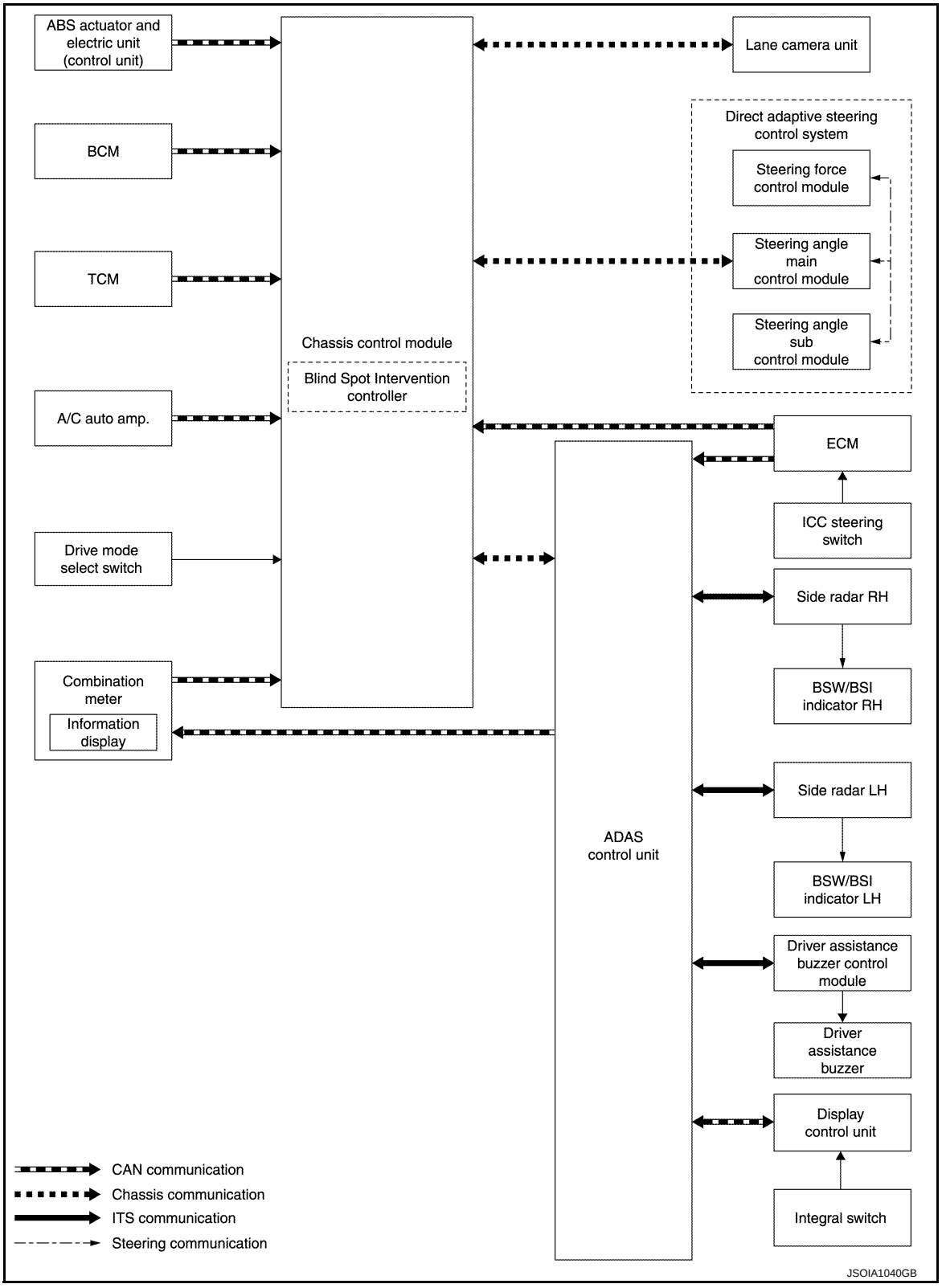
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 29 km/h (18 MPH)
- The Blind Spot Warning system may not function properly, depending on the situation. Refer to DAS-217, "Precautions for Blind Spot Warning/Blind Spot Intervention".
- 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

INFOID:0000000009729300

SYSTEM DIAGRAM



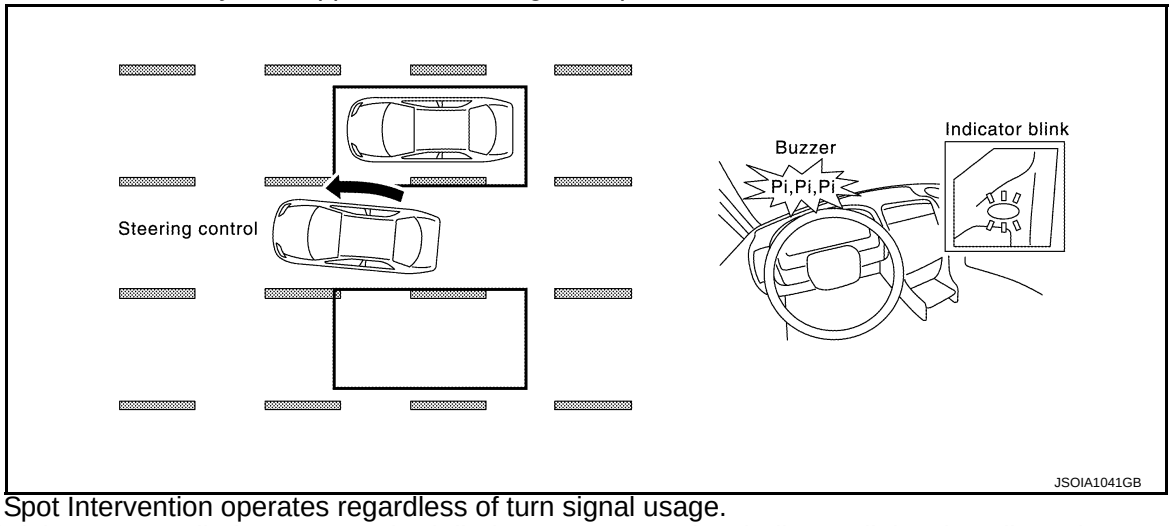
INPUT/OUTPUT SIGNAL ITEM

Reception unit	Transmit unit	Signal name		Description
Chassis control module	Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
			Lane camera unit condition signal	Receives lane camera unit condition
	Steering angle main control module	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
			Steering force actuator status signal	Receives torque state of steering force actuator.
			ALC permission signal	Receives a permission state of the ALC.
	ABS actuator and electric unit (control unit)	CAN communication	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
			VDC operation signal	Receives an operational state of VDC
			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
			Stop lamp switch	Receives stop lamp switch state
	ECM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
	BCM	CAN communication	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 communication	Current gear position signal	Receives a current gear position
			Shift position signal	Receives a selector lever position
	A/C auto amp.	CAN communication	Ambient temperature signal	Receives an ambient temperature
	ADAS control unit	Chassis communication	BSI ON signal	Receives an ON/OFF state of BSI
	Combination meter	CAN communication	Parking brake switch signal	Receives an operational state of the parking brake
	Side radar RH/LH (Via ADAS control unit)	Chassis communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.
	Drive mode select switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.

Reception unit	Transmit unit	Signal name		Description
Steering angle main control module	Chassis control module	Chassis communication	Steering angle request signal	Transmits steering angle request signal
			Steering reaction force request signal	Transmits steering reaction force request signal
Lane camera unit		Chassis communication	Vehicle speed signal	Transmits a vehicle speed calculated by the chassis control module
			Turn indicator signal	Transmits a turn indicator signal received from BCM
Combination meter (Via ADAS control unit)		Chassis communication	Blind Spot Intervention 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
Side radar RH/LH (Via ADAS control 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.

- For details of Blind Spot Intervention system indication on the combination meter, refer to DAS-205, "DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch".

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 dimmer 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 respectively 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:

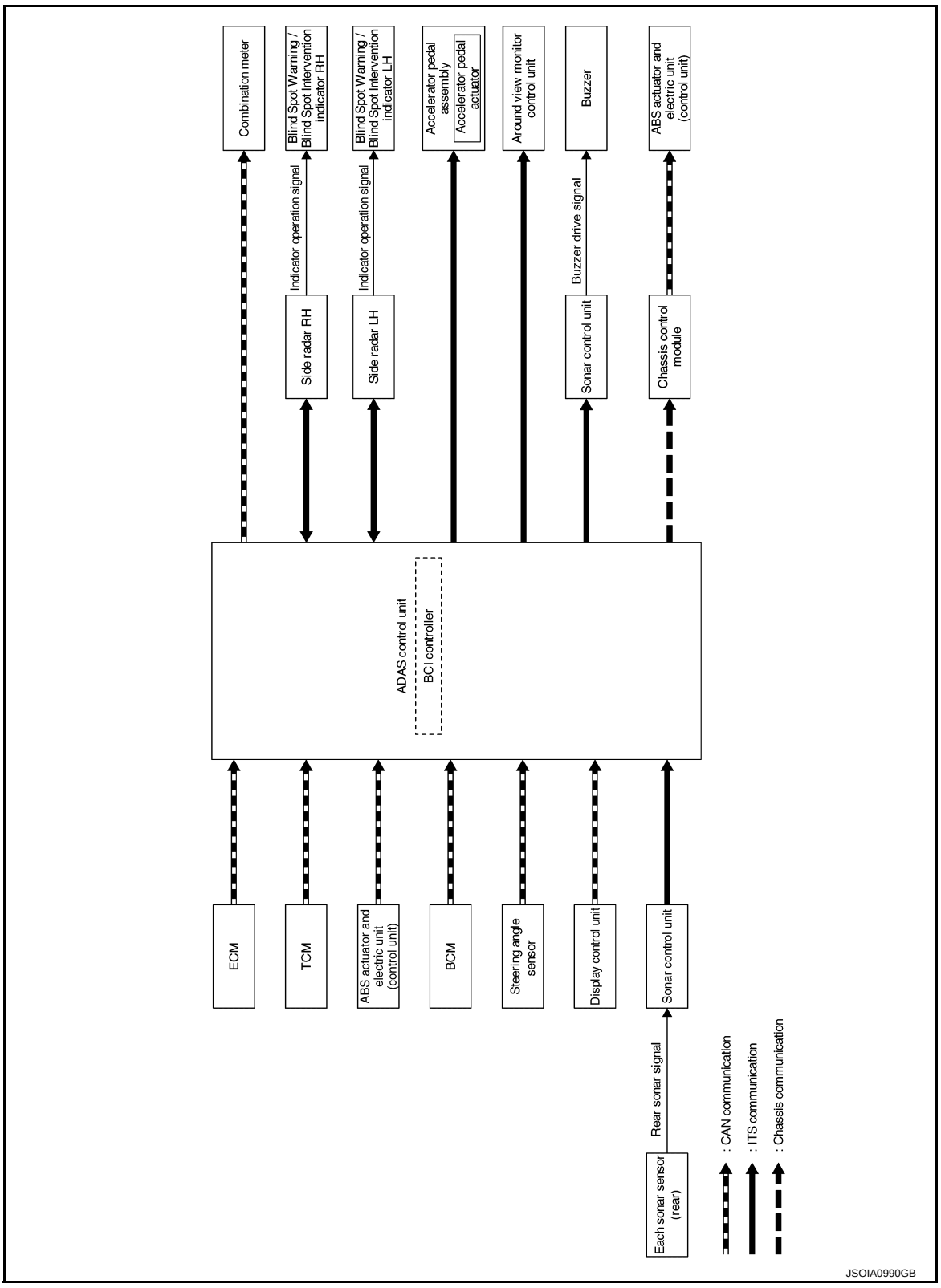
- Blind Spot Intervention system ON/OFF can be set on the integral switch.
- The Blind Spot Intervention system may not function properly, depending on the situation. Refer to DAS-217, "Precautions for Blind Spot Warning/Blind Spot Intervention".
- Blind Spot Intervention steering will not operate or 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, FCW 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

INFOID:0000000009644613

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ECM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
		Engine speed signal	Receives engine speed
TCM	CAN communication	Current gear position signal	Receives a current gear position
		Shift position signal	Receives a select lever position
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		VDC malfunction signal	Receives a malfunction state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Display control unit	ITS communication	System selection signal	Receives a selection state of each item in “Camera” selected with the integral switch
Sonar control unit	ITS communication	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.

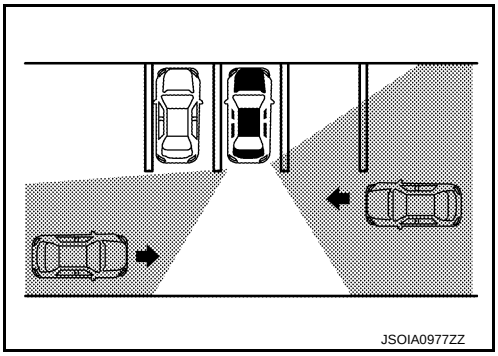
Output Signal Item

Reception unit	Signal name			Description
ABS actuator and electric unit (control unit)	CAN communication	Brake fluid pressure control signal.		Transmits a brake fluid pressure control signal to activate the brake.
Combination meter	CAN communication	Meter display signal	BCI system display	Transmits a meter display signal to turn ON the BCI system display
Sonar control unit	ITS communication	Buzzer drive signal		Transmits a buzzer drive signal to activate buzzer
Around view monitor control unit	ITS communication	BCI warning signal		Transmits a BCI warning signal to indicate a yellow/red frame on the upper display
Accelerator pedal actuator	ITS communication	Accelerator pedal feedback force control signal		Transmits an accelerator pedal feedback force control signal to activate the accelerator pedal actuator
Side radar LH, RH	ITS communication	Blind Spot Warning/Blind Spot Intervention indicator signal		Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer signal		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

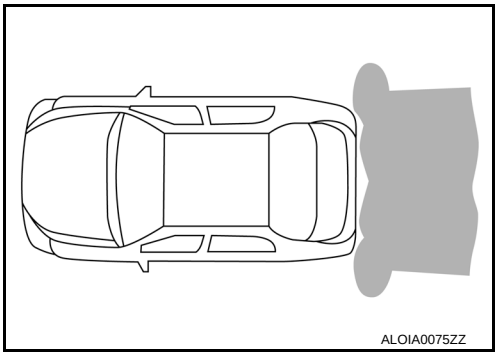
FUNCTION DESCRIPTION

- 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 5 MPH (8 km/h) whenever the vehicle is in reverse.

- 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.


JSOIA0977ZZ

- The sonar sensors can detect rear obstacles of up to approximately 1.5 m (4.9 ft).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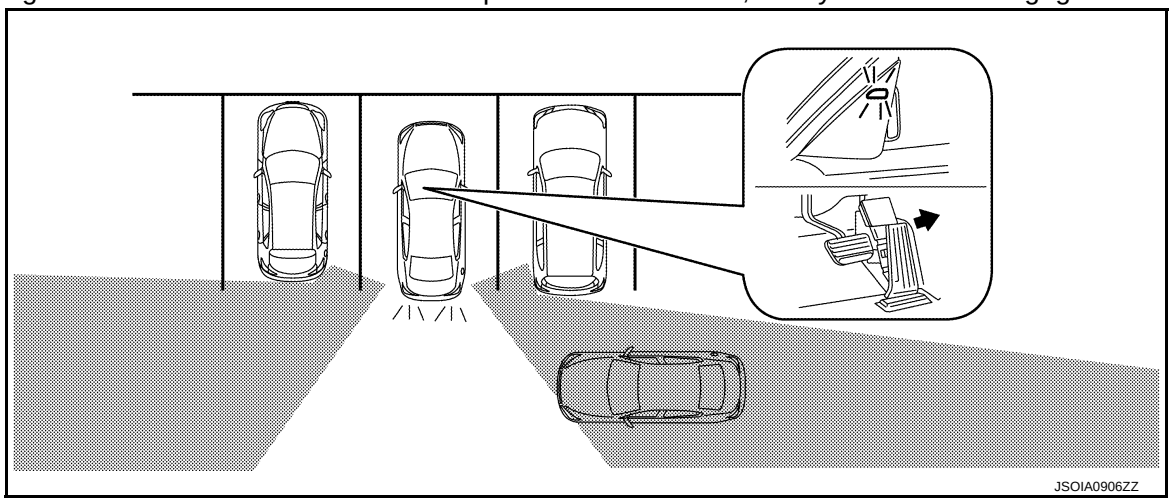
- If the radar detects a vehicle approaching from the side or the sonar detects close objects in the rear, the system gives visual and audible warnings, and applies the brake for a moment when the vehicle is moving backwards. If the driver's foot is on the accelerator pedal, the system pushes the accelerator upward before applying the brake. If the driver continues to press the accelerator, the system will not engage the brake.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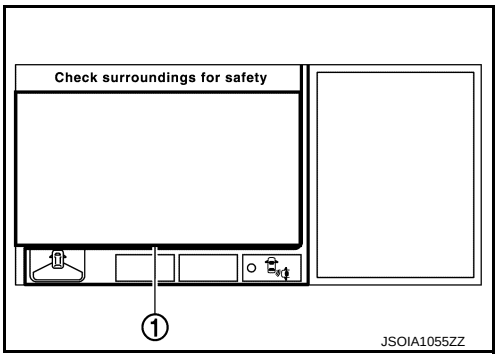
- If the side radar detects an approaching vehicle from the side, the BCI system sounds a beep (single beep), the Blind spot warning indicator on the side of the approaching vehicle flashes and the frame of the around view monitor screen ① is shown in yellow. If the detected vehicle approaches closer 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

- 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.

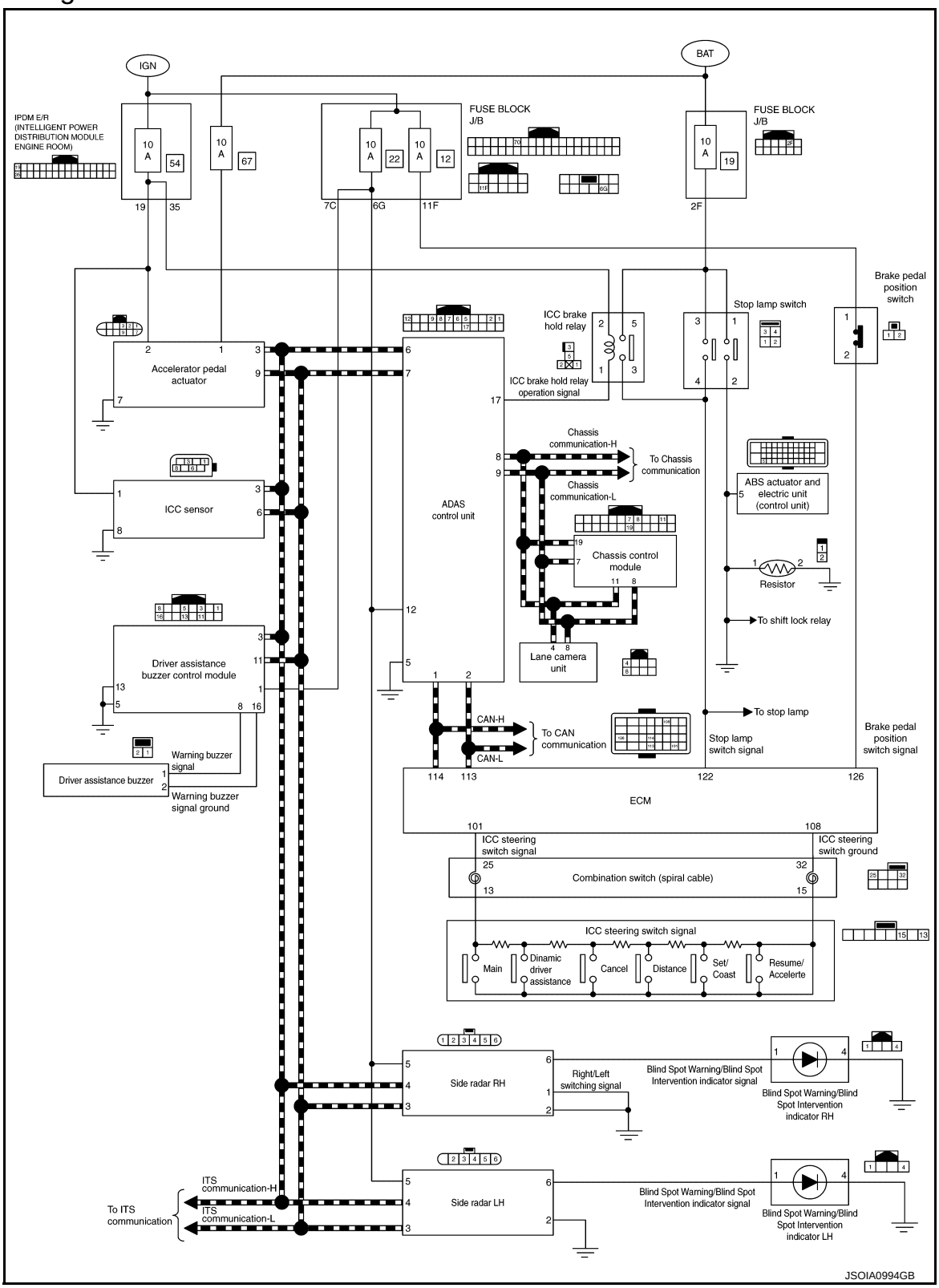
- Back-up Collision Intervention: ON (Selected by integral switch)
- When the vehicle is moving in reverse at 5 MPH (8 km/h) or less.

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".

Circuit Diagram

INFOID:0000000009763250



Fail-safe (ADAS Control Unit)

INFOID:0000000009727033

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 display	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:0000000009763256

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:0000000009644617

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)

INFOID:0000000009729301

FAIL-SAFE CONTROL BY DTC

If lane camera unit detects any DTC, following functions are suspended. And any warning is indicated on the combination meter.

Function	Indication
Active Lane Control	Chassis control warning is displayed
Lane Departure Warning (LDW)	LDW warning display (yellow) is displayed
Lane Departure Prevention (LDP)	LDP warning display (yellow) is displayed and a beep is sounded
Blind Spot Intervention	BSW/BSI warning display (yellow) is displayed and a beep is sounded

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

- If the vehicle is parked in direct sunlight under high temperature conditions, following functions are suspended. And camera high temperature message is indicated on the combination meter.
- When interior temperature is reduced, and system warning is stopped. Then the system can be operated again by dynamic driver assistance switch ON.

Function	Indication
Active Lane Control	—
Lane Departure Warning (LDW)	Camera high temperature message is displayed. Then LDW warning display (yellow) is blinked
Lane Departure Prevention (LDP)	Camera high temperature message is displayed. Then LDP warning display (yellow) is blinked
Blind Spot Intervention	Camera high temperature message is displayed. Then Blind Spot Intervention warning display (yellow) is blinked

Fail-Safe (Chassis Control Module)

INFOID:0000000009729302

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
C1B90-01 C1B91-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B92-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-01 C1B94-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
C1B95-01	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
C1B96-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function

DTC	Vehicle condition
C1B98-01	Normal control
C1B99-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BA0-01	The following functions are suspended. • Active trace control function
C1BA2-01	
C1BA5-01	Normal control
C1BA6-01	The following functions are suspended. • Infiniti InTuition function
C1BA7-01	The following functions are suspended. • Active lane control function
C1BA9-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
C1BAA-01	
C1BAB-01	The following functions are suspended. • Active trace control function
C1BAC-01	The following functions are suspended. • LDP function • Blind spot intervention function
C1BAD-01	
C1BAE-01	
C1BAF-01	The following functions are suspended. • Blind spot intervention function
C1BB0-01	Normal control
C1BB2-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB3-01	
C1BB4-01	
C1BB5-01	
C1BB6-01	Normal control
C1BB7-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB8-01	
C1BB9-01	
C1BBA-01	
C1BBB-01	
C1BBC-01	Normal control
C1BBD-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BC0-01	The following functions are suspended. • Active trace control function • Active lane control function
C1BC1-01	
C1BC2-01	The following functions are suspended. • Active trace control function
C1BC3-01	

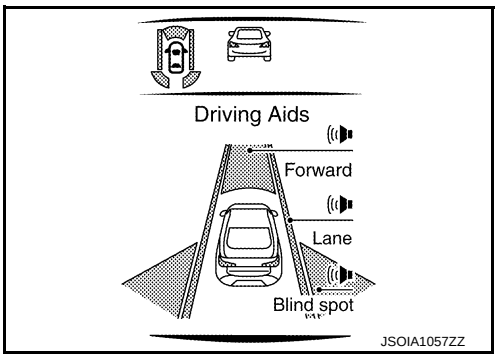
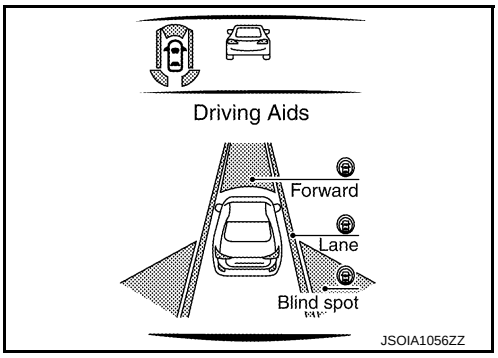
DTC	Vehicle condition
C1BC4-01	Normal control
C1BC5-01 C1BC6-01 U1000-01	The following functions are suspended. • Active trace control function
U1010-01	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-01 U1A31-01 U1A32-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A34-01 U1A35-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A36-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3B-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A3D-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-01	Normal control
U1A3F-01	The following functions are suspended. • Infiniti InTuition function
U1A42-01 U1A43-01	The following functions are suspended. • Active trace control function
U1A45-01	The following functions are suspended. • Active lane control function
U1A48-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function

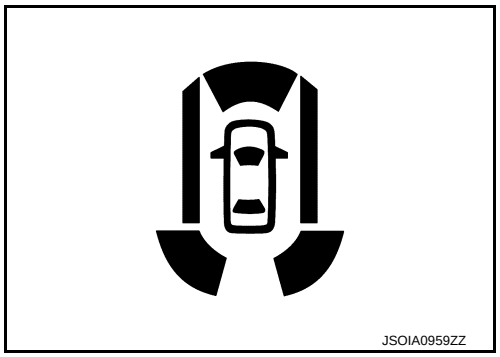
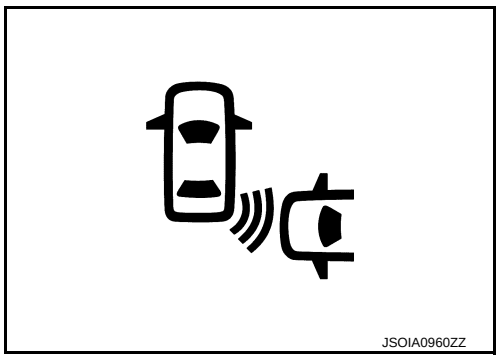
DTC	Vehicle condition
U1A4B-01	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-01	Normal control
U1A4E-01	The following functions are suspended. • Active trace control function

WARNING/INDICATOR/CHIME LIST

WARNING/INDICATOR/CHIME LIST : Warning/Indicator (On Information Display)

INFOID:0000000009644618

Name	Design	Function
Following system display • PFCW (FEB) • LDW • BSW		• Withe: DAS-199, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch" • Green: DAS-205, "DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch"
Following system display • DCA • LDP • Blind Spot Intervention		• Withe: DAS-199, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch" • Green: DAS-205, "DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch"

Name	Design	Function
Following system malfunction/warning • PFCW (FEB) • DCA • LDW • LDP • BSW • Blind Spot Intervention	 JSOIA0959ZZ	• Withe: DAS-199, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch" • Green: DAS-205, "DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch"
BCI malfunction/ warning	 JSOIA0960ZZ	DAS-212, "BCI : Menu Displayed by Pressing Each Switch"

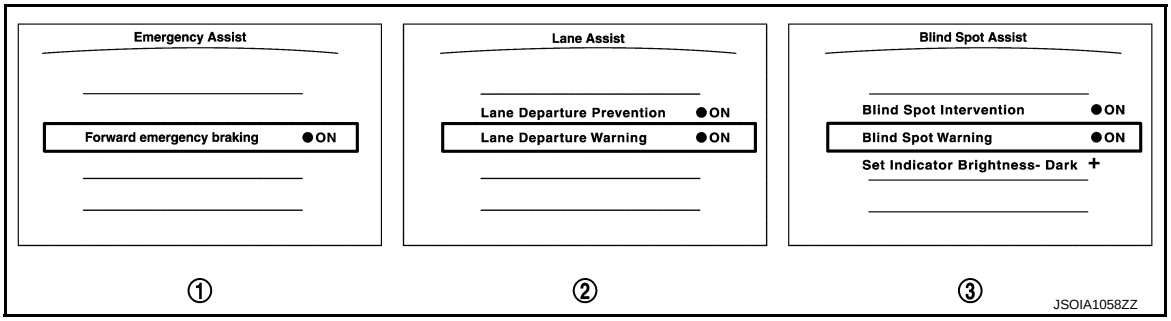
OPERATION

PFCW/LDW/BSW

PFCW/LDW/BSW : Switch Name and Function

INFOID:0000000009644619

PFCW/LDW/BSW



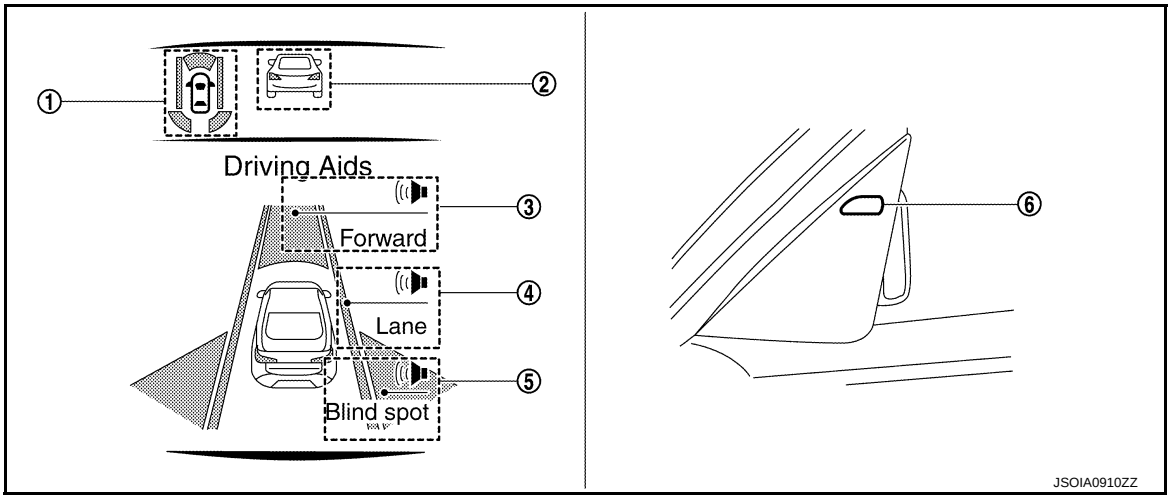
No.	Switch name	Description
①	PFCW/FEB system setting screen (Integral switch settings screen)	The setting of PFCW/FEB system can be switched between ON and OFF
②	LDW system setting screen (Integral switch settings screen)	The setting of LDW system can be switched between ON and OFF
③	BSW system setting 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:0000000009644620

SYSTEM DISPLAY

PFCW/LDW/BSW

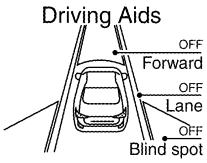
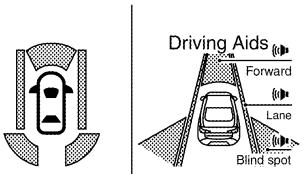
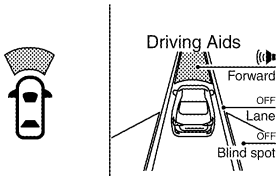
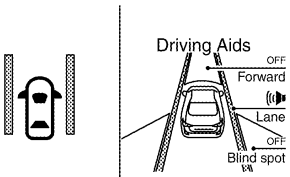
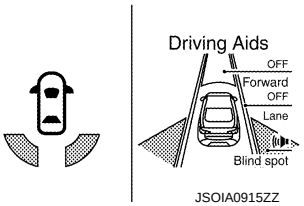


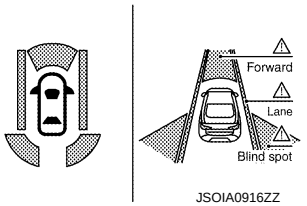
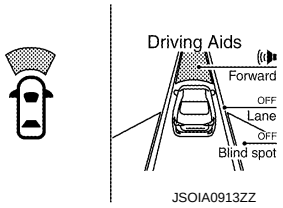
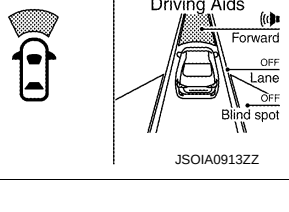
No.	Switch name	Description
①	Warning systems indicator	Indicates that PFCW/FEB/LDW/BSW systems are ON
②	Vehicle ahead detection indicator	Indicates whether it detects a vehicle ahead **NOTE:** The vehicle ahead detection indicator turns OFF when the no operation condition is satisfied
③	Warning systems indicator “Forward” position (Speaker icon)	Indicates that PFCW/FEB system is ON

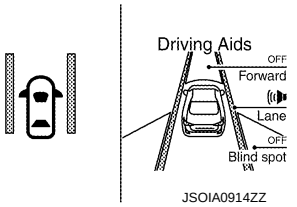
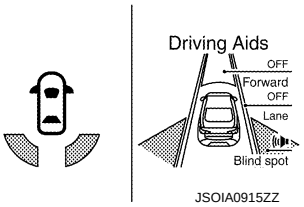
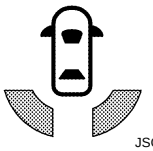
No.	Switch name	Description
④	Warning systems indicator “Lane” position (Speaker icon)	Indicates that LDW system is ON
⑤	Warning systems indicator “Blind spot” position (Speaker icon)	Indicates that BSW system is ON
⑥	Blind Spot Warning/Blind Spot Intervention indicator LH/RH	• Illuminates when detect other vehicles beside vehicle in an adjacent lane • Blinks when BSW system is warning to driver

DISPLAY AND WARNING (PFCW/LDW/BSW)

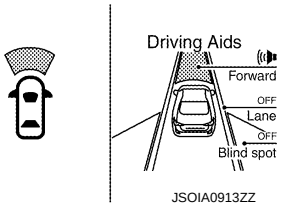
System Display
The PFCW/LDW/BSW systems operate when ON is selected with the integral switch.

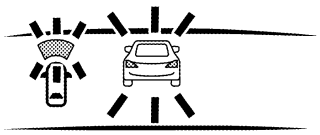
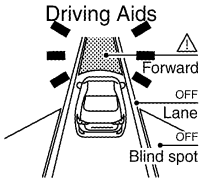
System status	Condition	Display on combination meter	Indicator color
PFCW/LDW/BSW OFF	—	 JSOIA0911ZZ	—
PFCW/LDW/BSW ON	System ON	 JSOIA0912ZZ	White
PFCW ON (FEB ON)	System ON	 JSOIA0913ZZ	White
LDW ON	System ON	 JSOIA0914ZZ	White
BSW ON	System ON	 JSOIA0915ZZ	White

System status	Condition	Display on combination meter	Indicator color
PFCW/LDW/BSW are malfunction	System malfunction	 JSOIA0916ZZ	Yellow
Operation conditions not satisfied (dirt around the ICC sensor)	The PFCW/FEB system is automatically canceled.	 JSOIA0913ZZ	Yellow
		 JSOIA0932ZZ	White
		Unavailable Front Radar Obstruction	
Accelerator pedal high temperature		 JSOIA0913ZZ	White (Blink)
		 JSOIA0932ZZ	White
		Unavailable High Accelerator Temperature	

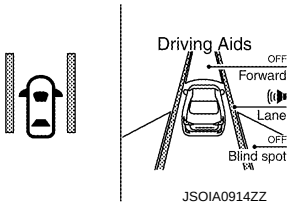
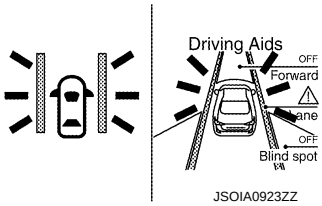
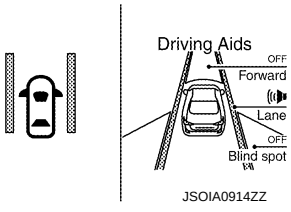
System status	Condition	Display on combination meter	Indicator color
Lane camera unit high temperature	The LDW system is automatically canceled.	 JSOIA0914ZZ	White (Blink)
		 JSOIA0931ZZ Unavailable High Cabin Temperature	White
Dirt around the side radar	The BSW system is automatically canceled.	 JSOIA0915ZZ	White (Blink)
		 JSOIA0936ZZ Unavailable Side Radar Obstruction	White

Warning Operation
- PFCW operation

Condition	Action		
	Indication on the combination meter	Indicator color	Buzzer
System ON	 JSOIA0913ZZ	White	OFF

Condition	Action		
	Indication on the combination meter	Indicator color	Buzzer
When judged that the distance between own vehicle and a vehicle in front of the vehicle ahead becomes closer	 JSOIA0921ZZ	Yellow (Blink)	Beep
	 JSOIA0922ZZ	Yellow (Blink)	
Operation conditions not satisfied (dirt around the ICC sensor)	 JSOIA0932ZZ	Yellow	Beep
	Unavailable Front Radar Obstruction		

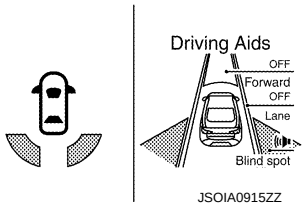
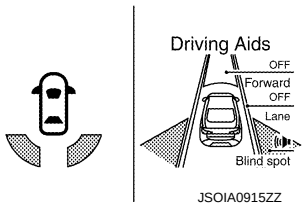
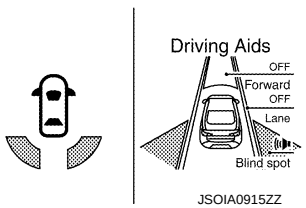
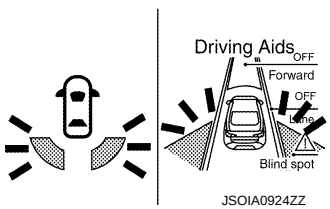
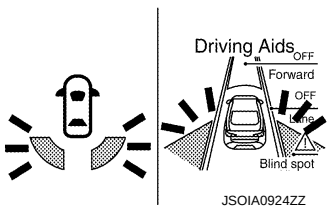
- LDW operation

Vehicle condition/ Driver's operation			Action		
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle close to lane marker	Indication on the combination meter	Indicator color	Buzzer
Less than Approx. 60 km/h (40 MPH)	—	Close to lane marker	 JSOIA0914ZZ	White	OFF
Approx. 70 km/h (45 MPH) or more	• OFF • ON (Opposite to the deviate side)	Close to lane marker	 JSOIA0923ZZ	Yellow (Blink)	Short continuous beeps
	ON (Deviate side)	Close to lane marker	 JSOIA0914ZZ	White	OFF

NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to DAS-176, "LDW : System Description".

- BSW operation

Vehicle condition/ Driver's operation			Action			
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle detection within detection 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	 JSOIA0915ZZ	White	OFF
Approx. 32 (20) or more	—	Vehicle is not detected	OFF	 JSOIA0915ZZ	White	OFF
	OFF	Vehicle is detected	ON	 JSOIA0915ZZ	White	OFF
	ON (vehicle detected direction)	Before turn signal operates Vehicle is detected	Blink	 JSOIA0924ZZ	Yellow (Blink)	Short continuous beeps
		Vehicle is detected after turn signal operates	Blink	 JSOIA0924ZZ	Yellow (Blink)	OFF

NOTE:

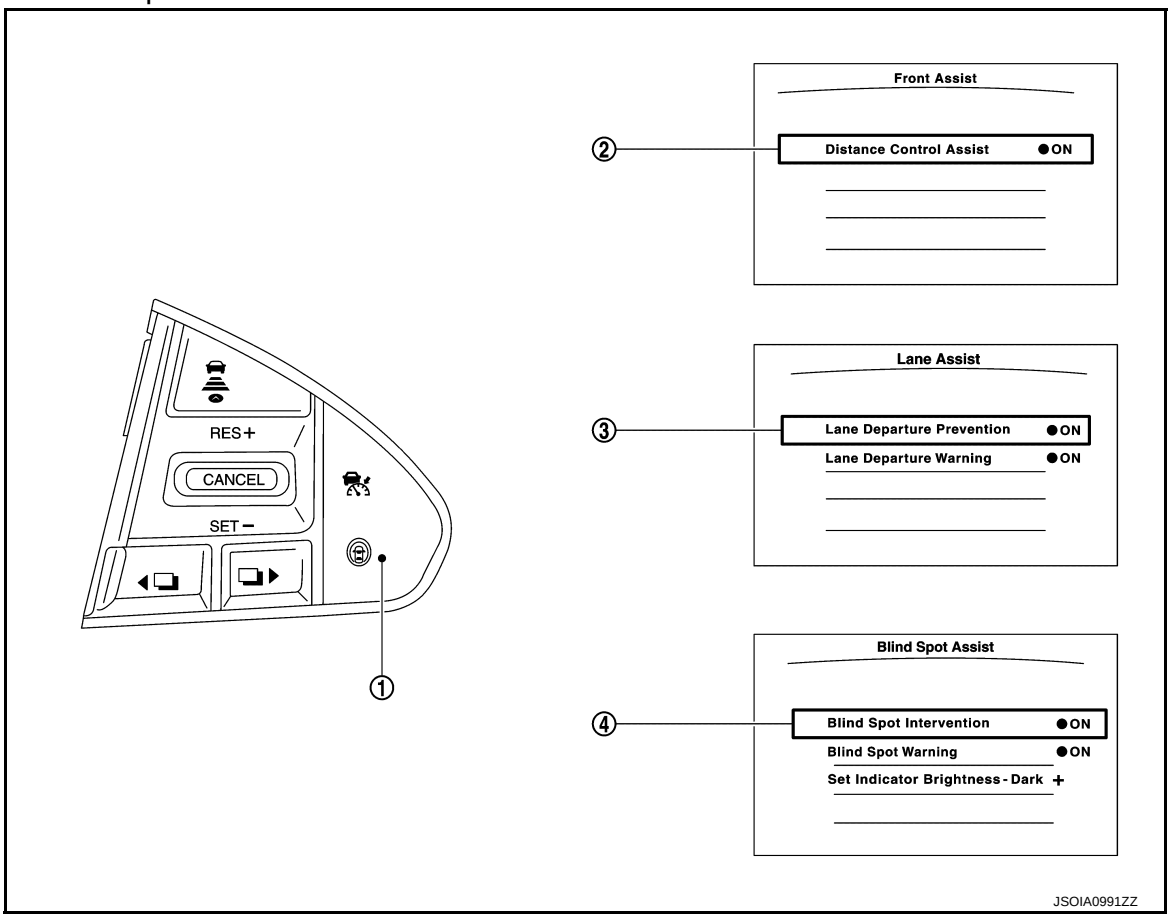
- If vehicle speed exceeds approximately 32 km/h (20MPH), BSW function operates until the vehicle speed becomes lower than approximately 29km/h (18MPH).
- Time shown in the figure is approximate time.
- Always Blind Spot Intervention system operates together with BSW system. Whenever Blind Spot Intervention 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:0000000009644621

DCA/LDP/Blind Spot Intervention



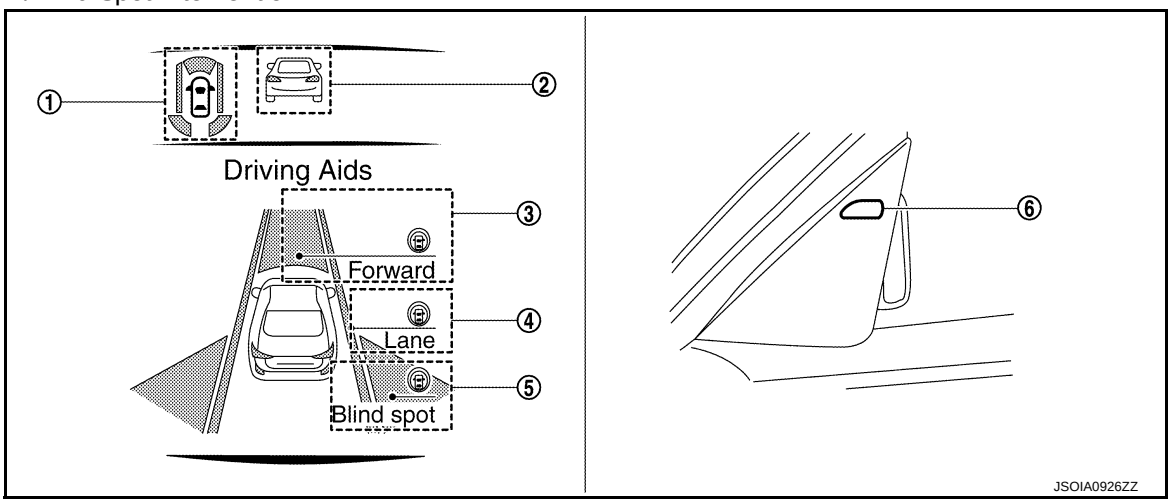
No.	Switch name	Description
①	Dynamic driver assistance switch	Turns DCA/LDP/Blind Spot Intervention system ON/OFF (When the setting of system on the navigation system setting screen is ON)
②	DCA system setting screen (Integral switch)	The setting of DCA system can be switched between ON and OFF
③	LDP system setting screen (Integral switch)	The setting of LDP system can be switched between ON and OFF
④	Blind Spot Intervention system setting 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:0000000009644622

SYSTEM DISPLAY

DCA/LDP/Blind Spot Intervention



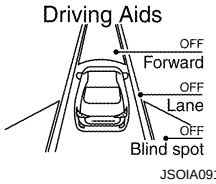
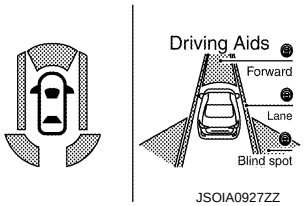
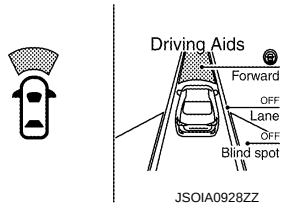
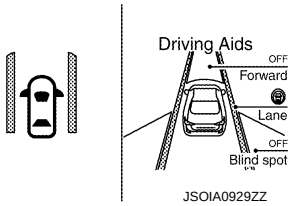
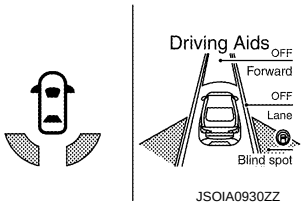
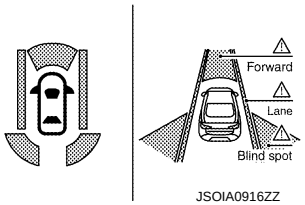
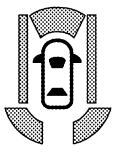
No.	Switch name	Description
①	Dynamic driver assistance systems indicator	Indicates that DCA/LDP/Blind Spot Intervention systems are ON
②	Vehicle ahead detection indicator	Indicates whether it detects a vehicle ahead **NOTE:** The vehicle ahead detection indicator turns OFF when the no operation condition 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 BSW system is warning to driver

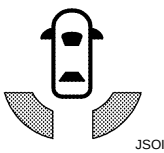
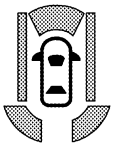
DISPLAY AND WARNING (DCA/LDP/BLIND SPOT INTERVENTION)

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.

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 Settings	White	Beep

System status	Condition	Display on combination meter	Indicator	Buzzer
DCA/LDP/Blind Spot Intervention OFF (PFCW/LDW/BSW are OFF)	—	 JSOIA0911ZZ	—	—
DCA/LDP/Blind Spot Intervention ON	System ON	 JSOIA0927ZZ	Green	—
DCA ON	System ON	 JSOIA0928ZZ	Green	—
LDP ON	System ON	 JSOIA0929ZZ	Green	—
Blind Spot Intervention ON	System ON	 JSOIA0930ZZ	Green	—
DCA/LDP/Blind Spot Intervention are malfunction	System malfunction	 JSOIA0916ZZ  JSOIA0931ZZ Malfunction See Owner's Manual	Yellow	Beep

System status	Condition	Display on combination meter	Indicator	Buzzer
Operation conditions not satisfied (dirt around the ICC sensor)	The DCA system is automatically canceled. **NOTE:** The system operates if the dynamic driver assistance switch is turned OFF⇒ON after the condition improves	—	OFF	Beep
		 JSOIA0932ZZ	Green	
		Unavailable Front Radar Obstruction		
Accelerator pedal high temperature		—	OFF	Beep
		 JSOIA0932ZZ	Green	
		Unavailable High Accelerator Temperature		
Lane camera unit high temperature	The 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	—	OFF	Beep
		 JSOIA0931ZZ	Green	
		Unavailable High Cabin Temperature		
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 condition improves	—	OFF	Beep
		 JSOIA0936ZZ	Green	
		Unavailable Side Radar Obstruction		
• 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	—	OFF	Beep
		 JSOIA0931ZZ	Green	
		Currently unavailable		

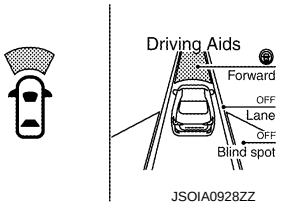
Warning Operation

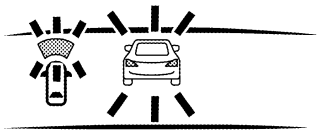
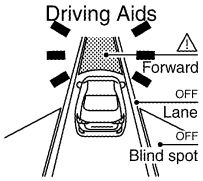
• DCA operation

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:

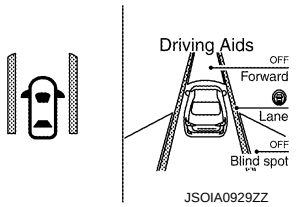
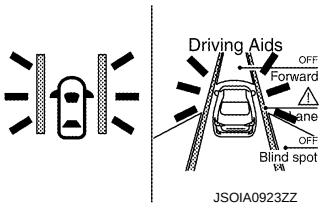
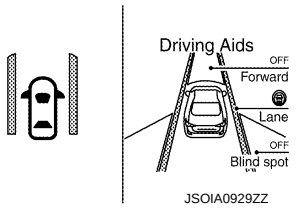
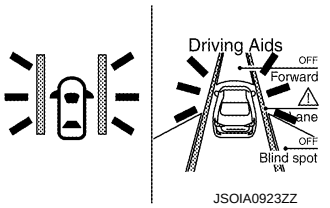
• When the vehicles are traveling at the same speed and the distance between vehicles is not changing
• When the vehicle ahead is traveling faster and the distance between vehicles is increasing
• When a vehicle cuts in near own vehicle
- The warning chime will not sound when own vehicle approaches vehicles that are parked or moving slowly.

<table>
<tr><th rowspan="2">Condition</th><th colspan="4">Action</th></tr>
<tr><th>Dynamics action</th><th>Display on combination meter</th><th>Indicator</th><th>Buzzer</th></tr>
<tr><td>System ON</td><td>—</td><td> 

JSOIA0928ZZ</td><td>Green</td><td>—</td></tr>
<tr><td rowspan="2">• When the system detected vehicle ahead
• When the system judges that the brake operation by the driver is necessary</td><td rowspan="2">• Accelerator pedal actuation
• Operates brake</td><td> 
JSOIA0921ZZ</td><td>Yellow (Blink)</td><td rowspan="2">Beep</td></tr>
<tr><td> 

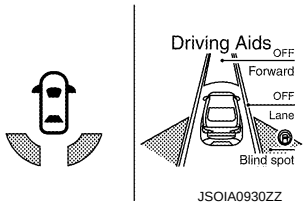
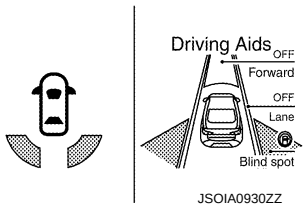
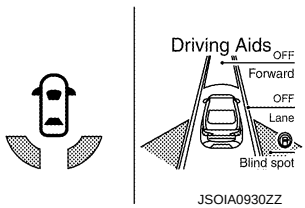
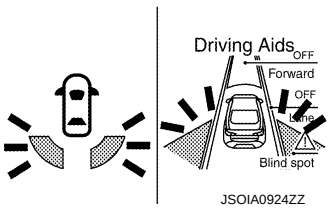
JSOIA0922ZZ</td><td>Yellow (Blink)</td></tr>
</table>

• LDP operation

Vehicle condition/ Driver's operation			Action			
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle close to lane marker	Yawing control	Indication on the combination meter	Indicator	Buzzer
Less than Approx. 60 km/h (40 MPH)	—	Close to lane marker	OFF	 JSOIA0929ZZ	Green	—
Approx. 70 km/h (45 MPH) or more	• Turn signal OFF • Turn signal ON (Opposite to the deviate side)	Close to lane marker	ON	 JSOIA0923ZZ	Yellow (Blink)	Short continuous beeps
	Turn signal ON (Deviate side)	Close to lane marker	OFF	 JSOIA0929ZZ	Green	—
	• Turn signal OFF • Turn signal ON (Opposite to the deviate side)	Close to lane marker with soft braking	OFF	 JSOIA0923ZZ	Yellow (Blink)	Short continuous beeps

NOTE:
After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to DAS-178, "LDP : System Description".

- Blind Spot Intervention operation

Vehicle condition/ Driver's operation			Action				
Vehicle speed (Approx.) [km/h (MPH)]	Status of vehicle detection within detection area	Status of approach to adjacent lane	Indication on the Blind Spot Intervention indicator	Yaw control	Indication on the combination meter	Indicator	Buzzer
Less than approx. 60 (37)	—	—	OFF	OFF	 JSOIA0930ZZ	Green	OFF
Approx. 60 (37) or more	Vehicle is not detected	—	OFF	OFF	 JSOIA0930ZZ	Green	OFF
	Vehicle is detected	Not approaching	ON	OFF	 JSOIA0930ZZ	Green	OFF
	Vehicle is detected	Approaching	Blink	ON	 JSOIA0924ZZ	Yellow (Blink)	Short continuous beeps

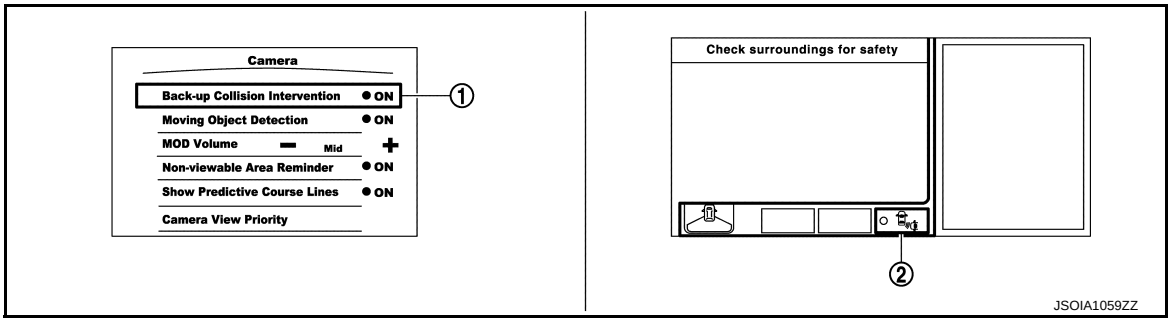
NOTE:
- If vehicle speed exceeds approximately 32 km/h (20MPH), BSW function operates until the vehicle speed becomes lower than approximately 29km/h (18MPH).
- Time shown in the figure is approximate time.
- Always Blind Spot Intervention system operates together with BSW system. Whenever Blind Spot 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.

BCI

BCI : Switch Name and Function

INFOID:0000000009644623

BCI

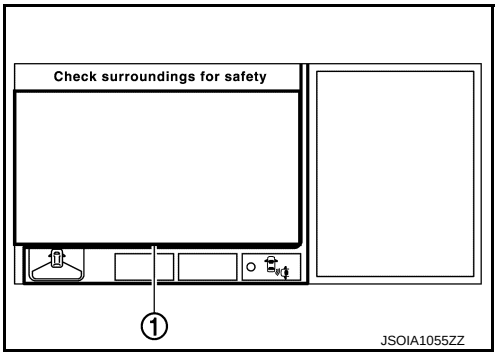


No.	Switch name	Description
①	BCI system setting screen (Integral switch)	The setting of BCI system can be switched between ON and OFF
②	BCI system temporary switch (Navigation screen)	Turns BCI system temporarily OFF

BCI : Menu Displayed by Pressing Each Switch

INFOID:0000000009644624

SYSTEM DISPLAY



No.	Name	Description
①	BCI warning frame (yellow)	Blinks when BCI system is warning to driver (Detecting vehicle)
	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 detection within detection area	Vehicle speed	Blind Spot Warning/ Blind Spot Intervention indicator	Action	Indication on the combination meter
• BCI system OFF • Shift lever in reverse	—	—	OFF	—	 JSOIA0941ZZ System OFF

Vehicle condition/Driver's operation	Status of detection within detection area	Vehicle speed	Blind Spot Warning/ Blind Spot Intervention indicator	Action	Indication on the combination meter
• BCI system ON • Engine running • Shift lever in reverse	Vehicle is absent	—	OFF	—	—
	Vehicle is detected	0 km/h (0 MPH)	Blink	• Buzzer sounds (single beep) • Display frame is yellow	—
		Less than 8 km/h (5.0 MPH)	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 display) is deactivated	 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 display) is deactivated	 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.

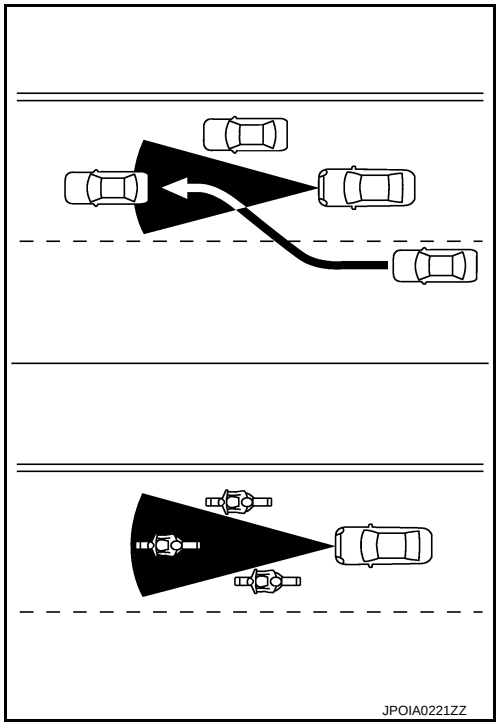
HANDLING PRECAUTION

Precautions for Distance Control Assist

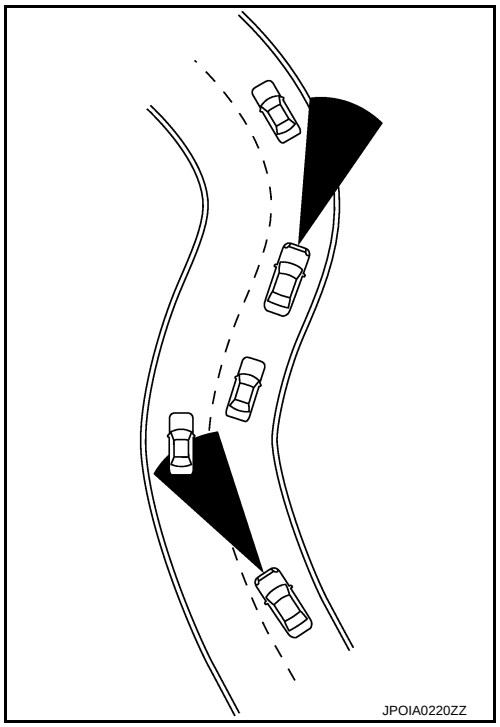
INFOID:0000000009644625

- 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.

- 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.
- 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

INFOID:0000000009787862

- 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 times.
- 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/Lane Departure Prevention

INFOID:0000000009644626

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)*1 or 60 km/h (37 MPH)*2 or if it cannot detect lane markers.
  *1: With Direct Adaptive Steering
  *2: Without Direct Adaptive Steering
- 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.)

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.
- When the LDP system is operating, avoid excessive or sudden steering maneuvers. Otherwise, driver could lose control of the vehicle.
- The LDP system will not operate at speeds below approximately 70 km/h (45 MPH)*1 or 60 km/h (37 MPH)*2 or if it cannot detect lane markers.
  *1: With Direct Adaptive Steering
  *2: Without Direct Adaptive Steering
- Do not use the LDP system under the following conditions as it may not function properly:
- During bad weather (rain, fog, snow, wind, 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.
- When driver is towing a trailer or other vehicle.
- 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:0000000009644627

LANE CAMERA UNIT HANDLING

Refer to DAS-216, "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.
- 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, wind, 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.
- When driver is towing a trailer or other vehicle.
- 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 Back-up Collision Intervention

INFOID:0000000009787864

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.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

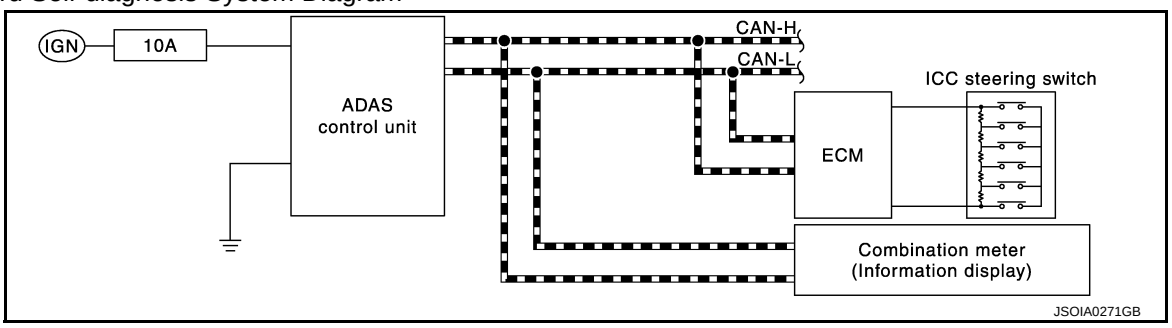
On Board Diagnosis Function

INFOID:0000000009716270

DESCRIPTION

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

On Board Self-diagnosis System Diagram



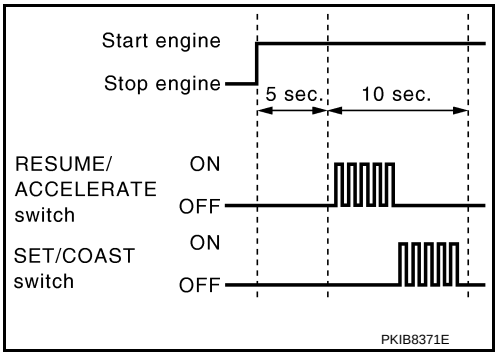
METHOD OF STARTING

CAUTION:

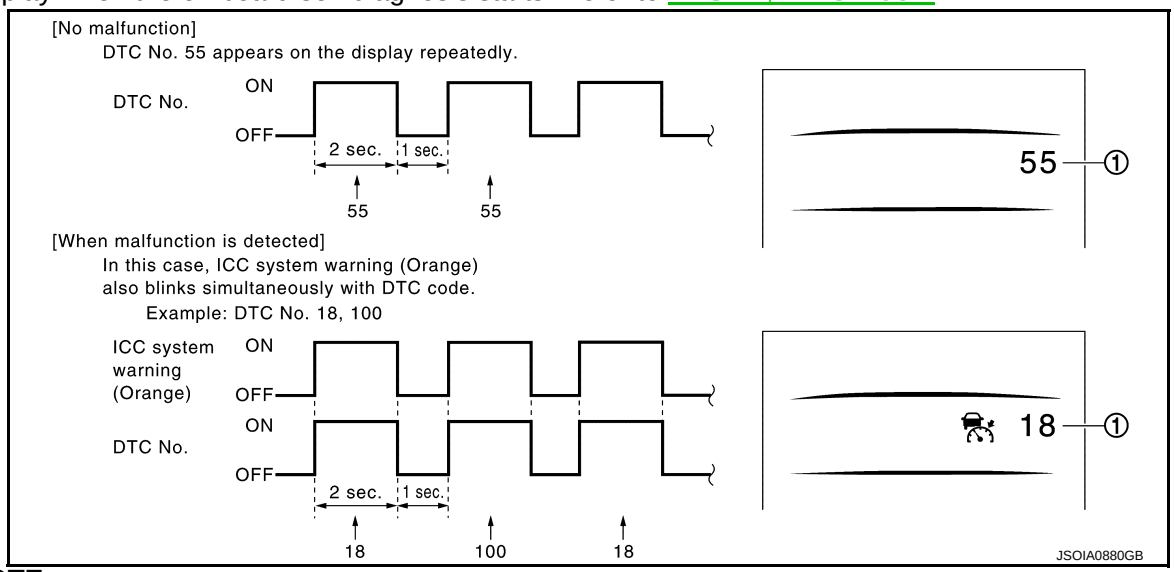
Start condition of on board self-diagnosis

- **ICC system OFF**
- **DCA system OFF**
- **Vehicle speed 0 km/h (0 MPH)**

1. Turn the ignition switch OFF.
2. Start the engine.
3. 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 DAS-44, "DTC Index".



NOTE:

- 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.

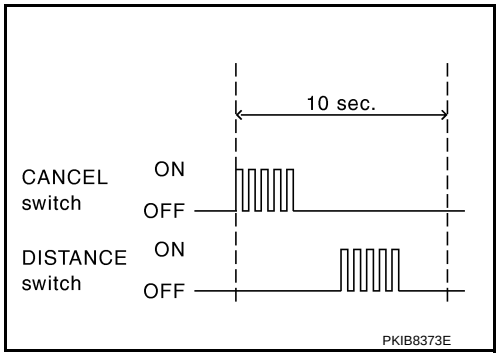
WHEN THE ON BOARD SELF-DIAGNOSIS DOES NOT START

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 malfunction		Perform the inspection for DTC “C1A06”. Refer to DAS-80, "DTC Logic".
Harness malfunction between ICC steering switch and ECM		
ECM malfunction		
ADAS control unit malfunction		• Check power supply and ground circuit of ADAS control unit. Refer to DAS-160, "Diagnosis Procedure". • Perform SELF-DIAGNOSIS for “ICC/ADAS”with CONSULT, and then check the malfunctioning parts. Refer to DAS-44, "DTC Index".

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 DISTANCE 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:0000000009716271

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.

Function		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)

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 ACCELERATION				×	Detected lateral speed is the specified value or more
RADAR INTERFERENCE	×		×	×	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

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-44, "DTC Index".

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”)
ON ROOT GUID-ANCE [On/Off]	×					**NOTE:** The item is displayed, but it is not monitored
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)
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)
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)
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]	×					Indicates [On/Off] status of own vehicle indicator output

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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)
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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
DISTANCE [m]	×					Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]	×					Indicates the relative speed of the vehicle ahead
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
FCW SYSTEM ON [On/Off]	×	×				Indicates [On/Off] status of PFCW system
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)
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 OUTPUT [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
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)
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)

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
STATUS signal [Stnby/Warn/Cancl/ Off]			×			Indicates a control state of LDP system
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)
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” ⇒ “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
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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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
BCI SYSTEM ON [On/Off]					×	Indicates [On/Off] status of BCI system
BATTERY CIRCUIT OFF [On/Off]	×					**NOTE:** The item is displayed, but it is not used
LDP WARNING INDICATOR [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 INDICATOR [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.
BSI WARNING INDICATOR [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 BRIGHTNESS [Nothing/Bright/Normal/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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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 VEHICLE 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**
  - **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

Test item	Description
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

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

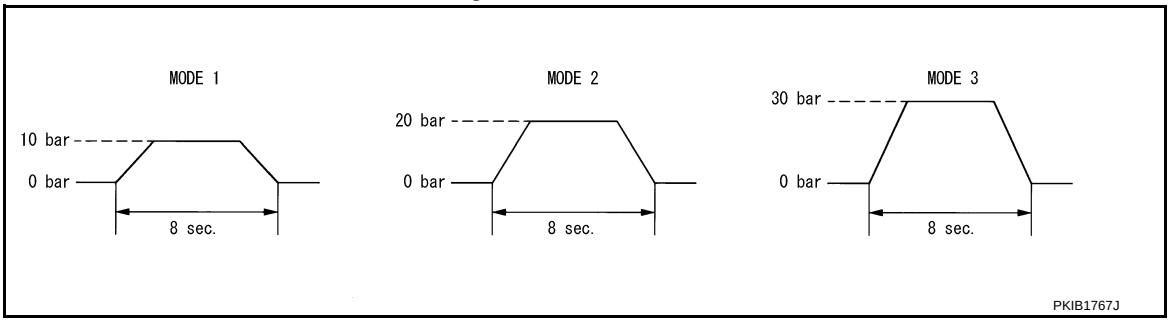
BRAKE ACTUATOR

NOTE:

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

Test item	Operation	Description	"PRESS SENS" value
BRAKE ACTUATOR	MODE1	Transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via chassis control module	10 bar
	MODE2		20 bar
	MODE3		30 bar
	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.)**

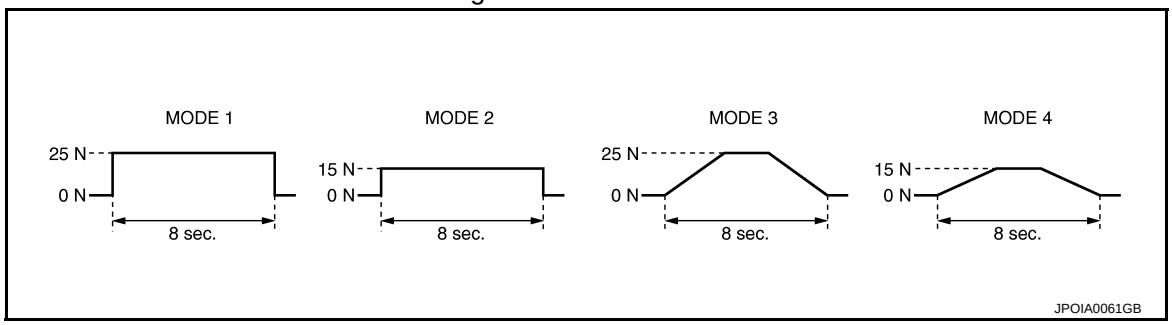
NOTE:

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

Test item	Operation	Description	Accelerator pedal operation
ACTIVE PEDAL	MODE1	Transmit the accelerator pedal feedback force control signal to the accelerator pedal actuator via ITS communication.	Constant with a force of 25 N for 8 seconds
	MODE2		Constant with a force of 15 N for 8 seconds
	MODE3		Change up to a force of 25 N for 8 seconds
	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	Operation	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	Operation	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	Operation	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

Test item	Operation	Description	Lane departure system display (Yellow)
LANE DEPARTURE W/L	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

BSW ON INDICATOR

Test item	Operation	Description	Blind Spot Warning system display (Yellow)
BSW ON 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

BSI ON INDICATOR

Test item	Operation	Description	Blind Spot Intervention system display (Green)
BSI ON 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

LDW ON INDICATOR

Test item	Operation	Description	LDW system display (White)
LDW ON 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 WARNING INDICATOR

Test item	Operation	Description	LDP malfunction (Yellow)
LDP WARNING 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

LDW WARNING INDICATOR

Test item	Operation	Description	LDW malfunction (Yellow)
LDW WARNING 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

BSW WARNING INDICATOR

Test item	Operation	Description	BSW malfunction (Yellow)
BSW WARNING 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

BSI WARNING INDICATOR

Test item	Operation	Description	Blind Spot Intervention malfunction (Yellow)
BSI WARNING 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

DIAGNOSIS SYSTEM (ICC SENSOR)

CONSULT Function (LASER/RADAR)

INFOID:0000000009716272

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-83, "TYPE 1 : Description".

SELF DIAGNOSTIC RESULT

Refer to CCS-63, "DTC Index".

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
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

Monitored item [Unit]	Description
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

DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR)

CONSULT Function (ACCELERATOR PEDAL ACT)

INFOID:0000000009644631

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-272, "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 malfunction 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
IGN Counter[Note]	It displays number of ignition switch OFF → ON after the malfunction is detected

NOTE:
- The number is 0 when is detected now.
- The number increases like 1→ 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
- 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
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 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)
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 via ITS communication (The ADAS control unit transmits with ITS communication the accelerator pedal position signal that 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.

NOTE:

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

NOTE:

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.

DIAGNOSIS SYSTEM (SIDE RADAR LH)

CONSULT Function (SIDE RADAR LEFT)

INFOID:0000000009644633

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-274, "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 Item [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 DRIVE	On	Outputs the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.
	Off	Stops the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.

DIAGNOSIS SYSTEM (SIDE RADAR RH)

CONSULT Function (SIDE RADAR RIGHT)

INFOID:0000000009644634

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-276, "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 Item [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 DRIVE	On	Outputs the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.
	Off	Stops the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE)

CONSULT Function (BSW/BUZZER)

INFOID:0000000009644635

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-280, "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 → ON after the malfunction is detected

NOTE:
- The number is 0 when is detected now.
- The number increases like 1→ 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
- 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)

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

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/OFF • 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
	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
	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
	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 2 (CCM)

Active test item	Operation	Description
BUZZER 2 (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 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
	On	Transmits the warning buzzer signal to the warning buzzer

ECU IDENTIFICATION

Displays driver assistance buzzer control module parts number.

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000009797491

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-573, "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

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-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

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.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000009729304

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-299, "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.

Item name	Indication/Unit	Display item
SHIFT POSITION	Off / P / R / N / D (A) / S / L / B / 1– 6 / M 1 –M 8 / A 1 – A 6	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.

Item [Unit]		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 / M 1 –M 8 / A 1 – A 6]	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.

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.

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 CANCEL	[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.

Test item	Operation	Description
COMMAND STEERING ANGLE	Start	Transmits the steering command value 0 deg → 0.00349 deg (hold it for approximately 2 seconds) → 0 deg (hold it for approximately 2 seconds) → 0.00349 deg (hold it for approximately 2 seconds) → 0 deg to the steering force control module.
COMMAND ST WHL FORCE	Start	Transmits the steering reaction force command value 0 N → 0.6 N (hold it for approximately 2 seconds) → 0 N (hold it for approximately 2 seconds)→ 0.6 N (hold it for approximately 2 seconds) → 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.
	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.
	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.
	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.
RR TIRE DISP	On	Displays the rear RH tire on the information display in the combination meter.
	Off	Does not display the rear RH tire on the information display in the combination meter.
TURN DISP	NO DISP	Does not display the turning status on the information display in the combination meter.
	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.
ALC LEVEL	LEVEL 1	Displays Active Lane Control corresponding to the selected level on the information display in the combination meter.
	LEVEL 2	
	LEVEL 3	
	LEVEL 4	
ALC SETTING	On	Displays Active Lane Control active status on the information display in the combination meter.
	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
ATC 1 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATC 2 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.

Test item	Operation	Description
ATC 4 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	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

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.

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.

ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000009716273

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
		When MAIN switch is not pressed	Off
SET/COAST SW	Ignition switch ON	When SET/COAST switch is pressed	On
		When SET/COAST switch is not pressed	Off
CANCEL SW	Ignition switch ON	When CANCEL switch is pressed	On
		When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
		When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition switch ON	When DISTANCE switch is pressed	On
		When DISTANCE switch is not pressed	Off
CRUISE OPE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC system is controlling	On
		When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed	Off
		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 running	Idling	On
		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 MAIN switch	ICC system ON (MAIN switch indicator ON)	On
		ICC system OFF (MAIN switch indicator OFF)	Off
OWN VHCL	**NOTE:** The item is indicated, but not monitored		Off
VHCL AHEAD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
		When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
ICC WARNING	Start the engine and press MAIN switch	When ICC system is malfunctioning (ICC system malfunction ON)	On
		When ICC system is normal (ICC system malfunction OFF)	Off

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 running	When the buzzer of the following system operates • Vehicle-to-vehicle distance control mode • DCA system • PFCW system • FEB system	On
		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 monitored		0.0
ENGINE RPM	Engine running		Equivalent to tachometer reading
WIPER SW	Ignition switch ON	Wiper not operating	Off
		Wiper LO operation	Low
		Wiper HI operation	High
YAW RATE	**NOTE:** The item is indicated, but not monitored		0.0
BA WARNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
STP LMP DRIVE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC brake hold relay is activated	On
		When ICC brake hold relay is not activated	Off
D RANGE SW	Engine running	When the selector lever is in “D” position or manual mode	On
		When the selector lever is in any position other than “D” or manual mode	Off
NP RANGE SW	Engine running	When the selector lever is in “N”, “P” position	On
		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
		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 vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position

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
		When clutch or brake pedal is not depressed	Off
NP SW SIG	Ignition switch ON	When the shift lever is in neutral position	On
		When the shift lever is in any position other than neutral	Off
MODE SIG	Start the engine and press MAIN switch	When ICC system is deactivated	Off
		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 activate the conventional (fixed speed) cruise control mode • Press SET/COAST switch	SET switch indicator ON	On
		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
DYNA ASIST SW	Ignition switch ON	When dynamic driver assistance switch is pressed	On
		When dynamic driver assistance switch is not pressed	Off
DCA ON IND	Start the engine and press dynamic driver assistance switch (When DCA setting is ON)	DCA system OFF	Off
		DCA system ON	On
DCA VHL AHED	Drive the vehicle and activate the DCA system	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
		When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
IBA SW	**NOTE:** The item is indicated, but not monitored		Off
FCW SYSTEM ON	Ignition switch ON	When the PFCW system is ON	On
		When the PFCW system is OFF	Off
APA TEMP	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA PWR	Ignition switch ON		Power supply voltage value of accelerator pedal actuator
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off

Monitor item	Condition		Value/Status
LDP ON IND	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	LDP ON indicator lamp ON	On
		LDP ON indicator lamp OFF	Off
LANE DPRT W/L	Drive the vehicle and activate the LDW system or LDP system	Lane departure warning lamp ON	On
		Lane departure warning lamp OFF	Off
LDW BUZER OUTPUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning/Blind Spot Intervention system	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	On
		When the buzzer of the following system does not operate • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	Off
LDP SYSTEM ON	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
READY signal	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
Camera lost	Drive the vehicle and activate the LDW system, LDP system or Blind Spot Intervention system	Both side lane markers are detected	Detect
		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both
Shift position	• Engine running • While driving		Displays the shift position
Turn signal	Turn signal lamps OFF		Off
	Turn signal lamp LH blinking		LH
	Turn signal lamp RH blinking		RH
	Turn signal lamp LH and RH blinking		LH&RH
SIDE G	While driving	Vehicle turning right	Negative value
		Vehicle turning left	Positive value
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
		Lane departure warning is not operating	Off
STATUS signal	Drive the vehicle and activate the LDP system	When the LDP system is ON	Stnby
		When the LDP system is operating	Warn
		When the LDP system is canceled	Cancl
		When the LDP system is OFF	Off
Lane unclear	While driving	Lane marker is unclear	On
		Lane marker is clear	Off
FUNC ITEM	Ignition switch ON		FUNC3
FUNC ITEM (NV-ICC)	**NOTE:** The item is indicated, but not monitored		Off
FUNC ITEM (NV-DCA)	**NOTE:** The item is indicated, but not monitored		Off
DCA SELECT	Ignition switch ON	“Distance Control Assist” set with the integral switch is ON	On
		“Distance Control Assist” set with the integral switch is OFF	Off

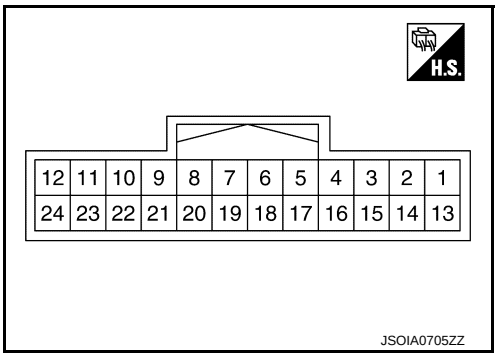
Monitor item	Condition		Value/Status
LDP SELECT	Ignition switch ON	"Lane Departure Intervention" set with the integral switch is ON	On
		"Lane Departure Intervention" set with the integral switch is OFF	Off
BSI SELECT	Ignition switch ON	"Blind Spot Intervention" set with the integral switch is ON	On
		"Blind Spot Intervention" set with the integral switch is OFF	Off
FCW SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is ON	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
BSW SELECT	Ignition switch ON	"Blind Spot Warning" set with the integral switch is ON	On
		"Blind Spot Warning" set with the integral switch is OFF	Off
NAVI ICC SELECT	**NOTE:** The item is indicated, but not monitored		Off
NAVI DCA SELECT	**NOTE:** The item is indicated, but not monitored		Off
SYS SELECTABILITY	Ignition switch ON	Items set with the integral switch can be switched normally	On
		Items set with the integral switch cannot be switched normally	Off
DRIVE MODE STATS	Ignition switch ON	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
		When drive mode select switch position is in SNOW	SNOW
		When drive mode select switch position is in PERSONAL	STD
		A signal other than those above is input	ERROR
WARN SYS SW	**NOTE:** The item is indicated, but not monitored		Off
BSW/BSI WARN LMP	Ignition switch ON	When the BSW system is malfunctioning	On
		When the BSW system is normal	Off
BSI ON IND	Ignition switch ON	Blind Spot Intervention warning ON	On
		Blind Spot Intervention warning OFF	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On
		When the BSW system is OFF	Off
BSI SYSTEM ON	Start the engine and press dynamic driver assistance switch (When Blind Spot Intervention system setting is ON)	When the Blind Spot Intervention system is ON	On
		When the Blind Spot Intervention system is OFF	Off
BCI SYSTEM ON	Engine running	When the BCI system is ON	On
		When the BCI system is OFF	Off
BCI SWITCH	**NOTE:** The item is indicated, but not monitored		Off

Monitor item	Condition		Value/Status
BATTERY CIRCUIT OFF	**NOTE:** The item is indicated, but not used		Off
LDP WARNING INDICATOR	Engine running	When the LDP system is malfunctioning	On
		When the LDP system is normal	Off
LDW ON INDICATOR	Ignition switch ON	LDW system display ON	On
		LDW system display OFF	Off
LDW WARNING INDICATOR	Ignition switch ON	When the LDW system is malfunctioning	On
		When the LDW system is normal	Off
SYSTEM CANCEL MESSAGE	Ignition switch ON	System cancel display ON	On
		System cancel display OFF	Off
CAMERA HI TEMP MSG	Ignition switch ON	Lane camera unit high temperature warning display ON	On
		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 INDICATOR	Engine running	When the Blind Spot Intervention is malfunctioning	On
		When the Blind Spot Intervention is normal	Off
BSW ON INDICATOR	Ignition switch ON	BSW system display ON	On
		BSW system display OFF	Off
SIDE RADAR BLOCK COND	Ignition switch ON	Front bumper or side radar is dirty	On
		Front bumper and side radar is clean	Off
LDW WARNING ALERT TIMING	Ignition switch ON	LDW system OFF	Nothing
		Lane departure warning timing is early setting	Early
		Lane departure warning timing is late setting	Late
BSW IND BRIGHTNESS	Ignition switch ON	BSW system OFF	Nothing
		Blind Spot Warning/Blind Spot Intervention indicator brightness bright	Bright
		Blind Spot Warning/Blind Spot Intervention indicator brightness normal	Normal
		Blind Spot Warning/Blind Spot Intervention indicator brightness dark	Dark
FUNC ITEM (FEB)	Engine running	“Forward Emergency Braking” set with the integral switch is ON	On
		“Forward Emergency Braking” set with the integral switch is OFF	Off
FEB SELECT	Ignition switch ON	“Forward Emergency Braking” set with the integral switch is ON	On
		“Forward Emergency Braking” set with the integral switch is OFF	Off
FEB SW	Engine running	FEB system ON	On
		FEB system OFF	Off
SL MAIN SW	Engine running	When speed limiter MAIN switch is pressed	On
		When speed limiter MAIN switch is not pressed	Off

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

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Standard value	Reference value
+	–	Signal name	Input/ Output				
1 (L)	Ground	CAN -H	—	—		—	—
2 (R)		CAN -L	—	—		—	—
5 (B)		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 (V)		Chassis communication-L	—	—		—	—
12 (GR)		Ignition power supply	Input	Ignition switch ON	—	10 - 16 V	Battery voltage
17 (V)		ICC brake hold relay drive signal	Output	Ignition switch ON	—	10 - 16 V	Approx. 12 V
					At “STOP LAMP” test of “Active test”	0 - 0.1 V	Approx. 0 V

Fail-safe (ADAS Control Unit)

INFOID:0000000009716274

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 display	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:0000000009716275

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

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 • U150B: ECM CAN CIRC 3 • U150C: VDC CAN CIRC 3 • U150D: TCM CAN CIRC 3 • U150E: BCM CAN CIRC 3 • U150F: AV CAN CIRC 3 • U1512: HVAC CAN CIRC3 • 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 R CAN CIRC 3 • U1521: SONAR CAN COMMUNICATION 3 • U1522: SONAR CAN COMMUNICATION 3 • U1523: SONAR CAN COMMUNICATION 2 • U1524: AVM CAN COMMUNICATION 1 • U1525: AVM CAN COMMUNICATION 3 • U1527: CCM CAN CIR 1 • U153F: CCM CAN CIR 2 • U1530: DR ASSIST BUZZER CAN CIR 1 • U1540: 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

INFOID:0000000009716276

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.

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		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	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
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

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		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
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
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

Systems for fail-safe
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- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)
- G: Back-up Collision Intervention (BCI)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
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.

ICC SENSOR

Reference Value

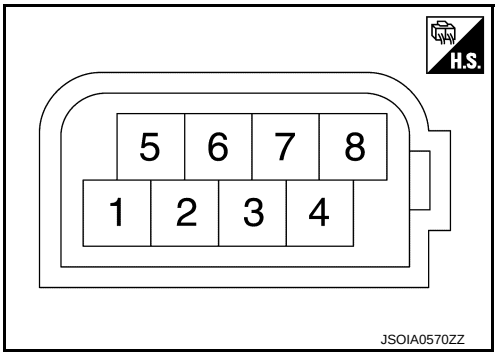
INFOID:0000000009716277

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)
YAW RATE	While driving	Vehicle stopped	0.0
		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 control mode	When a vehicle ahead is detected	Displays the relative speed
		When a vehicle ahead is not detected	0.0
RADAR OFFSET	**NOTE:** The item is indicated, but not used		—
RADAR HEIGHT	**NOTE:** The item is indicated, but not used		—
STEERING ANGLE	Ignition switch ON	When setting the steering wheel in straight-ahead position	0.0
		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 correction value is displayed
U/D ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Vertical correction value is displayed

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Standard value	Reference value
+	–	Signal name	Input/ Output			
1 (R)	Ground	Ignition power supply	Input	Ignition switch ON	10 - 16 V	Battery voltage
3 (L)		ITS communication-H	—	—	—	—
6 (Y)		ITS communication-L	—	—	—	—
8 (B)		Ground	—	Ignition switch ON	0 - 0.1 V	Approx. 0 V

Fail-safe (ICC Sensor)

INFOID:0000000009716278

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:0000000009716279

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 CIR1 • U0428: STRG SEN CAN CIR2
4	• C1A00: CONTROL UNIT

DTC Index

INFOID:0000000009716280

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.

×: Applicable

DTC	CONSULT display	Fail-safe				Reference
CONSULT		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)	
C1A00	CONTROL UNIT	×	×	×	×	CCS-101
C1A01	POWER SUPPLY CIR	×	×	×	×	CCS-102
C1A02	POWER SUPPLY CIR2	×	×	×	×	CCS-102
C1A12	RADAR OFF-CENTER	×		×	×	CCS-103
C1A16	RADAR BLOCKED	×		×	×	CCS-104
C1A21	UNIT HIGH TEMP	×	×	×	×	CCS-106
C1A23	UNIT LOW TEMP	×	×	×	×	CCS-107
C1A39	STRG SEN CIR	×	×	×	×	CCS-108
C1A50	ADAS MALFUNCTION	×	×	×	×	CCS-109
U0104	ADAS CAN CIR1	×	×	×	×	CCS-110
U0121	VDC CAN CIR2	×	×	×	×	CCS-111
U0126	STRG SEN CAN CIR1	×	×	×	×	CCS-112
U0405	ADAS CAN CIR2	×	×	×	×	CCS-113
U0415	VDC CAN CIR1	×	×	×	×	CCS-114
U0428	STRG SEN CAN CIR2	×	×	×	×	CCS-115
U1000	CAN COMM CIRCUIT	×	×	×	×	CCS-116
U1010	CONTROL UNIT (CAN)	×	×	×	×	CCS-117

ACCELERATOR PEDAL ACTUATOR

Reference Value

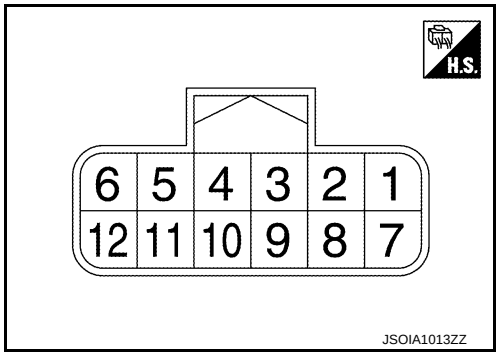
INFOID:0000000009644644

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 controlling 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 depressed amount of accelerator pedal
AP OPEN	Engine running	Depress accelerator pedal	It changes according to the depressed 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 controlling the accelerator pedal actuator	Display the accelerator pedal actuator motor operation consumption current
APA PWR	Ignition switch ON		Battery voltage
APA OPE STATS	Engine running	When the accelerator pedal actuator control is permitted	On
		When the accelerator pedal actuator control is invalid	Off
APA STATS	Engine running	When the accelerator pedal actuator is normal	Ready
		When the accelerator pedal actuator is temporarily malfunctioning	TP NG
		When the accelerator pedal actuator is malfunctioning	NG
		During the accelerator pedal actuator operation preparations	Init

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Standard value	Reference value
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	8 - 16 V	Battery voltage
2 (G)		Ignition power supply	Input	Ignition switch ON	8 - 16 V	Battery voltage
3 (L)		ITS communication-H	—	—	—	—
7 (B)		Ground	—	Ignition switch ON	0 - 0.1 V	Approx. 0 V
9 (Y)		ITS communication-L	—	—	—	—

DTC Inspection Priority Chart

INFOID:0000000009644645

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

INFOID:0000000009644646

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
- 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.

×: Applicable

CONSULT display	Fail-safe function	Reference
C1F01: APA MOTOR MALF	×	DAS-341
C1F02: APA C/U MALF	×	DAS-342
C1F03: APA HI TEMP	—	DAS-343
C1F05: APA PWR SUPLY CIR	×	DAS-344
C1F06: CAN CIR2	×	DAS-345
C1F07: CAN CIR1	×	DAS-346
U1000: CAN COMM CIRCUIT	×	DAS-350
U1010: CONTROL UNIT (CAN)	×	DAS-354

SIDE RADAR LH

Reference Value

INFOID:0000000009644651

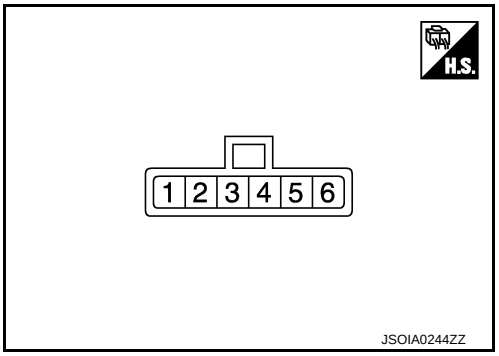
VALUES ON THE DIAGNOSIS TOOL

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 radar is malfunctioning.	On
BLOCKAGE COND	Side radar is not blocked.	Off
	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
	Radar detects a vehicle.	On

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Standard value	Reference value
+	–	Signal name	Input/ Output			
2 (B)	Ground	Ground	—	—	0 - 0.1 V	0 V
3 (R)	—	ITS communication-L	—	—	—	—
4 (L)	—	ITS communication-H	—	—	—	—
5 (GR)	Ground	Ignition power supply	Input	Ignition switch ON	10 - 16 V	Approx. 12 V
6 (BR)	Ground	Blind Spot Warning/Blind Spot Intervention indicator	Output	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	5.5 - 16 V	Approx. 6 V

Fail-safe (Side Radar)

INFOID:0000000009644652

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:0000000009644653

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

INFOID:0000000009644654

×: Applicable

DTC		Fail-safe		Reference page
		Blind Spot Warning/ Blind Spot Intervention	BCI	
C1B50	SIDE RDR MALFUNCTION	×	×	DAS-334
C1B51	BSW/BSI IND SHORT CIR	×	×	DAS-335
C1B52	BSW/BSI IND OPEN CIR	×	×	DAS-337
C1B55	RADAR BLOCKAGE	×	×	DAS-339
U1000	CAN COMM CIRCUIT	×	×	DAS-351
U1010	CONTROL UNIT (CAN)	×	×	DAS-354
U0104	ADAS CAN CIR1	×	×	DAS-347
U0405	ADAS CAN CIR2	×	×	DAS-349

SIDE RADAR RH

Reference Value

INFOID:0000000009644655

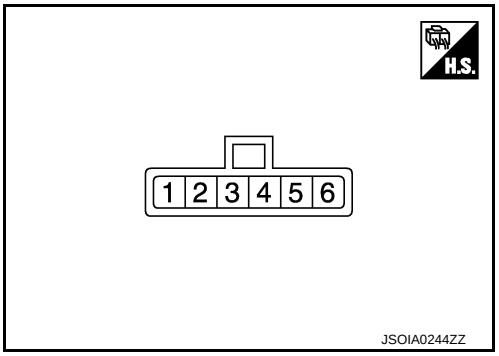
VALUES ON THE DIAGNOSIS TOOL

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 radar is malfunctioning.	On
BLOCKAGE COND	Side radar is not blocked.	Off
	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
	Radar detects a vehicle.	On

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Standard value	Reference value
+	–	Signal name	Input/ Output			
1 (B)	Ground	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)	Ground	Ignition power supply	Input	Ignition switch ON	10 - 16 V	—
6 (SB)	Ground	Blind Spot Warning/Blind Spot Intervention indicator	Output	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	5.5 - 16 V	6 V

Fail-safe (Side Radar)

INFOID:0000000009763253

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:0000000009644657

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

INFOID:0000000009644658

×: Applicable

DTC		Fail-safe		Reference page
		Blind Spot Warning/Blind Spot Intervention warning	BCI	
C1B50	SIDE RDR MALFUNCTION	×	×	DAS-334
C1B51	BSW/BSI IND SHORT CIR	×	×	DAS-335
C1B52	BSW/BSI IND OPEN CIR	×	×	DAS-337
C1B55	RADAR BLOCKAGE	×	×	DAS-339
U1000	CAN COMM CIRCUIT	×	×	DAS-352
U1010	CONTROL UNIT (CAN)	×	×	DAS-355
U0104	ADAS CAN CIR1	×	×	DAS-347
U0405	ADAS CAN CIR2	×	×	DAS-349

DRIVER ASSISTANCE BUZZER CONTROL MODULE

Reference Value

INFOID:0000000009644659

VALUES ON THE DIAGNOSIS TOOL

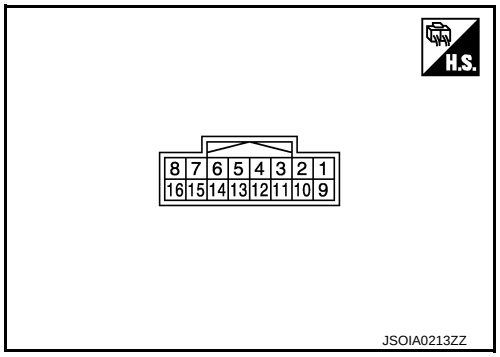
NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition		Value/Status
Buzzer 1 request (ADAS)	Drive the vehicle and operate each system	Except for the LDW/LDP/Blind Spot Warning/Blind Spot Intervention warning condition	Off
		When the LDW warning condition	TYPE 1
		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
Buzzer 1 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 2 request (ADAS)	Drive the vehicle and operate each system	Except for the ICC/PFCW/DCA warning condition	Off
		When the approach warning condition	TYPE 1
		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
Buzzer 2 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 3 request (ADAS)	Drive the vehicle and operate each system	Except for the FEB warning condition	Off
		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
Buzzer 3 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 4 request (ADAS)	Drive the vehicle and operate each system	Except for the PFCW warning condition	Off
		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
Buzzer 4 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE

Monitor item	Condition		Value/Status
Buzzer 1 request (CCM)	Drive the vehicle and operate each system	Except for the LDW/LDP/Blind Spot Warning/Blind Spot Intervention warning condition	Off
		When the LDW warning condition	TYPE 1
		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
Buzzer 1 stop (CCM)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 2 request (CCM)	Drive the vehicle and operate each system	Except for the ICC/PFCW/DCA warning condition	Off
		When the approach warning condition	TYPE 1
		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
Buzzer 2 stop (CCM)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 3 request (CCM)	Drive the vehicle and operate each system	Except for the FEB warning condition	Off
		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
Buzzer 3 stop (CCM)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 4 request (CCM)	Drive the vehicle and operate each system	Except for the PFCW warning condition	Off
		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
Buzzer 4 stop (CCM)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
ADAS MALFUNCTION	Ignition switch ON	When the ADAS control unit malfunction	On
		When the ADAS control unit normal	Off
CCM MALFUNCTION	Ignition switch ON	When the chassis control module malfunction	On
		When the chassis control module normal	Off
DR ASSIST BUZZ MALF	Ignition switch ON	When the driver assistance control module malfunction	On
		When the driver assistance control module normal	Off

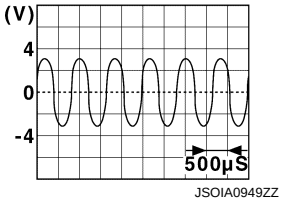
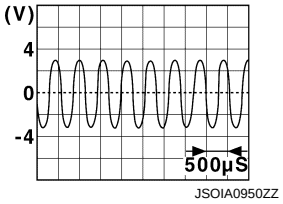
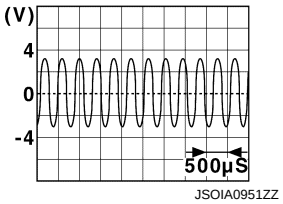
Monitor item	Condition		Value/Status
DR ASSIST BUZZ STATUS	Drive the vehicle and operate each system	Except for the warning condition	Off
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention system warning in progress	1
		ICC/PFCW/DCA system warning in progress	2
		FEB system warning in progress	3
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention/ICC/PFCW/DCA system 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

Terminal No. (Wire color)		Description		Condition		Standard value	Reference value
+	–	Signal name	Input/Output				
1 (G)	5 (B)	Ignition power supply	Input	Ignition switch ON	—	10 - 16 V	Battery voltage
3 (L)	—	ITS communication-H	—	—	—		—
5 (B)	Ground	Ground	—	Ignition switch ON	—	0 - 0.1 V	Approx. 0 V

Terminal No. (Wire color)		Description		Condition		Standard value	Reference value
+	–	Signal name	Input/Output				
8 (R)	16 (G)	Warning buzzer signal	Output	Ignition switch ON	Driver assistance buzzer OFF	0 - 0.1 V	Approx. 0 V
					At “BUZZER 1” test of “Active test”	 JSOIA0949ZZ	
					At “BUZZER 2” test of “Active test”	 JSOIA0950ZZ	
					At “BUZZER 3” test of “Active test”	 JSOIA0951ZZ	
11 (Y)	—	ITS communication-L	—	—	—	—	—
13 (B)	Ground	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

INFOID:0000000009644660

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

INFOID:0000000009644661

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

- 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.

×: Applicable

DTC		Reference
C1B20	CONTROL MODULE	DAS-332
U0104	ADAS CAN CIR2	DAS-348
U1527	CCM CAN CIRCUIT 1	DAS-358
U1000	CAN COMM CIRCUIT	DAS-353
U1010	CONTROL UNIT (CAN)	DAS-356

LANE CAMERA UNIT

Reference Value

INFOID:0000000009729305

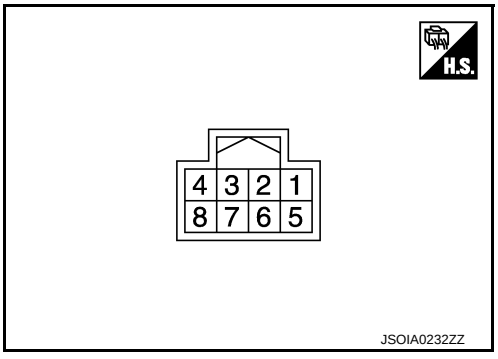
VALUES ON THE DIAGNOSIS TOOL

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
	When the temperature around the lane camera unit is high	High
VHCL SPD SE	While driving	Approximately equivalent to speedometer reading
TURN SIGNAL	Turn signal lamp LH and RH blinking	LH/RH
	Turn signal lamp LH blinking	LH
	Turn signal lamp RH blinking	RH
	Turn signal lamps OFF	Off
LANE DETCT LH	Left side lane marker is detected	On
	Left side lane marker is not detected	Off
LANE DETCT RH	Right side lane marker is detected	On
	Right side lane marker is not detected	Off
CROSS LANE LH	The vehicle is crossing left side lane marker	On
	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
WARN LANE RH	The vehicle is traveling on the right side lane marker.	On
	The vehicle is traveling the center of traffic lane.	Off
VALID POS LH	Lateral position for left side lane marker is valid	VLD
	Lateral position for left side lane marker is invalid.	INVLD
VALID POS RH	Lateral position for right side lane marker is valid.	VLD
	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.

Monitor Item	Condition	Value/Status
CAM DTC CODE	**NOTE:** The item is indicated, but not used.	
AIMING DONE	Camera aiming is completed	OK
	Camera aiming is not adjusted	NG
AIMING RESULT	Camera aiming is completed	OK
	Camera aiming is not completed	NOK
AIM NG REASON	No target is detected.	TARGET
	Yaw angle beyond the allowable range is detected.	YAW
	Roll angle beyond the allowable range is detected.	ROLL
	Pitch angle beyond the allowable range is detected.	PITCH
	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	—

Monitor Item	Condition	Value/Status
CAMERA START	Lane camera unit is starting.	START
	Lane camera unit starting is completed.	COMP
GIVE UP	Lane marker can be detected.	OK
	Lane marker can not be detected.	NG
READY	Operating conditions are not satisfied.	NOT
	Operating conditions are satisfied.	COMP
MARK TYPE LH	Lane marker is not detected	NONE
	Solid line is detected.	SOLID
	Dashed line is detected.	DASHED
	Bott's dots is detected.	BOTT's
	Fork road (bifurcation) is detected.	FORK
	Slow down area is detected.	SLOW
	Tar strips is detected.	TAR
	Irregularity road is detected.	IRGLTY
MARK TYPE RH	Lane marker is not detected	NONE
	Solid line is detected.	SOLID
	Dashed line is detected.	DASHED
	Bott's dots is detected.	BOTT's
	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

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	–	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0 V
4 (L)		Chassis communication-H	—	—	—
5 (B)		Ground	—	—	0 V
7 (V)		Ignition power supply	Input	Ignition switch	12 V – 14 V
8 (W)		Chassis communication-L	—	—	—

Fail-safe (Lane Camera Unit)

INFOID:0000000009729306

FAIL-SAFE CONTROL BY DTC

If lane camera unit detects any DTC, following functions are suspended. And any warning is indicated on the combination meter.

Function	Indication
Active Lane Control	Chassis control warning is displayed
Lane Departure Warning (LDW)	LDW warning display (yellow) is displayed
Lane Departure Prevention (LDP)	LDP warning display (yellow) is displayed and a beep is sounded
Blind Spot Intervention	BSW/BSI warning display (yellow) is displayed and a beep is sounded

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

- If the vehicle is parked in direct sunlight under high temperature conditions, following functions are suspended. And camera high temperature message is indicated on the combination meter.
- When interior temperature is reduced, and system warning is stopped. Then the system can be operated again by dynamic driver assistance switch ON.

Function	Indication
Active Lane Control	—
Lane Departure Warning (LDW)	Camera high temperature message is displayed. Then LDW warning display (yellow) is blinked
Lane Departure Prevention (LDP)	Camera high temperature message is displayed. Then LDP warning display (yellow) is blinked
Blind Spot Intervention	Camera high temperature message is displayed. Then Blind Spot Intervention warning display (yellow) is blinked

DTC Inspection Priority Chart

INFOID:0000000009729307

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	• C1B01: CAM AIMING INCMP • C1B03: ABNRML TEMP DETECT
3	C1B00: CAMERA UNIT MALF

DTC Index

INFOID:0000000009729308

×: Applicable

DTC		Warning display				Fail-safe			Reference
		Chassis control warning message	LDW system warning	LDP system warning	Blind Spot Intervention system warning	Active Lane Control	LDW/LDP	Blind Spot Intervention	
C1B00	CAMERA UNIT MALF	ON	ON	ON	ON	×	×	×	DAS-613
C1B01	CAM AIMING INCMP	ON	ON	ON	ON	×	×	×	DAS-614
C1B03	ABNRML TEMP DETECT	—	Message ↓ Blink	Message ↓ OFF	Message ↓ OFF	×	×	×	DAS-615
U1000	CAN COMM CIRCUIT	ON	ON	ON	ON	×	×	×	DAS-611
U1010	CONTROL UNIT (CAN)	ON	ON	ON	ON	×	×	×	DAS-612

CHASSIS CONTROL MODULE

Reference Value

INFOID:0000000009729309

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
CONTROL MODULE MALF	When chassis control module is normal	Off
	When chassis control module malfunction is detected	On
CAN DIAG STATUS	When diagnosis of CAN communication malfunction is detected	Off
	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 SPEED	Vehicle Stopped	0 km/h (0 MPH)
	Driving*	Almost same reading as speedometer (within ±10%)
FR WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
FL WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
RR WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
RL WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
STEERING ANG SENSOR	When driving straight	0±3.5 deg
	When steering wheel is steered to RH by 90°	Approx. +90 deg
	When steering wheel is steered to LH by 90°	Approx. –90 deg
DECEL G SENSOR	Vehicle stopped	Approx. 0 G
	When during acceleration	Positive value
	When during deceleration	Negative value
SIDE G SENSOR	Vehicle stopped	Approx. 0 G
	When right turn	Negative value
	When left turn	Positive value
YAW RATE SENSOR	Vehicle stopped	Approx. 0 deg/s
	When right turn	Negative value
	When left turn	Positive value
ACCELE PEDAL POSITION	When accelerator pedal is released	0%
	When accelerator pedal is depressed	0 – 100%

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
BRAKE SWITCH 2	When brake pedal is not depressed	Off
	When brake pedal is depressed	On
BRAKE SWITCH 1	When brake pedal is depressed	Off
	When brake pedal is not depressed	On
PRESS SENSOR	When brake pedal is not depressed	Approx. 0 bar
	when brake pedal is depressed	0 – 255 bar
ABS	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
ABS MALF	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
EBD	When EBD function is normal	NORMAL
	When EBD function malfunction is detected	ABNOR
ACCELE PEDAL MALF	When accelerator pedal is normal	NORMAL
	When accelerator pedal malfunction is detected	ABNOR
TCS	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
TCS MALF	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
VDC	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC MALF	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC OFF SWITCH	When VDC OFF switch is OFF	Off
	When VDC OFF switch is ON	On
PARKING BRAKE	When parking brake is inactive	Off
	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

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
	When correction is not permitted (system requirement)	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop	REQ
	When correction is not requested to stop	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ
	When prohibition of correction is not requested	NO REQ
DRIVE MODE SELECTOR	When drive mode select switch is “STANDARD” mode	STD
	When drive mode select switch is “SPORT” mode	SPORT
	When drive mode select switch is “SNOW” mode	SNOW
	When drive mode select switch is “ECO” mode	ECO
	When drive mode select switch is “PERSONAL” mode	PERSO
	When drive mode select switch is not select	NOT SET
LOG-IN PERMIS	When log-in is possible	NO PER
	When log-in is not possible	PERMIS
I-KEY LINK	When Intelligent Key is not linked	Off
	When Intelligent Key is linked	On
USER	When logged in with “USER A” Intelligent Key	USER A
	When logged in with “USER B” Intelligent Key	USER B
	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

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
	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
ALC SETTING	When Active Lane Control setting with drive mode select switch is “OFF”	Off
	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
	When Active Lane Control setting with drive mode select switch is “ON”	On
COMBI METER	When drive mode select switch is “STANDARD” mode	STD
	When drive mode select switch is “SNOW” mode	SNOW
	When drive mode select switch is “PERSONAL” mode	PERSO
	When drive mode select switch is “SPORT” mode	SPORT
	When drive mode select switch is “ECO” mode	ECO
ATC 1	When active trace control function is inactive	Off
	When active trace control function is active	On
ATC 2	When active trace control function is inactive	Off
	When active trace control function is active	On
ATC 4	When active trace control function is inactive	Off
	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
	When the front LH tire is displayed on the information display in the combination meter	1
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter	DEF
	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
	When the rear LH tire is displayed on the information display in the combination meter	1

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
	When the rear RH tire is displayed on the information display in the combination meter	1
TURN DISP	When the straight-ahead status is displayed on the information display in the combination meter	N STEER
	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
ALC LEVEL	When Active Lane Control is turned ON.	0
	When Active Lane Control is operational or is operating.	1 – 4
ALC STATUS	When Active Lane Control is OFF	INACT
	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
	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
	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
	When Active Lane Control is ON	On
LANE MARKER (LH)	When left side lane marker is not detected.	NOT
	when left side lane marker is detected.	DETECT
LANE MARKER (RH)	When right side lane marker is not detected.	NOT
	When right side lane marker is detected.	DETECT
TURN SIGNAL (LH)	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	On
TURN SIGNAL (RH)	When turn signal lamps is OFF	Off
	When turn signal lamp RH is blinking	On
TURN SIGNAL SWITCH	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	LEFT
	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
	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

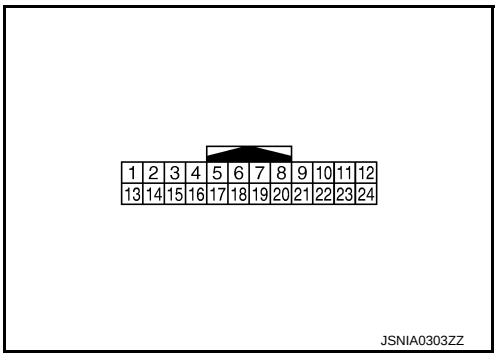
Monitor item	Condition	Reference values in normal operation
COMMAND ST ANG	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	Approx. 0 rad
	Active Lane Control is active with yaw angle formed on the left 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
ST PINION ANG	When driving straight	Approx. 0 rad
	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
	When steering wheel is steered	MAX ± 32 N·m
COMMAND ST WHL FORCE	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
	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
	When LDW function malfunction is detected	MALF
LDP DISP	When LDP function is ON	On
	When LDP function malfunction is detected	MALF
BSI DISP	When blind spot intervention function is ON	On
	When blind spot intervention function malfunction is detected	MALF
ST SWITCH COND	When steering switch is normal	OK
	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
	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
	When forward emergency brake function is active	On
DR BUZZER STATUS	Displayed but not used	—
LDW COND	When LDW function is ON	On
	When LDW function malfunction is detected	MALF

Monitor item	Condition	Reference values in normal operation
LDP COND	When LDP function is ON	On
	When LDP function malfunction is detected	MALF
BSI COND	When blind spot intervention function is ON	On
	When blind spot intervention function malfunction is detected	MALF
LDP BRAKE CANCEL	When not cancel	NONE
	When slippery road	SLIP
	When drive mode select switch is “SNOW” mode	SNOW
	When VDC OFF switch is OFF	VDC OF
BSI BRAKE CANCEL	When not cancel	NONE
	When slippery road	SLIP
	When drive mode select switch is “SNOW” mode	SNOW
	When VDC OFF switch is OFF	VDC OF
CAMERA COND	When Lane camera unit is normal	NORMAL
	When Lane camera unit malfunction is detected.	ABNOR
CAMERA TEMP COND	When the temperature around lane camera unit is normal	NORMAL
	When the temperature around the lane camera unit is high	ABNOR
CAMERA COMM COND	When communication between chassis control module and lane camera unit is normal	NORMAL
	When communication between chassis control module and lane camera unit malfunction is detected	ABNOR
CAMERA AIMING	When lane camera aiming is completed	COMP
	When lane camera aiming is not completed	INCOMP
CAMERA HIGH TEMP (LDW)	When the temperature around lane camera unit is normal. (LDW ON)	NORMAL
	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
	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
	When the temperature around the lane camera unit is high. (Blind spot intervention ON)	ABNOR
SIDE RADAR BLOCK CANCEL	When the side radar is normal	NORMAL
	Side radar is blocked and temporarily deactivated.	BLOCK
BSI LAMP REQ (LH)	When blind spot intervention function (LH) is inactive	Off
	When blind spot intervention function (LH) is active	On

Monitor item	Condition	Reference values in normal operation
BSI LAMP REQ (RH)	When blind spot intervention function (RH) is inactive	Off
	When blind spot intervention function (RH) is active	On
LANE DEPARTURE DISP (LH)	When not deviating the LH side lane	NO DISP
	When deviating the LH side lane	DEVIAT
LANE DEPARTURE DISP (RH)	When not deviating the RH side lane	NO DISP
	When deviating the RH side lane	DEVIAT
LDP/BSI ACTIVE	When LDP function and blind spot intervention function are inactive	Off
	When LDP function or blind spot intervention function are active	On
ADAS COND	When diagnosis of ADAS control unit is normal	NORMAL
	When diagnosis of ADAS control unit malfunction is detected	ABNOR
DR BUZZER COND	When driver assistance buzzer is normal	NORMAL
	when driver assistance buzzer malfunction is detected	ABNOR
OUTSIDE TEMP	Ignition switch ON	(–40°C) – (+72°C)
WIPER STATUS	When front wiper is inactive	Off
	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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
3 (R)*1 (P)*2	Ground	CAN-L	—	—	—	—
4 (L)		CAN-H	—	—	—	—
5 (V)		DRIVE MODE SELECT SWITCH (UP)	Input	Ignition switch ON	Up switch is not pressed	6.4 – 16 V
					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
					Down switch is pressed	0 V
7 (W)		CHASSIS COMM-L	—	—	—	—
8 (W)		CHASSIS COMM-L	—	—	—	—
10 (G)		IGN	Input	Ignition switch ON		6.4 – 16 V
11 (L)		CHASSIS COMM-H	—	—	—	—
12 (B)		GROUND	—	Ignition switch ON	—	0 V
19 (L)		CHASSIS COMM-H	—	—	—	—

*1: With Gateway
*2: Without Gateway

Fail-Safe (Chassis Control Module)

INFOID:0000000009729310

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
C1B90-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B91-01	
C1B92-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
C1B94-01	

DTC	Vehicle condition
C1B95-01	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
C1B96-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function
C1B98-01	Normal control
C1B99-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BA0-01	The following functions are suspended. • Active trace control function
C1BA2-01	
C1BA5-01	Normal control
C1BA6-01	The following functions are suspended. • Infiniti InTuition function
C1BA7-01	The following functions are suspended. • Active lane control function
C1BA9-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
C1BAA-01	
C1BAB-01	The following functions are suspended. • Active trace control function
C1BAC-01	The following functions are suspended. • LDP function • Blind spot intervention function
C1BAD-01	
C1BAE-01	
C1BAF-01	The following functions are suspended. • Blind spot intervention function
C1BB0-01	Normal control
C1BB2-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB3-01	
C1BB4-01	
C1BB5-01	
C1BB6-01	Normal control
C1BB7-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB8-01	
C1BB9-01	
C1BBA-01	
C1BBB-01	
C1BBC-01	Normal control

DTC	Vehicle condition
C1BBD-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BC0-01	The following functions are suspended. • Active trace control function • Active lane control function
C1BC1-01	
C1BC2-01	The following functions are suspended. • Active trace control function
C1BC3-01	
C1BC4-01	Normal control
C1BC5-01	The following functions are suspended. • Active trace control function
C1BC6-01	
U1000-01	
U1010-01	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A31-01	
U1A32-01	
U1A34-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A35-01	
U1A36-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3B-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A3D-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-01	Normal control
U1A3F-01	The following functions are suspended. • Infiniti InTuition function
U1A42-01	The following functions are suspended. • Active trace control function
U1A43-01	
U1A45-01	The following functions are suspended. • Active lane control function

DTC	Vehicle condition
U1A48-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
U1A4B-01	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-01	Normal control
U1A4E-01	The following functions are suspended. • Active trace control function

DTC Inspection Priority Chart

INFOID:0000000009729311

When multiple DTCs are displayed simultaneously, check them one by one according to the following priority list.

Priority	Detected item (DTC)
1	• U1000-01 CAN COMM CIRCUIT • U1010-01 CONTROL UNIT (CAN)
2	• U1A30-01 DAST COMM • U1A31-01 DAST COMM • U1A32-01 CAMERA COMM • U1A34-01 BRAKE CONTROL COMM • U1A35-01 BRAKE CONTROL COMM • U1A36-01 BCM/IPDM COMM • U1A39-01 COMBINATION METER COMM • U1A3B-01 TCM COMM • U1A3D-01 ADAS COMM • U1A3E-01 ADAS COMM • U1A3F-01 AV COMM • U1A42-01 STEERING ANGLE SENSOR COMM • U1A43-01 STEERING ANGLE SENSOR COMM • U1A45-01 DR BUZZER COMM • U1A48-01 ECM/HPCM COMM • U1A4A-01 CONTROL MODULE (CAN) • U1A4B-01 CONTROL MODULE (CAN) • U1A4C-01 A/C AUTO AMP. COMM • U1A4E-01 ECM/HPCM COMM
3	• C1BBD-01 VARIANT CODING
4	• C1B98-01 ADAS SYSTEM

Priority	Detected item (DTC)
5	• C1B90-01 DAST SYSTEM • C1B91-01 CAMERA SYSTEM • C1B92-01 BRAKE CONTROL SYSTEM • C1B93-01 ENGINE/HEV SYSTEM • C1B94-01 TM SYSTEM • C1B96-01 ADAS SYSTEM • C1BA0-01 ADAS/CHASSIS CTRL BRAKE SYS • C1BA2-01 STEERING ANGLE SENSOR • C1BA5-01 ADAS/CHASSIS CTRL ENGINE SYS • C1BA6-01 AV SYSTEM • C1BA7-01 ALC SYSTEM • C1BA9-01 NP RANGE • C1BAA-01 GEAR POSITION • C1BAB-01 STOP LAMP SW • C1BAC-01 OPERATION SW CIRC • C1BAD-01 ACCELERATER PEDAL • C1BAE-01 ACCELERATER PEDAL • C1BAF-01 BSW SYSTEM • C1BB0-01 DR BUZZER SYSTEM • C1BC0-01 FR WHEEL SENSOR • C1BC1-01 FL WHEEL SENSOR • C1BC2-01 RR WHEEL SENSOR • C1BC3-01 RL WHEEL SENSOR • C1BC4-01 DECEL G SENSOR • C1BC5-01 SIDE G SENSOR • C1BC6-01 PRESSURE SENSOR
6	• C1BB5-01 IGN POWER SUPPLY • C1BB6-01 IGN POWER SUPPLY
7	• C1B95-01 CONTROL MODULE • C1B99-01 CONTROL MODULE • C1BB2-01 CONTROL MODULE • C1BB3-01 CONTROL MODULE • C1BB4-01 CONTROL MODULE • C1BB7-01 CONTROL MODULE • C1BB8-01 CONTROL MODULE • C1BB9-01 CONTROL MODULE • C1BBA-01 CONTROL MODULE • C1BBB-01 CONTROL MODULE • C1BBC-01 CONTROL MODULE

DTC Index

INFOID:0000000009729312

DTC	Display item	Refer to
C1B90-01	DAST SYSTEM	DAS-436, "DTC Description"
C1B91-01	CAMERA SYSTEM	DAS-438, "DTC Description"
C1B92-01	BRAKE CONTROL SYSTEM	DAS-440, "DTC Description"
C1B93-01	ENGINE/HEV SYSTEM	DAS-442, "DTC Description"
C1B94-01	TM SYSTEM	DAS-444, "DTC Description"
C1B95-01	CONTROL MODULE	DAS-446, "DTC Description"
C1B96-01	ADAS SYSTEM	DAS-447, "DTC Description"
C1B98-01	ADAS SYSTEM	DAS-449, "DTC Description"
C1B99-01	CONTROL NODULE	DAS-451, "DTC Description"
C1BA0-01	ADAS/CHASSIS CTRL BRAKE SYS	DAS-452, "DTC Description"
C1BA2-01	STEERING ANGLE SENSOR	DAS-454, "DTC Description"
C1BA5-01	ADAS/CHASSIS CTRL ENGINE SYS	DAS-455, "DTC Description"
C1BA6-01	AV SYSTEM	DAS-456, "DTC Description"

DTC	Display item	Refer to
C1BA7-01	ALC SYSTEM	DAS-458, "DTC Description"
C1BA9-01	NP RANGE	DAS-460, "DTC Description"
C1BAA-01	GEAR POSITION	DAS-462, "DTC Description"
C1BAB-01	STOP LAMP SW	DAS-464, "DTC Description"
C1BAC-01	OPERATION SW CIRC	DAS-466, "DTC Description"
C1BAD-01	ACCELERATER PEDAL	DAS-468, "DTC Description"
C1BAE-01	ACCELERATER PEDAL	DAS-470, "DTC Description"
C1BAF-01	BSW SYSTEM	DAS-472, "DTC Description"
C1BB0-01	DR BUZZER SYSTEM	DAS-474, "DTC Description"
C1BB2-01	CONTROL MODULE	DAS-475, "DTC Description"
C1BB3-01	CONTROL MODULE	DAS-476, "DTC Description"
C1BB4-01	CONTROL MODULE	DAS-477, "DTC Description"
C1BB5-01	IGN POWER SUPPLY	DAS-478, "DTC Description"
C1BB6-01	IGN POWER SUPPLY	DAS-481, "DTC Description"
C1BB7-01	CONTROL MODULE	DAS-483, "DTC Description"
C1BB8-01	CONTROL MODULE	DAS-484, "DTC Description"
C1BB9-01	CONTROL MODULE	DAS-485, "DTC Description"
C1BBA-01	CONTROL MODULE	DAS-486, "DTC Description"
C1BBB-01	CONTROL MODULE	DAS-487, "DTC Description"
C1BBC-01	CONTROL MODULE	DAS-488, "DTC Description"
C1BBD-01	VARIANT CODING	DAS-489, "DTC Description"
C1BC0-01	FR WHEEL SENSOR	DAS-490, "DTC Description"
C1BC1-01	FL WHEEL SENSOR	DAS-492, "DTC Description"
C1BC2-01	RR WHEEL SENSOR	DAS-494, "DTC Description"
C1BC3-01	RL WHEEL SENSOR	DAS-496, "DTC Description"
C1BC4-01	DECEL G SENSOR	DAS-498, "DTC Description"
C1BC5-01	SIDE G SENSOR	DAS-499, "DTC Description"
C1BC6-01	PRESSURE SENSOR	DAS-501, "DTC Description"
U1000-01	CAN COMM CIRCUIT	DAS-502, "DTC Description"
U1010-01	CONTROL UNIT (CAN)	DAS-503, "DTC Description"
U1A30-01	DAST COMM	DAS-504, "DTC Description"
U1A31-01	DAST COMM	DAS-507, "DTC Description"
U1A32-01	CAMERA COMM	DAS-509, "DTC Description"
U1A34-01	BRAKE CONTROL COMM	DAS-511, "DTC Description"
U1A35-01	BRAKE CONTROL COMM	DAS-513, "DTC Description"
U1A36-01	BCM/IPDM COMM	DAS-515, "DTC Description"
U1A39-01	COMBINATION METER COMM	DAS-517, "DTC Description"
U1A3B-01	TCM COMM	DAS-519, "DTC Description"
U1A3D-01	ADAS COMM	DAS-521, "DTC Description"
U1A3E-01	ADAS COMM	DAS-523, "DTC Description"
U1A3F-01	AV COMM	DAS-525, "DTC Description"
U1A42-01	STEERING ANGLE SENSOR COMM	DAS-527, "DTC Description"
U1A43-01	STEERING ANGLE SENSOR COMM	DAS-529, "DTC Description"
U1A45-01	DR BUZZER COMM	DAS-531, "DTC Description"

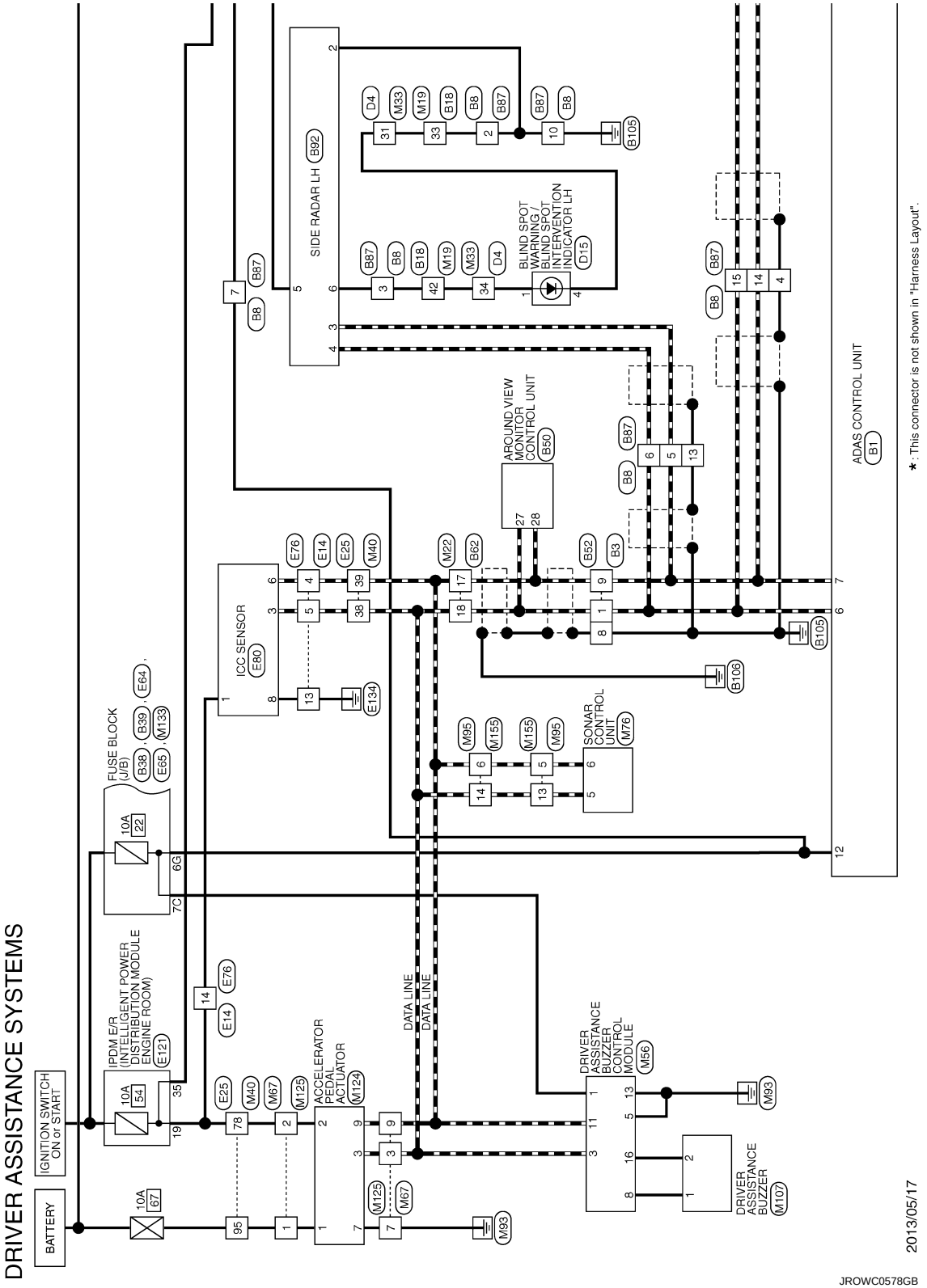
DTC	Display item	Refer to
U1A48-01	ECM/HPCM COMM	DAS-533, "DTC Description"
U1A4A-01	CONTROL MODULE (CAN)	DAS-535, "DTC Description"
U1A4B-01	CONTROL MODULE (CAN)	DAS-536, "DTC Description"
U1A4C-01	A/C AUTO AMP. COMM	DAS-537, "DTC Description"
U1A4E-01	ECM/HPCM COMM	DAS-539, "DTC Description"

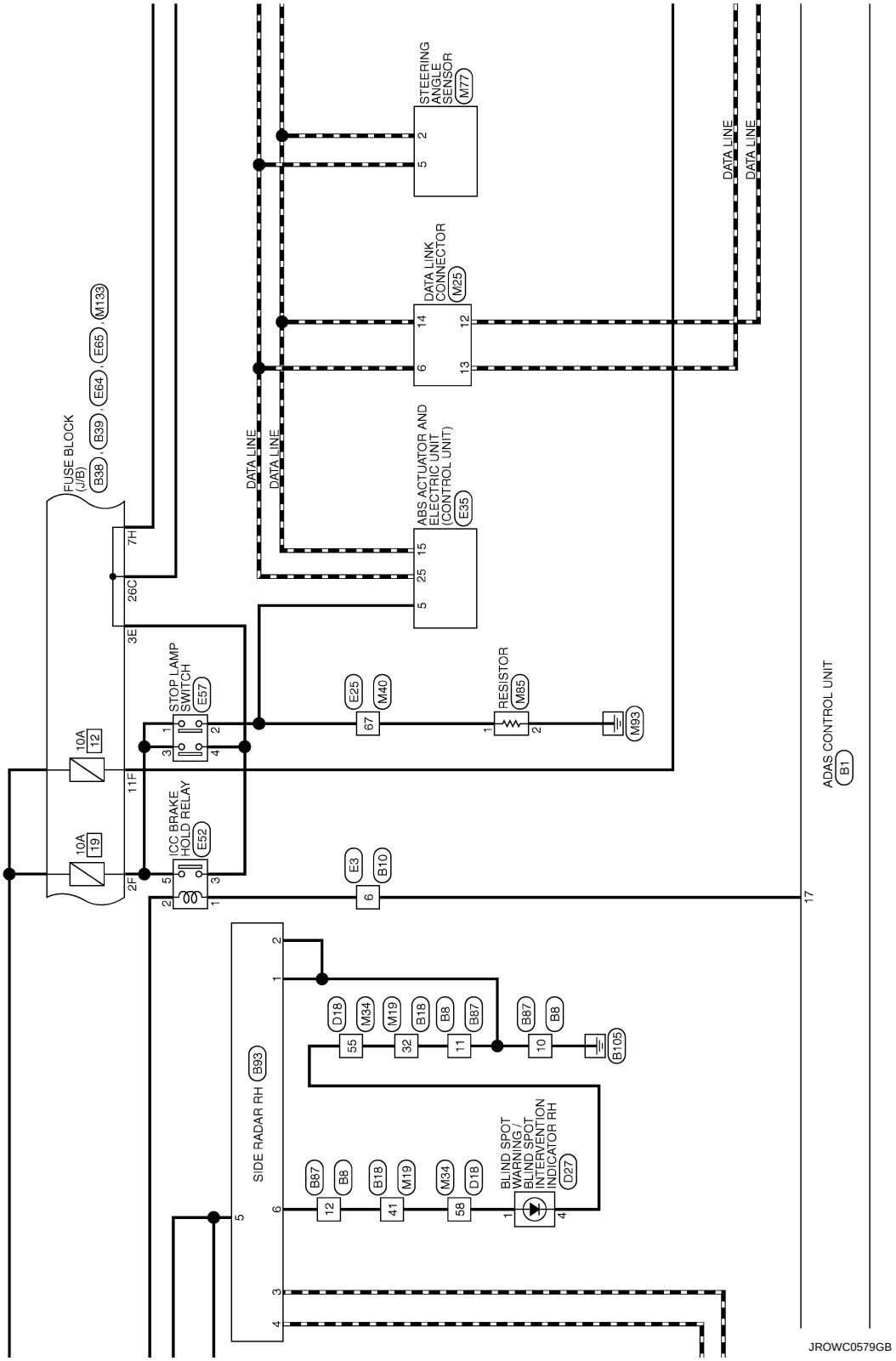
WIRING DIAGRAM

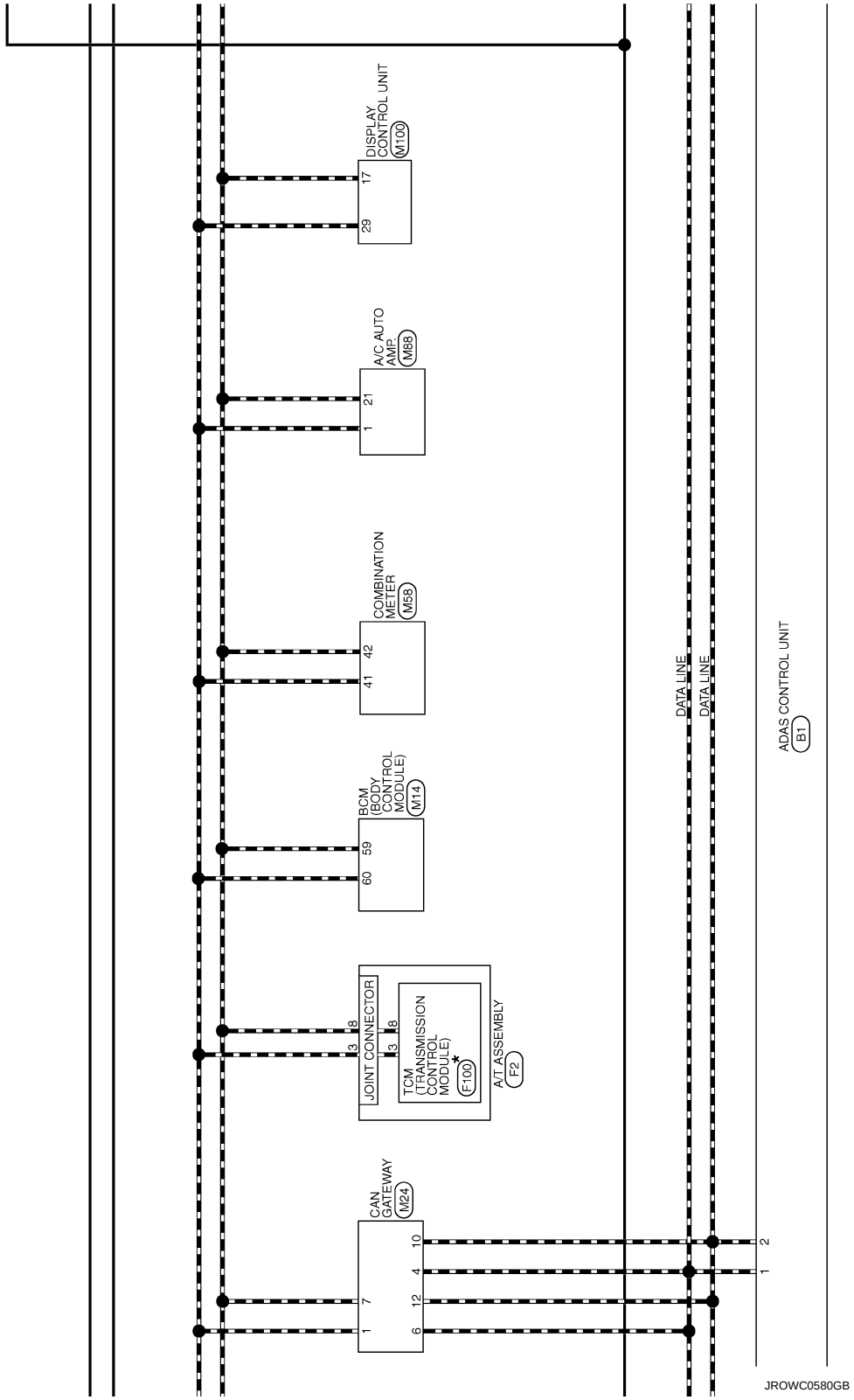
DRIVER ASSISTANCE SYSTEMS

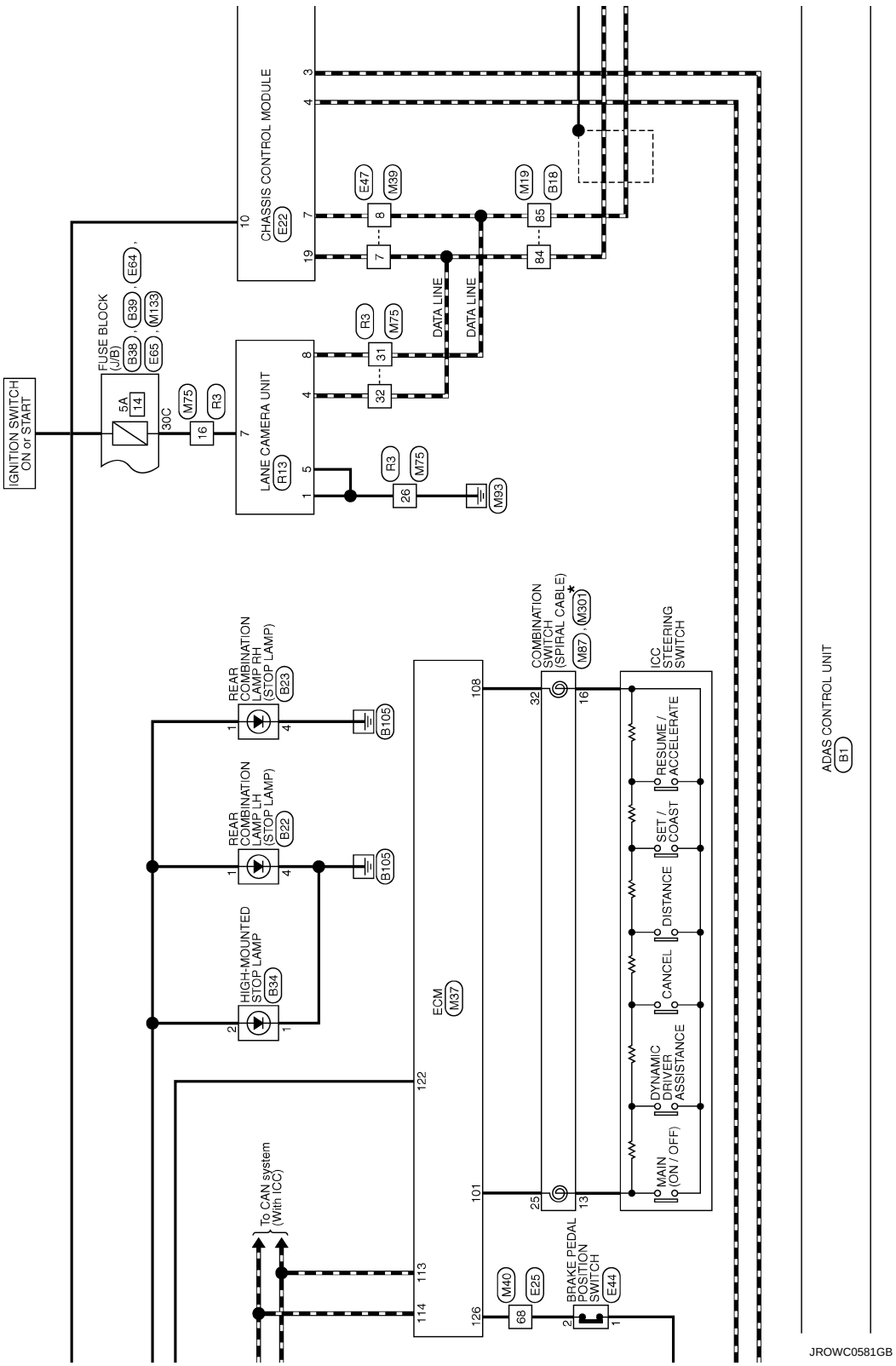
Wiring Diagram

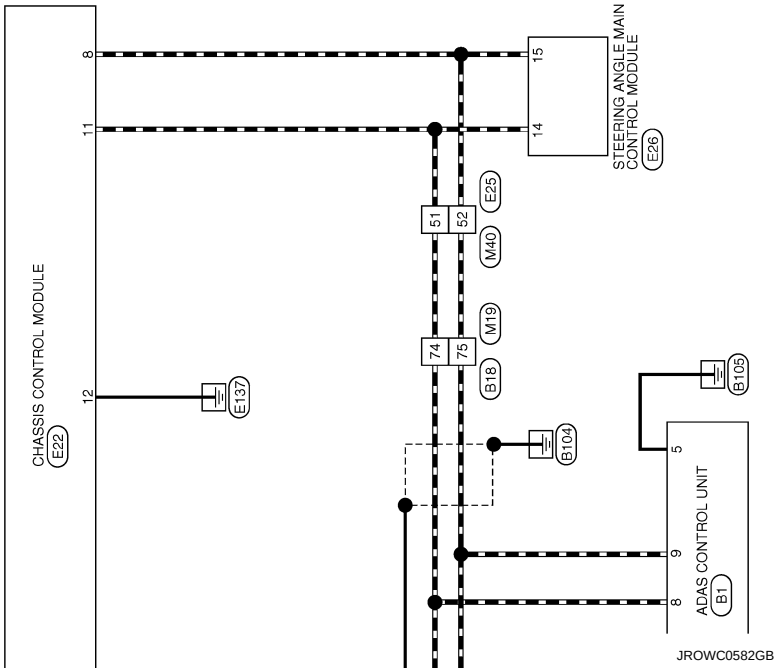
INFOID:0000000009644662




STEERING ANGLE SENSOR M77
DATA LINK CONNECTOR M25
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E35
DATA LINE
FUSE BLOCK (J/B) B38, B39, E64, E65, M133
STOP LAMP SWITCH E57
ICC BRAKE HOLD RELAY E52
RESISTOR M85
ADAS CONTROL UNIT B1
SIDE RADAR RH B93
BLIND SPOT WARNING/ BLIND SPOT INTERVENTION INDICATOR RH D27
JROWC0579GB


DISPLAY CONTROL UNIT
M100
17
29
A/C AUTO AMP.
M88
21
1
COMBINATION METER
M58
42
41
BCM (BODY CONTROL MODULE)
M14
59
60
JOINT CONNECTOR
8
3
8
3
TCM (TRANSMISSION CONTROL MODULE)
*
F100
A/T ASSEMBLY
F2
CAN GATEWAY
M24
10
4
12
6
7
1
DATA LINE
DATA LINE
ADAS CONTROL UNIT
B1
2
1
JROWC0580GB


IGNITION SWITCH ON or START
FUSE BLOCK (J/B)
B38, B39, E64, E65, M133
5A 14
30C
M75
R3
16
7
LANE CAMERA UNIT
R13
5
1
8
4
R3
M75
31
32
DATA LINE
DATA LINE
R3
M75
26
M93
CHASSIS CONTROL MODULE
E22
10
7
19
3
4
E47
M39
8
7
M19
B18
85
84
REAR COMBINATION LAMP RH (STOP LAMP)
B23
1
4
B105
REAR COMBINATION LAMP LH (STOP LAMP)
B22
1
4
B105
HIGH-MOUNTED STOP LAMP
B34
2
1
ECM
M37
122
113
114
126
108
101
To CAN system (With ICC)
M40
E25
68
BRAKE PEDAL POSITION SWITCH
E44
2
1
COMBINATION SWITCH (SPIRAL CABLE)
M87, M301
32
25
16
13
ICC STEERING SWITCH
RESUME / ACCELERATE
SET / COAST
DISTANCE
CANCEL
DYNAMIC DRIVER ASSISTANCE
MAIN (ON / OFF)
ADAS CONTROL UNIT
B1
JROWC0581GB


CHASSIS CONTROL MODULE
E22
8
11
12
E137
STEERING ANGLE MAIN CONTROL MODULE
E26
15
14
E25
51
52
M40
M19
74
75
B18
B105
B104
ADAS CONTROL UNIT
B1
5
9
8
JROWC0582GB

DRIVER ASSISTANCE SYSTEMS

Connector No.	B1
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	R	CAN-L
5	B	GROUND
6	L	ITS COMM-H
7	P	ITS COMM-L
8	L	CHASSIS COMM-H
9	V	CHASSIS COMM-L
12	GR	IGNITION
17	V	BRAKE HOLD RLY DRIVE SIGNAL

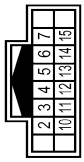
Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
7	R	-
8	B	-
9	P	-
14	B	-
15	W	-
16	BR	-

Connector No.	B8
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

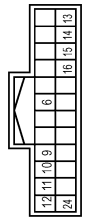
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
2	B	-
3	BR	-
4	SHIELD	-
5	P	-
6	L	-
7	GR	-
10	B	-
11	B	-
12	SB	-
13	SHIELD	-
14	P	-
15	L	-

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

H.S.

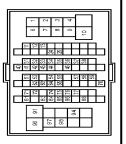


Terminal No.	Color Of Wire	Signal Name [Specification]
6	V	-
9	W	-
10	B	-
11	G	-
12	R	-
13	GR	-
14	BG	-

15	BR	-
16	LG	-
24	SHIELD	-

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
6	R	-
7	V	-
8	LG	-
9	BR	-
10	P	-
11	BG	-
12	LG	-
13	GR	-
24	Y	-
25	W	-
31	B	-
32	B	-
33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	BG	-
44	BG	-
46	R	-
51	SB	-
52	V	-

54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
62	BG	-
63	BR	-
64	Y	-
65	W	-
70	R	-
71	W	-
72	B	-
74	L	-
75	V	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	V	-
86	B	-
88	G	-
91	GR	-
94	GR	-
96	Y	-
97	V	-
98	BR	-

Connector No.	B22
Connector Name	REAR COMBINATION LAMP LH (BODY SIDE)
Connector Type	NS04MW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	P	-
3	SB	-
4	B	-

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DRIVER ASSISTANCE SYSTEMS

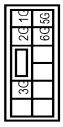
Connector No.	B23
Connector Name	REAR COMBINATION LAMP RH (BODY SIDE)
Connector Type	NS04MW-CS

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	–
2	R	–
3	V	–
4	B	–

Connector No.	B34
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Type	TK02MBR-P

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	–
2	LG	–

Connector No.	B38
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS

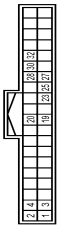


Terminal No.	Color Of Wire	Signal Name [Specification]
1G	GR	–
2G	W	–
3G	BR	–
5G	W	–
6G	G	–

Connector No.	B39
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH10FB-NH

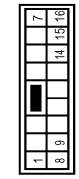
Terminal No.	Color Of Wire	Signal Name [Specification]
10H	P	–
3H	L	–
4H	R	–
6H	L	–
7H	LG	–
8H	P	–

Connector No.	B50
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH



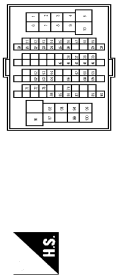
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GND
2	Y	BAT
3	LG	IGN
4	P	ACC
19	LG	AV COMM (H)
20	P	AV COMM (L)
23	SHIELD	AV COMM GND
25	BG	REVERSE SIGNAL
27	L	CAN-H
28	P	CAN-L [With ADAS]
28	R	CAN-L [With ASCD]
30	W	RETRACT MOTOR OPERATION SIGNAL (OPEN)
32	G	RETRACT MOTOR OPERATION SIGNAL (CLOSE)

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
7	R	–
8	SHIELD	–
9	P	–
14	B	–
15	W	–
16	BR	–

Connector No.	B62
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	L	–
3	R	– [With BOSE system]
3	W	– [Without BOSE system]
4	SHIELD	–
5	G	–
6	W	–
7	BR	– [Without BOSE system]
7	W	– [With BOSE system]
8	B	– [With BOSE system]
8	Y	– [Without BOSE system]
9	SHIELD	–
10	V	–
11	GR	–
12	Y	–
13	R	–
14	BG	–
15	GR	–
16	V	–
17	P	–
18	L	–
19	R	–
20	GR	–
21	R	–
22	P	–
23	W	–
24	V	–
25	SB	–
26	G	–
29	P	–
30	LG	–
36	R	–
37	R	–
38	W	–
39	W	–
45	G	–

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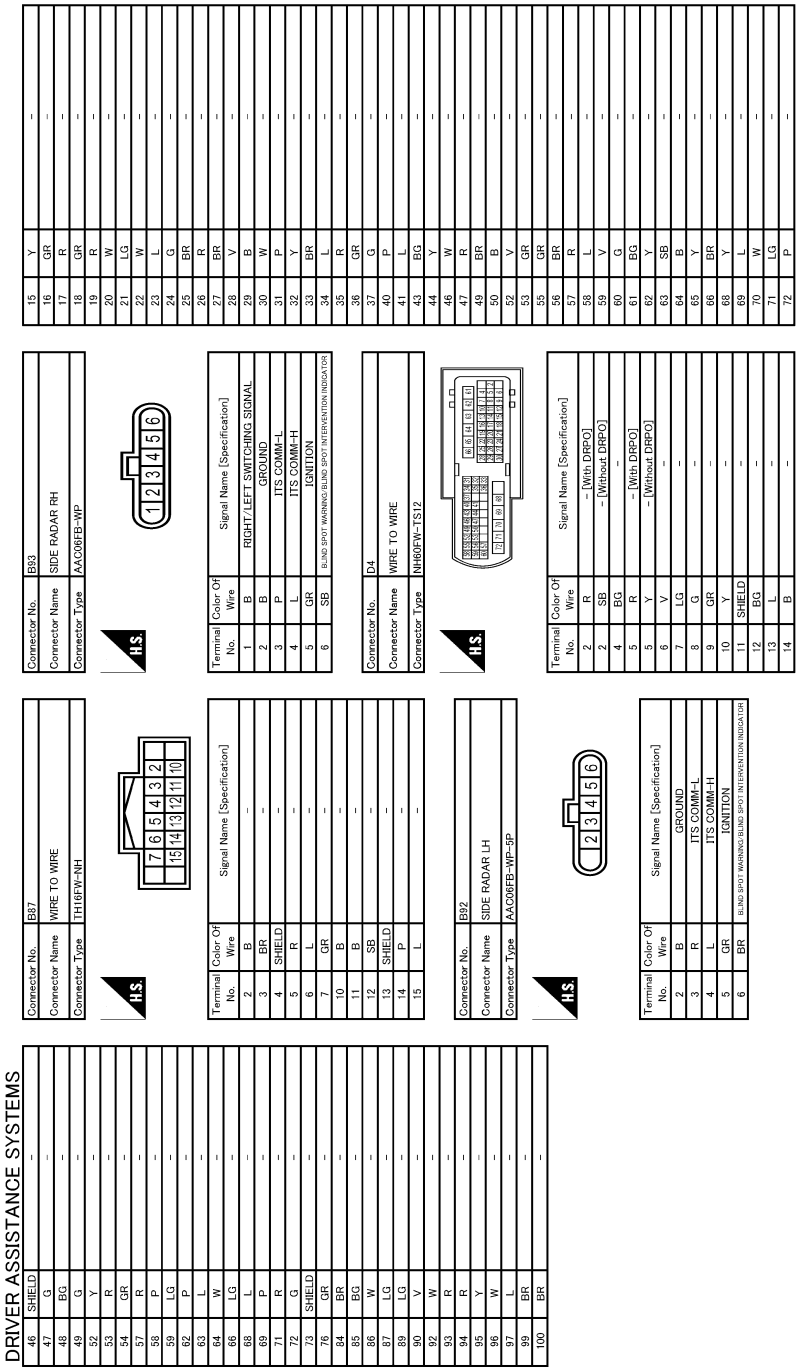


JROWC0585GB

DRIVER ASSISTANCE SYSTEMS

Connector No.	D15
Connector Name	BLIND SPOT WARNING (BLIND SPOT INTERVENTION INDICATOR (LH
Connector Type	TH04MW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	P	-

Connector No.	D18
Connector Name	WIRE TO WIRE
Connector Type	NH60FW-TS12

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	P	-
4	SB	-
5	BR	-
6	Y	-
7	LG	-
8	W	-
9	L	-
10	L	-
11	GR	-
13	Y	-
14	R	-
16	R	-
17	B	-
18	W	-
19	B	-
20	G	-
21	SHIELD	-
22	GR	-
23	BG	-
24	B	-
25	BR	-
26	V	-
27	G	-
28	V	-
29	Y	-
30	R	-
49	LG	-
52	P	-
55	L	-
56	Y	-
57	R	-
58	SB	-
59	R	-
60	G	-
63	B	-
64	Y	-
65	BR	-
66	GR	-
69	W	-
70	L	-
71	BG	-
72	Y	-

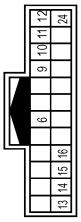
Connector No.	D27
Connector Name	BLIND SPOT WARNING (BLIND SPOT INTERVENTION INDICATOR (RH
Connector Type	TH04MW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
4	L	-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

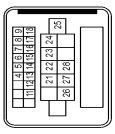
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
6	Y	-
9	W	-
10	B	-
11	G	-
12	R	-
13	GR	-
14	G	-
15	V	-
16	Y	-
24	SHIELD	-

Connector No.	E14
Connector Name	WIRE TO WIRE
Connector Type	SAA18MB-RS10-SJZ2

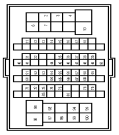
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
4	Y	-
5	L	-
6	B	-
7	BR	-
8	LG	-
9	W	-
11	V	-
12	R	-
13	B	-
14	P	-
15	GR	-
16	V	-
17	B	-
18	P	-
21	B	-
22	SHIELD	-
23	P	-
24	L	-
25	V	-
26	B	-
27	B	-
28	B	-

Connector No.	E25
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
3	LG	-
4	BR	-
6	V	-
7	L	-
10	BR	-
11	L	-
12	GR	-
13	W	-
14	B	-
15	SB	-
16	Y	-
17	BR	-
18	P	-
31	Y	-
32	GR	-
35	GR	-
36	R	-
37	V	-
38	L	-
39	Y	-
40	SB	-

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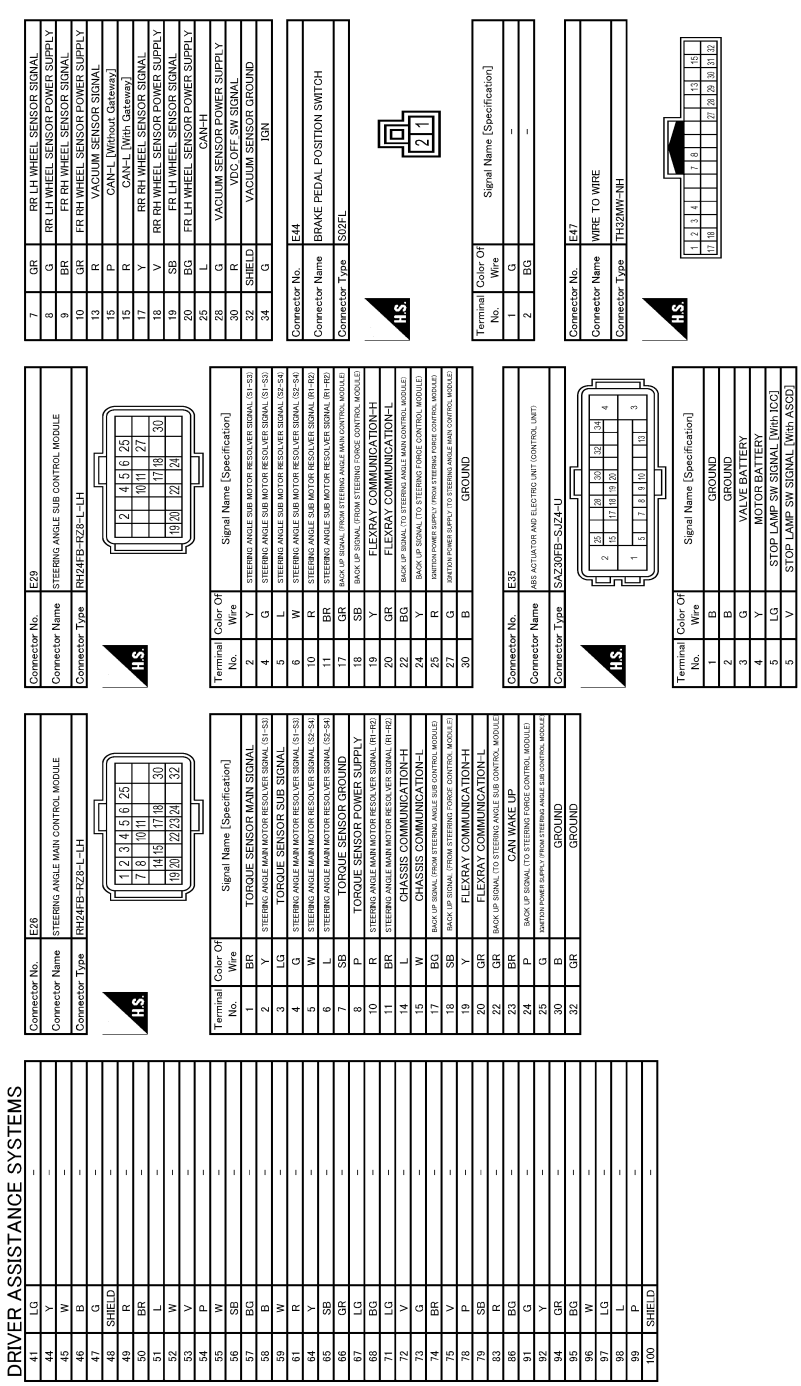

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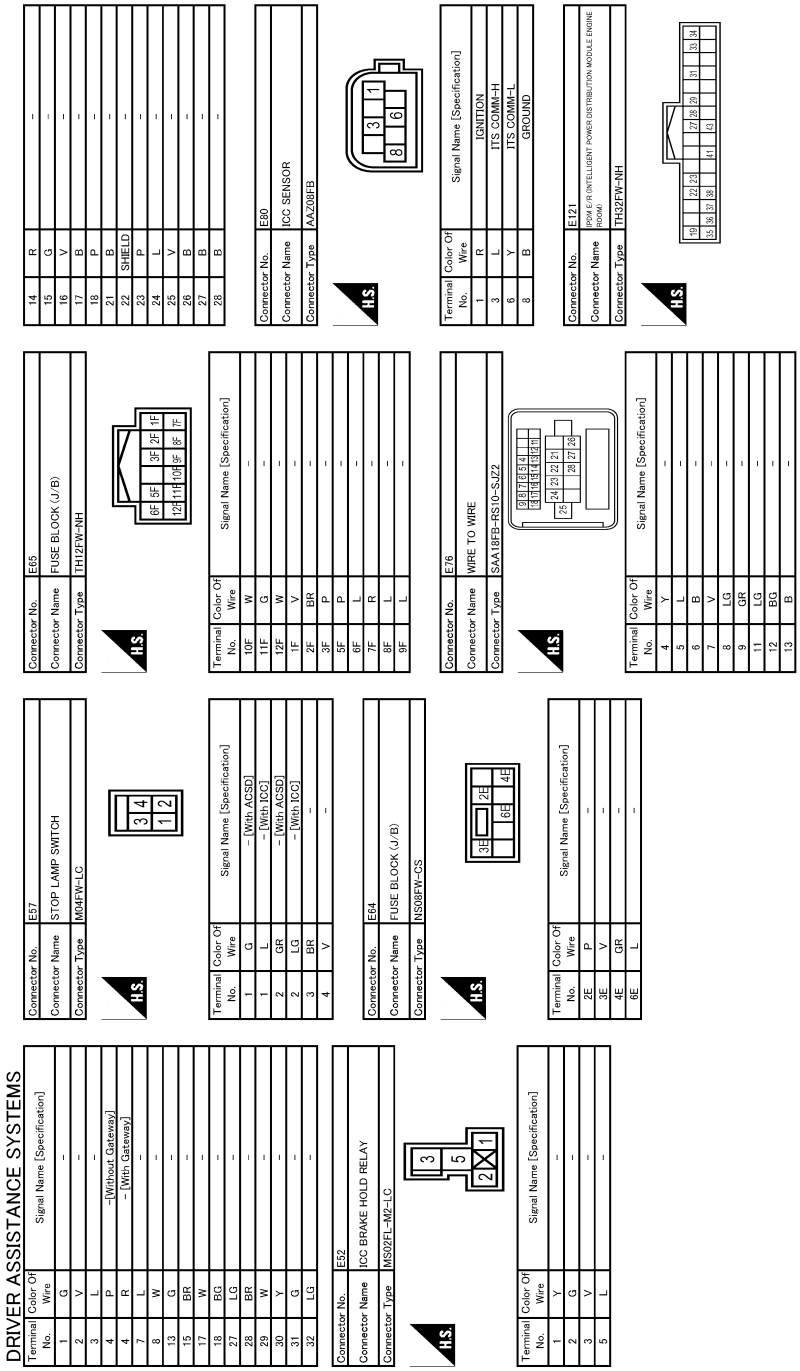

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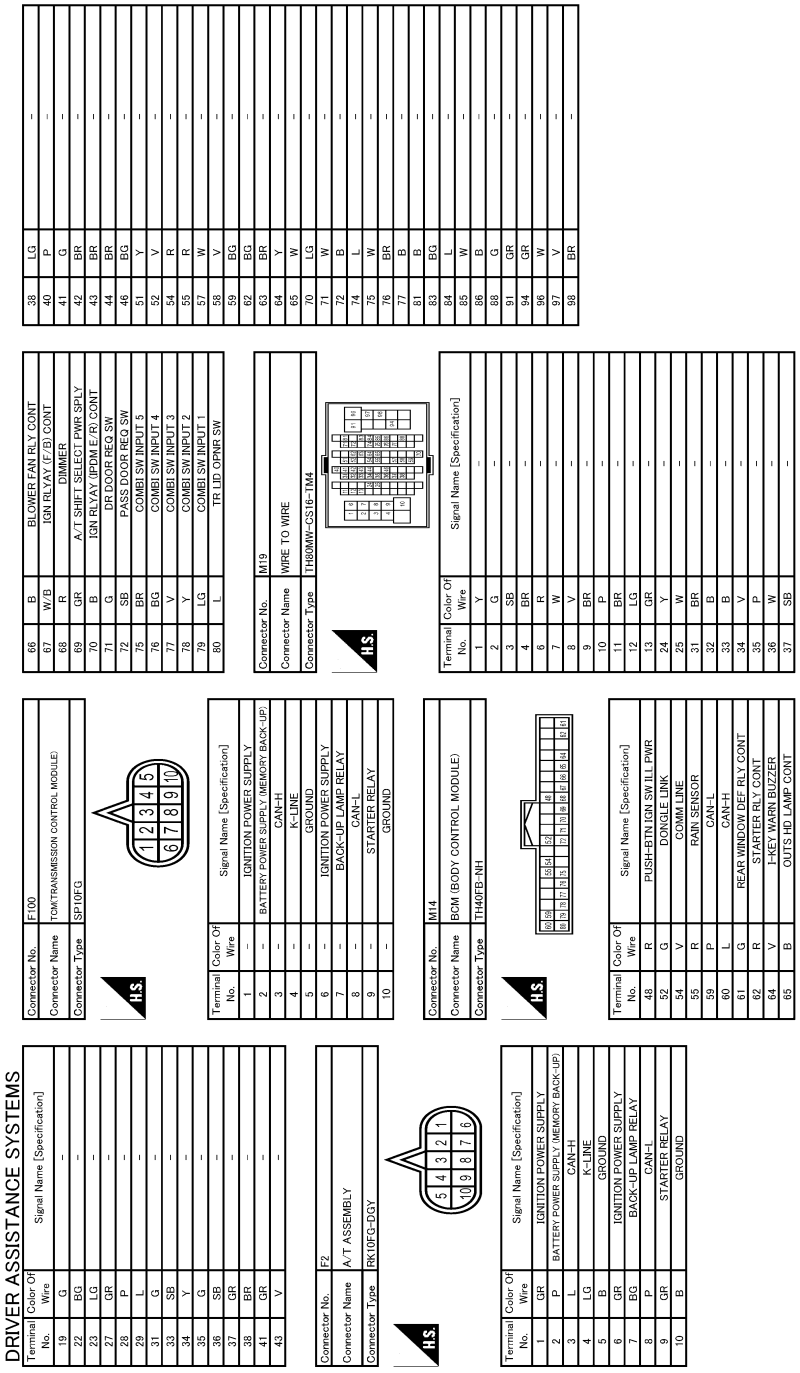

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DRIVER ASSISTANCE SYSTEMS

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	–
2	L	–
3	R	–
4	SHIELD	–
5	G	–
6	BG	–
7	LG	–
8	P	–
9	SHIELD	–
10	V	–
11	GR	–
12	V	–
13	LG	–
14	LG	–
15	P	–
16	SB	– [With DCM]
17	V	– [Without DCM]
18	L	–
19	G	–
20	GR	–
21	R	–
22	W	–
23	L	–
24	V	–
25	LG	–
26	GR	–
29	SB	–
30	LG	–
36	R	–
37	R	–
38	W	–
39	V	–
45	G	–
46	SHIELD	–
47	G	–
48	BR	–
49	SB	–
52	Y	–
53	R	–
54	GR	–
57	R	–
58	SB	–
59	LG	–
62	V	–
63	L	–
64	W	–
66	R	–
68	L	–
69	P	–
71	R	–
72	G	–
73	SHIELD	–
76	V	–
84	BR	–
85	BR	–
86	V	–
87	LG	–
89	BR	–
90	V	–
92	W	–
93	R	–
94	R	–
95	Y	–
96	W	–
97	L	–
99	BR	–
100	BR	–

Connector No.	M24
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
3	W	BATTERY
4	L	CAN2-H
5	B	GND
6	L	CAN3-H
7	P	CAN-L
9	R	IGN
10	R	CAN2-L
11	B	GND
12	R	CAN3-L

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

H.S.

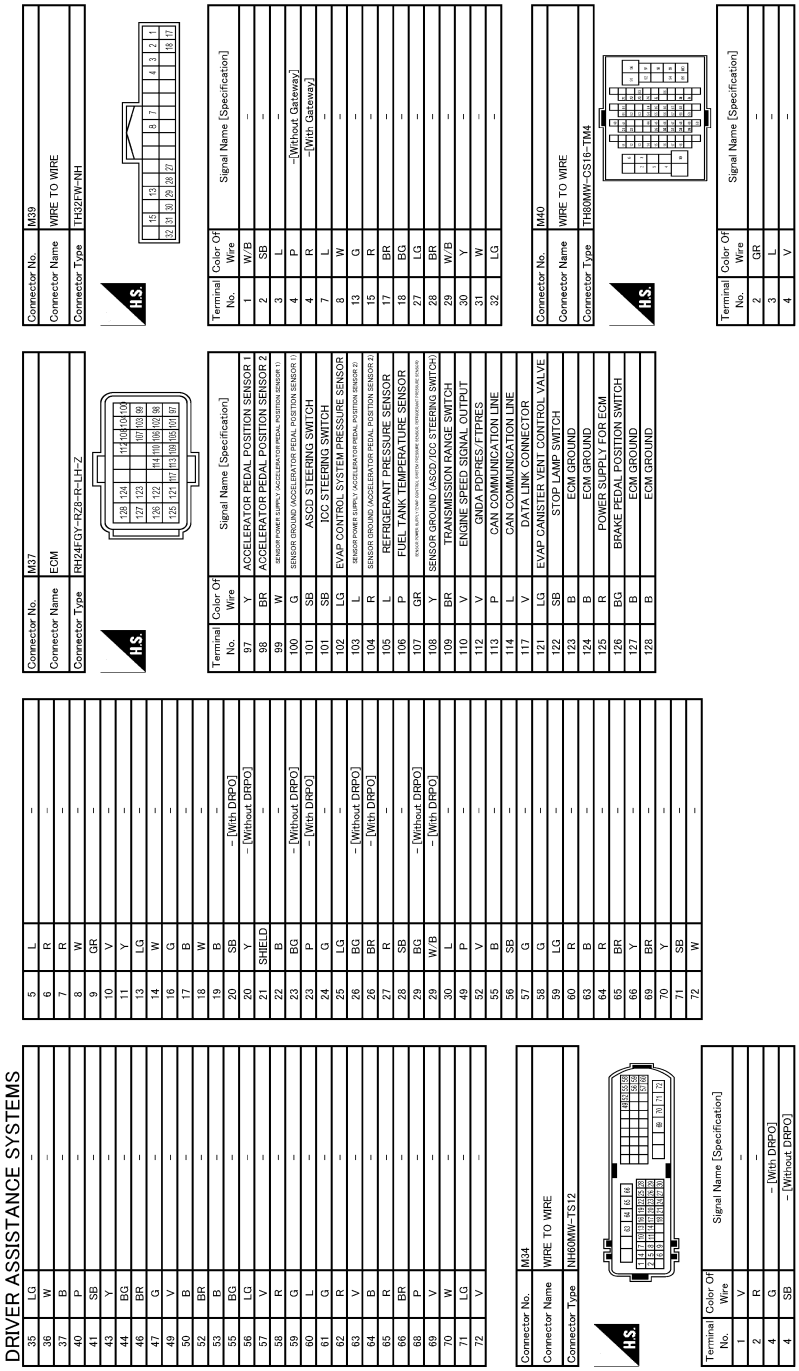
Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	AV COMM (L)
4	B	EARTH
5	B	EARTH
6	L	CAN-H
7	V	KLINE
8	W	IGN SW
11	LG	AV COMM (H)
12	R	CAN-L
13	L	CAN-H
14	P	CAN-L
16	W	POWER

Connector No.	M33
Connector Name	WIRE TO WIRE
Connector Type	NH80MW-TS12

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	–
4	G	– [With DRPO]
4	SB	– [Without DRPO]
5	G	–
6	R	–
7	R	–
8	GR	–
9	GR	–
10	W	–
11	SHIELD	–
12	P	–
13	SB	–
14	LG	–
15	Y	–
16	Y	–
17	P	–
18	W/B	– [With DRPO]
19	LG	– [Without DRPO]
19	Y	–
20	V	–
21	B	–
22	BG	– [Without DRPO]
22	G	– [With DRPO]
23	L	–
24	Y	–
25	BG	– [Without DRPO]
25	L	– [With DRPO]
26	Y	–
27	GR	–
28	V	–
29	B	–
30	W	–
31	B	–
32	SB	–
33	L	–
34	BR	–

JROWC0590GB



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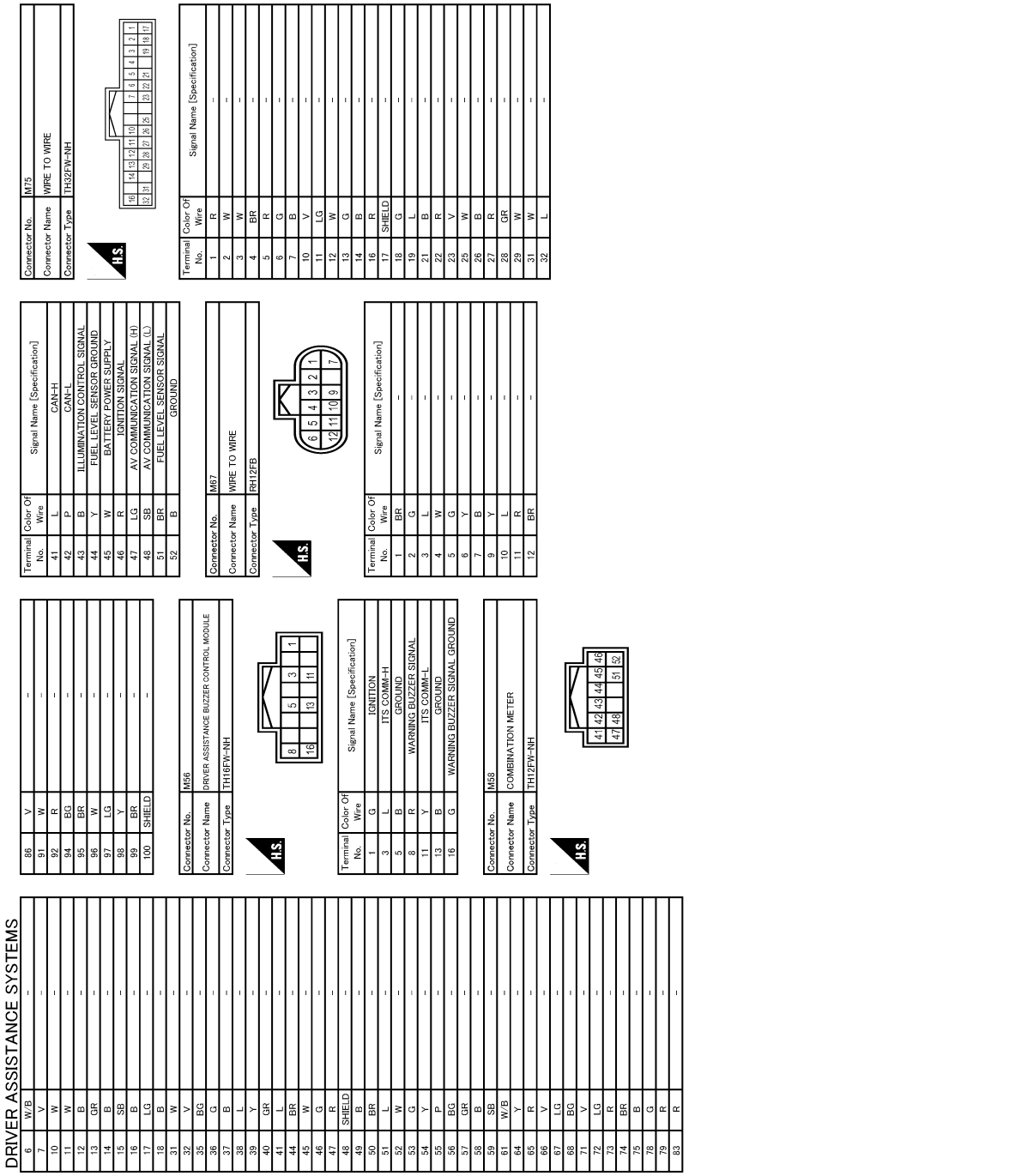

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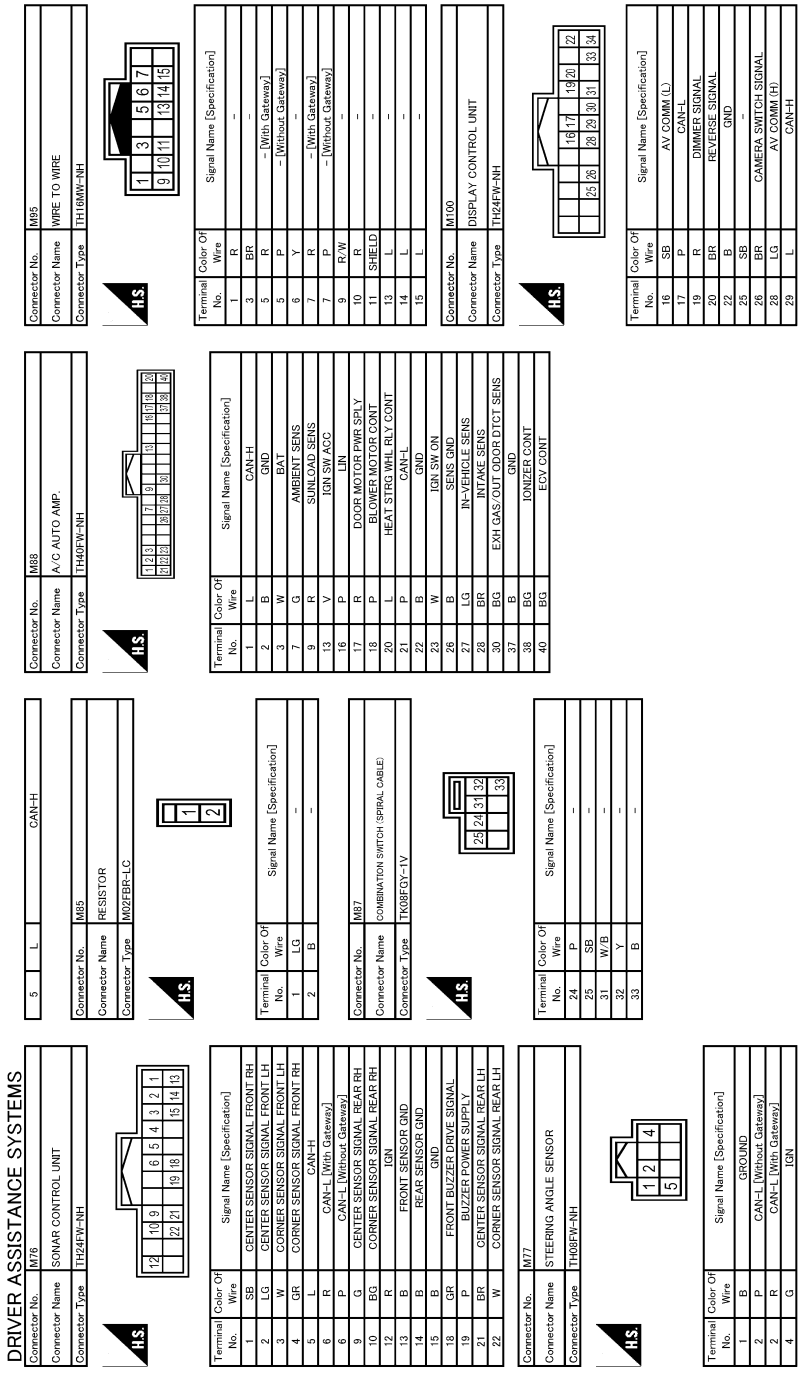

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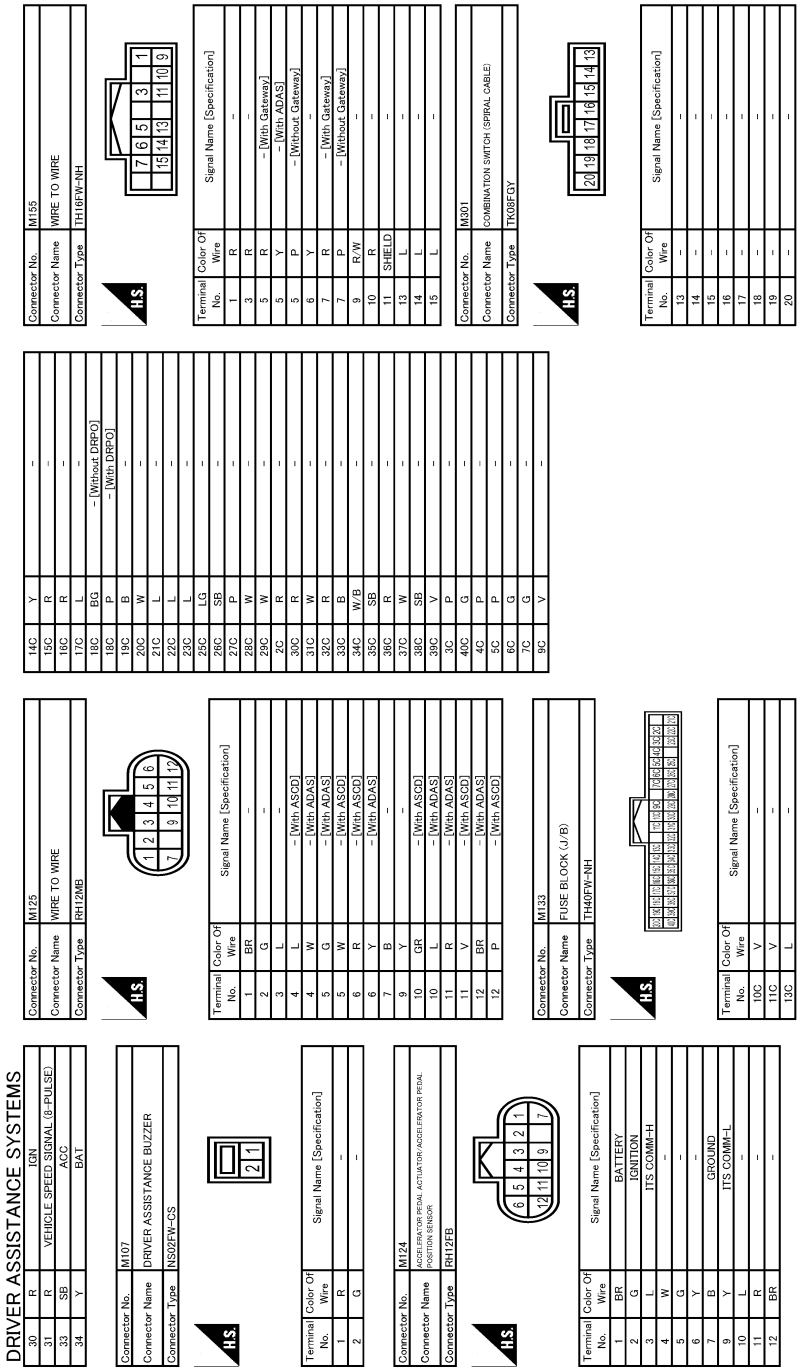

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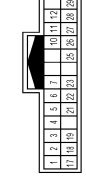
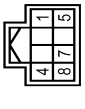
DRIVER ASSISTANCE SYSTEMS

Connector No.	R3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	GR	-
3	W	-
4	BR	-
5	R	-
6	G	-
7	B	-
10	BR	-
11	SB	-
12	GR	-
14	B	-
16	V	-
17	SHIELD	-
18	R	-
19	L	-
21	LG	-
22	V	-
23	GR	-
25	W	-
26	B	-
27	BR	-
28	BG	-
29	BG	-
31	W	-
32	L	-

Connector No.	R13
Connector Name	LANE CAMERA UNIT
Connector Type	TH08FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	CAN GND
4	L	CAN-H
5	B	GND
7	V	IGN
8	W	CAN-L

JROWC0595GB

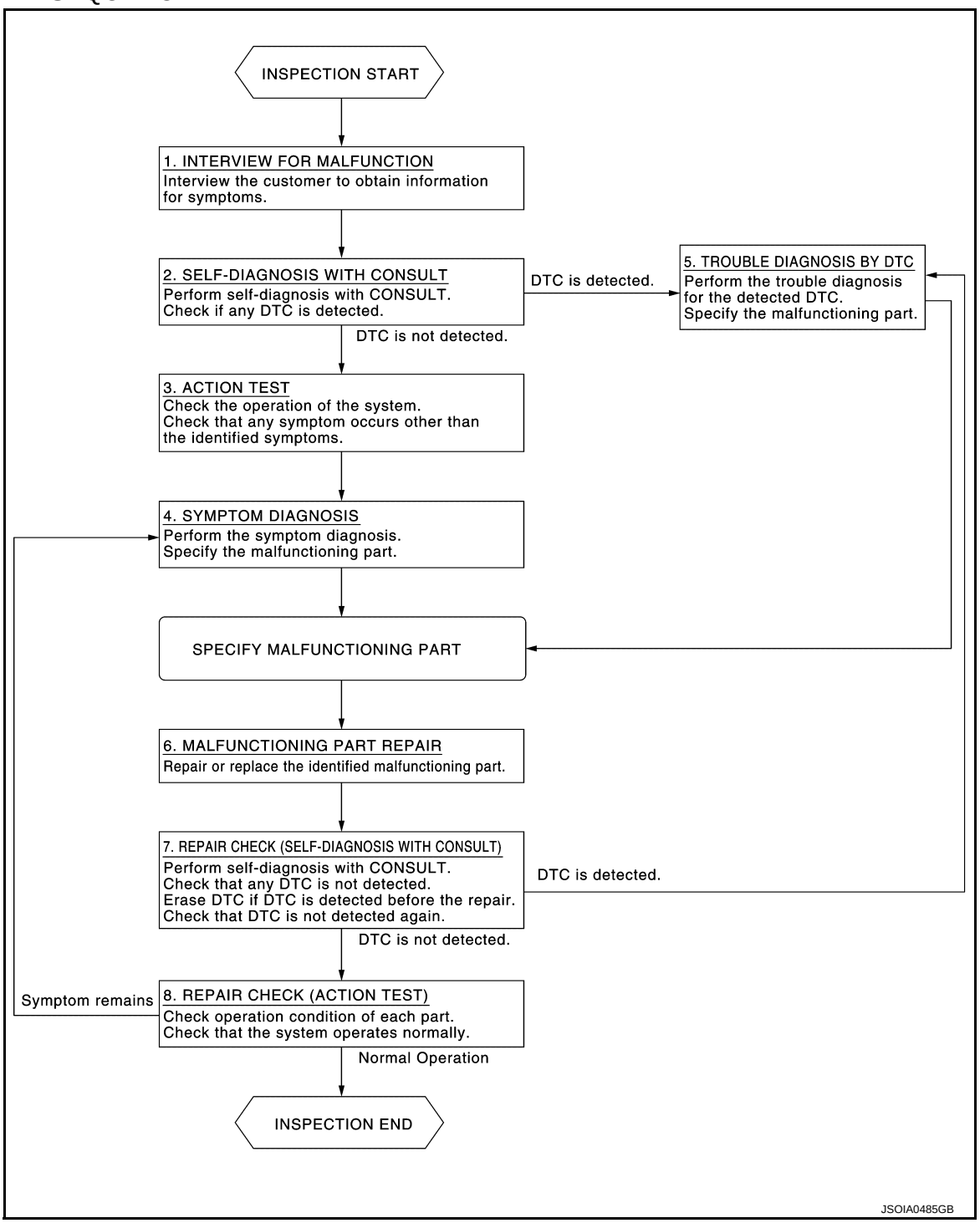
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009644664

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.

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 DAS-325, "DCA : Description".
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-365, "Symptom Table".

>> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

1. Check the DTC in the self-diagnosis results.
2. Perform trouble diagnosis for the detected DTC following.

- “ICC/ADAS”: Refer to DAS-264, "DTC Index"
- “CHASSIS CONTROL” Refer to DAS-299, "DTC Index"
- “LASER/RADAR” Refer to DAS-269, "DTC Index"
- “ACCELE PEDAL ACT”: Refer to DAS-272, "DTC Index"
- “LANE CAMERA”: Refer toDAS-286, "DTC Index"
- “SIDE RADAR LEFT”: Refer to DAS-274, "DTC Index"
- “SIDE RADAR RIGHT”: Refer to DAS-276, "DTC Index"
- “BSW/BUZZER”: Refer to DAS-280, "DTC Index"

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)

1. Erases self-diagnosis results.
2. Perform “All DTC Reading” again after repairing or replacing the specific items.
3. Check if any DTC is detected in 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 8.

8. REPAIR CHECK (ACTION TEST)

Perform the Following system action test. Check that the malfunction symptom is solved or no other symptoms occur.

- DCA
- LDW/LDP
- Blind Spot Warning/Blind Spot Intervention
- BCI

Is there a malfunction symptom?

YES >> GO TO 4.
NO >> INSPECTION END

ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

Description

INFOID:0000000009644665

- 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

INFOID:0000000009644666

1. RADAR ALIGNMENT

Perform the radar alignment. Refer to CCS-83, "TYPE 1 : Description".

>> GO TO 2.

2. DCA SYSTEM ACTION TEST

1. Perform the DCA system action test. Refer to DAS-325, "DCA : Description".
2. Check that the DCA system operates normally.

>> INSPECTION END

ADDITIONAL SERVICE WHEN REPLACING ACCELERATOR PEDAL ASSEMBLY

Description

INFOID:0000000009644667

- 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:0000000009644668

1.ACCELERATOR PEDAL RELEASED POSITION LEARNING

Perform accelerator pedal released position learning. Refer to DAS-324, "Description".

>> GO TO 2.

2.DCA SYSTEM ACTION TEST

1. Perform the DCA system action test. Refer to DAS-325, "DCA : Description".
2. Check that the DCA system operates normally.

>> INSPECTION END

ACTION TEST

DCA

DCA : Description

INFOID:0000000009644677

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:0000000009644678

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-95, "Description".

>> GO TO 2.

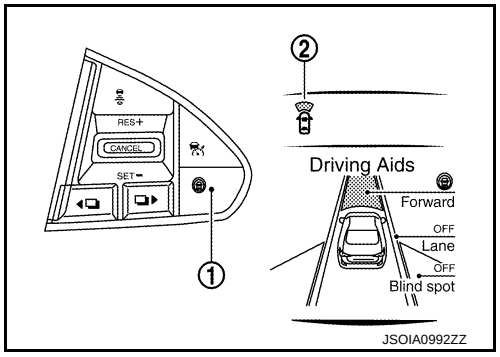
2.CHECK DCA SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 30 seconds or more.
3. 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

1. 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

LDW/LDP : Description

INFOID:0000000009644679

- 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;**
- **Precautions: Refer to DAS-163, "LDW/LDP System Service".**
- **System description for LDW: Refer to DAS-176, "LDW : System Description".**
- **System description for LDP: Refer to DAS-178, "LDP : System Description".**
- **Handling precaution: Refer to DAS-216, "Precautions for Lane Departure Warning/Lane Departure Prevention".**

LDW/LDP : Inspection Procedure

INFOID:0000000009644680

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, "LDW/LDP System Service".**
- **System description for LDW: Refer to DAS-176, "LDW : System Description".**
- **System description for LDP: Refer to DAS-178, "LDP : System Description".**
- **Handling precaution: Refer to DAS-216, "Precautions for Lane Departure Warning/Lane Departure Prevention".**

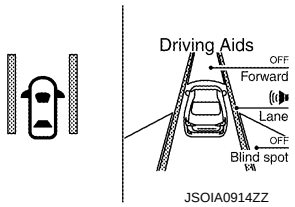
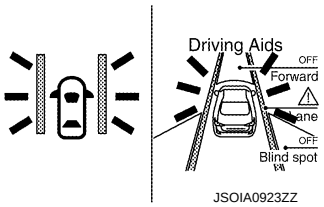
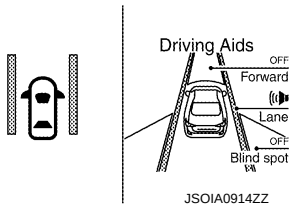
1.CHECK LDW SYSTEM SETTING

1. Start the engine.
2. Check that the LDW 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 2.

2.ACTION TEST FOR LDW

1. Enable the setting of the LDW system on the integral switch.
2. 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.

Vehicle condition/ Driver's operation			Action		
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle close to lane marker	Indication on the combination meter	Indicator color	Buzzer
Less than Approx. 60 km/h (40 MPH)	—	Close to lane marker	 JSOIA0914ZZ	White	OFF
Approx. 70 km/h (45 MPH) or more	• OFF • ON (Opposite to the deviate side)	Close to lane marker	 JSOIA0923ZZ	Yellow (Blink)	Short continuous beeps
	ON (Deviate side)	Close to lane marker	 JSOIA0914ZZ	White	OFF

NOTE:
After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to DAS-176, "LDW : System Description".

>> GO TO 3.

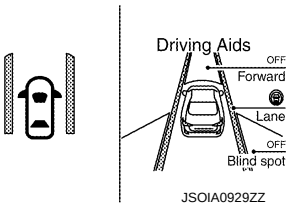
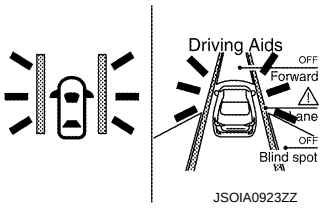
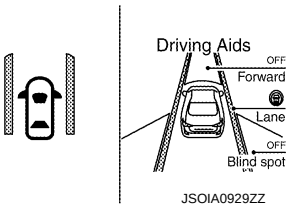
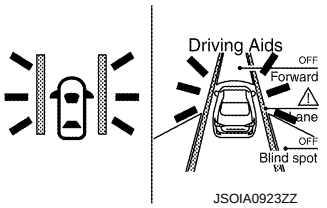
3. CHECK LDP SYSTEM SETTING

1. Start the engine.
2. 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.

Vehicle condition/ Driver's operation			Action			
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle close to lane marker	Yawing control	Indication on the combination meter	Indicator	Buzzer
Less than Approx. 60 km/h (40 MPH)	—	Close to lane marker	OFF		Green	—
Approx. 70 km/h (45 MPH) or more	• Turn signal OFF • Turn signal ON (Opposite to the deviate side)	Close to lane marker	ON		Yellow (Blink)	Short continuous beeps
	Turn signal ON (Deviate side)	Close to lane marker	OFF		Green	—
	• Turn signal OFF • Turn signal ON (Opposite to the deviate side)	Close to lane marker with soft braking	OFF		Yellow (Blink)	Short continuous beeps

NOTE:
After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to DAS-178, "LDP : System Description".

>> INSPECTION END

BLIND SPOT WARNING/BLIND SPOT INTERVENTION

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description

INFOID:0000000009644681

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 DAS-163, "Blind Spot Warning/Blind Spot Intervention System Service".**
- **System description for Blind Spot Warning: Refer to DAS-181, "BSW : System Description".**

- **System description for Blind Spot Intervention: Refer to DAS-184, "BLIND SPOT INTERVENTION : System Description".**
- **Normal operating condition: Refer to DAS-378, "Description".**

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Work Procedure

INFOID:0000000009644682

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 DAS-181, "BSW : System Description".**
- **System description for Blind Spot Intervention: Refer to DAS-184, "BLIND SPOT INTERVENTION : System Description".**
- **Normal operating condition: Refer to DAS-378, "Description".**

1. LDW/LDP SYSTEM ACTION TEST

Perform the LDW/LDP system action test. Refer to DAS-326, "LDW/LDP : Inspection Procedure".

>> GO TO 2.

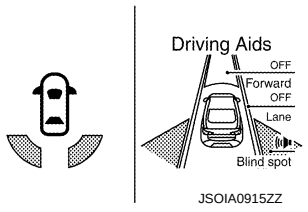
2. CHECK BSW SYSTEM SETTING

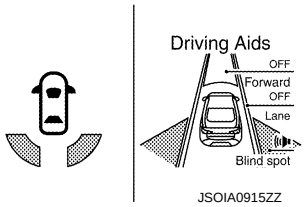
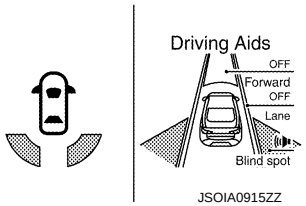
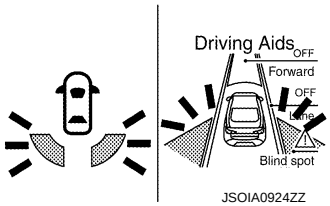
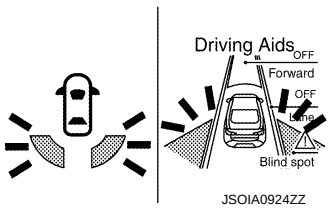
1. Start the engine.
2. Check that the BSW system setting can be enabled/disabled on the integral switch.
3. Turn OFF the ignition switch and wait for 5 seconds or more.
4. Check that the previous setting is saved when the engine starts again.

>> GO TO 3.

3. BSW SYSTEM ACTION TEST

1. Enable the setting of the BSW system on the integral switch.
2. 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 condition/ Driver's operation			Action			
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle detection within detection 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	 JSOIA0915ZZ	White	OFF

Vehicle condition/ Driver's operation			Action			
Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle detection within detection area	Indication on the Blind Spot Warning/ Blind Spot Intervention indicator	Indication on the combination meter	Indicator color	Buzzer
Approx. 32 (20) or more	—	Vehicle is absent	OFF	 JSOIA0915ZZ	White	OFF
	OFF	Vehicle is detected	ON	 JSOIA0915ZZ	White	OFF
	ON (vehicle detected direction)	Before turn signal operates Vehicle is detected	Blink	 JSOIA0924ZZ	Yellow (Blink)	Short continuous beeps
		Vehicle is detected after turn signal operates	Blink	 JSOIA0924ZZ	Yellow (Blink)	OFF

>> 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.
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 5.

5. CHECK DYNAMIC DRIVER ASSISTANCE SWITCH

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. Enable the setting of the Blind Spot Intervention system on the integral switch.
4. Press the dynamic driver assistance switch.
5. 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

BCI : Description

INFOID:0000000009644683

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 DAS-164, "BCI system service".**
- **System description for BCI: Refer to DAS-188, "BCI : System Description".**
- **Normal operating condition: Refer to DAS-378, "Description".**

BCI : Work Procedure

INFOID:0000000009644684

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-188, "BCI : System Description".**
- **Normal operating condition: Refer to DAS-378, "Description".**

1.CHECK BCI SYSTEM SETTING

Check the sonar system operation. Refer to AV-308, "System Description".

>> GO TO 2.

2.CHECK BCI SYSTEM SETTING

1. Start the engine.
2. Check that the BCI 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 3.

3.ACTION TEST FOR BCI

1. Enable the setting of the BCI system on the integral switch.
2. 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:0000000009644693

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.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1B20” is detected as the current malfunction in “Self Diagnostic Result” of “BSW/BUZZER”.

Is “C1B20” detected as the current malfunction?

YES >> Refer to DAS-332, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000009644694

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?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-280, "DTC Index".
NO >> GO TO 2.

2.CHECK DRIVER ASSISTANCE BUZZER SIGNAL CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect the driver assistance buzzer connector.
3. 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
	16		2	

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the harnesses or connectors.

3. 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		Ground	Continuity
Connector	Terminal		
M56	8		Not existed
	16		

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 DAS-333, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Component Inspection".

Is the inspection result normal?

YES >> Replace the driver assistance buzzer control module. Refer to DAS-389, "Removal and Installation".
NO >> Replace the driver assistance buzzer. Refer to DAS-390, "Removal and Installation".

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Component Inspection

INFOID:0000000009785364

1. CHECK DRIVER ASSISTANCE BUZZER

1. 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
SIDE RADAR

SIDE RADAR : DTC LOGIC

INFOID:0000000009644695

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

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. 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?

YES >> Refer to DAS-334, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000009644696

1.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-274, "DTC Index" (SIDE RADAR RIGHT) or DAS-276, "DTC Index" (SIDE RADAR LEFT).
NO >> Replace the side radar. Refer to DAS-386, "Removal and Installation".

C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT
SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000009644697

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.
3. 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 DAS-335, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000009644698

1.CHECK BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR CIRCUIT FOR SHORT
1. Turn ignition switch OFF.
2. 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		Ground	Continuity
Connector	Terminal		
B92 (LH)	6		Not existed
B93 (RH)			

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the harnesses or connectors.

2.REPLACE THE SIDE RADAR
1. Replace the side radar.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1B51” is detected in “Self Diagnostic Result” of “SIDE RADAR RIGHT/LEFT”

Is the DTC “C1B51” detected?

YES >> Replace the side radar. Refer to DAS-386, "Removal and Installation".
NO >> INSPECTION END

C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT
SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000009644699

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
1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. 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-337, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000009644700

1.CHECK BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR CIRCUIT FOR OPEN 1
1. Turn ignition switch OFF.
2. 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		Blind Spot Warning/Blind Spot Intervention indicator		Continuity
Connector	Terminal	Connector	Terminal	
B92 (LH)	6	D15 (LH)	1	Existed
B93 (RH)		D27 (RH)		

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

Check continuity between Blind Spot Warning/Blind Spot Intervention indicator harness connector and ground.

Blind Spot Warning/Blind Spot Intervention indicator		Ground	Continuity
Connector	Terminal		
D15 (LH)	4		Existed
D27 (RH)			

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.

Blind Spot Warning/Blind Spot Intervention indicator		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
D15 (LH)	1		Ignition switch OFF ⇒ ON (Approx. 2 sec.)	6 V
D27 (RH)				

Is the inspection result normal?

YES >> Replace Blind Spot Warning/Blind Spot Intervention indicator.
NO >> Replace side radar. Refer to DAS-386, "Removal and Installation".

C1B55 RADAR BLOCKAGE
SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000009644701

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.
2. Turn the Blind Spot Intervention system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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-339, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000009644702

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.

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

C1F01 ACCELERATOR PEDAL ACTUATOR
ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644703

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.
6. 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-341, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644704

1.REPLACE ACCELERATOR PEDAL ASSEMBLY

Perform DTC confirmation procedure. If “C1F01” is detected, replace the accelerator pedal assembly. Refer to DAS-384, "Exploded View".

>> INSPECTION END

C1F02 ACCELERATOR PEDAL ACTUATOR
ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644705

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

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.
2. Turn the DCA system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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?

YES >> Refer to DAS-342, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644706

1.CHECK SELF-DIAGNOSIS RESULTS

1. Perform “All DTC Reading” with CONSULT.
2. 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?

YES >> Replace the accelerator pedal assembly. Refer to DAS-384, "Exploded View".
NO >> INSPECTION END

C1F03 ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644707

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.
6. 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-343, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644708

1.REPLACE ACCELERATOR PEDAL ASSEMBLY

Perform DTC confirmation procedure. If “C1F03” is detected, replace the accelerator pedal assembly. Refer to DAS-384, "Exploded View".

>> INSPECTION END

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644709

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.
2. Turn the DCA system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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?

YES >> Refer to DAS-344, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644710

1.CHECK POWER SUPPLY CIRCUIT

Check the accelerator pedal actuator power supply circuit. Refer toDAS-344, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the accelerator pedal assembly. Refer to DAS-384, "Exploded View".
NO >> Repair or replace the malfunctioning parts.

C1F06 CAN CIRCUIT2
ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644711

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-345, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644712

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.
5. 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-384, "Exploded View".
NO >> INSPECTION END

C1F07 CAN CIRCUIT1
ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644713

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 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 “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-346, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644714

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.
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.
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-384, "Exploded View".
NO >> INSPECTION END

U0104 ADAS CAN 1
SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000009644729

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 DAS-351, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH) or DAS-352, "SIDE RADAR RH : DTC Logic" (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.
4. 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-347, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000009644730

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-351, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH) or DAS-352, "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-264, "DTC Index".
NO >> Replace side radar LH or RH. Refer to DAS-386, "Removal and Installation"

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000009644719

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?

YES >> Perform diagnosis of applicable. Refer to DAS-353, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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-348, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000009644720

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-353, "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-264, "DTC Index".
NO >> Replace the driver assistance buzzer control module. Refer to DAS-389, "Removal and Installation".

U0405 ADAS CAN 2
SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000009644731

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 DAS-351, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH) or DAS-352, "SIDE RADAR RH : DTC Logic" (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.
4. 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-349, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000009644732

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 DAS-351, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH) or DAS-352, "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-350, "ACCELERATOR PEDAL ACTUATOR : DTC Logic".
NO >> Replace side radar LH or RH. Refer to DAS-386, "Removal and Installation".

U1000 CAN COMM CIRCUIT

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : Description

INFOID:0000000009644733

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:0000000009644734

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

1. 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-350, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644735

1.PERFORM THE SELF-DIAGNOSIS

1. 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-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000009644739

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 LAN-44, "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:0000000009644740

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.
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, "SIDE RADAR LH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000009644741

1.PERFORM THE SELF-DIAGNOSIS

1. 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 LEFT”.

Is “U1000” detected as the current malfunction?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000009644742

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 LAN-44, "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:0000000009644743

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

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention 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-352, "SIDE RADAR RH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000009644744

1.PERFORM THE SELF-DIAGNOSIS

1. 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-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description

INFOID:0000000009644745

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.

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000009644746

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

1. Start the engine.
2. Turn the MAIN switch of ICC 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-353, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000009644747

1.PERFORM THE SELF-DIAGNOSIS

1. 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-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

U1010 CONTROL UNIT (CAN)
ACCELERATOR PEDAL ACTUATOR
ACCELERATOR PEDAL ACTUATOR : Description

INFOID:0000000009644748

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

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000009644749

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

1. 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-354, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644750

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the DCA system ON.
2. Perform “All DTC Reading” with CONSULT.
3. 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?

YES >> Replace the accelerator pedal actuator. Refer to DAS-384, "Exploded View".
NO >> INSPECTION END

SIDE RADAR LH
SIDE RADAR LH : Description

INFOID:0000000009644754

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

SIDE RADAR LH : DTC Logic

INFOID:0000000009644755

DTC DETECTION LOGIC

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.
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-355, "SIDE RADAR LH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH : Diagnosis Procedure
INFOID:0000000009644756

1.CHECK SELF-DIAGNOSIS RESULT
1. Turn the Blind Spot Intervention system ON.
2. Perform “All DTC Reading” with CONSULT.
3. 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. DAS-386, "Removal and Installation".
NO >> INSPECTION END

SIDE RADAR RH

SIDE RADAR RH : Description
INFOID:0000000009644757

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

SIDE RADAR RH : DTC Logic
INFOID:0000000009644758

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

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention 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-356, "SIDE RADAR RH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000009644759

1.CHECK SELF-DIAGNOSIS RESULT

1. Turn the Blind Spot Intervention system ON.
2. Perform “All DTC Reading” with CONSULT.
3. 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. DAS-386, "Removal and Installation".
NO >> INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description

INFOID:0000000009644760

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

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000009644761

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 controller initial diagnosis

POSSIBLE CAUSE

Driver assistance buzzer control module

FAIL-SAFE

None

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.
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, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000009644762

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the MAIN switch of ICC system ON.

2. Perform “All DTC Reading” with CONSULT.
3. Check if the “U1010” is detected as the current malfunction in “Self Diagnostic Result” of “BSW/BUZZER”.

Is “U1010” detected as the current malfunction?

YES >> Replace the driver assistance buzzer control module. Refer to DAS-389, "Removal and Installation".
NO >> INSPECTION END

U1527 CCM CAN 1

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000009644763

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?

YES >> Perform diagnosis of applicable. Refer to DAS-353, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform “All DTC Reading” with CONSULT.
4. 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-358, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000009644764

1. 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-353, "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-264, "DTC Index".

NO >> Replace the lane camera unit. Refer to DAS-620, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000009644765

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	Voltage (Approx.)
(+)		(–)		
Accelerator pedal actuator		Ground	Ignition switch	
Connector	Terminal			
M124	1		OFF	Battery voltage
	2		ON	

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 pedal actuator		Ground	Continuity
Connector	Terminal		
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:0000000009644767

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

1. Turn ignition switch OFF.
2. Disconnect the side radar LH connector.
3. Check voltage between side radar LH harness connector and ground.

Terminals			Condition	Voltage (Approx.)
(+)		(–)		
Side radar LH		Ground	Ignition switch	
Connector	Terminal			
B92	5		OFF	0 V
			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 radar LH		Ground	Continuity
Connector	Terminal		
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

INFOID:0000000009644768

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

1. Turn ignition switch OFF.
2. Disconnect the side radar RH connector.
3. Check voltage between side radar RH harness connector and ground.

Terminals			Condition	Voltage (Approx.)
(+)		(–)		
Side radar RH		Ground	Ignition switch	
Connector	Terminal			
B93	5		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the side radar RH power supply circuit.

3.CHECK GROUND CIRCUIT

Check continuity between side radar RH harness connectors and ground.

Side radar RH		Ground	Continuity
Connector	Terminal		
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:0000000009644769

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	Voltage (Approx.)
(+)		(–)		
Driver assistance buzzer control module		Ground	Ignition switch	
Connector	Terminal			
M56	1		ON	Battery voltage

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

1. 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.

Driver assistance buzzer control module		Ground	Continuity
Connector	Terminal		
M156	5		Existed
	13		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair the driver assistance buzzer control module.

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000009644770

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		Ground	Continuity
Connector	Terminal		
B93	6		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

DRIVER ASSISTANCE BUZZER CIRCUIT

Component Function Check

INFOID:0000000009644771

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 DAS-363, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009644772

1.CHECK DRIVER ASSISTANCE BUZZER SIGNAL CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect the driver assistance buzzer connector.
3. 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
	16		2	

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.

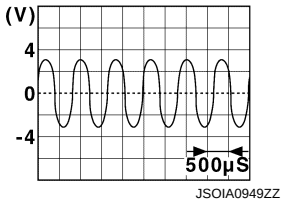
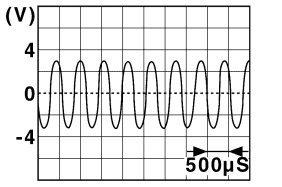
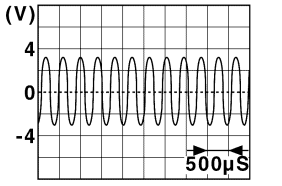
Driver assistance buzzer control module		Ground	Continuity
Connector	Terminal		
M56	8		Not existed
	16		

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.
3. Select the active test of “BSW/BUZZER” with CONSULT.
4. Check waveform between the driver assistance buzzer control module harness connector and ground.

Driver assistance buzzer control module			Condition	Voltage (Approx.)
Connector	Terminal			
	+	-		
M56	8	16	At “BUZZER 1” test of “Active test”	 JSOIA0949ZZ
			At “BUZZER 2” test of “Active test”	 JSOIA0950ZZ
			At “BUZZER 3” test of “Active test”	 JSOIA0951ZZ

Is the inspection result normal?

YES >> Replace the driver assistance buzzer. Refer to DAS-390, "Removal and Installation".
NO >> Replace the driver assistance buzzer control module. Refer to DAS-389, "Removal and Installation".

SYMPTOM DIAGNOSIS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000009644773

Symptom	Confirmation item		Inspection item/Reference page
PFCW/LDW/BSW/DCA/LDP/ Blind Spot Intervention/BCI system display does not illuminate	All of system display does not illuminate		System cannot be turned ON/ OFF ON the integral switch Refer to DAS-367, "Description"
	DCA/LDP/Blind Spot Intervention system display does not illuminate		Switch does not turn ON/Switch does not turn OFF Refer to DAS-370, "Description"
	BCI system display does not illuminate		TCM Refer to TM-85, "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 warning display does not illuminate (Buzzer is functioning normally)	Information display is functioning normally		ADAS control unit Refer to DAS-264, "DTC Index"
	Information display is not functioning normally		Perform On Board Diagnosis of Combination meter Refer to MWI-62, "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 DAS-368, "Description"
BCI warning buzzer is not sounding (Warning display is functioning normally)	Buzzer of camera assistance sonar is functioning normally		ADAS control unit Refer to DAS-161, "Removal and Installation"
	Buzzer of camera assistance sonar is not functioning normally		Camera assistance sonar Refer to AV-455, "Symptom Table"
PFCW/DCA is not activated	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-372, "Description"
	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 toDAS-373, "Description"
		System misidentifies a vehicle even though there is no vehicle ahead	Perform radar alignment Refer to CCS-83, "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-375, "Description"

Symptom	Confirmation item		Inspection item/Reference page
LDW/LDP is not functioning normally	The system operates once but is cancelled.		Check “Cause of auto-cancel 1” Refer to DAS-401, "CONSULT Function"
	Functions when changing the course in direction of the turn signal		Symptom operates even when using turn signal Refer to DAS-377, "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-600, "Description"
Blind Spot Intervention is not functioning normally	The system operates once but is cancelled.		Check “Cause of auto-cancel 1” Refer to DAS-401, "CONSULT Function"
	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-600, "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-386, "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-455, "Symptom Table"
	No force generated for putting 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-372, "Description"

SYSTEM SETTINGS CANNOT BE TURNED ON/OFF ON THE INTEGRAL SWITCH

Description

INFOID:0000000009644774

- 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:0000000009644775

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-.
2. 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-264, "DTC Index"
- MULTI AV: AV-351, "DTC Index"
- METER/M&A: MWI-80, "DTC Index"

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-220, "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 DAS-161, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

CHIME DOES NOT SOUND

Description

INFOID:0000000009644776

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-373, "Description".)

Diagnosis Procedure

INFOID:0000000009644777

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 DAS-161, "Removal and Installation".

>> GO TO 9.

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 DAS-280, "DTC Index".
NO >> GO TO 6.

6.CHECK DRIVER ASSISTANCE BUZZER CIRCUIT

Check driver assistance buzzer. Refer to DAS-363, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts.

>> GO TO 9.

8. REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to DAS-161, "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 DAS-325, "DCA : Description" for action test.)
2. Check if the each system is normal.

>> INSPECTION END

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

Description

INFOID:0000000009644778

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

INFOID:0000000009644779

1.CHECK SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. 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.
2. 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.

3.PERFORM THE SELF-DIAGNOSIS OF COMBINATION METER

1. Perform “All DTC Reading” with CONSULT.
2. 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.

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.

5.PERFORM THE SELF-DIAGNOSIS

1. Perform “All DTC Reading” with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of “ICC/ADAS”. Refer to DAS-264, "DTC Index".

Is any DTC detected?

YES >> GO TO 6.
NO >> GO TO 7.

6.REPAIR OR REPLACE MALFUNCTIONING PARTS.

Repair or replace malfunctioning parts.

>> GO TO 7.

7.CHECK EACH SYSTEM

1. Erase “self-diagnosis result”, and then perform “All DTC Reading” again after performing the action test. (Refer to DAS-325, "DCA : Description" for action test.)

2. Check that the each system is normal.

>> INSPECTION END

NO FORCE GENERATED FOR PUTTING BACK THE ACCELERATOR PEDAL

Description

INFOID:0000000009644780

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

INFOID:0000000009644781

1. PERFORM THE SELF-DIAGNOSIS

1. Perform “All DTC Reading” with CONSULT.
2. 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-264, "DTC Index" (ICC/ADAS) or DAS-272, "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 ACTUATOR 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.

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-373, "Description".

>> INSPECTION END

5. CHECK DCA SYSTEM

1. Erase “self-diagnosis result”, and then perform “All DTC Reading” again after performing the action test. (Refer to DAS-325, "DCA : Description" for action test.)
2. Check if the DCA system is normal.

>> INSPECTION END

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

Description

INFOID:0000000009644782

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:0000000009644783

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

1. Perform radar alignment. Refer to CCS-83, "TYPE 1 : Description".
2. Perform action test. Refer to DAS-325, "DCA : Description".
3. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END
NO >> GO TO 5.

5. REPLACE ICC SENSOR

1. Replace the ICC sensor. Refer to CCS-135, "Removal and Installation".
2. Perform radar alignment. Refer to CCS-83, "TYPE 1 : Description".
3. Perform action test. Refer to DAS-325, "DCA : Description".
4. 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

1. Erase “self-diagnosis result”, and then perform “All DTC Reading” again after performing the action test. (Refer to DAS-325, "DCA : Description" for action test.)
2. Check that the DCA/FCW system is normal.

>> INSPECTION END

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

Description

INFOID:0000000009644784

When DCA/FCW system is active, the DCA/FCW system does not perform any control even through there is a vehicle ahead.

Diagnosis Procedure

INFOID:0000000009644785

1.CHECK INFORMATION DISPLAY

1. Start the self-diagnosis mode of combination meter. Refer to MWI-62, "On Board Diagnosis Function".
2. Check that the segment of information display is displayed normally.

Is the inspection result normal?

YES >> 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.
NO >> GO TO 4.

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

1. Perform radar alignment. Refer to CCS-83, "TYPE 1 : Description".
2. Perform action test. Refer to DAS-325, "DCA : Description".
3. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END
NO >> GO TO 6.

6.REPLACE ICC SENSOR

1. Replace the ICC sensor. Refer to CCS-135, "Removal and Installation".
2. Perform radar alignment. Refer to CCS-83, "TYPE 1 : Description".
3. Perform action test. Refer to DAS-325, "DCA : Description".
4. 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

1. Erase “self-diagnosis result”, and then perform “All DTC Reading” again after performing the action test. (Refer to DAS-325, "DCA : Description" for action test.)
2. Check that the DCA/FCW system is normal.

>> INSPECTION END

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

Description

INFOID:0000000009644786

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-176, "LDW : System Description"
- LDP: DAS-178, "LDP : System Description"

Diagnosis Procedure

INFOID:0000000009644787

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-365, "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-264, "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".

NORMAL OPERATING CONDITION

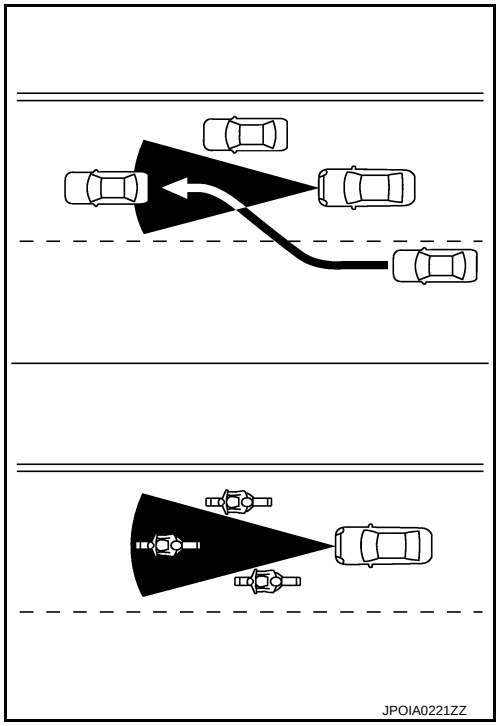
Description

INFOID:0000000009644788

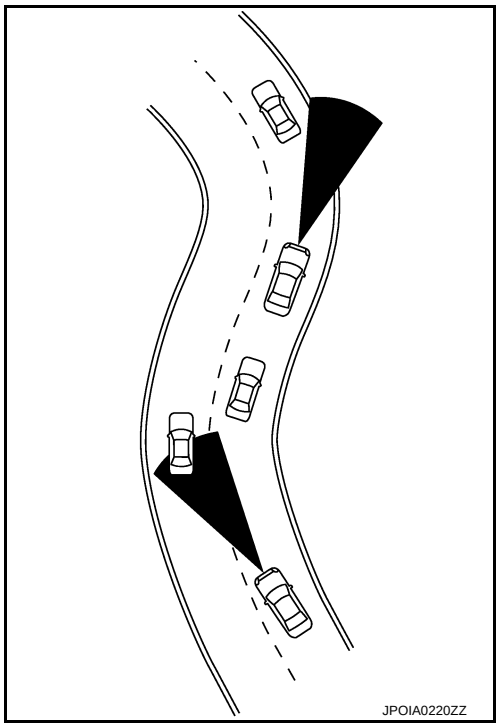
PRECAUTIONS FOR DISTANCE CONTROL ASSIST (DCA) SYSTEM

- 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.

- 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.
- 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)

- 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 times.
- 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)

- 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 other vehicle in front of the vehicle, 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)

- LDP system will not steer the vehicle to keep it in the lane, and will not 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.
- When the LDP system is operating, avoid excessive or sudden steering maneuvers. Otherwise, driver could lose control of the vehicle.
- The LDP system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- The LDP system may not function properly under the following conditions, and do not use the LDP system:
- During bad weather (rain, fog, snow, wind, 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 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 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 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 own vehicle, 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 (BSW) & 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 a 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, wind, 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 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 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.

• 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.

REMOVAL AND INSTALLATION

ACCELERATOR PEDAL ASSEMBLY

Exploded View

INFOID:0000000009644793

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-324, "Description".

DYNAMIC DRIVER ASSISTANCE SWITCH

Exploded View

INFOID:0000000009644794

Dynamic driver assistance switch is integrated in the steering switch. Refer to ST-30, "Exploded View".

NOTE:

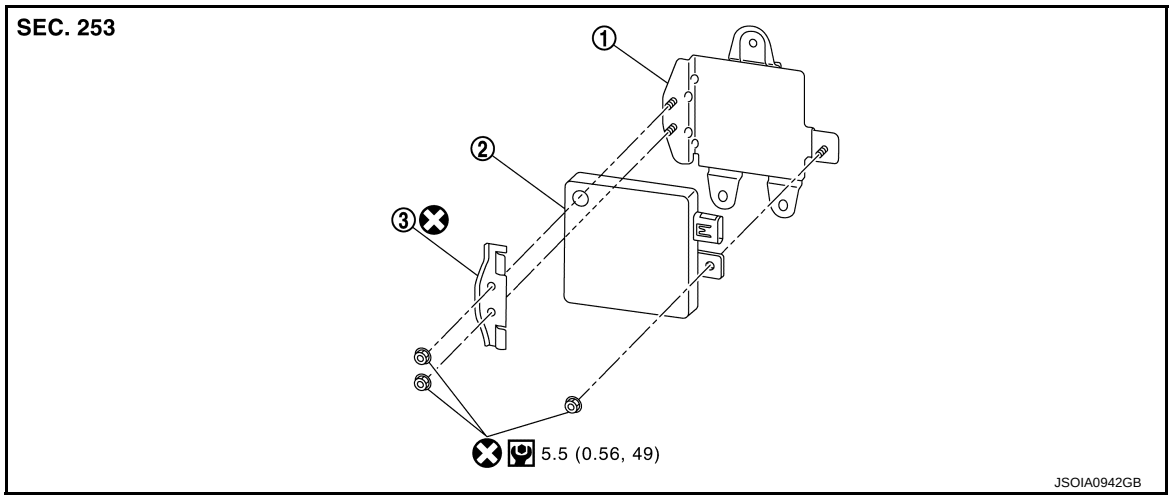
Always remove dynamic driver assistance switch together with steering wheel.

SIDE RADAR

Removal and Installation

INFOID:0000000009644796

EXPLODED VIEW



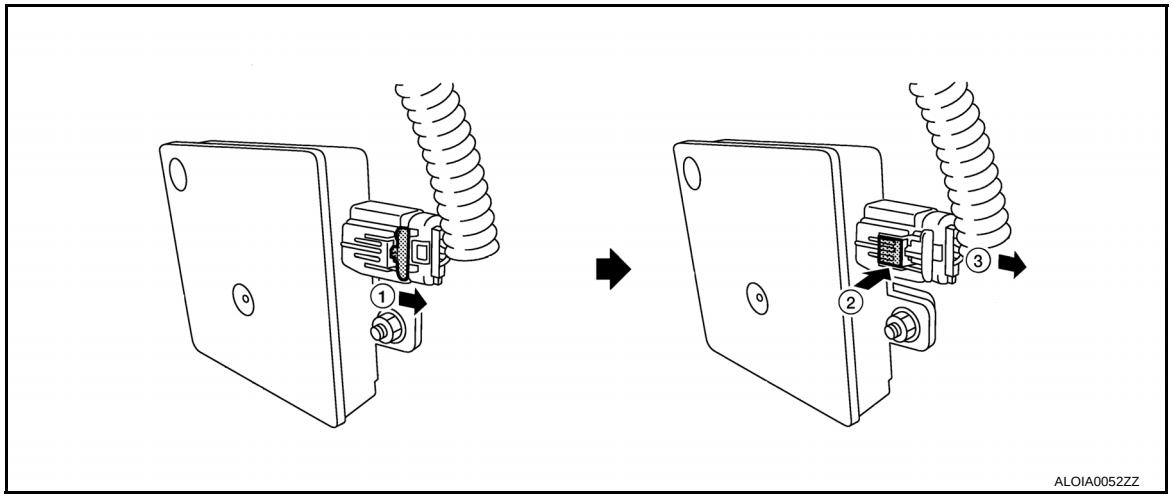
① Bracket ② Side radar ③ Bracket

: N·m (kg-m, in-lb)

REMOVAL AND INSTALLATION

Removal

1. Remove the rear bumper fascia. Refer to EXT-21, "Removal and Installation".
2. Remove the side radar connector.

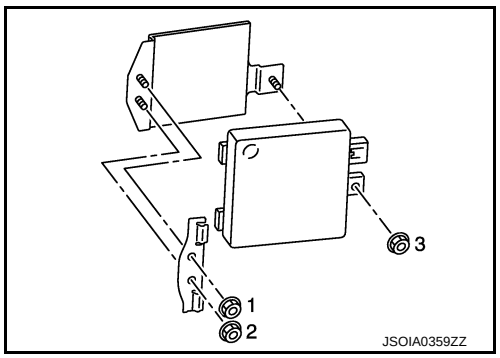


3. Remove the mounting nut.
4. Remove the side radar RH/LH.

Installation

Note the following, and install in the reverse order of removal.

- 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

INFOID:0000000009644797

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.

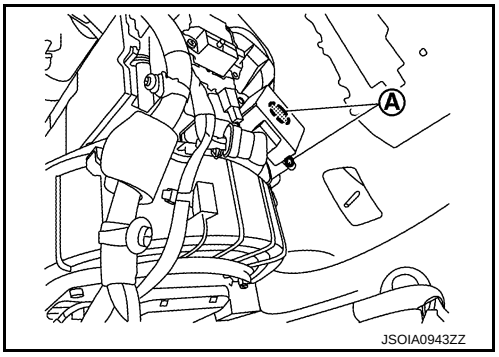
DRIVER ASSISTANCE BUZZER CONTROL MODULE

Removal and Installation

INFOID:0000000009644798

REMOVAL

1. Remove grove box. Refer to IP-12, "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-427, "Removal and Installation".
3. Remove driver assistance buzzer control module mounting screw Ⓐ.
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.

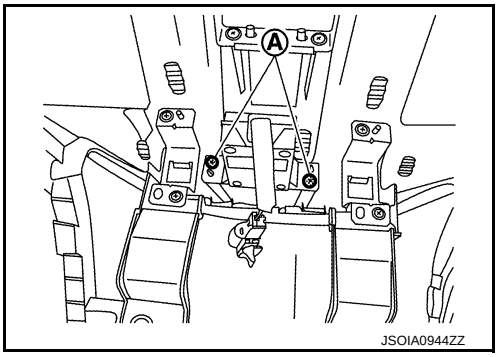
DRIVER ASSISTANCE BUZZER

Removal and Installation

INFOID:0000000009644799

REMOVAL

1. Remove the instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove driver assistance buzzer mounting screw Ⓐ.
3. Remove driver assistance buzzer.



INSTALLATION

Install in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009730174

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:

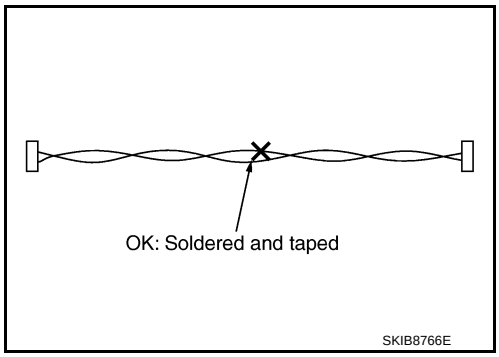
Always observe the following items for preventing accidental activation.

- **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.**

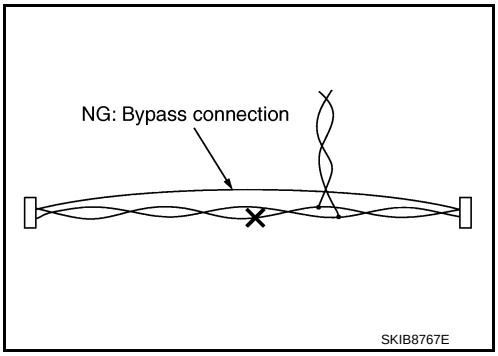
Precautions for Harness Repair

INFOID:0000000009730360

- 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 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

INFOID:0000000009761909

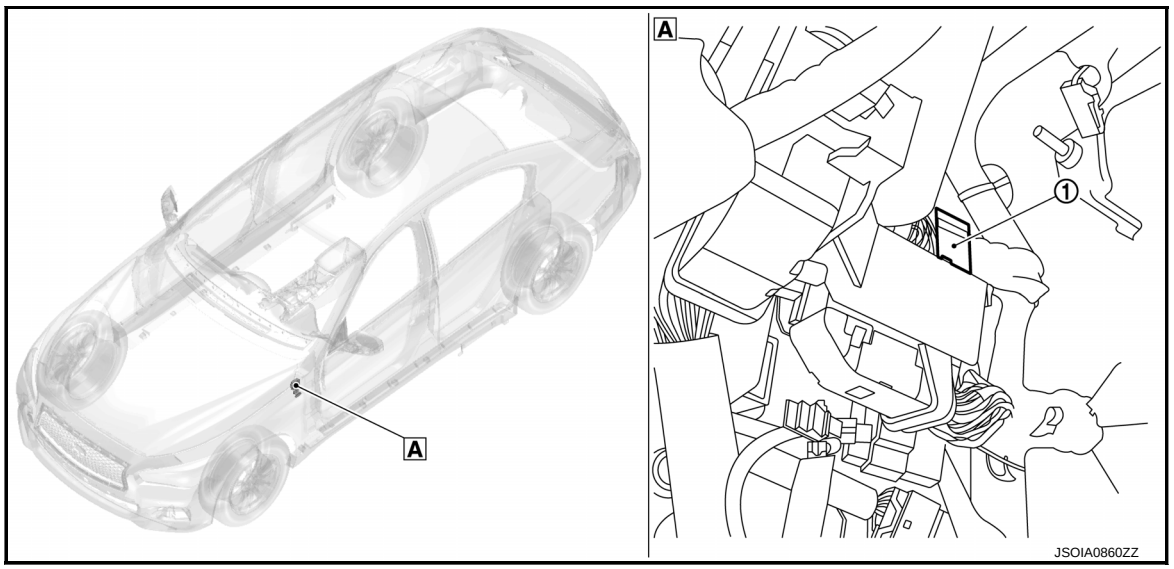
- Never disassemble the chassis control module.
- The parts must not be reused if they are dropped.
- When using a free roller, never activate the active lane control function.
- Never perform ACTIVE TEST while driving the vehicle.
- Slight vibrations are felt on the brake pedal and the operation noises 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 DMS-16, "Log-in Function".
- When starting the vehicle or stopping the engine during Log-in function change, the operation results may not be reflected. Refer to DMS-16, "Log-in Function".
- 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.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000009612832



A inside of dash side finisher LH

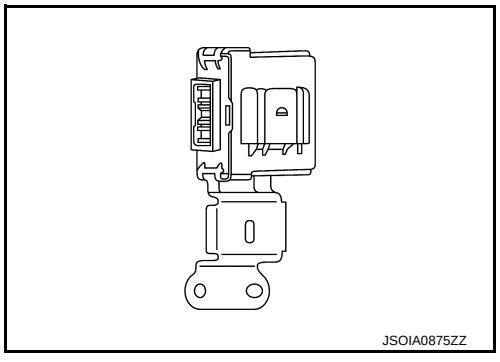
No.	Component parts	Function
①	Chassis control module	DAS-393, "Chassis Control Module"

Chassis Control Module

INFOID:0000000009612833

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



SYSTEM

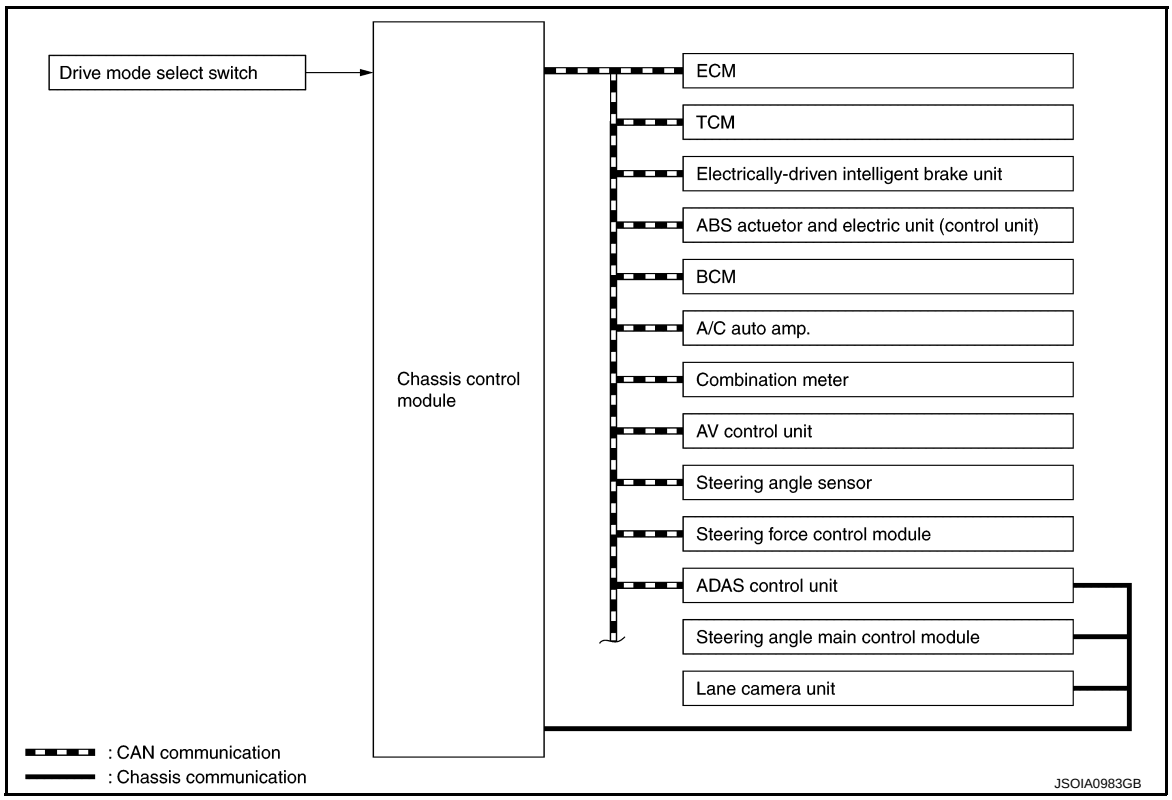
System Description

INFOID:0000000009612834

- 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.

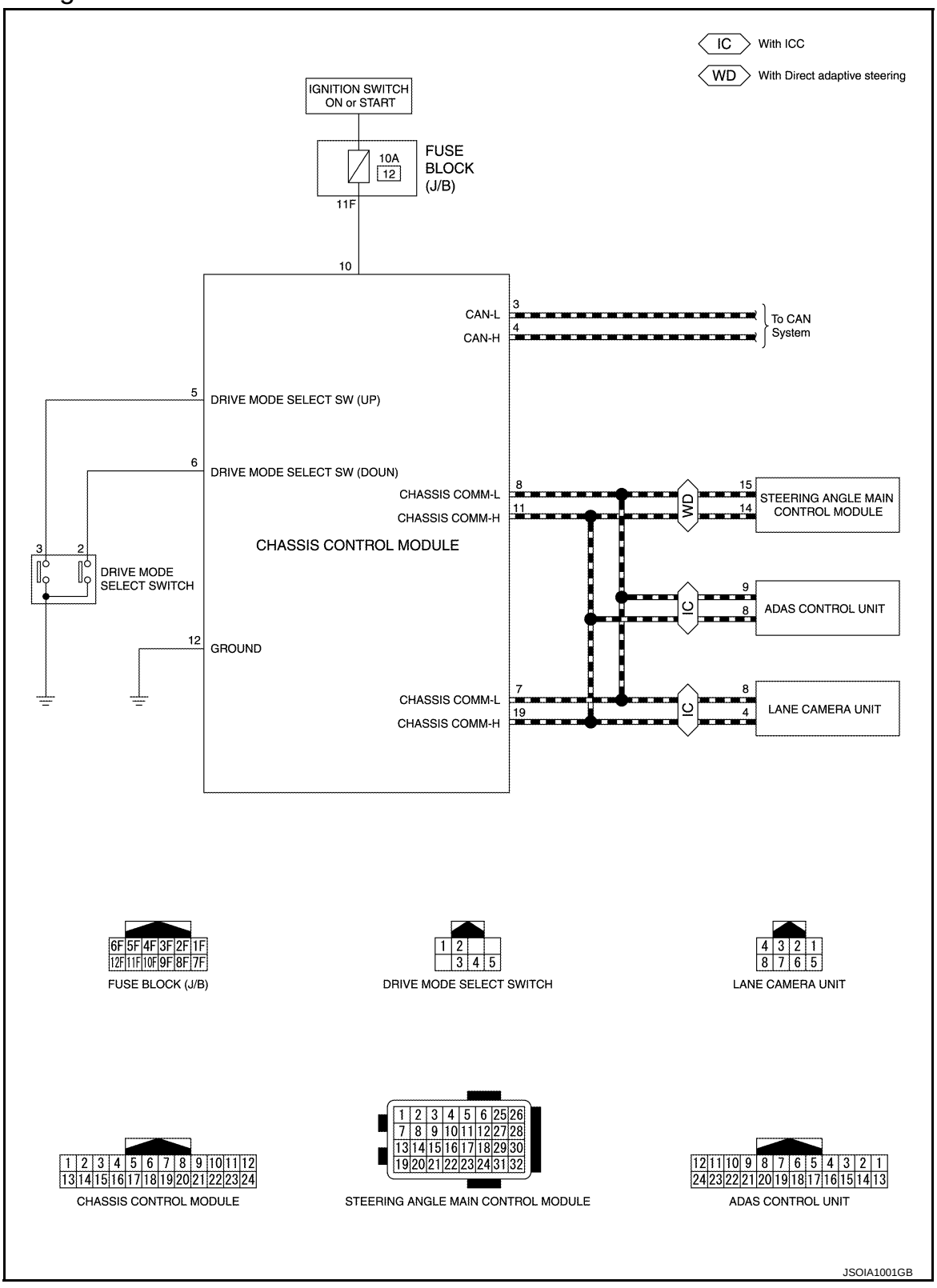
System		Reference page
Active trace control		BRC-41, "ACTIVE TRACE CONTROL FUNCTION : System Description"
Active lane control		DAS-547, "ACTIVE LANE CONTROL : System Description"
Infiniti InTuition	Infiniti drive mode selector function	DMS-7, "Infiniti Drive Mode Selector : System Description"
	Log-in function	DMS-9, "LOG-IN FUNCTION : System Description"

SYSTEM DIAGRAM



Circuit Diagram

INFOID:0000000009612835



Fail-Safe (Chassis Control Module)

INFOID:0000000009612836

- 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
C1B90-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B91-01	
C1B92-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
C1B94-01	
C1B95-01	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
C1B96-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function
C1B98-01	Normal control
C1B99-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BA0-01	The following functions are suspended. • Active trace control function
C1BA2-01	
C1BA5-01	Normal control
C1BA6-01	The following functions are suspended. • Infiniti InTuition function
C1BA7-01	The following functions are suspended. • Active lane control function
C1BA9-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
C1BAA-01	
C1BAB-01	The following functions are suspended. • Active trace control function
C1BAC-01	The following functions are suspended. • LDP function • Blind spot intervention function
C1BAD-01	
C1BAE-01	
C1BAF-01	The following functions are suspended. • Blind spot intervention function
C1BB0-01	Normal control

DTC	Vehicle condition
C1BB2-01 C1BB3-01 C1BB4-01 C1BB5-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB6-01	Normal control
C1BB7-01 C1BB8-01 C1BB9-01 C1BBA-01 C1BBB-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BBC-01	Normal control
C1BBD-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BC0-01 C1BC1-01	The following functions are suspended. • Active trace control function • Active lane control function
C1BC2-01 C1BC3-01	The following functions are suspended. • Active trace control function
C1BC4-01	Normal control
C1BC5-01 C1BC6-01 U1000-01	The following functions are suspended. • Active trace control function
U1010-01	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-01 U1A31-01 U1A32-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A34-01 U1A35-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A36-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function

DTC	Vehicle condition
U1A3B-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A3D-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-01	Normal control
U1A3F-01	The following functions are suspended. • Infiniti InTuition function
U1A42-01	The following functions are suspended. • Active trace control function
U1A43-01	
U1A45-01	The following functions are suspended. • Active lane control function
U1A48-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
U1A4B-01	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-01	Normal control
U1A4E-01	The following functions are suspended. • Active trace control function

INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display

INFOID:0000000009612837

DESIGN/PURPOSE

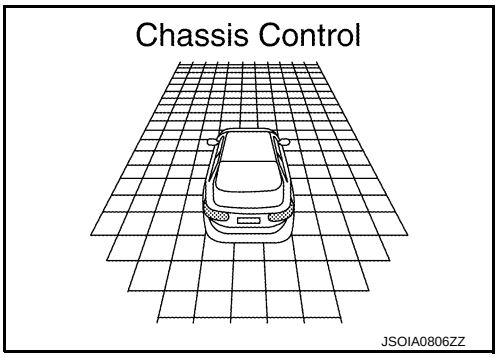
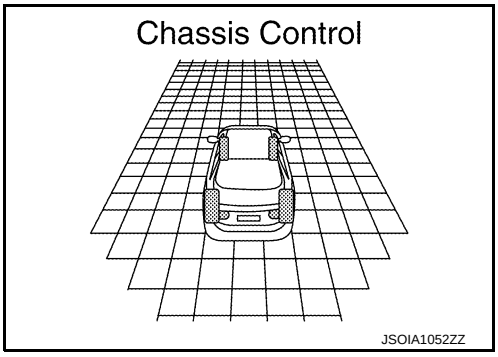
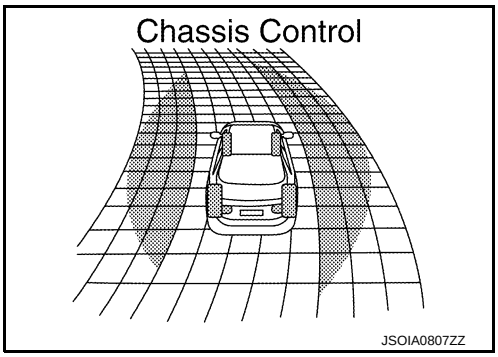
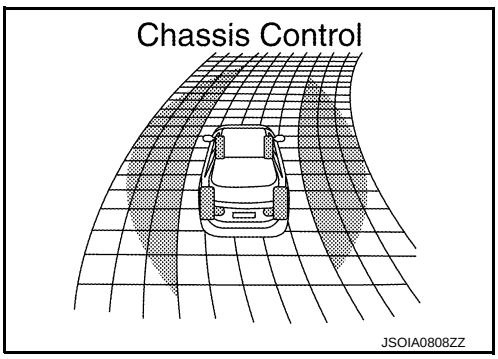
- The warning message is displayed on the vehicle information display when chassis control detected the system malfunction.
- When the aiming of lane camera unit is incomplete, a warning message is displayed.
- Each chassis control system information is displayed on the vehicle information display.

Warning Message

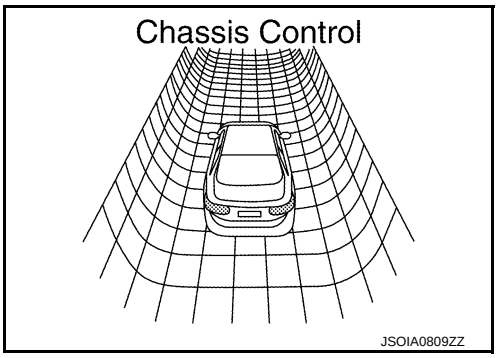
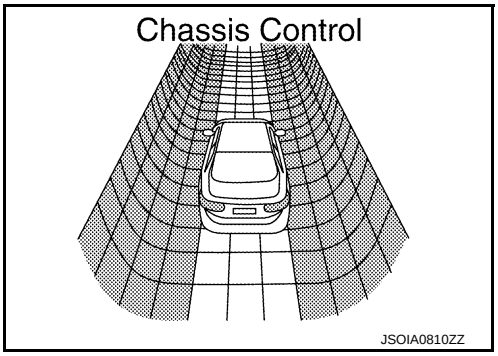
Design	Warning Message
—	Chassis Control System Error See Owner's Manual

System Information

Active trace control

Design	Description
 JSOIA0806ZZ	Active trace control inactive
 JSOIA1052ZZ	Active trace control is active. (Steering angle is less than the specified angle.)
 JSOIA0807ZZ	Active trace control is active. (Steering angle is the specified angle or more in the leftward direction.)
 JSOIA0808ZZ	Active trace control is active. (Steering angle is the specified angle or more in the rightward direction.)

Active lane control

Design	Description
 JSOIA0809ZZ	Active Lane Control is turned ON.
 JSOIA0810ZZ	Active Lane Control is operational or is operating.

SYNCHRONIZATION WITH MASTER WARNING LAMP

Applicable

Refer to MWI-34, "WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp".

WARNING/INDICATOR OPERATING CONDITION

Warning

When all of the following conditions are satisfied

- Ignition switch is ON
- Chassis system malfunction is detected. Refer to DAS-422, "DTC Index".
- Lane camera system malfunction is detected. Refer to DAS-573, "DTC Index".

Indicator operating

- Active trace control: Refer to BRC-41, "ACTIVE TRACE CONTROL FUNCTION : System Description".
- Active lane control: Refer to DAS-547, "ACTIVE LANE CONTROL : System Description".

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000009612838

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-422, "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.

Item name	Indication/Unit	Display item
SHIFT POSITION	Off / P / R / N / D (A) / S / L / B / 1– 6 / M 1 –M 8 / A 1 – A 6	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.

Item [Unit]		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 / M 1 –M 8 / A 1 – A 6]	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.

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.

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 CANCEL	[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.

Test item	Operation	Description
COMMAND STEERING ANGLE	Start	Transmits the steering command value 0 deg → 0.00349 deg (hold it for approximately 2 seconds) → 0 deg (hold it for approximately 2 seconds) → 0.00349 deg (hold it for approximately 2 seconds) → 0 deg to the steering force control module.
COMMAND ST WHL FORCE	Start	Transmits the steering reaction force command value 0 N → 0.6 N (hold it for approximately 2 seconds) → 0 N (hold it for approximately 2 seconds)→ 0.6 N (hold it for approximately 2 seconds) → 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.
	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.
	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.
	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.
RR TIRE DISP	On	Displays the rear RH tire on the information display in the combination meter.
	Off	Does not display the rear RH tire on the information display in the combination meter.
TURN DISP	NO DISP	Does not display the turning status on the information display in the combination meter.
	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.
ALC LEVEL	LEVEL 1	Displays Active Lane Control corresponding to the selected level on the information display in the combination meter.
	LEVEL 2	
	LEVEL 3	
	LEVEL 4	
ALC SETTING	On	Displays Active Lane Control active status on the information display in the combination meter.
	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
ATC 1 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATC 2 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.

Test item	Operation	Description
ATC 4 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	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

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.

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.

ECU DIAGNOSIS INFORMATION

CHASSIS CONTROL MODULE

Reference Value

INFOID:0000000009612839

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
CONTROL MODULE MALF	When chassis control module is normal	Off
	When chassis control module malfunction is detected	On
CAN DIAG STATUS	When diagnosis of CAN communication malfunction is detected	Off
	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 SPEED	Vehicle Stopped	0 km/h (0 MPH)
	Driving*	Almost same reading as speedometer (within ±10%)
FR WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
FL WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
RR WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
RL WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
STEERING ANG SENSOR	When driving straight	0±3.5 deg
	When steering wheel is steered to RH by 90°	Approx. +90 deg
	When steering wheel is steered to LH by 90°	Approx. –90 deg
DECEL G SENSOR	Vehicle stopped	Approx. 0 G
	When during acceleration	Positive value
	When during deceleration	Negative value
SIDE G SENSOR	Vehicle stopped	Approx. 0 G
	When right turn	Negative value
	When left turn	Positive value
YAW RATE SENSOR	Vehicle stopped	Approx. 0 deg/s
	When right turn	Negative value
	When left turn	Positive value
ACCELE PEDAL POSITION	When accelerator pedal is released	0%
	When accelerator pedal is depressed	0 – 100%

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
BRAKE SWITCH 2	When brake pedal is not depressed	Off
	When brake pedal is depressed	On
BRAKE SWITCH 1	When brake pedal is depressed	Off
	When brake pedal is not depressed	On
PRESS SENSOR	When brake pedal is not depressed	Approx. 0 bar
	when brake pedal is depressed	0 – 255 bar
ABS	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
ABS MALF	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
EBD	When EBD function is normal	NORMAL
	When EBD function malfunction is detected	ABNOR
ACCELE PEDAL MALF	When accelerator pedal is normal	NORMAL
	When accelerator pedal malfunction is detected	ABNOR
TCS	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
TCS MALF	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
VDC	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC MALF	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC OFF SWITCH	When VDC OFF switch is OFF	Off
	When VDC OFF switch is ON	On
PARKING BRAKE	When parking brake is inactive	Off
	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

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
	When correction is not permitted (system requirement)	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop	REQ
	When correction is not requested to stop	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ
	When prohibition of correction is not requested	NO REQ
DRIVE MODE SELECTOR	When drive mode select switch is “STANDARD” mode	STD
	When drive mode select switch is “SPORT” mode	SPORT
	When drive mode select switch is “SNOW” mode	SNOW
	When drive mode select switch is “ECO” mode	ECO
	When drive mode select switch is “PERSONAL” mode	PERSO
	When drive mode select switch is not select	NOT SET
LOG-IN PERMIS	When log-in is possible	NO PER
	When log-in is not possible	PERMIS
I-KEY LINK	When Intelligent Key is not linked	Off
	When Intelligent Key is linked	On
USER	When logged in with “USER A” Intelligent Key	USER A
	When logged in with “USER B” Intelligent Key	USER B
	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

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
	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
ALC SETTING	When Active Lane Control setting with drive mode select switch is “OFF”	Off
	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
	When Active Lane Control setting with drive mode select switch is “ON”	On
COMBI METER	When drive mode select switch is “STANDARD” mode	STD
	When drive mode select switch is “SNOW” mode	SNOW
	When drive mode select switch is “PERSONAL” mode	PERSO
	When drive mode select switch is “SPORT” mode	SPORT
	When drive mode select switch is “ECO” mode	ECO
ATC 1	When active trace control function is inactive	Off
	When active trace control function is active	On
ATC 2	When active trace control function is inactive	Off
	When active trace control function is active	On
ATC 4	When active trace control function is inactive	Off
	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
	When the front LH tire is displayed on the information display in the combination meter	1
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter	DEF
	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
	When the rear LH tire is displayed on the information display in the combination meter	1

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
	When the rear RH tire is displayed on the information display in the combination meter	1
TURN DISP	When the straight-ahead status is displayed on the information display in the combination meter	N STEER
	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
ALC LEVEL	When Active Lane Control is turned ON.	0
	When Active Lane Control is operational or is operating.	1 – 4
ALC STATUS	When Active Lane Control is OFF	INACT
	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
	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
	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
	When Active Lane Control is ON	On
LANE MARKER (LH)	When left side lane marker is not detected.	NOT
	when left side lane marker is detected.	DETECT
LANE MARKER (RH)	When right side lane marker is not detected.	NOT
	When right side lane marker is detected.	DETECT
TURN SIGNAL (LH)	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	On
TURN SIGNAL (RH)	When turn signal lamps is OFF	Off
	When turn signal lamp RH is blinking	On
TURN SIGNAL SWITCH	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	LEFT
	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
	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

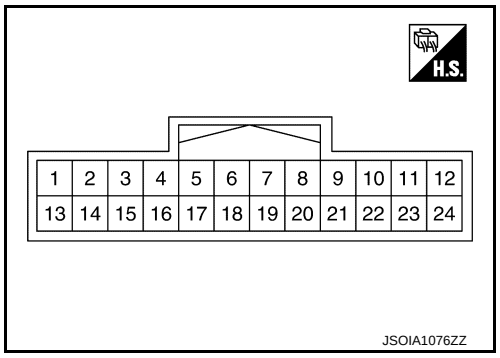
Monitor item	Condition	Reference values in normal operation
COMMAND ST ANG	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	Approx. 0 rad
	Active Lane Control is active with yaw angle formed on the left 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
ST PINION ANG	When driving straight	Approx. 0 rad
	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
	When steering wheel is steered	MAX ± 32 N·m
COMMAND ST WHL FORCE	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
	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
	When LDW function malfunction is detected	MALF
LDP DISP	When LDP function is ON	On
	When LDP function malfunction is detected	MALF
BSI DISP	When blind spot intervention function is ON	On
	When blind spot intervention function malfunction is detected	MALF
ST SWITCH COND	When steering switch is normal	OK
	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
	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
	When forward emergency brake function is active	On
DR BUZZER STATUS	Displayed but not used	—
LDW COND	When LDW function is ON	On
	When LDW function malfunction is detected	MALF

Monitor item	Condition	Reference values in normal operation
LDP COND	When LDP function is ON	On
	When LDP function malfunction is detected	MALF
BSI COND	When blind spot intervention function is ON	On
	When blind spot intervention function malfunction is detected	MALF
LDP BRAKE CANCEL	When not cancel	NONE
	When slippery road	SLIP
	When drive mode select switch is “SNOW” mode	SNOW
	When VDC OFF switch is OFF	VDC OF
BSI BRAKE CANCEL	When not cancel	NONE
	When slippery road	SLIP
	When drive mode select switch is “SNOW” mode	SNOW
	When VDC OFF switch is OFF	VDC OF
CAMERA COND	When Lane camera unit is normal	NORMAL
	When Lane camera unit malfunction is detected.	ABNOR
CAMERA TEMP COND	When the temperature around lane camera unit is normal	NORMAL
	When the temperature around the lane camera unit is high	ABNOR
CAMERA COMM COND	When communication between chassis control module and lane camera unit is normal	NORMAL
	When communication between chassis control module and lane camera unit malfunction is detected	ABNOR
CAMERA AIMING	When lane camera aiming is completed	COMP
	When lane camera aiming is not completed	INCOMP
CAMERA HIGH TEMP (LDW)	When the temperature around lane camera unit is normal. (LDW ON)	NORMAL
	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
	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
	When the temperature around the lane camera unit is high. (Blind spot intervention ON)	ABNOR
SIDE RADAR BLOCK CANCEL	When the side radar is normal	NORMAL
	Side radar is blocked and temporarily deactivated.	BLOCK
BSI LAMP REQ (LH)	When blind spot intervention function (LH) is inactive	Off
	When blind spot intervention function (LH) is active	On

Monitor item	Condition	Reference values in normal operation
BSI LAMP REQ (RH)	When blind spot intervention function (RH) is inactive	Off
	When blind spot intervention function (RH) is active	On
LANE DEPARTURE DISP (LH)	When not deviating the LH side lane	NO DISP
	When deviating the LH side lane	DEVIAT
LANE DEPARTURE DISP (RH)	When not deviating the RH side lane	NO DISP
	When deviating the RH side lane	DEVIAT
LDP/BSI ACTIVE	When LDP function and blind spot intervention function are inactive	Off
	When LDP function or blind spot intervention function are active	On
ADAS COND	When diagnosis of ADAS control unit is normal	NORMAL
	When diagnosis of ADAS control unit malfunction is detected	ABNOR
DR BUZZER COND	When driver assistance buzzer is normal	NORMAL
	when driver assistance buzzer malfunction is detected	ABNOR
OUTSIDE TEMP	Ignition switch ON	(–40°C) – (+72°C)
WIPER STATUS	When front wiper is inactive	Off
	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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
3 (R)*1 (P)*2	Ground	CAN-L	—	—	—	—
4 (L)		CAN-H	—	—	—	—
5 (V)		DRIVE MODE SELECT SWITCH (UP)	Input	Ignition switch ON	Up switch is not pressed	6.4 – 16 V
					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
					Down switch is pressed	0 V
7 (W)		CHASSIS COMM-L	—	—	—	—
8 (W)		CHASSIS COMM-L	—	—	—	—
10 (G)		IGN	Input	Ignition switch ON		6.4 – 16 V
11 (L)		CHASSIS COMM-H	—	—	—	—
12 (B)		GROUND	—	Ignition switch ON	—	0 V
19 (L)		CHASSIS COMM-H	—	—	—	—

*1: With Gateway
*2: Without Gateway

Fail-Safe (Chassis Control Module)

INFOID:0000000009612840

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
C1B90-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B91-01	
C1B92-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
C1B94-01	

DTC	Vehicle condition
C1B95-01	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
C1B96-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function
C1B98-01	Normal control
C1B99-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BA0-01	The following functions are suspended. • Active trace control function
C1BA2-01	
C1BA5-01	Normal control
C1BA6-01	The following functions are suspended. • Infiniti InTuition function
C1BA7-01	The following functions are suspended. • Active lane control function
C1BA9-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
C1BAA-01	
C1BAB-01	The following functions are suspended. • Active trace control function
C1BAC-01	The following functions are suspended. • LDP function • Blind spot intervention function
C1BAD-01	
C1BAE-01	
C1BAF-01	The following functions are suspended. • Blind spot intervention function
C1BB0-01	Normal control
C1BB2-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB3-01	
C1BB4-01	
C1BB5-01	
C1BB6-01	Normal control
C1BB7-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB8-01	
C1BB9-01	
C1BBA-01	
C1BBB-01	
C1BBC-01	Normal control

DTC	Vehicle condition
C1BBD-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BC0-01	The following functions are suspended. • Active trace control function • Active lane control function
C1BC1-01	
C1BC2-01	The following functions are suspended. • Active trace control function
C1BC3-01	
C1BC4-01	Normal control
C1BC5-01	The following functions are suspended. • Active trace control function
C1BC6-01	
U1000-01	
U1010-01	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A31-01	
U1A32-01	
U1A34-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A35-01	
U1A36-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3B-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A3D-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-01	Normal control
U1A3F-01	The following functions are suspended. • Infiniti InTuition function
U1A42-01	The following functions are suspended. • Active trace control function
U1A43-01	
U1A45-01	The following functions are suspended. • Active lane control function

DTC	Vehicle condition
U1A48-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
U1A4B-01	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-01	Normal control
U1A4E-01	The following functions are suspended. • Active trace control function

DTC Inspection Priority Chart

INFOID:0000000009612841

When multiple DTCs are displayed simultaneously, check them one by one according to the following priority list.

Priority	Detected item (DTC)
1	• U1000-01 CAN COMM CIRCUIT • U1010-01 CONTROL UNIT (CAN)
2	• U1A30-01 DAST COMM • U1A31-01 DAST COMM • U1A32-01 CAMERA COMM • U1A34-01 BRAKE CONTROL COMM • U1A35-01 BRAKE CONTROL COMM • U1A36-01 BCM/IPDM COMM • U1A39-01 COMBINATION METER COMM • U1A3B-01 TCM COMM • U1A3D-01 ADAS COMM • U1A3E-01 ADAS COMM • U1A3F-01 AV COMM • U1A42-01 STEERING ANGLE SENSOR COMM • U1A43-01 STEERING ANGLE SENSOR COMM • U1A45-01 DR BUZZER COMM • U1A48-01 ECM/HPCM COMM • U1A4A-01 CONTROL MODULE (CAN) • U1A4B-01 CONTROL MODULE (CAN) • U1A4C-01 A/C AUTO AMP. COMM • U1A4E-01 ECM/HPCM COMM
3	• C1BBD-01 VARIANT CODING
4	• C1B98-01 ADAS SYSTEM

Priority	Detected item (DTC)
5	• C1B90-01 DAST SYSTEM • C1B91-01 CAMERA SYSTEM • C1B92-01 BRAKE CONTROL SYSTEM • C1B93-01 ENGINE/HEV SYSTEM • C1B94-01 TM SYSTEM • C1B96-01 ADAS SYSTEM • C1BA0-01 ADAS/CHASSIS CTRL BRAKE SYS • C1BA2-01 STEERING ANGLE SENSOR • C1BA5-01 ADAS/CHASSIS CTRL ENGINE SYS • C1BA6-01 AV SYSTEM • C1BA7-01 ALC SYSTEM • C1BA9-01 NP RANGE • C1BAA-01 GEAR POSITION • C1BAB-01 STOP LAMP SW • C1BAC-01 OPERATION SW CIRC • C1BAD-01 ACCELERATER PEDAL • C1BAE-01 ACCELERATER PEDAL • C1BAF-01 BSW SYSTEM • C1BB0-01 DR BUZZER SYSTEM • C1BC0-01 FR WHEEL SENSOR • C1BC1-01 FL WHEEL SENSOR • C1BC2-01 RR WHEEL SENSOR • C1BC3-01 RL WHEEL SENSOR • C1BC4-01 DECEL G SENSOR • C1BC5-01 SIDE G SENSOR • C1BC6-01 PRESSURE SENSOR
6	• C1BB5-01 IGN POWER SUPPLY • C1BB6-01 IGN POWER SUPPLY
7	• C1B95-01 CONTROL MODULE • C1B99-01 CONTROL MODULE • C1BB2-01 CONTROL MODULE • C1BB3-01 CONTROL MODULE • C1BB4-01 CONTROL MODULE • C1BB7-01 CONTROL MODULE • C1BB8-01 CONTROL MODULE • C1BB9-01 CONTROL MODULE • C1BBA-01 CONTROL MODULE • C1BBB-01 CONTROL MODULE • C1BBC-01 CONTROL MODULE

DTC Index

INFOID:0000000009612842

DTC	Display item	Refer to
C1B90-01	DAST SYSTEM	DAS-436, "DTC Description"
C1B91-01	CAMERA SYSTEM	DAS-438, "DTC Description"
C1B92-01	BRAKE CONTROL SYSTEM	DAS-440, "DTC Description"
C1B93-01	ENGINE/HEV SYSTEM	DAS-442, "DTC Description"
C1B94-01	TM SYSTEM	DAS-444, "DTC Description"
C1B95-01	CONTROL MODULE	DAS-446, "DTC Description"
C1B96-01	ADAS SYSTEM	DAS-447, "DTC Description"
C1B98-01	ADAS SYSTEM	DAS-449, "DTC Description"
C1B99-01	CONTROL NODULE	DAS-451, "DTC Description"
C1BA0-01	ADAS/CHASSIS CTRL BRAKE SYS	DAS-452, "DTC Description"
C1BA2-01	STEERING ANGLE SENSOR	DAS-454, "DTC Description"
C1BA5-01	ADAS/CHASSIS CTRL ENGINE SYS	DAS-455, "DTC Description"
C1BA6-01	AV SYSTEM	DAS-456, "DTC Description"

DTC	Display item	Refer to
C1BA7-01	ALC SYSTEM	DAS-458, "DTC Description"
C1BA9-01	NP RANGE	DAS-460, "DTC Description"
C1BAA-01	GEAR POSITION	DAS-462, "DTC Description"
C1BAB-01	STOP LAMP SW	DAS-464, "DTC Description"
C1BAC-01	OPERATION SW CIRC	DAS-466, "DTC Description"
C1BAD-01	ACCELERATER PEDAL	DAS-468, "DTC Description"
C1BAE-01	ACCELERATER PEDAL	DAS-470, "DTC Description"
C1BAF-01	BSW SYSTEM	DAS-472, "DTC Description"
C1BB0-01	DR BUZZER SYSTEM	DAS-474, "DTC Description"
C1BB2-01	CONTROL MODULE	DAS-475, "DTC Description"
C1BB3-01	CONTROL MODULE	DAS-476, "DTC Description"
C1BB4-01	CONTROL MODULE	DAS-477, "DTC Description"
C1BB5-01	IGN POWER SUPPLY	DAS-478, "DTC Description"
C1BB6-01	IGN POWER SUPPLY	DAS-481, "DTC Description"
C1BB7-01	CONTROL MODULE	DAS-483, "DTC Description"
C1BB8-01	CONTROL MODULE	DAS-484, "DTC Description"
C1BB9-01	CONTROL MODULE	DAS-485, "DTC Description"
C1BBA-01	CONTROL MODULE	DAS-486, "DTC Description"
C1BBB-01	CONTROL MODULE	DAS-487, "DTC Description"
C1BBC-01	CONTROL MODULE	DAS-488, "DTC Description"
C1BBD-01	VARIANT CODING	DAS-489, "DTC Description"
C1BC0-01	FR WHEEL SENSOR	DAS-490, "DTC Description"
C1BC1-01	FL WHEEL SENSOR	DAS-492, "DTC Description"
C1BC2-01	RR WHEEL SENSOR	DAS-494, "DTC Description"
C1BC3-01	RL WHEEL SENSOR	DAS-496, "DTC Description"
C1BC4-01	DECEL G SENSOR	DAS-498, "DTC Description"
C1BC5-01	SIDE G SENSOR	DAS-499, "DTC Description"
C1BC6-01	PRESSURE SENSOR	DAS-501, "DTC Description"
U1000-01	CAN COMM CIRCUIT	DAS-502, "DTC Description"
U1010-01	CONTROL UNIT (CAN)	DAS-503, "DTC Description"
U1A30-01	DAST COMM	DAS-504, "DTC Description"
U1A31-01	DAST COMM	DAS-507, "DTC Description"
U1A32-01	CAMERA COMM	DAS-509, "DTC Description"
U1A34-01	BRAKE CONTROL COMM	DAS-511, "DTC Description"
U1A35-01	BRAKE CONTROL COMM	DAS-513, "DTC Description"
U1A36-01	BCM/IPDM COMM	DAS-515, "DTC Description"
U1A39-01	COMBINATION METER COMM	DAS-517, "DTC Description"
U1A3B-01	TCM COMM	DAS-519, "DTC Description"
U1A3D-01	ADAS COMM	DAS-521, "DTC Description"
U1A3E-01	ADAS COMM	DAS-523, "DTC Description"
U1A3F-01	AV COMM	DAS-525, "DTC Description"
U1A42-01	STEERING ANGLE SENSOR COMM	DAS-527, "DTC Description"
U1A43-01	STEERING ANGLE SENSOR COMM	DAS-529, "DTC Description"
U1A45-01	DR BUZZER COMM	DAS-531, "DTC Description"

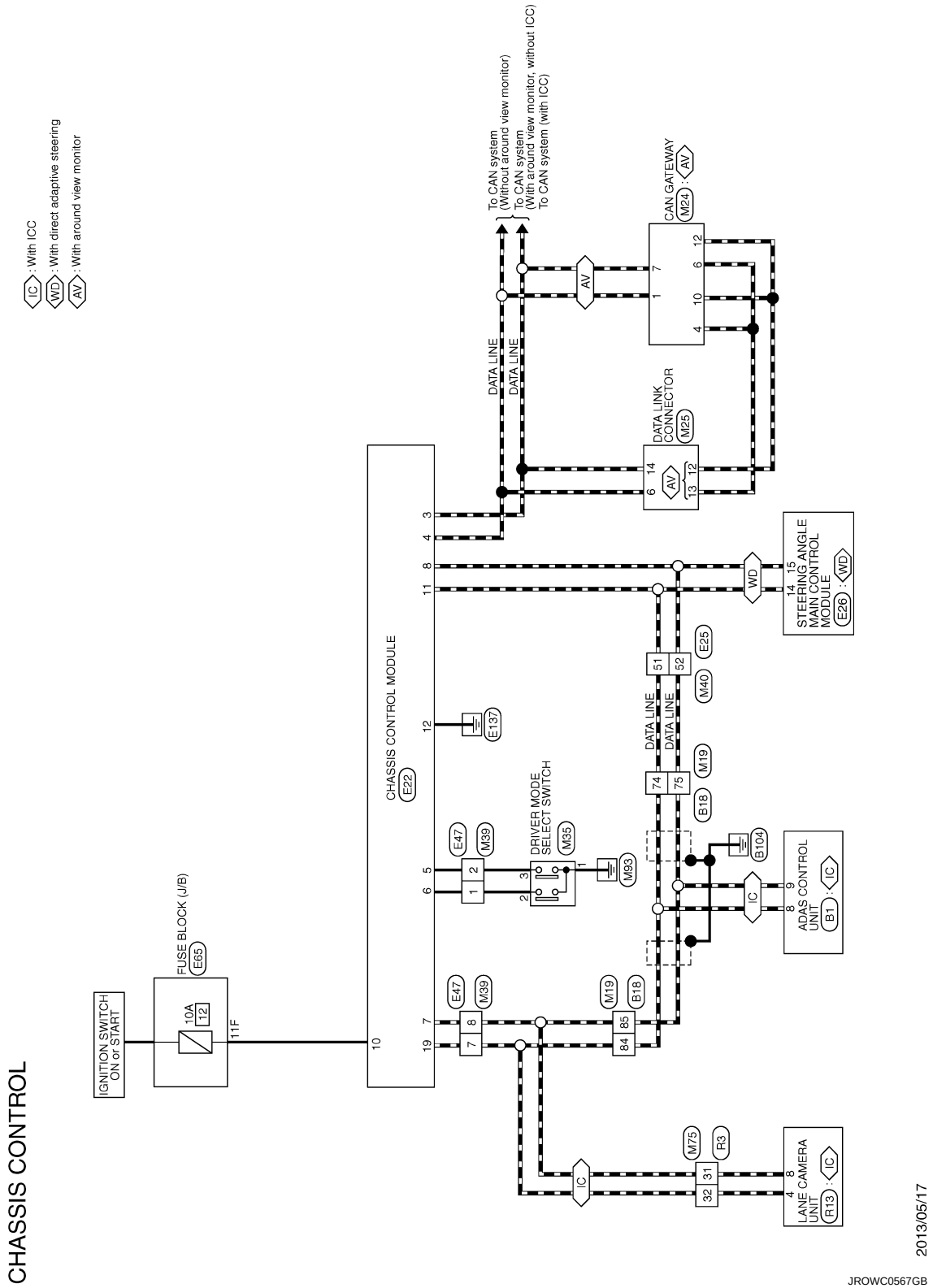
DTC	Display item	Refer to
U1A48-01	ECM/HPCM COMM	DAS-533, "DTC Description"
U1A4A-01	CONTROL MODULE (CAN)	DAS-535, "DTC Description"
U1A4B-01	CONTROL MODULE (CAN)	DAS-536, "DTC Description"
U1A4C-01	A/C AUTO AMP. COMM	DAS-537, "DTC Description"
U1A4E-01	ECM/HPCM COMM	DAS-539, "DTC Description"

WIRING DIAGRAM

CHASSIS CONTROL

Wiring Diagram

INFOID:0000000009612843



CHASSIS CONTROL

CHASSIS CONTROL

Connector No.	B1
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	R	CAN-L
5	B	GROUND
6	L	ITS COMM-H
7	P	ITS COMM-L
8	L	CHASSIS COMM-H
9	V	CHASSIS COMM-L
12	GR	IGNITION
17	V	BRAKE HOLD RLY DRIVE SIGNAL

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
6	R	-
7	V	-
8	LG	-
9	BR	-
10	P	-
11	BG	-
12	LG	-
13	GR	-
24	Y	-
25	W	-
31	B	-
32	B	-
33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	BG	-
44	BG	-
46	R	-
51	SB	-
52	V	-
54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
62	BG	-
63	BR	-
64	Y	-
65	W	-
70	R	-
71	W	-
72	B	-
74	L	-
75	V	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	V	-
86	B	-
88	G	-
91	GR	-
94	GR	-
96	Y	-
97	V	-
98	BR	-

Connector No.	E22
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	CAN-L [Without Gateway]
3	R	CAN-L [With Gateway]
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.	E25
Connector Name	WIRE TO WIRE
Connector Type	TH80FH-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
3	LG	-
4	BR	-
6	V	-
7	L	-
10	BR	-
11	L	-
12	GR	-
13	W	-
14	B	-
15	SB	-
16	Y	-
17	BR	-
18	P	-
31	Y	-
32	GR	-
35	GR	-
36	R	-
37	V	-
38	L	-
39	Y	-
40	SB	-
41	LG	-
44	Y	-
45	W	-
46	B	-
47	G	-
48	SHIELD	-
49	R	-
50	BR	-
51	L	-
52	W	-
53	V	-
54	P	-
55	W	-
56	SB	-
57	BG	-
58	B	-
59	W	-
61	R	-
64	Y	-
65	SB	-
66	GR	-
67	LG	-
68	BG	-
71	LG	-
72	V	-
73	G	-
74	BR	-
75	V	-
78	P	-
79	SB	-
83	R	-
86	BG	-
91	G	-
92	Y	-
94	GR	-
95	BG	-

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CHASSIS CONTROL

96	W	–
97	LG	–
98	L	–
99	P	–
100	SHIELD	–

Connector No.	E26
Connector Name	STEERING ANGLE MAIN CONTROL MODULE
Connector Type	RH24FB-RZ8-L-LH

H.S.

1	2	3	4	5	6	25	
7	8		10	11			
	14	15		17	18		30
19	20		22	23	24		32

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	TORQUE SENSOR MAIN SIGNAL
2	Y	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (S1-S3)
3	LG	TORQUE SENSOR SUB SIGNAL
4	G	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (S1-S3)
5	W	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (S2-S4)
6	L	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (S2-S4)
7	SB	TORQUE SENSOR GROUND
8	P	TORQUE SENSOR POWER SUPPLY
10	R	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (R1-R2)
11	BR	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL (R1-R2)
14	L	CHASSIS COMMUNICATION-H
15	W	CHASSIS COMMUNICATION-L
17	BG	BACK UP SIGNAL (FROM STEERING ANGLE SUB CONTROL MODULE)
18	SB	BACK UP SIGNAL (FROM STEERING FORCE CONTROL MODULE)
19	Y	FLEXRAY COMMUNICATION-H
20	GR	FLEXRAY COMMUNICATION-L
22	GR	BACK UP SIGNAL (TO STEERING ANGLE SUB CONTROL MODULE)
23	BR	CAN WAKE UP
24	P	BACK UP SIGNAL (TO STEERING FORCE CONTROL MODULE)
25	G	IGNITION POWER SUPPLY (FROM STEERING ANGLE SUB CONTROL MODULE)
30	B	GROUND
32	GR	GROUND

Connector No.	E47
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

H.S.

1	2	3	4		7	8						13	15
17	18											29	31	32

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	V	–
3	L	–
4	P	–[Without Gateway]
4	R	–[With Gateway]
7	L	–
8	W	–
13	G	–
15	BR	–
17	W	–
18	BG	–
27	LG	–
28	BR	–
29	W	–
30	Y	–
31	G	–
32	LG	–

Connector No.	E65
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH12FW-NH

H.S.

6F	5F		3F	2F	1F
12F	11F	10F	9F	8F	7F

Terminal No.	Color Of Wire	Signal Name [Specification]
10F	W	–
11F	G	–
12F	W	–
1F	V	–
2F	BR	–
3F	P	–
5F	P	–
6F	L	–
7F	R	–
8F	L	–
9F	L	–

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	–
2	G	–
3	SB	–
4	BR	–
6	R	–
7	W	–
8	V	–
9	BR	–
10	P	–
11	BR	–
12	LG	–
13	GR	–
24	Y	–
25	W	–
31	BR	–
32	B	–
33	B	–
34	V	–
35	P	–
36	W	–
37	SB	–
38	LG	–
40	P	–
41	G	–
42	BR	–
43	BR	–
44	BR	–
46	BG	–
51	Y	–
52	V	–
54	R	–
55	R	–
57	W	–
58	V	–
59	BG	–
62	BG	–
63	BR	–
64	Y	–
65	W	–
70	LG	–
71	W	–
72	B	–
74	L	–
75	W	–
76	BR	–
77	B	–
81	B	–
83	BG	–
84	L	–
85	W	–
86	B	–
88	G	–
91	GR	–
94	GR	–
96	W	–
97	V	–
98	BR	–

Connector No.	M24
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH

H.S.

1	3	4	5	6
7	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
3	W	BATTERY
4	L	CAN2-H
5	B	GND

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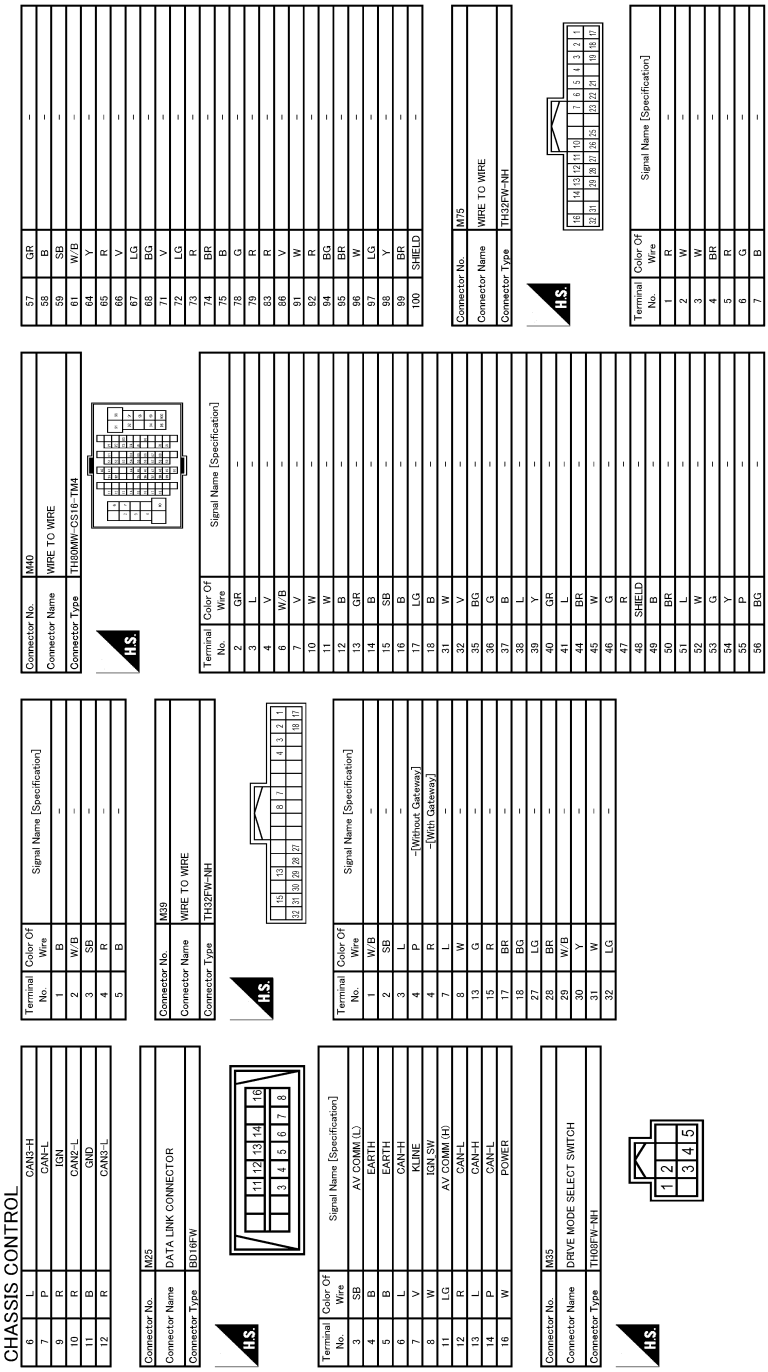

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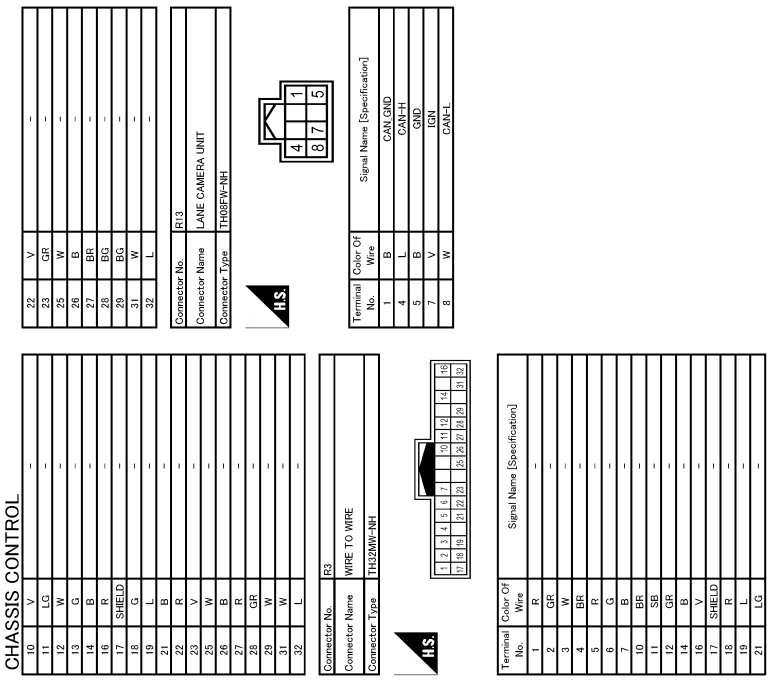

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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009612844

DETAILED FLOW

1.INTERVIEW FROM THE CUSTOMER

Clarify customer complaints before inspection. First of all, perform an interview utilizing DAS-431, "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-418, "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.

3.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC detected?

YES >> Record or print self-diagnosis results and freeze frame data (FFD). GO TO 4.
NO >> INSPECTION END

4.RECHECK THE SYMPTOM

With CONSULT

Perform DTC confirmation procedures for the error-detected system.

NOTE:

If some DTCs are detected at the some time, determine the order for performing the diagnosis based on DAS-421, "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-391, "Precautions for Harness Repair".

5.REPAIR OR REPLACE ERROR-DETECTED PARTS

1. Repair or replace error-detected parts.
2. Reconnect part or connector after repairing or replacing.
3. When DTC is detected, erase self-diagnosis results for “CHASSIS CONTROL”.

>> GO TO 6.

6.FINAL CHECK

With CONSULT

1. Check the reference value for “CHASSIS CONTROL”.
2. Recheck the symptom and check that the symptom is not reproduced on the same conditions.

Is the symptom reproduced?

YES >> GO TO 3.
NO >> INSPECTION END

Diagnostic Work Sheet

INFOID:0000000009612845

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

Interview sheet					
Customer name	MR/MS	Registration number		Initial year registration	
		Vehicle type		VIN	
Storage date		Engine, Traction motor		Mileage	km (Mile)
Symptom		☐ Does not operate ( ) function			
		☐ Warning lamp for ( ) turns ON.			
		☐ Noise ☐ Vibration			
		☐ Other ( )			
First occurrence		☐ Recently ☐ Other ( )			
Frequency of occurrence		☐ Always ☐ Under a certain conditions of ☐ Sometimes (time(s)/day)			
Climate conditions		☐ Irrelevant			
	Weather	☐ Fine ☐ Cloud ☐ Rain ☐Snow ☐ Others ( )			
	Temperature	☐ Hot ☐Warm ☐ Cool ☐ Cold ☐ Temperature [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 conditions					

Interview sheet

Customer name	MR/MS	Registration number		Initial year registration	
		Vehicle type		VIN	
Storage date		Engine, Traction motor		Mileage	km (Mile)

Vehicle equipment

Memo

ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MODULE

Description

INFOID:0000000009612846

When replaced the chassis control module, configuration of the chassis control module is required. Refer to DAS-434, "Work Procedure".

CONFIGURATION (CHASSIS CONTROL MODULE)

Work Procedure

INFOID:0000000009612847

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-542, "Removal and Installation".

2.CHECKING TYPE ID (2)

CONSULT Configuration

1. Select “Before Replace ECU” of “Read/Write Configuration”.
2. 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.

5.REPLACING CHASSIS CONTROL MODULE (1)

Replace the chassis control module. Refer to DAS-542, "Removal and Installation".

>> GO TO 6.

6.WRITING (AUTOMATIC WRITING)

CONSULT Configuration

1. Select “After Replace ECU” of “Re/programming, Configuration” or that of “Read / Write Configuration”.
2. 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)

Replace the chassis control module. Refer to DAS-542, "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.
2. 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-401, "CONSULT Function".

11. PERFORMING SUPPLEMENTARY WORK

1. Perform the self-diagnosis of all systems.
2. Erase self-diagnosis results.

>> End of work.

DTC/CIRCUIT DIAGNOSIS

C1B90-01 DIRECT ADAPTIVE STEERING SYSTEM

DTC Description

INFOID:0000000009612848

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B90-01	DAST SYSTEM (Direct adaptive steering system)	When a malfunction is detected in direct adaptive steering system.

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

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 “C1B90-01” detected?

YES >> Proceed to DAS-436, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612849

1.CHECK DIRECT ADADPTIVE STEERING SYSTEM

With CONSULT

1. Perform self-diagnosis for “EPS/DAST 3”.
2. Perform self-diagnosis for “DAST 1”.
3. Perform self-diagnosis for “DAST 2”.

Is DTC detected?

YES >> Check the DTC.
- “EPS/DAST 3”: Refer to STC-80, "DTC Index".
- “DAST 1”: Refer to STC-95, "DTC Index".
- “DAST 2”: Refer to STC-110, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B90-01”, “U1000-01” or other DTC detected?

YES (“C1B90-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B91-01 CAMERA SYSTEM

DTC Description

INFOID:0000000009612850

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B91-01	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

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 “C1B91-01” detected?

YES >> Proceed to DAS-438, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612851

1.CHECK LANE CAMERA UNIT SYSTEM

With CONSULT

Perform self-diagnosis for “LANE CAMERA”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-573, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B91-01”, “U1000-01”, “U1A4B” or other DTC detected?

YES (“C1B91-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A4B-01”)>>Refer to DAS-536, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B92-01 BRAKE CONTROL SYSTEM

DTC Description

INFOID:0000000009612852

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B92-01	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

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 “C1B92-01” detected?

YES >> Proceed to DAS-440, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612853

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-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B92-01”, “U1000-01” or other DTC detected?

YES (“C1B92-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B93-01 ENGINE SYSTEM

DTC Description

INFOID:0000000009612854

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B93-01	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

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 “C1B93-01” detected?

YES >> Proceed to DAS-442, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612855

1.CHECK ECM SYSTEM

With CONSULT

Perform self-diagnosis for “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-106, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B93-01”, “U1000-01” or other DTC detected?

YES (“C1B93-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B94-01 TRANSMISSION SYSTEM

DTC Description

INFOID:0000000009612856

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B94-01	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

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 “C1B94-01” detected?

YES >> Proceed to DAS-444, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612857

1.CHECK TRANSMISSION SYSTEM

With CONSULT

Perform self-diagnosis for “TRANSMISSION”.

Is DTC detected?

YES >> Check the DTC. Refer to TM-85, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B94-01”, “U1000-01” or other DTC detected?

YES (“C1B94-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B95-01 CONTROL MODULE

DTC Description

INFOID:0000000009612858

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B95-01	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

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 “C1B95-01” detected?

YES >> Proceed to DAS-446, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612859

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 “C1B95-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1B96-01 ADAS SYSTEM

DTC Description

INFOID:0000000009612860

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B96-01	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

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 “C1B96-01” detected?

YES >> Proceed to DAS-447, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612861

1.CHECK ADAS CONTROL UNIT SYSTEM

With CONSULT

Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B96-01”, “U1000-01” or other DTC detected?

YES (“C1B96-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B98-01 ADAS SYSTEM

DTC Description

INFOID:0000000009612862

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B98-01	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

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 “C1B98-01” detected?

YES >> Proceed to DAS-449, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612863

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-44, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1B98-01”, “U1000-01” or other DTC detected?

YES (“C1B98-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1B99-01 CONTROL MODULE

DTC Description

INFOID:0000000009612864

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B99-01	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

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 “C1B99-01” detected?

YES >> Proceed to DAS-451, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612865

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 “C1B99-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BA0-01 ADAS/CHASSIS CONTROL BRAKE SYSTEM

DTC Description

INFOID:0000000009612869

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA0-01	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

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 “C1BA0-01” and/or “C1BA7-01”detected?

YES (“C1BA0-01”)>>Proceed to DAS-452, "Diagnosis Procedure".
YES (“C1BA0-01” and “C1BA7-01”)>>Perform self-diagnosis for “ICC/ADAS”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612870

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-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BA0-01”, “U1000-01” or other DTC detected?

YES (“C1BA0-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BA2-01 STEERING ANGLE SENSOR

DTC Description

INFOID:0000000009612871

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA2-01	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

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 “C1BA2-01” detected?

YES >> Proceed to DAS-454, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612872

1.CHECK STEERING ANGLE SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BA2-01”, “U1000-01” or other DTC detected?

YES (“C1BA2-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BA5-01 ADAS/CHASSIS CONTROL ENGINE SYSTEM

DTC Description

INFOID:0000000009612877

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA5-01	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

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 “C1BA5-01” detected?

YES >> Proceed to DAS-455, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612878

1.CHECK ADAS CONTROL UNIT SYSTEM

With CONSULT

Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BA5-01”, “U1000-01” or other DTC detected?

YES (“C1BA5-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BA6-01 AV SYSTEM

DTC Description

INFOID:0000000009612879

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA6-01	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

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 “C1BA6-01” detected?

YES >> Proceed to DAS-456, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612880

1.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.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 “C1BA6-01”, “U1000-01” or other DTC detected?

YES (“C1BA6-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BA7-01 ACTIVE LANE CONTROL SYSTEM

DTC Description

INFOID:0000000009612881

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA7-01	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

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 “C1BA7-01” detected?

YES >> Proceed to DAS-458, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612882

1.CHECK DIRECT ADAPTIVE SETTRING SYSTEM

With CONSULT
Perform self-diagnosis for “DAST 1”.

Is DTC detected?

YES >> Check the DTC. Refer to STC-95, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BA7-01”, “U1000-01” or other DTC detected?

YES (“C1BA7”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BA9-01 NP RANGE

DTC Description

INFOID:0000000009612885

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA9-01	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

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 “C1BA9-01” detected?

YES >> Proceed to DAS-460, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612886

1.CHECK TRANSMISSION SYSTEM

With CONSULT

Perform self-diagnosis for “TRANSMISSION”.

Is DTC detected?

YES >> Check the DTC. Refer to TM-85, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BA9-01”, “U1000-01” or other DTC detected?

YES (“C1BA9-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BAA-01 GEAR POSITION

DTC Description

INFOID:0000000009612887

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAA-01	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-01” detected?

YES >> Proceed to DAS-462, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612888

1.PERFORM SELF-DIAGNOSIS (CHASSIS CONTROL MODULE) (1)

1. Start the engine.
2. 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-01” detected?

YES >> GO TO 3.
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS (CHASSIS CONTROL MODULE) (2)

1. Select the selector lever “R” position and wait 1 minute or more.
   CAUTION:
   Securely depress the brake pedal, and never move the vehicle.
2. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC “C1BAA-01” 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-85, "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-01”, “U1000-01” or other DTC detected?

YES (“C1BAA-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BAB-01 STOP LAMP SWITCH

DTC Description

INFOID:0000000009612889

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAB-01	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

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 “C1BAB-01” detected?

YES >> Proceed to DAS-464, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612890

1.CHECK STOP LAMP SWITCH SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BAB-01”, “U1000-01” or other DTC detected?

YES (“C1BAB-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BAC-01 OPERATION SWITCH SYSTEM

DTC Description

INFOID:0000000009612891

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAC-01	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

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 “C1BAC-01” detected?

YES >> Proceed to DAS-466, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612892

1.CHECK STEERING SWITCH SYSTEM

With CONSULT

Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BAC-01”, “U1000-01” or other DTC detected?

YES (“C1BAC-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BAD-01 ACCELERATOR PEDAL SYSTEM

DTC Description

INFOID:0000000009612893

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAD-01	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

With CONSULT

1. 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 “C1BAD-01” detected?

YES >> Proceed to DAS-468, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612894

1.CHECK ACCELERATOR PEDAL SYSTEM (ECM)

With CONSULT

Perform self-diagnosis for “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-106, "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.
3. Turn the ignition switch ON.

4. Perform “All DTC Reading”.

Is DTC “C1BAD-01”, “U1000-01” or other DTC detected?

YES (“C1BAD-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BAE-01 ACCELERATOR PEDAL SYSTEM

DTC Description

INFOID:0000000009697177

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAE-01	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

With CONSULT

1. 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-01” detected?

YES >> Proceed to DAS-470, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009697178

1.CHECK DISTANCE CONTROL ASSIST SYSTEM

With CONSULT

Perform self-diagnosis for “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-106, "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.
3. Turn the ignition switch ON.

4. Perform “All DTC Reading”.

Is DTC “C1BAE-01”, “U1000-01” or other DTC detected?

YES (“C1BAE-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BAF-01 BLIND SPOT WARNING SYSTEM

DTC Description

INFOID:0000000009612897

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAF-01	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

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 “C1BAF-01” detected?

YES >> Proceed to DAS-472, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612898

1.CHECK BLIND SPOT WARNING SYSTEM

With CONSULT

Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "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.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC “C1BAF-01”, “U1000-01” or other DTC detected?

YES (“C1BAF-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BB0-01 DRIVER ASSISTANCE BUZZER SYSTEM

DTC Description

INFOID:0000000009612899

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB0-01	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

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 “C1BB0-01” detected?

YES >> Proceed to DAS-474, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612900

1.CHECK DRIVER ASSISTANCE BUZZER SYSTEM

With CONSULT

Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "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.
3. Turn the ignition switch ON.
4. Perform “ALL DTC Reading”.

Is DTC “C1BB0-01”, “U1000-01” or other DTC detected?

YES (“C1BB0-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BB2-01 CONTROL MODULE

DTC Description

INFOID:0000000009612901

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB2-01	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

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 “C1BB2-01” detected?

YES >> Proceed to DAS-475, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612902

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 “C1BB2-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB3-01 CONTROL MODULE

DTC Description

INFOID:0000000009612903

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB3-01	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

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 “C1BB3-01” detected?

YES >> Proceed to DAS-476, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612904

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 “C1BB3-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB4-01 CONTROL MODULE

DTC Description

INFOID:0000000009612905

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB4-01	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

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 “C1BB4-01” detected?

YES >> Proceed to DAS-477, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612906

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 “C1BB4-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB5-01 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000009612907

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB5-01	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

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 “C1BB5-01” detected?

YES >> Proceed to DAS-478, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612908

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector
3. 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.

2. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC “C1BB5-01” detected?

YES >> GO TO 3.
NO >> INSPECTION END

3.CHECKCHASSIS CONTROL MODULE IGNITION POWER SUPPLY (1)

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
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 control module		—	Voltage (Approx.)
Connector	Terminal		
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).
3. 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 control module		—	Continuity
Connector	Terminal		
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.

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 control 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”.

Is DTC “C1BB5-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB6-01 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000009612909

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB6-01	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

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 “C1BB6-01” detected?

YES >> Proceed to DAS-481, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612910

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector
3. 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.
2. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC “C1BB6-01” detected?

YES >> GO TO 3.
NO >> INSPECTION END

3.CHECKCHASSIS CONTROL MODULE IGNITION POWER SUPPLY (1)

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.

3. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
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 control module		—	Voltage (Approx.)
Connector	Terminal		
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).
3. 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 control module		—	Continuity
Connector	Terminal		
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.

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 control 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 (1)

1. Connect chassis control module harness connector.
2. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC “C1BB6-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB7-01 CONTROL MODULE

DTC Description

INFOID:0000000009612911

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB7-01	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

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 “C1BB7-01” detected?

YES >> Proceed to DAS-483, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612912

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 “C1BB7-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB8-01 CONTROL MODULE

DTC Description

INFOID:0000000009612913

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB8-01	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

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 “C1BB8-01” detected?

YES >> Proceed to DAS-484, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612914

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 “C1BB8-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BB9-01 CONTROL MODULE

DTC Description

INFOID:0000000009612915

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB9-01	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

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 “C1BB9-01” detected?

YES >> Proceed to DAS-485, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612916

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 “C1BB9-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BBA-01 CONTROL MODULE

DTC Description

INFOID:0000000009612917

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBA-01	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

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 “C1BBA-01” detected?

YES >> Proceed to DAS-486, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612918

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-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BBB-01 CONTROL MODULE

DTC Description

INFOID:0000000009612919

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBB-01	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

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-01” detected?

YES >> Proceed to DAS-487, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612920

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 “C1BBB-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BBC-01 CONTROL MODULE

DTC Description

INFOID:0000000009612921

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBC-01	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

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 “C1BBC-01” detected?

YES >> Proceed to DAS-488, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612922

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 “C1BBC-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

C1BBD-01 VARIANT CODING

DTC Description

INFOID:0000000009612923

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBD-01	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

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-01” detected?

YES >> Proceed to DAS-489, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612924

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 “C1BBD-01” detected?

YES >> Perform configuration. Refer to DAS-434, "Work Procedure".
NO >> INSPECTION END

C1BC0-01 FRONT RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000009612925

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC0-01	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

With CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. 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 “C1BC0-01” detected?

YES >> Proceed to DAS-490, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612926

1.CHECK FRONT RH WHEEL SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.

4. Perform “All DTC Reading”.

Is DTC “C1BC0-01”, “U1000-01” or other DTC detected?

YES (“C1BC0-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BC1-01 FRONT LEFT WHEEL SENSOR

DTC Description

INFOID:0000000009612927

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC1-01	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

With CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. 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 “C1BC1-01” detected?

YES >> Proceed to DAS-492, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612928

1.CHECK FRONT LH WHEEL SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.

4. Perform “All DTC Reading”.

Is DTC “C1BC1-01”, “U1000-01” or other DTC detected?

YES (“C1BC1-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BC2-01 REAR RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000009612929

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC2-01	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

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. 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 “C1BC2-01” detected?

YES >> Proceed to DAS-494, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612930

1.CHECK REAR RH WHEEL SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BC2-01”, “U1000-01” or other DTC detected?

YES (“C1BC2-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BC3-01 REAR LEFT WHEEL SENSOR

DTC Description

INFOID:0000000009612931

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC3-01	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

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. 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 “C1BC3-01” detected?

YES >> Proceed to DAS-496, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612932

1.CHECK REAR LH WHEEL SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BC3-01”, “U1000-01” or other DTC detected?

YES (“C1BC3-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BC4-01 DECEL G SENSOR

DTC Description

INFOID:0000000009612933

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC4-01	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

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 “C1BC4-01” detected?

YES >> Proceed to DAS-498, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612934

1.CHECK DECEL G SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BC4-01”, “U1000-01” or other DTC detected?

YES (“C1BC4-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

C1BC5-01 SIDE G SENSOR

DTC Description

INFOID:0000000009612935

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC5-01	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

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 “C1BC5-01” detected?

YES >> Proceed to DAS-499, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612936

1.CHECK SIDE G SENSOR SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BC5-01”, “U1000-01” or other DTC detected?

YES (“C1BC5-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BC6-01 PRESSURE SENSOR

DTC Description

INFOID:0000000009612937

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC6-01	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

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 “C1BC6-01” detected?

YES >> Proceed to DAS-501, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612938

1.CHECK BRAKE FLUID PRESSURE SYSTEM

With CONSULT

Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "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.
3. Turn the ignition switch ON.
4. Perform “All DTC Reading”.

Is DTC “C1BC6-01”, “U1000-01” or other DTC detected?

YES (“C1BC6-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1000-01 CAN COMM CIRCUIT

DTC Description

INFOID:0000000009612939

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1000-01	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

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 “U1000-01” detected?

YES >> Proceed to DAS-502, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612940

Proceed to LAN-26, "Trouble Diagnosis Flow Chart".

U1010-01 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000009612943

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1010-01	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

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 “U1010-01” detected?

Y1ES >> Proceed to DAS-503, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612944

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-542, "Removal and Installation".
NO >> Repair or replace error-detected parts.

U1A30-01 DIRECT ADAPTIVE STEERING COMMUNICATION

DTC Description

INFOID:0000000009612945

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A30-01	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

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 “U1A30-01” detected?

YES >> Proceed to DAS-504, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612946

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-43, "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.

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 LAN-16, "Precautions for Harness Repair", 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 LAN-16, "Precautions for Harness Repair", 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 LAN-16, "Precautions for Harness Repair", 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.
5. Perform self-diagnosis for “EPS/DAST 3”.

Is DTC detected?

YES >> Check the DTC. Refer to STC-80, "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.
5. Perform self-diagnosis for “DAST 1”.

Is DTC detected?

YES >> Check the DTC. Refer to STC-95, "DTC Index".
NO >> GO TO 7.

7. 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 “U1000-01”, “U1A30-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A30-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A31-01 DIRECT ADAPTIVE STEERING COMMUNICATION

DTC Description

INFOID:0000000009612947

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A31-01	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

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 “U1A31-01” detected?

YES >> Proceed to DAS-507, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612948

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“DAST 1” other than “OK”>>GO TO 3.

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. 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 LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.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 4.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 4.

4.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.
5. Perform self-diagnosis for “DAST 1”.

Is DTC detected?

YES >> Check the DTC.
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A31-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A31-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A32-01 CAMERA COMMUNICATION

DTC Description

INFOID:0000000009612949

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A32-01	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

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 “U1A32-01” detected?

YES >> Proceed to DAS-509, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612950

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“LANE CAMERA” other than “OK”>>GO TO 3.

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. 8, 11, 7 and 19 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3. CHECK LANE CAMERA UNIT

1. Turn the ignition switch OFF.
2. Disconnect lane camera unit harness connector.
3. Check lane camera harness connector terminals (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 LAN-16, "Precautions for Harness Repair", and GO TO 4.

4. PFEFORM SELF-DIAGNOSIS (LANE CAMERA UNIT)

With CONSULT
1. Connect lane camera harness connector.
2. Erase self-diagnosis result for “LANE CAMERA”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “LANE CAMERA”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-573, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A32-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A32-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A34-01 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000009612951

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A34-01	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

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 “U1A34-01” detected?

YES >> Proceed to DAS-511, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612952

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“ABS” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

1. Turn the ignition switch OFF.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Check ABS actuator and electric unit (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-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

With CONSULT
1. Connect ABS actuator and electric unit (control unit) harness connector.
2. Erase self-diagnosis result for “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A34-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A34-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A35-01 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000009612953

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A35-01	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

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 “U1A35-01” detected?

YES >> Proceed to DAS-513, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612954

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“ABS” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-391, "Precautions for Harness Repair", and GO TO 5.

3. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

1. Turn the ignition switch OFF.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Check ABS actuator and electric unit (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 DAS-391, "Precautions for Harness Repair", and GO TO 4.

4. PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

With CONSULT
1. Connect ABS actuator and electric unit (control unit) harness connector.
2. Erase self-diagnosis result for “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A35-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A35-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A36-01 BCM COMMUNICATION

DTC Description

INFOID:0000000009612955

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A36-01	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

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 “U1A36-01” detected?

YES >> Proceed to DAS-515, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612956

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“BCM” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3. CHECK BCM

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check BCM 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-16, "Precautions for Harness Repair", and GO TO 4.

4. PFEFORM SELF-DIAGNOSIS (BCM)

With CONSULT
1. Connect BCM harness connector.
2. Erase self-diagnosis result for “BCM”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “BCM”.

Is DTC detected?

YES >> Check the DTC. Refer to BCS-62, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A36-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A36-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A39-01 COMBINATION METER COMMUNICATION

DTC Description

INFOID:0000000009612957

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A39-01	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

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 “U1A39-01” detected?

YES >> Proceed to DAS-517, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612958

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“METER/M&A” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3. CHECK COMBINATION METER

1. Turn the ignition switch OFF.
2. Disconnect combination meter harness connector.
3. Check combination meter 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-16, "Precautions for Harness Repair", and GO TO 4.

4. PFEFORM SELF-DIAGNOSIS (COMBINATION METER)

With CONSULT
1. Connect combination meter harness connector.
2. Erase self-diagnosis result for “MATER/M&A”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “METER/M&A”.

Is DTC detected?

YES >> Check the DTC. Refer to MWI-80, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A39-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A39-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A3B-01 TCM COMMUNICATION

DTC Description

INFOID:0000000009612959

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3B-01	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

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 “U1A3B-01” detected?

YES >> Proceed to DAS-519, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612960

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“TRANSMISSION” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", 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 LAN-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (TCM)

With CONSULT
1. Connect TCM harness connector.
2. Erase self-diagnosis result for “TRANSMISSION”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “TRANSMISSION”.

Is DTC detected?

YES >> Check the DTC. Refer to TM-85, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A3B-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A3B-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A3D-01 ADAS COMMUNICATION

DTC Description

INFOID:0000000009612961

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3D-01	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

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-01” detected?

YES >> Proceed to DAS-521, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612962

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“ICC/ADAS” other than “OK”>>GO TO 3.

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 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK ADAS CONTROL UNIT

1. Turn the ignition switch OFF.
2. Disconnect ADAS control unit harness connector.
3. 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 LAN-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (ADAS CONTROL UNIT)

With CONSULT
1. Connect ADAS control unit harness connector.
2. Erase self-diagnosis result for “ICC/ADAS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A3D-01” other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A3D-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A3E-01 ADAS COMMUNICATION

DTC Description

INFOID:0000000009612963

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3E-01	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

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 “U1A3E-01” detected?

YES >> Proceed to DAS-523, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612964

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“ICC/ADAS” other than “OK”>>GO TO 3.

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 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK ADAS CONTROL UNIT

1. 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?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (ADAS CONTROL UNIT)

With CONSULT
1. Connect ADAS control unit harness connector.
2. Erase self-diagnosis result for “ICC/ADAS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ICC/ADAS”.

Is DTC detected?

YES >> Check the DTC. Refer to DAS-44, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A3E-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A3E-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A3F-01 AV COMMUNICATION

DTC Description

INFOID:0000000009612965

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3F-01	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

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-01” detected?

YES >> Proceed to DAS-525, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612966

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“MALTI AV” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK DISPLAY CONTROL UNIT

1. Turn the ignition switch OFF.
2. Disconnect display control unit harness connector.
3. 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-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (DISPLAY CONTROL UNIT)

With CONSULT
1. Connect display control unit harness connector.
2. Erase self-diagnosis result for “MALTI AV”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. 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.
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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A3F-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A3F-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A42-01 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000009612967

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A42-01	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

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 “U1A42-01” detected?

YES >> Proceed to DAS-527, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612968

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“STRG” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK STEERING ANGLE SENSOR

1. Turn the ignition switch OFF.
2. Disconnect steering angle sensor harness connector.
3. Check steering angle sensor 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-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

With CONSULT
1. Connect steering angle sensor harness connector.
2. Erase self-diagnosis result for “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A42-01” other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A42-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A43-01 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000009612969

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A43-01	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

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 “U1A43-01” detected?

YES >> Proceed to DAS-529, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612970

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“STRG” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK STEERING ANGLE SENSOR

1. Turn the ignition switch OFF.
2. Disconnect steering angle sensor harness connector.
3. Check steering angle sensor 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-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

With CONSULT
1. Connect steering angle sensor harness connector.
2. Erase self-diagnosis result for “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-57, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A43-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A43-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A45-01 DRIVER ASSISTANCE BUZZER COMMUNICATION

DTC Description

INFOID:0000000009612971

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A45-01	DR BUZZER COMM (Driver assistance buzzer communication)	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

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 “U1A45-01” detected?

YES >> Proceed to DAS-531, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612972

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-43, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
“ICC/ADAS” other than “OK”>>GO TO 3.

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.

Is the inspection result normal?

YES >> GO TO 6.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 6.

3.CHECK ADAS CONTROL UNIT

1. 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.
4. Check ADAS control unit harness connector terminals (ITS 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-16, "Precautions for Harness Repair", and GO TO 4.

4.CHECK DRIVER ASSISTANCE BUZZER

1. 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?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to LAN-16, "Precautions for Harness Repair", and GO TO 5.

5.PFEFORM ADAS CONTROL UNIT

With CONSULT
1. Connect driver assistance buzzer harness connector.
2. Connect ADAS control unit harness connector.
3. 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-44, "DTC Index".
NO >> GO TO 6.

6.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A45-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A45-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A48-01 ECM COMMUNICATION

DTC Description

INFOID:0000000009612973

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A48-01	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

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 “U1A48-01” detected?

YES >> Proceed to DAS-533, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612974

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. 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-43, "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.
3. 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 LAN-16, "Precautions for Harness Repair", and GO TO 5.

3. CHECK ECM

1. Turn the ignition switch OFF.
2. Disconnect ECM harness connector.
3. 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-16, "Precautions for Harness Repair", and GO TO 4.

4. PFEFORM SELF-DIAGNOSIS (ECM)

With CONSULT
1. Connect ECM harness connector.
2. Erase self-diagnosis result for “ENGINE”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-106, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A48-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A48-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A4A-01 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000009612975

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4A-01	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

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-01” detected?

YES >> Proceed to DAS-535, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612976

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 “U1A4A-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

U1A4B-01 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000009612977

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4B-01	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

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-01” detected?

YES >> Proceed to DAS-536, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612978

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-01” detected?

YES >> Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
NO >> INSPECTION END

U1A4C-01 A/C AUTO AMP. COMMUNICATION

DTC Description

INFOID:0000000009612979

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4C-01	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

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-01” detected?

YES >> Proceed to DAS-537, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009612980

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-43, "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.
3. 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 LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK A/C AUTO AMP.

1. Turn the ignition switch OFF.

2. Disconnect A/C auto amp. harness connector.
3. 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 LAN-16, "Precautions for Harness 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.

5. PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform self-diagnosis for “CHASSIS CONTROL”.

Is DTC “U1000-01”, “U1A4C-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A4C-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

U1A4E-01 ECM COMMUNICATION

DTC Description

INFOID:0000000009729388

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4E-01	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

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-01” detected?

YES >> Proceed to DAS-539, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009729389

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-43, "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.
3. 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 LAN-16, "Precautions for Harness Repair", and GO TO 5.

3.CHECK ECM

1. Turn the ignition switch OFF.
2. Disconnect ECM harness connector.
3. 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-16, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (ECM)

With CONSULT
1. Connect ECM harness connector.
2. Erase self-diagnosis result for “ENGINE”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform self-diagnosis for “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-106, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. 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.
5. Perform “All DTC Reading”.

Is DTC “U1000-01”, “U1A4E-01” or other DTC detected?

YES (“U1000-01”)>>Refer to LAN-26, "Trouble Diagnosis Flow Chart".
YES (“U1A4E-01”)>>Replace the chassis control module. Refer to DAS-542, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000009612981

1.CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage
Connector	Terminal		
E22	10	Ground	Approx. 0 V

4. Turn the ignition switch ON
   CAUTION:
   Never start the engine.
5. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage
Connector	Terminal		
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.
2. Check the 10A fuse (#12).
3. 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.

3.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

Check the continuity between chassis control module harness connector and ground.

Chassis control module		—	Continuity
Connector	Terminal		
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?

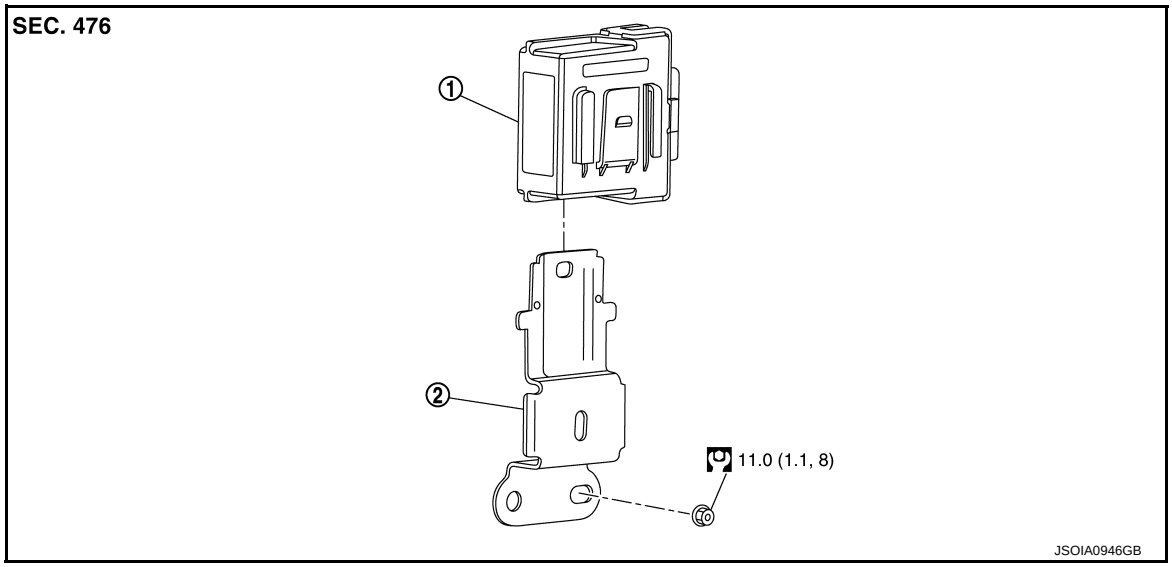
YES >> INSPECTION END
NO >> Repair or replace error-detected parts.

REMOVAL AND INSTALLATION

CHASSIS CONTROL MODULE

Exploded View

INFOID:0000000009612982



① Chassis control module ② Bracket

: N·m (kg-m, ft-lb)

Removal and Installation

INFOID:0000000009612983

REMOVAL

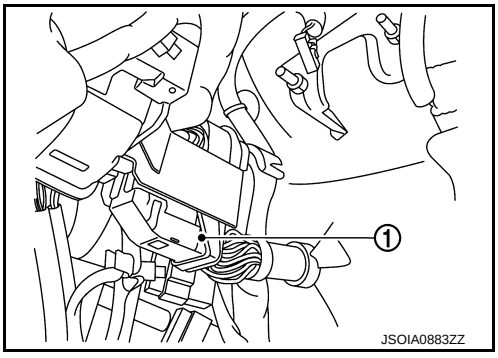
CAUTION:

When replacing chassis control module, configuration of chassis control module is required. Refer to DAS-434, "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.

1. Remove the parking brake pedal assembly. Refer to PB-8, "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 DAS-434, "Work Procedure".
- After replace the chassis control module, depress brake pedal and check that the stop lamp turns ON.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009785317

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.

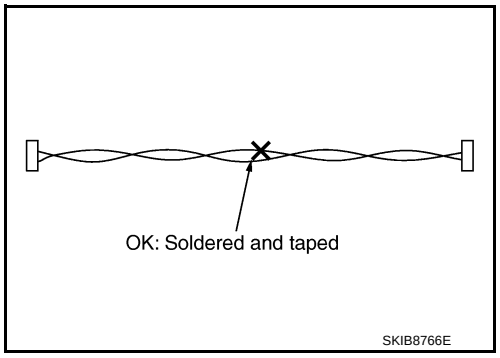
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious 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 Harness Repair

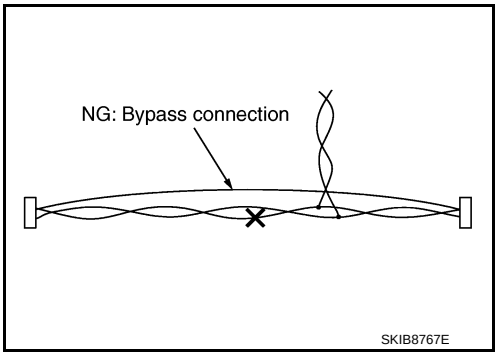
INFOID:0000000009725574

Twisted pair line is used for communication lines. Be careful when repairing communication lines.

- 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:0000000009725575

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.**

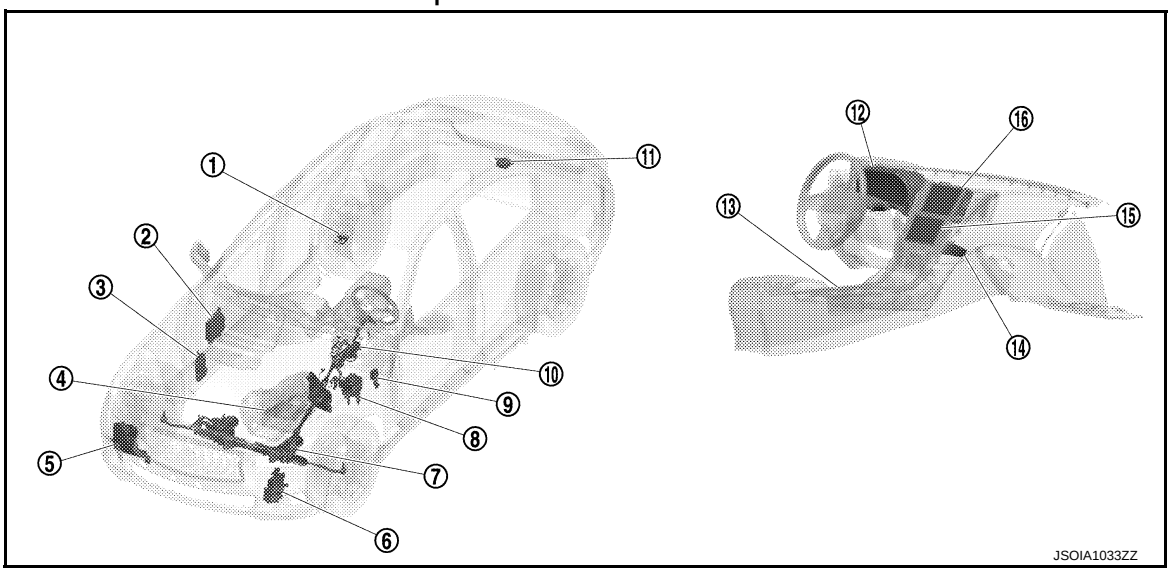
SYSTEM DESCRIPTION

COMPONENT PARTS

ACTIVE LANE CONTROL

ACTIVE LANE CONTROL : Component Parts Location

INFOID:0000000009725576



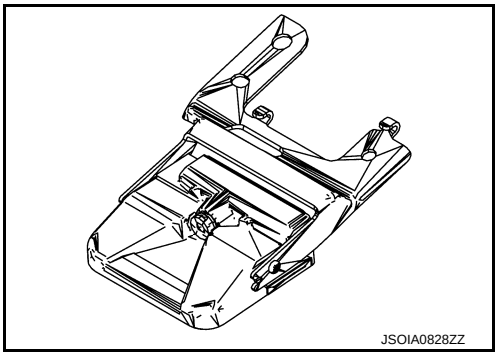
No.	Component	Function
①	Lane camera unit	Refer to DAS-546, "Lane Camera Unit".
②	Steering force control module	• Direct Adaptive Steering is controlled by three control modules of steering force control module, steering angle main control module and steering angle sub control module. • Receives steering reaction force request signal and controls the steering reaction force. • For the details of the location, refer to STC-35, "Component Parts Location".
③	BCM	• 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	TCM	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-35, "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-35, "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-9, "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 DAS-393, "Component Parts Location".

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 DAS-165, "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 communication. • For the details of the location, refer to HAC-5, "AUTOMATIC AIR CONDITIONING 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 AV-14, "Component Parts Location".

Lane Camera Unit

INFOID:0000000009725577

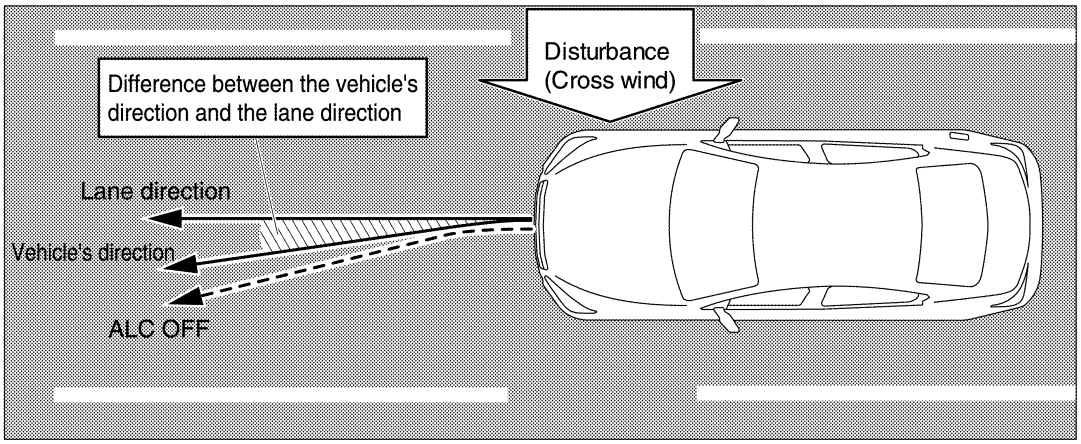
- Lane camera unit detects the lane marker in travel lane and located above the inside mirror.
- Lane camera unit transmits the detected lane condition signal to chassis control module via chassis communication
- Lane camera unit is equipped with the diagnosis function that performs the diagnosis with CONSULT.



SYSTEM
ACTIVE LANE CONTROL
ACTIVE LANE CONTROL : System Description

INFOID:0000000009725578

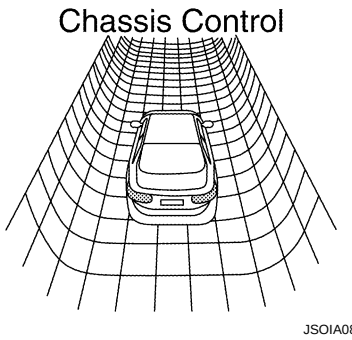
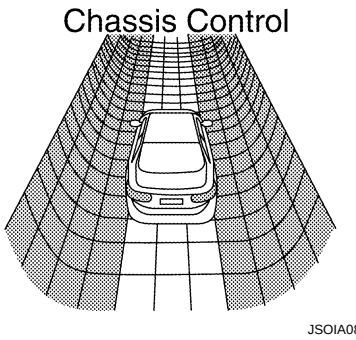
OUTLINE
- Active Lane Control enables the driver to make fewer steering corrections on freeways.
- Active Lane Control slightly corrects front tire angles and steering wheel torque to reduce the difference between the vehicle's direction and the lane direction which is detected by using the lane camera unit located above the inside mirror.



JSOIA1068GB

NOTE:
- When the vehicle approaches to the traffic lane, the vehicle is controlled by LDP system. Refer to DAS-178, "LDP : System Description".
- For the details of "Direct Adaptive Steering", Refer to STC-40, "DIRECT ADAPTIVE STEERING : System Description".
- Active Trace Control can be set to ON (enabled) or OFF (disabled). Refer to DAS-555, "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.

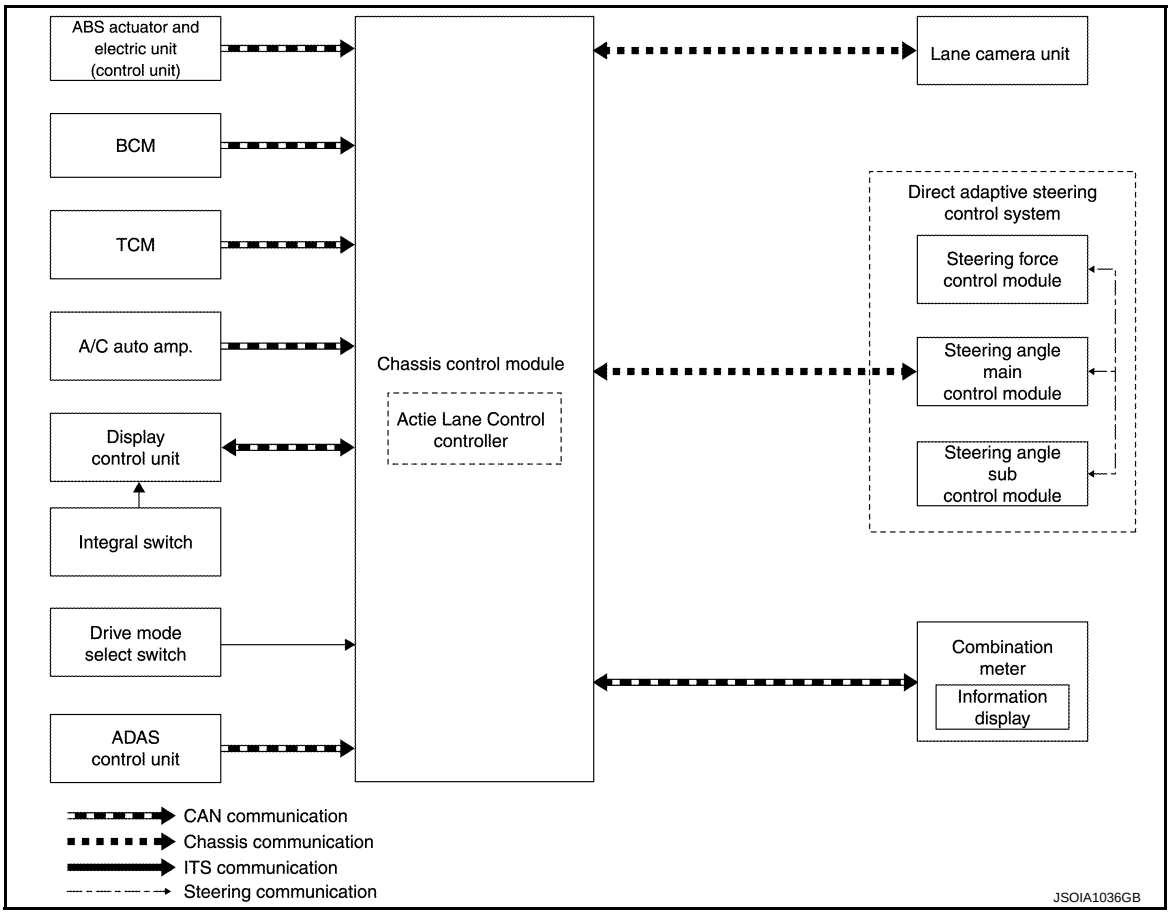
Active Lane Control is turned ON	Active Lane Control is operational or is operating
 JSOIA0809ZZ	 JSOIA0810ZZ

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 marker is detecting. • Driving in lane	Both side marker is 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 Trace 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 Trace Control may not function properly, depending on the situation. Refer to DAS-556, "Precautions for Active Lane Control".

SYSTEM DIAGRAM

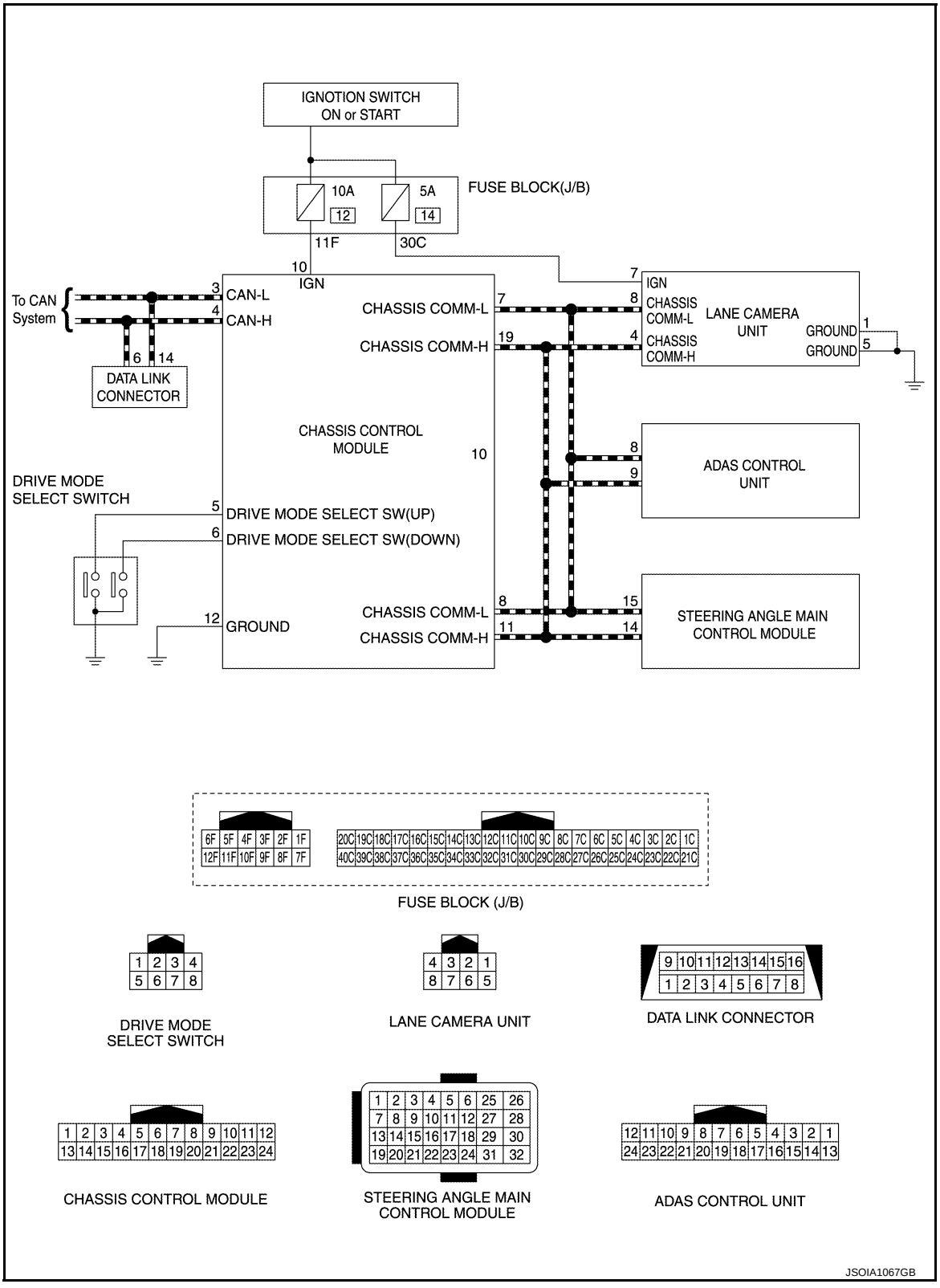


INPUT/OUTPUT SIGNAL ITEM

Reception unit	Transmit unit	Signal name		Description
Chassis control module	Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
			Lane camera unit condition signal	Receives lane camera unit condition
	Steering angle main control module	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
			Steering force actuator status signal	Receives torque state of steering force actuator.
			ALC permission signal	Receives a permission state of the ALC.
	ABS actuator and electric unit (control unit)	CAN communication	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
			VDC operation signal	Receives an operational state of VDC
			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
			Stop lamp switch	Receives stop lamp switch state
	BCM	CAN communication	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 communication	Shift position signal	Receives a selector lever position
	A/C auto amp.	CAN communication	Ambient temperature signal	Receives an ambient temperature
	Display control unit	CAN communication	System selection signal	Receives a selection state of each item in “Driver Assistance”
	ADAS control unit	Chassis communication	LDP ON signal	Receives an ON/OFF state of LDP
	Drive mode select switch	Hard wire	Drive mode select switch signal	Detects the snow mode selection.
Steering angle main control module	Chassis control module	Chassis communication	Steering angle request signal	Transmits steering angle request signal
			Steering reaction force request signal	Transmits steering reaction force request signal
Lane camera unit		Chassis communication	Vehicle speed signal	Receives a vehicle speed calculated by the chassis control module
			Snow mode signal	Receives a selection state of each item in “Driver Assistance”
			Turn indicator signal	Receives a turn indicator signal received from BCM
Combination meter		CAN communication	Master warning signal	Transmits master warning signal to indicate.
			ALC system display signal	Transmits a signal to display a state of the system on the information display

ACTIVE LANE CONTROL : Circuit Diagram

INFOID:0000000009725579



ACTIVE LANE CONTROL : Fail-Safe (Chassis Control Module)

INFOID:0000000009785321

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
C1B90-01 C1B91-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B92-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-01 C1B94-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
C1B95-01	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
C1B96-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function
C1B98-01	Normal control
C1B99-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BA0-01 C1BA2-01	The following functions are suspended. • Active trace control function
C1BA5-01	Normal control
C1BA6-01	The following functions are suspended. • Infiniti InTuition function
C1BA7-01	The following functions are suspended. • Active lane control function
C1BA9-01 C1BAA-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
C1BAB-01	The following functions are suspended. • Active trace control function
C1BAC-01 C1BAD-01 C1BAE-01	The following functions are suspended. • LDP function • Blind spot intervention function
C1BAF-01	The following functions are suspended. • Blind spot intervention function
C1BB0-01	Normal control

DTC	Vehicle condition
C1BB2-01 C1BB3-01 C1BB4-01 C1BB5-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB6-01	Normal control
C1BB7-01 C1BB8-01 C1BB9-01 C1BBA-01 C1BBB-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BBC-01	Normal control
C1BBD-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BC0-01 C1BC1-01	The following functions are suspended. • Active trace control function • Active lane control function
C1BC2-01 C1BC3-01	The following functions are suspended. • Active trace control function
C1BC4-01	Normal control
C1BC5-01 C1BC6-01 U1000-01	The following functions are suspended. • Active trace control function
U1010-01	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-01 U1A31-01 U1A32-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A34-01 U1A35-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A36-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function

DTC	Vehicle condition
U1A3B-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A3D-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-01	Normal control
U1A3F-01	The following functions are suspended. • Infiniti InTuition function
U1A42-01	The following functions are suspended. • Active trace control function
U1A43-01	
U1A45-01	The following functions are suspended. • Active lane control function
U1A48-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
U1A4B-01	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-01	Normal control
U1A4E-01	The following functions are suspended. • Active trace control function

OPERATION

ACTIVE LANE CONTROL

ACTIVE LANE CONTROL : Menu Displayed by Pressing Each Switch

INFOID:0000000009725580

DESCRIPTION

Active Trace 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

NOTE:

- 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”.
3. 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:0000000009725581

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

- 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 in certain roads, weather or driving conditions.
- Using Active Lane Control 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.
- When Active Lane Control is operating, avoid excessive or sudden steering maneuvers. Otherwise, you could lose control of the vehicle.
- 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 function properly under the following conditions, and do not use Active Lane Control:

- During bad weather (rain, fog, snow, wind, 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 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 other vehicle in front of the vehicle, 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 in or exiting from tollgates.
- When driving on roads with widening or narrowing lane width.

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000009725582

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-573, "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

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-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

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.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000009785319

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-422, "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.

Item name	Indication/Unit	Display item
SHIFT POSITION	Off / P / R / N / D (A) / S / L / B / 1– 6 / M 1 –M 8 / A 1 – A 6	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.

Item [Unit]		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 / M 1 –M 8 / A 1 – A 6]	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.

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.

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 CANCEL	[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.

Test item	Operation	Description
COMMAND STEERING ANGLE	Start	Transmits the steering command value 0 deg → 0.00349 deg (hold it for approximately 2 seconds) → 0 deg (hold it for approximately 2 seconds) → 0.00349 deg (hold it for approximately 2 seconds) → 0 deg to the steering force control module.
COMMAND ST WHL FORCE	Start	Transmits the steering reaction force command value 0 N → 0.6 N (hold it for approximately 2 seconds) → 0 N (hold it for approximately 2 seconds)→ 0.6 N (hold it for approximately 2 seconds) → 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.
	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.
	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.
	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.
RR TIRE DISP	On	Displays the rear RH tire on the information display in the combination meter.
	Off	Does not display the rear RH tire on the information display in the combination meter.
TURN DISP	NO DISP	Does not display the turning status on the information display in the combination meter.
	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.
ALC LEVEL	LEVEL 1	Displays Active Lane Control corresponding to the selected level on the information display in the combination meter.
	LEVEL 2	
	LEVEL 3	
	LEVEL 4	
ALC SETTING	On	Displays Active Lane Control active status on the information display in the combination meter.
	Off	Displays Active Lane Control inactive status on the information display in the combination meter.
ATC 1 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATC 2 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.

Test item	Operation	Description
ATC 4 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	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

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.

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.

ECU DIAGNOSIS INFORMATION

LANE CAMERA UNIT

Reference Value

INFOID:0000000009725584

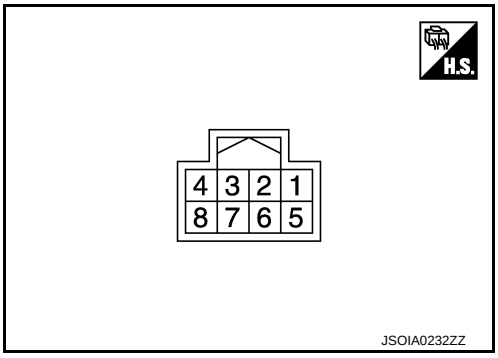
VALUES ON THE DIAGNOSIS TOOL

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
	When the temperature around the lane camera unit is high	High
VHCL SPD SE	While driving	Approximately equivalent to speedometer reading
TURN SIGNAL	Turn signal lamp LH and RH blinking	LH/RH
	Turn signal lamp LH blinking	LH
	Turn signal lamp RH blinking	RH
	Turn signal lamps OFF	Off
LANE DETCT LH	Left side lane marker is detected	On
	Left side lane marker is not detected	Off
LANE DETCT RH	Right side lane marker is detected	On
	Right side lane marker is not detected	Off
CROSS LANE LH	The vehicle is crossing left side lane marker	On
	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
WARN LANE RH	The vehicle is traveling on the right side lane marker.	On
	The vehicle is traveling the center of traffic lane.	Off
VALID POS LH	Lateral position for left side lane marker is valid	VLD
	Lateral position for left side lane marker is invalid.	INVLD
VALID POS RH	Lateral position for right side lane marker is valid.	VLD
	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.

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
	Camera aiming is not adjusted	NG
AIMING RESULT	Camera aiming is completed	OK
	Camera aiming is not completed	NOK
AIM NG REASON	No target is detected.	TARGET
	Yaw angle beyond the allowable range is detected.	YAW
	Roll angle beyond the allowable range is detected.	ROLL
	Pitch angle beyond the allowable range is detected.	PITCH
	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	—

Monitor Item	Condition	Value/Status
ROM WRITING COUNT	**NOTE:** The item is indicated, but not used	—
CAMERA START	Lane camera unit is starting.	START
	Lane camera unit starting is completed.	COMP
GIVE UP	Lane marker can be detected.	OK
	Lane marker can not be detected.	NG
READY	Operating conditions are not satisfied.	NOT
	Operating conditions are satisfied.	COMP
MARK TYPE LH	Lane marker is not detected	NONE
	Solid line is detected.	SOLID
	Dashed line is detected.	DASHED
	Bott's dots is detected.	BOTT's
	Fork road (bifurcation) is detected.	FORK
	Slow down area is detected.	SLOW
	Tar strips is detected.	TAR
	Irregularity road is detected.	IRGLTY
MARK TYPE RH	Lane marker is not detected	NONE
	Solid line is detected.	SOLID
	Dashed line is detected.	DASHED
	Bott's dots is detected.	BOTT's
	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

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	–	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0 V
4 (L)		Chassis communication-H	—	—	—
5 (B)		Ground	—	—	0 V
7 (V)		Ignition power supply	Input	Ignition switch	12 V – 14 V
8 (W)		Chassis communication-L	—	—	—

Fail-safe (Lane Camera Unit)

INFOID:0000000009725585

FAIL-SAFE CONTROL BY DTC

If lane camera unit detects any DTC, following functions are suspended. And any warning is indicated on the combination meter.

Function	Indication
Active Lane Control	Chassis control warning is displayed
Lane Departure Warning (LDW)	LDW warning display (yellow) is displayed
Lane Departure Prevention (LDP)	LDP warning display (yellow) is displayed and a beep is sounded
Blind Spot Intervention	BSW/BSI warning display (yellow) is displayed and a beep is sounded

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

- If the vehicle is parked in direct sunlight under high temperature conditions, following functions are suspended. And camera high temperature message is indicated on the combination meter.
- When interior temperature is reduced, and system warning is stopped. Then the system can be operated again by dynamic driver assistance switch ON.

Function	Indication
Active Lane Control	—
Lane Departure Warning (LDW)	Camera high temperature message is displayed. Then LDW warning display (yellow) is blinked
Lane Departure Prevention (LDP)	Camera high temperature message is displayed. Then LDP warning display (yellow) is blinked
Blind Spot Intervention	Camera high temperature message is displayed. Then Blind Spot Intervention warning display (yellow) is blinked

DTC Inspection Priority Chart

INFOID:0000000009725586

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	• C1B01: CAM AIMING INCMP • C1B03: ABNRML TEMP DETECT
3	C1B00: CAMERA UNIT MALF

DTC Index

INFOID:0000000009725587

×: 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-613
C1B01	CAM AIMING INCMP	ON	ON	ON	ON	×	×	×	DAS-614
C1B03	ABNRML TEMP DETECT	—	Message ↓ Blink	Message ↓ OFF	Message ↓ OFF	×	×	×	DAS-615
U1000	CAN COMM CIRCUIT	ON	ON	ON	ON	×	×	×	DAS-611
U1010	CONTROL UNIT (CAN)	ON	ON	ON	ON	×	×	×	DAS-612

CHASSIS CONTROL MODULE

Reference Value

INFOID:0000000009729282

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
CONTROL MODULE MALF	When chassis control module is normal	Off
	When chassis control module malfunction is detected	On
CAN DIAG STATUS	When diagnosis of CAN communication malfunction is detected	Off
	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 SPEED	Vehicle Stopped	0 km/h (0 MPH)
	Driving*	Almost same reading as speedometer (within ±10%)
FR WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
FL WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
RR WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
RL WHEEL SPEED	Vehicle stopped	0 rpm
	Driving*	Increases according to vehicle speed
STEERING ANG SENSOR	When driving straight	0±3.5 deg
	When steering wheel is steered to RH by 90°	Approx. +90 deg
	When steering wheel is steered to LH by 90°	Approx. –90 deg
DECEL G SENSOR	Vehicle stopped	Approx. 0 G
	When during acceleration	Positive value
	When during deceleration	Negative value
SIDE G SENSOR	Vehicle stopped	Approx. 0 G
	When right turn	Negative value
	When left turn	Positive value
YAW RATE SENSOR	Vehicle stopped	Approx. 0 deg/s
	When right turn	Negative value
	When left turn	Positive value
ACCELE PEDAL POSITION	When accelerator pedal is released	0%
	When accelerator pedal is depressed	0 – 100%

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
BRAKE SWITCH 2	When brake pedal is not depressed	Off
	When brake pedal is depressed	On
BRAKE SWITCH 1	When brake pedal is depressed	Off
	When brake pedal is not depressed	On
PRESS SENSOR	When brake pedal is not depressed	Approx. 0 bar
	when brake pedal is depressed	0 – 255 bar
ABS	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
ABS MALF	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
EBD	When EBD function is normal	NORMAL
	When EBD function malfunction is detected	ABNOR
ACCELE PEDAL MALF	When accelerator pedal is normal	NORMAL
	When accelerator pedal malfunction is detected	ABNOR
TCS	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
TCS MALF	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
VDC	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC MALF	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC OFF SWITCH	When VDC OFF switch is OFF	Off
	When VDC OFF switch is ON	On
PARKING BRAKE	When parking brake is inactive	Off
	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

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
	When correction is not permitted (system requirement)	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop	REQ
	When correction is not requested to stop	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ
	When prohibition of correction is not requested	NO REQ
DRIVE MODE SELECTOR	When drive mode select switch is “STANDARD” mode	STD
	When drive mode select switch is “SPORT” mode	SPORT
	When drive mode select switch is “SNOW” mode	SNOW
	When drive mode select switch is “ECO” mode	ECO
	When drive mode select switch is “PERSONAL” mode	PERSO
	When drive mode select switch is not select	NOT SET
LOG-IN PERMIS	When log-in is possible	NO PER
	When log-in is not possible	PERMIS
I-KEY LINK	When Intelligent Key is not linked	Off
	When Intelligent Key is linked	On
USER	When logged in with “USER A” Intelligent Key	USER A
	When logged in with “USER B” Intelligent Key	USER B
	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

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
	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
ALC SETTING	When Active Lane Control setting with drive mode select switch is “OFF”	Off
	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
	When Active Lane Control setting with drive mode select switch is “ON”	On
COMBI METER	When drive mode select switch is “STANDARD” mode	STD
	When drive mode select switch is “SNOW” mode	SNOW
	When drive mode select switch is “PERSONAL” mode	PERSO
	When drive mode select switch is “SPORT” mode	SPORT
	When drive mode select switch is “ECO” mode	ECO
ATC 1	When active trace control function is inactive	Off
	When active trace control function is active	On
ATC 2	When active trace control function is inactive	Off
	When active trace control function is active	On
ATC 4	When active trace control function is inactive	Off
	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
	When the front LH tire is displayed on the information display in the combination meter	1
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter	DEF
	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
	When the rear LH tire is displayed on the information display in the combination meter	1

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
	When the rear RH tire is displayed on the information display in the combination meter	1
TURN DISP	When the straight-ahead status is displayed on the information display in the combination meter	N STEER
	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
ALC LEVEL	When Active Lane Control is turned ON.	0
	When Active Lane Control is operational or is operating.	1 – 4
ALC STATUS	When Active Lane Control is OFF	INACT
	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
	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
	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
	When Active Lane Control is ON	On
LANE MARKER (LH)	When left side lane marker is not detected.	NOT
	when left side lane marker is detected.	DETECT
LANE MARKER (RH)	When right side lane marker is not detected.	NOT
	When right side lane marker is detected.	DETECT
TURN SIGNAL (LH)	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	On
TURN SIGNAL (RH)	When turn signal lamps is OFF	Off
	When turn signal lamp RH is blinking	On
TURN SIGNAL SWITCH	When turn signal lamps is OFF	Off
	When turn signal lamp LH is blinking	LEFT
	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
	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

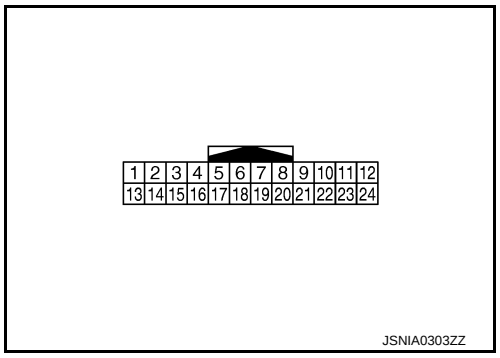
Monitor item	Condition	Reference values in normal operation
COMMAND ST ANG	When the Active Lane Control is inactive or when the Active Lane Control is active and the vehicle is driving straight around the center of the lane	Approx. 0 rad
	Active Lane Control is active with yaw angle formed on the left 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
ST PINION ANG	When driving straight	Approx. 0 rad
	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
	When steering wheel is steered	MAX ± 32 N·m
COMMAND ST WHL FORCE	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
	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
	When LDW function malfunction is detected	MALF
LDP DISP	When LDP function is ON	On
	When LDP function malfunction is detected	MALF
BSI DISP	When blind spot intervention function is ON	On
	When blind spot intervention function malfunction is detected	MALF
ST SWITCH COND	When steering switch is normal	OK
	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
	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
	When forward emergency brake function is active	On
DR BUZZER STATUS	Displayed but not used	—
LDW COND	When LDW function is ON	On
	When LDW function malfunction is detected	MALF

Monitor item	Condition	Reference values in normal operation
LDP COND	When LDP function is ON	On
	When LDP function malfunction is detected	MALF
BSI COND	When blind spot intervention function is ON	On
	When blind spot intervention function malfunction is detected	MALF
LDP BRAKE CANCEL	When not cancel	NONE
	When slippery road	SLIP
	When drive mode select switch is “SNOW” mode	SNOW
	When VDC OFF switch is OFF	VDC OF
BSI BRAKE CANCEL	When not cancel	NONE
	When slippery road	SLIP
	When drive mode select switch is “SNOW” mode	SNOW
	When VDC OFF switch is OFF	VDC OF
CAMERA COND	When Lane camera unit is normal	NORMAL
	When Lane camera unit malfunction is detected.	ABNOR
CAMERA TEMP COND	When the temperature around lane camera unit is normal	NORMAL
	When the temperature around the lane camera unit is high	ABNOR
CAMERA COMM COND	When communication between chassis control module and lane camera unit is normal	NORMAL
	When communication between chassis control module and lane camera unit malfunction is detected	ABNOR
CAMERA AIMING	When lane camera aiming is completed	COMP
	When lane camera aiming is not completed	INCOMP
CAMERA HIGH TEMP (LDW)	When the temperature around lane camera unit is normal. (LDW ON)	NORMAL
	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
	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
	When the temperature around the lane camera unit is high. (Blind spot intervention ON)	ABNOR
SIDE RADAR BLOCK CANCEL	When the side radar is normal	NORMAL
	Side radar is blocked and temporarily deactivated.	BLOCK
BSI LAMP REQ (LH)	When blind spot intervention function (LH) is inactive	Off
	When blind spot intervention function (LH) is active	On

Monitor item	Condition	Reference values in normal operation
BSI LAMP REQ (RH)	When blind spot intervention function (RH) is inactive	Off
	When blind spot intervention function (RH) is active	On
LANE DEPARTURE DISP (LH)	When not deviating the LH side lane	NO DISP
	When deviating the LH side lane	DEVIAT
LANE DEPARTURE DISP (RH)	When not deviating the RH side lane	NO DISP
	When deviating the RH side lane	DEVIAT
LDP/BSI ACTIVE	When LDP function and blind spot intervention function are inactive	Off
	When LDP function or blind spot intervention function are active	On
ADAS COND	When diagnosis of ADAS control unit is normal	NORMAL
	When diagnosis of ADAS control unit malfunction is detected	ABNOR
DR BUZZER COND	When driver assistance buzzer is normal	NORMAL
	when driver assistance buzzer malfunction is detected	ABNOR
OUTSIDE TEMP	Ignition switch ON	(–40°C) – (+72°C)
WIPER STATUS	When front wiper is inactive	Off
	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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
3 (R)*1 (P)*2	Ground	CAN-L	—	—	—	—
4 (L)		CAN-H	—	—	—	—
5 (V)		DRIVE MODE SELECT SWITCH (UP)	Input	Ignition switch ON	Up switch is not pressed	6.4 – 16 V
					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
					Down switch is pressed	0 V
7 (W)		CHASSIS COMM-L	—	—	—	—
8 (W)		CHASSIS COMM-L	—	—	—	—
10 (G)		IGN	Input	Ignition switch ON		6.4 – 16 V
11 (L)		CHASSIS COMM-H	—	—	—	—
12 (B)		GROUND	—	Ignition switch ON	—	0 V
19 (L)		CHASSIS COMM-H	—	—	—	—

*1: With Gateway
*2: Without Gateway

Fail-Safe (Chassis Control Module)

INFOID:0000000009729283

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
C1B90-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B91-01	
C1B92-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
C1B93-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
C1B94-01	

DTC	Vehicle condition
C1B95-01	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
C1B96-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function • Intelligent cruise control function
C1B98-01	Normal control
C1B99-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BA0-01	The following functions are suspended. • Active trace control function
C1BA2-01	
C1BA5-01	Normal control
C1BA6-01	The following functions are suspended. • Infiniti InTuition function
C1BA7-01	The following functions are suspended. • Active lane control function
C1BA9-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
C1BAA-01	
C1BAB-01	The following functions are suspended. • Active trace control function
C1BAC-01	The following functions are suspended. • LDP function • Blind spot intervention function
C1BAD-01	
C1BAE-01	
C1BAF-01	The following functions are suspended. • Blind spot intervention function
C1BB0-01	Normal control
C1BB2-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB3-01	
C1BB4-01	
C1BB5-01	
C1BB6-01	Normal control
C1BB7-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BB8-01	
C1BB9-01	
C1BBA-01	
C1BBB-01	
C1BBC-01	Normal control

DTC	Vehicle condition
C1BBD-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
C1BC0-01	The following functions are suspended. • Active trace control function • Active lane control function
C1BC1-01	
C1BC2-01	The following functions are suspended. • Active trace control function
C1BC3-01	
C1BC4-01	Normal control
C1BC5-01	The following functions are suspended. • Active trace control function
C1BC6-01	
U1000-01	
U1010-01	The following functions are suspended. • Active trace control function • Active lane control function
U1A30-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A31-01	
U1A32-01	
U1A34-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A35-01	
U1A36-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A39-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3B-01	The following functions are suspended. • Active trace control function • Active lane control function • LDW function • LDP function • Blind spot intervention function
U1A3D-01	The following functions are suspended. • LDW function • LDP function • Blind spot intervention function
U1A3E-01	Normal control
U1A3F-01	The following functions are suspended. • Infiniti InTuition function
U1A42-01	The following functions are suspended. • Active trace control function
U1A43-01	
U1A45-01	The following functions are suspended. • Active lane control function

DTC	Vehicle condition
U1A48-01	The following functions are suspended. • Active trace control function • LDW function • LDP function • Blind spot intervention function
U1A4A-01	The following functions are suspended. • Active lane control function • LDW function • LDP function • Blind spot intervention function • Infiniti InTuition function
U1A4B-01	The following functions are suspended. • Active trace control function • Active lane control function • Infiniti InTuition function
U1A4C-01	Normal control
U1A4E-01	The following functions are suspended. • Active trace control function

DTC Inspection Priority Chart

INFOID:0000000009729284

When multiple DTCs are displayed simultaneously, check them one by one according to the following priority list.

Priority	Detected item (DTC)
1	• U1000-01 CAN COMM CIRCUIT • U1010-01 CONTROL UNIT (CAN)
2	• U1A30-01 DAST COMM • U1A31-01 DAST COMM • U1A32-01 CAMERA COMM • U1A34-01 BRAKE CONTROL COMM • U1A35-01 BRAKE CONTROL COMM • U1A36-01 BCM/IPDM COMM • U1A39-01 COMBINATION METER COMM • U1A3B-01 TCM COMM • U1A3D-01 ADAS COMM • U1A3E-01 ADAS COMM • U1A3F-01 AV COMM • U1A42-01 STEERING ANGLE SENSOR COMM • U1A43-01 STEERING ANGLE SENSOR COMM • U1A45-01 DR BUZZER COMM • U1A48-01 ECM/HPCM COMM • U1A4A-01 CONTROL MODULE (CAN) • U1A4B-01 CONTROL MODULE (CAN) • U1A4C-01 A/C AUTO AMP. COMM • U1A4E-01 ECM/HPCM COMM
3	• C1BBD-01 VARIANT CODING
4	• C1B98-01 ADAS SYSTEM

Priority	Detected item (DTC)
5	• C1B90-01 DAST SYSTEM • C1B91-01 CAMERA SYSTEM • C1B92-01 BRAKE CONTROL SYSTEM • C1B93-01 ENGINE/HEV SYSTEM • C1B94-01 TM SYSTEM • C1B96-01 ADAS SYSTEM • C1BA0-01 ADAS/CHASSIS CTRL BRAKE SYS • C1BA2-01 STEERING ANGLE SENSOR • C1BA5-01 ADAS/CHASSIS CTRL ENGINE SYS • C1BA6-01 AV SYSTEM • C1BA7-01 ALC SYSTEM • C1BA9-01 NP RANGE • C1BAA-01 GEAR POSITION • C1BAB-01 STOP LAMP SW • C1BAC-01 OPERATION SW CIRC • C1BAD-01 ACCELERATER PEDAL • C1BAE-01 ACCELERATER PEDAL • C1BAF-01 BSW SYSTEM • C1BB0-01 DR BUZZER SYSTEM • C1BC0-01 FR WHEEL SENSOR • C1BC1-01 FL WHEEL SENSOR • C1BC2-01 RR WHEEL SENSOR • C1BC3-01 RL WHEEL SENSOR • C1BC4-01 DECEL G SENSOR • C1BC5-01 SIDE G SENSOR • C1BC6-01 PRESSURE SENSOR
6	• C1BB5-01 IGN POWER SUPPLY • C1BB6-01 IGN POWER SUPPLY
7	• C1B95-01 CONTROL MODULE • C1B99-01 CONTROL MODULE • C1BB2-01 CONTROL MODULE • C1BB3-01 CONTROL MODULE • C1BB4-01 CONTROL MODULE • C1BB7-01 CONTROL MODULE • C1BB8-01 CONTROL MODULE • C1BB9-01 CONTROL MODULE • C1BBA-01 CONTROL MODULE • C1BBB-01 CONTROL MODULE • C1BBC-01 CONTROL MODULE

DTC Index

INFOID:0000000009729285

DTC	Display item	Refer to
C1B90-01	DAST SYSTEM	DAS-436, "DTC Description"
C1B91-01	CAMERA SYSTEM	DAS-438, "DTC Description"
C1B92-01	BRAKE CONTROL SYSTEM	DAS-440, "DTC Description"
C1B93-01	ENGINE/HEV SYSTEM	DAS-442, "DTC Description"
C1B94-01	TM SYSTEM	DAS-444, "DTC Description"
C1B95-01	CONTROL MODULE	DAS-446, "DTC Description"
C1B96-01	ADAS SYSTEM	DAS-447, "DTC Description"
C1B98-01	ADAS SYSTEM	DAS-449, "DTC Description"
C1B99-01	CONTROL NODULE	DAS-451, "DTC Description"
C1BA0-01	ADAS/CHASSIS CTRL BRAKE SYS	DAS-452, "DTC Description"
C1BA2-01	STEERING ANGLE SENSOR	DAS-454, "DTC Description"
C1BA5-01	ADAS/CHASSIS CTRL ENGINE SYS	DAS-455, "DTC Description"
C1BA6-01	AV SYSTEM	DAS-456, "DTC Description"

DTC	Display item	Refer to
C1BA7-01	ALC SYSTEM	DAS-458, "DTC Description"
C1BA9-01	NP RANGE	DAS-460, "DTC Description"
C1BAA-01	GEAR POSITION	DAS-462, "DTC Description"
C1BAB-01	STOP LAMP SW	DAS-464, "DTC Description"
C1BAC-01	OPERATION SW CIRC	DAS-466, "DTC Description"
C1BAD-01	ACCELERATER PEDAL	DAS-468, "DTC Description"
C1BAE-01	ACCELERATER PEDAL	DAS-470, "DTC Description"
C1BAF-01	BSW SYSTEM	DAS-472, "DTC Description"
C1BB0-01	DR BUZZER SYSTEM	DAS-474, "DTC Description"
C1BB2-01	CONTROL MODULE	DAS-475, "DTC Description"
C1BB3-01	CONTROL MODULE	DAS-476, "DTC Description"
C1BB4-01	CONTROL MODULE	DAS-477, "DTC Description"
C1BB5-01	IGN POWER SUPPLY	DAS-478, "DTC Description"
C1BB6-01	IGN POWER SUPPLY	DAS-481, "DTC Description"
C1BB7-01	CONTROL MODULE	DAS-483, "DTC Description"
C1BB8-01	CONTROL MODULE	DAS-484, "DTC Description"
C1BB9-01	CONTROL MODULE	DAS-485, "DTC Description"
C1BBA-01	CONTROL MODULE	DAS-486, "DTC Description"
C1BBB-01	CONTROL MODULE	DAS-487, "DTC Description"
C1BBC-01	CONTROL MODULE	DAS-488, "DTC Description"
C1BBD-01	VARIANT CODING	DAS-489, "DTC Description"
C1BC0-01	FR WHEEL SENSOR	DAS-490, "DTC Description"
C1BC1-01	FL WHEEL SENSOR	DAS-492, "DTC Description"
C1BC2-01	RR WHEEL SENSOR	DAS-494, "DTC Description"
C1BC3-01	RL WHEEL SENSOR	DAS-496, "DTC Description"
C1BC4-01	DECEL G SENSOR	DAS-498, "DTC Description"
C1BC5-01	SIDE G SENSOR	DAS-499, "DTC Description"
C1BC6-01	PRESSURE SENSOR	DAS-501, "DTC Description"
U1000-01	CAN COMM CIRCUIT	DAS-502, "DTC Description"
U1010-01	CONTROL UNIT (CAN)	DAS-503, "DTC Description"
U1A30-01	DAST COMM	DAS-504, "DTC Description"
U1A31-01	DAST COMM	DAS-507, "DTC Description"
U1A32-01	CAMERA COMM	DAS-509, "DTC Description"
U1A34-01	BRAKE CONTROL COMM	DAS-511, "DTC Description"
U1A35-01	BRAKE CONTROL COMM	DAS-513, "DTC Description"
U1A36-01	BCM/IPDM COMM	DAS-515, "DTC Description"
U1A39-01	COMBINATION METER COMM	DAS-517, "DTC Description"
U1A3B-01	TCM COMM	DAS-519, "DTC Description"
U1A3D-01	ADAS COMM	DAS-521, "DTC Description"
U1A3E-01	ADAS COMM	DAS-523, "DTC Description"
U1A3F-01	AV COMM	DAS-525, "DTC Description"
U1A42-01	STEERING ANGLE SENSOR COMM	DAS-527, "DTC Description"
U1A43-01	STEERING ANGLE SENSOR COMM	DAS-529, "DTC Description"
U1A45-01	DR BUZZER COMM	DAS-531, "DTC Description"

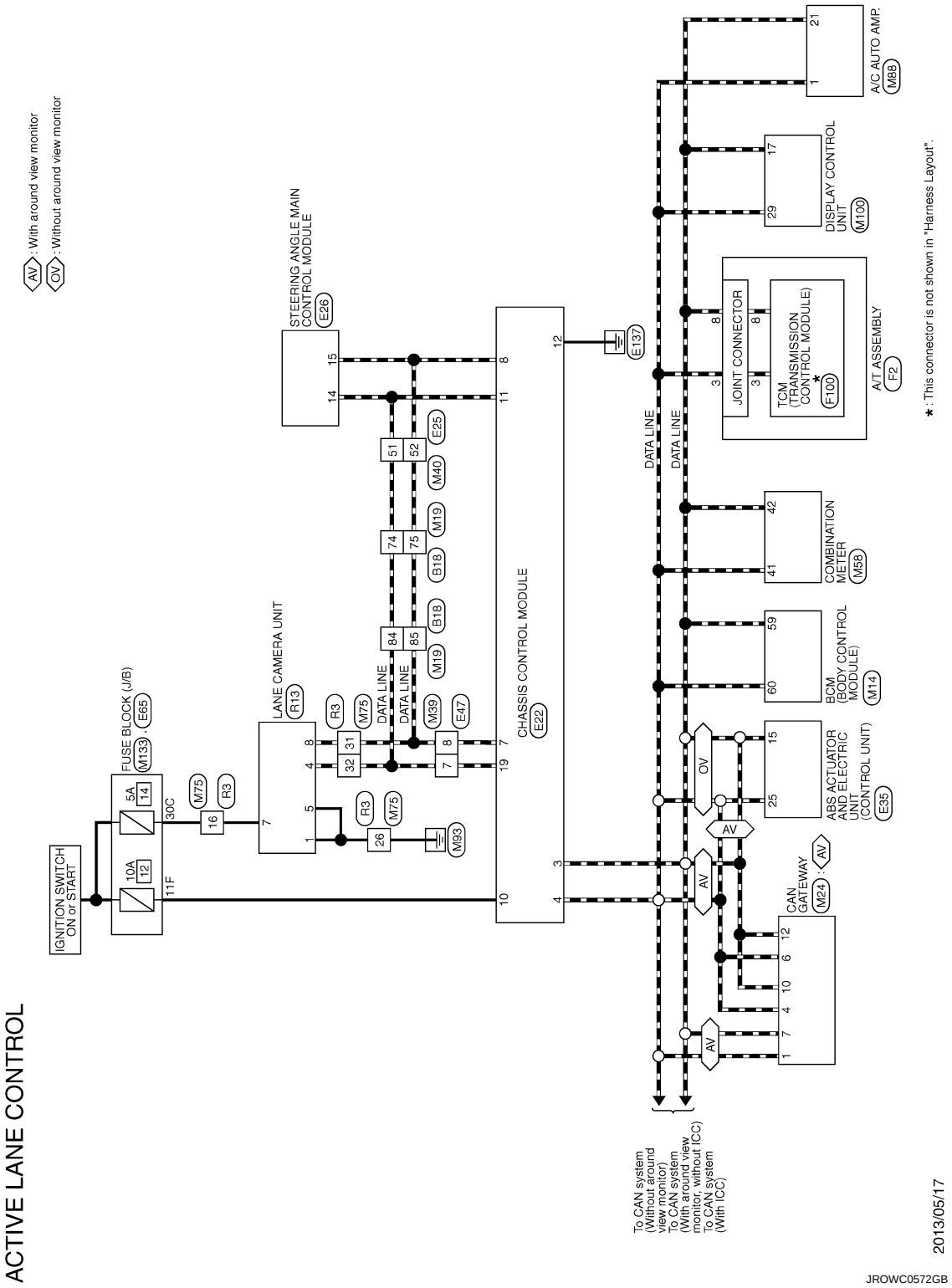
DTC	Display item	Refer to
U1A48-01	ECM/HPCM COMM	DAS-533, "DTC Description"
U1A4A-01	CONTROL MODULE (CAN)	DAS-535, "DTC Description"
U1A4B-01	CONTROL MODULE (CAN)	DAS-536, "DTC Description"
U1A4C-01	A/C AUTO AMP. COMM	DAS-537, "DTC Description"
U1A4E-01	ECM/HPCM COMM	DAS-539, "DTC Description"

WIRING DIAGRAM

ACTIVE LANE CONTROL

Wiring Diagram

INFOID:0000000009725589



ACTIVE LANE CONTROL

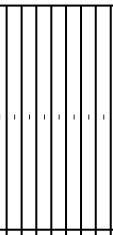
Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	–
2	G	–
3	L	–
4	LG	–
6	R	–
7	V	–
8	LG	–
9	BR	–
10	P	–
11	BG	–
12	LG	–
13	GR	–
24	Y	–
25	W	–
31	B	–
32	B	–
33	B	–
34	LG	–
35	P	–
36	W	–
37	SB	–
38	LG	–
40	P	–
41	SB	–
42	BR	–
43	BG	–
44	BG	–
46	R	–
51	SB	–
52	V	–
54	R	–
55	R	–
57	W	–
58	V	–
59	GR	–
62	BG	–
63	BR	–
64	Y	–
65	W	–
70	R	–
71	W	–
72	B	–
74	L	–
75	V	–
76	BR	–
77	B	–
81	B	–
83	BG	–
84	L	–
85	V	–
86	B	–
88	G	–
91	GR	–
94	GR	–
96	Y	–
97	V	–
98	BR	–

Connector No.	E22
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	CAN-L [Without Gateway]
3	R	CAN-L [With Gateway]
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

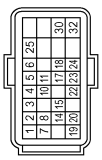
Connector No.	E25
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	–
3	LG	–
4	BR	–
6	V	–
7	L	–
10	BR	–
11	L	–
12	GR	–
13	W	–
14	B	–
15	SB	–
16	Y	–
17	BR	–
18	P	–
31	Y	–
32	GR	–
35	GR	–
36	R	–
37	V	–
38	L	–
39	Y	–
40	SB	–
41	LG	–
44	Y	–
45	W	–
46	B	–
47	G	–
48	SHIELD	–
49	R	–
50	BR	–
51	L	–
52	W	–
53	V	–
54	P	–
55	W	–
56	SB	–
57	BG	–
58	B	–
59	W	–
61	R	–
64	Y	–
65	SB	–
66	GR	–
67	LG	–
68	BG	–
71	LG	–
72	V	–
73	G	–
74	BR	–
75	V	–
78	P	–
79	SB	–
83	R	–
86	BG	–
91	G	–
92	Y	–
94	GR	–
95	BG	–
96	W	–
97	LG	–
98	L	–
99	P	–
100	SHIELD	–

Connector No.	E26
Connector Name	STEERING ANGLE MAIN CONTROL MODULE
Connector Type	RH24FB-R28-L-LH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	TORQUE SENSOR MAIN SIGNAL
2	Y	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL [S1+SS]
3	LG	TORQUE SENSOR SUB SIGNAL
4	G	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL [S1-SS]
5	W	STEERING ANGLE MAIN MOTOR RESOLVER SIGNAL [S2-S4]

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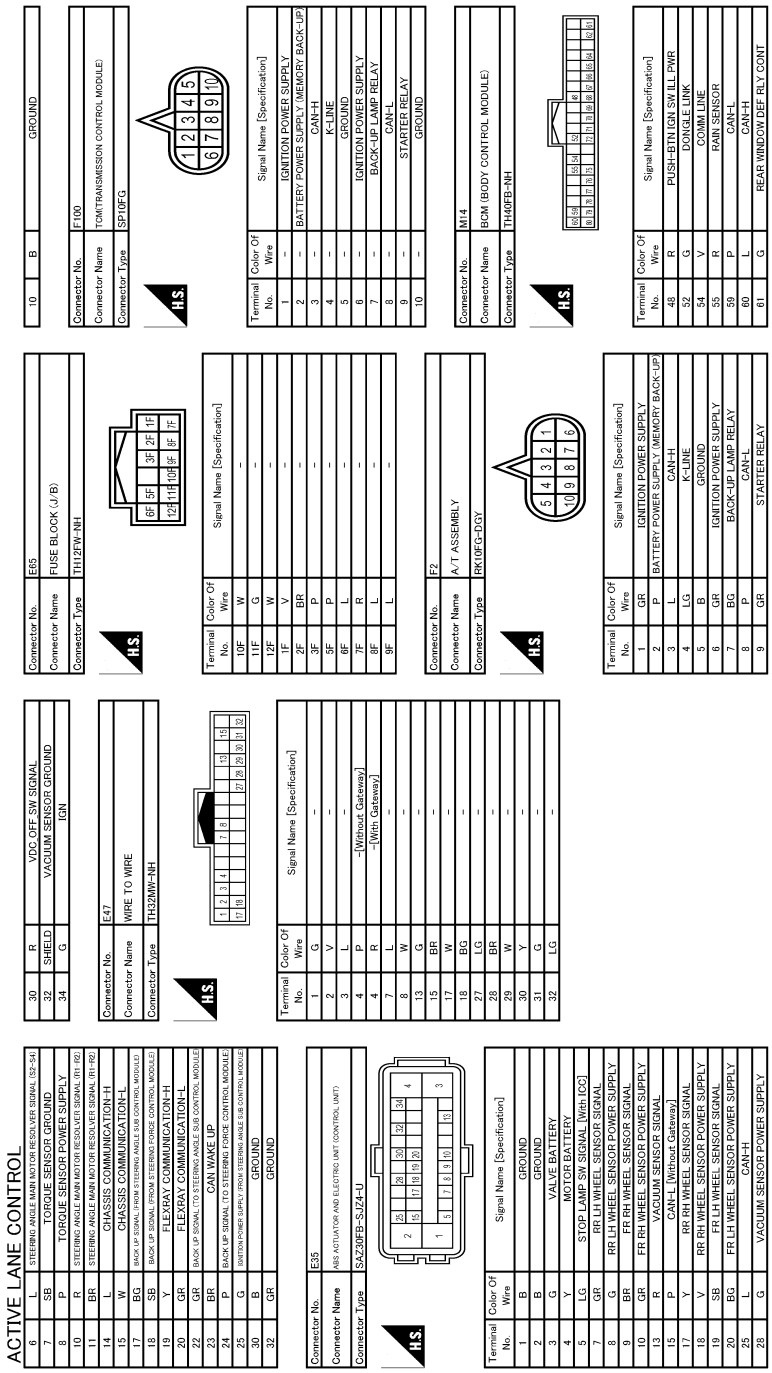
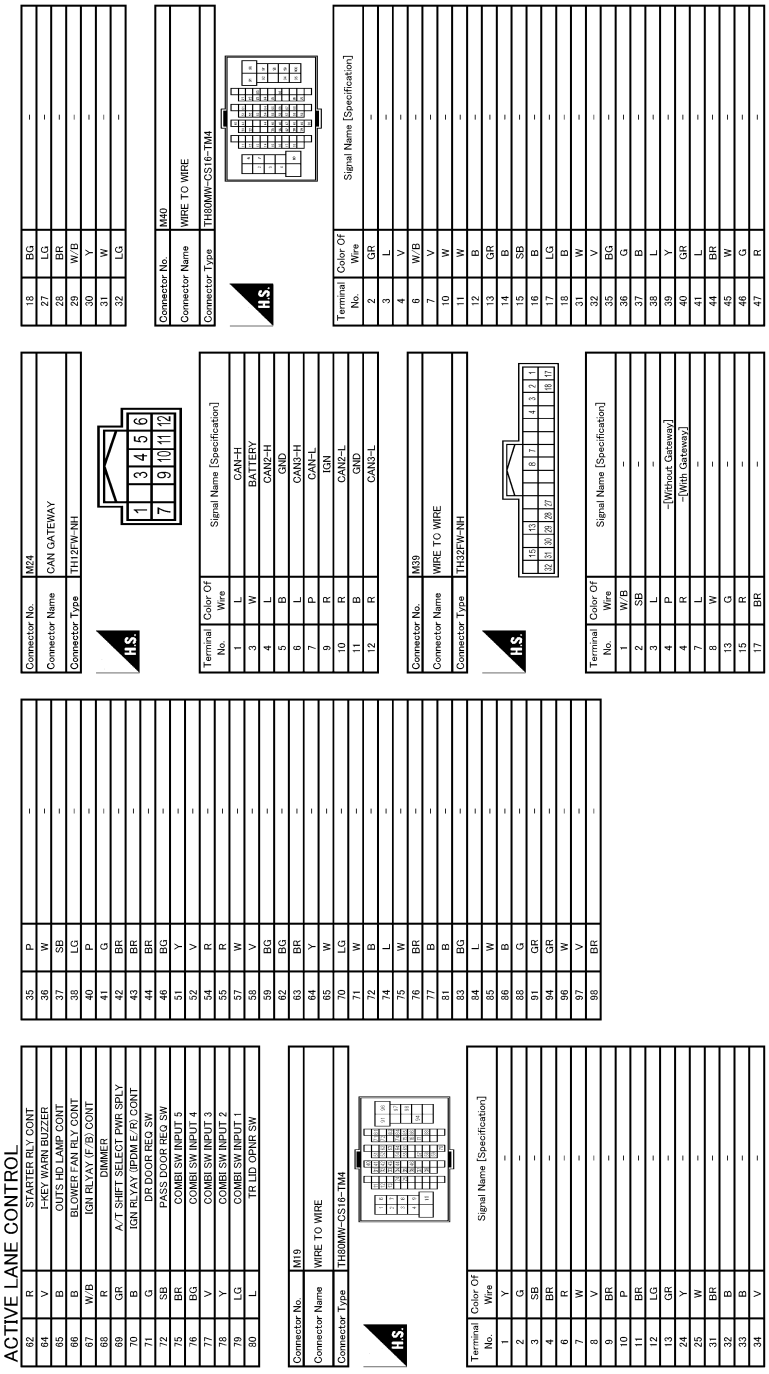
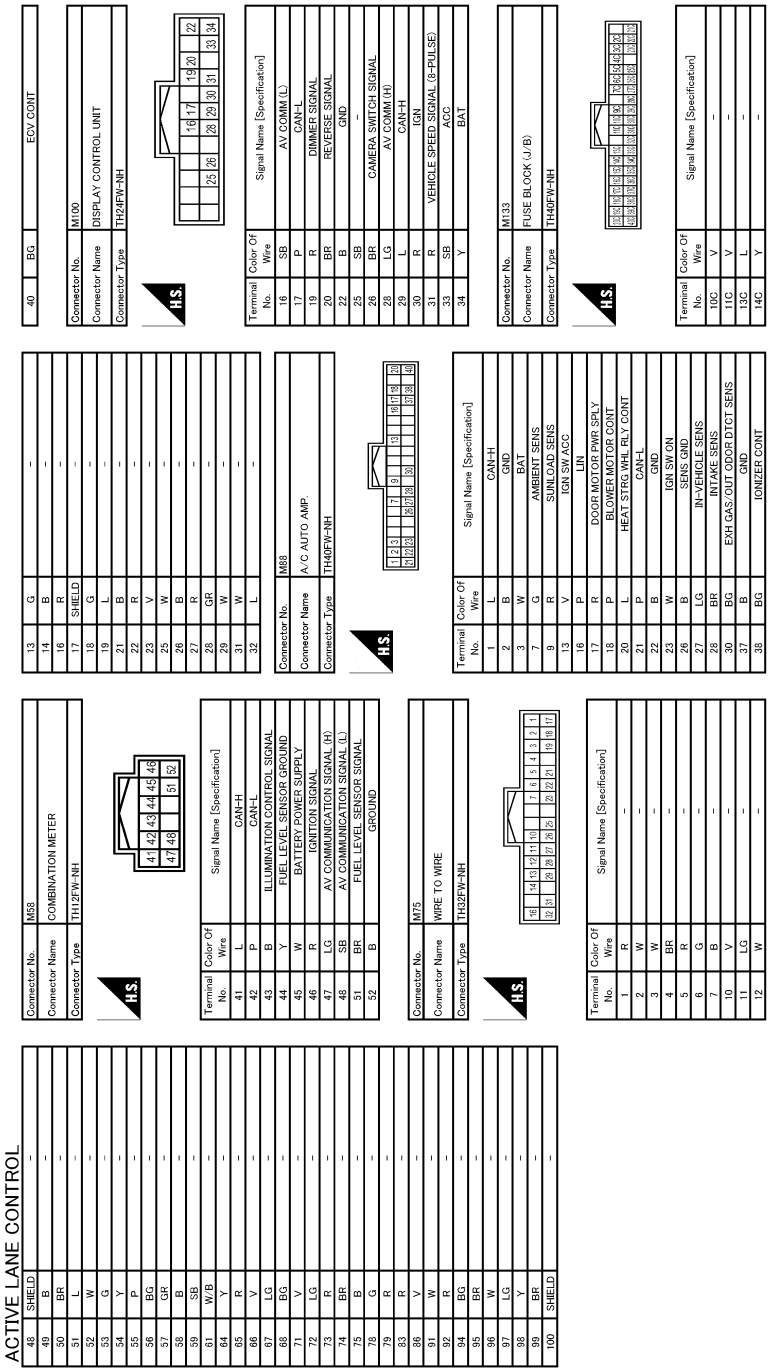


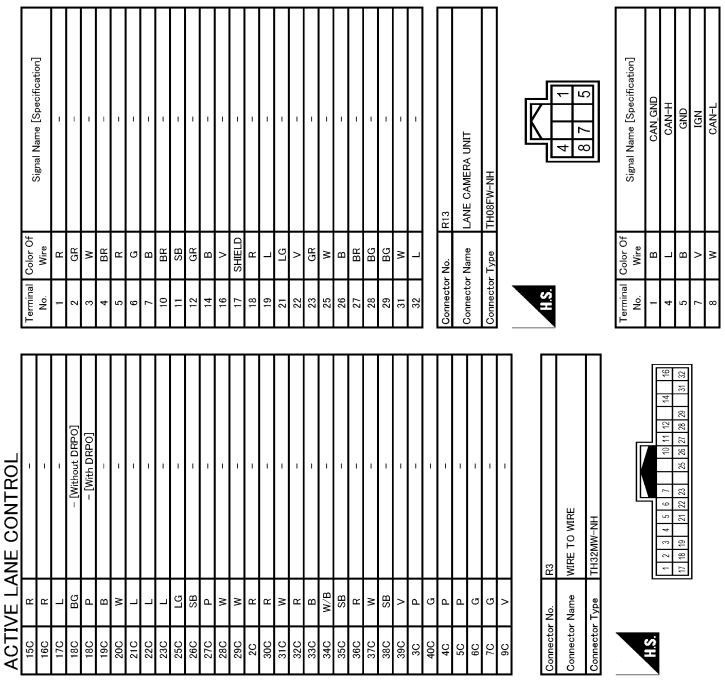
JROWC0574GB



JROWC0575GB



JROWC0576GB



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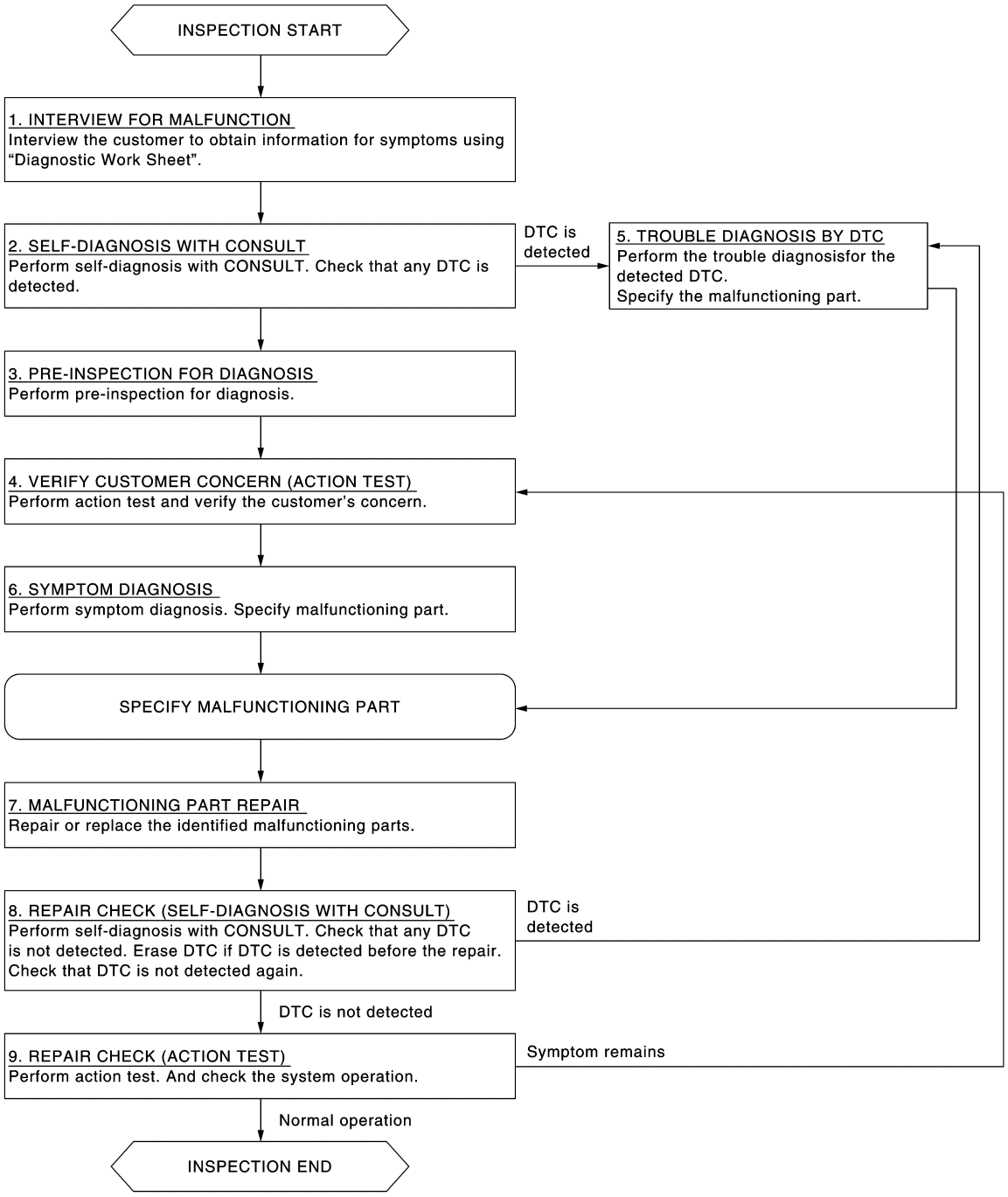
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009725590

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 DAS-597, "Diagnostic Work Sheet".)

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.

- “CHASSIS CONTROL”
- “LANE CAMERA”

Is any DTC detected?

YES >> GO TO 5.
NO >> GO TO 3.

3.PRE-INSPECTION FOR DIAGNOSIS

Perform pre-inspection for diagnosis. Refer to DAS-599, "Inspection Procedure".

>> GO TO 4.

4.ACTION TEST

Perform Active Lane Control action test to check the operation status. Refer to DAS-600, "Description".

>> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

1. Check the DTC in the self-diagnosis results.
2. Perform trouble diagnosis for the detected DTC following.

- “CHASSIS CONTROL”: Refer to DAS-573, "DTC Index".
- “LANE CAMERA”: Refer to DAS-573, "DTC Index".

NOTE:
If “DTC: U1000” is detected, first diagnose the CAN communication system, chassis communication system or ITS communication system.

>> GO TO 7.

6.SYMPTOM DIAGNOSIS

Perform symptom diagnosis. Specify malfunctioning part. Refer to DAS-616, "Symptom Table".

>> GO TO 7.

7.MALFUNCTION PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 8.

8.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

1. Erases self-diagnosis results.
2. Perform “All DTC Reading” again after repairing or replacing the specific items.
3. 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.

9.REPAIR CHECK (ACTION TEST)

1. Perform the action test. Refer to DAS-600, "Description".

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:0000000009802063

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

WORK SHEET SAMPLE

Customer name MR/MS	Model and Year	VIN
Engine #	Trans.	Mileage
Incident Date	Manuf. Date	In Service Date

Symptoms			
Indicator/Warning lamps	☐ Master warning lamp	☐ Stays ON	☐ Stays OFF ☐ Others ( )
	☐ Chassis warning message	☐ Displayed	☐ Not displayed
	☐ Active Lane Control display	☐ ALC OFF ☐ ALC is turned ON	☐ ALC is operational or is operating
	☐ Other lamps ( )	☐ Stays ON ☐ Turned ON occasionally	☐ Stays OFF ☐ Blinks ☐ Others ( )
Functions	☐ The vehicle dose not run straight while ALC is functioning. ☐ Steering wheel feel is not good while ALC in functioning. ☐ ALC dose not function. ☐ ALC function is not felt. ☐ Others ( )		

Conditions			
Frequency	☐ Continuously	☐ Intermittently	
Light conditions	☐ Not affected ☐ In the daytime ☐ Direct light	☐ At night ☐ Backlight	☐ Sunrise/sunset (Strong light) ☐ Others ( )
Driving conditions	☐ Not affected ☐ Vehicle speed	MPH (km/h)	☐ Vehicle is stopped
Weather conditions	☐ Not affected ☐ Fine ☐ Clouding	☐ Raining	☐ Snowing ☐ Others ( )
Road conditions	☐ Not affected ☐ Highway ☐ Uneven roads	☐ In town ☐ Winding roads	☐ Others ( )
Lane maker conditions	☐ Not affected ☐ Clear	☐ Unclear	☐ Others ( )
Other conditions			

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PRE-INSPECTION FOR DIAGNOSIS

Inspection Procedure

INFOID:0000000009725591

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 FSU-23, "Wheelarch Height" (2WD) or FSU-46, "Wheelarch Height" (AWD).

Is vehicle height appropriate?

YES >> INSPECTION END
NO >> Repair vehicle to appropriate height.

ACTION TEST

Description

INFOID:0000000009725592

- 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 DAS-547, "ACTIVE LANE CONTROL : System Description".**
- **Handling precaution: Refer to DAS-556, "Precautions for Active Lane Control".**

Inspection Procedure

INFOID:0000000009725593

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 DAS-547, "ACTIVE LANE CONTROL : System Description".**
- **Handling precaution: Refer to DAS-556, "Precautions for Active Lane Control".**

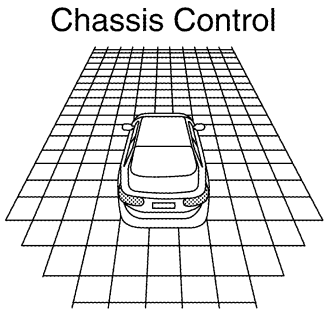
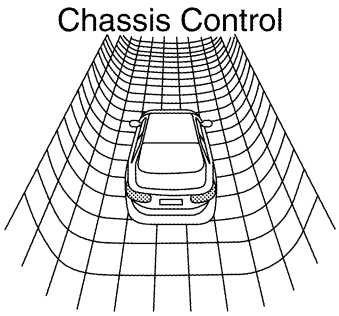
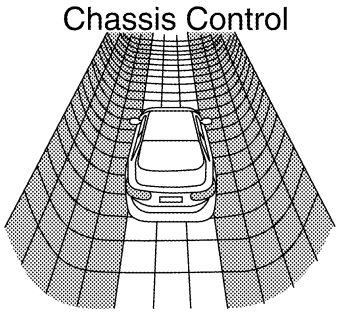
1.CHECK ACTIVE LANE CONTROL SETTING

1. Start the engine.
2. Check that the Active Lane Control setting can be enabled/disabled on the integral switch screen.
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 2.

2.ACTION TEST FOR ACTIVE LANE CONTROL

1. 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.
4. 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-547, "ACTIVE LANE CONTROL : System Description".

Vehicle condition	Active Lane Control	Indication on the combination meter
—	OFF	 JSOIA0806ZZ
Operating conditions are not satisfied	Active Lane Control is turned ON	 JSOIA0809ZZ
Operating conditions are satisfied	Active Lane Control is operational or is operating	 JSOIA0810ZZ

Does it operate normally?

YES >> INSPECTION END

NO >> Perform symptom diagnosis. Specify malfunctioning part. Refer to DAS-616, "Symptom Table".

ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT

Description

INFOID:0000000009725594

Always adjust the camera aiming after removing and installing or replacing the lane camera unit.

CAUTION:

The system does not operate normally unless the camera aiming adjustment is performed. Always perform it.

Work Procedure

INFOID:0000000009725595

1.CAMERA AIMING ADJUSTMENT

Perform the camera aiming adjustment with CONSULT. Refer to DAS-603, "Description".

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

Perform the self-diagnosis of lane camera unit with CONSULT. Check if any DTC is detected.

Is any DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to DAS-573, "DTC Index".
NO >> GO TO 3.

3.ACTIVE LANE CONTROL ACTION TEST

1. Perform the Active Lane Control action test. Refer to DAS-600, "Description".
2. Check that the Active Lane Control operates normally.

>> WORK END

CAMERA AIMING ADJUSTMENT

Description

INFOID:0000000009725596

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:0000000009725597

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-573, "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 DAS-599, "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. (A/T models)
6. Shift the shift lever to “N” position and release the parking brake.(M/T models)

   CAUTION:

   Use wheel chocks to the wheels to prevent the vehicle from moving.
7. Clean the windshield.
8. 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.

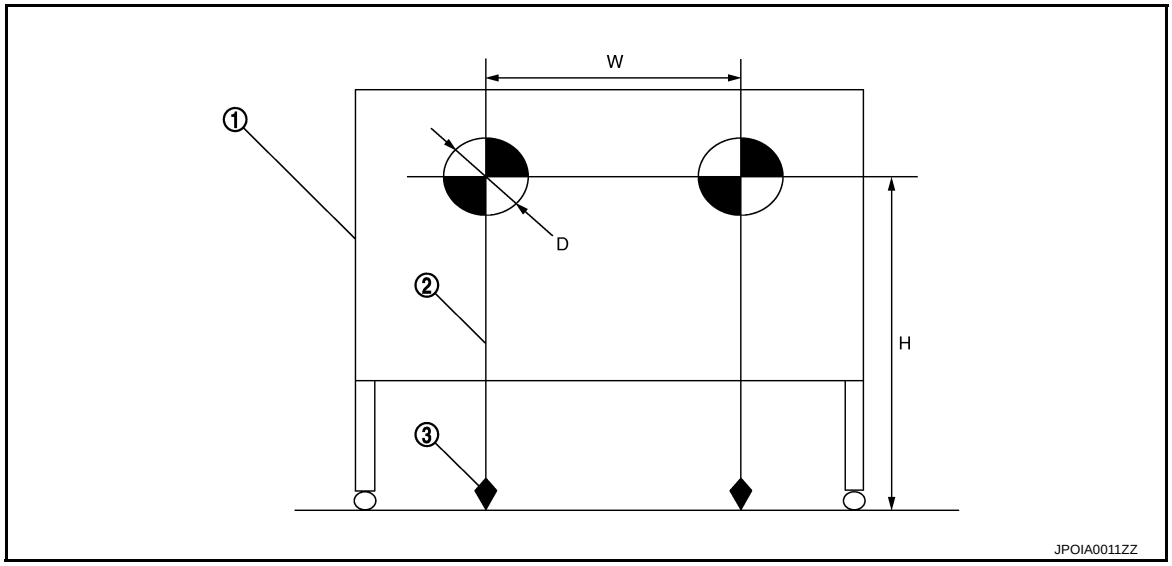
3. PREPARATION OF AIMING ADJUSTMENT JIG

Prepare the aiming adjustment jig according to the following procedure and the figure.

1. Print out the target mark attached in this service manual. Refer to DAS-608, "Work Procedure (Target Mark Sample)".
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.**



1. 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 center from a left target center (W)	**: 600 mm (23.62 in)**

>> Proceed to DAS-604, "Work Procedure (Target Setting)".

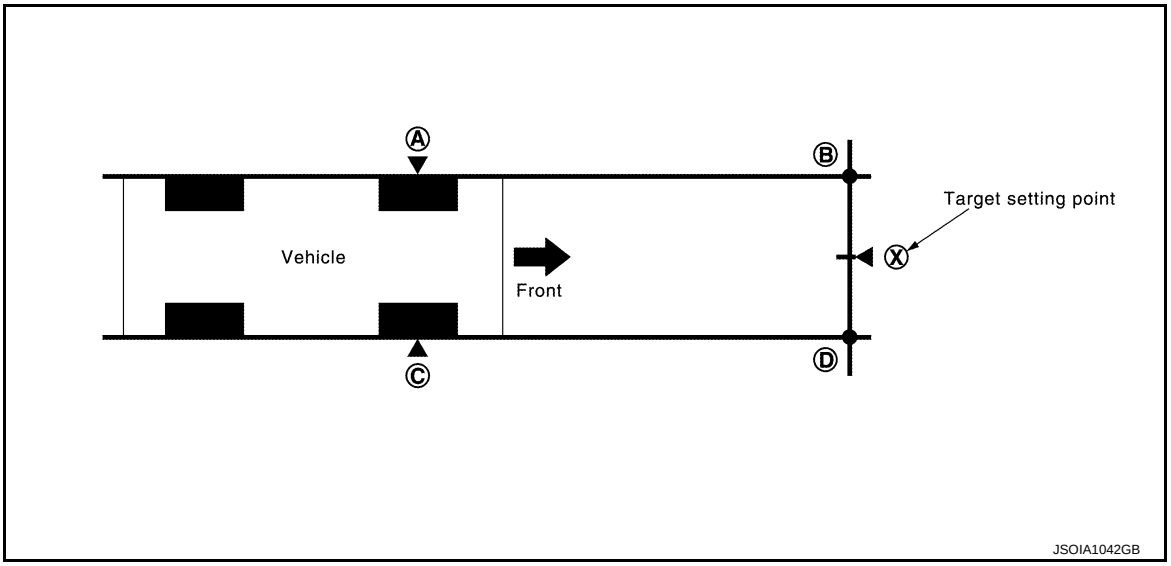
Work Procedure (Target Setting)

INFOID:0000000009725598

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

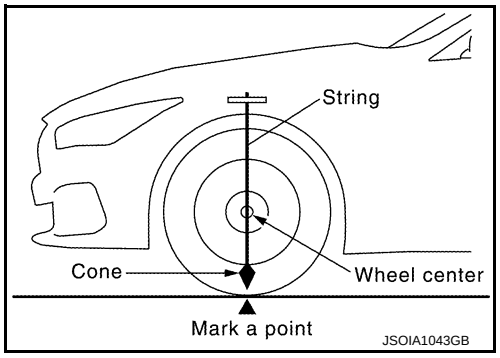


Ⓐ – Ⓑ (Ⓒ – Ⓓ) : 3850 mm (151.57 in)

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

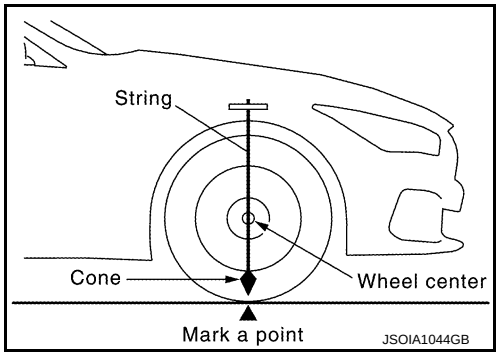
2. Mark point Ⓐ on a measuring tape. Hang a string with a cone from the fender so as to pass through the center of wheel, and then mark a point at the center of the lateral surface of the wheel.
3. Mark point Ⓑ on a measuring tape at the positions 3850 mm (151.57 in) from point Ⓐ.
4. Remove a measuring 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

6. 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 Ⓓ on a measuring tape at the positions 3850 mm (151.57 in) from point Ⓒ.
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 Ⓑ and Ⓓ on the front side of vehicle. And then fix it with tapes.
10. Mark point Ⓧ at the center of point Ⓑ and Ⓓ on a measuring tape.

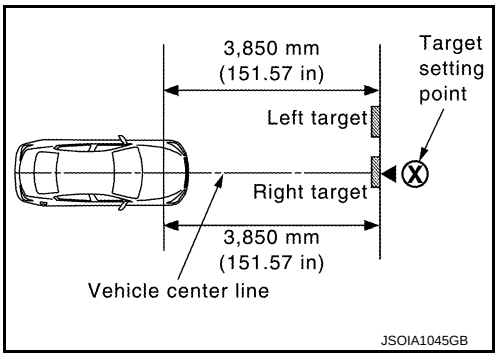
CAUTION:
Make sure that Ⓑ to Ⓧ is equal to Ⓓ to Ⓧ.

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 Ⓧ.

CAUTION:
- **Be sure to place the board that the cross of the target is horizontal and vertical.**
- **Fix point Ⓧ with a cone that hung down from the right side target.**



>> Proceed to DAS-606, "Work Procedure (Camera Aiming Adjustment)".

Work Procedure (Camera Aiming Adjustment)

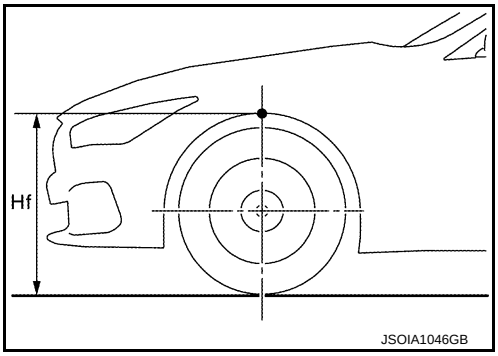
INFOID:0000000009725599

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) ÷ 2 – "A"
where,
Hfl: Front left wheelarch height [mm]
Hfr: Front right wheelarch height [mm]
"A" ;
Except for Mexico: 710
For Mexico: 705



CAUTION:
Be sure to measure wheelarch height correctly.
NOTE:
"Dh" may be calculated as a minus value.

>> GO TO 2.

2.CAMERA AIMING ADJUSTMENT

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.
2. 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.

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 DAS-573, "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-604, "Work Procedure (Target Setting)". or GO TO 2.

4. PERFORM SELF-DIAGNOSIS

With CONSULT

Perform self-diagnosis of lane camera unit with CONSULT.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to DAS-573, "DTC Index".

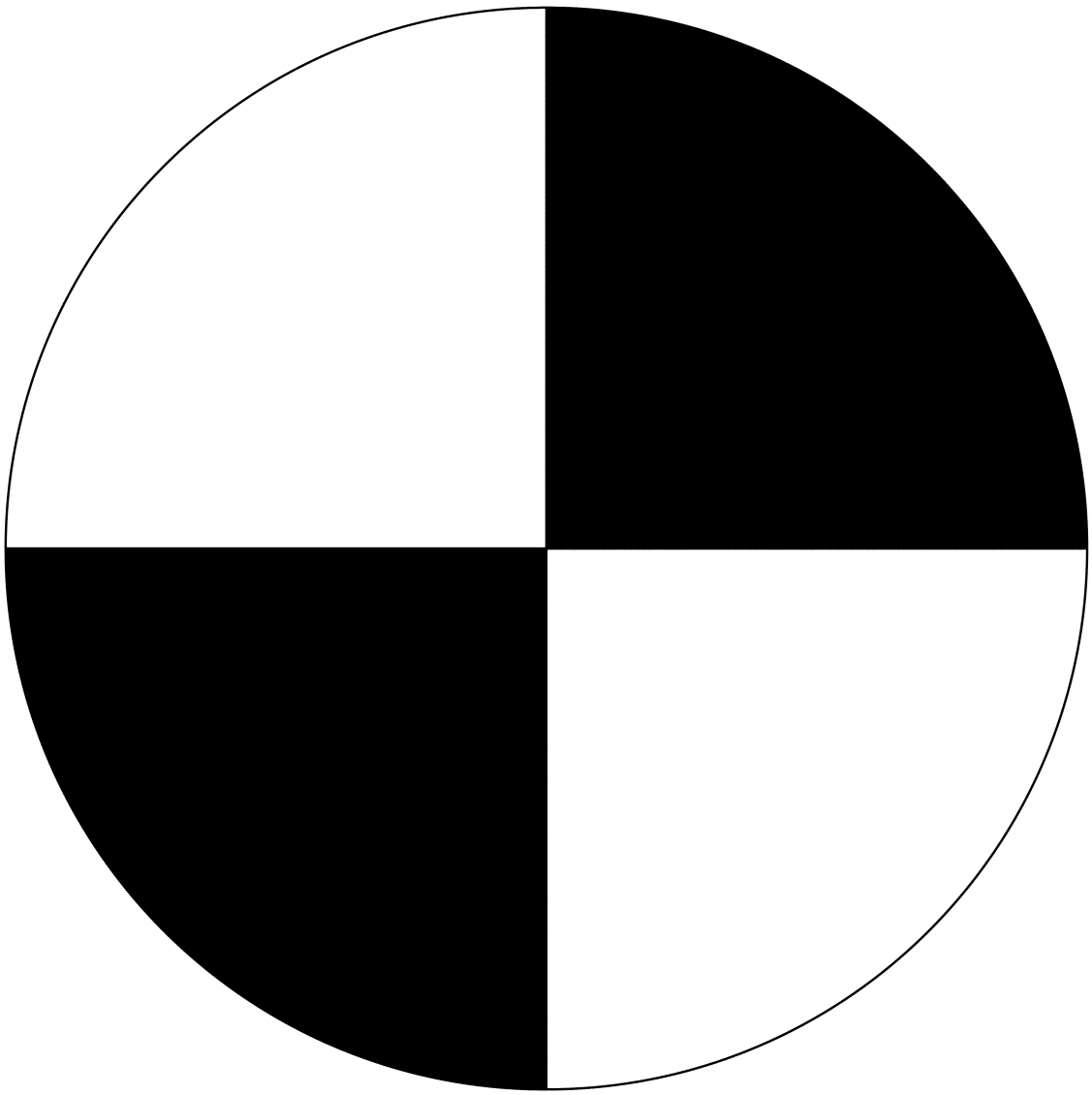
NO >> WORK END

Work Procedure (Target Mark Sample)

INFOID:0000000009725600

NOTE:

Print this illustration so that the diameter of the circle is 200 mm (7.87 in).



PGIA0105J

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
LANE CAMERA UNIT

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000009725601

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	Voltage (Approx.)
(+)		(–)		
Lane camera unit		Ground	Ignition switch	
Connector	Terminal			
R13	7		OFF	0 V
			ON	12 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the lane camera unit power supply circuit.

3.CHECK LANE CAMERA UNIT GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the lane camera unit connector.
3. Check for continuity between lane camera unit harness connector and ground.

Lane camera unit		Ground	Continuity
Connector	Terminal		
R13	1		Existed
	5		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair the lane camera unit ground circuit.

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:0000000009725602

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

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 DAS-611, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009725603

Perform the Chassis communication (CAN communication) system trouble diagnosis. Then repair or replace the malfunctioning parts.
Refer to LAN-26, "Trouble Diagnosis Flow Chart".

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000009725604

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

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 DAS-612, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009725605

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the LDP system ON.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “U1010” is detected as the current malfunction in “Self Diagnostic Result” of “LANE CAMERA”.

Is “U1010” detected as the current malfunction?

YES >> Replace the lane camera unit. Refer to DAS-620, "Removal and Installation".
NO >> INSPECTION END

C1B00 CAMERA UNIT MALF

DTC Description

INFOID:0000000009725606

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

With CONSULT

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1B00” is detected as the current malfunction in “Self Diagnostic Result” of “LANE CAMERA”.

Is “C1B00” detected as the current malfunction?

YES >> Refer to DAS-613, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009725607

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 DAS-573, "DTC Index".
NO >> Replace the lane camera unit. Refer to DAS-620, "Removal and Installation".

C1B01 CAM AIMING INCMP

DTC Description

INFOID:0000000009725608

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.
2. 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 DAS-614, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009725609

1. CAMERA AIMING ADJUSTMENT

1. Perform the camera aiming. Refer to DAS-603, "Description".
2. Erase all self-diagnosis results with CONSULT.
3. Perform “All DTC Reading”.
4. Check if the “C1B01” is detected in “Self Diagnostic Result” of “LANE CAMERA”.

Is “C1B01” detected?

YES >> Replace the lane camera unit. Refer to DAS-620, "Removal and Installation".
NO >> INSPECTION END

C1B03 ABNRML TEMP DETECT

DTC Description

INFOID:0000000009725610

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:0000000009725611

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 DAS-620, "Removal and Installation".
NO >> INSPECTION END

SYMPTOM DIAGNOSIS

ACTIVE LANE CONTROL

Symptom Table

INFOID:0000000009725612

NOTE:

- For the operational conditions of Active Lane Control, refer to DAS-547, "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
Hard to drive along a traffic lane during the use of Active Lane Control.	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-556, "Precautions for 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 installation condition	**Symptom diagnosis** "THE VEHICLE PULLS TO ONE SIDE" Refer to DAS-616, "Symptom Table".
		Temporarily	Lane marker detecting condition (Certain roads, weather or driving conditions.)	System is normally. Confirm the using situation of the customer. Refer to DAS-556, "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-556, "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-547, "ACTIVE LANE CONTROL : System Description".
		After the use of turn signal	Operation condition	Confirm the operating condition. Refer to DAS-547, "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-556, "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-556, "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-556, "Precautions for 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-555, "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-556, "Precautions for Active Lane Control".
		The vehicle speed is low	Confirm the operating condition. Refer to DAS-547, "ACTIVE LANE CONTROL : System Description".

THE VEHICLE PULLS TO ONE SIDE

Description

INFOID:0000000009784907

The vehicle pulls to one side continuously during traveling straight

NOTE:

- For the operational conditions of Active Lane Control, refer to DAS-547, "ACTIVE LANE CONTROL : System Description".
- For the handling precautions of Active Lane Control, refer to DAS-556, "Precautions for Active Lane Control".

Diagnosis Procedure

INFOID:0000000009784908

1.CHECK WHEEL ALIGNMENT

Check wheel alignment. Refer to FSU-6, "Inspection" (2WD) or FSU-30, "DIRECT ADAPTIVE STEERING : Inspection" (AWD).

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace malfunctioning parts.

2.CHECK DIRECT ADAPTIVE STEERING

1. Perform “All DTC Reading” with CONSULT.
2. Check if the DTC is detected in self-diagnosis results for Direct Adaptive Steering. Refer to STC-80, "DTC Index".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts.
NO >> GO TO 3.

3.CHECK LANE CAMERA UNIT INSTALLATION CONDITION

Check lane camera unit installation condition (installation position, properly tightened, a bent bracket).

Is it properly installed?

YES >> System is normally. Confirm the using situation of the customer. Refer to DAS-556, "Precautions for Active Lane Control".
NO >> Install lane camera unit properly, and perform camera aiming. Refer to DAS-603, "Description".

NORMAL OPERATING CONDITION
ACTIVE LANE CONTROL

ACTIVE LANE CONTROL : Description

INFOID:0000000009725613

- 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 in certain roads, weather or driving conditions.
- Using Active Lane Control 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.
- When Active Lane Control is operating, avoid excessive or sudden steering maneuvers. Otherwise, you could lose control of the vehicle.
- 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 function properly under the following conditions, and do not use Active Lane Control:

- During bad weather (rain, fog, snow, wind, 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 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:

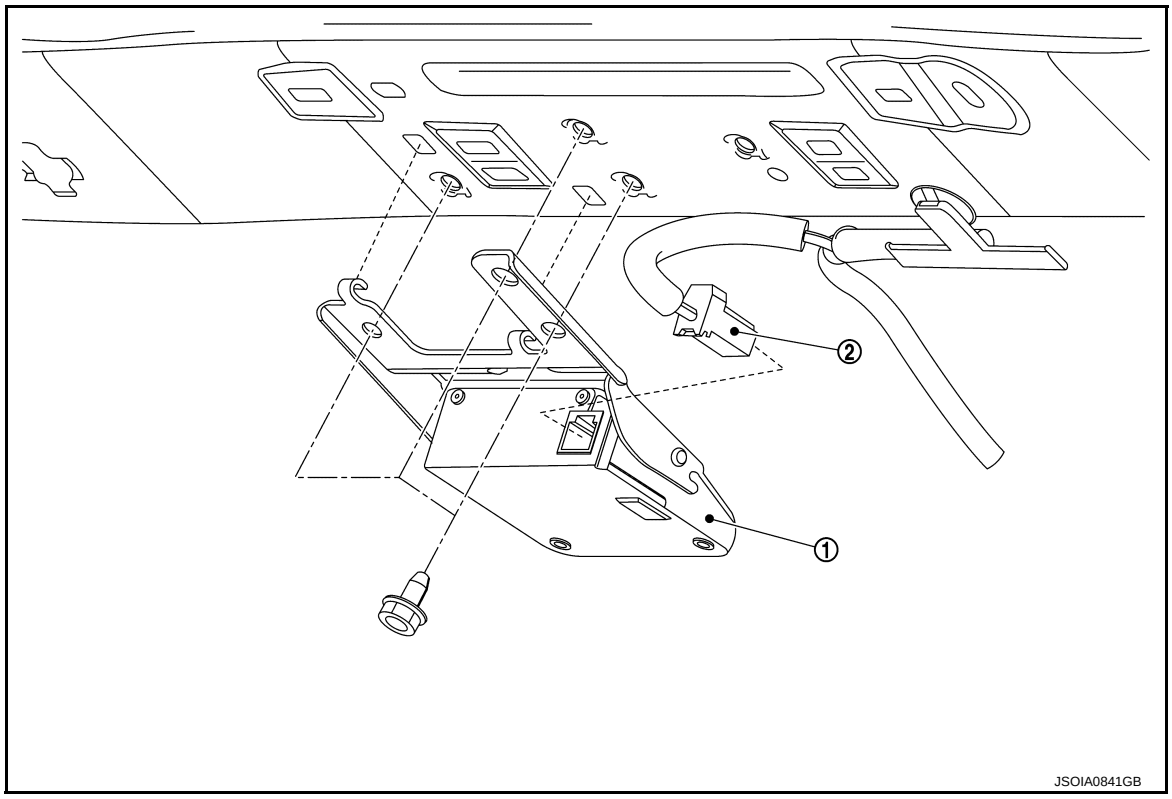
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where 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 other vehicle in front of the vehicle, 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 in or exiting from tollgates.
- When driving on roads with widening or narrowing lane width.

REMOVAL AND INSTALLATION

LANE CAMERA UNIT

Exploded View

INFOID:0000000009725614



① Lane camera unit ② Lane camera unit harness connector

Removal and Installation

INFOID:0000000009725615

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 DAS-603, "Work Procedure (Preparation)".**