SECTION DAS
DRIVER ASSISTANCE SYSTEM

CONTENTS

CHASSIS CONTROL

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012421510

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.**
- **Do not 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:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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 three minutes before performing any service.**

Precaution for Work

INFOID:0000000012421511

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.

- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

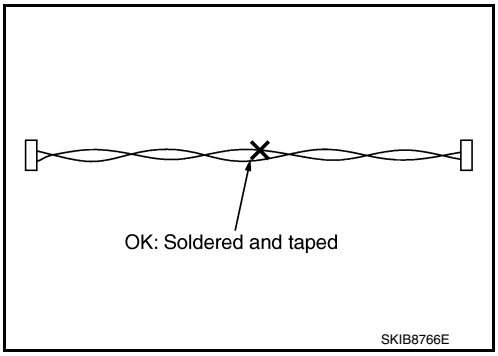
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

Precautions For Harness Repair

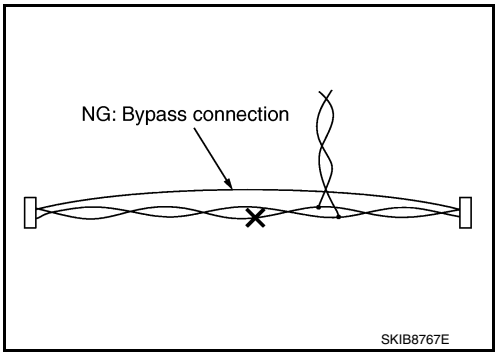
INFOID:0000000012421512

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.



Precautions for Driver Assistance Systems

INFOID:0000000012421513

CAUTION:
- **Turn FEB system OFF in conditions similar to driving, such as free rollers or a chassis dynamometer.**
- **Do not use or disassemble the distance sensor removed from the vehicle.**
- **Erase DTC when replacing parts of FCW system, then check the operation of FCW system after sensor alignment, if necessary.**
- **Do not change FEB initial state ON⇒OFF without consent of the customer.**

WARNING:
Be cautious of traffic conditions and other vehicles when performing a road test.

Blind Spot Warning/Rear Cross Traffic Alert (RCTA) System Service

INFOID:0000000012759701

CAUTION:
- **Do not use Blind Spot Warning system when driving with free rollers or a chassis dynamometer.**
- **Do not perform active test while driving.**

TO KEEP BLIND SPOT WARNING SYSTEM OPERATING PROPERLY, BE SURE TO OBSERVE THE FOLLOWING ITEMS:

System Maintenance
Side radars for Blind Spot Warning system are located near rear bumper.
- Be sure to keep the area near the side radars clean.
- Do not attach stickers (including transparent material), install accessories or apply additional paint near side radars.
- Do not strike or damage area around side radars.

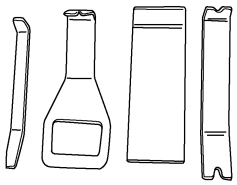
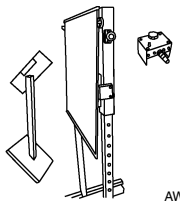
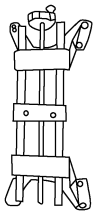
PREPARATION

PREPARATION

Special Service Tool

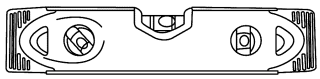
INFOID:0000000012421514

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components
— (1-20-2851-1) Distance Sensor Alignment Kit  AWOIA0016ZZ	Adjusting distance sensor
— (1-20-2722-1-IF) Wheel Adapter  AWOIA0017ZZ	Adjusting distance sensor

Commercial Service Tools

INFOID:0000000012782400

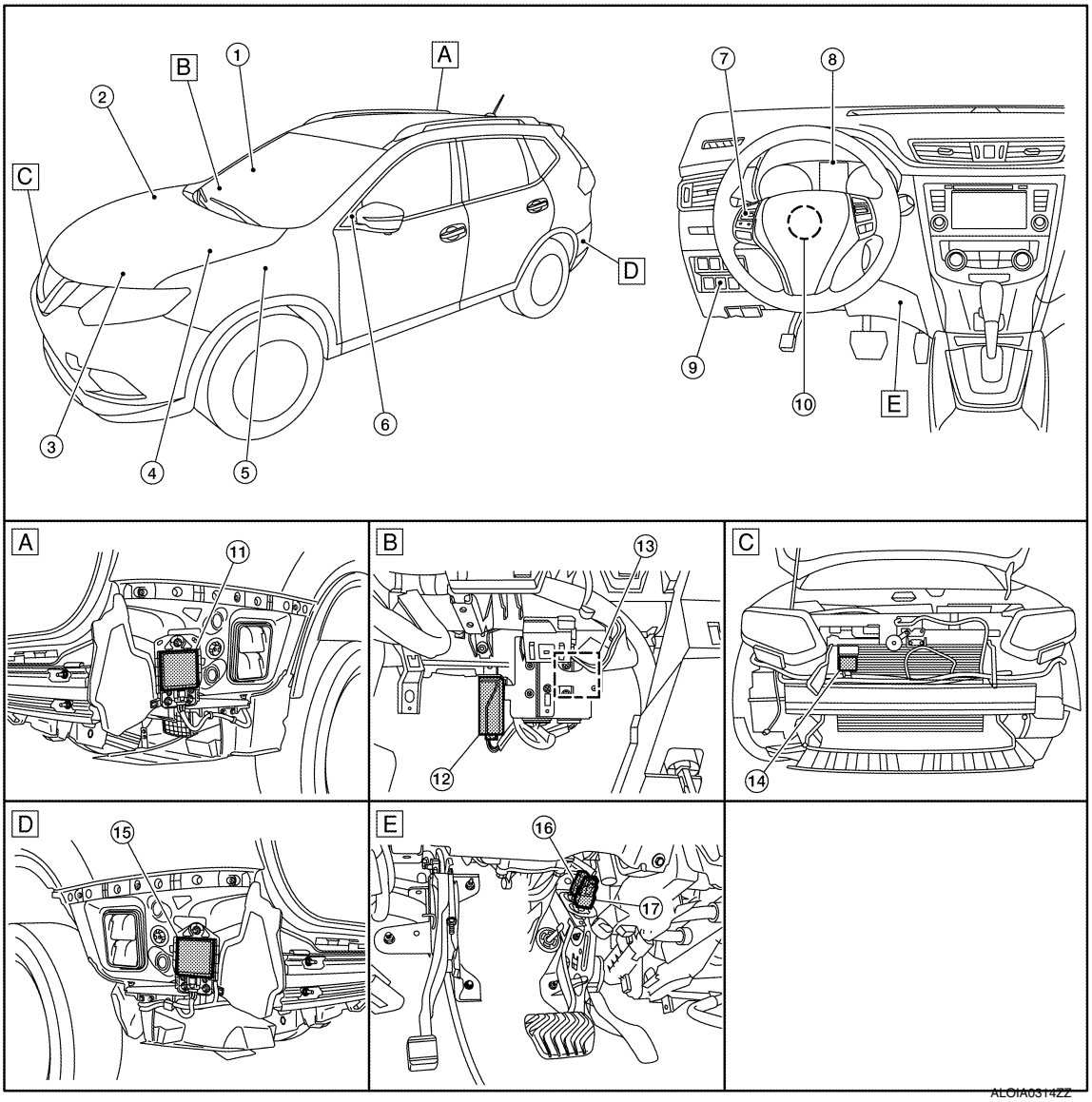
Tool name	Description
Spirit level  JSOIA1620ZZ	Uses for distance sensor initial vertical alignment.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012421515



A. View with rear bumper fascia removed B. View with glove box assembly removed C. View with front bumper fascia removed
D. View with rear bumper fascia removed E. View of upper brake pedal assembly

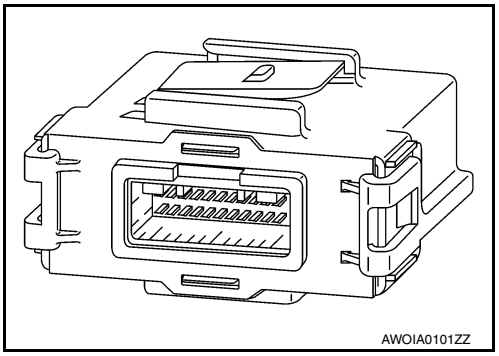
No.	Component	Function
1.	Blind spot warning indicator RH	Refer to DAS-12, "Blind Spot Warning Indicator LH/RH".
2.	ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal (wheel speed) to ADAS control unit via CAN communication. Refer to BRC-9, "Component Parts Location" for detailed installation location.
3.	ECM	Transmits engine speed signal to ADAS control unit via CAN communication. Refer to EC-14, "Component Parts Location" for detailed installation location.

No.	Component	Function
4.	TCM	Transmits the selector lever position signal to ADAS control unit via CAN communication. Refer to TM-12, "CVT CONTROL SYSTEM : Component Parts Location" for detailed installation location.
5.	BCM	Transmits the turn indicator signal, stop lamp switch, stop lamp states signal, dimmer signal, and back door switch signal to ADAS control unit via CAN communication. Refer to the following for detailed installation location: • With Intelligent Key system: BCS-7, "BODY CONTROL SYSTEM : Component Parts Location". • Without Intelligent Key system: BCS-80, "BODY CONTROL SYSTEM : Component Parts Location".
6.	Blind spot warning indicator LH	Refer to DAS-12, "Blind Spot Warning Indicator LH/RH".
7.	Steering switches	Refer to DAS-12, "Steering Switches".
8.	Combination meter	Description: DAS-12, "Combination Meter". Refer to MWI-6, "METER SYSTEM : Component Parts Location" for detailed installation location.
9.	Warning system switch	Refer to DAS-12, "Warning System Switch".
10.	Steering angle sensor	Transmits the steering angle sensor signal to ADAS control unit via CAN communication. Refer to BRC-9, "Component Parts Location" for detailed installation location.
11.	Side radar RH	Refer to DAS-12, "Side Radar LH/RH".
12.	Warning system buzzer	Refer to DAS-12, "Warning System Buzzer".
13.	ADAS control unit	Refer to DAS-11, "ADAS Control Unit".
14.	Distance sensor	Refer to DAS-11, "Distance Sensor".
15.	Side radar RH	Refer to DAS-12, "Side Radar LH/RH".
16.	Brake pedal position switch	Refer to DAS-13, "Brake Pedal Position Switch / Stop Lamp Switch".
17.	Stop lamp switch	

ADAS Control Unit

INFOID:0000000012731450

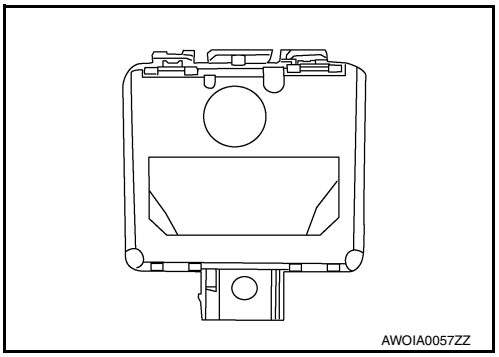
- ADAS control unit is installed behind the glove box assembly.
- Communicates with each control unit via CAN communication and ITS communication.
- ADAS control unit controls each system, based on ITS communication signals and CAN communication signals from each control unit.


AWOIA0101ZZ

Distance Sensor

INFOID:0000000012421516

- Distance sensor is installed to the back of the front bumper and detects a vehicle ahead by using millimeter waves.
- Distance 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.
- Distance sensor transmits the presence/absence of vehicle ahead and the distance from the vehicle ahead to the ADAS control unit via CAN communication.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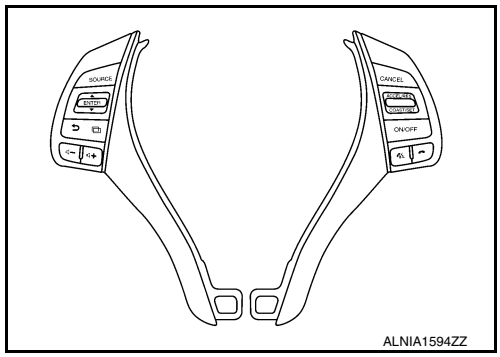
Steering Switches

INFOID:0000000012421517

- Steering switches are installed in the steering wheel.
- Settings for driver assistance systems are possible.
- Switch is connected to the combination meter and signals are transmitted to the ADAS control unit via CAN communication.



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Combination Meter

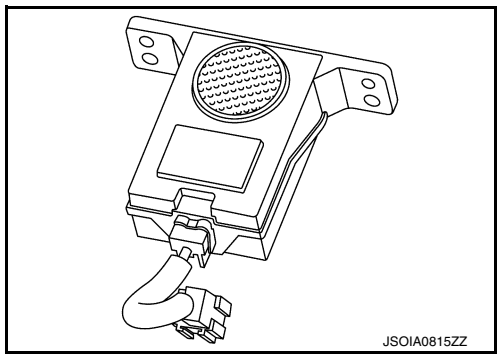
INFOID:0000000012421520

- Receives meter display signal from the ADAS control unit via CAN communication.
- Displays system status according to the signal received from the ADAS control unit.

Warning System Buzzer

INFOID:0000000012421523

- Warning system buzzer is installed behind the glove box assembly.
- When a warning buzzer signal is received, the buzzer sounds.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Blind Spot Warning Indicator LH/RH

INFOID:0000000012421525

- Installed on the front door corner finisher, the blind spot warning indicator warns the driver by lighting/blinking.
- Receives a blind spot warning indicator operation signal from the side radar LH/RH and blinks or turns ON/OFF the blind spot warning indicator.

Warning System Switch

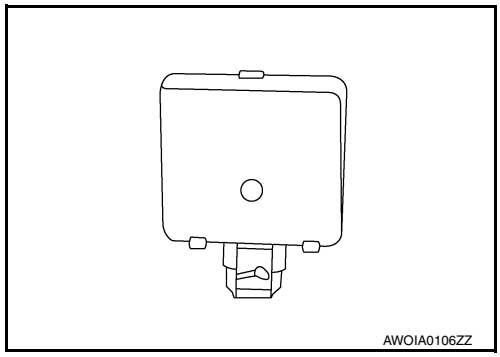
INFOID:0000000012421526

- Installed to the back of the instrument lower panel LH, the warning system switch is used to activate/deactivate the driver assistance system.
- Transmits a warning system switch signal to the ADAS control unit.

Side Radar LH/RH

INFOID:0000000012731449

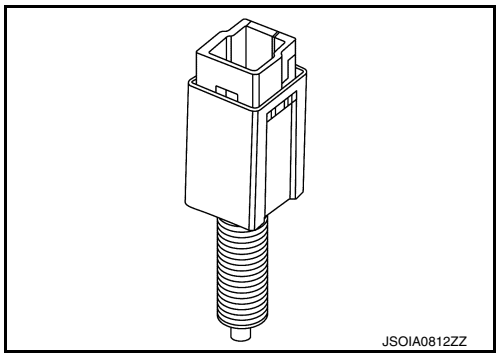
- Installed near the rear bumper, the side radar detects other vehicles beside own vehicle in an adjacent lane.
- Connected with the ADAS control unit via ITS communication, the side radar transmits a vehicle detection signal.
- Receives a Blind Spot Warning indicator signal and a Blind Spot Warning indicator dimmer signal from the ADAS control unit and transmits an indicator operation signal to the Blind Spot Warning 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.


AWOIA0106ZZ

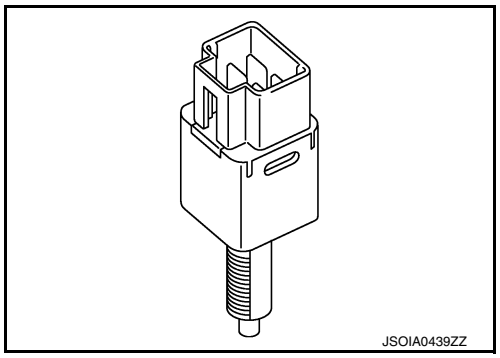
Brake Pedal Position Switch / Stop Lamp Switch

INFOID:0000000012731448

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



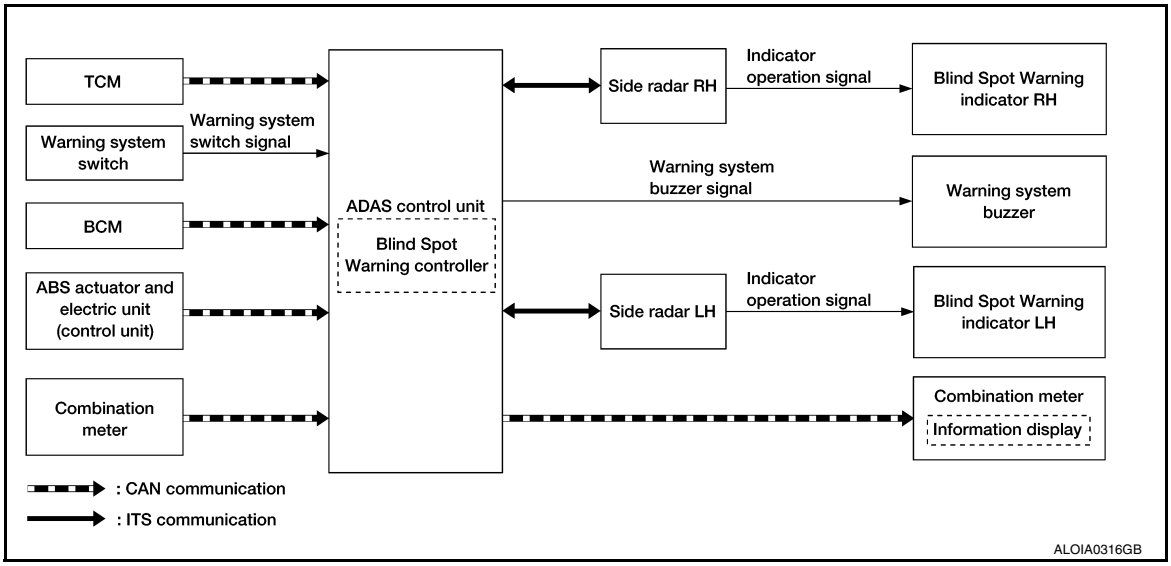
- Stop lamp switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.
- Stop lamp switch is turned ON, when depressing the brake pedal.
- Stop lamp switch signal is input to ECM and ABS actuator and electric unit (control unit). Stop lamp switch signals are transmitted from ECM and ABS actuator and electric unit (control unit) to ADAS control unit via CAN communication.



SYSTEM
BSW
BSW : System Description

INFOID:0000000012731453

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 selector position signal	Receives a shift selector 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.
Combination meter	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.

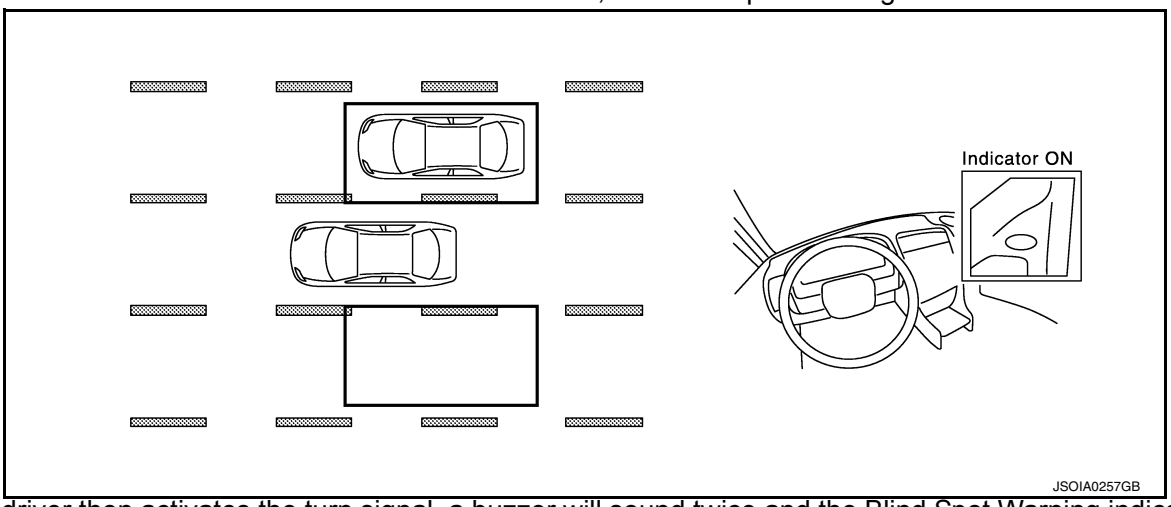
Output Signal Item

Reception unit	Signal name		Description
Combination meter	CAN communication	BSW indicator signal	Transmits a BSW indicator signal to turn ON the BSW indicator on the combination meter.
Side radar LH, RH	ITS communication	Blind Spot Warning indicator signal	Transmits a Blind Spot Warning indicator signal to turn ON the Blind Spot Warning indicator.
		Blind Spot Warning indicator dimmer signal	Transmits a Blind Spot Warning indicator dimmer signal to dim Blind Spot Warning indicator.
		Vehicle speed signal	Transmits a vehicle speed that is calculated by the ADAS control unit.

FUNCTION DESCRIPTION

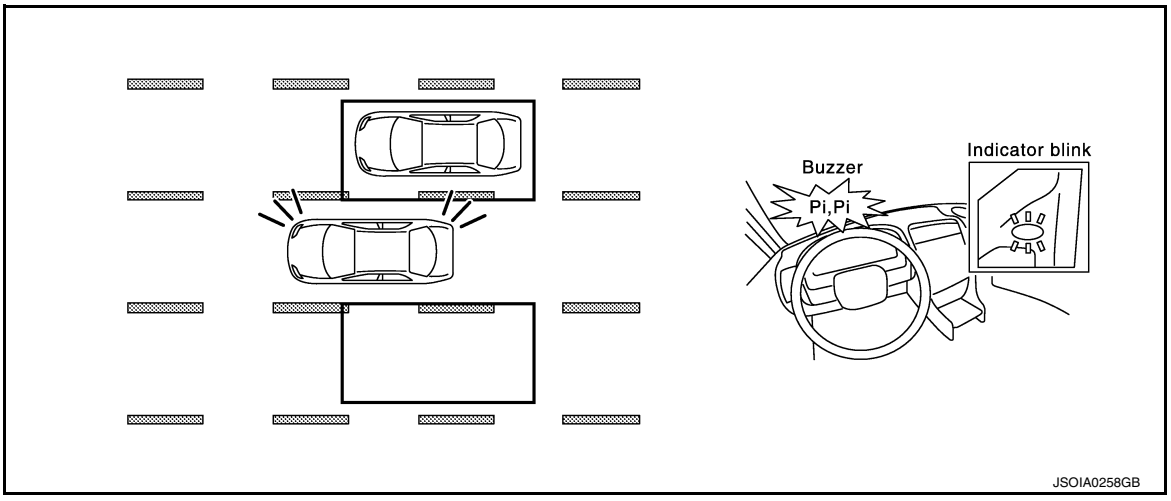
- The BSW system can help alert the driver of other vehicles in adjacent lanes when changing lanes.
- The BSW system uses side radars installed near the rear bumper to detect vehicles in an adjacent lane.

- The side radars 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 20 MPH (32 km/h).
- If the side radar detects vehicles in the detection zone, the Blind Spot Warning indicator illuminates.



- If the driver then activates the turn signal, a buzzer will sound twice and the Blind Spot Warning indicator will blink.

NOTE:
A buzzer sounds if the side radar has detected a vehicle 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 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 it is turned ON by the 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 indicator signal and Blind Spot Warning indicator dimmer signal transmission to side radar.
- Side radar transmits an indicator operation signal to the Blind Spot Warning indicator according to Blind Spot Warning indicator signal and Blind Spot Warning indicator dimmer signal.

OPERATING CONDITION

- Blind Spot Warning system display (white): ON
- Vehicle speed: Approximately 20 MPH (32 km/h) or more

NOTE:
ON/OFF of Blind Spot Warning system is performed with the integral switch.

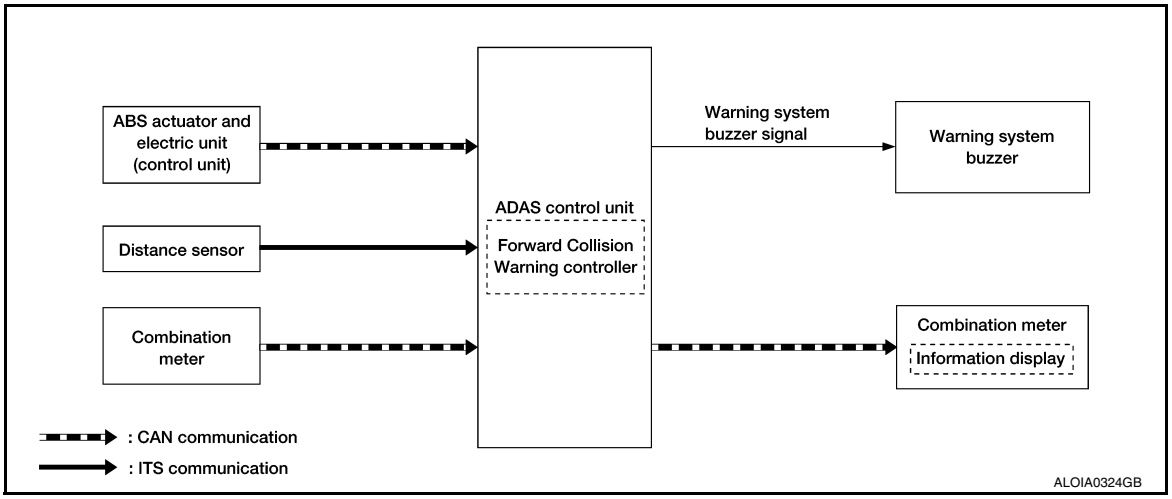
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 18 MPH (29 km/h).
- The Blind Spot Warning system may not function properly, depending on the situation. Refer to DAS-8, "Blind Spot Warning/Rear Cross Traffic Alert (RCTA) System Service".

FCW

FCW : System Description

INFOID:0000000012421530

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	Wheel speed signal	Receives wheel speed.
Combination meter	CAN communication	System selection signal	Receives a selection state each item in “Driver Aids” selected with the steering switch.
Distance sensor	CAN communication	Distance 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.
Distance sensor	CAN communication	Vehicle speed signal		Transmits a vehicle speed calculated by the distance sensor.

DESCRIPTION

- The Forward Collision Warning (FCW) System alerts the driver by a warning lamp (vehicle ahead detection indicator) and chime when own vehicle is getting close to the vehicle ahead in the traveling lane.
- The FCW system will function when own vehicle is driven at speeds of approximately 10 MPH (15 km/h) and above.

FUNCTION DESCRIPTION

The distance from the vehicle ahead and a relative speed are calculated by using the distance sensor signal transmitted to the ADAS control unit via ITS communication. When judging the necessity of warning from the received distance sensor signal, the distance sensor transmits a buzzer signal to the ADAS control unit via ITS communication and the ADAS control unit transmits a warning system buzzer signal to the warning system buzzer.

FCW Operating Condition

- Vehicle speed: Approximately 10 MPH (15 km/h) and above.

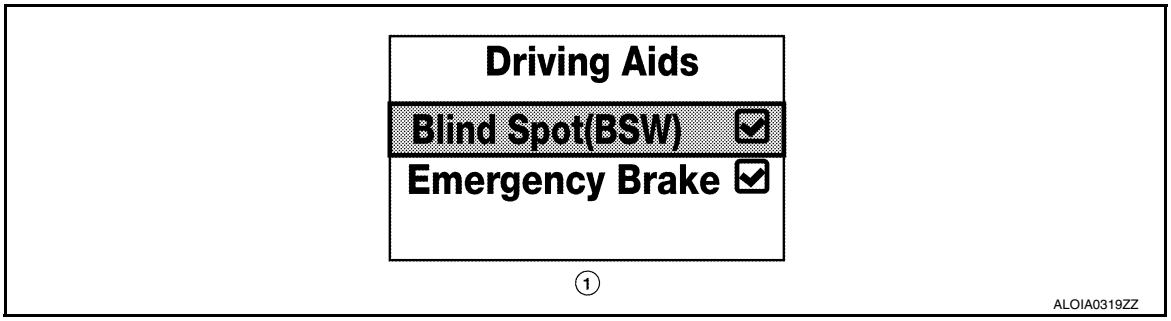
OPERATION

BSW

BSW : Switch Name and Function

INFOID:0000000012738592

BSW

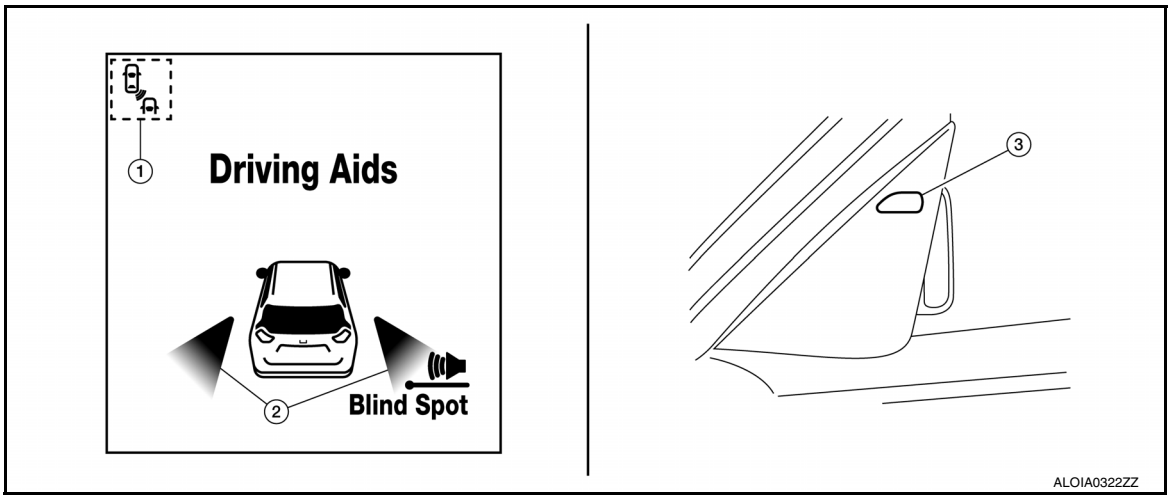


No.	Switch name	Description
1.	BSW system setting screen (Combination meter settings screen)	The setting of BSW system can be switched between ON and OFF.

BSW : Menu Displayed by Pressing Each Switch

INFOID:0000000012738593

SYSTEM DISPLAY

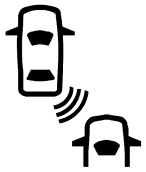
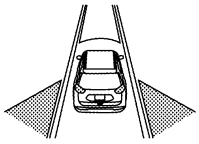
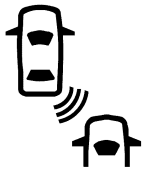
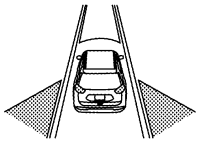
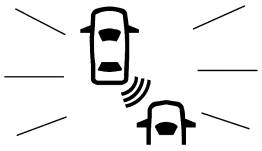
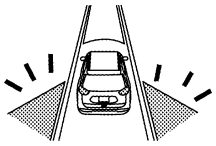


No.	Display item	Description
1.	Warning system indicator (BSW)	Indicates that BSW system is ON
2.	Warning system indicator “Blind Spot” position	Indicates that BSW system is ON
3.	BSW indicator LH/RH	• Illuminates when detecting other vehicles in the adjacent lane • Blinks when warning the driver

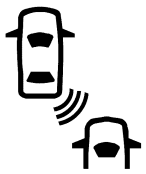
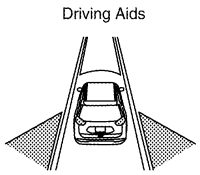
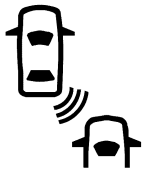
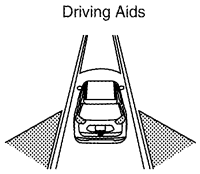
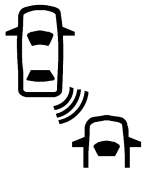
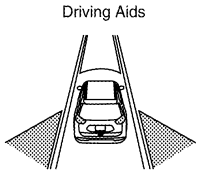
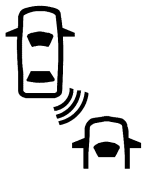
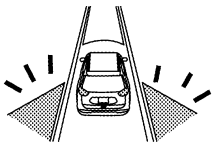
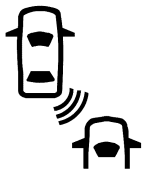
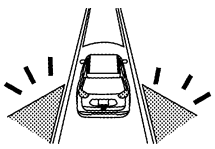
DISPLAY AND WARNING

System Display

The BSW systems operate when ON is selected with the combination meter.

System status	Condition	Display on combination meter	
		Upper part	Middle part
BSW OFF	—	—	White Driving Aids  JSOIA1591ZZ
BSW ON	System ON	White  JSOIA1423ZZ	White Driving Aids  JSOIA1597ZZ
BSW is malfunction	The BSW system is automatically canceled.	Orange  JSOIA1423ZZ	Orange Driving Aids  JSOIA1597ZZ
Side radar blocked	The BSW system is automatically canceled.	White (Blink)  JSOIA1425ZZ	White (Blink) Driving Aids  JSOIA1600ZZ  Unavailable Side radar blocked JSOIA2091ZZ

Display And Warning Operation

Vehicle condition/ Driver's operation			Action			
				Indication on the combination meter		
Vehicle speed (Approx.)	Turn signal condition	Status of vehicle detection within detection area	Indication on the BSW indicator	Upper part	Middle part	Buzzer
Less than 29 km/h (18 MPH)	—	—	OFF	White  JSOIA1423ZZ	White Driving Aids  JSOIA1597ZZ	OFF
32 km/h (20 MPH) or more	—	Vehicle is not detected	OFF	White  JSOIA1423ZZ	White Driving Aids  JSOIA1597ZZ	OFF
	OFF	Vehicle is detected	ON	White  JSOIA1423ZZ	White Driving Aids  JSOIA1597ZZ	OFF
	ON (vehicle detected direction)	Before turn signal operates Vehicle is detected	Blink	White  JSOIA1423ZZ	Orange (Blink) Driving Aids  JSOIA1600ZZ	Short continuous beeps
		Vehicle is detected after turn signal operates	Blink	White  JSOIA1423ZZ	Orange (Blink) Driving Aids  JSOIA1600ZZ	OFF

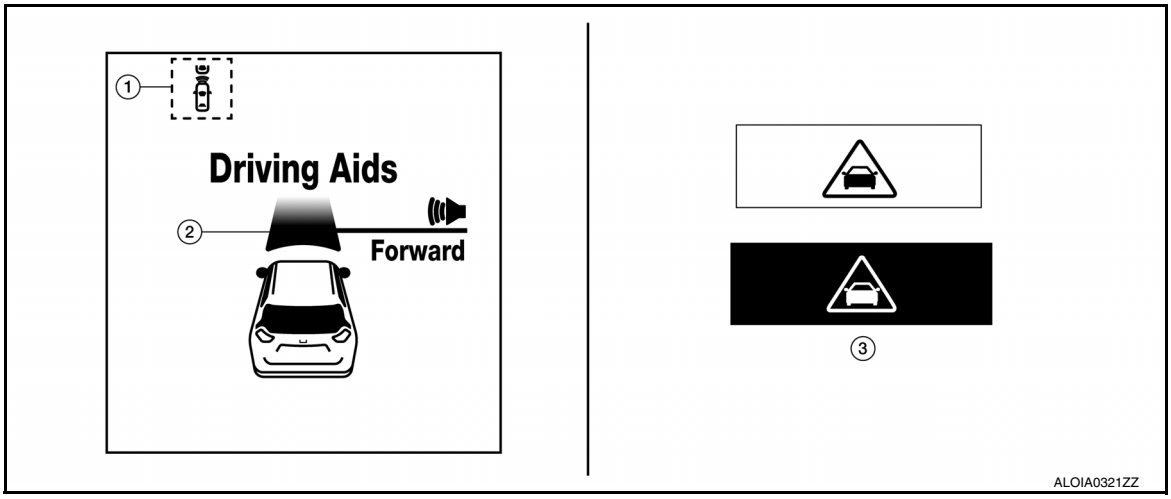
NOTE:
- If vehicle speed exceeds approximately 32 km/h (20 MPH), BSW function operates until the vehicle speed becomes lower than approximately 29 km/h (18 MPH).
- Time shown in the figure is approximate time.

FCW

FCW : System Display and Warning

INFOID:0000000012421537

INDICATOR LAMP AND WARNING LAMP



No.	Display item	Description
1.	Warning system indicator (FCW)	Indicates that the FCW system is ON.
2.	FCW system indicator “Forward position”	• Indicates that the FCW system is ON (white). • Blinks (white) when the FCW system is activated.
3.	FCW warning	Blinks when approaching vehicle ahead.

DISPLAY

Vehicle condition/Driver's operation		Action	Warning systems ON indicator	Indication on the combination meter	Buzzer
Less than Approx. 10 MPH (15 km/h)	Close to vehicle ahead	No action	ON	FCW indicator (white) ON steady  AWOIA0096ZZ	—
Approx. 10 MPH (15 km/h) or more.	When own vehicle comes close to the vehicle ahead and it is judged that the distance between the vehicles is not sufficient.	• Warning buzzer sounds • FCW indicator blinks (white)	ON	FCW indicator (white) Blinks  AWOIA0096ZZ	Short continuous beeps

HANDLING PRECAUTION

Precautions for Forward Collision Warning

INFOID:0000000012421538

- The forward collision warning system is designed to warn the 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 distance sensor does not detect the following objects:
- Pedestrians, animals, or obstacles in the roadway.
- Oncoming vehicles.
- Crossing vehicles.
- The forward collision warning system does not function when a vehicle ahead is a narrow vehicle, such as a motorcycle.
- The distance sensor may not detect a vehicle ahead in the following conditions:
- Snow or heavy rain.
- Dirt, ice, snow or other material covering the distance sensor.
- Contamination or foreign materials adhere to the distance sensor area of the front bumper.
- The distance sensor area of the front bumper is temporarily fogged.
- Interference by other radar sources.
- Snow or road spray from traveling vehicles is splashed.
- Driving in a tunnel
- When the distance to the vehicle ahead is too close, the beam of the distance sensor is obstructed.
- The distance 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 Blind Spot Warning

INFOID:0000000012775910

SIDE RADAR HANDLING

- Side radar for Blind Spot Warning 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

- The Blind Spot Warning system is not a replacement for proper driving procedure and is 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 system.
- The Blind Spot Warning system may not provide the warning 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 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 is 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.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

CONSULT Function (ICC/ADAS)

INFOID:0000000012731445

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.
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.

SELF DIAGNOSTIC RESULT

Refer to DAS-32, "DTC Index".

NOTE:

• The details of time display are as per the following:
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

• ODO/TRIP METER (Mileage) and VOLTAGE (IGN voltage) are displayed on FFD (Freeze Frame Data).

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
BRAKE SW [On/Off]	Indicates [ON/OFF] status as judged from brake switch signal (ECM transmits brake switch signal through CAN communication).
STOP LAMP SW [On/Off]	Indicates [ON/OFF] status as judged from stop lamp switch signal (ECM transmits stop lamp switch signal through CAN communication).
IDLE SW [On/Off]	Indicates [ON/OFF] status of idle switch read from ADAS control unit through CAN communication (ECM transmits ON/OFF status through CAN communication).
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 warning chime output.

Monitored item [Unit]	Description
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).
BA WARNING [On/Off]	Indicates [ON/OFF] status of FEB indicator lamp output.
D POSITION 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 selector position signal through CAN communication).
NP RANGE SW [On/Off]	Indicates shift selector position signal read from ADAS control unit through CAN communication (TCM transmits shift selector 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 receives via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication).
PWR SUP MONI [V]	Indicates ignition voltage input monitored by ADAS control unit.
VHCL SPD AT [km/h] or [mph]	Indicates vehicle speed calculated from CVT vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits CVT 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 CVT 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).
SET DISP IND [On/Off]	Indicates [ON/OFF] status of SET switch indicator output.
DISTANCE [m]	Indicates the distance from the vehicle ahead.
RELATIVE SPD [m/s]	Indicates the relative speed of the vehicle ahead.
SIDE G [G]	Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication. (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication).
FUNC ITEM (FCW) [On/Off]	Indicates system which can be set to ON/OFF by selecting “Driver Assistance”⇒“Emergency Brake” of the integral switch: Forward Emergency Braking.
FUNC ITEM (BSW) [On/Off]	Indicates system which can be set to ON/OFF by selecting “Driver Assistance”⇒“Blind Spot” of the integral switch: Blind Spot Warning.
FCW SELECT [On/Off]	Indicates an ON/OFF state of the FCW system. The FCW system can be set to ON/OFF by selecting “Driver Assistance”⇒“Emergency Brake” 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 “Driver Assistance”⇒“Blind Spot” of the integral switch.
BSW/BSI WARN LMP [On/Off]	Indicates [ON/OFF] status of Blind Spot Warning malfunction.
BSW SYSTEM ON [On/Off]	Indicates [ON/OFF] status of BSW system.
FCW SYSTEM ON [On/Off]	Indicates [ON/OFF] status of FEB system.
BSW ON INDICATOR [On/Off]	Indicates [ON/OFF] status of BSW system ON display output.

Monitored item [Unit]	Description
SIDE RADAR BLOCK COND [On/Off]	Indicates [ON/OFF] status of side radar with dirt or foreign materials.
BSW IND BRIGHTNESS [Nothing/Bright/Normal/Dark]	Indicates status of brightness of Blind Spot Warning indicator.
FEB AVAILABLE COND [On/Off]	Indicates [On/Off] available condition of FEB system.
EBA AVAILABLE COND [On/Off]	Indicates [On/Off] available condition of Brake Assist system.

ACTIVE TEST

CAUTION:

- **Never perform "Active Test" while driving the vehicle.**
- **The "Active Test" cannot be performed when the following systems malfunction is displayed.**
  - **Blind Spot Warning**
  - **FCW/FEB**
- **The "Active Test" cannot be performed when the FEB warning lamp is illuminated.**

Test item	Description
METER LAMP	The FEB warning lamp can be illuminated by ON/OFF operation as necessary.
Switch lamp	The warning system ON indicator (on warning system switch) can be illuminated by ON/OFF operation as necessary.

METER LAMP

Test item	Operation	Description	FEB warning lamp
METER LAMP	Off	Stops sending the FEB warning lamp signal to exit from the test.	OFF
	On	Transmits the FEB warning lamp signal to the combination meter via CAN communication.	ON

SWITCH LAMP

Test item	Operation	Description	Warning system ON indicator
Switch lamp	Off	Stops transmitting the warning system ON indicator (on warning system switch) signal to end the test.	OFF
	On	Transmits the warning system ON indicator (on warning system switch) signal to start the test.	ON

ECU IDENTIFICATION

Displays ADAS control unit part number.

DIAGNOSIS SYSTEM (DISTANCE SENSOR)

CONSULT Function (LASER/RADAR)

INFOID:0000000012797894

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication with Distance sensor.

Diagnosis mode	Description
Self Diagnostic Result	Displays malfunctioning system memorized in Distance sensor.
Data Monitor	Displays real-time input/output data of Distance sensor.
Active Test	Distance sensor activates outputs to components.
Work support	It can monitor the adjustment direction indication in order to perform the radar alignment operation smoothly.
ECU Identification	Displays Distance sensor part number.
CAN Diag Support Monitor	Monitor the reception status of CAN communication viewed from Distance sensor.

SELF DIAGNOSTIC RESULT

Refer to BRC-212, "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]	Vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication.
YAW RATE [deg/s]	Yaw rate signal received from ABS actuator and electric unit (control unit) via CAN communication.
PWR SUP MONI [V]	Indicates IGN voltage input by Distance sensor.
DISTANCE [m]	Indicates the distance from the vehicle ahead.
RELATIVE SPD [m/s]	Indicates the relative speed of the vehicle ahead.
LASER OFFSET [m]	**NOTE:** The item is indicated, but not used.
LASER HEIGHT [m]	**NOTE:** The item is indicated, but not used.
STEERING ANGLE [deg]	The steering angle is displayed.
STRG ANGLE SPEED [deg/s]	The steering angle speed is displayed.
L/R ADJUST [deg]	Indicates a horizontal correction value of the radar.
U/D ADJUST [deg]	Indicates a vertical correction value of the radar.
FCW SYSTEM ON [On/Off]	**NOTE:** The item is indicated, but not used.
FCW SELECT [On/Off]	**NOTE:** The item is indicated, but not used.
FEB SW [On/Off]	Indicates [On/Off] status of FEB system

Monitored item [Unit]	Description
FEB SELECT [On/Off]	Indicates an ON/OFF state of the FEB system.
BRAKE SW [On/Off]	Indicates [On/Off] status as judged from brake pedal position switch signal (BCM transmits brake pedal position switch signal through CAN communication)
IDLE SW [On/Off]	Indicates [On/Off] status of idle switch read from distance sensor through CAN communication (ECM transmits On/Off status through CAN communication)
THRTL SENSOR [On/Off]	**NOTE:** The item is indicated, but not used.
VEHICLE AHEAD DETECT [On/Off]	Indicates [On/Off] status of vehicle ahead detection indicator output
STATIC OBSTACLE DETECT [On/Off]	Indicates [On/Off] status of static obstacle detection
BUZZER O/P [On/Off]	Indicates [On/Off] status of warning chime output
FUNC ITEM (FCW) [Without FCW/With FCW]	**NOTE:** The item is indicated, but not used.
FUNC ITEM (FEB)	Indicates systems which can be set to ON/OFF by selecting FEB.
PRESS ORDER	Indicates status as judged from brake fluid pressure signal [ABS actuator and electric unit (control unit) transmits brake fluid pressure signal through CAN communication].
Shift position	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication).
Turn signal	**NOTE:** The item is indicated, but not used.
ADAS MALF	Indicates [On/Off] status of ADAS malfunction
MILEAGE	Indicates [On/Off] status of ADAS malfunction

WORK SUPPORT

Work support items	Description
MILLIWAVE RADAR ADJUST	Outputs millimeter waves, calculates dislocation of the millimeter waves, and indicates adjustment direction.
FEB DEFAULT SETTING	Changes the FEB system to default settings.
FEB OPERATION MILEAGE	The mileage information for FEB operation is displayed.

ACTIVE TEST

Test item	Description
BRAKE ACTUATOR	Activates the brake by an arbitrary operation
ICC BUZZER	This test is able to check FEB warning chime operation [On/Off] in the combination meter.
METER LAMP	This test is able to check FEB warning indicator operation [On/Off] in the combination meter information display.

DIAGNOSIS SYSTEM (SIDE RADAR LH)

CONSULT Function (SIDE RADAR LEFT)

INFOID:0000000012731455

DESCRIPTION

CONSULT performs the following functions by communicating with the side radar LH.

Diagnosis 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-35, "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
BSW/CTA WARN STATUS [On/Off]	Indicates [ON/OFF] status of vehicle detection
BSW STATUS [On/Off]	Indicates [ON/OFF] status of Blind Spot Warning system
VHCL SPD SE [mph]	Indicates vehicle speed [mph]
TURN SIGNAL [LH/RH/Off]	Indicates the [LH/RH/OFF] operation of the signal
SHIFT POSITION [P/R/N/D]	Indicates position of transmission range switch
LUMINANCE (LEFT) [Hi/Lo]	Indicates the left side luminance level of the radar
LUMINANCE (RIGHT) [Hi/Lo]	Indicates the right side luminance level of the radar

ACTIVE TEST

CAUTION:

- **Never perform the active test while driving.**
- **Active test cannot be started while the BSW indicator is illuminated.**

Active test item	Operation	Description
BSW/BSI INDICATOR DRIVE	On	Outputs the voltage to illuminate the BSW indicator
	Off	Stops the voltage to illuminate the BSW indicator

DIAGNOSIS SYSTEM (SIDE RADAR RH)

CONSULT Function (SIDE RADAR RIGHT)

INFOID:0000000012731456

DESCRIPTION

CONSULT performs the following functions by communicating with the side radar RH.

Diagnosis 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-37, "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
BSW/CTA WARN STATUS [On/Off]	Indicates [On/Off] status of vehicle detection
BSW STATUS [On/Off]	Indicates [On/Off] status of Blind Spot Warning system
VHCL SPD SE [mph]	Indicates vehicle speed [mph]
TURN SIGNAL [LH/RH/Off]	Indicates the [LH/RH/OFF] operation of the turn signal
SHIFT POSITION [P/R/N/D]	Indicates position of transmission range switch
LUMINANCE (LEFT) [Hi/Lo]	Indicates the left side luminance level of the radar
LUMINANCE (RIGHT) [Hi/Lo]	Indicates the right side luminance level of the radar

ACTIVE TEST

CAUTION:

- **Never perform the active test while driving.**
- **Active test cannot be started while the BSW indicator is illuminated.**

Active test item	Operation	Description
BSW/BSI INDICATOR DRIVE	On	Outputs the voltage to illuminate the BSW indicator
	Off	Stops the voltage to illuminate the BSW indicator

ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000012744329

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.

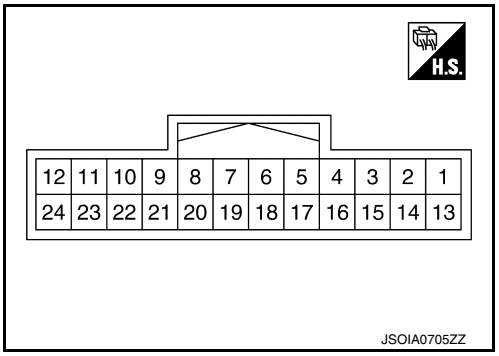
Monitor item	Condition		Value/Status
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed.	Off
		When brake or clutch pedal is not depressed.	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed.	On
		When brake pedal is not depressed.	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
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: • FCW system • FEB system	On
		When the buzzer of the following system not operates: • FCW system • FEB system	Off
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
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
D POSITION 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

Monitor item	Condition		Value/Status
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit
VHCL SPD AT	While driving		Value of CVT vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal.	Displays the throttle position
GEAR	While driving		Displays the gear position
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
SET DISP IND	Press SET/COAST switch	SET switch indicator ON.	On
		SET switch indicator OFF.	Off
DISTANCE	Drive the vehicle and activate the FCW/FEB system	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 FCW/FEB system	When a vehicle ahead is detected.	Displays the relative speed.
		When a vehicle ahead is not detected.	0.0
SIDE G	While driving	Vehicle turning right.	Negative value
		Vehicle turning left.	Positive value
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
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
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
BSWBSI WARN LMP	Engine running	When the BSW system is malfunctioning.	On
		When the BSW system is normal.	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON.	On
		When the BSW system is OFF.	Off
FCW SYSTEM ON	Engine running	When the FEB system is ON.	On
		When the FEB system is OFF.	Off
BSW ON INDICATOR	Engine running	BSW system display ON.	On
		BSW system display OFF.	Off
SIDE RADAR BLOCK COND	Engine running	Rear bumper or side radar is dirty.	On
		Rear bumper or side radar is clean.	Off
BSW IND BRIGHTNESS	Ignition switch ON	BSW system OFF.	Nothing
		Blind Spot Warning indicator brightness bright.	Bright
		Blind Spot Warning indicator brightness normal.	Normal
		Blind Spot Warning indicator brightness dark.	Dark

Monitor item	Condition		Value/Status
FEB AVAILABLE COND	Engine running	When the FEB system is available condition.	On
		When the FEB system is not available condition.	Off
EBA AVAILABLE COND	Engine running	When the Brake Assist system is available condition.	On
		When the Brake Assist system is not available condition.	Off

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	Input	—		0 V
2 (L)		ITS communication-high	—	—		—
3 (P)		Ignition power supply	Input	Ignition switch ON		Battery voltage
5 (Y)		ITS communication-low	—	—		—
6 (Y)		3rd CAN Low	Input	—		—
9 (L)		CAN high	—	—		—
10 (R)		CAN low	—	—		—
11 (W)		Warning system switch	Input	Ignition switch ON	Warning system switch is not pressed	Battery voltage
					Warning system switch is pressed	0 V
12 (GR)		Warning buzzer signal	Output	Ignition switch ON	Warning buzzer operation	Battery voltage
					Warning buzzer not operating	0 V
17 (BR)		Warning system switch ON indicator	Output	Ignition switch ON	Warning system ON indicator is OFF	Battery voltage
					Warning system ON indicator is ON	0 V
18 (L)		3rd CAN High	Input	—	—	0 V
24 (B)		Warning buzzer ground	—	—	—	—

Fail-safe (ADAS Control Unit)

INFOID:0000000012797889

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
Forward Emergency Braking (FEB)	High-pitched tone	FEB warning lamp (Yellow)	Cancel
Forward Collision Warning (FCW)	High-pitched tone	FEB warning lamp (Yellow)	Cancel
Blind Spot Warning (BSW)	Low-pitched tone	BSW system warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000012797888

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	• U1000: CAN COMM CIRCUIT • U1321: CONFIGURATION
3	• C1B53: SIDE RDR R MALF • C1B54: SIDE RDR L MALF
4	• C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • U0121: VDC CAN CIR 2 • U0126: STRG SEN CAN1 • U0235: DIST SEN CAN CIRC 1 • U0402: TCM CAN CIR 1 • U0415: VDC CAN CIR 1 • U0428: STRG SEN CAN2 • U0433: DIST SEN CAN CIRC 2 • 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
5	• C1A03: VHCL SPEED SE CIRC
6	• C1A00: CONTROL UNIT

DTC Index

INFOID:0000000012731468

DTC CONSULT	CONSULT display	Reference
U1507	LOST COMM (SIDE RDR R)	DAS-105
U1508	LOST COMM (SIDE RDR L)	DAS-106
U1000[NOTE]	CAN COMM CIRCUIT	DAS-96
U1321	CONFIGURATION	DAS-100
C1B53	SIDE RDR R MALF	DAS-84
C1B54	SIDE RDR L MALF	DAS-85
C1A01	POWER SUPPLY CIR	DAS-76
C1A02	POWER SUPPLY CIR 2	DAS-76
U0121	VDC CAN CIR 2	DAS-88

DTC CONSULT	CONSULT display	Reference
U0126	STRG SEN CAN 1	DAS-89
U0235	DIST SEN CAN CIRC 1	DAS-90
U0428	STRG SEN CAN CIR2	DAS-94
U0402	TCM CAN CIR 1	DAS-91
U0415	VDC CAN CIR 1	DAS-93
U0433	DIST SEN CAN CIRC 2	DAS-95
U1503	SIDE RDR L CAN CIR 2	DAS-101
U1504	SIDE RDR L CAN CIR 1	DAS-102
U1505	SIDE RDR R CAN CIR 2	DAS-103
U1506	SIDE RDR R CAN CIR 1	DAS-104
C1A03	VHCL SPEED SE CIRC	DAS-77
C1A00	CONTROL UNIT	DAS-75

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.

SIDE RADAR LH

Reference Value

INFOID:0000000012731457

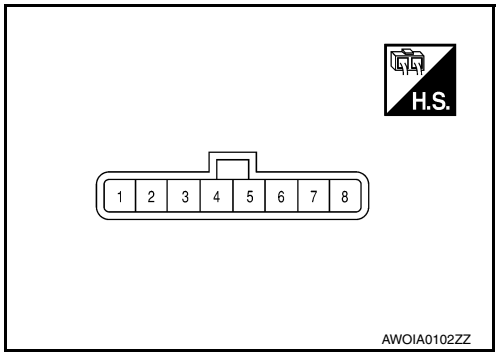
VALUES ON THE DIAGNOSIS TOOL

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
BSW/CTA WARN STATUS	BSW system is normal.	On
	BSW system is malfunctioning.	Off
BSW STATUS	BSW system is ON.	Off
	BSW system is OFF.	On
VHCL SPD SE	Indicates current vehicle speed	mph
TURN SIGNAL	Left/right turn signal is ON.	On
	Left/right turn signal is OFF.	Off
SHIFT POSITION	Shows the position of the transmission range switch	P/R/N/D/L
LUMINANCE(LEFT)	Shows radar left luminance level	Hi/Lo
LUMINANCE (RIGHT)	Shows radar right luminance level	Hi/Lo

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	–	Signal name	Input/ Output		
4 (R)	Ground	Blind Spot Warning indicator	Output	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	6 V
5 (BR)	Ground	Ignition power supply	Input	Ignition switch ON	Battery voltage
6 (L)	—	ITS communication high	—	—	—
7 (Y)	—	ITS communication low	—	—	—
8 (B)	Ground	Ground	—	—	0 V

Fail-safe (Side Radar)

INFOID:0000000012731458

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 indicator (orange) on the combination meter.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)
When the side radar is blocked, the operation is temporarily canceled. Then the buzzer sounds and the Blind Spot Warning indicator (orange) is turned ON in the combination meter. Also, under the following conditions, the operation may be temporarily canceled:
- 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:0000000012731459

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 IND SHORT CIR • C1B52: BSW IND OPEN CIR • C1B55: RADAR BLOCKAGE

DTC Index

INFOID:0000000012731460

×: Applicable

DTC		Fail-safe	Reference page
		Blind Spot Warning	
C1B50	SIDE RDR MALFUNCTION	×	DAS-79
C1B51	BSW IND SHORT CIR	×	DAS-80
C1B52	BSW IND OPEN CIR	×	DAS-82
C1B55	RADAR BLOCKAGE	×	DAS-86
U1000	CAN COMM CIRCUIT	×	DAS-97
U1010	CONTROL UNIT (CAN)	×	DAS-99
U0104	ADAS CAN CIR1	×	DAS-87
U0405	ADAS CAN CIR2	×	DAS-92

SIDE RADAR RH

Reference Value

INFOID:0000000012731461

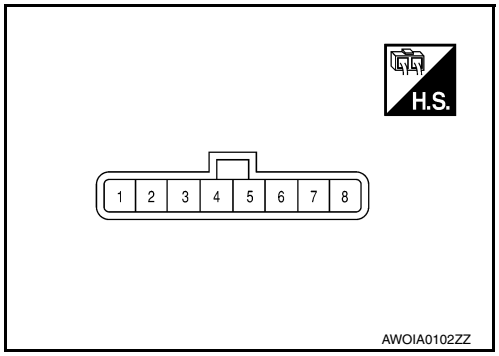
VALUES ON THE DIAGNOSIS TOOL

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
BSW/CTA WARN STATUS	BSW system is normal.	On
	BSW system is malfunctioning.	Off
BSW STATUS	BSW system is ON.	Off
	BSW system is OFF.	On
VHCL SPD SE	Indicates current vehicle speed	mph
TURN SIGNAL	Left/right turn signal is ON.	On
	Left/right turn signal is OFF.	Off
SHIFT POSITION	Shows the position of the transmission range switch	P/R/N/D
LUMINANCE(LEFT)	Shows radar left luminance level	Hi/Lo
LUMINANCE (RIGHT)	Shows radar right luminance level	Hi/Lo

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	–	Signal name	Input/ Output		
3 (B)	Ground	Right/Left switching signal	Input	—	0 V
4 (G)	Ground	Blind Spot Warning indicator	Output	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	6 V
5 (BR)	Ground	Ignition power supply	Input	Ignition switch ON	Battery voltage
6 (L)	—	ITS communication high	—	—	—
7 (Y)	—	ITS communication low	—	—	—
8 (B)	Ground	Ground	—	—	0 V

Fail-safe (Side Radar)

INFOID:0000000012731462

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 indicator (orange) on the combination meter.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily canceled. Then the buzzer sounds and the Blind Spot Warning indicator (orange) is turned ON in the combination meter. Also, under the following conditions, the operation may be temporarily canceled:

- 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:0000000012731463

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 IND SHORT CIR • C1B52: BSW IND OPEN CIR • C1B55: RADAR BLOCKAGE

DTC Index

INFOID:0000000012731464

×: Applicable

DTC		Fail-safe	Reference page
		Blind Spot Warning	
C1B50	SIDE RDR MALFUNCTION	×	DAS-79
C1B51	BSW IND SHORT CIR	×	DAS-80
C1B52	BSW IND OPEN CIR	×	DAS-82
C1B55	RADAR BLOCKAGE	×	DAS-86
U1000	CAN COMM CIRCUIT	×	DAS-97
U1010	CONTROL UNIT (CAN)	×	DAS-99
U0104	ADAS CAN CIR1	×	DAS-87
U0405	ADAS CAN CIR2	×	DAS-92

DISTANCE SENSOR

Reference Value

INFOID:0000000012916717

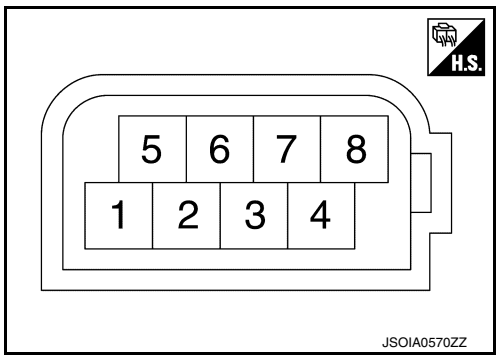
VALUES ON THE DIAGNOSIS TOOL

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 distance 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
LASER OFFSET	**NOTE:** The item is indicated, but not used		—
LASER 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
FCW SYSTEM ON	Engine running	When the FEB system is ON	On
		When the FEB system is OFF	Off
FCW SELECT	Ignition switch ON	FEB system set with the information display is ON	On
		FEB system set with the information display is OFF	Off
FEB SW	Engine running	FEB system ON	On
		FEB system OFF	Off
FEB SELECT	Ignition switch ON	FEB system set with the information display is ON	On
		FEB system set with the information display is OFF	Off
BRAKE SW	Ignition switch ON	When brake pedal is depressed	On
		When brake pedal is not depressed	Off

Monitor item	Condition		Value/Status
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
THRTL SENSOR	**NOTE:** The item is indicated, but not used		Off
VEHICLE AHEAD DETECT	Drive the vehicle	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
STATIC OBSTACLE DETECT	Drive the vehicle	When a vehicle static obstacle is detected	On
		When a vehicle static obstacle is not detected	Off
BUZZER O/P	Engine running	When the buzzer of the FEB system operates	On
		When the buzzer of the FEB system not operates	Off
FUNC ITEM (FCW)	Engine running	FEB system set with the integral switch ON	On
		FEB system set with the integral switch OFF	Off
FUNC ITEM (FEB)	Engine running	FEB system set with the integral switch ON	On
		FEB system set with the integral switch OFF	Off
PRESS ORDER	When brake pedal is depressed		Approx. 0 bar
	When brake pedal is not depressed		0 – 255 bar
Shift position	• Engine running • While driving		Displays the shift position
Turn signal	**NOTE:** The item is indicated, but not used		Off
ADAS MALF	Engine running	ADAS is malfunctioning	On
		ADAS is not malfunctioning	Off
MILEAGE	• Engine running • While driving	When the FEB system is activated	Displays the speed at which the FEB system is activated

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail-safe (Distance Sensor)

INFOID:0000000012916718

If a malfunction occurs in the distance sensor cancels control, sounds a beep, and turns ON the FEB system warning and warning lamp.

System	Buzzer	Warning lamp/Indicator lamp	Description
Forward Emergency Braking (FEB)	Beep	• FEB system display: Yellow • FEB warning lamp: On	Cancel

DTC Inspection Priority Chart

INFOID:0000000012916719

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	• C10B7: YAW RATE SENSOR • C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • C1A03: VHCL SPEED SE CIRC • C1A04: ABS/TCS/VDC CIRC • C1A05: BRAKE SW/STOP L SW • C1A07: CVT CIRCUIT • C1A12: LASER BEAM OFF CNTR • C1A14: ECM CIRCUIT • C1A15: GEAR POSITION • C1A16: RADAR STAIN • C1A17: ICC SENSOR MALF • C1A18: LASER AIMING INCMP • C1A21: UNIT HIGH TEMP • C1A24: NP RANGE • C1A26: ECD MODE MALF • C1A39: STRG SEN CIR • C1B5D: FEB OPE COUNT LIMIT • U0121: VDC CAN CIR 2 • U0126: STRG SEN CAN CIR 1 • U0401: ECM CAN CIR 1 • U0415: VDC CAN CIR 1 • U0428: STRG SEN CAN CIR 2 • U1527: CCM CAN CIR 1 • U153F: CCM CAN CIR 2

DTC Index

INFOID:0000000012916720

DTC CONSULT	CONSULT display	Reference
C10B7	YAW RATE SENSOR	BRC-227, "DTC Logic"
C1A01	POWER SUPPLY CIR	BRC-228, "DTC Logic"
C1A02	POWER SUPPLY CIR 2	BRC-229, "DTC Logic"
C1A03	VHCL SPEED SE CIRC	BRC-229, "DTC Logic"
C1A04	ABS/TCS/VDC CIRC	BRC-231, "DTC Logic"
C1A05	BRAKE SW/STOP L SW	BRC-232, "DTC Logic"
C1A07	CVT CIRCUIT	BRC-234, "DTC Logic"
C1A12	LASER BEAM OFF CNTR	BRC-235, "DTC Logic"
C1A14	ECM CIRCUIT	BRC-236, "DTC Logic"
C1A15	GEAR POSITION	BRC-237, "DTC Logic"
C1A16	RADAR STAIN	BRC-239, "DTC Logic"
C1A17	ICC SENSOR MALF	BRC-241, "DTC Logic"
C1A18	LASER AIMING INCMP	BRC-242, "DTC Logic"
C1A21	UNIT HIGH TEMP	BRC-243, "DTC Logic"
C1A24	NP RANGE	BRC-244, "DTC Logic"
C1A26	ECD MODE MALF	BRC-246, "DTC Logic"
C1A39	STRG SEN CIR	BRC-247, "DTC Logic"
C1A50	ADAS MALFUNCTION	BRC-248, "DTC Logic"
C1A0C	ADAS CIRCUIT CIR1	BRC-250, "DTC Logic"
C1B5D	FEB OPE COUNT LIMIT	BRC-250, "DTC Logic"

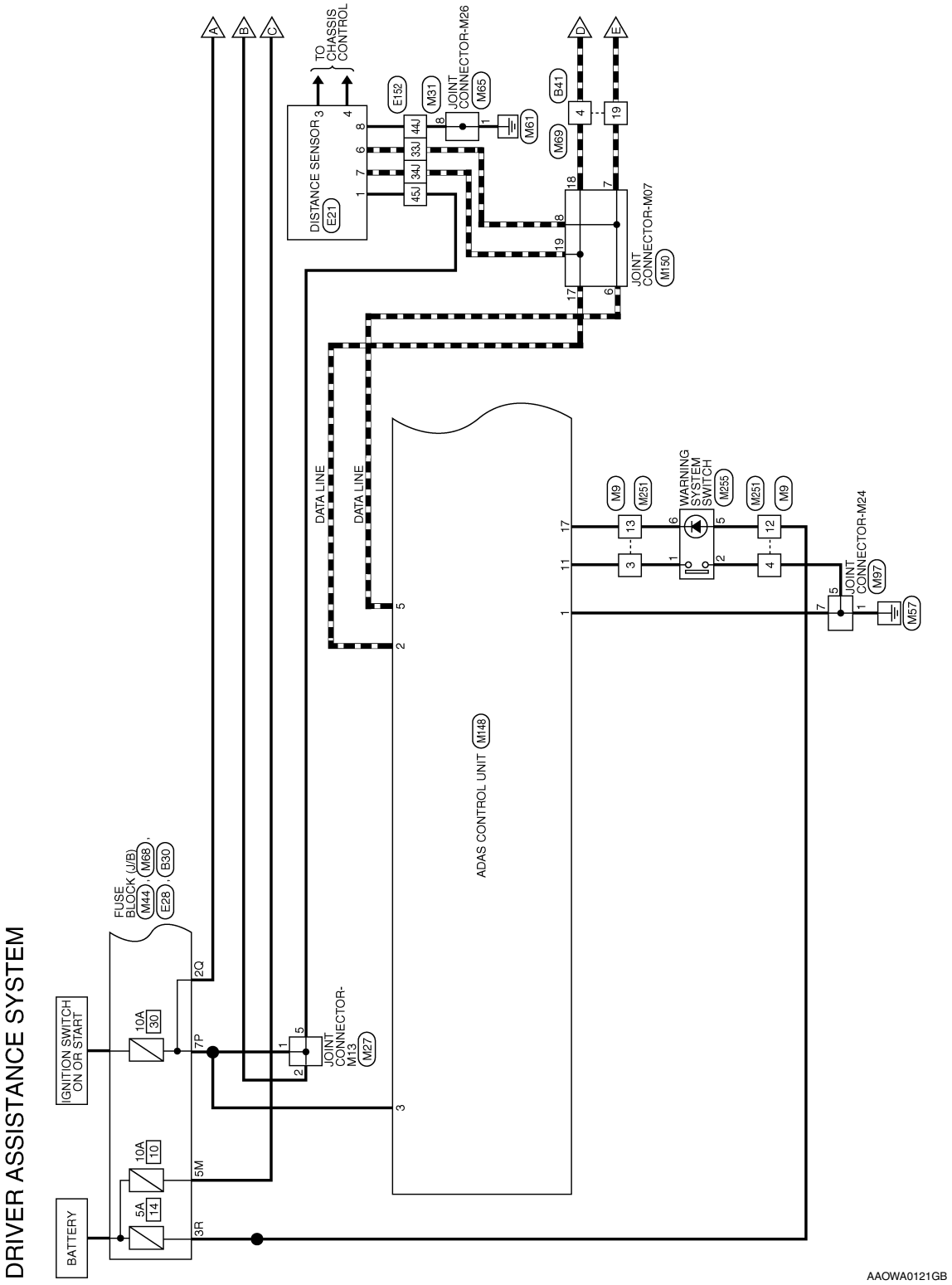
DTC	CONSULT display	Reference
CONSULT		
U0121	VDC CAN CIR 2	BRC-251, "DTC Logic"
U0126	STRG SEN CAN CIR 1	BRC-252, "DTC Logic"
U0401	ECM CAN CIR 1	BRC-253, "DTC Logic"
U0415	VDC CAN CIR 1	BRC-254, "DTC Logic"
U0428	STRG SEN CAN CIR 2	BRC-255, "DTC Logic"
U1000	CAN COMM CIRCUIT	BRC-256, "DTC Logic"
U1010	CONTROL UNIT (CAN)	BRC-257, "DTC Logic"
U1527	CCM CAN CIR 1	BRC-258, "DTC Logic"
U153F	CCM CAN CIR 2	BRC-259, "DTC Logic"

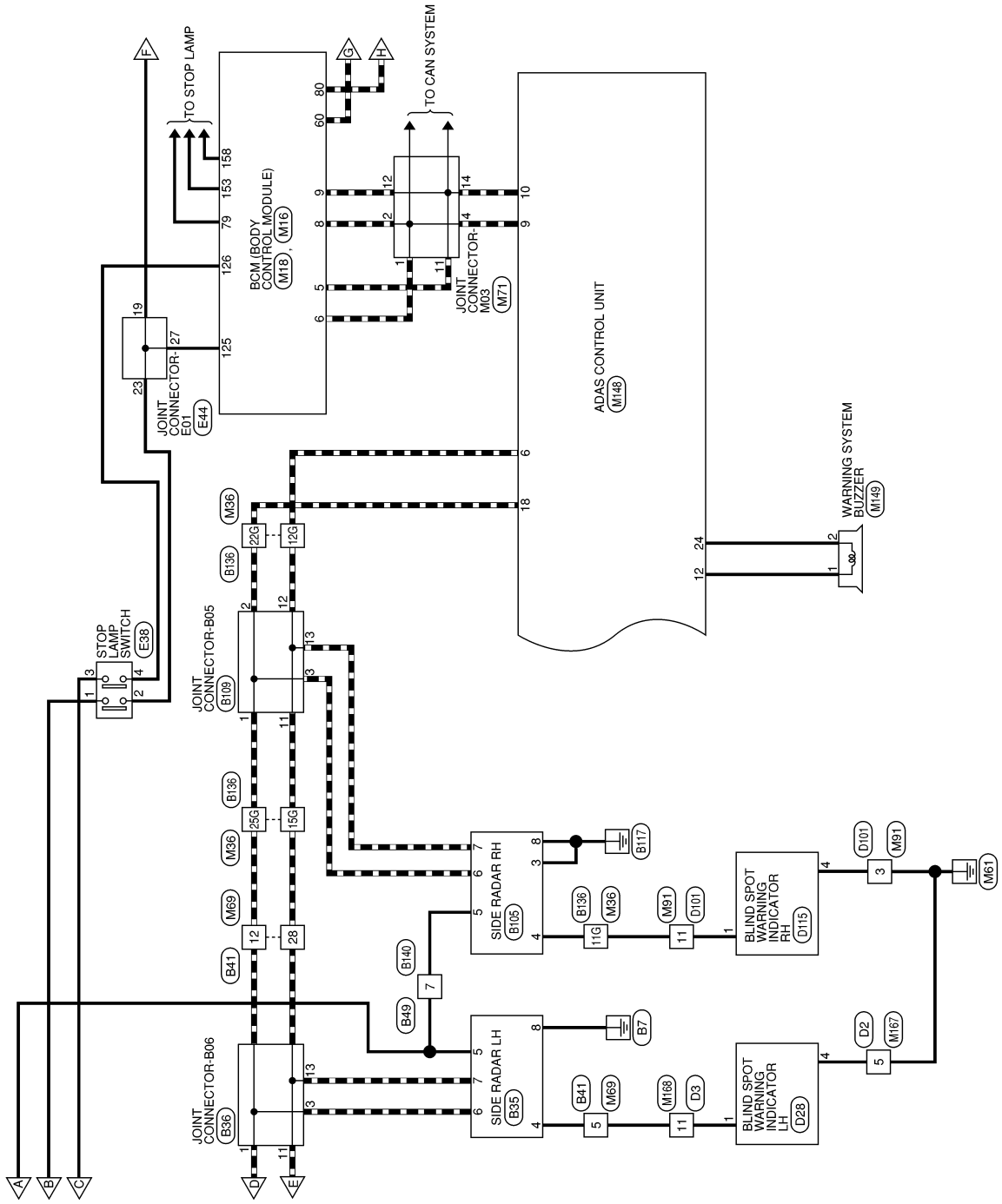
WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

INFOID:0000000012421551





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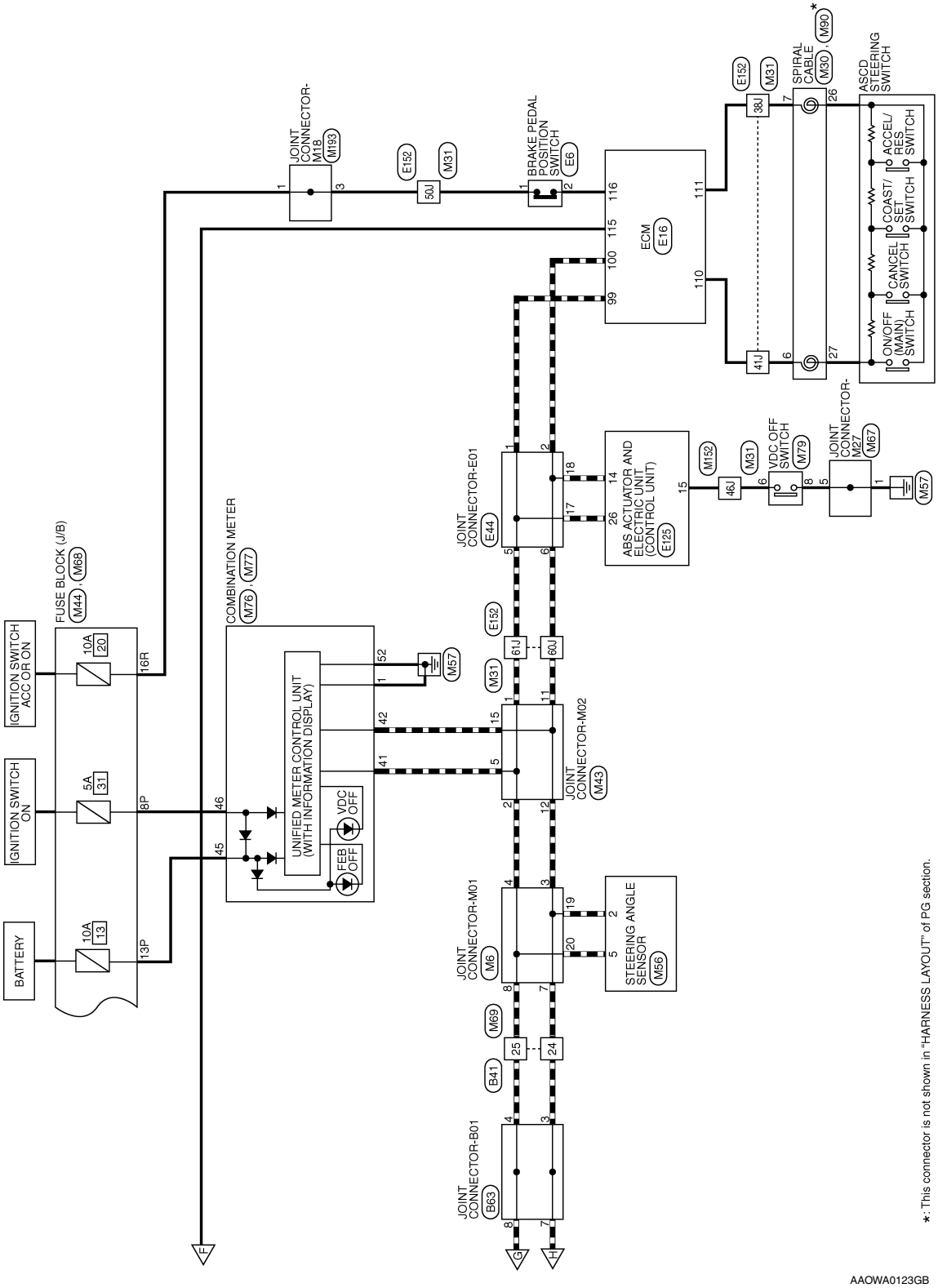
IGNITION SWITCH ACC OR ON
IGNITION SWITCH ON
BATTERY
FUSE BLOCK (J/B) (M44), (M68)
10A 20
5A 31
10A 13
16R
8P
13P
COMBINATION METER (M76), (M77)
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
VDC OFF
FEB OFF
JOINT CONNECTOR-M18 (M193)
BRAKE PEDAL POSITION SWITCH (E6)
ECM (E16)
SPIRAL CABLE (M30)
ASCD STEERING SWITCH
ACCEL/RES SWITCH
COAST/SET SWITCH
CANCEL SWITCH
ON/OFF (MAIN) SWITCH
VDC OFF SWITCH (M79)
JOINT CONNECTOR-M27 (M67)
JOINT CONNECTOR-E01 (E44)
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (E125)
JOINT CONNECTOR-M02 (M43)
JOINT CONNECTOR-M01 (M6)
STEERING ANGLE SENSOR (M56)
JOINT CONNECTOR-B01 (B63)
*: This connector is not shown in "HARNESS LAYOUT" of PG section.
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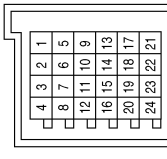
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY

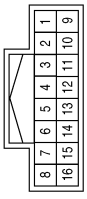
H.S.



Terminal No.	Color of Wire	Signal Name
3	P	–
4	L	–
7	P	–
8	L	–
19	P	–
20	L	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

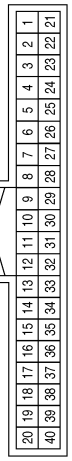
H.S.



Terminal No.	Color of Wire	Signal Name
3	W	–
4	B	–
12	SB	–
13	BR	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.



Terminal No.	Color of Wire	Signal Name
5	R	CAN-L
6	L	CAN-H
8	L	CAN-H
9	R	CAN-L

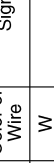
Connector No.	M27
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–
5	P	–

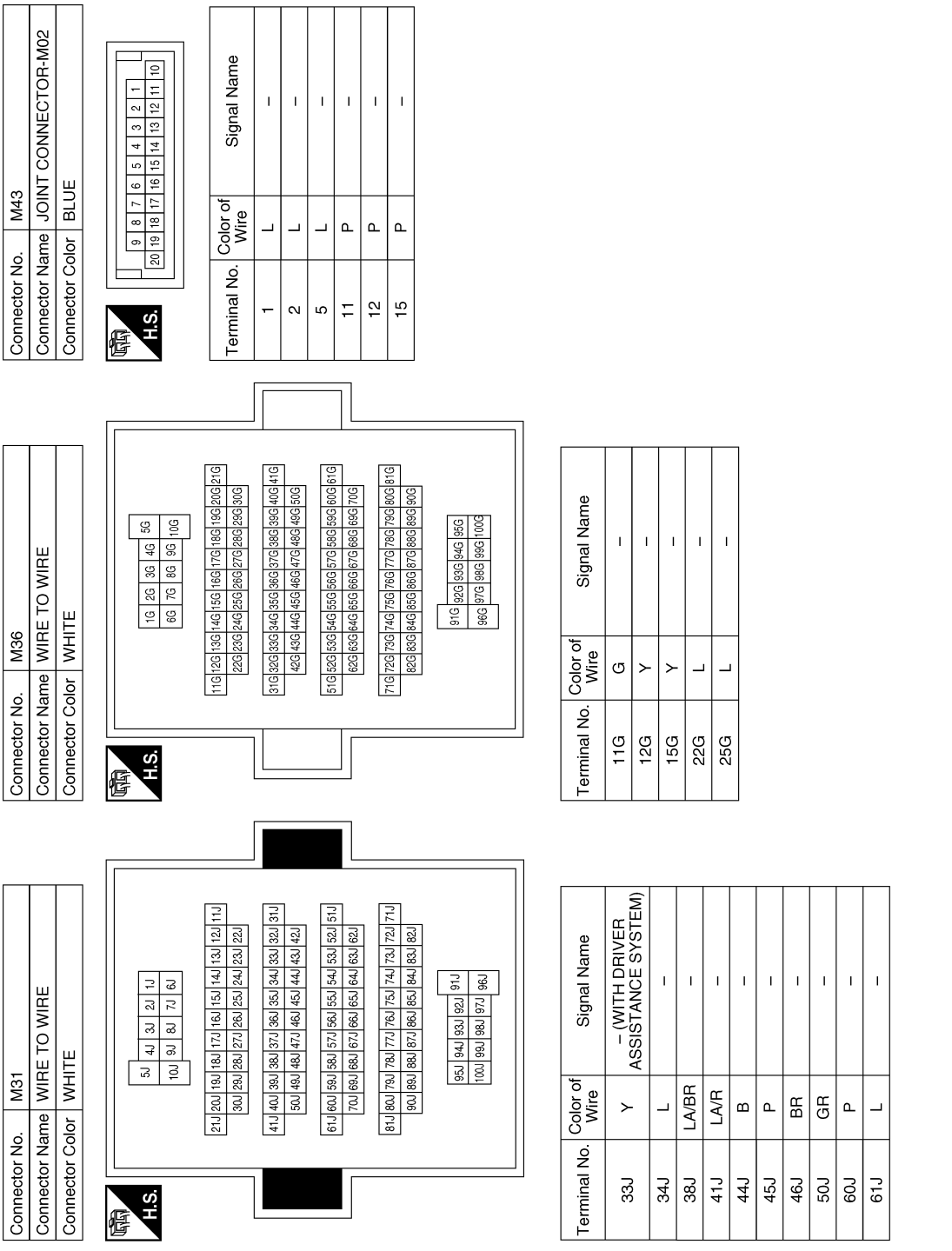
Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
6	LA/R	–
7	LA/BR	–

AAOIA0397GB



AAOIA0398GB

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

7P	6P	5P	4P		3P	2P	1P
16P	15P	14P	13P	12P	11P	10P	9P	8P

Terminal No.	Color of Wire	Signal Name
7P	Y	–
8P	LA/BR	–
13P	LA/G	–

Connector No.	M56
Connector Name	STEERING ANGLE SENSOR
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
2	P	–
5	L	–

Connector No.	M65
Connector Name	JOINT CONNECTOR-M26
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	–
8	B	–

Connector No.	M67
Connector Name	JOINT CONNECTOR-M27
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	–
8	B	–

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

H.S.

7R	6R	5R	4R		3R	2R	1R
16R	15R	14R	13R	12R	11R	10R	9R	8R

Terminal No.	Color of Wire	Signal Name
3R	V	–
16R	GR	–

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
4	BR	–
5	R	–
12	L	–
19	Y	–
24	P	–
25	L	–
28	Y	–

AAOIA0399GB

Connector No.	M71
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

9	8	7	6	5	4	3	2	1
20	19	18	17	16	15	14	13	12	11	10
---	---	---	---	---	---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–
4	L	–
11	R	–
12	R	–
14	R	–

Connector No.	M76
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LA/G	BAT
46	LA/BR	IGN
52	B	G1

Connector No.	M79
Connector Name	VDC OFF SWITCH
Connector Color	BLACK

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
6	BR	–
8	B	–

Connector No.	M90
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	WHITE

H.S.

22	21	20	19	18	17
28	27	26	25	24	23

Terminal No.	Color of Wire	Signal Name
26	GR	–
27	V	–

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
3	GR	–
11	G	–

AAOIA0400GB

Connector No.	M97
Connector Name	JOINT CONNECTOR-M24
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
5	B	–
7	B	–

Connector No.	M148
Connector Name	ADAS CONTOL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	L	ITS CAN-H
3	P	IGN
4	–	–
5	Y	ITS CAN-L
6	Y	CAN-L
7	–	–
8	–	–
9	L	CAN-H

Terminal No.	Color of Wire	Signal Name
10	R	CAN-L
11	W	SW1
12	GR	SPEAKER_DRIVE(+)
13	–	–
14	–	–
15	–	–
16	–	–
17	BR	LED1
18	L	CAN-H
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	B	SPEAKER_DRIVE(-)

Connector No.	M149
Connector Name	WARNING SYSTEM BUZZER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	–
2	B	–

Connector No.	M150
Connector Name	JOINT CONNECTOR-M07
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
6	Y	–
7	Y	–
8	Y	–
17	L	–
18	L	–
19	L	–

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	–

AAOIA0401GB

Connector No.	M251
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
3	W	–
4	B	–
12	BG	–
13	BR	–

Connector No.	M193
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	GR	–
3	GR	–

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
11	R	–

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK

H.S.

97	101	105	109	113	117	121	125
98	102	106	110	114	118	122	126
99	103	107	111	115	119	123	127
100	104	108	112	116	120	124	128

Terminal No.	Color of Wire	Signal Name
99	L	CAN-H
100	P	CAN-L
110	G	ASCD STEERING SWITCH
111	BR	SENSOR GROUND
115	V	STOP LAMP SWITCH
116	GR	BRAKE PEDAL POSITION SWITCH

Connector No.	E6
Connector Name	BRAKE PEDAL POSITION SWITCH
Connector Color	BROWN

H.S.

2
1

Terminal No.	Color of Wire	Signal Name
1	P	–
2	GR	–

Connector No.	M255
Connector Name	WARNING SYSTEM SWITCH
Connector Color	WHITE

H.S.

4	6	3
2	1	5

Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–
5	BG	–
6	BR	–

AAOIA0402GB

Connector No.	E21
Connector Name	DISTANCE SENSOR
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	IGN
2	–	–
3	W	CAN-L
4	L	CAN-H
5	–	–
6	R	ITS CAN-L
7	L	ITS CAN-H
8	B	GND

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5M	V	–

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
125	LG	I BRAKE SW2
126	W	I BRAKE SW1

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	V	–
2	LG	–
3	L	–
4	W	–

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	P	–
5	L	–
6	P	–
17	L	–
18	P	–
19	V	–
23	LG	–
27	LG	–

AAOIA0403GB

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
14	P	CAN-L
15	BR	VDC OFF
26	L	CAN-H

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
33J	R	–
34J	L	–
38J	BR	–
41J	G	–
44J	B	–
45J	P	–
46J	BR	–
50J	P	–
60J	P	–
61J	L	–

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
79	LA/W	O STOP LAMP3
80	P	CAN-L

Connector No.	B23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
153	LA/W	O STOP LAMP1
158	LA/Y	O STOP LAMP2 NISSAN EUR

Connector No.	B30
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2Q	BR	–

AAOIA0404GB

Connector No.	B35
Connector Name	SIDE RADAR LH
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	–	–
4	R	LED INDICATOR L
5	BR	IGN POWER
6	L	ITS CAN-H
7	Y	ITS CAN-L
8	B	GND

Connector No.	B36
Connector Name	JOINT CONNECTOR-B06
Connector Color	BLUE

H.S.

9	8	7	6	5	4	3	2	1
20	19	18	17	16	15	14	13	12	11	10
---	---	---	---	---	---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–
3	L	–
11	Y	–
12	Y	–
13	Y	–

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
4	L	–
5	R	–
12	L	–
19	Y	–
24	P	–
25	L	–
28	Y	–

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5
6	7	8	9	10	11	12
---	---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name
7	BR	–

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY

H.S.

4	3	2	1
8	7	6	5
12	11	10	9
16	15	14	13
20	19	18	17
24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	P	–
4	L	–
7	P	–
8	L	–

AAOIA0405GB

Connector No.	B105
Connector Name	SIDE RADAR RH
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	B	GND IDENT RH
4	G	LED INDICATOR
5	BR	IGN POWER
6	L	ITS CAN-H

Terminal No.	Color of Wire	Signal Name
7	Y	ITS CAN-L
8	B	GND

Connector No.	B109
Connector Name	JOINT CONNECTOR-B05
Connector Color	BLUE

H.S.

9	8	7	6	5	4	3	2	1	
20	19	18	17	16	15	14	13	12	11	10

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–
3	L	–
4	Y	–
5	Y	–
6	Y	–

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11G	G	–
12G	Y	–
15G	Y	–
22G	L	–
25G	L	–

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

5	4		3	2	1
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
7	BR	–

AAOIA0406GB

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
5	B	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
11	R	–

Connector No.	D28
Connector Name	BLIND SPOT WARNING INDICATOR LH
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	R	–
4	B	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
3	B	–
11	G	–

Connector No.	D115
Connector Name	BLIND SPOT WARNING INDICATOR RH
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
4	B	–

AAOIA0413GB

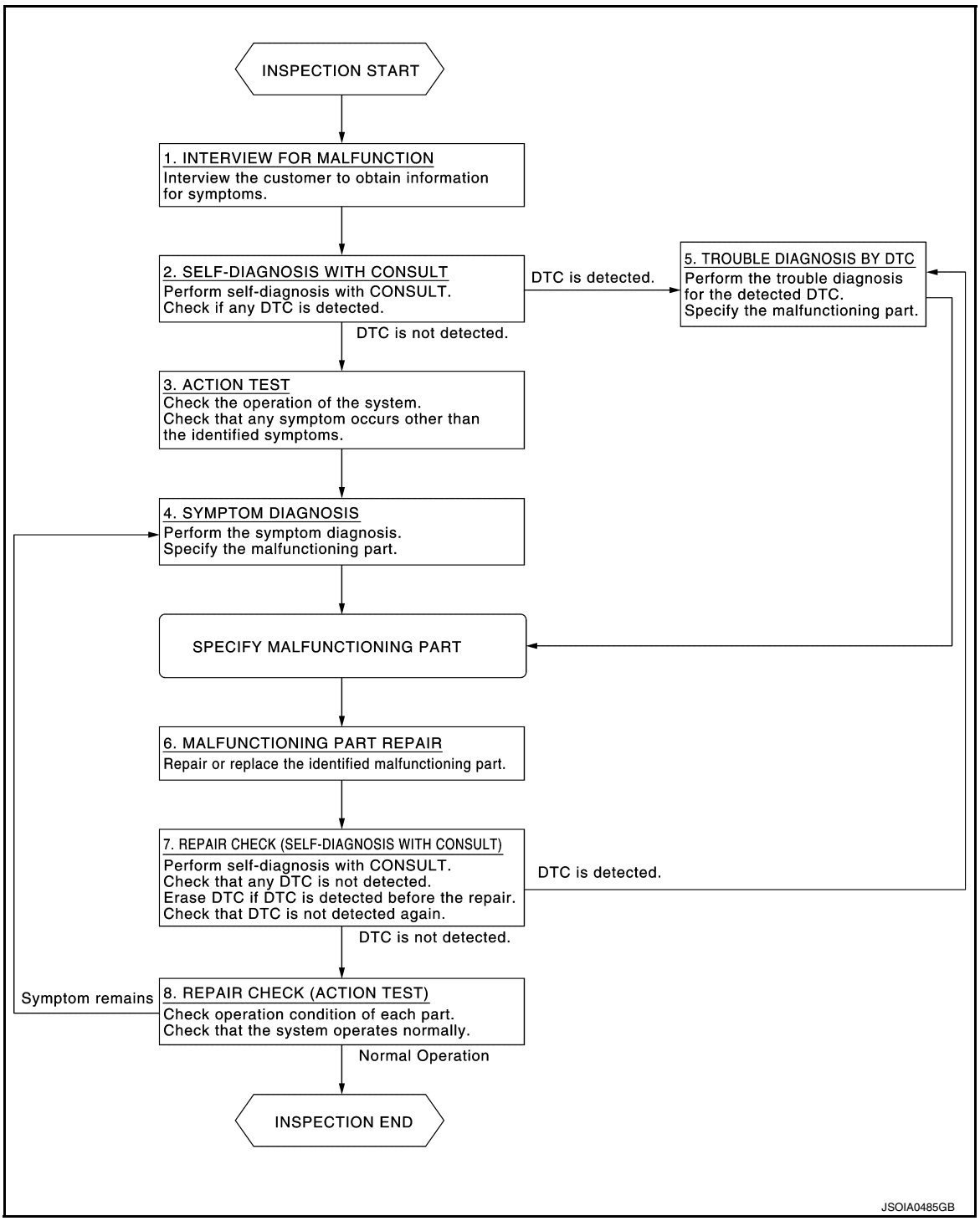
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012752037

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

It is important to clarify the customer's 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

CONSULT
1. Perform “All DTC Reading” mode.
2. Check if the DTC is detected in the “Self Diagnostic Result” of the following:
- “ICC/ADAS”
- “LASER/RADAR”
- “SIDE RADAR LEFT”
- “SIDE RADAR RIGHT”

Is any DTC detected?

YES >> GO TO 5.
NO >> GO TO 3.

3.ACTION TEST

1. Perform the system action test to check the operation status of the following:
- BSW: Refer to DAS-14, "BSW : System Description".
2. 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-117, "Symptom Table".

>> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

CONSULT
1. Check the DTC in the “Self Diagnostic Result”.
2. Perform trouble diagnosis for the following detected DTC:
- “ICC/ADAS”: Refer to DAS-32, "DTC Index".
- “LASER/RADAR”: Refer to BRC-212, "DTC Index".
- “SIDE RADAR LEFT”: Refer to DAS-35, "DTC Index".
- “SIDE RADAR RIGHT”: Refer to DAS-35, "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. Erase “Self Diagnostic Result”.
2. Perform “All DTC Reading” mode after repairing or replacing the specific items.
3. Check if any DTC is detected in self-diagnosis results of the following:
- “ICC/ADAS”
- “LASER/RADAR”
- “SIDE RADAR LEFT”
- “SIDE RADAR RIGHT”

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.

- BSW: Refer to DAS-14, "BSW : System Description".

Is there a malfunction symptom?

YES >> GO TO 4.
NO >> Inspection End.

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT

Description

INFOID:0000000012760346

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

Work Procedure

INFOID:0000000012760347

1.ADAS CONTROL UNIT CONFIGURATION

CONSULT
Perform the ADAS control unit configuration. Refer to DAS-61, "Description".

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “ICC/ADAS”.
3. Check DTC.

Is DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to DAS-32, "DTC Index".
NO >> Inspection End.

CONFIGURATION (ADAS CONTROL UNIT)

Description

INFOID:0000000012760348

- Since vehicle specifications are not included in the ADAS control unit after replacement, it is required to write vehicle specifications using CONSULT.
- Configuration has three functions as follows:

Function		Description
Read/Write Configuration	Before ECU	Allows the reading of vehicle specification written in ADAS control unit to store the specification in CONSULT.
	After ECU replacement	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:0000000012760349

CAUTION:
- **Use “Manual Configuration” only when “TYPE ID” of ADAS control unit cannot be read.**
- **If an error occurs during configuration, start over from the beginning.**

1.CHECKING TYPE ID (1)

Use FAST (service parts catalogue) to search ADAS control unit 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 ADAS control unit. Replace in the usual manner. Refer to DAS-121, "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 ADAS CONTROL UNIT (1)

Replace ADAS control unit. Refer to DAS-121, "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 ADAS control unit.
   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 ADAS CONTROL UNIT (2)

Replace ADAS control unit. Refer to DAS-121, "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 ADAS control unit.
   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 ADAS control unit 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. RESTART ADAS BY IGN OFF/IGN ON

1. Turn the ignition switch OFF.
2. Turn the ignition switch ON.

>> GO TO 11.

11. PERFORMING SUPPLEMENTARY WORK

1. Perform “Self Diagnostic Result” of all systems.
2. Erase “Self Diagnostic Result”.

>> End of work.

ADDITIONAL SERVICE WHEN REPLACING DISTANCE SENSOR

Description

INFOID:0000000012815298

Always perform the following after removing and installing or replacing the distance sensor:
1. Distance sensor initial vertical alignment
2. Distance sensor alignment

Refer to DAS-63, "Work Procedure".

CAUTION:

The system does not operate normally unless the distance sensor is aligned properly.

Work Procedure

INFOID:0000000012815299

1. DISTANCE SENSOR INITIAL VERTICAL ALIGNMENT

Perform the distance sensor initial vertical alignment. Refer to DAS-64, "Description".

>> GO TO 2.

2. DISTANCE SENSOR ALIGNMENT

Perform the distance sensor alignment. Refer to DAS-64, "Description".

>> Work End.

DISTANCE SENSOR INITIAL VERTICAL ALIGNMENT

Description

INFOID:0000000012815300

WARNING:
Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use.

OUTLINE OF DISTANCE SENSOR INITIAL ALIGNMENT PROCEDURE

- Always perform the Distance sensor initial vertical alignment after removing and installing or replacing the Distance sensor.

CAUTION:
The system does not operate normally unless the Distance sensor is aligned properly.

1. Required tools, refer to DAS-64, "Required Tools".
2. Preparation, refer to DAS-64, "Preparation".
3. Distance sensor initial vertical alignment, refer to DAS-65, "Distance Sensor Initial Vertical Alignment".

CAUTIONARY POINT FOR DISTANCE SENSOR ALIGNMENT PROCEDURE

CAUTION:

- **For Distance sensor alignment procedure, choose a level location with a few feet of working space in front and surrounding the vehicle.**
- **Vehicle must be stationary and unoccupied during the whole alignment procedure.**
- **Never enter the vehicle during distance sensor alignment.**
- **For proper system operation and adjustment, all vehicle wheels must be the original factory size.**

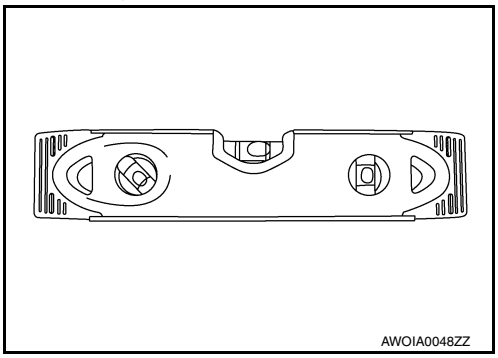
The Distance sensor requires alignment whenever the Distance sensor is removed and reinstalled and whenever front end structural repairs are performed. Distance sensor alignment consists of performing the mechanical vertical alignment (Distance sensor initial vertical alignment) described in the following procedure, followed by the electronic horizontal alignment (Distance sensor alignment) that is performed using CONSULT and the appropriate special service tools.

Required Tools

INFOID:0000000012815301

The following tool is necessary to perform the Distance sensor initial vertical alignment:

- Carpenters level.



Preparation

INFOID:0000000012815302

1. PREPARATION FOR DISTANCE SENSOR INITIAL VERTICAL ALIGNMENT PROCEDURE

1. Verify correct vehicle suspension height. Refer to FSU-28, "Wheelarch Height (Unladen*)".
2. Repair or replace any damaged body components.
3. Verify proper tire inflation pressures. Refer to WT-82, "Tire Air Pressure".
4. Remove any accumulations of mud, snow or ice from the vehicle underbody.
5. Verify that there is no load in the vehicle (cargo or passenger).
6. Place the vehicle on a known level horizontal surface such as a wheel or frame alignment rack to achieve satisfactory sensor vertical alignment results.
7. Remove front fascia. Refer to EXT-17, "Removal and Installation".

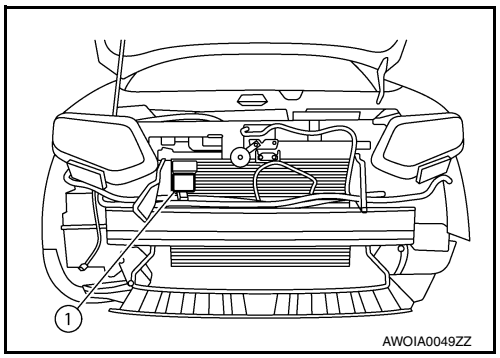
>> Refer to DAS-65, "Distance Sensor Initial Vertical Alignment".

Distance Sensor Initial Vertical Alignment

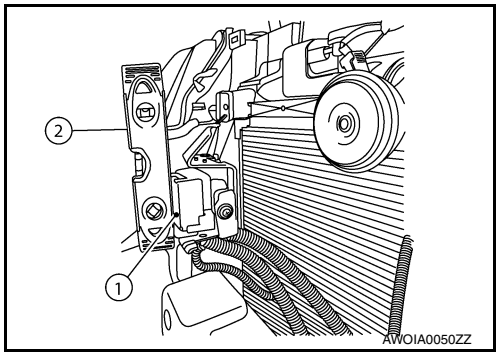
INFOID:0000000012815303

NOTE:
The Distance sensor initial vertical alignment procedure must be performed anytime the Distance sensor is removed and reinstalled.

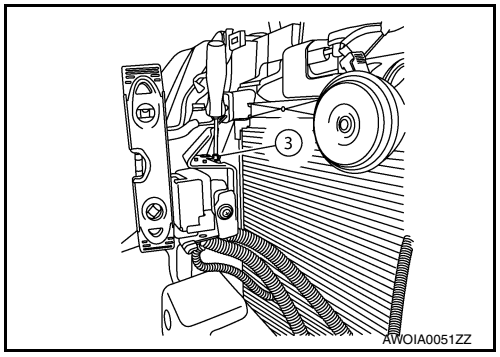
1. The Distance sensor (1) is located near the right front head lamp behind the front bumper fascia.



2. Place the carpenters level (2) against the face of the Distance sensor (1).



3. Turn the Distance sensor adjustment screw (3) to level the sensor.



4. Ensure the Distance sensor electrical connector located on the bottom of the sensor is connected.
5. Reinstall the front bumper fascia.
6. Perform the Distance sensor alignment procedure. Refer to DAS-66, "Description".

DISTANCE SENSOR ALIGNMENT

Description

INFOID:0000000012815304

WARNING:
Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use.

OUTLINE OF RADAR ALIGNMENT PROCEDURE

- A 4-wheel vehicle alignment must be performed before proceeding with radar alignment procedure.
- Always perform the radar alignment after removing and installing or replacing the Distance sensor.
- If the Distance sensor was removed and installed or replaced, first perform Distance Sensor Initial Vertical Alignment, refer to DAS-64, "Description".

CAUTION:
The system does not operate normally unless the Distance sensor is aligned properly.

1. Required tools, refer to DAS-66, "Required Tools".
2. Preparation, refer to DAS-67, "Preparation".
3. Vehicle set up, refer to DAS-68, "Vehicle Set Up".
4. Setting the Distance sensor target board, refer to DAS-70, "Setting The Distance Sensor Target Board".
5. Distance sensor adjustment, refer to DAS-71, "Distance Sensor Adjustment".

CAUTIONARY POINT FOR RADAR ALIGNMENT PROCEDURE

CAUTION:

- **For radar alignment procedure, choose a level location with a few feet of working space in front and surrounding the vehicle.**
- **Vehicle must be stationary and unoccupied during the whole alignment procedure.**
- **Any slight vibration during the alignment procedure can cause the test to fail. If this happens, you will have to restart the alignment process.**
- **The ignition switch must be in the ON position.**
- **The battery voltage must not fall below 12 volts during the whole alignment procedure. Failure to maintain adequate battery voltage will cause the test to fail. If this happens, you will have to restart the alignment process.**
- **The Distance sensor target board must be set in front of the vehicle facing the sensor.**
- **Adjust the radar alignment with CONSULT. (The radar alignment procedure cannot be adjusted without CONSULT.)**
- **Never enter the vehicle during radar alignment.**
- **Never block the area between the radar and the Distance sensor target board at any time during the alignment process.**
- **Never break the laser beam between the laser assembly and front Distance sensor target board or rear reflector at any time during alignment.**
- **Accurate steering wheel setting is crucial. Once set, do not disturb the steering wheel for the remainder of the alignment procedure.**
- **To avoid physical damage, the Distance sensor adjustment screw must not be forced to either clockwise or counter-clockwise limit. For proper adjustment procedure, follow the directions of the CONSULT exactly as instructed.**
- **For proper system operation and adjustment, all vehicle wheels must be of the same size.**

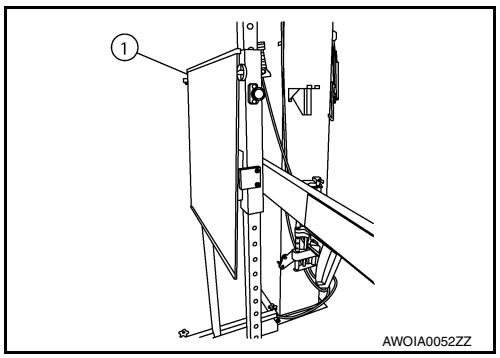
Required Tools

INFOID:0000000012815305

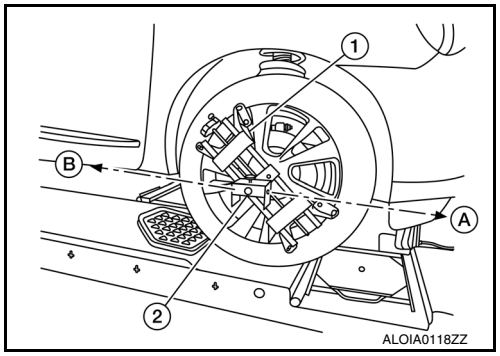
- Distance sensor alignment kit 1-20-2851-1 in addition to one of the following:
  a) Hunter self-centering wheel adapter (Hunter wheel alignment tool)
  b) Special Service Tool kit 1-20-2722-1 (kit SCA W/Tire Clamp-ICC Aiming)

The following Distance sensor alignment kit (1-20-2851-1) is necessary to perform the Distance sensor alignment:

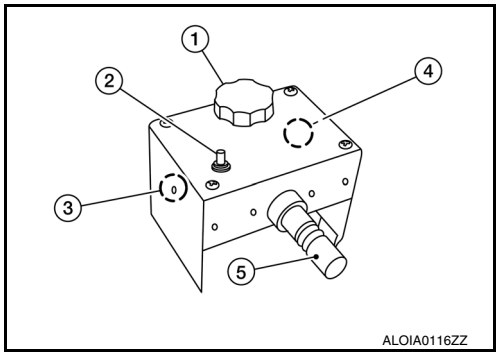
- Distance sensor target board (1).



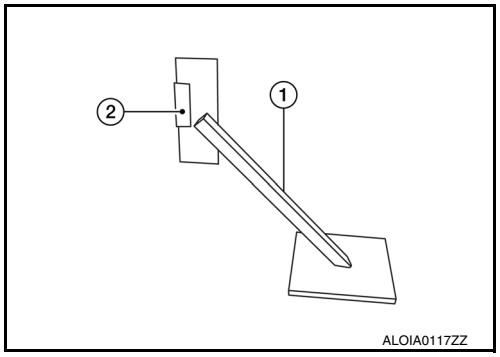
- Hunter self-centering wheel adapter (1) [shown with laser assembly (2) installed] (Hunter alignment rack head may be substituted).
  NOTE:
  Dealers that are not equipped with a Hunter self-centering wheel adapter will require the following kit:
  Part No. 1-20-2722-1-IF (kit SCA W/Tire Clamp-Distance Sensor Aiming)



- Laser assembly (with bi-directional laser beam) as shown in the illustration.
- Tightening knob (1)
- Power ON/OFF button (2)
- Front laser beam opening (3)
- Rear laser beam opening (4)
- Attaching shaft (5)



- Stationary target as shown in the illustration.
- Stationary target (1)
- Laser signal reception plate (2)



- Distance chain (not shown).

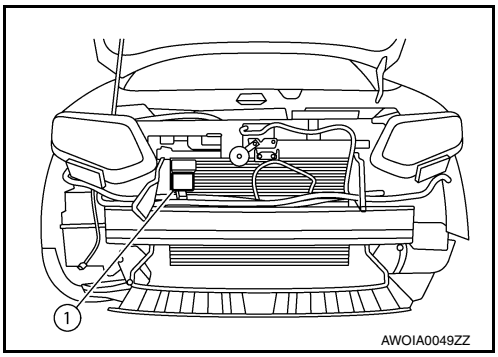
Preparation

INFOID:0000000012815306

1. ADVANCE PREPARATION FOR RADAR ALIGNMENT PROCEDURE

1. Adjust all tire pressures to the specified value.
2. Empty the vehicle. (Remove any luggage from the passenger compartment, luggage room, etc.)
3. Shift the selector lever to “P” position, and release the parking brake.
4. Fully fill the fuel tank, and then check that the coolant and oils are filled up to correct level.
5. Clean off the right front side of the fascia in front of the Distance sensor.

NOTE:
The Distance sensor is located behind the fascia and it is not exposed to the elements. Therefore it should not require any cleaning.



1 : Distance sensor

>> Refer to DAS-68, "Vehicle Set Up".

Vehicle Set Up

INFOID:0000000012815307

DESCRIPTION

Accurate adjustment of the radar alignment requires that the Distance sensor target board, wheel adapter, laser assembly, and stationary target be properly positioned.

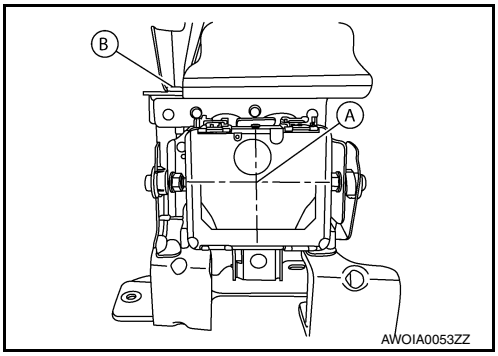
CAUTION:

If the radar alignment is adjusted with the Distance sensor target board, wheel adapter, laser assembly, or stationary target in the incorrect position, the Distance system will not function properly or the alignment procedure may not be completed successfully.

1.PREPOSITION TARGET BOARD

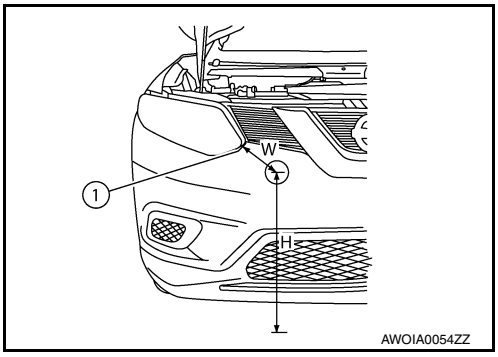
NOTE:

- The center of the distance sensor (A).



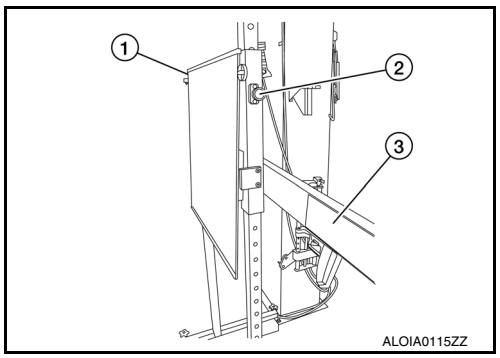
B : Up-down direction adjusting screw

- To locate the center of the distance sensor (A) easily, on a flat level surface measure 27 in (685 mm) (H) up from the floor, and 7 in (178 mm) (W) to the right from the point of the right front head lamp (1) when viewed from the front of the vehicle.

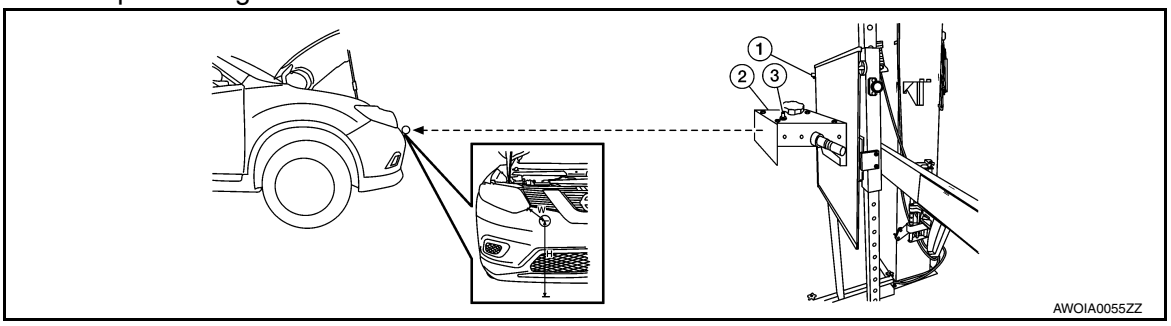


- Initial distance sensor target board setting must be in the center position.

1. Position the distance sensor target board in front facing the right front side of the vehicle:
- Using the full length of the supplied chain for distance, place the marked center of the distance sensor target board (1) 1375 mm (54.1 in.) ± 625 mm(24.6 in) facing the distance sensor.
- Adjust the height of the distance sensor target board using the adjustable nut (2) to achieve the proper height. The up/down tolerance is ± 80 mm (3.15 in).
- Adjust the distance sensor target board lateral position aligning the marked center of the board horizontally with the center of the distance sensor front. The right/left tolerance is ± 80 mm (3.15 in).



2. Extend the machined arm of the distance sensor target board exposing the reflective surface (3) to the right front side of the vehicle.
3. Place one side of the laser assembly (2) flush against the center of the distance sensor target board (1) to assist in the positioning.



4. Turn the laser assembly ON (3) allowing the laser beam to emit through the opening of the laser assembly toward the center of the distance sensor.
5. Move the distance sensor target board (1) as necessary so that center of distance sensor target board aligns with center of distance sensor.
6. Turn the laser assembly OFF when done.

Are you using Hunter alignment equipment?

YES >> Refer to Hunter's equipment instructions for complete vehicle set up and distance sensor target board setting. Then, refer to DAS-71, "Distance Sensor Adjustment".

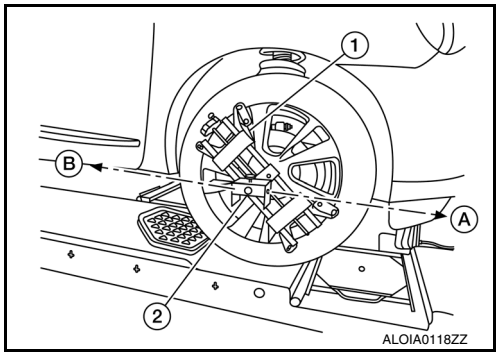
NO >> GO TO 2.

2. INSTALLING LASER ASSEMBLY

NOTE:
- Insure the steering wheel is positioned in the center straight forward position.
- Insure all 4 vehicle wheels do not contain any physical damage.

1. Install the wheel adapter (1) on the right front wheel.
2. Mount the laser assembly (2) to the wheel adapter (1) as shown in the figure.

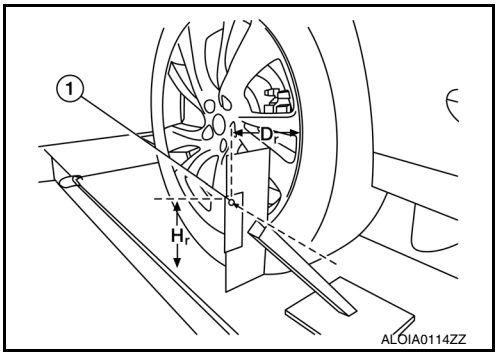
NOTE:
When the power switch is turned ON, the front laser signal (A) will be emitted toward the front distance sensor target board, and the rear laser signal (B) will be emitted toward the rear of the vehicle.



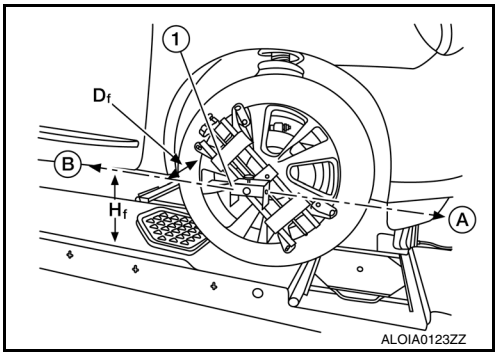
>> GO TO 3.

3. SETTING UP STATIONARY TARGET

1. Place the stationary target next to the right rear tire as shown in the figure.
2. Turn the laser assembly ON allowing the laser beam to be emitted through the front and rear laser assembly openings.
3. Measure and record the distance (D_r) between the edge of the right rear wheel and the laser beam (1) on the stationary target (horizontal line).
4. Measure and record the height (H_r) between the laser beam (1) on the stationary target and ground level (vertical line).



5. Measure and record the distance (D_f) between the edge of the right front wheel and the laser beam signal/opening (1) on the laser assembly (horizontal line).
6. Measure and record the height (H_f) between the laser beam signal/opening (1) on the laser assembly and ground level (vertical line).
   NOTE:
   - Horizontal adjustment [front distance (D_f) and rear distance (D_r)] is accomplished by slowly turning the steering wheel until the 2 distances are the same.
   - Vertical adjustment [front height (H_f) and rear height (H_r)] is accomplished by rotating the laser assembly around its axis until the two heights are the same.
   - Directional arrows (A) and (B) are shown to illustrate the direction of the laser assembly beams.
7. Adjust laser beam as necessary until the two distances match and the two heights match.
   NOTE:
   You will have to verify both horizontal and vertical adjustments anytime one adjustment is made.



>> Refer to DAS-70, "Setting The Distance Sensor Target Board".

Setting The Distance Sensor Target Board

INFOID:0000000012815308

DESCRIPTION

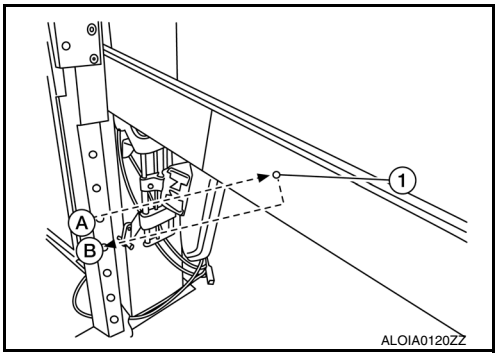
Accurate adjustment of the radar alignment requires that the distance sensor target board be accurately positioned.

CAUTION:

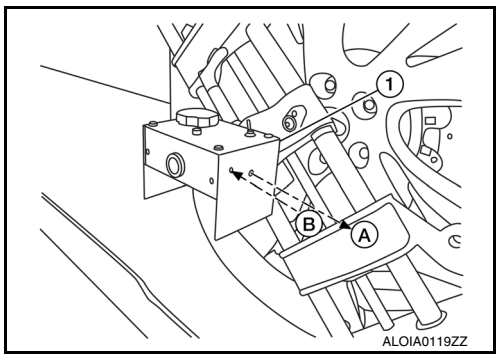
If the radar alignment is adjusted with the distance sensor target board in the incorrect position, the distance system will not function properly or the alignment procedure may not be completed successfully.

1. DISTANCE SENSOR TARGET BOARD FINAL SETTING

1. With the distance sensor target board arm extended, the laser beam (1) emitted by the laser assembly (A) will be reflected back (B) toward the laser assembly.
   NOTE:
   When adjusted properly, reflected laser beam (B) must align with emitted laser beam (A) and the two laser beams will be seen as one.
2. Rotate the distance sensor target board to achieve the necessary horizontal adjustment.
3. Adjust the distance sensor target board leveling screws to achieve the necessary vertical adjustment.



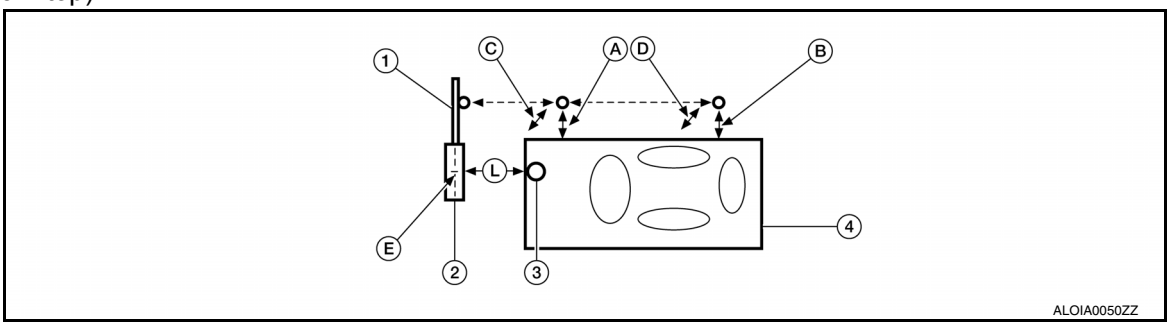
4. The figure shown illustrates the laser beam (A) emitted by the laser assembly (1) and its reflection (B) off of the distance sensor target board arm.



>> GO TO 2.

2.CHECK THE POSITION OF THE DISTANCE SENSOR TARGET BOARD

Do not place anything other than the distance sensor target board in the space shown in front of the vehicle (view from top).



1.	Distance sensor target board arm	2.	Distance sensor target board	3.	Distance sensor
4.	Vehicle	A.	Distance between front wheel and laser beam (D_f)	B.	Distance between rear wheel and laser beam (D_r)
C.	Height between front laser beam and ground (H_f)	D.	Height between rear laser beam and ground (H_r)	E.	Distance sensor target board center position (Position 2)
L.	1 - 1.5 m (39.3 - 59 in.)				

>> Refer to DAS-71, "Distance Sensor Adjustment".

Distance Sensor Adjustment

INFOID:0000000012815309

DESCRIPTION

The radar alignment is performed automatically with CONSULT.

CAUTION:

Perform all necessary work for radar alignment until the adjustment completes as shown in the procedure. If the procedure does not complete, the FCW system is inoperable.

1.PERFORM RADAR ALIGNMENT

1. Start the engine.
2. Connect CONSULT and select “Work support” of “LASER/RADAR”.
3. Select “MILLIWAVE RADAR ADJUST” after the “Work support” screen is displayed.
   NOTE:
   Confirm the following items;
   - The target should be accurately placed.
   - The vehicle should be stopped.
4. Select “Start” after the “MILLIWAVE RADAR ADJUST” screen is displayed.
   CAUTION:
   Never select “Start” when the target is not accurately placed.
5. Select “Start” after the preparation information is displayed.
6. Select “Next” after the “Starting alignment.” screen is displayed.

NOTE:
If the radar is in alignment at this time, “Alignment in progress” is displayed. It may take several 10s of seconds until the result is displayed.

7. Confirm the displayed item.

- “Alignment completed.”: Go to 8.
- Except “Alignment completed.”: Perform the following services.

Displayed item	Possible cause	Service procedure
Alignment condition is not ready.	• DTC is detected (Except C1A12). • The position of the Distance sensor target board is not correct. • Vehicle is moving.	Check the vehicle condition and perform radar alignment again.
Alignment condition is not ready. (Stop the vehicle.)	Vehicle is moving.	Stop the vehicle and perform radar alignment again.
Target is not detected.	• A target is not-yet-placed. (The Distance sensor cannot detect target) • The position of the Distance sensor target board is not correct. • The position of the Distance sensor is not correct.	Check the target board condition and perform radar alignment again.
Sensor malfunction.	Distance sensor malfunction.	Check the vehicle condition and perform radar alignment again.

NOTE:
Replace Distance sensor if “Sensor malfunction.” is repeatedly indicated.

8. Confirm displayed value.

Displayed item	Monitor item	Reference value
Alignment completed.	FACTORY AIM L/R	Less than 3.00 deg
	FACTORY AIM U/D	Less than 3.00 deg
	AIMING VALUE L/R	Less than 3.00 deg
	AIMING VALUE U/D	Less than 3.00 deg

- Within reference value: Go to 9.
- Outside of reference value: Check the target board condition and perform radar alignment again.

NOTE:
- Check the condition of the Distance sensor installation.
- Check the vehicle for damage.
- Replace Distance sensor if it is outside the reference value, even when Distance sensor installation is installed normally and the vehicle is not damaged.

9. Select “OK” after the “No error detected.” is displayed.
10. Select “OK” after the “End of alignment.” is displayed.

CAUTION:
Once “MILLIWAVE RADAR ADJUST” is started with CONSULT, always continue the work until the horizontal radar alignment is completed successfully. If the job is stopped midway, the radar alignment is not adjusted and the FCW system cannot operate.

>> RADAR ALIGNMENT END

ACTION TEST

BSW

BSW : Description

INFOID:0000000012421569

Always perform the Blind Spot Warning system action test to check that the system operates normally after replacing the side radar LH/RH, or repairing any Blind Spot Warning 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-8, "Blind Spot Warning/Rear Cross Traffic Alert (RCTA) System Service".**
- **System description for Blind Spot Warning: Refer to DAS-14, "BSW : System Description".**
- **Normal operating condition: Refer to DAS-120, "Description".**

BSW : Inspection Procedure

INFOID:0000000012421570

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-8, "Blind Spot Warning/Rear Cross Traffic Alert (RCTA) System Service".**
- **System description for Blind Spot Warning: Refer to DAS-14, "BSW : System Description".**
- **Normal operating condition: Refer to DAS-120, "Description".**

1.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 2.

2.BSW SYSTEM ACTION TEST

1. Enable the setting of the BSW system on the integral switch.
2. Check BSW operation according to the following table:

Vehicle condition/ Driver's operation			Action			
Vehicle speed (Approx.)	Turn signal condition	Status of vehicle detection within detection area	Indication on the Blind Spot Warning indicator	Indication on the combination meter	Indicator color	Buzzer
Less than approx. 18 MPH (29 km/h)	—	—	OFF	ON	White	OFF
Approx. 20 MPH (32 km/h) or more	—	Vehicle is absent	OFF	ON	White	OFF
	OFF	Vehicle is detected	ON	ON	White	OFF
	ON (vehicle detected direction)	Before turn signal operates Vehicle is detected	Blink	Blink	Yellow (Blink)	Short continuous beeps
		Vehicle is detected after turn signal operates	Blink	Blink	Yellow (Blink)	OFF

>> Inspection End.

FCW

FCW : Description

INFOID:0000000012421573

- Perform action test to verify the customer's concern.

• Perform action test and check the system operation after system diagnosis.

FCW : Inspection Procedure

INFOID:0000000012421574

1.CHECK FEB SYSTEM SETTING

1. Start the engine.
2. Check that the FEB system setting can be enabled/disabled on the vehicle information display.
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.CHECK FEB SYSTEM

1. Enable the setting of the FEB system on the vehicle information display.
2. Check FEB warning lamp is OFF.

>> Inspection End.

DTC/CIRCUIT DIAGNOSIS

C1A00 CONTROL UNIT

DTC Logic

INFOID:0000000012767573

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
C1A00	CONTROL UNIT	ADAS control unit internal malfunction	ADAS control unit

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-75, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012767574

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-32, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2

DTC Logic

INFOID:0000000012767575

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
C1A01	POWER SUPPLY CIR	The battery voltage sent to ADAS control unit remains less than 7.9 V for 5 seconds	• Connector, harness, fuse • ADAS control unit
C1A02	POWER SUPPLY CIR 2	The battery voltage sent to ADAS control unit remains more than 19.3 V for 5 seconds	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. 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-107, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012767576

1.CHECK ADAS CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of ADAS control unit. Refer to DAS-107, "ADAS CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".
NO >> Repair or replace the malfunctioning parts.

C1A03 VEHICLE SPEED SENSOR

DTC Logic

INFOID:0000000012767577

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
C1A03	VHCL SPEED SE CIRC	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) and the CVT vehicle speed sensor signal (output shaft revolution signal) from TCM, received by the ADAS control unit via CAN communication, are inconsistent	• Wheel speed sensor • ABS actuator and electric unit (control unit) • Vehicle speed sensor CVT (output speed sensor) • TCM • ADAS control unit

NOTE:
If DTC “C1A03” is detected along with DTC “U1000”, first diagnose the DTC “U1000”.
• Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic" for DTC “U1000”.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Drive the vehicle at 30 km/h (19 MPH) or more.
   CAUTION:
   Always drive safely.
3. Stop the vehicle.
4. Perform “All DTC Reading” with CONSULT.
5. 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-77, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012767578

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “C1A03” 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-32, "DTC Index".
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-121, "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-63, "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-121, "Removal and Installation".

C1B50 SIDE RADAR MALFUNCTION

DTC LOGIC

INFOID:0000000012781886

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
C1B50	SIDE RDR MALFUNCTION	Side radar malfunction	Side radar

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-79, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012781887

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-37, "DTC Index" (SIDE RADAR RIGHT) or DAS-35, "DTC Index" (SIDE RADAR LEFT).
NO >> Replace the side radar. Refer to DAS-124, "Removal and Installation".

C1B51 BLIND SPOT WARNING INDICATOR SHORT CIRCUIT

DTC Logic

INFOID:0000000012781888

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
C1B51	BSW IND SHORT CIR	Short circuit in Blind Spot Warning indicator circuit is detected. (Over current is detected)	• Blind Spot Warning indicator circuit • Blind Spot Warning indicator • Side radar

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-80, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012781889

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK BLIND SPOT WARNING INDICATOR CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect side radar harness connector and Blind Spot Warning indicator harness connector.
3. Check continuity between side radar harness connector and Blind Spot Warning indicator harness connector.

Side radar		Blind Spot Warning indicator		Continuity
Connector	Terminal	Connector	Terminal	
B35 (LH)	4	D28 (LH)	1	Yes
B105 (RH)		D115 (RH)		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

2.CHECK BLIND SPOT WARNING INDICATOR GROUND CIRCUIT FOR OPEN

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

Side radar		Ground	Continuity
Connector	Terminal		
B35 (LH)	4		Yes
B105 (RH)			

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connector.

3.CHECK SIDE RADAR VOLTAGE OUTPUT

1. Connect side radar harness connector.
2. Check voltage between Blind Spot Warning indicator harness connector and ground.

Blind Spot Warning indicator		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
D28 LH	1		Ignition switch OFF ⇒ ON (Approx. 2 sec.)	6 V
D115 RH				

Is the inspection result normal?

YES >> Replace Blind Spot Warning indicator. Refer to DAS-125, "Removal and Installation".
NO >> Replace side radar. Refer to DAS-124, "Removal and Installation".

C1B52 BLIND SPOT WARNING INDICATOR OPEN CIRCUIT

DTC Logic

INFOID:0000000012781890

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
C1B52	BSW IND OPEN CIR	Open circuit in Blind Spot Warning indicator circuit is detected.	• Blind Spot Warning indicator circuit. • Blind Spot Warning indicator. • Side radar.

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-82, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012781891

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK BLIND SPOT WARNING INDICATOR CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect side radar harness connector and Blind Spot Warning indicator harness connector.
3. Check continuity between side radar harness connector and Blind Spot Warning indicator harness connector.

Side radar		Blind Spot Warning indicator		Continuity
Connector	Terminal	Connector	Terminal	
B35 (LH)	4	D28 LH	1	Yes
B105 (RH)		D115 RH		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

2.CHECK BLIND SPOT WARNING INDICATOR GROUND CIRCUIT FOR OPEN

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

Side radar		Ground	Continuity
Connector	Terminal		
B35 (LH)	4		Yes
B105 (RH)			

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connector.

3.CHECK SIDE RADAR VOLTAGE OUTPUT

1. Connect side radar harness connector.
2. Check voltage between Blind Spot Warning indicator harness connector and ground.

Blind Spot Warning indicator		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
D28 LH	1		Ignition switch OFF ⇒ ON (Approx. 2 sec.)	6 V
D115 RH				

Is the inspection result normal?

YES >> Replace Blind Spot Warning indicator. Refer to DAS-125, "Removal and Installation".
NO >> Replace side radar. Refer to DAS-124, "Removal and Installation".

C1B53 SIDE RADAR RIGHT MALFUNCTION

DTC Logic

INFOID:0000000012767579

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
C1B53	SIDE RDR R MALF	ADAS control unit detects that side radar RH has a malfunction	Side radar RH

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-84, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012767580

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-96, "ADAS CONTROL UNIT : 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-35, "DTC Index" (SIDE RADAR LH), DAS-37, "DTC Index" (SIDE RADAR RH).
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

C1B54 SIDE RADAR LEFT MALFUNCTION

DTC Logic

INFOID:0000000012767581

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
C1B54	SIDE RDR L MALF	ADAS control unit detects that side radar LH has a malfunction.	Side radar LH

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-85, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012767582

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-96, "ADAS CONTROL UNIT : 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-35, "DTC Index" (SIDE RADAR LH), DAS-37, "DTC Index" (SIDE RADAR RH).
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

C1B55 RADAR BLOCKAGE

DTC Logic

INFOID:0000000012781893

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
C1B55	RADAR BLOCKAGE	Side radar is blocked.	Stain or foreign materials is deposited.

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.

Diagnosis Procedure

INFOID:0000000012781894

1.CHECK THE REAR BUMPER

Check if rear bumper near the side radar is contaminated with foreign materials.

>> GO TO 2.

2.CHECK THE SIDE RADAR

Check if side radar and the side radar outskirts are contaminated with foreign materials.

>> GO TO 3.

3.CHECK THE SIDE RADAR INSTALLATION CONDITION

Check side radar installation condition (installation position, properly tightened or 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.

Are 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.

U0104 ADAS CAN 1

DTC Logic

INFOID:0000000012768188

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
U0104	ADAS CAN CIR1	Side radar detected an error of ITS communication signal that was received from ADAS control unit.	ADAS control unit

NOTE:

If DTC “U0104” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-97, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH), DAS-97, "SIDE RADAR LH : DTC Logic" (SIDE RADAR RH).

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT
4. Check if “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-87, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768189

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0104” in “Self Diagnostic Result” of “SIDE RADAR RIGHT/LEFT”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-97, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH), DAS-97, "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-32, "DTC Index".
NO >> Replace side radar LH or RH. Refer to DAS-124, "Removal and Installation".

U0121 VDC CAN 2

DTC Logic

INFOID:0000000012768152

DTC DETECTION LOGIC

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

NOTE:
If DTC “U0121” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-88, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768153

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0121” 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-96, "ADAS CONTROL UNIT : 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-121, "Removal and Installation".

U0126 STRG SEN CAN 1

DTC Logic

INFOID:0000000012768154

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U0126	STRG SEN CAN CIR1	If ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication	Steering angle sensor

NOTE:
If DTC “U0126” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-89, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768155

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0126” 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-96, "ADAS CONTROL UNIT : 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-121, "Removal and Installation".

U0235 DIST SEN CAN CIRC 1

DTC Logic

INFOID:0000000012768158

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U0235	DIST SEN CAN CIR1	If ADAS control unit detects an error signal that is received from distance sensor via ITS communication	Distance sensor

NOTE:
If DTC “U0235” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the FEB system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-90, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768159

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0235” 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-96, "ADAS CONTROL UNIT : DTC Logic".
NO >> GO TO 2.

2.CHECK DISTANCE 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 DAS-41, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U0402 TCM CAN 1

DTC Logic

INFOID:0000000012768144

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U0402	TCM CAN CIRC1	If ADAS control unit detects an error signal that is received from TCM via CAN communication	TCM

NOTE:
If DTC “U0402” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-91, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768145

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0402” 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-96, "ADAS CONTROL UNIT : 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-63, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U0405 ADAS CAN 2

DTC Logic

INFOID:0000000012768192

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
U0405	ADAS CAN CIR2	Side radar detected an error of ITS communication signal that was received from ADAS control unit.	ADAS control unit.

NOTE:

If DTC “U0405” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-97, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH), DAS-97, "SIDE RADAR RH : DTC Logic" (SIDE RADAR RH).

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT
4. Check if “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-92, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768193

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0405” in “Self Diagnostic Result” of “SIDE RADAR RIGHT/LEFT”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-97, "SIDE RADAR LH : DTC Logic" (SIDE RADAR LH), DAS-97, "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-32, "DTC Index".
NO >> Replace side radar LH or RH. Refer to DAS-124, "Removal and Installation".

U0415 VDC CAN 1

DTC Logic

INFOID:0000000012768146

DTC DETECTION LOGIC

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

NOTE:
If DTC “U0415” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-93, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768147

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0415” 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-96, "ADAS CONTROL UNIT : 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-121, "Removal and Installation".

U0428 STRG SEN CAN 2

DTC Logic

INFOID:0000000012768148

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U0428	STRG SEN CAN CIR2	If ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication	Steering angle sensor

NOTE:
If DTC “U0428” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if “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-94, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768149

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0428” 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-96, "ADAS CONTROL UNIT : 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-121, "Removal and Installation".

U0433 DIST SEN CAN CIRC 2

DTC Logic

INFOID:0000000012768184

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U0433	DIST SEN CAN CIR2	ADAS control unit received invalid data from distance sensor via ITS communication	Distance sensor

NOTE:
If DTC “U0433” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the FEB system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “U0433” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U0433” detected as the current malfunction?

YES >> Refer to DAS-95, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768185

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0433” 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-96, "ADAS CONTROL UNIT : DTC Logic".
NO >> GO TO 2.

2.CHECK DISTANCE 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 DAS-41, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U1000 CAN COMM CIRCUIT

ADAS CONTROL UNIT

ADAS CONTROL UNIT : Description

INFOID:0000000012768178

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-36, "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.

ADAS CONTROL UNIT : DTC Logic

INFOID:0000000012768179

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1000	CAN COMM CIRCUIT	If ADAS control unit is not transmitting or receiving CAN communication signal or ITS communication signal for 2 seconds or more	• CAN communication system • ITS communication system

NOTE:
If “U1000” is detected, first diagnose the CAN communication system.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000012768180

1.PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON.
2. Turn the BSW system ON, and then wait for 30 seconds or more.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-20, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-45, "Intermittent Incident".

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000012768172

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-36, "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:0000000012768173

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1000	CAN COMM CIRCUIT	If Side radar LH is not transmitting or receiving ITS communication signal for 2 seconds or more	ITS communication system

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000012768174

1.PERFORM THE SELF-DIAGNOSIS

1. Start the engine.
2. Turn the BSW system ON, and then wait for 30 seconds or more.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-20, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-45, "Intermittent Incident".

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000012768175

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-36, "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:0000000012768176

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1000	CAN COMM CIRCUIT	If Side radar RH is not transmitting or receiving ITS communication signal for 2 seconds or more	ITS communication system

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000012768177

1.PERFORM THE SELF-DIAGNOSIS

1. Start the engine.
2. Turn the BSW system ON, and then wait for 30 seconds or more.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-20, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-45, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000012781896

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

SIDE RADAR LH : DTC Logic

INFOID:0000000012781897

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
U1010	CONTROL UNIT (CAN)	If side radar LH detects malfunction by CAN controller initial diagnosis.	Side radar LH

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000012781898

1.CHECK SELF-DIAGNOSIS RESULT

1. Turn the BSW system ON system ON.
2. Perform “All DTC Reading” with CONSULT.
3. Check if “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. Refer to DAS-124, "Removal and Installation".
NO >> Inspection End.

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000012781899

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

SIDE RADAR RH : DTC Logic

INFOID:0000000012781900

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible cause
U1010	CONTROL UNIT (CAN)	If Side radar RH detects malfunction by CAN controller initial diagnosis.	Side radar RH

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000012781901

1.CHECK SELF-DIAGNOSIS RESULT

1. Turn the BSW system ON.
2. Perform “All DTC Reading” with CONSULT.
3. Check if “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. Refer to DAS-124, "Removal and Installation".
NO >> Inspection End.

U1321 CONFIGURATION

DTC Logic

INFOID:0000000012768186

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1321	NOT CONFIGURED	ADAS is not configured

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if “U1321” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1321” detected as the current malfunction?

YES >> Refer to DAS-100, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012768187

1.PERFORM CONFIGURATION OF ADAS CONTROL UNIT

Perform configuration of ADAS control unit when DTC “U1321” is detected.

>> Perform configuration of ADAS control unit. Refer to DAS-60, "Work Procedure".

U1503 SIDE RDR L CAN 2

DTC Logic

INFOID:0000000012768160

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1503	SIDE RDR L CAN CIR 2	ADAS control unit detects an error signal that is received from side radar LH via ITS communication	Side radar LH

NOTE:
If DTC “U1503” is detected along with DTC “U1000”, or “U1508”, first diagnose the DTC “U1000” or “U1508”.
- Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic" for DTC “U1000”.
- Refer to DAS-106, "DTC Logic" for DTC “U1508”.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-101, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768161

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” or “U1508” is detected other than “U1503” in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1000” or “U1508” detected?

YES-1 >> U1000 detected: Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".
YES-2 >> U1508 detected: Refer to DAS-101, "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-35, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U1504 SIDE RDR L CAN 1

DTC Logic

INFOID:0000000012768162

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1504	SIDE RDR L CAN CIR 1	ADAS control unit detects an error signal that is received from side radar LH via ITS communication	Side radar LH

NOTE:
If DTC “U1504” is detected along with DTC “U1000”, or “U1508”, first diagnose the DTC “U1000” or “U1508”.
- Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic" for DTC “U1000”.
- Refer to DAS-106, "DTC Logic" for DTC “U1508”.

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 “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-102, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768163

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” or “U1508” is detected other than “U1504” in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1000” or “U1508” detected?

YES-1 >> U1000 detected: Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".
YES-2 >> U1508 detected: Refer to DAS-106, "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-35, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U1505 SIDE RDR R CAN 2

DTC Logic

INFOID:0000000012768164

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1505	SIDE RDR R CAN CIR 2	ADAS control unit detects an error signal that is received from side radar RH via ITS communication	Side radar RH

NOTE:
If DTC “U1505” is detected along with DTC “U1000”, or “U1507”, first diagnose the DTC “U1000” or “U1507”.
- Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic" for DTC “U1000”.
- Refer to DAS-105, "DTC Logic" for DTC “U1507”.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if “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-103, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768165

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” or “U1507” is detected other than “U1505” in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1000” or “U1507” detected?

YES-1 >> U1000 detected: Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".
YES-2 >> U1507 detected: Refer to DAS-105, "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-37, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U1506 SIDE RDR R CAN 1

DTC Logic

INFOID:0000000012768166

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1506	SIDE RDR R CAN CIR 1	ADAS control unit detects an error signal that is received from side radar RH via ITS communication	Side radar RH

NOTE:
If DTC “U1506” is detected along with DTC “U1000”, or “U1507”, first diagnose the DTC “U1000” or “U1507”.
- Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic" for DTC “U1000”.
- Refer to DAS-105, "DTC Logic" for DTC “U1507”.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW 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-104, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768167

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” or “U1507” is detected other than “U1506” in “Self Diagnostic Result” of “ICC/ADAS”.

Is “U1000” or “U1507” detected?

YES-1 >> U1000 detected: Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-96, "ADAS CONTROL UNIT : DTC Logic".
YES-2 >> U1507 detected: Refer to DAS-105, "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-37, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".

U1507 LOST COMM(SIDE RDR R)

DTC Logic

INFOID:0000000012768168

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1507	LOST COMM(SIDE RDR R)	ADAS control unit cannot receive ITS communication signal from side radar RH for 2 seconds or more	• Side radar RH right/left switching signal circuit • ITS communication system • Side radar RH

NOTE:
DTC “U1507” is detected along with DTC “U1000”, first diagnose the DTC “U1507”.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW 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-105, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768169

1.CHECK RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Check right/left switching signal circuit. Refer to DAS-111, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to LAN-36, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".
NO >> Repair right/left switching signal circuit.

U1508 LOST COMM(SIDE RDR L)

DTC Logic

INFOID:0000000012768170

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible causes
U1508	LOST COMM(SIDE RDR L)	ADAS control unit cannot receive ITS communication signal from side radar LH for 2 seconds or more	• Side radar LH harness connector • ITS communication system • Side radar LH

NOTE:
DTC “U1508” is detected along with DTC “U1000”, first diagnose the DTC “U1508”.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the BSW 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-106, "Diagnosis Procedure".
NO >> Refer to GI-45, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000012768171

1.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-20, "Trouble Diagnosis Flow Chart".
NO >> Repair the terminal or connector.

POWER SUPPLY AND GROUND CIRCUIT

ADAS CONTROL UNIT

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000012731524

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuse is not blown:

Signal name	Fuse No.
Ignition power supply	30 (10 A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

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			
M148	3		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		
M148	1		Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair the ADAS control unit ground circuit.

SIDE RADAR LH

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000012731522

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuse is not blown:

Signal name	Fuse No.
Ignition power supply	30 (10 A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

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.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
Side radar LH		Ground	Ignition switch	
Connector	Terminal			
B35	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 connector and ground.

Side radar LH		Ground	Continuity
Connector	Terminal		
B35	8		Yes

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:0000000012731523

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuse is not blown:

Signal name	Fuse No.
Ignition power supply	30 (10 A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

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.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
Side radar RH		Ground	Ignition switch	
Connector	Terminal			
B105	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 connector and ground.

Side radar RH		Ground	Continuity
Connector	Terminal		
B105	3		Yes
	8		

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair the side radar RH ground circuit.

DISTANCE SENSOR

DISTANCE SENSOR : Diagnosis Procedure

INFOID:0000000012797895

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram"

1.CHECK FUSES.

Check if any of the following fuses are blown:

Signal name	Fuse No.
Ignition power supply	30

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 DISTANCE SENSOR POWER SUPPLY CIRCUIT

Check voltage between distance sensor harness connector and ground.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
Distance sensor		Ground	Ignition switch	
Connector	Terminal			
E21	1		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the distance sensor power supply circuit.

3.CHECK DISTANCE SENSOR GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the distance sensor connector.

3. Check for continuity between distance sensor harness connector and ground.

Distance sensor		Ground	Continuity
Connector	Terminal		
E21	8		Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair the distance sensor ground circuit.

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000012742359

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

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 OF RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

1. Disconnect side radar RH connector.
2. Check continuity between side radar RH harness connector and ground.

Side radar RH		Ground	Continuity
Connector	Terminal		
B105	3		Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair harness or connector.

WARNING SYSTEM SWITCH CIRCUIT

Diagnosis Procedure

INFOID:0000000012421671

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK WARNING SYSTEM SWITCH SIGNAL INPUT

1. Turn the ignition switch ON.
2. Check voltage between ADAS control unit harness connector and ground.

Terminals			Condition	Voltage (Approx.)
(+)		(−)		
ADAS control unit		Ground	Warning systems switch	
Connector	Terminal			
M148	11		Pressed	0 V
			Released	Battery voltage

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".
NO >> GO TO 2.

2.CHECK WARNING SYSTEM SWITCH

1. Turn ignition switch OFF.
2. Remove warning system switch.
3. Check warning system switch. Refer to DAS-113, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace the warning system switch. Refer to DAS-126, "Removal and Installation".

3.CHECK WARNING SYSTEM SWITCH GROUND CIRCUIT

Check continuity between warning system switch harness connector and ground.

Warning system switch		Ground	Continuity
Connector	Terminal		
M255	2		Yes

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair harness or connector.

4.CHECK WARNING SYSTEM SWITCH SIGNAL INPUT CIRCUIT FOR OPEN

1. Disconnect the ADAS control unit connector.
2. Check continuity between the ADAS control unit harness connector and warning system switch harness connector.

ADAS control unit		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
M148	11	M255	1	Yes

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair the harness or connector.

5.CHECK WARNING SYSTEM SWITCH SIGNAL INPUT CIRCUIT FOR SHORT

Check continuity between the ADAS control unit harness connector and ground.

ADAS control unit		Ground	Continuity
Connector	Terminal		
M148	11		No

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".
NO >> Repair the harness or connector.

Component Inspection

INFOID:0000000012421672

1. CHECK WARNING SYSTEM SWITCH

Check continuity of warning system switch.

Warning system switch			Continuity
Terminals		Condition	
1	2	When warning system switch is pressed	Yes
		When warning system switch is released	No

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the warning system switch. Refer to DAS-126, "Removal and Installation".

WARNING SYSTEMS ON INDICATOR CIRCUIT

Diagnosis Procedure

INFOID:0000000012421673

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK WARNING SYSTEM ON INDICATOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect warning system switch harness connector.
3. Turn ignition switch ON.
4. Check voltage between warning system switch harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(−)	
Warning system switch		Ground	
Connector	Terminal		
M255	5		Battery voltage

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the harness or connector.

2.CHECK WARNING SYSTEMS ON INDICATOR SIGNAL FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect the ADAS control unit harness connector.
3. Check continuity between the ADAS control unit harness connector and warning system switch harness connector.

ADAS control unit		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
M148	17	M255	6	Yes

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the harness or connector.

3.CHECK WARNING SYSTEMS ON INDICATOR SIGNAL CIRCUIT FOR SHORT

Check continuity between the ADAS control unit harness connector and ground.

ADAS control unit		Ground	Continuity
Connector	Terminal		
M148	17		No

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair the harness or connector.

4.CHECK WARNING SYSTEMS ON INDICATOR

Check the warning systems ON indicator. Refer to DAS-115, "Component Inspection".

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".
NO >> Replace warning system switch. DAS-126, "Removal and Installation".

Component Inspection

INFOID:0000000012421674

1. CHECK WARNING SYSTEMS ON INDICATOR

Apply battery voltage to warning system switch terminals 3 and 5, and then check if the warning system ON indicator illuminates.

Warning system switch			
Terminals		Condition	Warning system switch ON indicator
(+)	(-)		
5	6	When the battery voltage is applied	On
		When the battery voltage is not applied	Off

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the warning system switch. Refer to DAS-126, "Removal and Installation".

WARNING BUZZER CIRCUIT

Component Function Check

INFOID:0000000012421675

1.CHECK WARNING BUZZER

1. Turn the ignition switch ON.
2. Select “ICC BUZZER” in “Active Test” of “LASER/RADAR” using CONSULT.
3. Check the warning system buzzer operation.

Does the warning system buzzer sound?

YES >> Inspection End.
NO >> Refer to DAS-116, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012421676

Regarding Wiring Diagram information, refer to DAS-43, "Wiring Diagram".

1.CHECK WARNING SYSTEM BUZZER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect warning system buzzer connector.
3. Turn ignition switch ON.
4. Check voltage between warning system buzzer harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(–)	
Warning system buzzer		Ground	
Connector	Terminal		
M149	1		Battery voltage

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the harness or connector.

2.CHECK WARNING SYSTEM BUZZER CONTROL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the ADAS control unit harness connector.
3. Check continuity between the ADAS control unit harness connector and warning system buzzer harness connector.

ADAS control unit		Warning system buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M148	24	M149	2	Yes

4. Check continuity between the ADAS control unit harness connector and ground.

ADAS control unit		Ground	Continuity
Connector	Terminal		
M148	24		No

Is the inspection result normal?

YES >> Replace warning system buzzer switch. Refer to DAS-127, "Removal and Installation".
NO >> Repair or replace harness or connector.

SYMPTOM DIAGNOSIS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012421679

Symptom	Confirmation item		Inspection item/Reference page
FCW/FEB/BSW indicators do not illuminate.	All of driver assistance indicators do not illuminate.		System cannot be turned ON/OFF using the integral switch. Refer to DAS-118, "Description".
	Other information display is not illuminated.		Combination meter. Refer to MWI-19, "Description".
FEB/FCW/BSW warning display does not illuminate (Buzzer is functioning normally)	Information display is functioning normally.		ADAS control unit. Refer to DAS-32, "DTC Index".
	Information display is not functioning normally.		Perform On Board Diagnosis of Combination meter. Refer to MWI-19, "Description".
FEB/FCW/BSW warning buzzer is not sounding (Warning display is functioning normally)	FEB/FCW/BSW warning buzzer does not sound.		Chime does not sound. Refer to DAS-116, "Component Function Check".
FCW/FEB is not activated	FCW and FEB are not activated.	System misidentifies a vehicle even though there is no vehicle ahead.	Perform radar alignment. Refer to BRC-217, "Description".
		System misidentifies a vehicle in the next lane.	

SYSTEM SETTINGS CANNOT BE TURNED ON/OFF IN VEHICLE INFORMATION DISPLAY

Description

INFOID:0000000012421680

The system setting cannot be turned ON/OFF in the combination meter information display using the steering switch.

Diagnosis Procedure

INFOID:0000000012421681

1.CHECK DRIVER ASSISTANCE SYSTEM SETTING

1. Ignition On.
2. Check that the driver assistance system setting can be turned ON/OFF in the combination meter information display using the steering switch.

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2.

2.CHECK STEERING SWITCH CIRCUIT

Check the steering switch. Refer to MWI-71, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connector.

3.CHECK STEERING SWITCH RESISTANCE

Check the steering switch resistance. Refer to MWI-71, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-84, "Removal and Installation".
NO >> Replace steering switch. Refer to AV-73, "Removal and Installation".

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

Description

INFOID:0000000012421682

The switch does not turn ON
- The driver assistance system does not turn On when the warning system switch is pressed.

The switch does not turn OFF
- The driver assistance system does not turn Off when the warning system switch is pressed.

Diagnosis Procedure

INFOID:0000000012421683

1.CHECK WARNING SYSTEM SWITCH CIRCUIT

Check the warning system switch circuit. Refer to DAS-112, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

2.CHECK WARNING SYSTEM SWITCH

Check the warning system switch. Refer to DAS-113, "Component Inspection".

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-121, "Removal and Installation".
NO >> Replace the warning system switch. Refer to DAS-126, "Removal and Installation".

NORMAL OPERATING CONDITION

Description

INFOID:0000000012421684

PRECAUTIONS FOR FORWARD COLLISION WARNING (FCW)

- The Forward Collision Warning system is designed to warn the 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 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 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 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 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 BLIND SPOT WARNING

- The Blind Spot Warning system is 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 system.
- The Blind Spot Warning system 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 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 is 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.

REMOVAL AND INSTALLATION

ADAS CONTROL UNIT

Removal and Installation

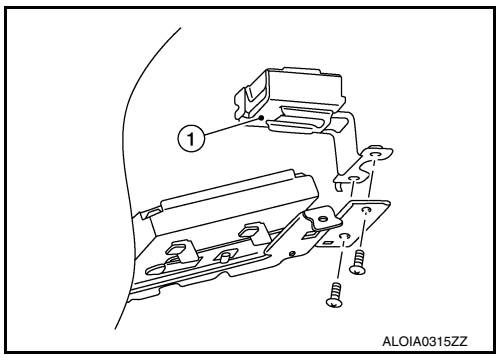
INFOID:0000000012731451

REMOVAL

NOTE:

Before replacing ADAS control unit, perform “Before Replace ECU” of “Read / Write Configuration” to save or print current vehicle specification. Refer to DAS-60, "Description".

1. Remove glove box. Refer to IP-24, "Removal and Installation".
2. Remove screws from ADAS control unit (1) bracket.



3. Disconnect harness connector from ADAS control unit and remove ADAS control unit.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Be sure to perform “After Replace ECU” of “Read / Write Configuration” or “Manual Configuration” when replacing ADAS control unit. Refer to DAS-60, "Description".

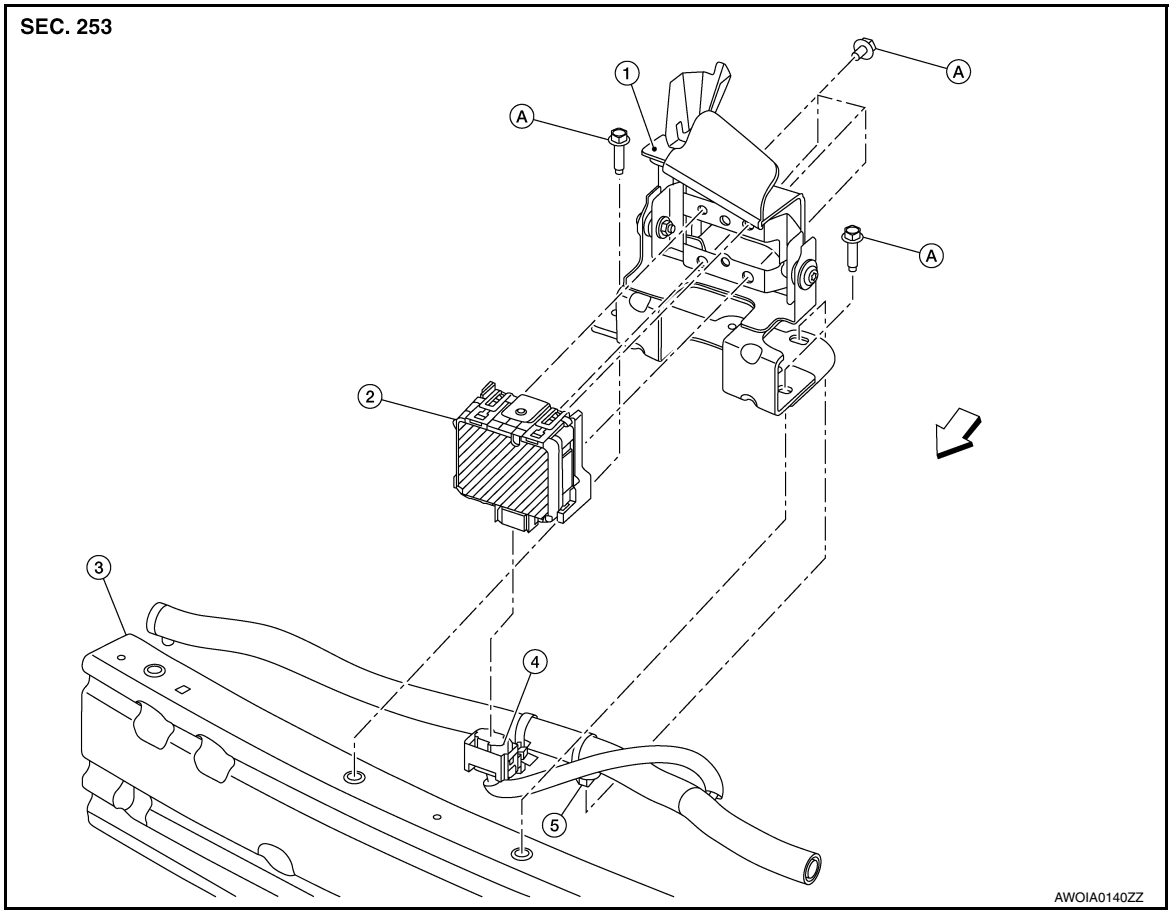
CAUTION:

Be sure to perform “Configuration (ADAS control unit)” when replacing ADAS control unit. Refer to DAS-61, "Description".

DISTANCE SENSOR

Exploded View

INFOID:0000000012421687



1. Bracket
2. Distance sensor
3. Front bumper reinforcement
4. Distance sensor harness connector
5. Clip
A. Refer to INSTALLATION

⇦ Front

Removal and Installation

INFOID:0000000012421688

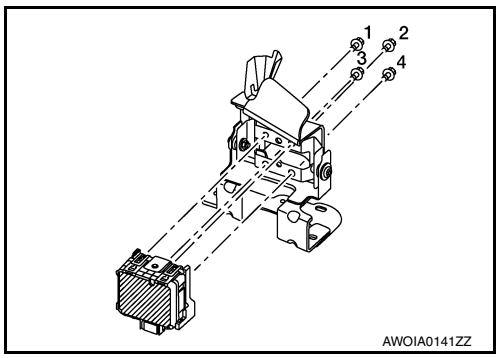
REMOVAL

1. Remove front bumper fascia. Refer to EXT-16, "Exploded View".
2. Disconnect harness connector from distance sensor.
3. Remove bolts and remove distance sensor from distance sensor bracket.
   CAUTION:
   Do not drop or shock distance sensor.
4. If necessary, remove bolts and remove distance sensor bracket from front bumper reinforcement.

INSTALLATION

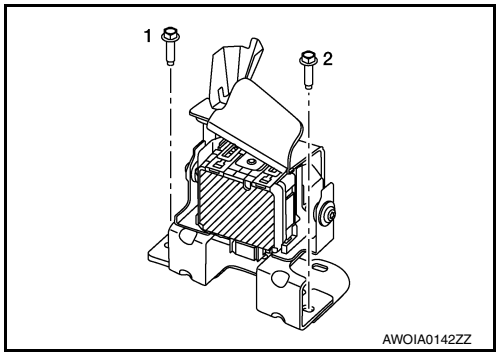
1. Install distance sensor bolts finger–tight, then tighten to specification in sequence shown.

Distance sensor bolts : 3.8 N·m (0.39 kg-m, 34 in-lb)



2. Install distance sensor bracket bolts finger-tight, then tighten to specification in sequence shown.

Distance sensor bracket bolts : 10.0 N·m (1.0 kg-m, 7 ft-lb)



3. Install remaining components in the reverse order of removal.

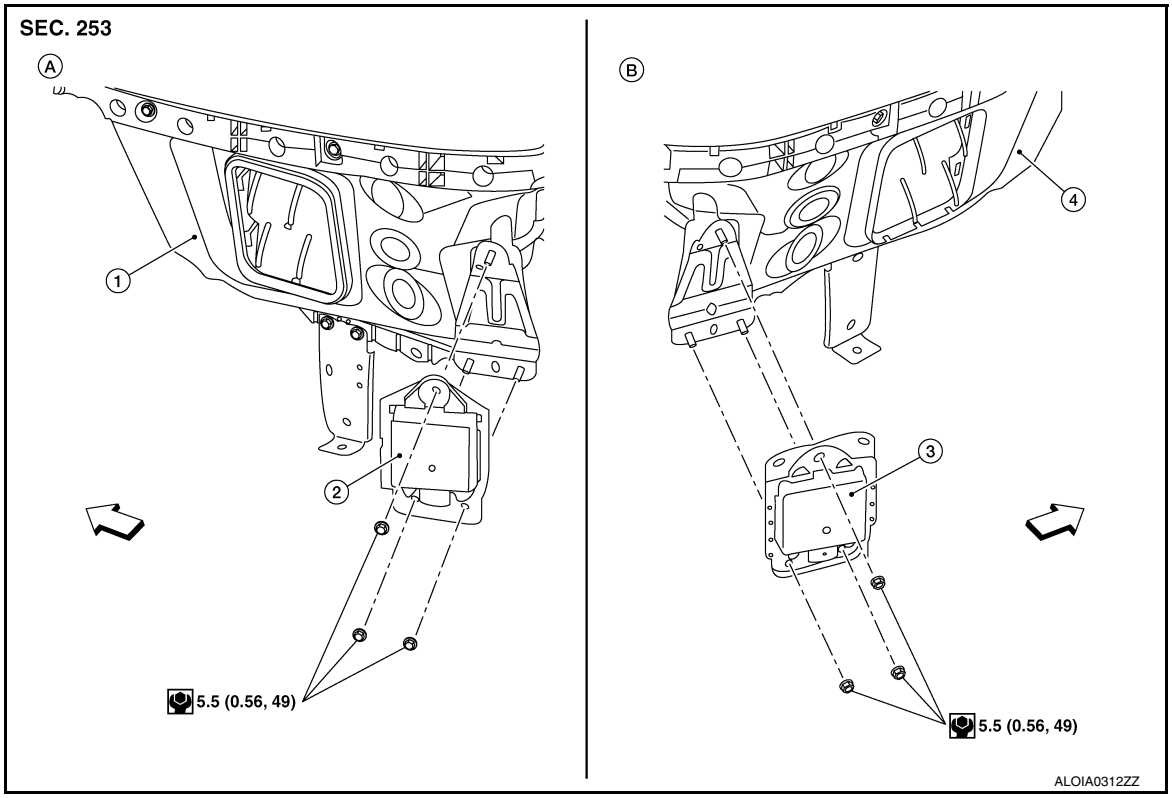
CAUTION:

- **Always perform distance sensor alignment and check operation after removal, installation, or replacement of distance sensor. Refer to DAS-64, "Description".**
- **Do not touch distance sensor face.**
- **Do not drop or shock distance sensor.**
- **Make sure distance sensor harness is installed without any twists.**

SIDE RADAR

Exploded View

INFOID:0000000012568967



1. Rear fender (LH)
2. Side radar (LH)
3. Side radar (RH)
4. Rear fender (RH)
A. LH side
B. RH side

⇦ Front

Removal and Installation

INFOID:0000000012568968

REMOVAL

1. Remove rear bumper fascia. Refer to EXT-20, "Exploded View".
2. Disconnect harness connector from side radar.
3. Remove nuts and remove side radar.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform side radar action test after side radar installation is complete. Refer to DAS-73, "BSW : Description"

Do not use side radar if lens has flaws.

NOTE:

Do not touch side radar lens and keep lens area clean.

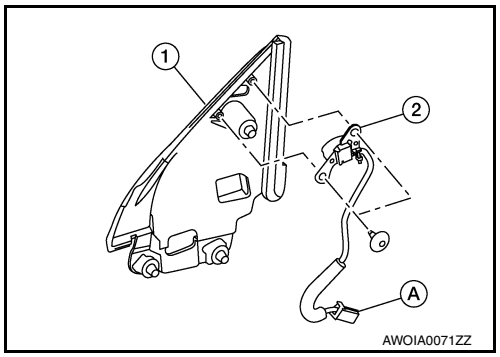
BSW INDICATOR

Removal and Installation

INFOID:0000000012421690

REMOVAL

1. Remove the front door finisher. Refer to INT-15, "Removal and Installation".
2. Release the door mirror corner finisher using suitable tool. Refer to MIR-22, "Exploded View".
3. Disconnect the harness connector (A), release the harness clip and remove the door mirror corner finisher (1).
4. Remove screws and the blind spot warning indicator (2).



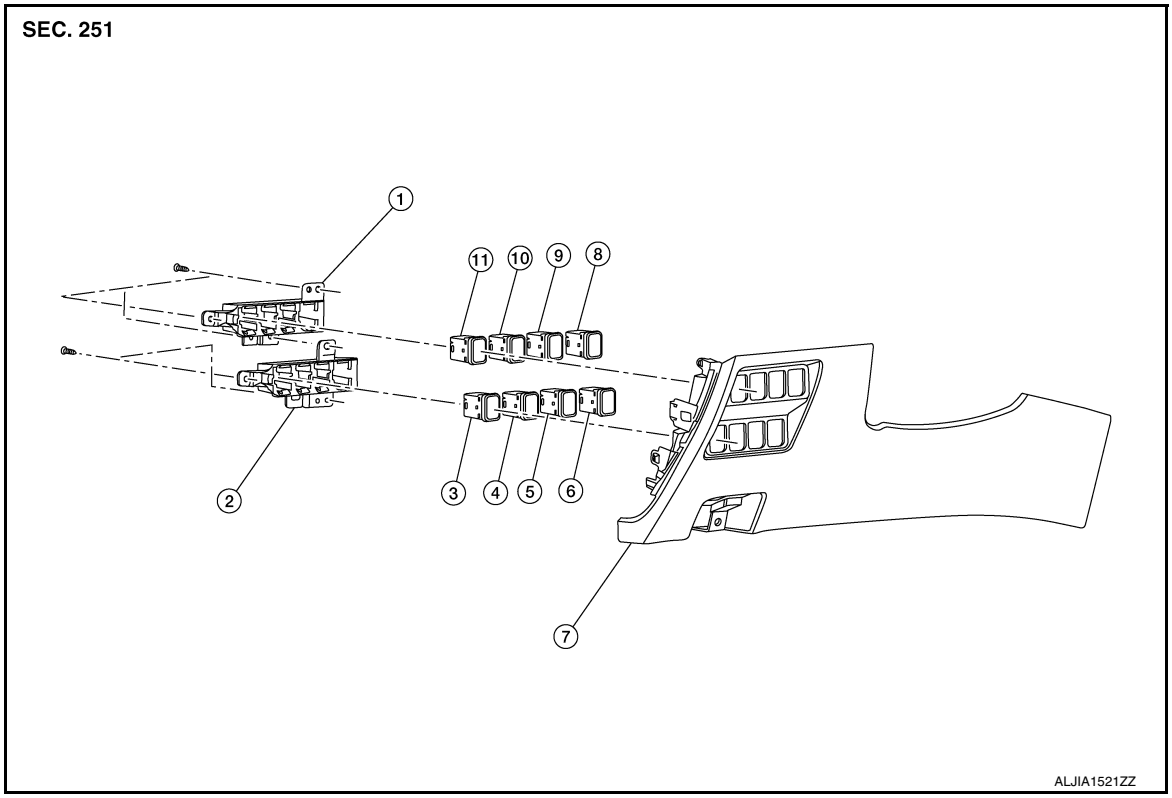
INSTALLATION

Installation is in the reverse order of removal.

WARNING SYSTEMS SWITCH

Exploded View

INFOID:0000000012421693



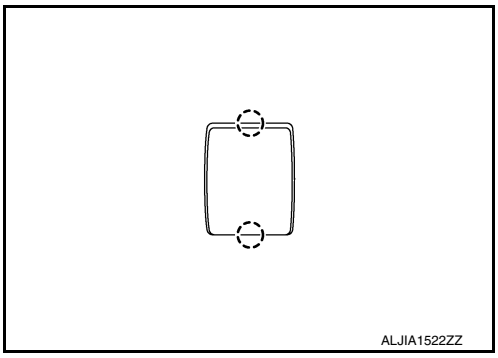
1.	Upper switch carrier	2.	Lower switch carrier	3.	ECO Mode switch
4.	Warning systems switch	5.	AWD lock switch (if equipped)	6.	Hill descent control switch (if equipped)
7.	Instrument lower panel LH	8.	Automatic back door main switch (if equipped)	9.	Automatic back door switch (if equipped)
10.	Sport mode switch	11.	VDC OFF switch		

Removal and Installation

INFOID:0000000012421694

REMOVAL

1. Remove instrument lower panel LH. Refer to IP-23, "Removal and Installation".
2. Remove screws and upper switch carrier, then remove screws and lower switch carrier.
3. Release pawls using suitable tool, then remove warning systems switch from the lower switch carrier.
   ◌: Pawl



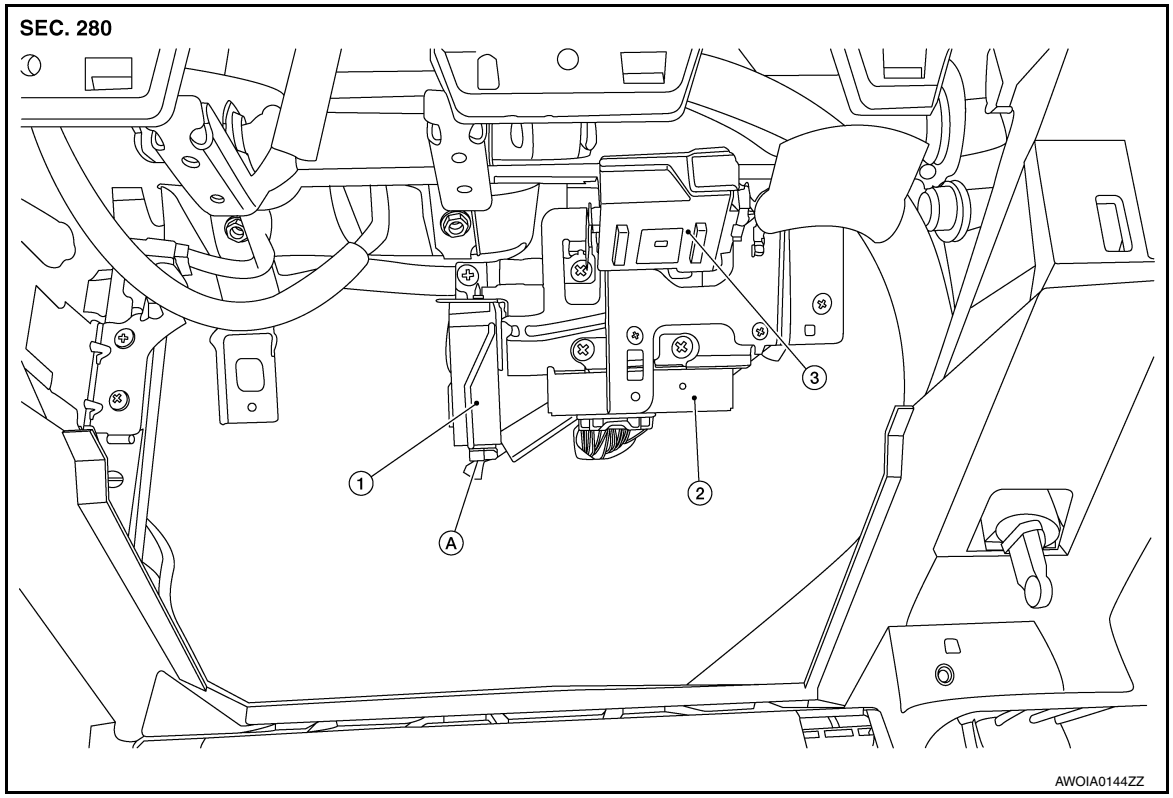
INSTALLATION

Installation is in the reverse order of removal.

WARNING SYSTEMS BUZZER

Exploded View

INFOID:0000000012421695



1. Warning systems buzzer
2. Around view module (if equipped)
3. Chassis control module
A. Harness connector

Removal and Installation

INFOID:0000000012421696

REMOVAL

1. Remove glove box. Refer to IP-24, "Removal and Installation".
2. Disconnect harness connector from warning systems buzzer.
3. Remove screws and remove warning systems buzzer from vehicle.

INSTALLATION

Installation is in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012421704

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.**
- **Do not 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:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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 three minutes before performing any service.**

Precaution for Work

INFOID:0000000012421705

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt:

- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.

- Oily dirt:

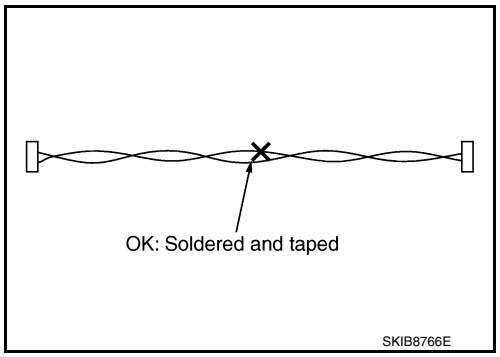
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

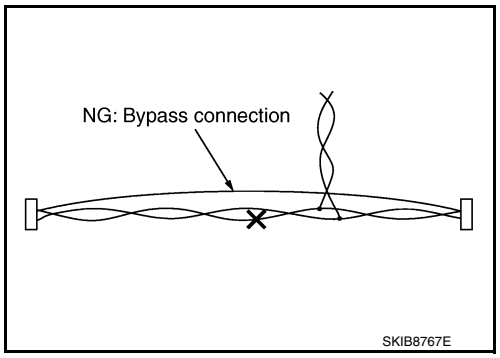
Precautions for Harness Repair

INFOID:0000000012421706

- 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:0000000012421707

- Do not disassemble the chassis control module.
- Do not reuse if the chassis control module has been dropped.
- Do not perform ACTIVE TEST while driving the vehicle.
- Slight vibrations are felt on the brake pedal and the operation noises occur, when Active Trace Control and Active Ride Control function operates. This is not a malfunction because it is caused by the functions that are normally operated.
- Tachometer will rise and engine noise may be noticeable during Active Engine Brake function operation. This is not a malfunction because it is caused by the function that is normally operated.
- Active Trace Control, Active Ride Control and Active Engine Brake are not always activated in any driving conditions.

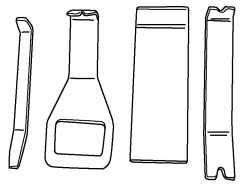
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012421708

The actual shape of the tools may differ from those illustrated here.

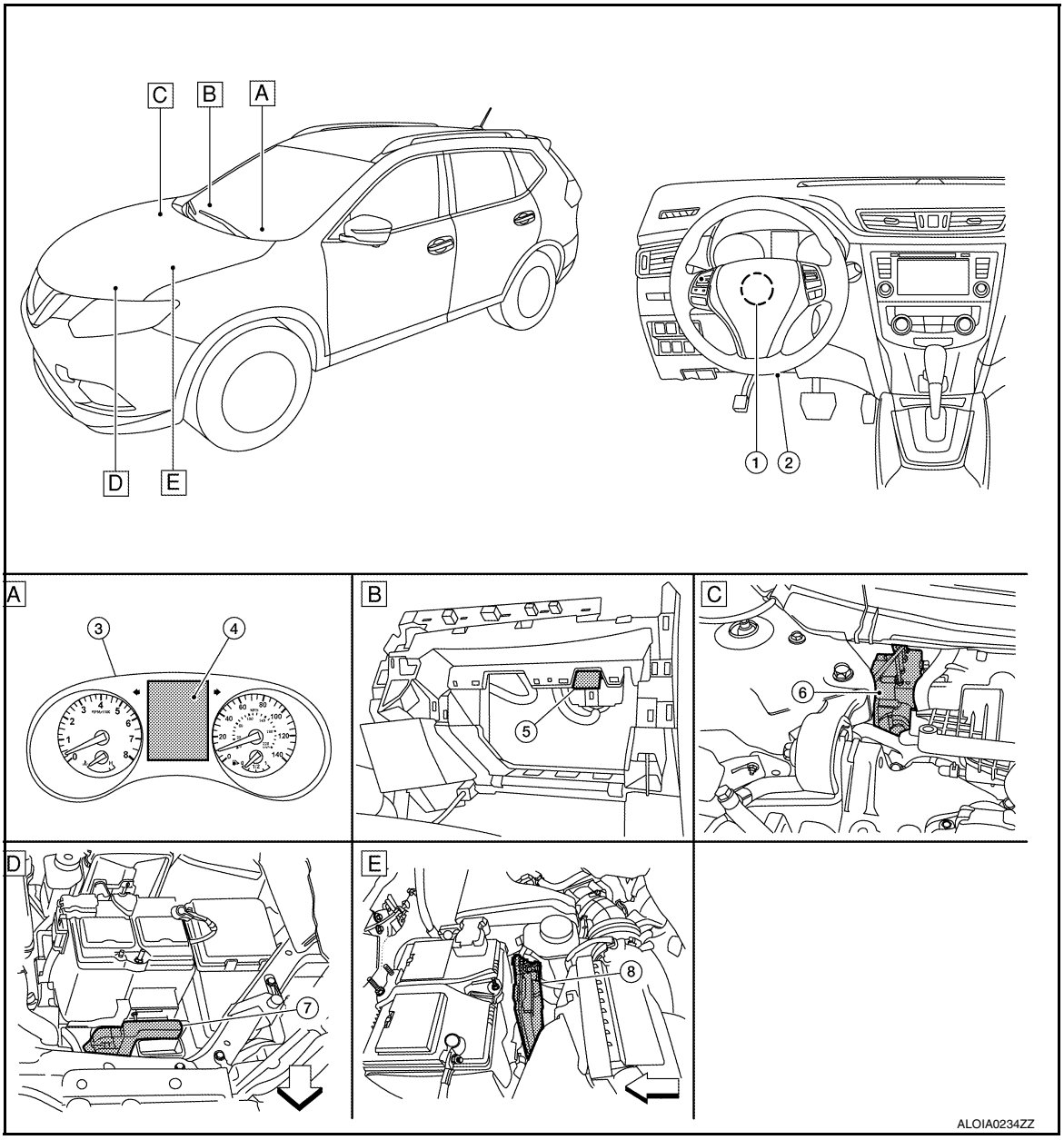
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012421709



⇦ Front of vehicle

A	Instrument panel LH	B	View with glove box assembly removed	C	Rear of engine compartment RH
D	Front of engine compartment LH	E	Rear of battery		

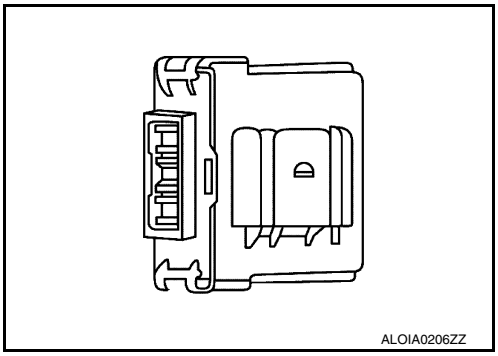
No.	Component parts	Function
1.	Steering angle sensor	BRC-14, "System Description"
2.	Data link connector	LAN-29, "CAN COMMUNICATION SYSTEM : System Description"
3.	Combination meter	MWI-8, "METER SYSTEM : System Description"

No.	Component parts	Function
4.	Vehicle information display	MWI-15, "INFORMATION DISPLAY : System Description"
5.	Chassis control module	DAS-132, "Chassis Control Module"
6.	ABS actuator and electric unit (control unit)	BRC-14, "System Description"
7.	Engine control module	EC-31, "ENGINE CONTROL SYSTEM : System Description"
8.	Transmission control module	TM-31, "CVT CONTROL SYSTEM : System Description"

Chassis Control Module

INFOID:0000000012421710

Chassis control module controls the following systems based on the signals from each sensor, switch, and control unit:
- Active engine brake
- Active ride control
- Active trace control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SYSTEM

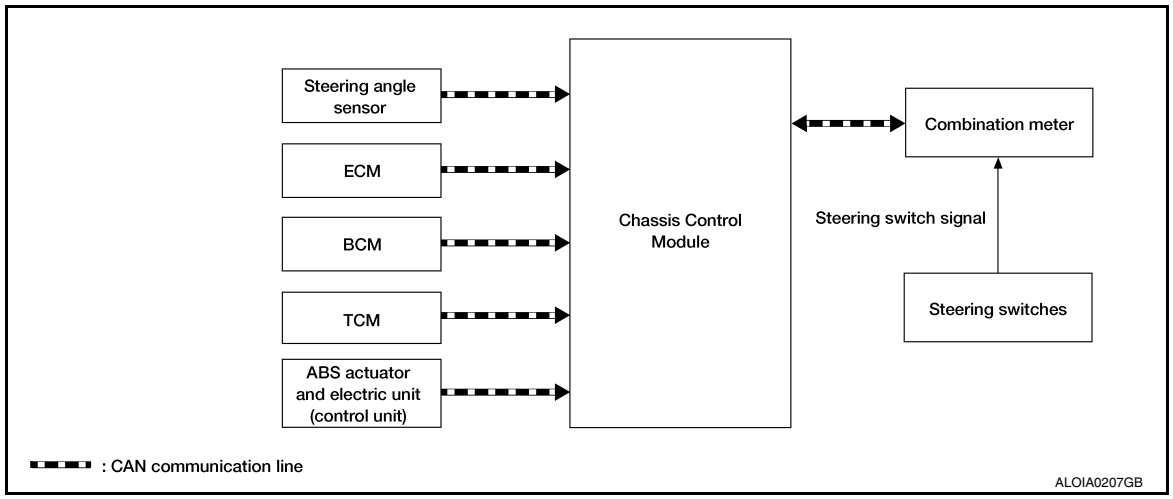
System Description - Chassis Control

INFOID:0000000012421711

- 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 Engine Brake	DAS-133, "System Description - Active Engine Brake"
Active Ride Control	DAS-134, "System Description - Active Ride Control"
Active Trace Control	DAS-134, "System Description - Active Trace Control"

SYSTEM DIAGRAM

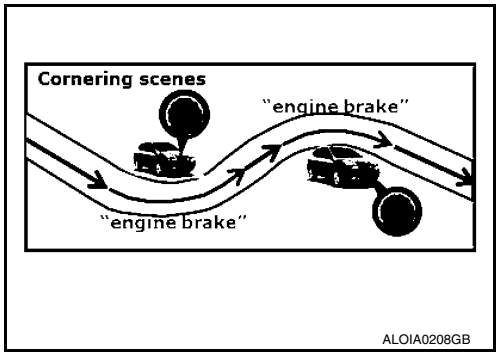


System Description - Active Engine Brake

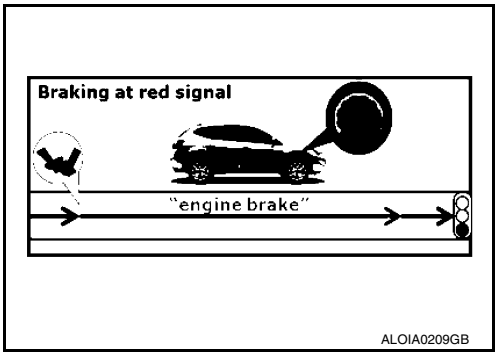
INFOID:0000000012421712

Active Engine Brake function can be switched ON/OFF through the "Chassis Control" settings on the vehicle information display.

- Assist at corners - to lessen the workload of adjusting speed with brake pedal operations at corners. Active Engine Brake function adds small amount of deceleration by controlling the CVT gear ratio depending on the steering input and various sensors. This benefits to easier traceability at corners.



- Assist at breaking - To enhance braking feel, Active Engine Brake adds deceleration by shifting the CVT gear ratio to lower side depending on the driver's brake pedal operation.

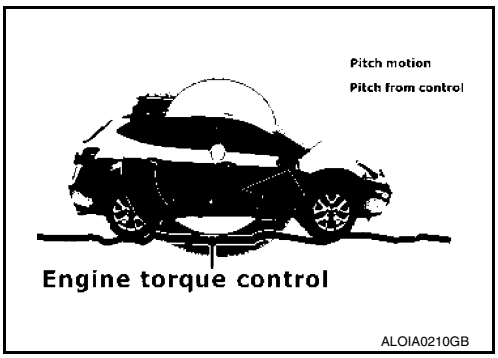


System Description - Active Ride Control

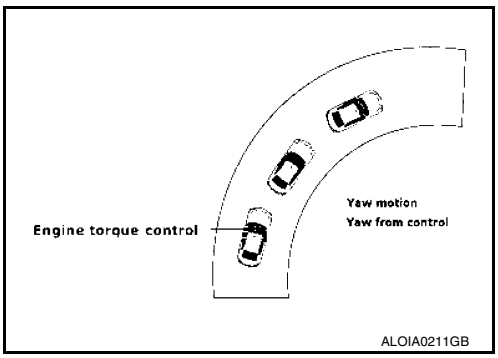
INFOID:0000000012421713

The Active Ride Control function can be turned ON/OFF by turning the VDC OFF switch ON/OFF.

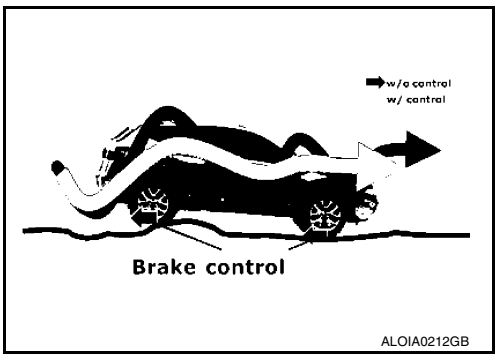
- Engine control - Enhances ride comfort by adding/subtracting engine torque in an effort to control the front and rear wheel load balance.



- Engine control - Enhances handling by adding/subtracting engine torque in an effort to control the front and rear wheel load balance.



- Brake control - Enhances ride comfort by restraining upper body movement with small amount of brake control when driving on bumpy roads.



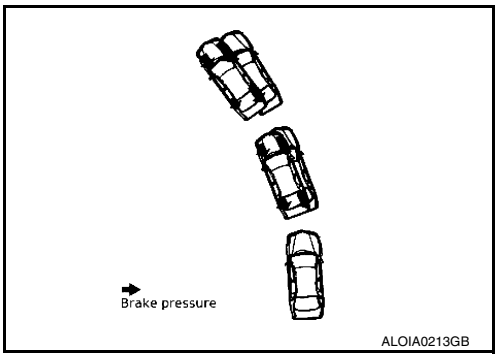
System Description - Active Trace Control

INFOID:0000000012421714

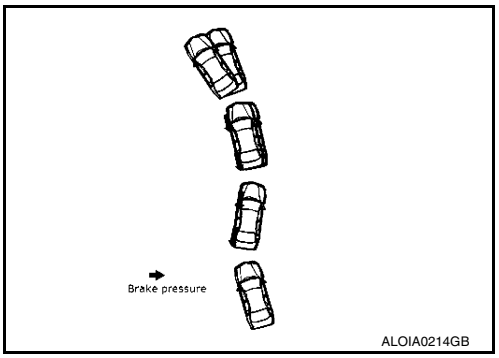
Active Trace Control function controls the braking utilizing the ABS actuator and electric unit (control unit), depending on cornering condition calculated from driver's steering input and plural sensors. Active Trace Control function is aimed to enhance traceability at corners and smooth the vehicle movement to provide confident driving.

Active Trace Control function can be switched ON/OFF through the "Chassis Control" settings on the vehicle information display. When the Active Trace Control is selected OFF, some functions will be kept ON to assist driver (for example, avoidance condition).
When the VDC OFF switch is used to turn OFF the VDC system, the Active Trace Control system is also completely turned OFF.

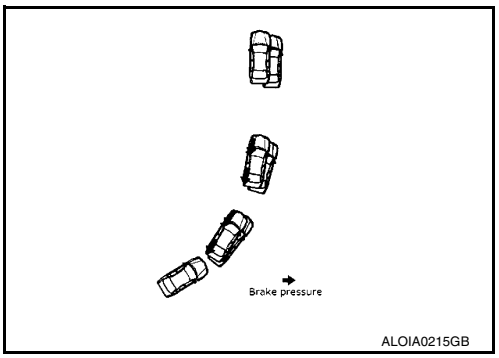
- Steady cornering - The change of forward and lateral acceleration is smoothened by applying the necessary amount of brake pressure.



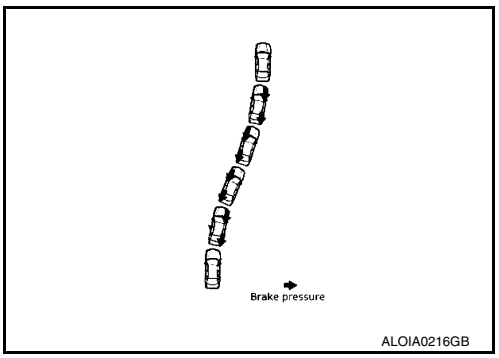
- Transient steering input - Reduces lag of yaw rate against steering operation.



- Acceleration at corners - Restrains understeer by applying the necessary amount of brake pressure to the inner wheels.



- Quick lane change - achieves stable vehicle behavior at quick steering operation by applying the necessary amount of brake pressure to the appropriate wheels.



Fail-Safe (Chassis Control Module)

INFOID:0000000012421715

- When chassis control module detects an error in the chassis control system architecture (including other system components), the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter. Please check the DTCs and investigate the cause of error.

DTC	Vehicle condition
C1B92-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1B93-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine) • Active Engine Brake
C1B94-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1B95-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
C1B99-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BA0-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
C1BA2-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1BA5-00	Normal control
C1BAB-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1BB2-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB3-00	
C1BB4-00	
C1BB5-00	
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB8-00	
C1BB9-00	
C1BBA-00	
C1BBB-00	
C1BBC-00	Normal control
C1BBD-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BC0-00	The following functions are suspended: • Active Trace Control • Active Ride Control
C1BC1-00	
C1BC2-00	
C1BC3-00	
C1BC4-00	The following function is suspended: • Active Ride Control (brake)
C1BC5-00	The following function is suspended: • Active Trace Control

DTC	Vehicle condition
C1BC6-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
U1A34-00 U1A35-00 U1A36-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A39-00	Normal control
U1A3B-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake) • Active Engine Brake
U1A42-00 U1A43-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
U1A48-00 U1A4A-00 U1A4B-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A4E-00	The following function is suspended: • Active Ride Control

INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display

INFOID:0000000012421716

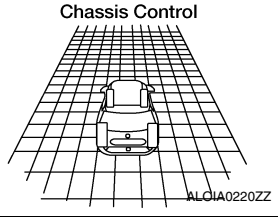
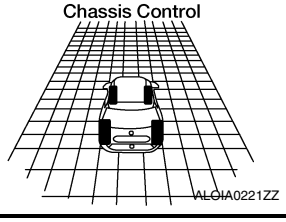
DESIGN/PURPOSE

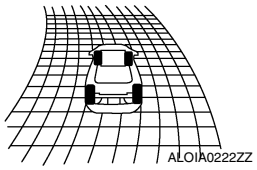
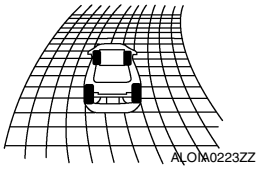
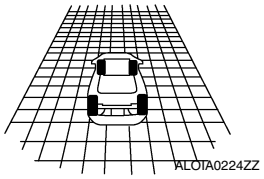
- The warning message is displayed on the vehicle information display when chassis control module detects an error in the chassis control system architecture. Please check the DTCs and investigate the cause of error.
- Each chassis control system information is displayed on the vehicle information display.

Warning Message

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

System Information

Design	Description
 ALOIA0220ZZ	Active Engine Brake inactive. Active Ride Control inactive. Active Trace Control inactive.
 ALOIA0221ZZ	Active Engine Brake (assist at corners). Active Trace Control is active. (Steering angle is less than the specified angle).

Design	Description
Chassis Control  ALOIA0222ZZ	Active Engine Brake (assist at corner). Active Trace Control assist is active. (Steering angle is the specified angle or more in the leftward direction).
Chassis Control  ALOIA0223ZZ	Active Engine Brake (assist at corner). Active Trace Control assist is active. (Steering angle is the specified angle or more in the rightward direction).
Chassis Control  ALOIA0224ZZ	Active Ride Control is active (assist).

Indicator operating
- Active Engine Brake: Refer to DAS-133, "System Description - Active Engine Brake".
- Active Ride Control: Refer to DAS-134, "System Description - Active Ride Control".
- Active Trace Control: Refer to DAS-134, "System Description - Active Trace Control".

HANDLING PRECAUTION

Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)

INFOID:0000000012421717

CHASSIS CONTROL

- Chassis Control will not provide all the necessary controls to replace driver intervention. 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.
- Chassis Control is primarily intended for use on well-developed freeways or highways. It may not perform satisfactorily in certain roads, weather or driving conditions.
- Using Chassis Control under some conditions of road, corner or severe weather 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 Chassis Control is operating, avoid excessive or sudden steering maneuvers. Otherwise, you could lose control of the vehicle.
- Engine Brake Control is designed to enhance braking feel and traceability at corners.
- Active Ride Control is designed to enhance handling and drive comfort.
- Active Trace Control is designed to enhance traceability at corners and smooth vehicle movement for more confident driving.
- Chassis Control may not function properly under the following conditions:
- 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 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 Chassis Control may or may not operate properly under the following conditions:
- On roads covered with water, dirt or snow, etc.
- On roads where there are sharp curves.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000012421718

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 Result	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.
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-151, "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.
PRESS SENSOR	bar	Displays the brake fluid pressure.

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.
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.
THROTTLE CONTROL	[NORMAL / INCORR / PREV / IN-POSSI]	Displays the electric throttle status.
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).
STOP LAMP SW	[INACT / ACT]	Displays the stop lamp switch status.
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.
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.
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.
AEB	[Off / On]	Displays the Active Engine Brake (corner) function operating status
ATC 1	[Off / On]	Displays active trace control function operating status.
ATC 2	[Off / On]	Displays active trace control function operating status.
ATC 3	[Off / On]	Displays active trace control function operating status.

Item [Unit]		Description
ATC 4	[Off / On]	Displays active trace control function operating status.
ATC 5	[Off / On]	Displays active trace control function operating status.
BRAKE HOLD	[INACT / ACT / RELEA]	Displays the status of Hill Start Assist function.
FL TIRE DISP	[DEF / 1]	Displays tire status.
FR TIRE DISP	[DEF / 1]	Displays tire status.
RL TIRE DISP	[DEF / 1]	Displays tire status.
RR TIRE DISP	[DEF / 1]	Displays tire status.
VEHICLE DISP	[Off / On]	Displays Active Ride Control (brake) activation status.
INTERRUPT DISP	[NOREQ / HOLD1 / HOLD2 / HDC]	Displays the interruption status.
TURN DISP	[NSTEER / LEFT / RIGHT]	Displays the turn status.
BRAKE HOLD DISP	[INACT / ACT / RELEA]	Displays the brake hold status.
ATC DISP	[Off / On]	Displays Active Trace Control status.
ARC BRAKE DISP	[Off / On]	Displays the status of Active Ride Control (brake).
HDC DISP	[Off / On]	Displays the Hill Descent Control.
AEB CVT PERMIT	[Off / On]	Displays the CVT authorized state for Active Engine Brake.
AEB STATUS	[Off / On]	Displays the setting status of Active Engine Brake function.
AEB COMMAND 1	[0.0000]	Displays the relative command value of Active Engine Brake.
AEB SLIP RATE	[%]	Displays slip ratio of Active Engine Brake.
ATC SETTING	[Off / On]	Displays the setting status of Active Trace Control function by steering switch.
AEB SETTING	[Off / On]	Displays the setting status of Active Engine Brake function by steering switch.
ARC BRAKE	[Off / On]	Displays the Active Ride Control function 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
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)
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.
	ROUND	Displayed but not used.
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.
HDC DISP	On	Displays Hill Descent Control active status on the information display on the combination meter.
	Off	Displays Hill Descent Control inactive status on the information display on the combination meter.
BRAKE HOLD DISP	INACT	Displays inactive status of controls on the information display on the combination meter.
	READY	Displays ready status of Hill Start Assist on the information display on the combination meter.
	ACTIVE	Displays active status of Hill Start Assist on the information display on the combination meter.
	ERROR	Displays inactive status of controls on the information display on the combination meter.
AEB DISP	On	Displays Active Engine Brake (corner) active status on the information display in the combination meter.
	Off	Displays Active Engine Brake (corner) inactive status on the information display in the combination meter.

Test item	Operation	Description
VEHICLE DISP	On	Displays Active Ride Control (brake) active status on the information display in the combination meter.
	Off	Displays Active Ride Control (brake) inactive status on the information display in the combination meter.
INTERRUPT DISP	NO REQ	Displays inactive status of controls on the information display in the combination meter.
	READY	Displays ready status of Hill Start Assist on the information display in the combination meter.
	ACTIVE	Displays active status of Hill Start Assist on the information display in the combination meter.
	HDC	Displays Hill Descent Control active status on the information display in the combination meter.
ATC 3 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.

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:0000000012421719

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
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%

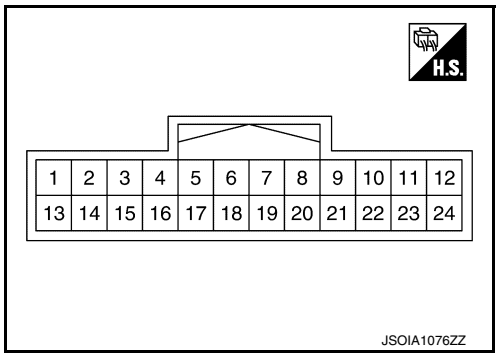
Monitor item	Condition	Reference values in normal operation
THROTTLE CONTROL	When electric throttle control actuator is normal.	NORMAL
	When the electric throttle control actuator does not achieve the requirement (measured value is inaccurate).	INCORR
	When the electric throttle control actuator does not achieve the requirement (temporary prevention).	PREV
	When the electric throttle control actuator does not achieve the requirement (impossible).	IMPOSSI
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
STOP LAMP SW	When brake pedal is not depressed.	INACT
	When brake pedal is depressed.	ACT
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
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
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
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

Monitor item	Condition	Reference values in normal operation
AEB	When Active Engine Brake (corner) function is active.	On
	When Active Engine Brake (corner) function is inactive.	Off
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 3	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
ATC 5	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ARC BRAKE	When active ride control (brake control) function is inactive	Off
	When active ride control (brake control) function is active	On
BRAKE HOLD	When Hill Start Assist function is inactive.	INACT
	When Hill Start Assist function is ready.	ACT
	When Hill Start Assist function is active.	RELEA
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
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
VEHICLE DISP	When active ride control (brake) effect is not displayed on the information display in the combination meter.	Off
	When active ride control (brake) effect is displayed on the information display in the combination meter.	On
INTERRUPT DISP	When interrupt display is not displayed on the information display in the combination meter.	NOREQ
	When Hill Start Assist function (ready) is displayed on the information display in the combination meter.	HOLD1
	When Hill Start Assist function (active) is displayed on the information display in the combination meter.	HOLD2
	When Hill Descent Control function is displayed on the information display in the combination meter.	HDC

Monitor item	Condition	Reference values in normal operation
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
BRAKE HOLD DISP	When Hill Start Assist function is not displayed on the information display in the combination meter.	INACT
	When Hill Start Assist function (ready) is displayed on the information display in the combination meter.	ACT
	When Hill Start Assist function (active) is displayed on the information display in the combination meter.	RELEA
ATC DISP	When the activation of Active Trace Control is not displayed on the information display on the combination meter.	Off
	When the activation of Active Trace Control is displayed on the information display on the combination meter.	On
ARC BRAKE DISP	When Active Ride Control (Brake) function is not displayed on the information display in the combination meter.	Off
	When Active Ride Control (Brake) function is displayed on the information display in the combination meter.	On
HDC DISP	When Hill Descent Control function is not displayed on the information display in the combination meter.	Off
	When Hill Descent Control function is displayed on the information display in the combination meter.	On
AEB CVT PERMIT	When transaxle control is authorized.	On
	When transaxle control is not authorized.	Off
AEB STATUS	When active engine brake function is ON.	On
	When active engine brake function is OFF.	Off
AEB COMMAND 1	When active engine brake function is inactive.	0 – 0.1023 G
	When active engine brake function is active.	0 G
AEB SLIP RATE	When slip ratio of active engine brake function is inactive.	0%
	When slip ratio of active engine brake function is active	0 – 100%
ATC SETTING	When active trace control function is ON by steering switch.	On
	When active trace control function is OFF by steering switch	Off
AEB SETTING	When active engine brake function is ON by steering switch.	On
	When active engine brake function is OFF by steering switch.	Off

*: Check tire pressure under normal conditions.

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/Output			
3 (P)	Ground	CAN low	—	—	—	—
4 (L)		CAN high	—	—	—	—
7 (W)	Ground	Chassis comm low	—	—	—	—
8 (W)		Chassis comm high	—	—	—	—
10 (SB)		IGN	Input	Ignition switch ON		6.4 – 16 V
11 (L)	Ground	Chassis comm high	—	—	—	—
12 (B)		Ground	—	Ignition switch ON		0 V
19 (L)	Ground	Chassis comm high	—	—	—	—

Fail-Safe (Chassis Control Module)

INFOID:0000000012421720

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
C1B92-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1B93-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine) • Active Engine Brake
C1B94-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1B95-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
C1B99-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BA0-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
C1BA2-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1BA5-00	Normal control
C1BAB-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)

DTC	Vehicle condition
C1BB2-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB3-00	
C1BB4-00	
C1BB5-00	
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB8-00	
C1BB9-00	
C1BBA-00	
C1BBB-00	
C1BBC-00	Normal control
C1BBD-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BC0-00	The following functions are suspended: • Active Trace Control • Active Ride Control
C1BC1-00	
C1BC2-00	
C1BC3-00	
C1BC4-00	The following functions are suspended: • Active Ride Control (brake)
C1BC5-00	The following functions are suspended: • Active Trace Control
C1BC6-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
U1A34-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A35-00	
U1A36-00	
U1A39-00	Normal control
U1A3B-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake) • Active Engine Brake
U1A42-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
U1A43-00	
U1A48-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A4A-00	
U1A4B-00	
U1A4E-00	The following functions are suspended: • Active Ride Control

DTC Inspection Priority Chart

INFOID:0000000012421721

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

Priority	Detected item (DTC)
1	• U1000-00 CAN COMM CIRCUIT
2	• U1A34-00 BRAKE CONTROL COMM • U1A35-00 BRAKE CONTROL COMM • U1A36-00 BCM/IPDM COMM • U1A39-00 COMBINATION METER COMM • U1A3B-00 TCM COMM • U1A3F-00 AV COMM • U1A42-00 STEERING ANGLE SENSOR COMM • U1A43-00 STEERING ANGLE SENSOR COMM • U1A48-00 ECM/HPCM COMM • U1A4A-00 CONTROL MODULE (CAN) • U1A4B-00 CONTROL MODULE (CAN) • U1A4E-00 ECM/HPCM COMM
3	• C1BBD-00 VARIANT CODING
4	• C1B92-00 BRAKE CONTROL SYSTEM • C1B93-00 ENGINE/HEV SYSTEM • C1B94-00 TM SYSTEM • C1BA0-00 ADAS/CHASSIS CTRL BRAKE SYS • C1BA2-00 STEERING ANGLE SENSOR • C1BA5-00 ADAS/CHASSIS CTRL ENGINE SYS • C1BAB-00 STOP LAMP SW • C1BC0-00 FR WHEEL SENSOR • C1BC1-00 FL WHEEL SENSOR • C1BC2-00 RR WHEEL SENSOR • C1BC3-00 RL WHEEL SENSOR • C1BC4-00 DECEL G SENSOR • C1BC5-00 SIDE G SENSOR • C1BC6-00 PRESSURE SENSOR
5	• C1BB5-00 IGN POWER SUPPLY • C1BB6-00 IGN POWER SUPPLY
6	• C1B95-00 CONTROL MODULE • C1B99-00 CONTROL MODULE • C1BB2-00 CONTROL MODULE • C1BB3-00 CONTROL MODULE • C1BB4-00 CONTROL MODULE • C1BB7-00 CONTROL MODULE • C1BB8-00 CONTROL MODULE • C1BB9-00 CONTROL MODULE • C1BBA-00 CONTROL MODULE • C1BBB-00 CONTROL MODULE • C1BBC-00 CONTROL MODULE

DTC Index

INFOID:0000000012421722

DTC	Display item	Refer to
C1B92-00	BRAKE CONTROL SYSTEM	DAS-165, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-167, "DTC Description"
C1B94-00	TM SYSTEM	DAS-169, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-171, "DTC Description"
C1B99-00	CONTROL NODULE	DAS-172, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-173, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-175, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-177, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-178, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-180, "DTC Description"

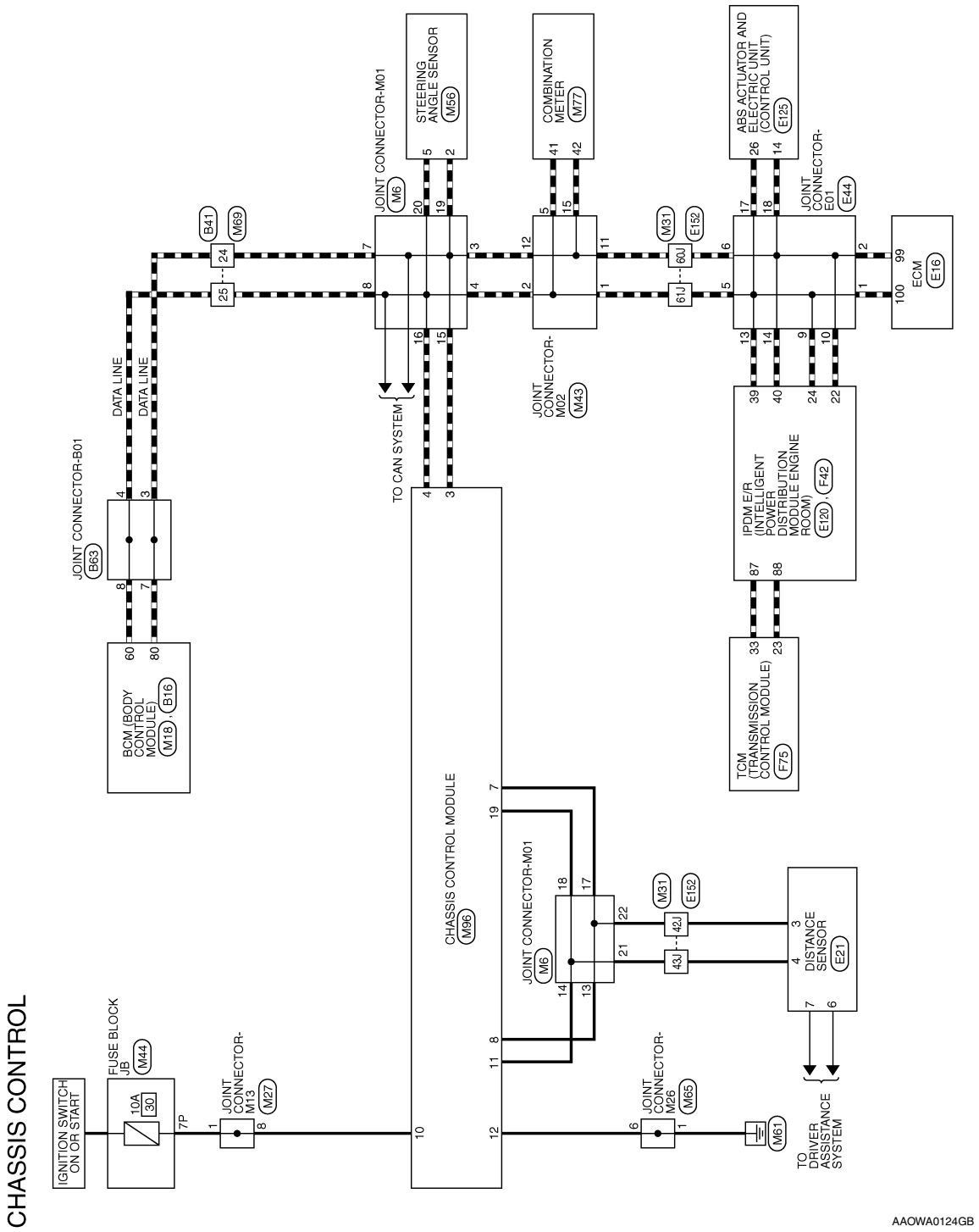
DTC	Display item	Refer to
C1BB3-00	CONTROL MODULE	DAS-181, "DTC Description"
C1BB4-00	CONTROL MODULE	DAS-182, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-183, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-185, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-187, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-188, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-189, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-190, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-191, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-192, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-193, "DTC Description"
C1BC0-00	FR WHEEL SENSOR	DAS-194, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-196, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-198, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-200, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-202, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-204, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-206, "DTC Description"
U1000-00	CAN COMMUNICATION	DAS-209, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-209, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-211, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-213, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-215, "DTC Description"
U1A3B-00	TCM COMM	DAS-217, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-219, "DTC Description"
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-221, "DTC Description"
U1A48-00	ECM/HPCM COMM	DAS-223, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-225, "DTC Description"
U1A4B-00	CONTROL MODULE (CAN)	DAS-226, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-227, "DTC Description"

WIRING DIAGRAM

CHASSIS CONTROL

Wiring Diagram

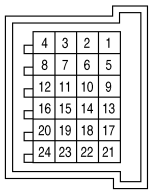
INFOID:0000000012421723



CHASSIS CONTROL CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY

H.S.

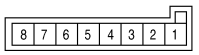


Terminal No.	Color of Wire	Signal Name
3	P	–
4	L	–
7	P	–
8	L	–

Terminal No.	Color of Wire	Signal Name
13	W	–
14	L	–
15	P	–
16	L	–
17	W	–
18	L	–
19	P	–
20	L	–
21	P	–
22	L	–

Connector No.	M27
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE

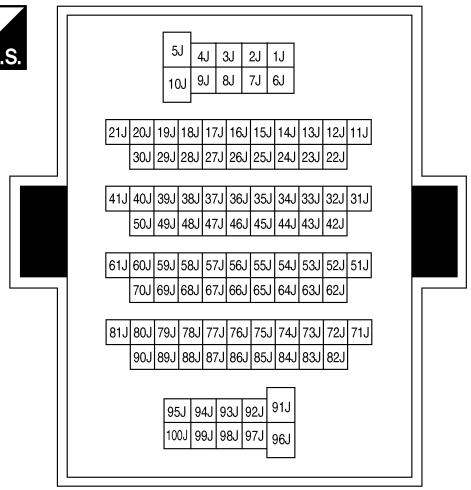
H.S.



Terminal No.	Color of Wire	Signal Name
1	SB	–
8	SB	–

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

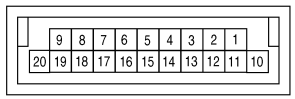


AAOIA0407GB

Terminal No.	Color of Wire	Signal Name
42J	W	–
43J	L	–
60J	P	–
61J	L	–

Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–
5	L	–
11	P	–
12	P	–
15	P	–

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

7P	6P	5P	4P	3P	2P	1P
16P	15P	14P	13P	12P	11P	10P	9P	8P

Terminal No.	Color of Wire	Signal Name
7P	Y	–

Connector No.	M56
Connector Name	STEERING ANGLE SENSOR
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
2	P	–
5	L	–

Connector No.	M65
Connector Name	JOINT CONNECTOR-M26
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	–
6	B	–

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
24	P	–
25	L	–

Connector No.	M77
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

41	42	43	44	45	46
47	48	49	50	51	52

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L

AAOIA0408GB

Connector No.	M96
Connector Name	CHASSIS CONTROL MODULE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	P	CAN-L
4	L	CAN-H
5	–	–
6	–	–
7	W	CHASSIS COMM-L
8	W	CHASSIS COMM-L
9	–	–

Connector No.	E21
Connector Name	DISTANCE SENSOR
Connector Color	BLACK

H.S.

5	6	7	8
1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	W	CAN-L
4	L	CAN-H
6	R	ITS CAN-L
7	L	ITS CAN-H

Terminal No.	Color of Wire	Signal Name
10	SB	IGN
11	L	CHASSIS COMM-H
12	B	GND
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	L	CHASSIS COMM-H
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5
12	11	10	9
16	15	14	13
20	19	18	17
24	23	22	21
28	27	26	25

Terminal No.	Color of Wire	Signal Name
1	L	–
2	P	–
5	L	–
6	P	–
9	L	–
10	P	–
13	L	–
14	P	–
17	L	–
18	P	–

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK

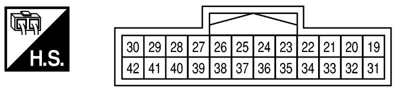
H.S.

97	101	105	109	113	117	121	125
98	102	106	110	114	118	122	126
99	103	107	111	115	119	123	127
100	104	108	112	116	120	124	128

Terminal No.	Color of Wire	Signal Name
99	P	CAN-L
100	L	CAN-H

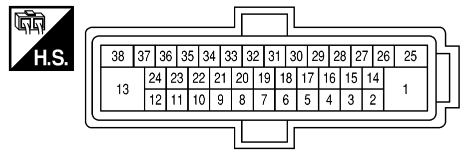
AAOIA0409GB

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



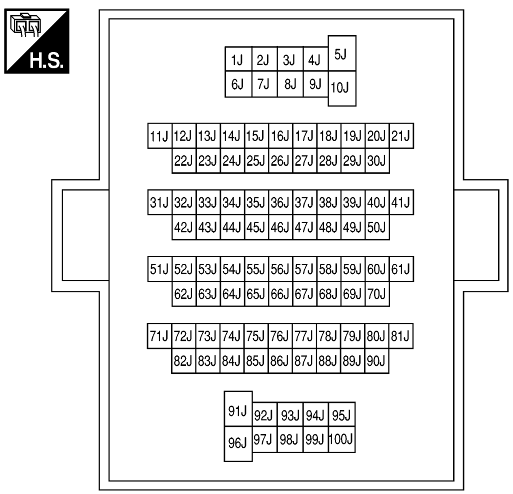
Terminal No.	Color of Wire	Signal Name
22	P	CAN-L
24	L	CAN-H
39	L	CAN-H
40	P	CAN-L

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK



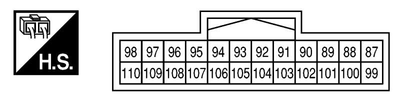
Terminal No.	Color of Wire	Signal Name
14	P	CAN-L
26	L	CAN-H

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
42J	W	–
43J	L	–
60J	P	–
61J	L	–

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

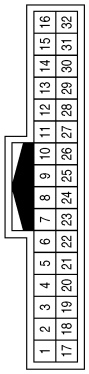


Terminal No.	Color of Wire	Signal Name
87	L	CAN-H
88	P	CAN-L

AAOIA0410GB

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE

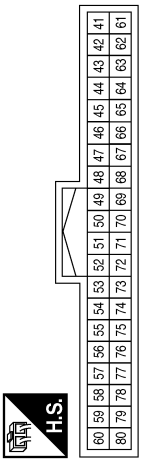
H.S.



Terminal No.	Color of Wire	Signal Name
24	P	–
25	L	–

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

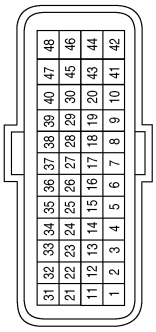
H.S.



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	F75
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK

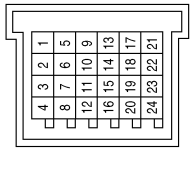
H.S.



Terminal No.	Color of Wire	Signal Name
23	P	CAN-L
33	L	CAN-H

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY

H.S.



Terminal No.	Color of Wire	Signal Name
3	P	–
4	L	–
7	P	–
8	L	–

AAOIA0411GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012421724

DETAILED FLOW

1.INTERVIEW FROM THE CUSTOMER

Clarify customer complaints before inspection. First of all, perform an interview utilizing DAS-160, "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-149, "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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC detected?

YES >> Record or print “Self Diagnostic Result” and freeze frame data (FFD). GO TO 4.
NO >> Inspection End.

4.RECHECK THE SYMPTOM

With CONSULT

Perform DTC confirmation procedures for the malfunctioning system.

NOTE:

If some DTCs are detected at the some time, determine the order for performing the diagnosis based on DAS-150, "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-129, "Precautions for Harness Repair".

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

1. Repair or replace malfunctioning parts.
2. Reconnect part or connector after repairing or replacing.
3. When DTC is detected, erase “Self Diagnostic Result” of “CHASSIS CONTROL”.

>> GO TO 6.

6.FINAL CHECK

With CONSULT

1. Check the reference value of “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:0000000012421725

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:0000000012421726

When replaced the chassis control module, configuration of the chassis control module is required. Refer to DAS-163, "Work Procedure".

CONFIGURATION (CHASSIS CONTROL MODULE)

Work Procedure

INFOID:0000000012421727

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-234, "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-234, "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-234, "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 Diagnostic Result” of “CHASSIS CONTROL”. Refer to DAS-140, "CONSULT Function".

11. PERFORMING SUPPLEMENTARY WORK

1. Perform “Self Diagnostic Result” of all systems.
2. Erase “Self Diagnostic Result”.

>> End of work.

DTC/CIRCUIT DIAGNOSIS

C1B92-00 BRAKE CONTROL SYSTEM

DTC Description

INFOID:0000000012421728

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B92-00	BRAKE CONTROL SYSTEM (Brake control system)	When a malfunction is detected in ABS actuator and electric unit (control unit) system.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit) system
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control function
- Active Trace Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B92-01” detected?

YES >> Proceed to DAS-165, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421729

1. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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”, “U1000” or other DTC detected?

YES (“C1B92-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1B93-00 ENGINE/HEV SYSTEM

DTC Description

INFOID:0000000012421730

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B93-00	ENGINE/HEV SYSTEM (Engine/HEV system)	When a malfunction is detected in ECM system.

POSSIBLE CAUSE

- Engine system
- ECM
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- Active Trace Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B93-00” detected?

YES >> Proceed to DAS-167, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421731

1.CHECK ECM SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-96, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “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”, “U1000” or other DTC detected?

YES (“C1B93-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1B94-00 TRANSMISSION SYSTEM

DTC Description

INFOID:0000000012421732

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B94-00	TM SYSTEM (Transmission system)	When a malfunction is detected in transmission system.

POSSIBLE CAUSE

- Transmission system
- TCM
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B94-00” detected?

YES >> Proceed to DAS-169, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421733

1.CHECK TRANSMISSION SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC detected?

YES >> Check the DTC. Refer to TM-63, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “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 “C1B94-00”, “U1000-00” or other DTC detected?

YES (“C1B94-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".

YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1B95-00 CONTROL MODULE

DTC Description

INFOID:0000000012421734

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B95-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (brake) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B95-00” detected?

YES >> Proceed to DAS-171, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421735

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B95” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1B99-00 CONTROL MODULE

DTC Description

INFOID:0000000012421736

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1B99-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control function
- Active Trace Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B99-00” detected?

YES >> Proceed to DAS-172, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421737

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1B99” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BA0-00 ADAS/CHASSIS CONTROL BRAKE SYSTEM

DTC Description

INFOID:0000000012421738

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS (ADAS/Chassis Control brake system)	• When receiving from ABS actuator and electric unit (control unit) that the value of the brake system signal transmitted from the chassis control module to ABS actuator and electric unit (control unit) is malfunctioning.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (brake) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BA0-00” and/or “C1BA7-00”detected?

YES (“C1BA0-00”)>>Proceed to DAS-173, "Diagnosis Procedure".
YES (“C1BA0-00” and “C1BA7-00”)>>Perform “Self Diagnostic Result” of “ICC/ADAS”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421739

1.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SYSTEM

With CONSULT
Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BA0-00”, “U1000-00” or other DTC detected?

YES (“C1BA0-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BA2-00 STEERING ANGLE SENSOR

DTC Description

INFOID:0000000012421740

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA2-00	STEERING ANGLE SENSOR (Steering angle sensor)	When a malfunction is detected in steering angle sensor system.

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BA2-00” detected?

YES >> Proceed to DAS-175, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421741

1.CHECK STEERING ANGLE SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BA2-00”, “U1000-00” or other DTC detected?

YES (“C1BA2-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.

NO >> Inspection End.

C1BA5-00 ADAS/CHASSIS CONTROL ENGINE SYSTEM

DTC Description

INFOID:0000000012421742

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS (ADAS/Chassis control engine system)	• When receiving from ECM that the value of the engine system signal transmitted from the chassis control module to ECM is malfunctioning.

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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BA5-00” detected?

YES >> Proceed to DAS-177, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421743

1.CHECK ADAS CONTROL UNIT SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “ECM”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-96, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “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 “C1BA5-00”, “U1000-00” or other DTC detected?

YES (“C1BA5-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BAB-00 STOP LAMP SWITCH

DTC Description

INFOID:0000000012421744

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BAB-00	STOP LAMP SW (Stop lamp switch)	When a malfunction is detected in stop lamp switch system.

POSSIBLE CAUSE

- Stop lamp switch
- BCM
- Chassis Control Module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BAB-00” detected?

YES >> Proceed to DAS-178, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421745

1.CHECK STOP LAMP SWITCH SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “BCM”.

Is DTC detected?

YES >> Check the DTC. Refer to BCS-48, "DTC Index" (with Intelligent Key) or BCS-109, "DTC Index" (without Intelligent Key).
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “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”, “U1000-00” or other DTC detected?

YES (“C1BAB-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BB2-00 CONTROL MODULE

DTC Description

INFOID:0000000012421746

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB2-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB2-00” detected?

YES >> Proceed to DAS-180, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421747

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB2-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BB3-00 CONTROL MODULE

DTC Description

INFOID:0000000012421748

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB3-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB3-00” detected?

YES >> Proceed to DAS-181, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421749

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB3-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BB4-00 CONTROL MODULE

DTC Description

INFOID:0000000012421750

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB4-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB4-00” detected?

YES >> Proceed to DAS-182, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421751

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB4-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BB5-00 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000012421752

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB5-00	IGN POWER SUPPLY (Ignition power supply)	Ignition power supply voltage of chassis control module is as shown below. • Ignition power supply voltage: 6.4 V ≥ Ignition power supply voltage.

POSSIBLE CAUSE

- Harness or connector
- Fuse
- Ignition power supply system
- Battery
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB5-00” detected?

YES >> Proceed to DAS-183, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421753

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
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 SELF-DIAGNOSIS (1)

1. Connect chassis control module harness connector M96.
2. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB5-00” detected?

YES >> GO TO 3.
NO >> Inspection End.

3.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
7P	Ignition power supply	30 (10A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

4.CHECK POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
3. Check the voltage between chassis control module harness connector M96 terminal 10 and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M96	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 M96 terminal 10 and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M96	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connector

5.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

Check the continuity between chassis control module harness connector M96 terminal 12 and ground.

Chassis control module		—	Continuity
Connector	Terminal		
M96	12	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connector.

C1BB6-00 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000012421754

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB6-00	IGNITION POWER SUPPLY (ignition power supply)	Ignition power supply voltage of chassis control module is as shown below. • Ignition power supply voltage: 16 V ≤ Ignition power supply voltage

POSSIBLE CAUSE

- Harness or connector
- Fuse
- Ignition power supply system
- Battery
- Chassis control module

DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

If “DTC CONFIRMATION PROCEDURE” has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2. CHECK DTC DETECTION

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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB6-00” detected?

YES >> Proceed to DAS-185, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421755

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
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 SELF-DIAGNOSIS (1)

1. Connect chassis control module harness connector M96.
2. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB5-00” detected?

YES >> GO TO 3.
NO >> Inspection End.

3. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
7P	Ignition power supply	30 (10A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

4. CHECK POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
3. Check the voltage between chassis control module harness connector M96 terminal 10 and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M96	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 M96 terminal 10 and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M96	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connector

5. CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

Check the continuity between chassis control module harness connector M96 terminal 12 and ground.

Chassis control module		—	Continuity
Connector	Terminal		
M96	12	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connector.

C1BB7-00 CONTROL MODULE

DTC Description

INFOID:0000000012421756

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB7-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB7-00” detected?

YES >> Proceed to DAS-187, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421757

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB7-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BB8-00 CONTROL MODULE

DTC Description

INFOID:0000000012421758

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB8-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB8-00” detected?

YES >> Proceed to DAS-188, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421759

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB8-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BB9-00 CONTROL MODULE

DTC Description

INFOID:0000000012421760

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BB9-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB9-00” detected?

YES >> Proceed to DAS-189, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421761

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BB9-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BBA-00 CONTROL MODULE

DTC Description

INFOID:0000000012421762

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBA-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBA-00” detected?

YES >> Proceed to DAS-190, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421763

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBA-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BBB-00 CONTROL MODULE

DTC Description

INFOID:0000000012421764

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBB-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBB-00” detected?

YES >> Proceed to DAS-191, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421765

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBB-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BBC-00 CONTROL MODULE

DTC Description

INFOID:0000000012421766

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBC-00	CONTROL MODULE (Control module)	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If “DTC CONFIRMATION PROCEDURE” has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBC-00” detected?

YES >> Proceed to DAS-192, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421767

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBC-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

C1BBD-00 VARIANT CODING

DTC Description

INFOID:0000000012421768

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BBD-00	VARIANT CODING (Variant coding)	When variant coding is incomplete.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBD-00” detected?

YES >> Proceed to DAS-193, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421769

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BBD-00” detected?

YES >> Perform configuration. Refer to DAS-163, "Work Procedure".
NO >> Inspection End.

C1BC0-00 FRONT RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000012421770

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC0-00	FR WHEEL SENSOR (Front right wheel sensor)	When a malfunction is detected in front right wheel sensor system.

POSSIBLE CAUSE

- Front right wheel sensor
- Front right sensor rotor
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC0-00” detected?

YES >> Proceed to DAS-194, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421771

1.CHECK FRONT RH WHEEL SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC0-00”, “U1000-00” or other DTC detected?

YES (“C1BC0-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BC1-00 FRONT LEFT WHEEL SENSOR

DTC Description

INFOID:0000000012421772

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC1-00	FL WHEEL SENSOR (Front left wheel sensor)	When a malfunction is detected in front left wheel sensor system.

POSSIBLE CAUSE

- Front left wheel sensor
- Front left sensor rotor
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC1-00” detected?

YES >> Proceed to DAS-196, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421773

1.CHECK FRONT LH WHEEL SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC1-00”, “U1000-00” or other DTC detected?

YES (“C1BC1-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BC2-00 REAR RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000012421774

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC2-00	RR WHEEL SENSOR (Rear right wheel sensor)	When a malfunction is detected in rear right wheel sensor system.

POSSIBLE CAUSE

- Rear right wheel sensor
- Rear right sensor rotor
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC2-00” detected?

YES >> Proceed to DAS-198, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421775

1.CHECK REAR RH WHEEL SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC2-00”, “U1000-00” or other DTC detected?

YES (“C1BC2-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BC3-00 REAR LEFT WHEEL SENSOR

DTC Description

INFOID:0000000012421776

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC3-00	RL WHEEL SENSOR (Rear left wheel sensor)	When a malfunction is detected in rear left wheel sensor system.

POSSIBLE CAUSE

- Rear left wheel sensor
- Rear left sensor rotor
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC3-00” detected?

YES >> Proceed to DAS-200, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421777

1.CHECK REAR LH WHEEL SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC3-00”, “U1000-00” or other DTC detected?

YES (“C1BC3-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

C1BC4-00 DECEL G SENSOR

DTC Description

INFOID:0000000012421778

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC4-00	DECEL G SENSOR (Decel G sensor)	When a malfunction is detected in decel G sensor system.

POSSIBLE CAUSE

- Yaw rate/side/decel G sensor [integrated in ABS actuator and electric unit (control unit)]
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (brake) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC4-00” detected?

YES >> Proceed to DAS-202, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421779

1.CHECK DECEL G SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC4-00”, “U1000-00” or other DTC detected?

YES (“C1BC4-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.

NO >> Inspection End.

C1BC5-00 SIDE G SENSOR

DTC Description

INFOID:0000000012421780

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC5-00	SIDE G SENSOR (Side G sensor)	When a malfunction is detected in side G sensor system.

POSSIBLE CAUSE

- Yaw rate/side/decel G sensor [integrated in ABS actuator and electric unit (control unit)]
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If “DTC CONFIRMATION PROCEDURE” has been previously conducted, always turn the ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC5-00” detected?

YES >> Proceed to DAS-204, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421781

1.CHECK SIDE G SENSOR SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC5-00”, “U1000-00” or other DTC detected?

YES (“C1BC5-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.

NO >> Inspection End.

C1BC6-00 PRESSURE SENSOR

DTC Description

INFOID:0000000012421782

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC6-00	PRESSURE SENSOR (Pressure sensor)	When a malfunction is detected in brake fluid pressure system.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (brake) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “C1BC6-00” detected?

YES >> Proceed to DAS-206, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421783

1.CHECK BRAKE FLUID PRESSURE SYSTEM

With CONSULT

Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “C1BC6-00”, “U1000-00” or other DTC detected?

YES (“C1BC6-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (other DTC)>>Check the DTC.

NO >> Inspection End.

U1000-00 CAN COMM CIRCUIT

DTC Logic

INFOID:0000000012421784

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000-00]	Chassis Control module is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:0000000012421785

1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform “Self Diagnostic Result” of CHASSIS CONTROL.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-20, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-45, "Intermittent Incident".

U1A34-00 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000012421786

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A34-00	BRAKE CONTROL COMM (Brake control communication)	When chassis control module is not receiving CAN communication signal [between chassis control module and ABS actuator and electric unit (control unit)] for 2 seconds or more.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control Function
- Active Ride Control Function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A34-00” detected?

YES >> Proceed to DAS-209, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421787

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

Refer to>> LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "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 Diagnostic Result” of “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “U1000-00”, “U1A34-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A34-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A35-00 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000012421788

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A35-00	BRAKE CONTROL COMM (Brake control communication)	A calculated signal value differs between a signal transmitted from the ABS actuator and electric unit (control unit) and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A35-00” detected?

YES >> Proceed to DAS-211, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421789

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-129, "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-129, "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 Diagnostic Result” of “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “U1000-00”, “U1A35-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A35-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A36-00 BCM/IPDM COMMUNICATION

DTC Description

INFOID:0000000012421790

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A36-00	BCM/IPDM COMM (BCM/IPDM communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and BCM) for 2 seconds or more.

POSSIBLE CAUSE

- BCM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A36-00” detected?

YES >> Proceed to DAS-213, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421791

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (BCM)

With CONSULT
1. Connect BCM harness connector.
2. Erase “Self Diagnostic Result” of “BCM”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “BCM”.

Is DTC detected?

YES >> Check the DTC. Refer to BCS-48, "DTC Index" (with Intelligent key system) or BCS-109, "DTC Index" (without Intelligent key system).
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. Connect chassis control module harness connector.
2. Erase “Self Diagnostic Result” of “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 “U1000-00”, “U1A36-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A36-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A39-00 COMBINATION METER COMMUNICATION

DTC Description

INFOID:0000000012421792

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A39-00	COMBINATION METER COMM (Combination meter communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and combination meter) for 2 seconds or more.

POSSIBLE CAUSE

- Combination meter
- Chassis control module
- CAN communication line

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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A39-00” detected?

YES >> Proceed to DAS-215, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421793

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "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 Diagnostic Result” of “METER/M&A”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “METER/M&A”.

Is DTC detected?

YES >> Check the DTC. Refer to MWI-31, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. Connect chassis control module harness connector.
2. Erase “Self Diagnostic Result” of “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 “U1000-00”, “U1A39-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A39-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A3B-00 TCM COMMUNICATION

DTC Description

INFOID:0000000012421794

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A3B-00	TCM COMM (TCM communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and TCM) for 2 seconds or more.

POSSIBLE CAUSE

- TCM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (engine) function
- Active Engine Brake

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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A3B-00” detected?

YES >> Proceed to DAS-217, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421795

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (TCM)

With CONSULT
1. Connect TCM harness connector.
2. Erase “Self Diagnostic Result” of “TRANSMISSION”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC detected?

YES >> Check the DTC. Refer to TM-63, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. Connect chassis control module harness connector.
2. Erase “Self Diagnostic Result” of “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 “U1000-00”, “U1A3B-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A3B-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000012421796

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A42-00	STEERING ANGLE SENSOR COMM (Steering angle sensor communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and steering angle sensor) for 2 seconds or more.

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (engine) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A42-00” detected?

YES >> Proceed to DAS-219, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421797

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "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 Diagnostic Result” of “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “U1000-00”, “U1A42-00” other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A42-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000012421798

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A43-00	STEERING ANGLE SENSOR COMM (Steering angle sensor communication)	A calculated signal value differs between a signal transmitted from the steering angle sensor and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (engine) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A43-00” detected?

YES >> Proceed to DAS-221, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421799

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "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 Diagnostic Result” of “ABS”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “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 Diagnostic Result” of “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 “U1000-00”, “U1A43-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A43-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A48-00 ECM/HPCM COMMUNICATION

DTC Description

INFOID:0000000012421800

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A48-00	ECM/HPCM COMM (ECM/HPCM communication)	When chassis control module is not receiving CAN communication signal (between chassis control module and ECM) for 2 seconds or more.

POSSIBLE CAUSE

- ECM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A48-00” detected?

YES >> Proceed to DAS-223, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421801

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select and “CAN Diagnosis Support Monitor” of “CHASSIS CONTROL”.
2. Check malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-12, "CAN Communication Control Circuit".
“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-10, "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-10, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (ECM)

With CONSULT
1. Connect ECM harness connector.
2. Erase “Self Diagnostic Result” of “ENGINE”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-96, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. Connect chassis control module harness connector.
2. Erase “Self Diagnostic Result” of “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 “U1000-00”, “U1A48-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A48-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

U1A4A-00 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000012421802

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4A-00	CONTROL MODULE (CAN) [Control module (CAN)]	• When a malfunction is detected in chassis control module (transmission via CAN communication is impossible)

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A4A-00” detected?

YES >> Proceed to DAS-225, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421803

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A4A-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

U1A4B-00 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000012421804

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4B-00	CONTROL MODULE (CAN) [Control module (CAN)]	When a malfunction is detected in chassis control module.

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A4B-00” detected?

YES >> Proceed to DAS-226, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421805

1.PERFORM SELF-DIAGNOSIS

With CONSULT

1. Erase “Self Diagnostic Result” of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform “Self Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A4B-00” detected?

YES >> Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
NO >> Inspection End.

U1A4E-00 ECM/HPCM COMMUNICATION

DTC Description

INFOID:0000000012421806

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4E-00	ECM/HPCM COMM (ECM/HPCM communication)	A calculated signal value differs between a signal transmitted from the ECM and a signal received from chassis control module via CAN communication.

POSSIBLE CAUSE

- ECM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) 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 Diagnostic Result” of “CHASSIS CONTROL”.

Is DTC “U1A4E-00” detected?

YES >> Proceed to DAS-227, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000012421807

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

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-45, "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-10, "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-10, "Precautions for Harness Repair", and GO TO 4.

4.PFEFORM SELF-DIAGNOSIS (ECM)

With CONSULT
1. Connect ECM harness connector.
2. Erase “Self Diagnostic Result” of “ENGINE”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Perform “Self Diagnostic Result” of “ENGINE”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-96, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT
1. Connect chassis control module harness connector.
2. Erase “Self Diagnostic Result” of “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 “U1000-00”, “U1A4E-00” or other DTC detected?

YES (“U1000-00”)>>Refer to DAS-208, "Diagnosis Procedure".
YES (“U1A4E-00”)>>Replace the chassis control module. Refer to DAS-234, "Removal and Installation".
YES (other DTC)>>Check the DTC.
NO >> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000012421808

Regarding Wiring Diagram information, refer to DAS-153, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
7P	Ignition power supply	30 (10A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
3. Check the voltage between chassis control module harness connector M96 terminal 10 and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M96	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 M96 terminal 10 and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M96	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connector

3.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

Check the continuity between chassis control module harness connector M96 terminal 12 and ground.

Chassis control module		—	Continuity
Connector	Terminal		
M96	12	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connector.

SYMPTOM DIAGNOSIS

CHASSIS CONTROL

Active Engine Brake

INFOID:0000000012421809

NOTE:
- For the operational conditions of Active Engine Brake, refer to DAS-133, "System Description - Active Engine Brake".
- Perform the “Self Diagnostic Result” using CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
Active Engine Brake inoperative/ineffective.	No CVT gear ratio assist.		Active Engine Brake selected OFF in the vehicle information display.	Change Active Engine Brake selection in the vehicle information display to ON.
			Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-139, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".
			• Road wheel tire condition is abnormal • Road wheel tire size is abnormal.	Check the road wheel tire.
	Lower CVT gear ratio not achieved.	Continuously	Active Engine Brake selected OFF in the vehicle information display.	Change Active Engine Brake selection in the vehicle information display to ON.
		At cornering.	• Wheel alignment • Steering malfunction	Refer to “STEERING WHEEL TURNING FORCE IS HEAVY OR LIGHT”STC-7, "EPS SYSTEM : System Description".
		While coming to a complete stop.	Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-139, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".

Active Ride Control

INFOID:0000000012421810

NOTE:
- For the operational conditions of Active Ride Control, refer to DAS-134, "System Description - Active Ride Control".
- Perform the “Self Diagnostic Result” using CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
Active Ride Control inoperative/ineffective.	No Active Ride Control assist.		VDC OFF switch is engaged.	Turn VDC OFF switch to the OFF position.
			Engine or transmission DTCs present.	Refer to EC DTCsEC-96, "DTC Index" , or TM DTCs TM-63, "DTC Index" as necessary.
	Bumpy ride on bumpy road.		Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-139, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".
			• Road wheel tire condition is abnormal. • Road wheel tire size is abnormal.	Check the road wheel tire.
	High vehicle pitch on bumps.	Ineffective pitch control.	• Wheel alignment. • Steering malfunction.	Change Active Engine Brake selection in the vehicle information display to ON.
		No pitch control.	Brake system malfunction.	Refer to DAS-150, "DTC Inspection Priority Chart".
		No engine torque control on curves.	Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-139, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".

Active Trace Control

INFOID:0000000012421811

NOTE:
- For the operational conditions of Active Trace Control, refer to DAS-134, "System Description - Active Trace Control".
- Perform the “Self Diagnostic Result” using CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
Active Trace Control inoperative/ineffective.	No Active Trace Control assist.		Active Trace Control selected OFF in the vehicle information display.	Change Active Trace Control selection in the vehicle information display to ON.
			VDC OFF switch is engaged.	Turn VDC OFF switch to the OFF position.
			Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-139, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".
			• Road wheel tire condition is abnormal. • Road wheel tire size is abnormal.	Check the road wheel tire.
	Excessive lag on turns.	On turns	Wheel alignment	Repair alignment malfunction.
		While zigzagging.	Steering malfunction.	“STEERING WHEEL TURNING FORCE IS HEAVY OR LIGHT” DAS-134, "System Description - Active Trace Control".
		With quick lane change.	Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-139, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".

NORMAL OPERATING CONDITION

Description

INFOID:0000000012421812

CHASSIS CONTROL

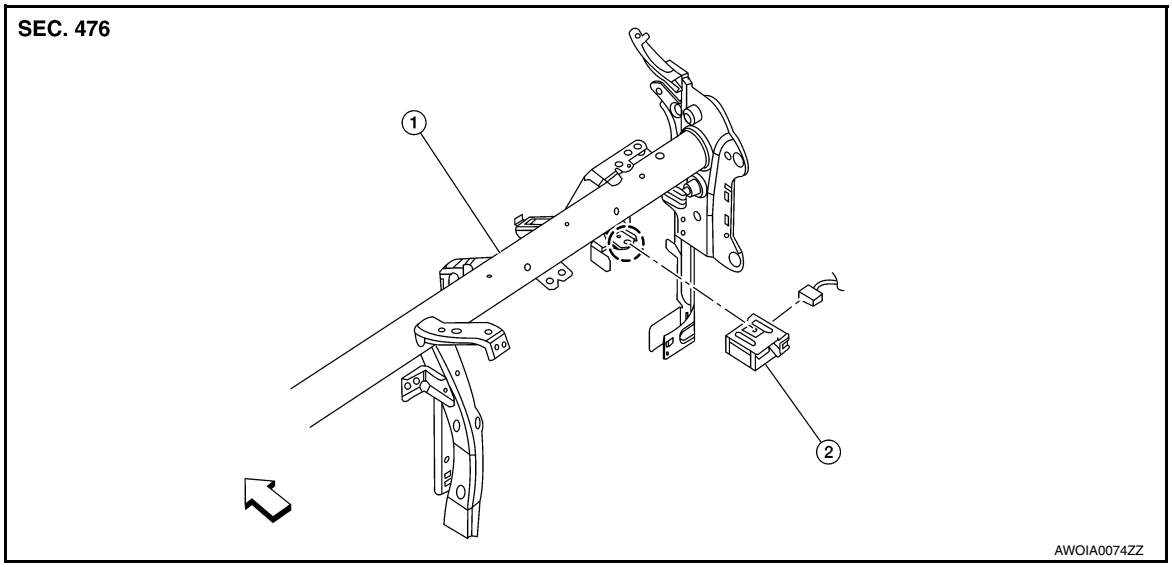
- Chassis Control will not provide all the necessary controls to replace driver intervention. It is not designed to prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- Chassis Control is primarily intended for use on well-developed freeways or highways. It may not perform satisfactorily in certain roads, weather or driving conditions.
- Using Chassis Control under some conditions of road, corner or severe weather 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 Chassis Control is operating, avoid excessive or sudden steering maneuvers. Otherwise, you could lose control of the vehicle.
- Engine Brake Control is designed to enhance braking feel and traceability at corners.
- Active Ride Control is designed to enhance handling and drive comfort.
- Active Trace Control is designed to enhance traceability at corners and smooth vehicle movement for more confident driving.
- Chassis Control may not function properly under the following conditions:
- 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 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 Chassis Control may or may not operate properly under the following conditions:
- On roads covered with water, dirt or snow, etc.
- On roads where there are sharp curves.

REMOVAL AND INSTALLATION

CHASSIS CONTROL MODULE

Exploded View

INFOID:0000000012421813



1. Steering member
2. Chassis control module
⇦ Front

Removal and Installation

INFOID:0000000012421814

REMOVAL

NOTE:

If the chassis control module is replaced, user registration information is erased, and all setting items for Nissan InTuition related parts are erased.

1. Remove glove box assembly. Refer to IP-24, "Removal and Installation".
2. Disconnect harness connector from chassis control module.
3. Release pawl and remove chassis control module.
   CAUTION:
   Do not drop the chassis control module.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When replacing chassis control module, perform configuration of chassis control module. Refer to DAS-163, "Work Procedure".