

SECTION **DAS** DRIVER ASSISTANCE SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:000000010727876

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precautions for Removing Battery Terminal

INFOID:000000010842480

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

NOTE:

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.

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

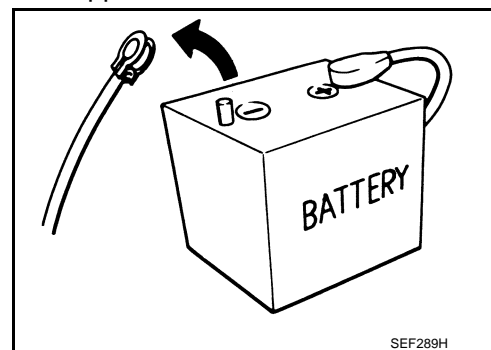
NOTE:

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

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

NOTE:

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



HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.

PRECAUTIONS

[DRIVER ASSISTANCE SYSTEM]

< PRECAUTION >

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

NOTE:

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

6. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

Precaution for LDW System Service

INFOID:0000000010727878

WARNING:

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

CAUTION:

- Do not use the front camera unit that is removed from the vehicle.
- Never disassemble and remodel the front camera unit.
- Never change LDW initial state ON ⇒ OFF without the consent of the customer.

Precaution for BSW System Service

INFOID:0000000010727879

WARNING:

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

CAUTION:

- Never perform the active test while driving.
- Never change BSW initial state ON ⇒ OFF without the consent of the customer.

Precaution for TSR System Service

INFOID:0000000010842483

WARNING:

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

CAUTION:

- Do not use the front camera unit that is removed from the vehicle.
- Never disassemble and remodel the front camera unit.
- Never change TSR initial state ON ⇒ OFF without the consent of the customer.

PRECAUTIONS

< PRECAUTION >

[DRIVER ASSISTANCE SYSTEM]

Precaution for DAA System Service

INFOID:0000000010842482

WARNING:

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

CAUTION:

Never change DAA initial state ON ⇒ OFF without the consent of the customer.

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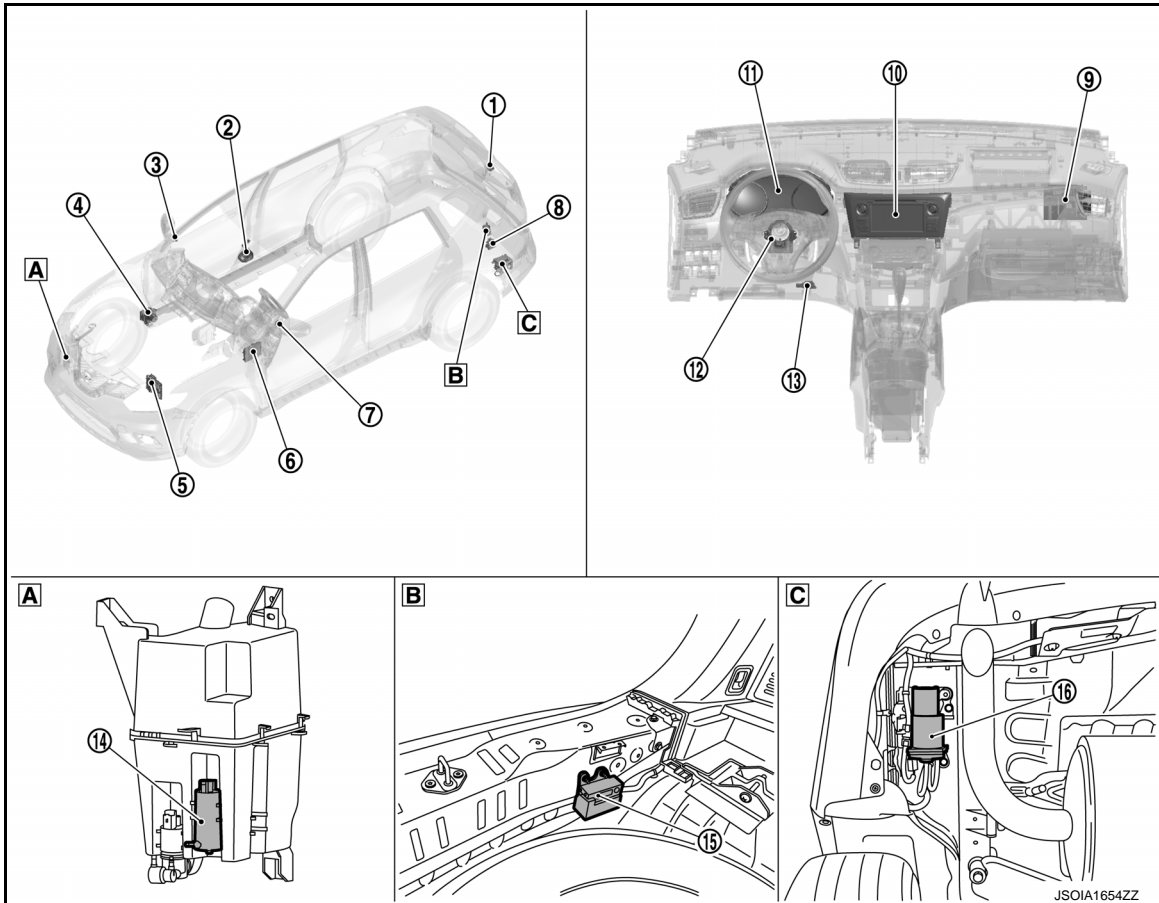
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000010727880

LHD MODELS



A Behind front fender protector (RH)

B Luggage room rear

C Rear under body (LH)

No.	Component	Function
①	Rear camera	<ul style="list-style-type: none"> Refer to DAS-13, "Rear Camera" Refer to AV-64, "Component Parts Location" for detailed installation location
②	Front camera unit	Refer to DAS-15, "Front Camera Unit"
③	BSW indicator RH	Refer to DAS-13, "BSW Indicator LH/RH"
④	ABS actuator and electric unit (control unit)	<ul style="list-style-type: none"> ABS actuator and electric unit (control unit) transmits the vehicle speed signal (ABS) and VDC/TCS/ABS system operation condition to around view monitor control unit via CAN communication Refer to BRC-14, "Component Parts Location" for detailed installation location
⑤	ECM	<ul style="list-style-type: none"> Transmits the accelerator pedal position signal, etc. to around view monitor control unit via CAN communication Refer to following for detailed installation location - R9M: EC-812, "Component Parts Location" - MR20DD: EC-28, "ENGINE CONTROL SYSTEM : Component Parts Location" - QR25DE: EC-440, "Component Parts Location"

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

No.	Component	Function
⑥	BCM	<ul style="list-style-type: none"> Transmits the turn indicator signal and position light request signal to around view monitor via CAN communication Refer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location
⑦	BSW indicator LH	Refer to DAS-13, "BSW Indicator LH/RH"
⑧	Sonar control unit	<ul style="list-style-type: none"> Operates the buzzer using the buzzer output signal from around view monitor control unit* Refer to following for detailed installation location - WITHOUT PARK ASSIST: SN-8, "Component Parts Location" - WITH PARK ASSIST: SN-119, "Component Parts Location"
⑨	Around view monitor control unit	<ul style="list-style-type: none"> Refer to DAS-13, "Around View Monitor Control Unit" Refer to AV-64, "Component Parts Location" for detailed installation location
⑩	NAVI control unit	<ul style="list-style-type: none"> Transmits the speed limit information signal to the front camera unit via CAN communication Refer to AV-64, "Component Parts Location" for detailed installation location
⑪	Combination meter	<ul style="list-style-type: none"> Refer to DAS-13, "Combination Meter" Refer to MWI-7, "METER SYSTEM : Component Parts Location" for detailed installation location
⑫	Steering angle sensor	<ul style="list-style-type: none"> Transmits the steering angle sensor signal to around view monitor control unit via CAN communication Refer to BRC-14, "Component Parts Location" for detailed installation location
⑬	Buzzer	<ul style="list-style-type: none"> The warning buzzer sounds with the signal from the sonar control unit* Refer to following for detailed installation location - WITHOUT PARK ASSIST: SN-8, "Component Parts Location" - WITH PARK ASSIST: SN-119, "Component Parts Location"
⑭	Rear camera washer pump	Refer to DAS-15, "Rear Camera Washer Pump"
⑮	Pump control unit	Refer to DAS-14, "Pump Control Unit"
⑯	Air pump	Refer to DAS-15, "Air Pump"

*: For vehicles without sonar system, meter buzzer is used.

RHD MODELS

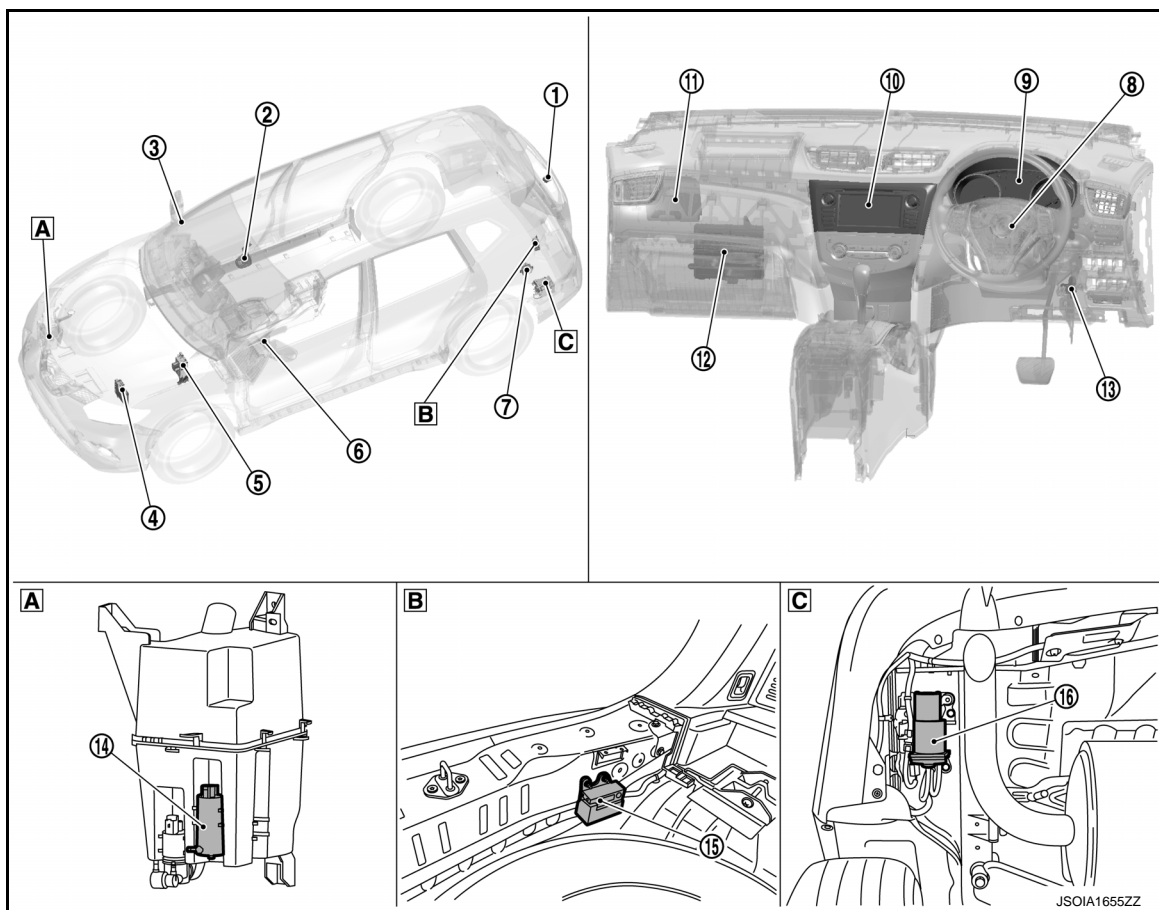
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DAS

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]



A Behind front fender protector (RH)

B Luggage room rear

C Rear under body (LH)

No.	Component	Function
①	Rear camera	<ul style="list-style-type: none"> Refer to DAS-13, "Rear Camera" Refer to AV-64, "Component Parts Location" for detailed installation location
②	Front camera unit	Refer to DAS-15, "Front Camera Unit"
③	BSW indicator RH	Refer to DAS-13, "BSW Indicator LH/RH"
④	ECM	<ul style="list-style-type: none"> Transmits the accelerator pedal position signal, etc. to around view monitor control unit via CAN communication Refer to EC-812, "Component Parts Location" for detailed installation location
⑤	ABS actuator and electric unit (control unit)	<ul style="list-style-type: none"> ABS actuator and electric unit (control unit) transmits the vehicle speed signal (ABS) and VDC/TCS/ABS system operation condition to around view monitor control unit via CAN communication Refer to BRC-14, "Component Parts Location" for detailed installation location
⑥	BSW indicator LH	Refer to DAS-13, "BSW Indicator LH/RH"
⑦	Sonar control unit	<ul style="list-style-type: none"> Operates the buzzer using the buzzer output signal from around view monitor control unit* Refer to following for detailed installation location - WITHOUT PARK ASSIST: SN-8, "Component Parts Location" - WITH PARK ASSIST: SN-119, "Component Parts Location"
⑧	Steering angle sensor	<ul style="list-style-type: none"> Transmits the steering angle sensor signal to around view monitor control unit via CAN communication Refer to BRC-14, "Component Parts Location" for detailed installation location
⑨	Combination meter	<ul style="list-style-type: none"> Refer to DAS-13, "Combination Meter" Refer to MWI-7, "METER SYSTEM : Component Parts Location" for detailed installation location

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

No.	Component	Function
⑩	NAVI control unit	<ul style="list-style-type: none"> Transmits the speed limit information signal to the front camera unit via CAN communication Refer to AV-64, "Component Parts Location" for detailed installation location
⑪	Around view monitor control unit	<ul style="list-style-type: none"> Refer to DAS-13, "Around View Monitor Control Unit" Refer to AV-64, "Component Parts Location" for detailed installation location
⑫	BCM	<ul style="list-style-type: none"> Transmits the turn indicator signal and position light request signal to around view monitor via CAN communication Refer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location
⑬	Buzzer	<ul style="list-style-type: none"> The warning buzzer sounds with the signal from the sonar control unit* Refer to following for detailed installation location - WITHOUT PARK ASSIST: SN-8, "Component Parts Location" - WITH PARK ASSIST: SN-119, "Component Parts Location"
⑭	Rear camera washer pump	Refer to DAS-15, "Rear Camera Washer Pump"
⑮	Pump control unit	Refer to DAS-14, "Pump Control Unit"
⑯	Air pump	Refer to DAS-15, "Air Pump"

*: For vehicles without sonar system, meter buzzer is used.

Combination Meter

INFOID:0000000010727881

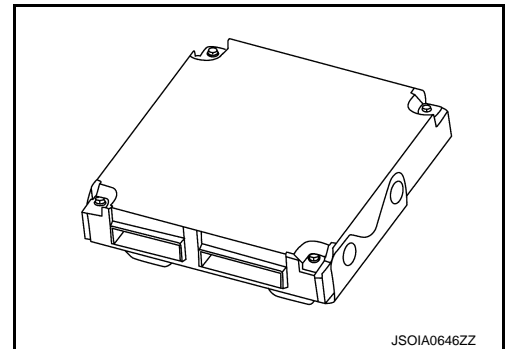
- Receives meter display signal and buzzer output signal* from around view monitor control unit via CAN communication.
- Displays the each system operation status according to meter display signal received from the around view monitor control unit.
- Operates the buzzer according to the signal from the around view monitor control unit.*
- Transmits the ambient temperature signal to around view monitor via CAN communication.

*: For vehicles with sonar system, sonar buzzer is used.

Around View Monitor Control Unit

INFOID:0000000010727882

- The around view monitor control unit is installed behind the glove box.
- The around view monitor control unit controls following systems according to the signals via CAN communication from each control unit.
 - BSW
 - DAA



BSW Indicator LH/RH

INFOID:0000000010727883

- BSW indicator is installed in the door mirror corner cover.
- Receives a BSW indicator operation signal from the around view monitor control unit and blinks or turns ON/OFF the BSW indicator.

Rear Camera

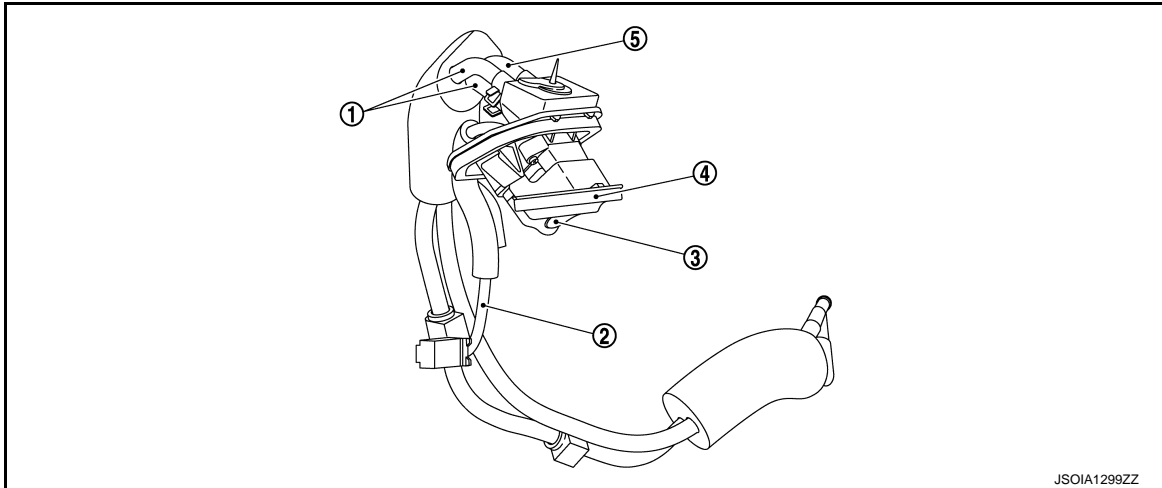
INFOID:0000000010727884

- The rear view camera is installed to the back door finisher.
- With the mirror processing function, a mirror image is sent as if it is viewed by a rear view mirror.
- Power for the camera is supplied from the around view monitor control unit, and the image at the rear of the vehicle is sent to the around view monitor control unit.
- The rear camera is equipped with a washer nozzle and air nozzle for cleaning camera. A check valve is installed to the tube connected to the washer nozzle.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]



- | | | |
|---------------------|---------------|---------------|
| ① Air tube | ② Harness | ③ Rear camera |
| ④ Washer/Air nozzle | ⑤ Washer tube | |

Camera Specification

Image pickup element	1/4-inch CMOS* image sensor
Effective number of pixels	Approx. 300,000 pixels (632 × 480)
Minimum brightness	1 lx
Angle of view	H: Approx. 190° V: Approx. 144°
Image	With mirror processing function

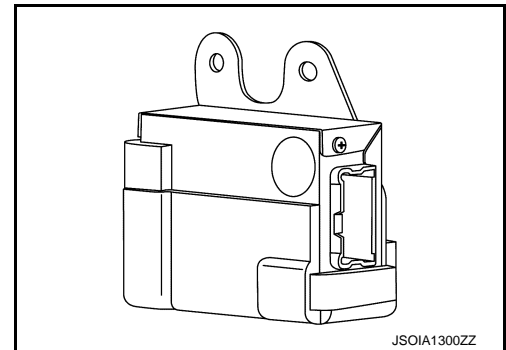
NOTE:

*: "CMOS" is abbreviation of Complementary Metal Oxide Semiconductor, and features low power consumption and high speed reading rate of electric charge.

Pump Control Unit

INFOID:0000000010727885

- Pump control unit is installed under the luggage rear plate.

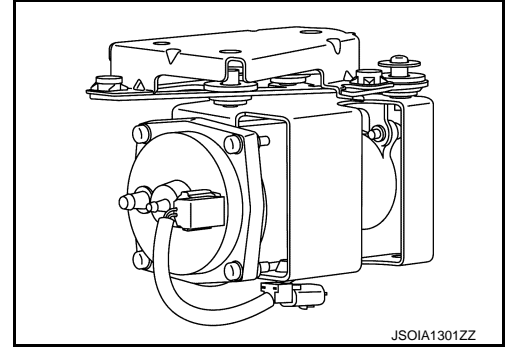


- Communicates with around view monitor control unit via communication line.
- Activates air pump and washer pump according to the signal from around view monitor control unit.

Air Pump

INFOID:0000000010727886

- Rear view camera air pump motor is installed to the rear left under-body.

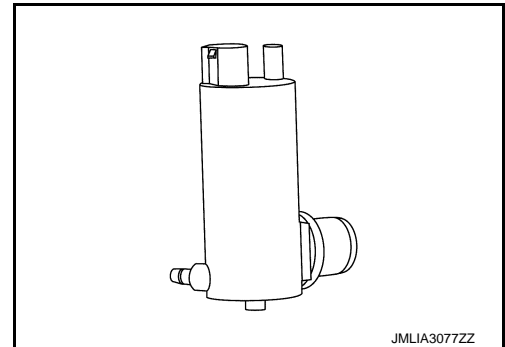


- Air pump is activated and generates compressed air when power is supplied from the pump control unit.
- Compressed air jets out from the air nozzle of rear view camera via air tube.

Rear Camera Washer Pump

INFOID:0000000010727887

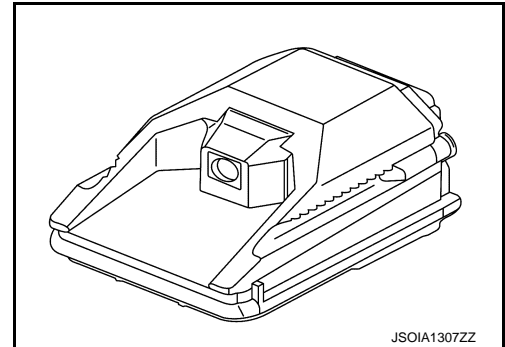
Washer fluid is sprayed according to washer switch states.



Front Camera Unit

INFOID:0000000010842520

- The front camera unit is installed to the windshield and detects information ahead of the vehicle.
- Based on the detected information and CAN communication signals received from each control unit, the front camera unit controls the systems listed below:
 - LDW
 - TSR



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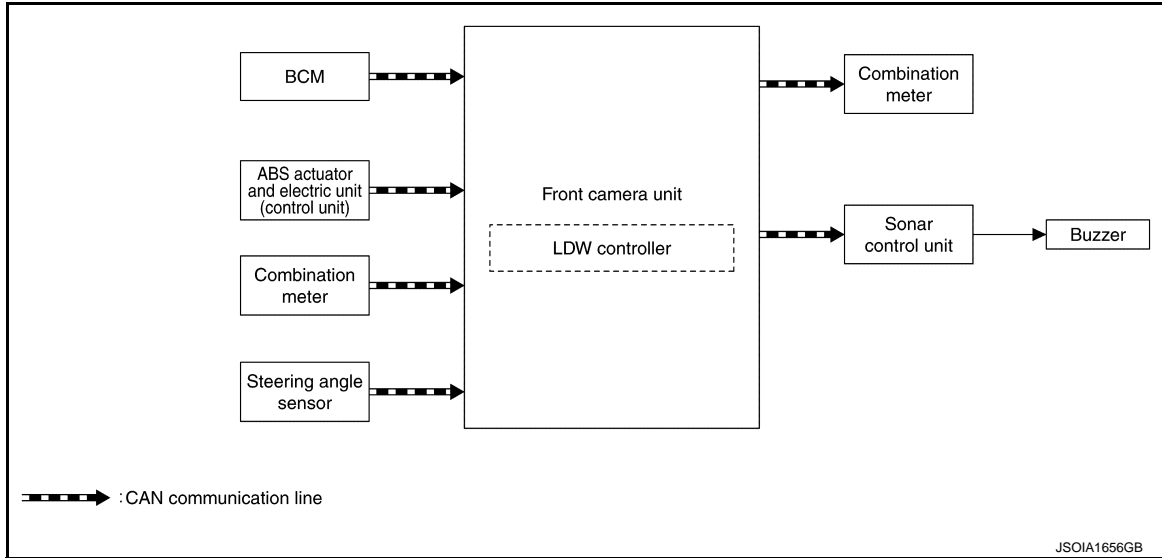
SYSTEM

LDW

LDW : System Description

INFOID:0000000010727888

SYSTEM DIAGRAM



FRONT CAMERA UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Combination meter	CAN communication	System selection signal	Receives a selection state of LDW in "Driver Aids" selected with the information display
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
Steering angle sensor	CAN communication	Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel

Output Signal Item

Reception unit	Signal name		Description
Combination meter	CAN communication	Meter display signal	Transmits a signal to display a state of the system on the information display
		LDW system display signal	
Sonar control unit*2	CAN communication	Buzzer output signal*1	Transmits a buzzer output signal to activates the warning buzzer
		Buzzer drive signal	Transmits a buzzer drive signal to activate buzzer

*1: Without sonar system

*2: With sonar system

FUNCTION DESCRIPTION

- The Lane Departure Warning (LDW) system provides a lane departure warning function when the vehicle is driven at speeds of approximately 60 km/h (37 MPH) or more.

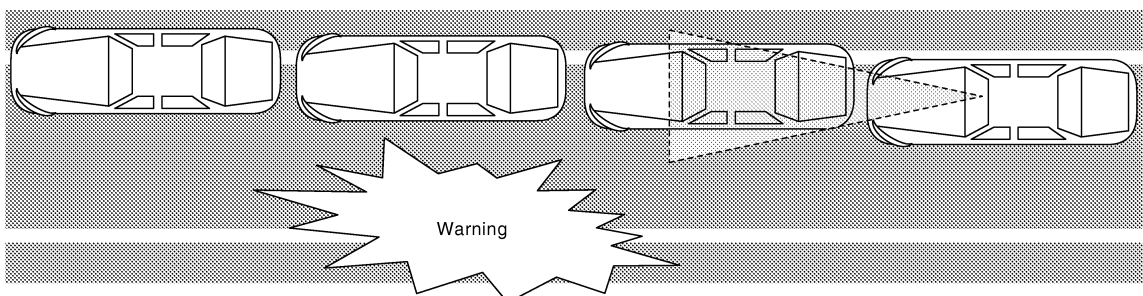
SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- When the vehicle approaches either the left or the right side of the traveling lane, a warning will alert the driver (the buzzer and the display on the combination meter).
- The warning does not occur during turn signal operation (Lane change side).
- The warning function will stop when the vehicle returns inside of the lane markers.

EXAMPLE



JPOIA0014GB

When the vehicle approaches the right lane marker, the driver is alerted by the buzzer and the display on the combination meter.

NOTE:

For details of LDW system indication on the combination meter, refer to [DAS-30. "LDW : Menu Displayed by Pressing Each Switch"](#).

OPERATION DESCRIPTION

- LDW system is controlled by the front camera unit.
- When the system is turned ON, the front camera unit transmits LDW system display signal to combination meter via CAN communication.
- The front camera unit monitors lane markers of the traveling lane.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, the front camera unit controls the following item to alert the driver.
 - Activates warning buzzer in the sonar control unit (With sonar system) or combination meter (Without sonar system).
 - The front camera unit transmits a LDW system display signal to combination meter via CAN communication and blinks the LDW system indicator ("icon").

Operating Condition

- LDW system indicator (white): ON ("lane")
When the LDW system setting on the combination meter is ON
- Vehicle speed: approximately 60 km/h (37 MPH) or more
- Turn indicator signal: After 2 seconds or more from turned OFF

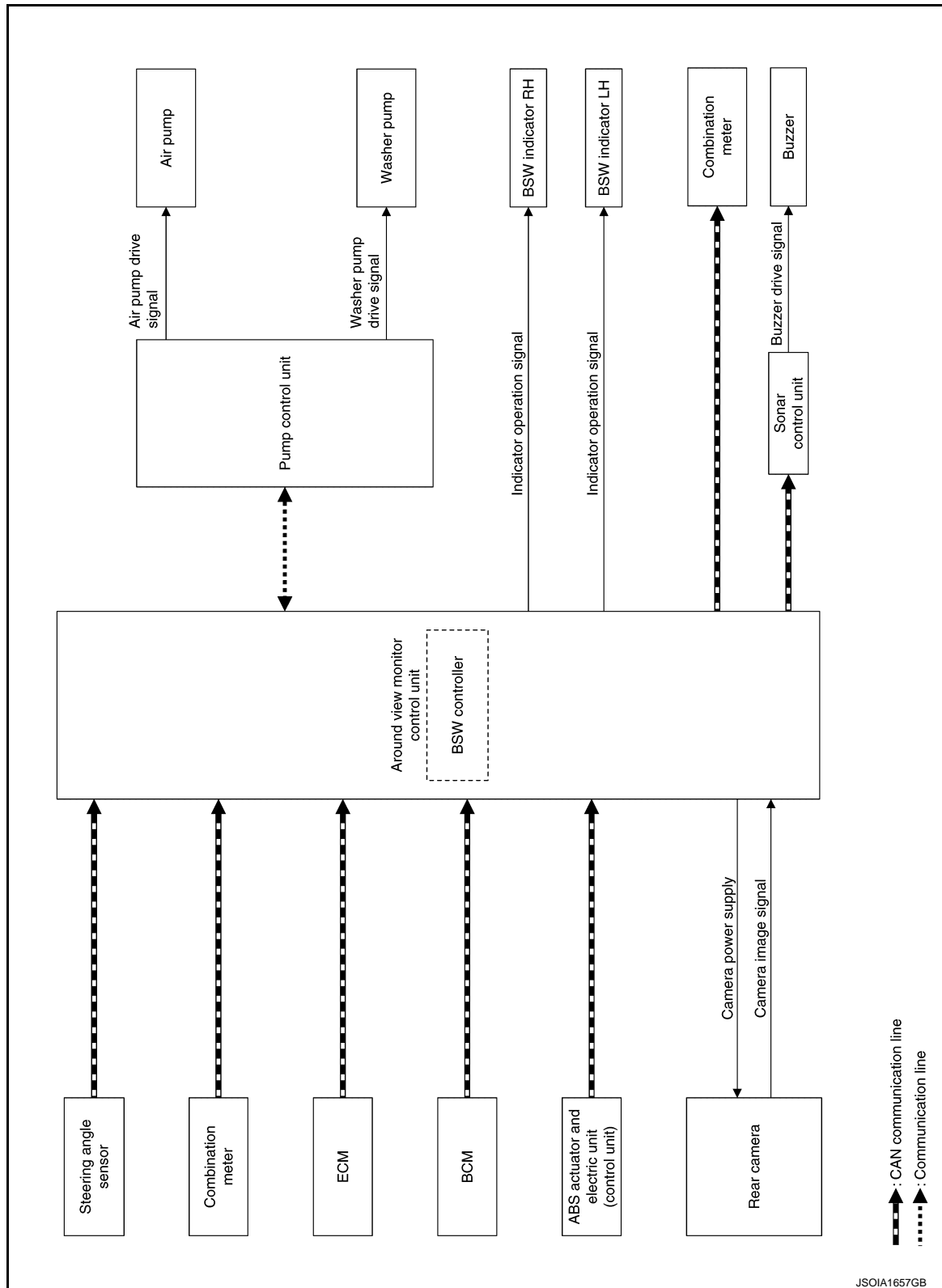
NOTE:

- LDW system ON/OFF can be set on the combination meter
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 55 km/h (34 MPH)
- LDW system may not function properly, depending on the situation. Refer to [DAS-40. "Precautions for Lane Departure Warning"](#).

BSW

DAS

SYSTEM DIAGRAM



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AROUND VIEW MONITOR CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Around view monitor control unit receives signals via CAN communication. It also detects vehicle conditions that are necessary for BSW control.

Input Signal Item

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Transmit unit	Signal name		Description
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
		Position light request signal	Receives an operational state of tail lamp
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in "Driver Aids" selected with the combination meter
		Ambient sensor signal	Receives the ambient temperature
Steering angle sensor	CAN communication	Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
ECM	CAN communication	Engine status signal	Receives the engine status
		Engine coolant temperature signal	Receives the engine coolant temperature

Output Signal Item

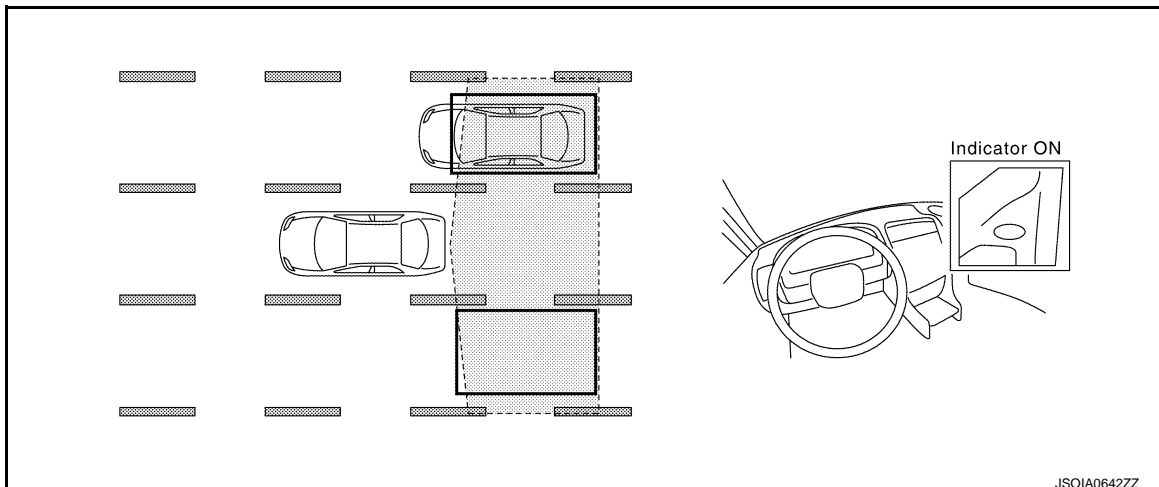
Reception unit	Signal name		Description
Combination meter	CAN communication	Meter display signal	Transmits a meter display signal to turn ON the Blind Spot Warning system display
		BSW system display signal	
Pump control unit	Communication line	Buzzer output signal*1	Transmits a buzzer output signal to activates the warning buzzer
		Rear camera washer signal	Transmits a rear camera washer signal to activates the washer pump
Sonar control unit*2	Communication line	Rear camera air blow signal	Transmits a rear camera air blow signal to activates the air pump
		Buzzer drive signal	Transmits a buzzer drive signal to activate buzzer

*1: Without sonar system

*2: With sonar system

FUNCTION DESCRIPTION

- The BSW system can help alert the driver of other vehicles in adjacent lanes when changing lanes.
- The BSW system uses rear camera installed the back door finisher to detect vehicles in an adjacent lane.
- The rear camera can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- This detection zone starts from the outside mirror of vehicle and extends approximately 10 ft (3.0 m) behind the rear bumper, and approximately 10 ft (3.0 m) sideways.
- The BSW system operates above approximately 32 km/h (20 MPH).
- If the rear camera detects vehicles in the detection zone, the BSW indicator illuminates.



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SYSTEM

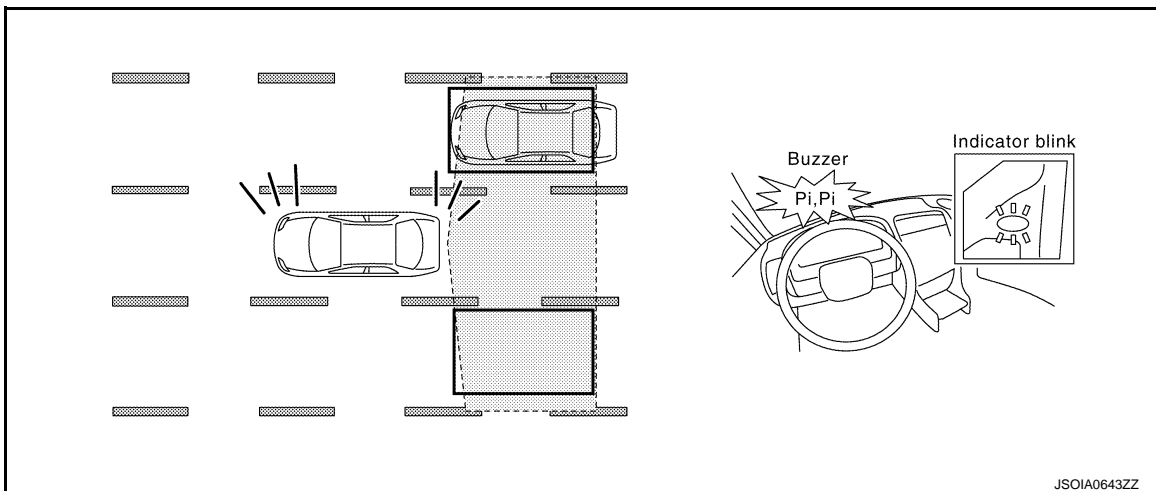
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

NOTE:

A buzzer sounds if the rear camera have already detected vehicles when the driver activates the turn signal. If a vehicle comes into the detection zone after the driver activates the turn signal, then only the BSW indicator blinks and no buzzer sounds.



OPERATION DESCRIPTION

- Around view monitor control unit enables BSW system.
- The around view monitor control unit turns on the BSW system when the turned ON by combination meter.
- Rear camera transmits the camera image signal to around view monitor control unit.
- Around view monitor control unit starts the control as follows, based on a camera image signal, turn indicator signal and position light request signal transmitted from BCM via CAN communication:
 - Buzzer drive signal transmission to sonar control unit via CAN communication. (With sonar system)
 - Buzzer output signal transmission to combination meter via CAN communication. (Without sonar system)
- Around view monitor control unit transmits an indicator operation signal to the BSW indicator.

Operation Condition

- BSW system indicator (white): ON (Speaker icon ON in "Blind spot" position)
- When the vehicle drives at 32 km/h (20 MPH) or more to the forward direction.

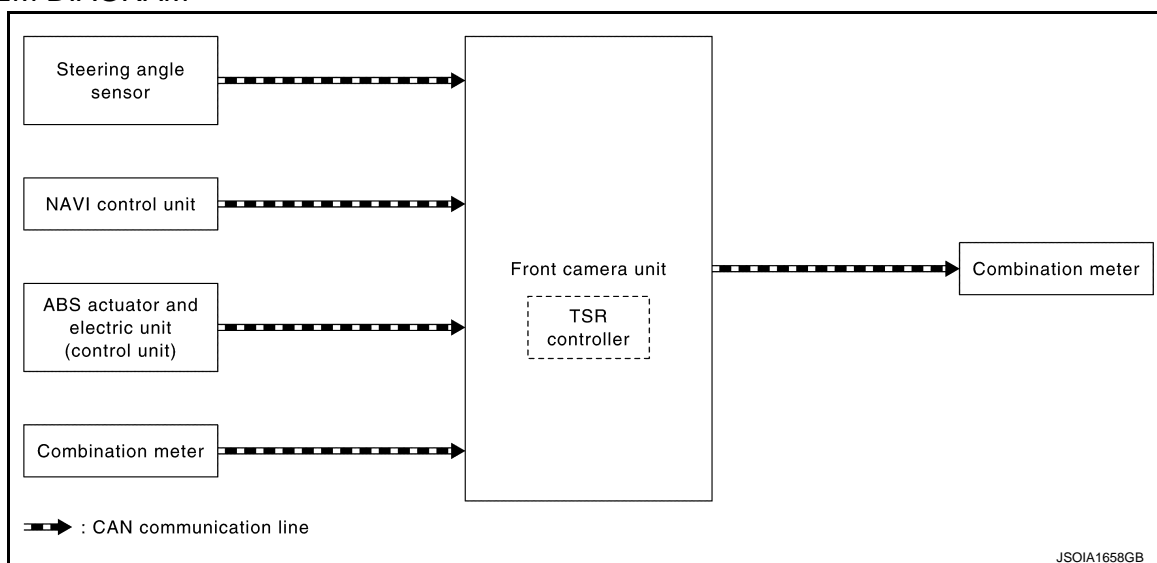
NOTE:

BSW system ON/OFF can be set on the combination meter

- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 29 km/h (18 MPH)
- The BSW system may not function properly, depending on the situation. Refer to [DAS-40. "Precautions for Blind Spot Warning"](#).

TSR

SYSTEM DIAGRAM



FRONT CAMERA UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives the wheel speed of the four wheels
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in "Driver Aids" selected with the combination meter
NAVI control unit*	CAN communication	Speed limit information signal	Receives the speed limit information data in the NAVI control unit
Steering angle sensor	CAN communication	Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel

*: With navigation system

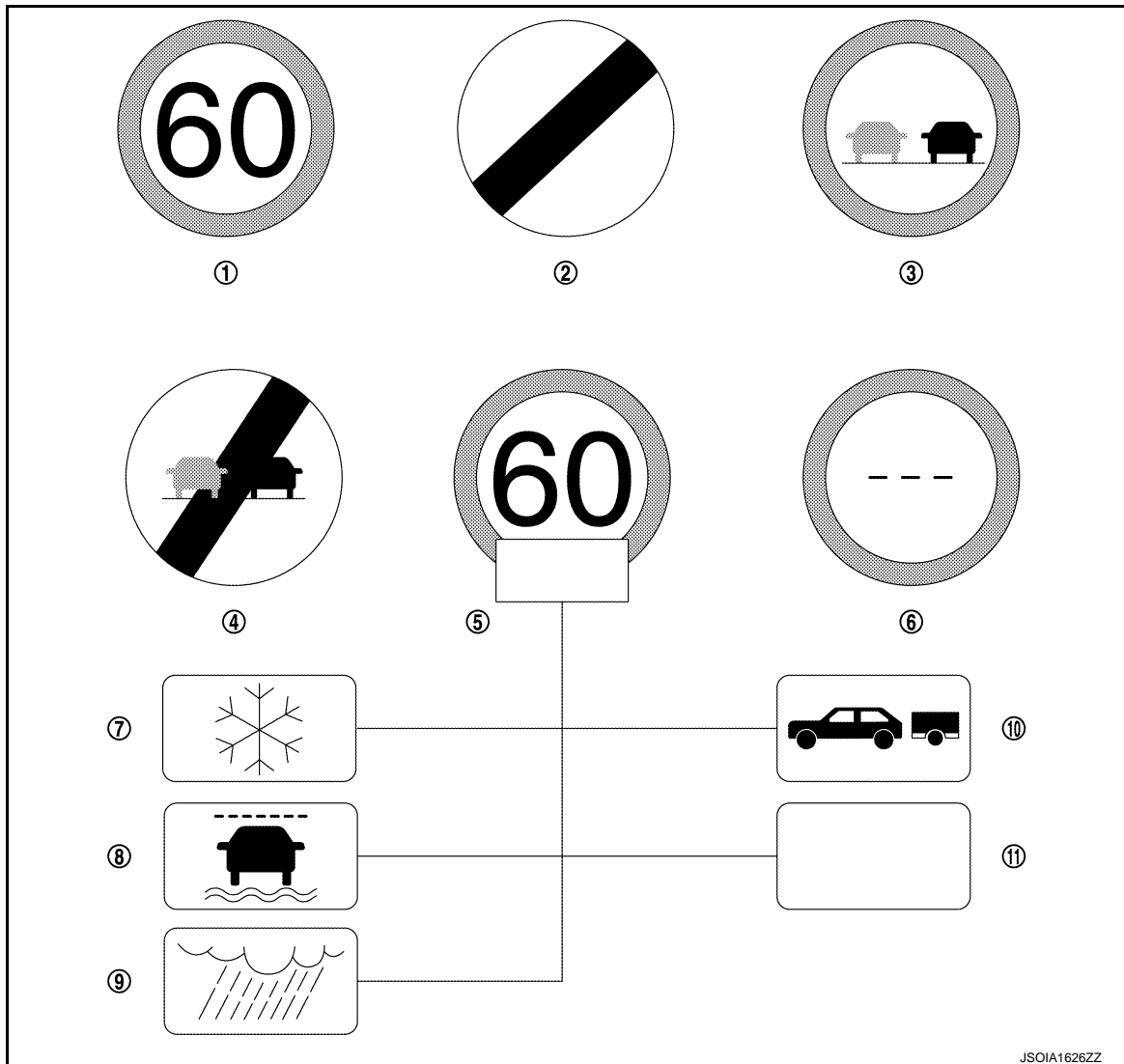
Output Signal Item

Reception unit	Signal name			Description
Combination meter	CAN communication	Meter display signal	<ul style="list-style-type: none"> • Speed limit sign signal • Do not pass sign 	Transmits a signal and displays the status on the vehicle information display

FUNCTION DESCRIPTION

Displays the road conditions as identified by the front camera unit on the information display, and alerts the driver. Identifies the road sign information.

The front camera unit detects road signs as described below and displays them on the information display.



① Latest detected speed limit

② National speed limit

③ No-overtaking zone

④ End of no-overtaking zone

⑤ Conditional speed limit

⑥ No road sign information*¹

⑦ Snow

⑧ Slip (rain 1)

⑨ Rain (rain 2)

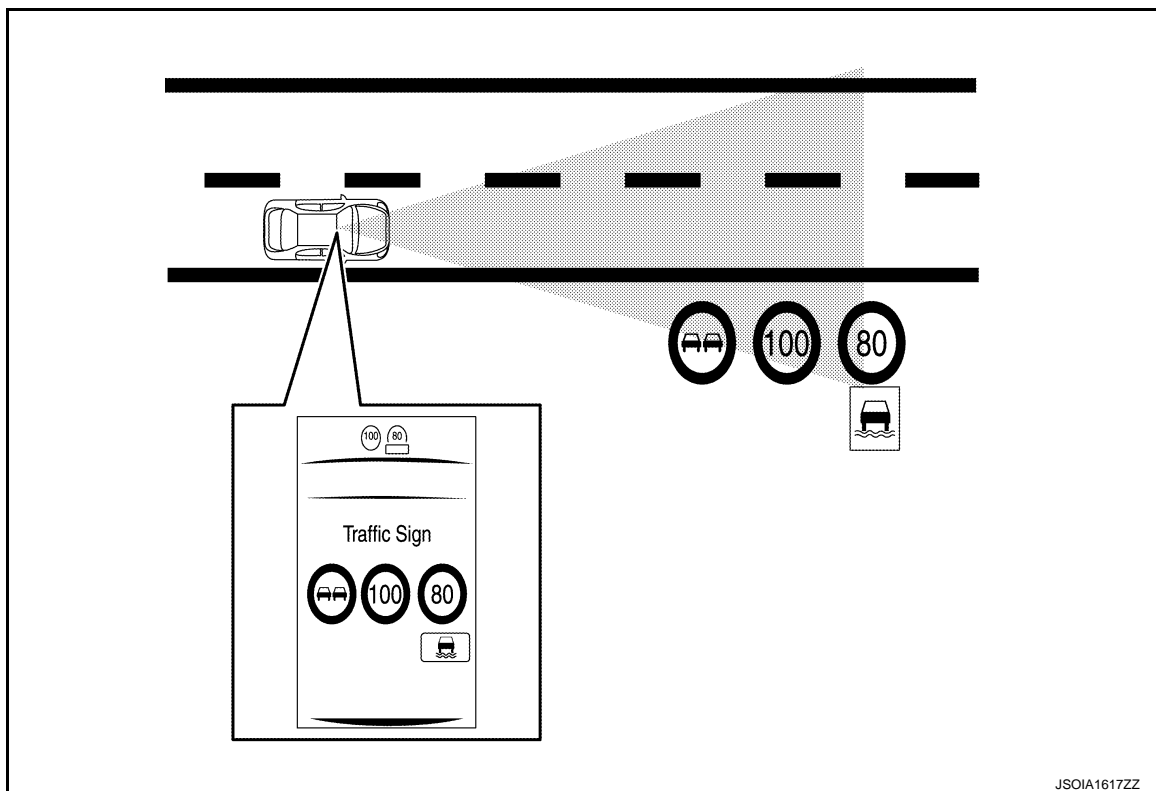
⑩ Towing

⑪ Generic*²

*1: Displayed when TSR is ON and road signs are not recognized.

*2: Displayed when a supplemental sign other than those from ⑦ to ⑩ is detected.

EXAMPLE



JSOIA1617ZZ

OPERATION DESCRIPTION

- The TSR system is controlled by the front camera unit.
- The front camera unit turns on the TSR system when the turned ON by combination meter.
- The front camera unit detects the road sign.
- The front camera unit transmits the meter display signal to the combination meter, when detecting the road sign.
- The front camera unit receives the speed limit information data from the NAVI control unit. (With navigation system)
- The front camera unit detects speed limit signs, recognizes speed limit signs by combining the detected speed limit signs with speed limit information data received from the NAVI control unit, and transmits a meter display signal to the combination meter. (With navigation system)
- The front camera unit adjusts the detection range of road signs according to a steering angle sensor signal received from the steering angle sensor.

Operation Condition

- TSR: ON

NOTE:

- TSR system ON/OFF can be set on the combination meter
- The TSR system may not function properly, depending on the situation. Refer to [DAS-41, "Precautions for Traffic Sign Recognition"](#).

DAA

SYSTEM

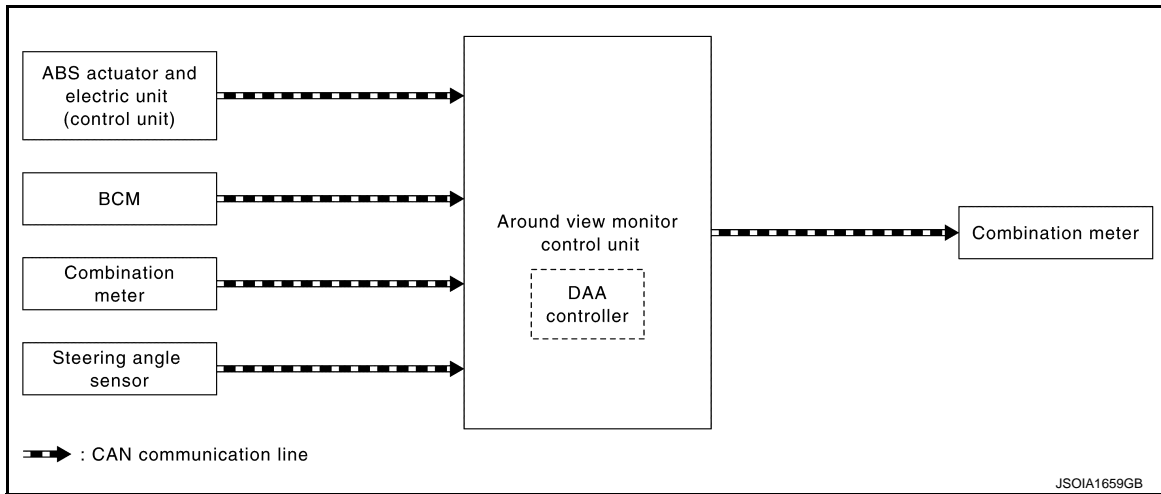
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DAA : System Description

INFOID:000000010795656

SYSTEM DIAGRAM



AROUND VIEW MONITOR CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives the wheel speed of the four wheels
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in "Driver Assistance" selected with the combination meter
Steering angle sensor	CAN communication	Steering angle sensor signal	Receives the amount of rotation, rotational angle, and rotational direction of the steering wheel

Output Signal Item

Reception unit	Signal name		Description
Combination meter	CAN communication	Meter display signal	<ul style="list-style-type: none"> Speed limit sign signal Do not pass sign Transmits a signal and displays the status on the vehicle information display
		Buzzer output signal	Operates the buzzer

FUNCTION DESCRIPTION

- Operates when the vehicle speed is 60 km/h or higher.
- Detects the steering status and judges the attentiveness of the driver. The driver's attentiveness is shown on the vehicle information display in eight stages (level indicator).
- When it is judged from the degree of minor swerving in the steering operation that the vehicle is drifting, the driver is prompted to exert caution by the drift warning, which displays on the combination meter, and by a buzzer sound.
- When the engine is stopped, the system is reset.
- When the level indicator on the drift warning display becomes 1, the system warns the driver with a buzzer sound.

OPERATION DESCRIPTION

- The DAA (Driver Attention Alert) is controlled by the around view monitor control unit.
- ON/OFF of the DAA is performed by using the combination meter.
- The steering angle sensor detects the degree of swerving in the steering operation.
- When the around view monitor control unit judges that the steering operation is drifting (when the level indicator in the drift warning display becomes 1), the following control is performed and the driver is warned.
- Transmits the buzzer output signal to the combination meter and sounds the buzzer.

< SYSTEM DESCRIPTION >

Operation Condition

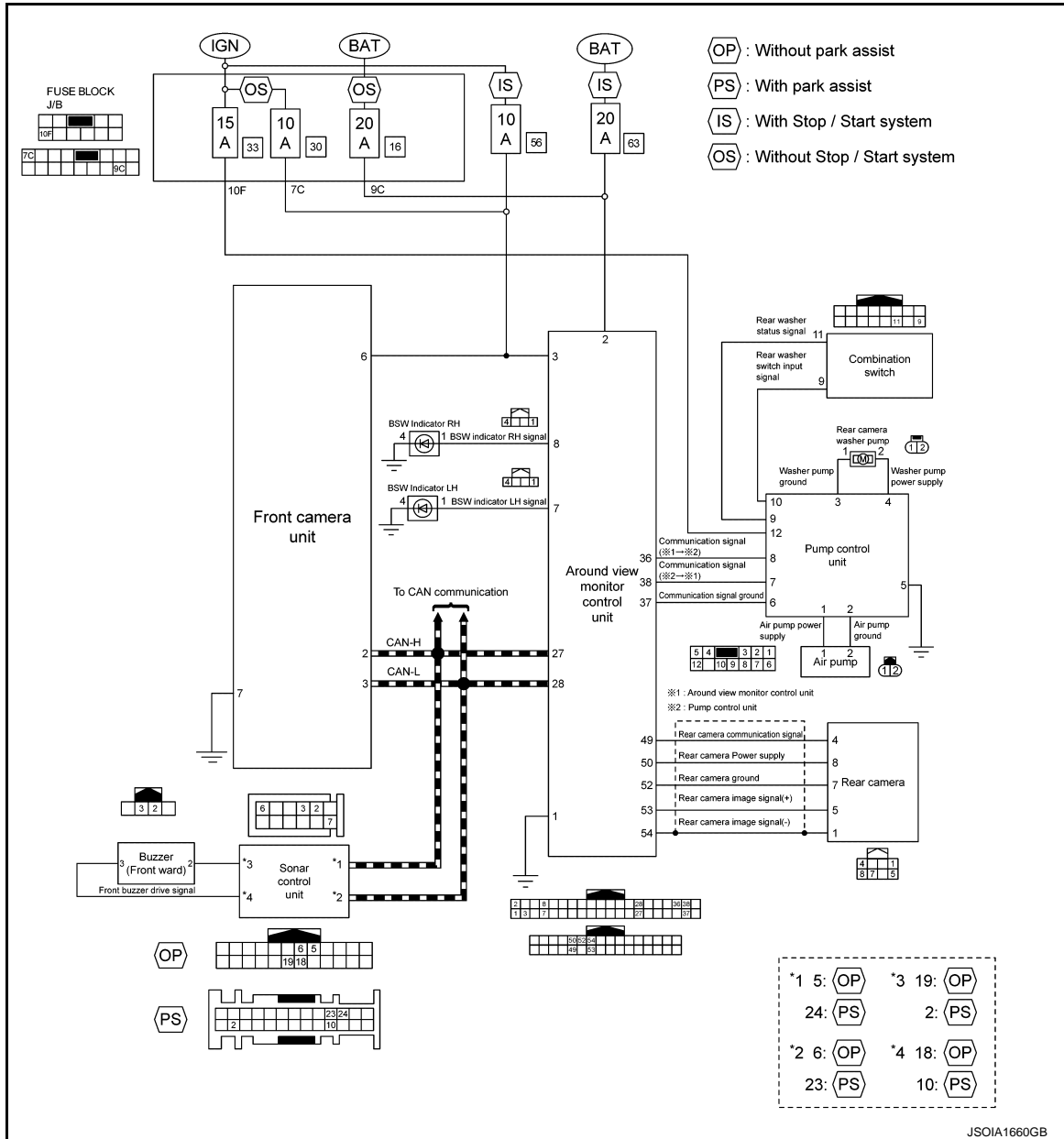
- DAA: ON
- Vehicle speed approximately 60 km/h or more

NOTE:

- DAA system ON/OFF can be set on the combination meter.
- When the engine is stopped, the system is reset.
- The DAA system may not function properly, depending on the situation. Refer to [DAS-41, "Precautions for Drive Attention Alert"](#).

Circuit Diagram

INFOID:000000010727890



Fail-safe (Front Camera Unit)

INFOID:0000000010924936

FAIL-SAFE CONTROL BY DTC

LDW (Lane Departure Warning)

If a malfunction occurs in front camera unit, front camera unit cancels control, and turns ON the LDW malfunction in information display.

TSR (Traffic Sign Recognition)

If a malfunction occurs in front camera unit, front camera unit cancels control, and turns ON the TSR malfunction in information display.

FRONT CAMERA UNIT TEMPORARY OPERATION CANCELLATION

- Temporary disabled status at high temperature
- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the system malfunction in information display.
- When interior temperature is reduced, the system will resume operation automatically.
- When vehicle front identification is difficult
- When vehicle front identification is difficult due to soiling of windshield glass and strong light shining from the front, operation may be canceled temporarily. At this time, a warning is displayed on the vehicle information display in the combination meter.
- Normal operation recovers when conditions improve.

Fail-Safe (Around View Monitor Control Unit)

INFOID:000000010924927

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A00 CONTROL UNIT	Around view monitor control unit internal malfunction	Around view monitor with Park Assist is cancel
C1A01 POWER SUPPLY CIRC	<ul style="list-style-type: none"> • The battery voltage sent to around view monitor control unit remains less than 7.9 V for 5 seconds • The battery voltage sent to around view monitor control unit remains more than 19.3 V for 5 seconds 	Around view monitor with Park Assist is cancel
C1A03 VHCL SPEED SE CIRC	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) received by the around view monitor control unit via CAN communication, are inconsistent	<ul style="list-style-type: none"> • BSW system is cancel • DAA system is stopped. • MOD (Moving Object Detection) function is cancel • Around view monitor with Park Assist is cancel
C1A04 ABS/TCS/VDC CIRC	If a malfunction occurs in the VDC/TCS/ABS system	<ul style="list-style-type: none"> • BSW system is cancel • DAA system is stopped. • MOD (Moving Object Detection) function is cancel • Around view monitor with Park Assist is cancel
C1A07 CVT CIRCUIT	If the CVT is malfunction	Around view monitor with Park Assist is cancel
C1A39 STRG SEN CIR	If the steering angle sensor is malfunction	<ul style="list-style-type: none"> • BSW system is cancel • DAA system is stopped. • MOD (Moving Object Detection) function is cancel
C1A56 SONAR CIRC	The around view monitor control unit detects that sonar control unit has a malfunction	Around view monitor with Park Assist is cancel
U0122 VDC P-RUN DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> • BSW system is cancel • DAA system is stopped. • MOD (Moving Object Detection) function is cancel • Around view monitor with Park Assist is cancel
U0416 VDC CHECKSUM DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> • BSW system is cancel • DAA system is stopped. • MOD (Moving Object Detection) function is cancel • Around view monitor with Park Assist is cancel

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U0428 ST ANGLE SENSOR CALIBRATION	Neutral position adjustment of steering angle sensor is not complete.	<ul style="list-style-type: none"> • Predicted course line is not displayed. • MOD (Moving Object Detection) function is stopped. • BSW system is stopped. • DAA system is stopped. • Around view monitor with Park Assist is stopped
U1000 CAN COMM CIRCUIT	When around view monitor control unit cannot transmit/receive CAN communication signal continuously for 2 seconds or more.	<p>The following functions are stopped</p> <ul style="list-style-type: none"> • When communication of steering angle sensor signal is not normal <ul style="list-style-type: none"> - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - BSW system is stopped. - DAA system is stopped. • When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal <ul style="list-style-type: none"> - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - LDW system is stopped. - BSW system is stopped. - DAA system is stopped. - Around view monitor with Park Assist is stopped
U1010 CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	MOD (Moving Object Detection) function is stopped.
U111A REAR CAMERA IMAGE SIGNAL	<p>No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	<ul style="list-style-type: none"> • Camera image is not displayed (Gray screen display). • MOD (Moving Object Detection) function is stopped.
U111B SIDE CAMERA RH IMAGE SIGNAL	<p>No-signal status of side camera RH image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	Camera image is not displayed (Gray screen display).
U111C FRONT CAMERA IMAGE SIGNAL	<p>No-signal status of front camera image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	Camera image is not displayed (Gray screen display).
U111D SIDE CAMERA LH IMAGE SIGNAL	<p>No-signal status of side camera LH image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	Camera image is not displayed (Gray screen display).
U112F EPS CIRCUIT	If the EPS system is malfunction	Around view monitor with Park Assist is cancel

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[DRIVER ASSISTANCE SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U1232 ST ANGLE SEN CALIB	Neutral position adjustment of steering angle sensor is performed. NG signal from steering angle sensor is received.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped.
U1302 CAMERA POWER VOLT	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. <ul style="list-style-type: none"> When camera power supply output is ON: 5.9 - 6.5 V When OFF: 0 V by camera power supply measurement. 	Camera power output is stopped
U1304 CAMERA IMAGE CALIB	<ul style="list-style-type: none"> When camera calibration is incomplete. When camera information in around view monitor control unit and information read from camera are not the same. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> Unmatched icon  display (red) is displayed (applicable for unmatched camera only). Around view monitor with Park Assist is cancel.
U1305 CONFIG UNFINISH	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> On applicable camera screen  marking (Red) is displayed. Around view monitor with Park Assist is cancel.
U1308 R-CAMERA (R&L) CALIB JDG-MNT	Camera image calibration is incomplete	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped. Around view monitor with Park Assist is stopped.
U1309 PUMP INPUT CURRENT JUDGE	Around view monitor control unit detects the value of current from pump control unit is incorrect	BSW system is stopped.
U130A PUMP ECU JUDGE	If the pump control unit is malfunction	BSW system is stopped.
U130B RR CAMERA COMM ERROR	Around view monitor control unit receives the incorrect communication signal from rear view camera	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped.
U1320 REPROGRAMMING	Reprogramming of around view monitor control unit is incomplete	Around view monitor with Park Assist is cancel
U150E BCM CIRCUIT	If the BCM is malfunction	Around view monitor with Park Assist is cancel
U1971 SONAR MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from sonar control unit via CAN communication	Around view monitor with Park Assist is cancel
U1972 EPS MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from EPS control unit via CAN communication	Around view monitor with Park Assist is cancel
Other	When around view monitor control unit is not normal.	Switch to camera screen is not allowed.

INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER) : Warning/Indicator (On Informa-

Name	Design	Function
<div><div></div><div><ul style="list-style-type: none">• LDW• BSW</div></div>	<div><div><div><div><div></div><div></div></div><div></div><div></div></div><div>Driving Aids</div><div><div><div></div><div></div></div><div>Enter = Settings</div></div><div>JSOIA1586ZZ</div></div></div>	<div><ul style="list-style-type: none">• LDW: DAS-30, "LDW : Menu Displayed by Pressing Each Switch"• BSW: DAS-33, "BSW : Menu Displayed by Pressing Each Switch"</div>
<div><div></div><div>TSR</div></div>	<div><div><div><div><div></div><div></div></div><div></div><div></div></div><div>Traffic Sign</div><div><div><div></div><div></div></div><div>100</div><div>80</div></div><div></div><div></div></div><div>JSOIA1588ZZ</div></div>	<div>DAS-36, "TSR : Menu Displayed by Pressing Each Switch"</div>
<div><div></div><div>DAA</div></div>	<div><div><div><div><div></div><div></div></div><div></div><div></div></div><div>Driver Attention</div><div><div><div></div><div></div></div><div></div><div></div></div><div>JSOIA1587ZZ</div></div></div>	<div>DAS-38, "DAA : Menu Displayed by Pressing Each Switch"</div>

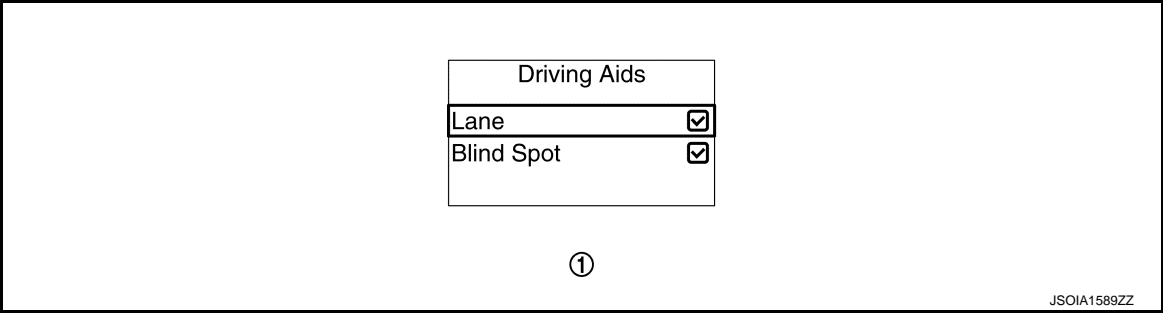
OPERATION

LDW

LDW : Switch Name and Function

INFOID:0000000010727895

LDW

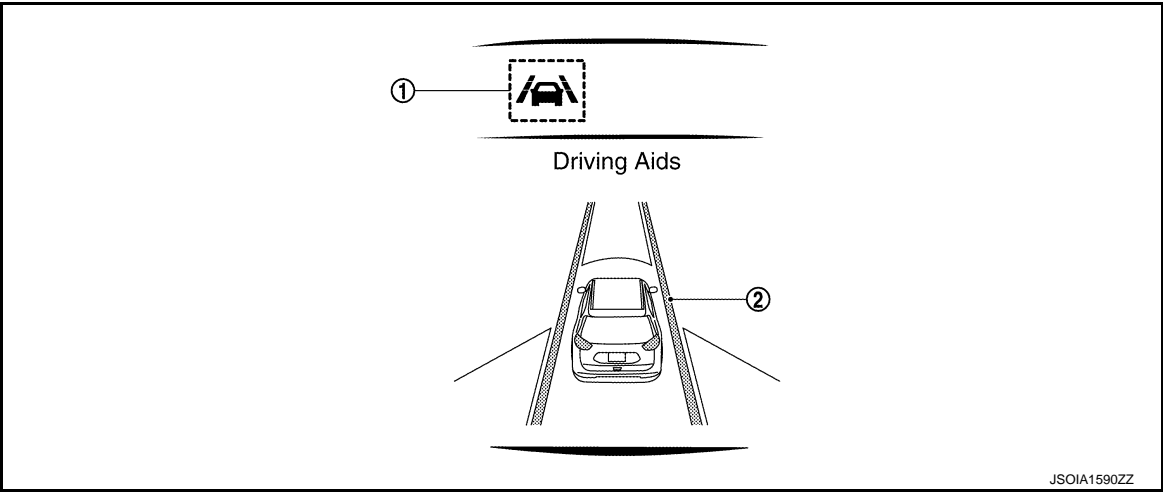


No.	Switch name	Description
①	LDW system setting screen (Combination meter settings screen)	The setting of LDW system can be switched between ON and OFF

LDW : Menu Displayed by Pressing Each Switch

INFOID:0000000010727896

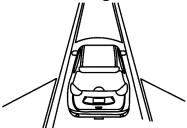

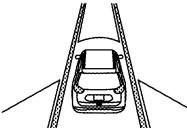

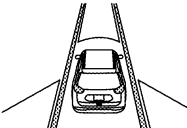



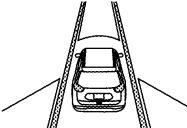
SYSTEM DISPLAY



No.	Display item	Description
①	Warning systems indicator (LDW)	Indicates that LDW system is ON
②	Warning systems indicator "Lane" position	Indicates that LDW system is ON

DISPLAY AND WARNING

System Display
The LDW systems operate when ON is selected with the combination meter.


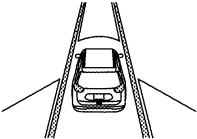



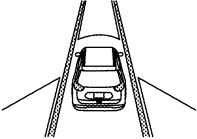
System status	Condition	Display on combination meter	
		Upper part	Middle part
LDW OFF	—	—	White Driving Aids  JSOIA1591ZZ
LDW ON	System ON	White  JSOIA1422ZZ	White Driving Aids  JSOIA1592ZZ
LDW is malfunction	The LDW system is automatically canceled.	Orange  JSOIA1422ZZ	Orange Driving Aids  JSOIA1592ZZ
			 Warning  System fault JSOIA1593ZZ
Front camera unit high temperature	The LDW system is automatically canceled.	White (Blink)  JSOIA1367ZZ	White Driving Aids  JSOIA1592ZZ

Display And Warning Operation

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/ Driver's operation			Action		
Vehicle speed (Approx.)	Turn signal condition	Status of vehicle close to lane marker	Indication on the combination meter		Buzzer
			Upper part	Middle part	
Less than 55 km/h (34 MPH)	—	Close to lane marker	White  <small>JSOIA1422ZZ</small>	White Driving Aids  <small>JSOIA1592ZZ</small>	OFF
60 km/h (37 MPH) or more	<ul style="list-style-type: none"> • OFF • ON (Opposite to the deviate side) 	Close to lane marker	Orange (Blink)  <small>JSOIA1367ZZ</small>	Orange (Blink) Driving Aids  <small>JSOIA1594ZZ</small>	Short continuous beeps
	ON (Deviate side)	Close to lane marker	White  <small>JSOIA1422ZZ</small>	White Driving Aids  <small>JSOIA1592ZZ</small>	OFF

NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 55 km/h (34 MPH). Refer to [DAS-16, "LDW : System Description"](#).

BSW

BSW : Switch Name and Function

INFOID:0000000010784380

BSW

Driving Aids

Lane ☒

Blind Spot ☒

①

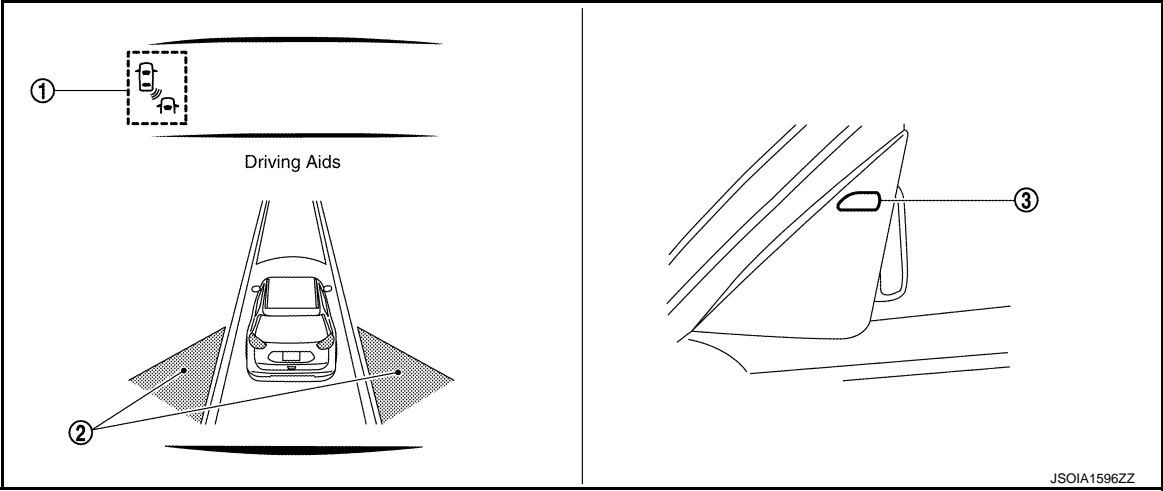
JSOIA1595ZZ

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:0000000010784381

SYSTEM DISPLAY



No.	Display item	Description
①	Warning systems indicator (BSW)	Indicates that BSW system is ON
②	Warning systems indicator "Blind spot" position	Indicates that BSW system is ON
③	Blind Spot Warning indicator LH/RH	<ul style="list-style-type: none">• Illuminates when detect other vehicles beside vehicle in an adjacent lane• Blinks when BSW system is warning to driver

DISPLAY AND WARNING

System Display


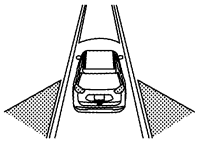


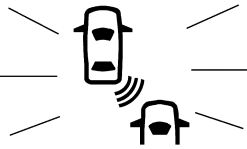


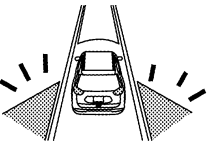
The BSW systems operate when ON is selected with the combination meter.

System status	Condition	Display on combination meter	
		Upper part	Middle part
BSW OFF	—	—	<p>White</p> <p>Driving Aids</p> <p>JSOIA1591ZZ</p>
BSW ON	System ON	<p>White</p> <p>JSOIA1423ZZ</p>	<p>White</p> <p>Driving Aids</p> <p>JSOIA1597ZZ</p>

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

System status	Condition	Display on combination meter	
		Upper part	Middle part
BSW is malfunction	The BSW system is automatically canceled.	<div>Orange</div>  <div>JSOIA1423ZZ</div>	<div>Orange</div> <div>Driving Aids</div>  <div>JSOIA1597ZZ</div>
			<div> Warning</div> <div></div> <div>System fault</div> <div>JSOIA1598ZZ</div>
Dirt around the rear camera*	The BSW system is automatically canceled.	<div>White (Blink)</div>  <div>JSOIA1425ZZ</div>	<div> Warning</div> <div></div> <div>Cleanup rear camera</div> <div>JSOIA1599ZZ</div>
			<div>Driving Aids</div>  <div>JSOIA1600ZZ</div>


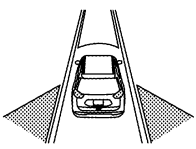

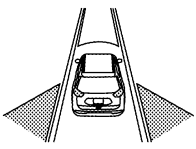

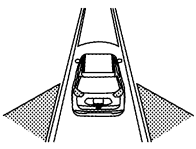
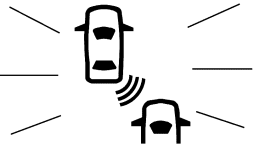
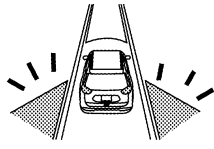
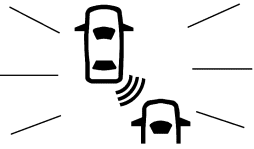
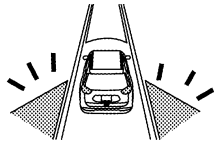
*: This indication shows the possibility of no washer fluid. Check washer fluid level.

Display And Warning Operation

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/ Driver's operation			Action			
Vehicle speed (Approx.)	Turn signal condition	Status of vehicle detection within detection area	Indication on the BSW indicator	Indication on the combination meter		Buzzer
				Upper part	Middle part	
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	Orange (Blink)  JSOIA1425ZZ	Orange (Blink) Driving Aids  JSOIA1600ZZ	Short continuous beeps
		Vehicle is detected after turn signal operates	Blink	Orange (Blink)  JSOIA1425ZZ	Orange (Blink) Driving Aids  JSOIA1600ZZ	OFF

NOTE:

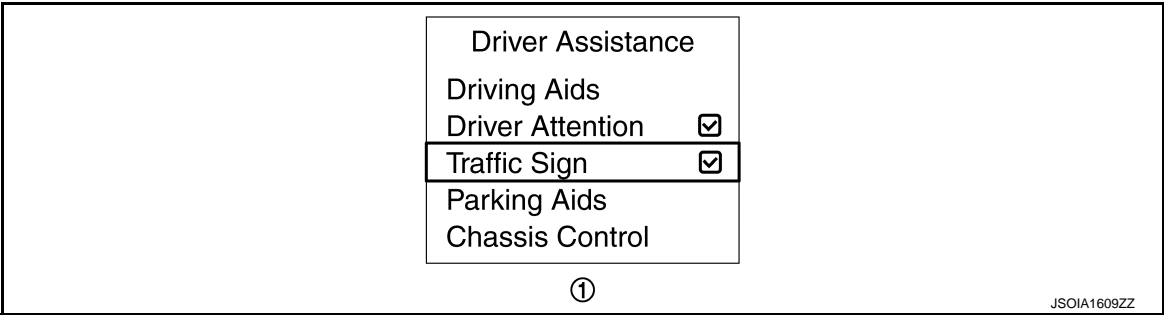
- If vehicle speed exceeds approximately 32 km/h (20 MPH), BSW function operates until the vehicle speed becomes lower than approximately 29 km/h (18 MPH).
- Time shown in the figure is approximate time.

TSR

TSR : Switch Name and Function

INFOID:0000000010784384

TSR

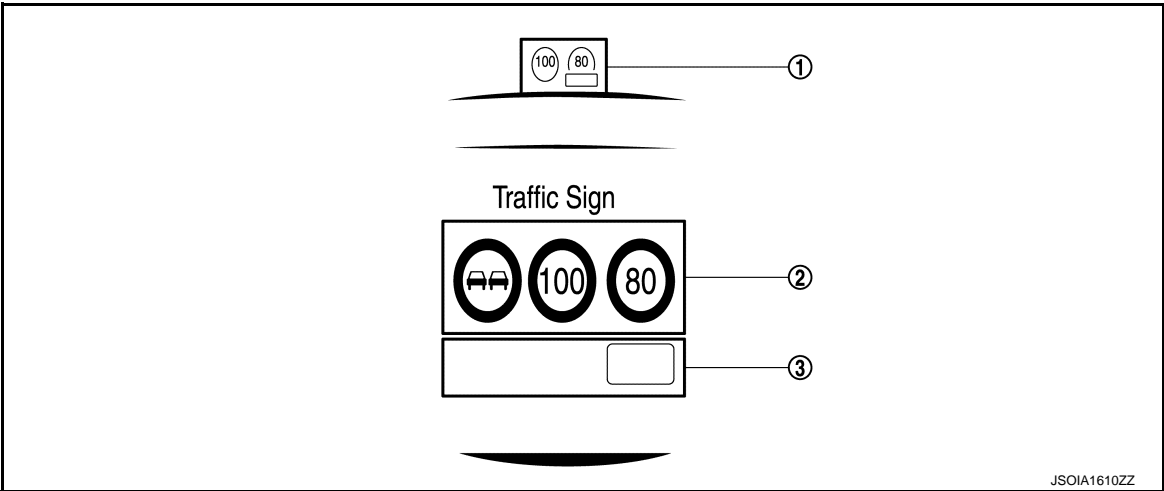


No.	Switch name	Description
①	TSR system setting screen (Combination meter settings screen)	The setting of TSR system can be switched between ON and OFF

TSR : Menu Displayed by Pressing Each Switch

INFOID:0000000010784385

SYSTEM DISPLAY











No.	Display item	Description
①	Speed limit sign indicator	<ul style="list-style-type: none">Displays speed limit signs detected by the front camera unitAllows the displaying of up to 2 signsFor speed limit signs with a supplemental sign, the supplemental sign is displayed together
②	Road sign indicator	<ul style="list-style-type: none">Displays road signs detected by the front camera unitAllows the displaying of up to 3 signs i.e. 2 speed limit signs and 1 do not pass sign
③	Supplemental sign indicator	<ul style="list-style-type: none">Displays supplemental signs detected by the front camera unitAllows the displaying of up to 3 supplemental signs

DISPLAY AND WARNING

System Display

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

System status	Condition	Display on combination meter	
		Upper part	Middle part
TSR OFF	—	—	Traffic Sign JSOIA1611ZZ
TSR ON	Road sign not detected	—	Traffic Sign  JSOIA1612ZZ
	Road sign detected (except for speed limit signs)	—	This is an example. For details of displayed signs, refer to DAS-21, "TSR : System Description" Traffic Sign  JSOIA1613ZZ
	Road sign detected (Speed limit signs)	This is an example. For details of displayed signs, refer to DAS-21, "TSR : System Description"   JSOIA1614ZZ	This is an example. For details of displayed signs, refer to DAS-21, "TSR : System Description" Traffic Sign   JSOIA1615ZZ
TSR is malfunction	The TSR system is automatically canceled.	—	 Warning  System fault JSOIA1616ZZ

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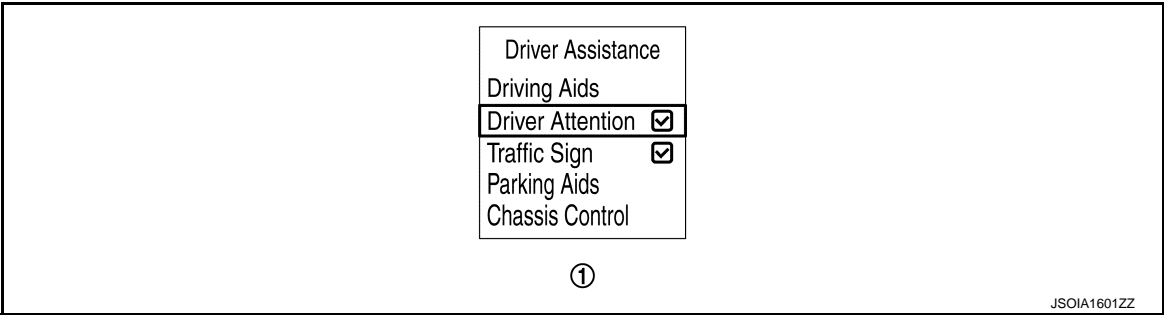
DAA

DAS

DAA : Switch Name and Function

INFOID:0000000010784382

DAA

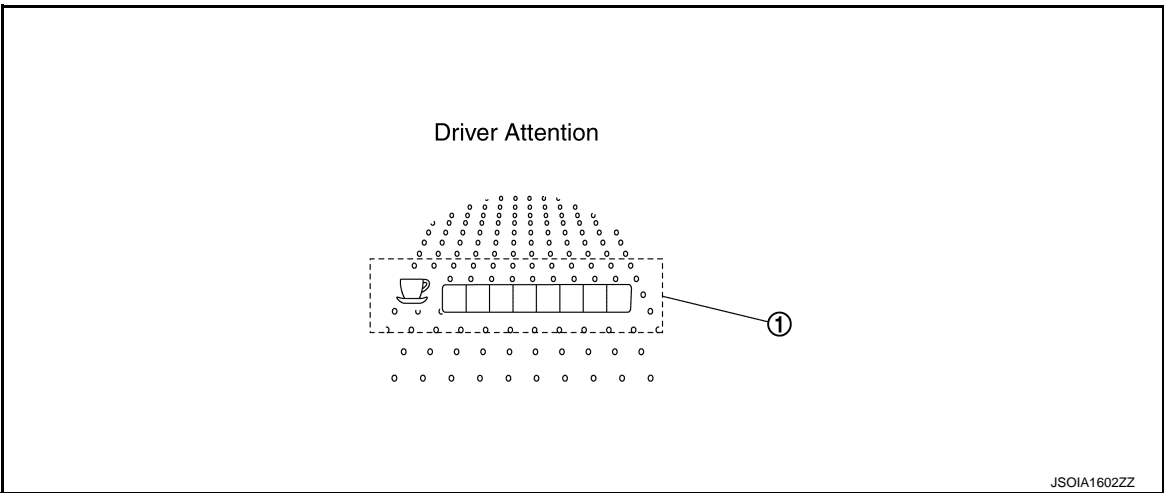


No.	Switch name	Description
①	DAA system setting screen (Combination meter settings screen)	The setting of DAA system can be switched between ON and OFF

DAA : Menu Displayed by Pressing Each Switch

INFOID:0000000010784383

SYSTEM DISPLAY



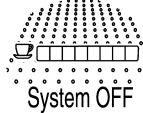
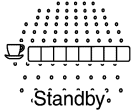
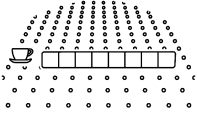
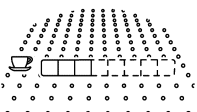



No.	Display item	Description
①	Level indicator	The driver's attentiveness is shown in eight stages

DISPLAY AND WARNING

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/ Driver's operation	Driver's condition	Vehicle speed (Approx.)	Action	Display on combination meter
DAA OFF	—	—	—	<div>Driver Attention</div> <div></div> <div>System OFF</div> <div>JSOIA1603ZZ</div>
DAA ON	—	0 km/h (0MPH) ≤ Vehicle speed < 60 km/h (37 MPH)	—	<div>Driver Attention</div> <div></div> <div>Standby</div> <div>JSOIA1604ZZ</div>
	Normal	More than 60 km/h (37 MPH)	Level indicator: Blue	<div>Driver Attention</div> <div></div> <div>Standby</div> <div>JSOIA1605ZZ</div>
	Attention diminished		Level indicator: Yellow	<div>Driver Attention</div> <div></div> <div>Standby</div> <div>JSOIA1606ZZ</div>
	Attention significantly diminished		<ul style="list-style-type: none">Level indicator: OrangeBuzzer sounds	<div>Driver Attention</div> <div></div> <div>Have a brake?</div> <div>JSOIA1607ZZ</div>
DAA is malfunction	—	—	—	<div> Warning</div> <div></div> <div>System fault</div> <div>JSOIA1608ZZ</div>

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DAS

HANDLING PRECAUTION**Precautions for Lane Departure Warning**

INFOID:000000010727897

FRONT CAMERA UNIT HANDLING

To keep the proper operation of the LDW systems and prevent a system malfunction, be sure to observe the following:

- Always keep the windshield clean.
- Do not attach a sticker (including transparent material) or install an accessory near the front camera unit.
- Do not place reflective materials, such as white paper or a mirror, on the instrument panel. The reflection of sunlight may adversely affect the front camera unit capability of detecting the lane markers.
- Do not strike or damage the areas around the camera unit. Do not touch the camera lens or remove the screw located on the camera unit. If the camera unit is damaged due to an accident.

LANE DEPARTURE WARNING (LDW)

- If the LDW system malfunctions, it will cancel automatically, and the LDW malfunction message will appear in the vehicle information display.
- LDW system is only a warning device to inform the driver of a potential unintended lane departure. It will not steer the vehicle or prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of the vehicle at all times.
- LDW system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- LDW system may not function properly under the following conditions:
 - On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers; or lane markers covered with water, dirt or snow, etc.
 - On roads where the discontinued lane markers are still detectable.
 - On roads where there are sharp curves.
 - On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. (The LDW system could detect these items as lane markers.)
 - On roads where the traveling lane merges or separates.
 - When the vehicle's traveling direction does not align with the lane marker.
 - When traveling close to the vehicle in front of driver, which obstructs the front camera unit detection range.
 - When the road surface is very dark due to weak ambient light or impaired tail lamp.
 - When rain, snow or dirt adheres to the windshield in front of the front camera unit.
 - When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
 - When strong light enters the front camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
 - When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)
- When driving on a curved road, warning will be late on the outside of the curve.

Precautions for Blind Spot Warning

INFOID:000000010727898

REAR CAMERA HANDLING

The rear camera for the BSW systems is located above the rear licence plate. To keep the proper operation of the BSW systems and prevent a system malfunction, be sure to observe the following:

- Always keep the rear camera clean. Be careful not to damage the nozzle of automatic washer and blower.
- Do not attach "licence plate accessory" that reflect light.
- Do not strike or damage the areas around the rear camera.

BLIND SPOT WARNING (BSW)

- The BSW 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 you will move to ensure it is safe to change lanes. Never rely solely on the BSW system.
- The rear camera may not function properly under the following conditions:
 - When towing a trailer.
 - When strong light enters the rear camera. (For example, direct sunlight or headlight from the rear)
 - When ambient brightness changes instantly. (For example, when the vehicle enters or exits a tunnel or passes under a bridge.)

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- Automatic washer and blower may not be able to secure detection capability when excessive dirt adheres on the camera lens. A
- The rear camera may not be able to detect when certain objects are present such as:
 - Pedestrians, bicycles, animals
 - Several types of vehicles such as motorcycles and very short length vehicle
 - Oncoming vehicles B
 - A vehicle approaching rapidly from behind.
 - A vehicle which your vehicle overtakes rapidly.
 - A vehicle that merges or changes lanes rapidly directly next to your vehicle. C
- The rear camera may not be able to detect property when your vehicle travels beside the middle section of a vehicle with long wheelbase (for example, trailer truck, semi-trailer, tractor).
- The rear camera detection zone is designed based on a standard lane width. When driving in a wider lane, the camera unit may not detect vehicles in an adjacent lane. When driving in a narrow lane, the camera unit may detect vehicles driving two lanes away. D
- The rear camera 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. E
- The rear camera may detect reflection image of vehicles or roadside objects that are not actually in the detection zone, especially when the road is wet. F

Precautions for Traffic Sign Recognition

INFOID:0000000010924937

TRAFFIC SIGN RECOGNITION (TSR)

- The TSR system is only intended to be a support device to provide the driver with information. It is not a replacement for the driver's attention to traffic conditions or responsibility to drive safely. It cannot prevent accidents due to carelessness. It is the driver's responsibility to stay alert and drive safely at all times. G
- The Traffic Sign Recognition system is intended as an aid to careful driving. It is the driver's responsibility to stay alert, drive safely, and observe all road regulations that currently apply, including looking out for road signs. H
- The Traffic Sign Recognition system may not function properly under the following conditions:
 - When rain, snow or dirt adheres to the windscreen in front of the front camera unit. I
 - When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
 - When strong light enters the camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.) J
 - When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)
 - In areas not covered by the navigation system.
 - If there are deviations in relation to the navigation, for example due to changes in the road routing. K
 - When overtaking buses or trucks with speed stickers.

Precautions for Drive Attention Alert

INFOID:0000000010924938

DRIVE ATTENTION ALERT (DAA)

This system is not designed to assist driving impaired due to fatigue, or other causes. Be attentive at all times, and avoid driving when tired. Failure to do so could cause you to lose control of the vehicle, resulting in a serious accident. M

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DAS

P

DIAGNOSIS SYSTEM (FRONT CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (FRONT CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000010924957

APPLICATION ITEMS

CONSULT performs the following functions by communicating with the front camera unit.

Diagnosis mode	Description
Work Support	Performs the camera aiming.
Self Diagnostic Result	Displays the name of a malfunctioning system stored in the front camera unit
Data Monitor	Displays front camera unit input/output data in real time
ECU Identification	Displays front camera unit part number
CAN Diag Support Monitor	Displays a reception/transmission state of CAN communication

WORK SUPPORT

Work support items	Description
AUTO AIM	Outputs camera unit, calculates dislocation of the camera, and displays adjustment direction.
AIM CHECK	NOTE: The item is displayed, but it is not used.

SELF DIAGNOSTIC RESULT

Refer to [DAS-56. "DTC Index"](#).

FREEZE FRAME DATA (FFD)

Front camera unit records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item (Indication/Unit)	Description
ODO/TRIP METER (km/h)	Vehicle speed of the moment a particular DTC is detected.

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
CAMERA HIGH TEMP (Normal/High)	Displays status of front camera unit high temperature judgment.
TURN SIGNAL (Off/LH/ RH/LH&RH)	Displays status of "Turn signal" received from BCM via CAN communication.
WIPER (Off/Lo/Hi)	Displays the wiper operating status.
VEHICLE SPEED (km/h)	Displays vehicle speed received from ABS actuator and electric unit (control unit) via CAN communication.
DRIVER ASSIST SYSTEM SET (NO REQ/BSW Off/BSW On/TSR Off/TSR On/FEB Off/FEB On)	Displays Driver Assist System setting status.
BRAKE OPERATION STATUS (Off/On/CNFRM/UNKWN)	Displays the brake operating status.
AIMING DONE (not finished/finished)	Displays status that camera aiming is done.

DIAGNOSIS SYSTEM (FRONT CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item (Unit)	Description	
AIMING RESULT (NOK/OK)	Displays result of camera aiming.	A
STEERING ANGLE (deg)	Displays the steering angle from the steering angle sensor.	B
YAW RATE (deg/s)	Displays the yaw rate.	C
FCTRY AIM YAW (deg)	Displays the yaw angle result of camera aiming.	
FCTRY AIM ROL (deg)	Displays the roll angle result of camera aiming.	D
FCTRY AIM PIT (deg)	Displays the pitch angle result of camera aiming.	E
FEB OPERATION DISP (0, 1, 2, 3)	Displays the control operation of FEB.	
BSW LEFT DISP (0, 1)	Displays BSW indicator LH status.	F
BSW RIGHT DISP (0, 1)	Displays BSW indicator RH status.	G
FCW STATUS DISPLAY (0, 1, 2, 3)	NOTE: The item is indicated, but not monitored.	
BSW STATUS DISPLAY (0, 1, 2, 3)	Displays status of BSW.	H
FEB STATUS DISPLAY (0, 1, 2, 3)	Displays status of FEB.	I
FCW BUZZER (0, 2, 4, 6, 7)	NOTE: The item is indicated, but not monitored.	
FCW SETTING DISPLAY (0, 1, 2, 3)	NOTE: The item is indicated, but not monitored.	J
BSW SETTING DISPLAY (0, 1, 2)	Displays BSW setting status.	K
MOD SETTING DISPLAY (0, 1, 2)	Displays MOD setting status.	
FEB SETTING DISPLAY (0, 1, 2)	Displays FEB setting status.	L
DAA SETTING DISPLAY (0, 1, 2)	Displays DAA setting status.	
BSW IND BRIGHT DISP (0, 1, 2, 3)	NOTE: The item is indicated, but not monitored.	M
CLN RR CAMERA MSG (0, 1)	Displays the clean rear camera warning status.	N
FCW MALFUNCTION MSG (0, 1)	NOTE: The item is indicated, but not monitored.	
DAA LEVEL DISPLAY (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 14, 15)	Displays DAA level status.	
DAA WARNING DISPLAY (0, 1)	Displays DAA warning indicator status.	P
LDW MALFUNCTION MSG (0, 1)	Displays LDW malfunction status.	
BSW MALFUNCTION MSG (0, 1)	Displays BSW malfunction status.	
CAMERA HI TEMP MSG (0, 1)	Displays status of front camera unit high temperature warning display output.	

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DIAGNOSIS SYSTEM (FRONT CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item (Unit)	Description
FCW BLOCK MSG (0, 1)	NOTE: The item is indicated, but not monitored.
FEB BLOCK MSG (0, 1)	Displays FEB radar blockage status.
FEB MALFUNCTION MSG (0, 1)	Displays FEB malfunction status.
LDW FUNCTION (NORMAL/MALF)	Displays LDW function status.
LDW SETTING DISPLAY (NTHNG/Off/On)	Displays LDW setting status.
DRIVER ASSIST SYSTEM BZZR (NO REQ/BSW/LDW/MOD)	Displays Driver Assist System warning buzzer status.
LDW LEFT (Off/On)	Displays the deviating status on the LH side lane.
LDW RIGHT (Off/On)	Displays the deviating status on the RH side lane.
LDW STATUS DISPLAY (OFF/ON/TMP MF/ MF)	Displays status Lane Departure Warning system.
HBA FUNCTION (MALF/NORMAL/TP OFF)	Displays High beam assist system function status.
HBA REQUEST (NO REQ/LOW/HIGH/UNMBL)	Displays High beam assist request status.
LOW BEAM STATUS (Off/On)	Displays low beam status of the vehicle.
HIGH BEAM STATUS (Off/On)	Displays high beam status of the vehicle.
TSR STATUS (Nothing/Off/On)	Displays setting of the TSR.
TSR FUNCTION (NORMAL/MALF)	Displays TSR function status.
TSR SPEED LIMIT SIGN 1 (km/h,mph)	Displays the speed limit sign indicator 1 status.
TSR SPEED LIMIT SIGN 2 (km/h,mph)	Displays the speed limit sign indicator 2 status.
TSR SUPPLEMENT SIGN 1 (Display OFF/RAIN1/RAIN2/ SNOW/TOWING/AROW L/AROW R/WHITE/TRUCK)	Displays the supplementsign indicator 1.
TSR SUPPLEMENT SIGN 2 (Display OFF/RAIN1/RAIN2/ SNOW/TOWING/AROW L/AROW R/WHITE/TRUCK)	Displays the supplementsign indicator 2.
TSR SUPPLEMENT SIGN 3 (Display OFF/RAIN1/RAIN2/ SNOW/TOWING/AROW L/AROW R/WHITE/TRUCK)	Displays the supplementsign indicator 3.
CAMERA INACTIVE CAUSE (FS1 - FS11)	Displays factors causing temporary breakdown of a function of front camera unit.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

CONSULT Function

INFOID:0000000010924956

CONSULT FUNCTIONS

CONSULT performs the following functions via the CAN communication with the around view monitor control unit.

Diagnosis mode	Description
ECU Identification	Around view monitor control unit part number can be identified.
Self Diagnostic Results	Around view monitor control unit diagnosis is performed. Current and previous malfunctions are displayed collectively.
Data Monitor	Diagnosis of vehicle signal that is received by around view monitor control unit can be performed.
Work Support	<ul style="list-style-type: none">• Calibration and initialization of each camera can be performed.• Fine tuning of Birds-eye view can be performed.• Target line calibration of rear wide view can be performed.• Language of warning message can be selected.• Display of predicted course line can be switched to ON/OFF.• Neutral position adjustment of steering angle sensor can be performed.• Camera screen activation enhancing display can be switched to ON/OFF.• Calibration for BSW can be performed.• Displays causes of system cancellation occurred during system control.
Active Test	Enables an operational check of a load by transmitting a driving signal from the around view monitor control unit to the load.
Configuration	<ul style="list-style-type: none">• The vehicle specification that is written in around view monitor control unit can be displayed or stored.• The vehicle specification can be written when around view monitor control unit is replaced.

ECU IDENTIFICATION

Around view monitor control unit part number can be identified.

SELF DIAGNOSIS RESULT

- Refer to [AV-120. "DTC Index"](#).
- In CONSULT self-diagnosis, self-diagnosis results and error history are displayed collectively.
- The current malfunction indicates "CRNT". The past malfunction indicates "PAST".
- The timing is displayed as "0" if any of the error codes [U1000] and [U1010] is detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Freeze Frame Data (FFD)

The following vehicle status is recorded when DTC is detected and is displayed on CONSULT.

Item name	Display content
ODO/TRIP METER (km)	Total driving distance (odometer value) upon DTC detection 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.

- Displays the status of the following vehicle signals inputted into the around view monitor control unit.
- For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Remarks
ST ANGLE SENSOR SIGNAL [ON/OFF]	Receiving status of steering angle signal received from steering angle sensor is switched to ON/OFF.
REVERSE SIGNAL [ON/OFF]	Receiving status of reverse signal received from NAVI control unit is displayed by ON/OFF.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Display Item	Remarks
VEHICLE SPEED SIGNAL [ON/OFF]	Receiving status of vehicle speed signal received from ABS actuator and electric unit (control unit) is displayed by ON/OFF.
CAMERA SWITCH SIGNAL [ON/OFF]	Receiving status of camera switch signal received from NAVI control unit is displayed by ON/OFF.
CAMERA OFF SIGNAL [ON/OFF]	Receiving status of camera OFF signal received from NAVI control unit is displayed by ON/OFF.
ST ANGLE SENSOR TYPE [Absolute]	Input type of steering angle sensor is displayed. NOTE: For this vehicle, "Absolute" is displayed.
STEERING GEAR RATIO TYPE [TYPE 0]	Type of steering gear ratio is displayed. NOTE: For this vehicle, "TYPE 0" is displayed.
STEERING POSITION [RHD/LHD]	Steering position is displayed.
REAR CAMERA IMAGE SIGNAL [OK/NG]	Input status of rear camera image signal is displayed by OK/NG in real time.
WASH SW [OFF]	Indicates [On/Off] status of the washer switch signal input. NOTE: For this vehicle, "OFF" is displayed.
R-CAMERA COMM STATUS [OK/NG]	Communication status with rear camera is displayed by OK/NG in real time.
R-CAMERA COMM LINE [OK/NG]	Status of communication line with rear camera is displayed by OK/NG in real time.
F-CAMERA IMAGE SIGNAL [OK/NG]	Input status of front view camera image signal is displayed by OK/NG in real time.
DR-SIDE CAMERA IMAGE SIG [OK/NG]	<ul style="list-style-type: none"> Input status of side camera LH image signal is displayed by OK/NG in real time. (LHD models) Input status of side camera RH image signal is displayed by OK/NG in real time. (RHD models)
PA-SIDE CAMERA IMAGE SIG [OK/NG]	<ul style="list-style-type: none"> Input status of side camera RH image signal is displayed by OK/NG in real time. (LHD models) Input status of side camera LH image signal is displayed by OK/NG in real time. (RHD models)
PUMP COMM STATUS [OK/NG]	Communication status with pump control unit is displayed by OK/NG in real time.
ILL [ON/OFF]	Receiving status of dimmer signal received from BCM is displayed by ON/OFF.
ITS SW 1 [ON/OFF]	Indicates the state of the warning systems switch as seen by the around view monitor control unit.
ITS SW 1 IND [OFF]	Indicates the state of the warning systems switch indicator output. NOTE: For this vehicle, "OFF" is displayed.
TURN SIGNAL [OFF/LEFT/RIGHT]	Indicates [OFF/LEFT/RIGHT] status of the turn signal input.
ITS SW 2 [NO SET]	Indicates the status of warning systems switch as seen by the around view monitor control unit. NOTE: For this vehicle, "NO SET" is displayed.
ITS SW 2 IND [NO SET]	Indicates the status of warning systems switch indicator output. NOTE: For this vehicle, "NO SET" is displayed.
VEHICLE SPEED [km/h]	Vehicle speed from the ABS actuator and electric unit (control unit) is displayed.
IDLE STOP STATUS [ON/OFF]	The stop/start status received from ECM is displayed. NOTE: For this vehicle, "OFF" is displayed.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Display Item	Remarks
TRAILER HITCH SW [ON/OFF]	The towed vehicle connection status is displayed.
STEERING ANGLE [°]	Steering angle received from steering angle sensor is displayed.

WORK SUPPORT

Display Item	Remarks
NON-VIEWABLE AREA REMINDER	ON/OFF setting of the non-viewable area reminder can be performed.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	The position of rear wide view guiding line can be changed.
PREDICTIVE COURSE LINE DISPLAY	ON/OFF setting of predictive course line can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	The calibration can be initialized to factory shipment condition. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
STEERING ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position can be adjusted and registered. CAUTION: For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS actuator control unit side. Refer to BRC-99, "Work Procedure" .
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs the calibration of front camera. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	<ul style="list-style-type: none"> Performs the calibration of side camera RH. (LHD models) Performs the calibration of side camera LH. (RHD models) NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	<ul style="list-style-type: none"> Performs the calibration of side camera LH. (LHD models) Performs the calibration of side camera RH. (RHD models) NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs the calibration of rear camera. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
FINE TUNING OF BIRDS-EYE VIEW	The confirmation and adjustment of the difference between each camera can be performed. The fine adjustment function of camera calibration can check and adjust the difference between each camera.
SELECT LANGUAGE OF WARNING MESSAGE	Language of warning message shown during camera image display can be selected. [ENGLISH, SPANISH, FRENCH, DUTCH, GERMAN, ITALIAN, PORTUGAL, RUSSIAN, JAPANESE, CHINESE 1 (TRADITIONAL), CHINESE 2 (SIMPLIFIED), KOREAN]
REAR CAMERA ITS	Calibration for BSW can be performed.
CAUSE OF LDW CANCEL	NOTE: The item is displayed, but it is not used.
CAUSE OF BSW CANCEL	Displays causes of automatic system cancellation occurred during control of the BSW system.
CAUSE OF IPA CANCEL	Displays causes of automatic system cancellation occurred during control of the around view monitor with Park Assist system.

NOTE:

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

Display Items for The Cause of BSW Cancel

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Cause of cancellation	Description
REAR CAMERA DIRTY	Rear camera lens is dirty.
TRUNK OPEN	Back door is open.
TRAILER HITCH ON	Towing (by attaching a trailer).
R CAMERA COMM ERR	Communication error between around view monitor control unit and rear camera.
LOW WASH FLUID	Washer fluid level is low.
LO TMP(AIR WIPING)	Ambient temperature drops to -20 °C (-4 °F) or less.
LO TMP(WSH WIPING)	Washer fluid temperature drops to -20 °C (-4 °F) or less.
CAMERA ANGLE ERROR	Improper installation of rear camera.
PUMP C/U COMM ERROR	Communication error between around view monitor control unit and pump control unit.
CAMERA IMAGE ERROR	Camera image signal is malfunction.
NO RECORD	—

Display Items for The Cause of Around View Monitor with Park Assist Cancel

NOTE:

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

Cause of cancellation	Description
STRG SEN CIRCUIT	A malfunction is detected in steering angle sensor.
TRUNK OPEN	Back door is open.
Vehicle towed	A towing vehicle is connected.
VDC CIRCUIT	VDC detects a malfunction.
VHCL SPD UNMATCH	A malfunction is detected in vehicle speed signal.
SONAR CIRCUIT	A sonar control unit malfunction has occurred.
CAN COMM ERROR	The CAN communication signals needed by the Around view monitor control unit cannot be received.
BCM CIRCUIT	BCM detects a malfunction.
ESP CIRCUIT	EPS control unit detects a malfunction.
CVT CIRCUIT	TCM detects a malfunction.
ECM CIRCUIT	ECM detects a malfunction.
DOOR OPEN	A door is open.
VDC OFF	VDC OFF switch is pressed.
SHIFT POSITION	A shift position other than the specified position is detected.
NO RECORD	—

ACTIVE TEST

CAUTION:

- **Never perform “Active Test” while driving the vehicle.**
- **The “Active Test” cannot be performed when the following systems malfunction is displayed.**
 - LDW
 - BSW
- **Shift the selector lever to “P” position, and then perform the test.**

Test items	Description
LED LH INDICATOR	BSW indicator LH can be illuminated by ON/OFF operations as necessary.
LED RH INDICATOR	BSW indicator RH can be illuminated by ON/OFF operations as necessary.
WASH ACTIVE	Camera washer can be operated by ON/OFF operations as necessary.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Test items	Description
AIR ACTIVE	Camera blower can be operated by ON/OFF operations as necessary.
AIR & WASH ACTIVE	Camera blower and washer can be operated by ON/OFF operations as necessary.

LED LH INDICATOR

Test item	Operation	Description	BSW indicator LH
LED LH INDICATOR	Off	Stops transmitting the BSW indicator LH signal below to end the test	OFF
	On	Transmits the BSW indicator LH signal to the BSW indicator	ON

LED RH INDICATOR

Test item	Operation	Description	BSW indicator RH
LED RH INDICATOR	Off	Stops transmitting the BSW indicator RH signal below to end the test	OFF
	On	Transmits the BSW indicator RH signal to the BSW indicator	ON

WASH ACTIVE

Test item	Operation	Description	Rear camera washer
WASH ACTIVE	Off	Stops transmitting the rear camera washer signal below to end the test	OFF
	On	Transmits the rear camera washer signal to the pump control unit via communication line	ON

NOTE:

The test can be performed only when the trunk lid is closed. (Trunk room lamp switch is OFF.)

AIR ACTIVE

Test item	Operation	Description	Rear camera air blower
AIR ACTIVE	Off	Stops transmitting the rear camera air blow signal below to end the test	OFF
	On	Transmits the rear camera air blow signal to the pump control unit via communication line	ON

NOTE:

The test can be performed only when the trunk lid is closed. (Trunk room lamp switch is OFF.)

AIR & WASHER ACTIVE

Test item	Operation	Description	Rear camera air blower and washer
AIR & WASHER ACTIVE	Off	Stops transmitting the rear camera air blow / washer signal below to end the test	OFF
	On	Transmits the rear camera air blow / washer signal to the pump control unit via communication line	ON

NOTE:

The test can be performed only when the trunk lid is closed. (Trunk room lamp switch is OFF.)

CONFIGURATION

Configuration includes functions as follows.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Function		Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in around view monitor control unit to store the specification in CONSULT.
	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the around view monitor control unit.
Manual Configuration		Allows the writing of the vehicle specification into the around view monitor control unit by hand.

FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

ECU DIAGNOSIS INFORMATION

FRONT CAMERA UNIT

Reference Value

INFOID:0000000010926629

VALUE ON THE DIAGNOSIS TOOL

Monitor item	Condition	Value/Status
CAMERA HIGH TEMP	When the temperature around lane camera unit is adequate	Normal
	when the temperate around the lane camera unit is high	High
TURN SIGNAL	Turn signal lamp LH and RH blinking	LH&RH
	Turn signal lamp LH blinking	LH
	Turn signal lamp RH blinking	RH
	Turn signal lamps OFF	Off
WIPER	Wiper position is High	Hi
	Wiper position is Low	Lo
	Wiper position is OFF	Off
VEHICLE SPEED	While drive	km/h
DRIVER ASSIST SYSTEM SET	When no operation in setting display on combination meter	NO REQ
	When LDW Off is selected in setting display on combination meter	LDW Off
	When LDW On is selected in setting display on combination meter	LDW On
	When BSW Off is selected in setting display on combination meter	BSW Off
	When BSW On is selected in setting display on combination meter	BSW On
	When TSR Off is selected in setting display on combination meter	TSR Off
	When TSR On is selected in setting display on combination meter	TSR On
	When FEB Off is selected in setting display on combination meter	FEB Off
	When FEB On is selected in setting display on combination meter	FEB On
BRAKE OPERATION STATUS	When brake pedal is depressed	Off
	When brake pedal is pressed	On
	When brake pedal is pressed	CFNRM
	When brake pedal operation is not judged	UNKWN
AIMING DONE	Camera aiming is completed	finished
	Camera aiming is not adjusted	not finished
AIMING RESULT	Camera aiming is completed	OK
	Camera aiming is not completed	NOK
STEERING ANGLE	When driving straight	0 ± 3.0 deg
YAW RATE	Vehicle stopped	0 ± 3.0 deg/s
FCTRY AIM YAW	Camera aiming is completed	0 ± 3.0 deg
FCTRY AIM ROL	Camera aiming is completed	0 ± 3.0 deg
FCTRY AIM PIT	Camera aiming is completed	0 ± 3.0 deg
FEB OPERATION DISP	No display	0
	Forward object is displayed	1
	Approach warning is displayed	2
	Collision warning is displayed	3
BSW LEFT DISP	BSW is not operated for left side	0
	BSW is operated for left side	1

FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition	Value/Status
BSW RIGHT DISP	BSW is not operated for right side	0
	BSW is operated for right side	1
FCW STATUS DISPLAY	NOTE: The item is displayed, but it is not monitored	0
		1
		2
		3
BSW STATUS DISPLAY	BSW is OFF	0
	BSW is ON	1
	BSW indicator is flashing	2
	BSW is malfunctioning	3
FEB STATUS DISPLAY	FEB is OFF	0
	FEB is ON	1
	FEB indicator is flashing	2
	FEB is malfunctioning	3
FCW BUZZER	NOTE: The item is displayed, but it is not monitored	0
		2
		4
		6
		7
FCW SETTING DISPLAY	NOTE: The item is displayed, but it is not monitored	0
		1
		2
		3
BSW SETTING DISPLAY	Nothing	0
	BSW is OFF	1
	BSW is ON	2
MOD SETTING DISPLAY	Nothing	0
	MOD is OFF	1
	MOD is ON	2
FEB SETTING DISPLAY	Nothing	0
	FEB is OFF	1
	FEB is ON	2
DAA SETTING DISPLAY	Nothing	0
	DAA is OFF	1
	DAA is ON	2
BSW IND BRIGHT DISP	NOTE: The item is displayed, but it is not monitored	0
		1
		2
		3
CLN RR CAMERA MSG	No display	0
	Rear camera clean message is displayed	1
FCW MALFUNCTION MSG	NOTE: The item is displayed, but it is not monitored	0
		1

FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition	Value/Status
DAA LEVEL DISPLAY	No display	0
	DAA OFF	1
	DAA level (1 – 8)	2 – 9
	DAA standby	14
	DAA malfunction	15
DAA WARNING DISPLAY	No warning	0
	DAA warning	1
LDW MALFUNCTION MSG	No display	0
	LDW malfunction message is displayed	1
BSW MALFUNCTION MSG	No display	0
	BSW malfunction message is displayed	1
CAMERA HI TEMP MSG	No display	0
	Front camera unit high temperature message is displayed	1
FCW BLOCK MSG	NOTE: The item is displayed, but it is not monitored	0
		1
FEB BLOCK MSG	No display	0
	Radar blockage message is displayed for FEB	1
FEB MALFUNCTION MSG	No display	0
	FEB malfunction message is displayed	1
LDW FUNCTION	When LDW function is ON	NORMAL
	When LDW function malfunction is detected	MALF
LDW SETTING DISPLAY	Nothing	NTHNG
	LDW is OFF	Off
	LDW is ON	On
DRIVER ASSIST SYSTEM BZZR	No request	NO REQ
	BSW is requested	BSW
	LDW is requested	LDW
	MOD is requested	MOD
LDW LEFT	Left side lane maker is not detected	Off
	Left side lane maker is detected	On
LDW RIGHT	Right side lane maker is not detected	Off
	Right side lane maker is detected	On
LDW STATUS DISPLAY	LDW is OFF	OFF
	LDW is ON	ON
	LDW indicator is flashing	TPM MF
	LDW is malfunctioning	MF
HBA FUNCTION	HBA is malfunctioning	MALF
	HBA is normal	NORMAL
	HBA is unavailable	TP OFF
HBA REQUEST	No request	NO REQ
	Low beam is requested	LOW
	High beam is requested	HIGH
	HBA is unavailable	UNMBL

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FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition	Value/Status
LOW BEAM STATUS	Low beam OFF	Off
	Low beam ON	On
HIGH BEAM STATUS	High beam OFF	Off
	High beam ON	On
TSR STATUS	Nothing	Nothing
	TSR is OFF	Off
	TSR is ON	On
TSR FUNCTION	TSR is normal	NORMAL
	TSR is malfunctioning	MALF
TSR SPEED LIMIT SIGN 1	Speed limit 1 is displayed	km/h mhp
TSR SPEED LIMIT SIGN 2	Speed limit 2 is displayed	km/h mhp
TSR SUPPLEMENT SIGN 1	No display	Display OFF
	Rain1 is displayed	RAIN1
	Rain2 is displayed	RAIN2
	Snow is displayed	SNOW
	Towing is displayed	TOWING
	Arrow L is displayed	AROW L
	Arrow R is displayed	AROW R
	White box is displayed	WHITE
	Truck is displayed	TRUCK
TSR SUPPLEMENT SIGN 2	No display	Display OFF
	Rain1 is displayed	RAIN1
	Rain2 is displayed	RAIN2
	Snow is displayed	SNOW
	Towing is displayed	TOWING
	Arrow L is displayed	AROW L
	Arrow R is displayed	AROW R
	White box is displayed	WHITE
	Truck is displayed	TRUCK
TSR SUPPLEMENT SIGN 3	No display	Display OFF
	Rain1 is displayed	RAIN1
	Rain2 is displayed	RAIN2
	Snow is displayed	SNOW
	Towing is displayed	TOWING
	Arrow L is displayed	AROW L
	Arrow R is displayed	AROW R
	White box is displayed	WHITE
	Truck is displayed	TRUCK

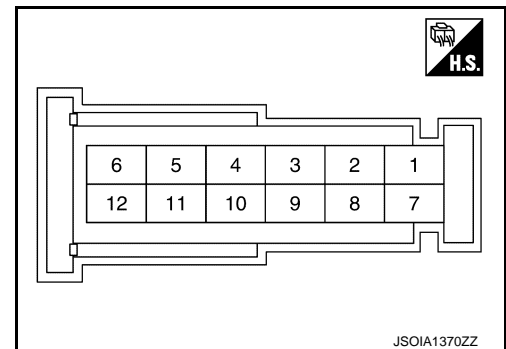
FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition	Value/Status
CAMERA INACTIVE CAUSE	The forward of front camera unit is completely blocked	FS1
	Occurrence of smear 1 from light source	FS2
	The forward of front camera unit is partially blocked	FS3
	Subjected to direct sunlight	FS4
	Subjected to spray of water	FS5
	Low visibility due to bad weather	FS6
	Heavy fog	FS7
	Occurrence of smear 2 from light source	FS8
	Unexpected road environment	FS9
	Subjected to the sun	FS10
	Icy road	FS11

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Standard value (V)	Reference value (V)
+	–	Signal name	Input/Output			
2 (L)	Ground	CAN- H	—	—	—	—
3 (R)		CAN - L	—	—	—	—
6 (R)		Ignition power supply	Input	Ignition switch ON	12 – 14	Battery voltage
7 (B)		Ground	—	—	0 – 0.1	Approx. 0

Fail-safe (Front Camera Unit)

INFOID:0000000010926630

FAIL-SAFE CONTROL BY DTC

LDW (Lane Departure Warning)

If a malfunction occurs in front camera unit, front camera unit cancels control, and turns ON the LDW malfunction in information display.

TSR (Traffic Sign Recognition)

If a malfunction occurs in front camera unit, front camera unit cancels control, and turns ON the TSR malfunction in information display.

FRONT CAMERA UNIT TEMPORARY OPERATION CANCELLATION

- Temporary disabled status at high temperature
- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the system malfunction in information display.

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FRONT CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

- When interior temperature is reduced, the system will resume operation automatically.
- When vehicle front identification is difficult
- When vehicle front identification is difficult due to soiling of windshield glass and strong light shining from the front, operation may be canceled temporarily. At this time, a warning is displayed on the vehicle information display in the combination meter.
- Normal operation recovers when conditions improve.

DTC Inspection Priority Chart

INFOID:0000000010926631

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	<ul style="list-style-type: none"> • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	<ul style="list-style-type: none"> • C1B01: CAM AIMING INCOMP • C1B02: VHCL SPD DATA MALF • C1B03: ABNRML TEMP DETECT • C1B09: POWER SUPPLY CIRCUIT • C1B0A: POWER SUPPLY CIRCUIT 2 • U0122: VDC CAN CIR 1 (LDP) • U0126: STRG SEN CAN CIR 1 • U0155: METER CAN CIRC 1 • U0235: DIST SEN CAN CIRC 1 • U0416: VDC CAN CIR 2 (LDP) • U0428: STRG SEN CAN CIR 2 • U0433: DIST SEN CAN CIRC 2
3	C1B00: CAMERA UNIT MALF

DTC Index

INFOID:0000000010926632

×:Applicable

DTC		Fail-safe		Reference
		LDW	TSR	
C1B00	CAMERA UNIT MALF	×	×	DAS-116
C1B01	CAM AIMING INCOMP	×	×	DAS-117
C1B02	VHCL SPD DATA MALF	×	×	DAS-118
C1B03	ABNRML TEMP DETECT	×	×	DAS-119
C1B09	POWER SUPPLY CIRCUIT	×	×	DAS-120
C1B0A	POWER SUPPLY CIRCUIT 2	×	×	DAS-120
U1000	CAN COMM CIRCUIT	×	×	DAS-121
U1010	CONTROL UNIT (CAN)	×	×	DAS-122
U0122	VDC CAN CIR 1 (LDP)	×	×	DAS-123
U0126	STRG SEN CAN CIR 1	×	×	DAS-124
U0155	METER CAN CIRC 1	×	×	DAS-125
U0235	DIST SEN CAN CIRC 1	×	×	DAS-126
U0416	VDC CAN CIR 2 (LDP)	×	×	DAS-127
U0428	STRG SEN CAN CIR 2	—	—	DAS-128
U0433	DIST SEN CAN CIRC 2	—	—	DAS-129

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

AROUND VIEW MONITOR CONTROL UNIT

Reference Value

INFOID:0000000010926625

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
ST ANGLE SENSOR SIGNAL	Ignition switch ON	When steering angle sensor signal is input	ON
		Other than the above	OFF
REVERSE SIGNAL	Ignition switch ON	When selector lever is in "R"	ON
		When selector lever is in any position other than "R"	OFF
VEHICLE SPEED SIGNAL	Ignition switch ON	When vehicle speed is input	ON
		Other than the above	OFF
CAMERA SWITCH SIGNAL	Ignition switch ON	When camera switch signal is input	ON
		Other than the above	OFF
CAMERA OFF SIGNAL	Ignition switch ON	When camera OFF signal is input	ON
		Other than the above	OFF
ST ANGLE SENSOR TYPE	Ignition switch ON	—	Absolute
STEERING GEAR RATIO TYPE	Ignition switch ON	—	TYPE 0
STEERING POSITION	Ignition switch ON	LHD models	LHD
		RHD models	RHD
REAR CAMERA IMAGE SIGNAL	Ignition switch ON	When rear camera image signal input status is normal	OK
		When rear camera image signal input status is not normal	NG
WASH SW	Ignition switch ON	—	OFF
R-CAMERA COMM STATUS	Ignition switch ON	When communication status with rear camera is normal	OK
		When communication status with rear camera is not normal	NG
R-CAMERA COMM LINE	Ignition switch ON	When communication line with rear camera is normal	OK
		When communication line with rear camera is not normal	NG
F-CAMERA IMAGE SIGNAL	Ignition switch ON	When front camera image signal input status is normal	OK
		When front camera image signal input status is not normal	NG
DR-SIDE CAMERA IMAGE SIG	Ignition switch ON	When driver side camera image signal input status is normal	OK
		When driver side camera image signal input status is not normal	NG
PA-SIDE CAMERA IMAGE SIG	Ignition switch ON	When passenger side camera image signal input status is normal	OK
		When passenger side camera image signal input status is not normal	NG

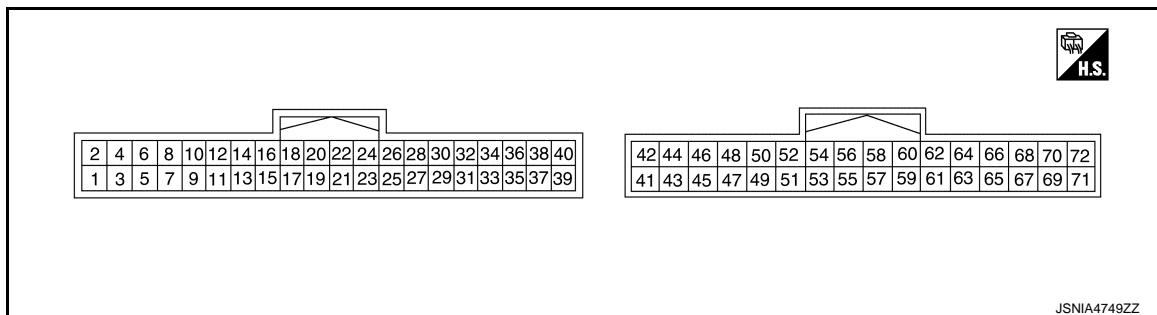
AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor Item	Condition		Value/Status
PUMP COMM STATUS	Ignition switch ON	When communication signal is input	OK
		Other than the above	NG
ILL	Ignition switch ON	When lighting switch is ON	ON
		When lighting switch is OFF	OFF
ITS SW 1	Ignition switch ON	Warning systems switch is ON. (Warning systems ON indicator illuminates.)	ON
		Warning systems switch is OFF. (Warning systems ON indicator OFF.)	OFF
ITS SW 1 IND	Ignition switch ON	—	OFF
TURN SIGNAL	Ignition switch ON	Turn signal RH: ON	RIGHT
		Turn signal LH: ON	LEFT
		Turn signal: OFF	OFF
ITS SW 2	Ignition switch ON	—	NO SET
ITS SW 2 IND	Ignition switch ON	—	NO SET
VEHICLE SPEED	Ignition switch ON		Displays approximately the same speed as the value indicated on the speedometer.
IDLE STOP STATUS	Ignition switch ON	—	OFF
TRAILER HITCH SW	Ignition switch ON	When a towing vehicle is connected	ON
		Other than the above	OFF
STEERING ANGLE	Ignition switch ON		Displays a value that corresponds to the steering angle.

TERMINAL LAYOUT



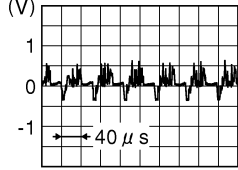
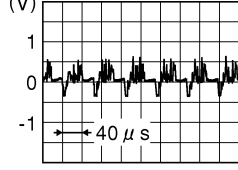
PHYSICAL VALUES

Without BSW

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
2 (Y)	1 (B)	Battery power supply	Input	Ignition switch OFF	—	9.5 - 16 V	Battery voltage
4 (SB)	1 (B)	Ignition signal	Input	Ignition switch ON	—	9.5 - 16 V	Battery voltage
9 (G)	—	Camera switch signal	Input	—	—	—	—
10 (R)	—	CAN-L	Input/ Output	—	—	—	—
12 (L)	—	CAN-H	Input/ Output	—	—	—	—
23	Ground	Camera image signal ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
24 (G)	23	Camera image signal	Output	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. 	
25 (B)	Ground	Rear camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
26 (R)	27	Rear camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. 	
27	Ground	Rear camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
28 (W)	27	Rear camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
29 (Y)	Ground	Driver side camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
30 (L)	29 (Y)	Driver side camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V

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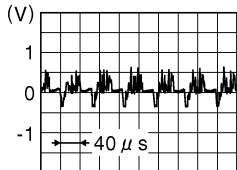
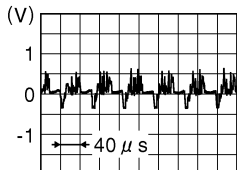
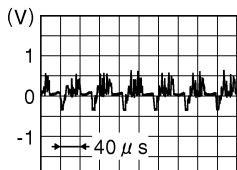
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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

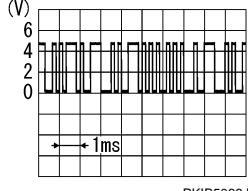
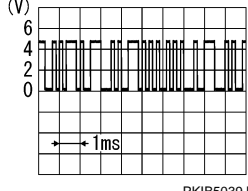
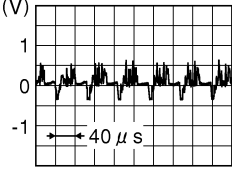
Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
31	Ground	Driver side camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
32 (G)	31	Driver side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  <small>JSNIA0834GB</small>	
33 (L)	Ground	Passenger side camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
34 (B)	33 (L)	Passenger side camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
35	Ground	Passenger side camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
36 (Y)	35	Passenger side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  <small>JSNIA0834GB</small>	
37 (V)	Ground	Front camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
38 (L)	37 (V)	Front camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
39	Ground	Front camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
40 (LG)	39	Front camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  <small>JSNIA0834GB</small>	

With BSW

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	-	Signal name	Input/ Output				
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
2 (Y)	1 (B)	Battery power supply	Input	Ignition switch OFF	—	9.5 - 16 V	Battery voltage
3 (SB)	1 (B)	Ignition signal	Input	Ignition switch ON	—	9.5 - 16 V	Battery voltage
7 (R)	Ground	BSW indicator LH	Output	Ignition switch ON	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check).	5.5 - 16 V	12.0 V
8 (G)	Ground	BSW indicator RH	Output	Ignition switch ON	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	5.5 - 16 V	12.0 V
27 (L)	—	CAN-H	Input/ Output	—	—	—	—
28 (R)	—	CAN-L	Input/ Output	—	—	—	—
36 (Y)	Ground	Communication sig- nal (CAMERA → PUMP)	Output	Ignition switch ON	—	Input the waveform synchronized with the communication status. 	
37 (V)	Ground	COMM GND	—	Ignition switch ON	—	0 - 0.1 V	0 V
38 (SB)	Ground	Communication sig- nal (PUMP → CAMERA)	Input	Ignition switch ON	—	Input the waveform synchronized with the communication status. 	
47 (G)	48	Camera image signal	Output	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. 	
48	Ground	Camera image signal ground	—	Ignition switch ON	—	0 - 0.1 V	0 V

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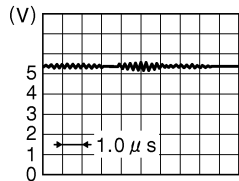
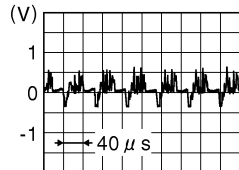
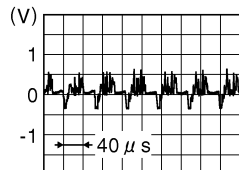
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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

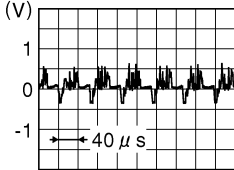
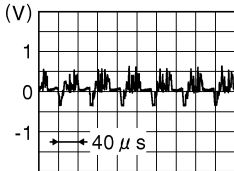
[DRIVER ASSISTANCE SYSTEM]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
49 (LG)	52 (B)	Rear camera commu- nication signal	Input/ Output	Ignition switch ON	—	Input the waveform synchronized with the communication status. <div></div> JSNIA0836GB	
50 (R)	52 (B)	Rear camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
52 (B)	Ground	Rear camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
53 (W)	54	Rear camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. <div></div> JSNIA0834GB	
54	Ground	Rear camera image signal (-)	—	Ignition switch ON	—	0 - 0.1 V	0 V
56 (L)	58 (Y)	Driver side camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
58 (Y)	Ground	Driver side camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
59 (G)	60	Driver side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. <div></div> JSNIA0834GB	
60	Ground	Driver side camera image signal (-)	—	Ignition switch ON	—	0 - 0.1 V	0 V
62 (B)	64 (L)	Passenger side cam- era power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
64 (L)	Ground	Passenger side cam- era ground	—	Ignition switch ON	—	0 - 0.1 V	0 V

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	−	Signal name	Input/ Output				
65 (Y)	66	Passenger side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  JSNIA0834GB	
66	Ground	Passenger side camera image signal (−)	—	Ignition switch ON	—	0 - 0.1 V	0 V
68 (L)	70 (V)	Front camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
70 (V)	Ground	Front camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
71 (LG)	72	Front camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  JSNIA0834GB	
72	Ground	Front camera image signal (−)	—	Ignition switch ON	—	0 - 0.1 V	0 V

Fail-Safe (Around View Monitor Control Unit)

INFOID:0000000010926626

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A00 CONTROL UNIT	Around view monitor control unit internal malfunction	Around view monitor with Park Assist is cancel
C1A01 POWER SUPPLY CIRC	<ul style="list-style-type: none"> The battery voltage sent to around view monitor control unit remains less than 7.9 V for 5 seconds The battery voltage sent to around view monitor control unit remains more than 19.3 V for 5 seconds 	Around view monitor with Park Assist is cancel
C1A03 VHCL SPEED SE CIRC	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) received by the around view monitor control unit via CAN communication, are inconsistent	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
C1A04 ABS/TCS/VDC CIRC	If a malfunction occurs in the VDC/TCS/ABS system	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >



[DRIVER ASSISTANCE SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A07 CVT CIRCUIT	If the CVT is malfunction	Around view monitor with Park Assist is cancel
C1A39 STRG SEN CIR	If the steering angle sensor is malfunction	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel
C1A56 SONAR CIRC	The around view monitor control unit detects that sonar control unit has a malfunction	Around view monitor with Park Assist is cancel
U0122 VDC P-RUN DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
U0416 VDC CHECKSUM DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
U0428 ST ANGLE SENSOR CALIBRATION	Neutral position adjustment of steering angle sensor is not complete.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped
U1000 CAN COMM CIRCUIT	When around view monitor control unit cannot transmit/receive CAN communication signal continuously for 2 seconds or more.	<p>The following functions are stopped</p> <ul style="list-style-type: none"> When communication of steering angle sensor signal is not normal <ul style="list-style-type: none"> - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - BSW system is stopped. - DAA system is stopped. When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal <ul style="list-style-type: none"> - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - LDW system is stopped. - BSW system is stopped. - DAA system is stopped. - Around view monitor with Park Assist is stopped
U1010 CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	MOD (Moving Object Detection) function is stopped.
U111A REAR CAMERA IMAGE SIGNAL	<p>No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	<ul style="list-style-type: none"> Camera image is not displayed (Gray screen display). MOD (Moving Object Detection) function is stopped.
U111B SIDE CAMERA RH IMAGE SIGNAL	<p>No-signal status of side camera RH image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	Camera image is not displayed (Gray screen display).

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U111C FRONT CAMERA IMAGE SIGNAL	No-signal status of front camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U111D SIDE CAMERA LH IMAGE SIGNAL	No-signal status of side camera LH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U112F EPS CIRCUIT	If the EPS system is malfunction	Around view monitor with Park Assist is cancel
U1232 ST ANGLE SEN CALIB	Neutral position adjustment of steering angle sensor is performed. NG signal from steering angle sensor is received.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped.
U1302 CAMERA POWER VOLT	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. <ul style="list-style-type: none"> When camera power supply output is ON: 5.9 - 6.5 V When OFF: 0 V by camera power supply measurement. 	Camera power output is stopped
U1304 CAMERA IMAGE CALIB	<ul style="list-style-type: none"> When camera calibration is incomplete. When camera information in around view monitor control unit and information read from camera are not the same. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> Unmatched icon  display (red) is displayed (applicable for unmatched camera only). Around view monitor with Park Assist is cancel.
U1305 CONFIG UNFINISH	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> On applicable camera screen  marking (Red) is displayed. Around view monitor with Park Assist is cancel.
U1308 R-CAMERA (R&L) CALIB JDMNT	Camera image calibration is incomplete	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped. Around view monitor with Park Assist is stopped.
U1309 PUMP INPUT CURRENT JUDGE	Around view monitor control unit detects the value of current from pump control unit is incorrect	BSW system is stopped.
U130A PUMP ECU JUDGE	If the pump control unit is malfunction	BSW system is stopped.
U130B RR CAMERA COMM ERROR	Around view monitor control unit receives the incorrect communication signal from rear view camera	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped.
U1320 REPROGRAMMING	Reprogramming of around view monitor control unit is incomplete	Around view monitor with Park Assist is cancel
U150E BCM CIRCUIT	If the BCM is malfunction	Around view monitor with Park Assist is cancel

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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U1971 SONAR MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from sonar control unit via CAN communication	Around view monitor with Park Assist is cancelled
U1972 EPS MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from EPS control unit via CAN communication	Around view monitor with Park Assist is cancelled
Other	When around view monitor control unit is not normal.	Switch to camera screen is not allowed.

DTC Inspection Priority Chart

INFOID:000000010926627

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

Priority	Detected items (DTC)
1	U1305: CONFIG UNFINISH
2	U1320: REPROGRAMMING
3	<ul style="list-style-type: none"> U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
4	<ul style="list-style-type: none"> U1232: ST ANGLE SEN CALIB U1304: CAMERA IMAGE CALIB
5	U0428: ST ANGLE SENSOR CALIBRATION
6	U130B: RR CAMERA COMM ERROR
7	U1308: R-CAMERA (R&L) CALIB JDGMNT
8	<ul style="list-style-type: none"> C1A01: POWER SUPPLY VOLTAGE CIRCUIT 1 C1A04: ABS/TCS/VDC CIRC C1A07: CVT SYSTEM C1A39: STRG SEN CIR C1B56: SONAR SYSTEM U0122: VDC P-RUN DIAGNOSIS U0416: VDC CHECKSUM DIAGNOSIS U111A: REAR CAMERA IMAGE SIGNAL U111B: SIDE CAMERA RH IMAGE SIGNAL U111C: FRONT CAMERA IMAGE SIGNAL U111D: SIDE CAMERA LH IMAGE SIGNAL U112F: EPS SYSTEM U1302: CAMERA POWER SUPPLY VOLTAGE U1304: CAMERA CALIBRATION U1309: PUMP INPUT CURRENT JUDGE U130A: PUMP ECU JUDGE U150E: BCM SYSTEM U1971: SONAR MESSAGE COUNTER DIAGNOSIS U1972: EPS MESSAGE COUNTER DIAGNOSIS
9	<ul style="list-style-type: none"> C1A00: CONTROL UNIT C1A03: VHCL SPEED SE CIRC

DTC Index

INFOID:000000010926628

Fail-safe subject system

- A: Around View Monitor system
- B: MOD (Moving Object Detection)
- C: BSW (Blind Spot Warning)
- D: DAA (Driver Attention Alert)
- E: Around view monitor with Park Assist

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC	Display contents of CONSULT	Fail-safe					Refer to
		System					
		A	B (MOD icon color)	C	D	E	
C1A00	CONTROL UNIT					×	AV-166
C1A01	POWER SUPPLY CIRC					×	AV-167
C1A03	VHCL SPEED SE CIRC		×	×	×	×	AV-168
C1A04	ABS/TCS/VDC CIRC		×	×	×	×	AV-170
C1A07	CVT system					×	AV-171
C1A39	STRG CIRCUIT			×	×		AV-172
C1B56	SONAR CIRC					×	AV-173
U0122	VDC P-RUN DIAGNOSIS		×	×	×	×	AV-174
U0416	VDC CHECKSUM DIAGNOSIS		×	×	×	×	AV-175
U0428	ST ANGLE SENSOR CALIBRATION	×	×	×	×	×	AV-176
U1000 ^{NOTE}	CAN COMM CIRC	×	×	×	×	×	AV-178
U1010	CONTROL UNIT (CAN)	×					AV-180
U111A	REAR CAMERA IMAGE SIGNAL	×					AV-182
U111B	SIDE CAMERA RH IMAGE SIGNAL	×					AV-186
U111C	FRONT CAMERA IMAGE SIGNAL	×					AV-192
U111D	SIDE CAMERA LH IMAGE SIGNAL	×					AV-195
U112F	EPS CIRCUIT					×	AV-201
U1232	ST ANGLE SEN CALIB	×	×	×	×	×	AV-205
U1302	CAMERA POWER VOLT	×					AV-222
U1304	CAMERA IMAGE CALIB	×				×	AV-230
U1305 ^{NOTE}	CONFIG UNFINISH					×	AV-231
U1308	R-CAMERA (R&L) CALIB JDGMNT			×		×	AV-232
U1309	PUMP INPUT CURRENT JUDGE		×	×			AV-233
U130A	PUMP ECU JUDGE		×	×			AV-234
U130B	RR CAMERA COMM ERROR		×	×			AV-235
U1320	REPROGRAMMING					×	AV-237
U150E	BCM CIRCUIT					×	AV-238
U1971	SONAR MESSAGE COUNTER DIAG					×	AV-239
U1972	EPS MESSAGE COUNTER DIAG					×	AV-240

NOTE:

Some systems activate fail-safe when U1000 is detected, and some do not.

- The systems which activate failsafe are those which use the signal from the control unit where communication with the around view monitor control unit is interrupted.
- When U1305 is detected, operates with vehicle settings set to default values.

PUMP CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

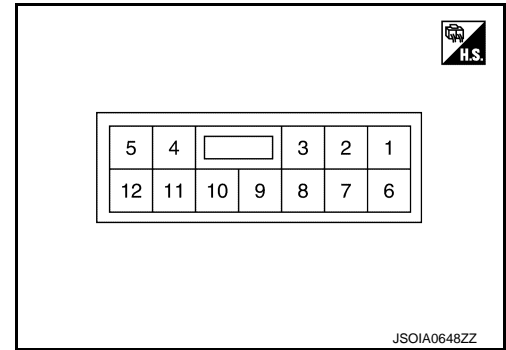
[DRIVER ASSISTANCE SYSTEM]

PUMP CONTROL UNIT

Reference Value

INFOID:000000010727914

TERMINAL LAYOUT



PHYSICAL VALUES

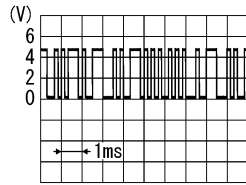
Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	–	Signal name	Input/ Output				
1 (SB)	2 (LG)	Air pump power supply	Output	Ignition switch ON	Air pump operated	9.5 – 16 V	12 V
					Air pump not operated	0 – 0.1 V	0 V
2 (LG)	Ground	Air pump ground	—	Ignition switch ON	—	0 – 0.1 V	0 V
3 (GR)	5 (B)	Washer pump ground	Output	Ignition switch ON	Front window washer operated	0 – 0.1 V	0 V
					Front window washer not operated	9.5 – 16 V	12 V
4 (Y)	5 (B)	Washer pump power supply	Output	Ignition switch ON	Rear camera washer operated	0 – 0.1 V	0 V
					Rear camera washer not operated	9.5 – 16 V	12 V
5 (B)	Ground	Ground	—	Ignition switch ON	—	0 – 0.1 V	0 V
6 (V)	Ground	Communication line ground	—	Ignition switch ON	—	0 – 0.1 V	0 V
7 (L)	Ground	Communication line (PUMP → CAM- ERA)	Output	Ignition switch ON	—	Input the waveform synchronized with the communication status. 	

PKIB5039J

PUMP CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	–	Signal name	Input/ Output				
8 (BR)	Ground	Communication line (CAMERA → PUMP)	Input	Ignition switch ON	—	Input the waveform synchronized with the communication status. <div></div> <div>PKIB5039J</div>	
9 (LG)	5 (B)	Rear washer status	Output	Ignition switch ON	Rear washer switch is ON.	0 – 0.1 V	0 V
					Rear washer switch is OFF.	9.5 – 16 V	12 V
10 (BR)	5 (B)	Rear washer switch input	Input	Ignition switch ON	Rear washer switch is ON.	9.5 – 16 V	12 V
					Rear washer switch is OFF.	0 – 0.1 V	0 V
12 (LG)	Ground	Ignition power sup- ply	Input	Ignition switch ON		12 – 14 V	Battery voltage

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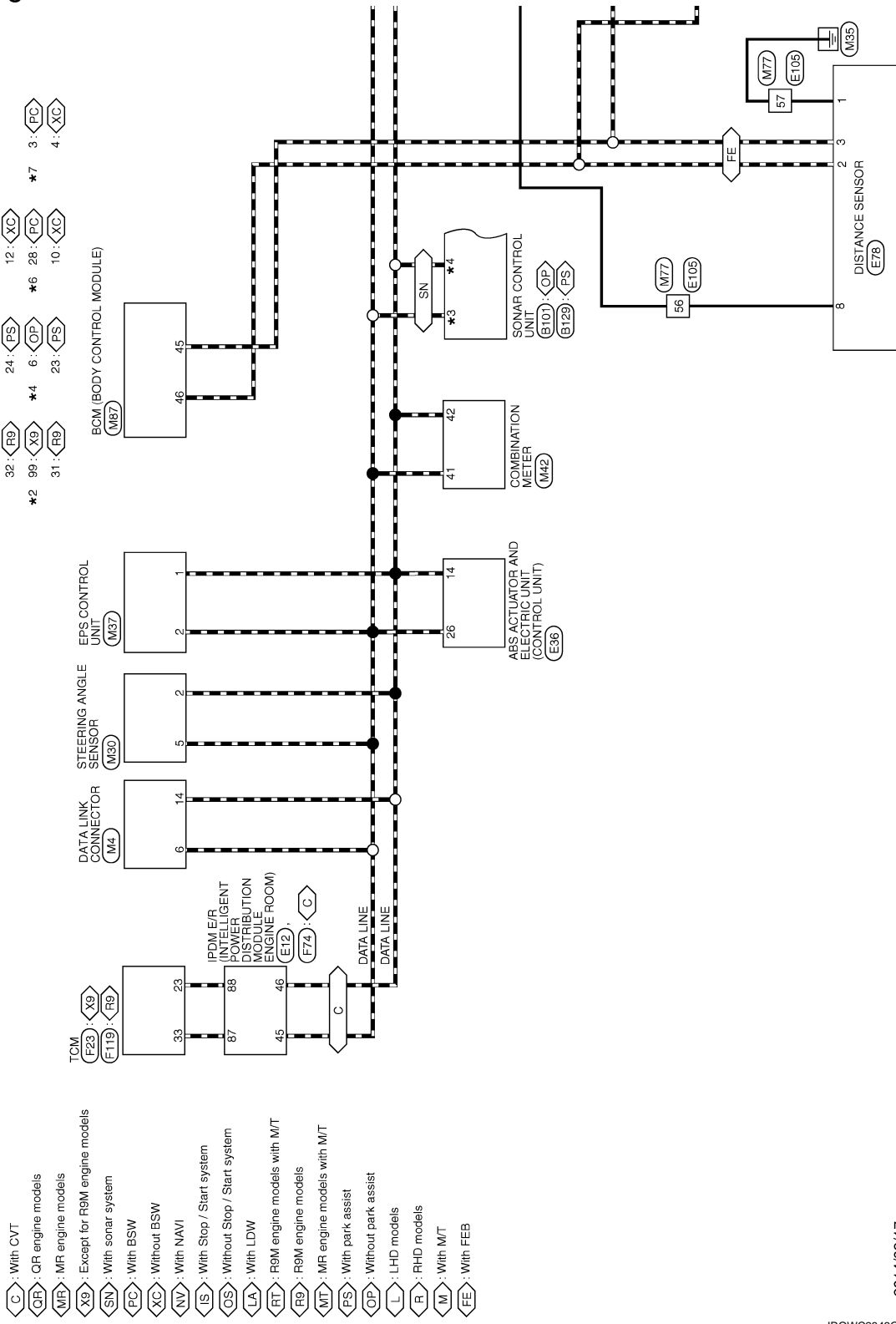
WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

INFOID:0000000010727915

DRIVER ASSISTANCE SYSTEMS



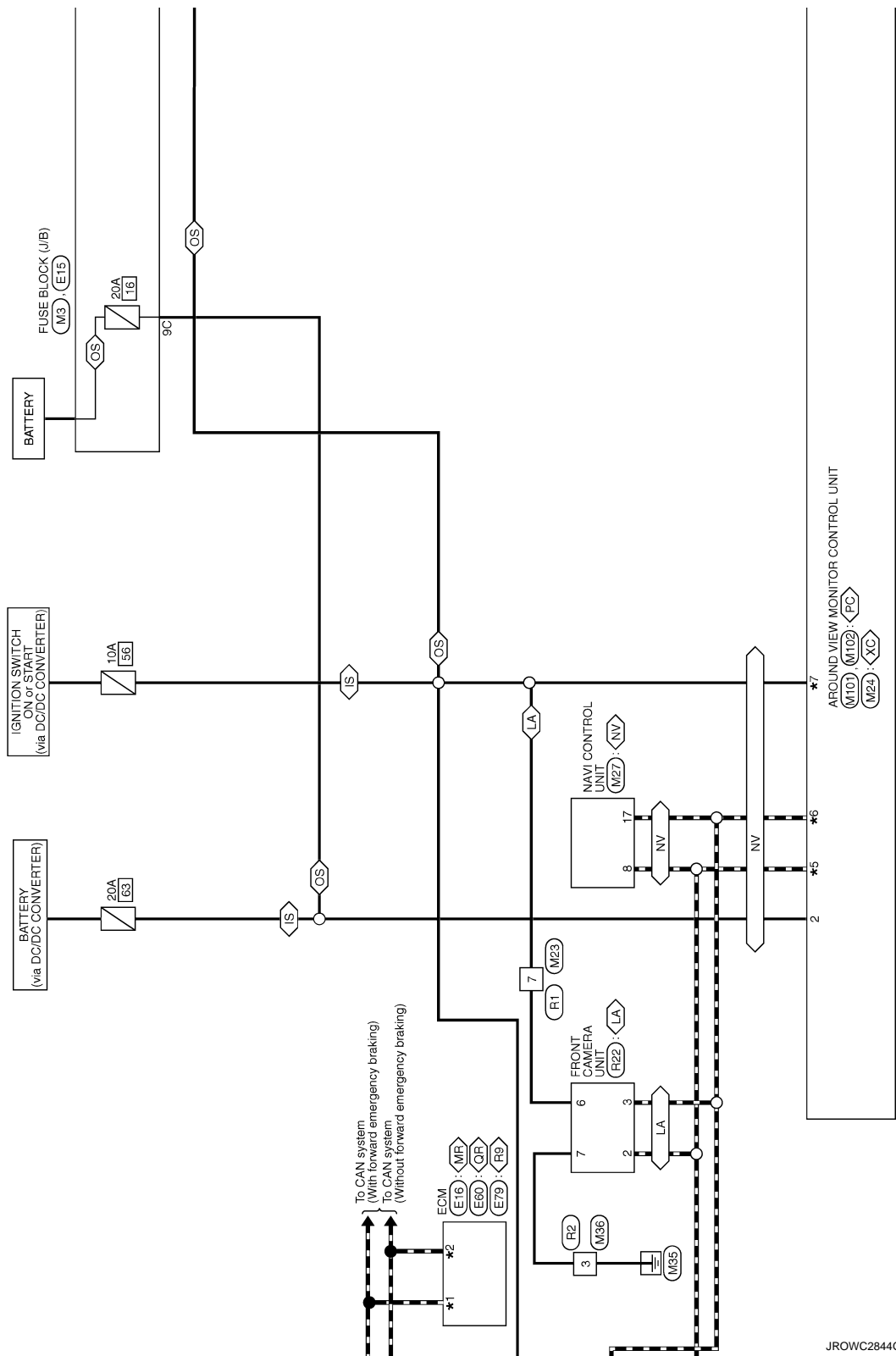
JROWC2843GB

2014/03/17

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

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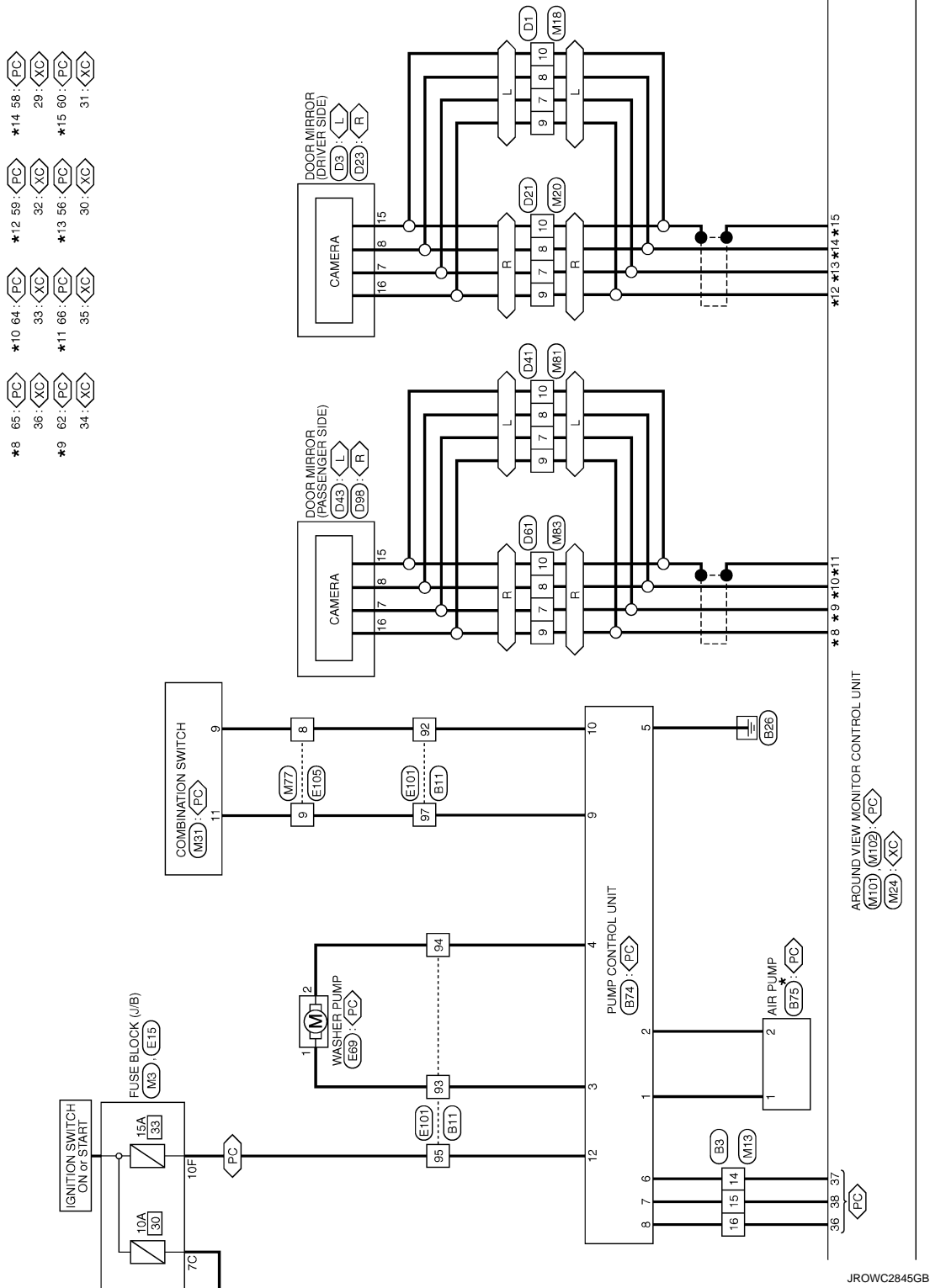


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DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

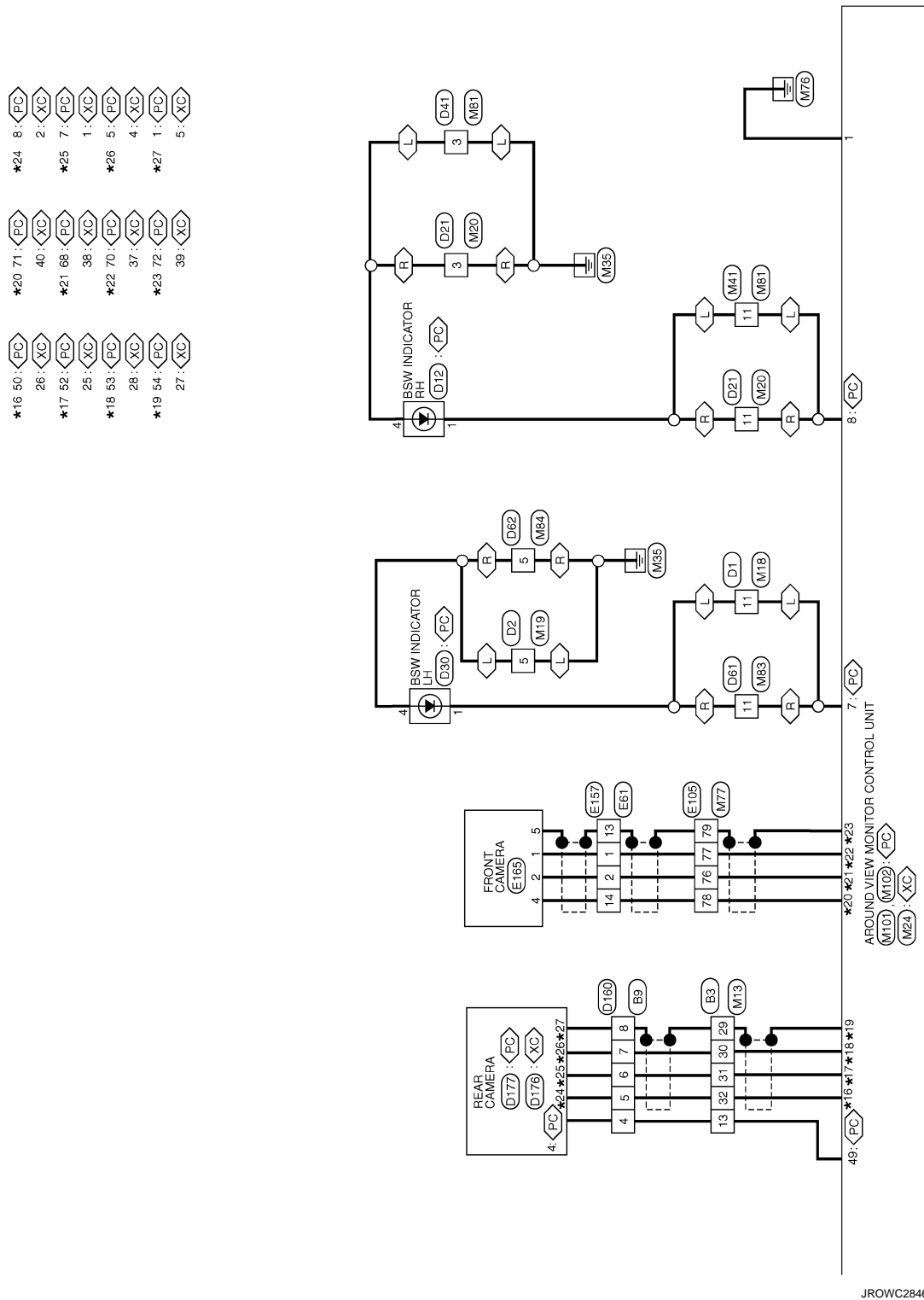
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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]



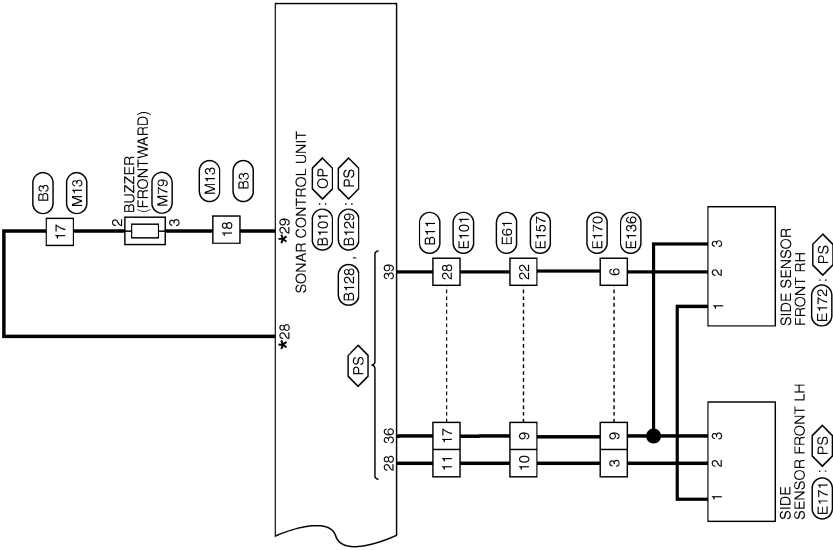
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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

*28 19 : OP
2 : PS
*29 18 : OP
10 : PS



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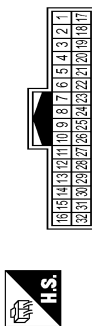
DRIVER ASSISTANCE SYSTEMS

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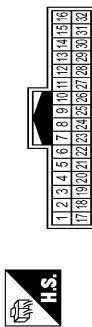
[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

Connector No.	B3
Connector Name	WIPE TO WIRE
Connector Type	TH32MW-AH



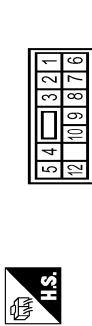
Connector No.	B9
Connector Name	WIPE TO WIRE
Connector Type	TH32MW-AH



Connector No.	B11
Connector Name	WIPE TO WIRE
Connector Type	TH80MDGY-CS16-TM4



Connector No.	B74
Connector Name	PUMP CONTROL UNIT
Connector Type	NS12FM-CS



Terminal No.	Color	Off Wire	Signal Name [Specification]
1	SB	-	-
2	V	-	-
3	LAR	-	-
4	V	-	-
5	GR	-	-
6	Y	-	-
7	LG	-	-
8	BG	-	-
9	W	-	-
10	LAY	-	-
11	BR	-	-
12	Y	-	-
13	W	-	-
14	V	-	-
15	L	-	-
16	BR	-	-
17	Y	-	-
18	LAL	-	- [Without PSM]
19	SB	-	- [With PSM]
20	LG	-	-
21	G	-	-
22	V	-	-
23	BR	-	-
24	P	-	-
25	L	-	-
26	G	-	-
29	SHIELD	-	-
30	W	-	-
31	B	-	-
32	R	-	-

Terminal No.	Color	Off Wire	Signal Name [Specification]
4	W	-	-
5	R	-	-
6	B	-	-
7	W	-	-
8	SHIELD	-	-
13	W	-	-
14	V	-	-
15	BR	-	-
16	SB	-	-
17	LAW	-	-
18	LAR	-	-
19	LG	-	-
20	LAG	-	-
21	LAG	-	-
22	LAR	-	-
23	LAR	-	-
24	R	-	-
29	Y	-	-
30	G	-	-
31	GR	-	-
32	LG	-	-

Terminal No.	Color	Off Wire	Signal Name [Specification]
1	G	-	-
2	LAR	-	-
5	BG	-	-
11	BR	-	-
12	W	-	-
13	P	-	-
14	SB	-	-
15	V	-	-
16	P	-	-
17	P	-	-
18	G	-	-
19	P	-	-
20	R	-	-
21	BR	-	-
22	Y	-	-
23	BG	-	-
24	SB	-	-
25	G	-	-
26	B	-	-
27	P	-	-
28	R	-	-
29	LG	-	-
30	P	-	-
92	BR	-	-
93	GR	-	-
94	Y	-	-
95	LG	-	-
97	LG	-	-

Terminal No.	Color	Off Wire	Signal Name [Specification]
1	SB	-	AIR PUMP POWER SUPPLY
2	LG	-	AIR PUMP GROUND
3	GR	-	WASHER PUMP GROUND
4	Y	-	WASHER PUMP POWER SUPPLY
5	B	-	GROUND
6	V	-	COMMUNICATION LINE GROUND
7	L	-	COMMUNICATION LINE (PUMP - CAMERA)
8	BR	-	COMMUNICATION LINE (CAMERA - PUMP)
9	LG	-	REAR WASHER STATUS
10	BR	-	REAR WASHER SWITCH INPUT
12	LG	-	IGNITION POWER SUPPLY

Connector No.	B75
Connector Name	AIR PUMP
Connector Type	RH02FB



Terminal No.	Color	Off Wire	Signal Name [Specification]
1	SB	-	-
2	LG	-	-

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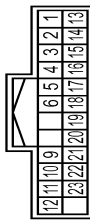
DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

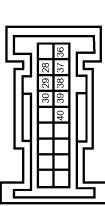
DRIVER ASSISTANCE SYSTEMS

Connector No.	B101
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FV-AH



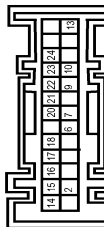
Terminal No.	Color	Wire	Signal Name [Specification]
1	LG	BR	CENTER SENSOR SIGNAL FRONT RH
2	G	BR	CENTER SENSOR SIGNAL FRONT LH
3	W	G	CORNER SENSOR SIGNAL FRONT LH
4	V	G	CORNER SENSOR SIGNAL FRONT RH
5	Y	P	FRONT SENSOR SIGNAL FRONT LH
6	P	W	CORNER SENSOR SIGNAL FRONT LH
7	P	W	CORNER SENSOR SIGNAL FRONT RH
8	P	W	CORNER SENSOR SIGNAL FRONT RH
9	V	LG	CORNER SENSOR SIGNAL FRONT RH
10	LG	R	CORNER SENSOR SIGNAL FRONT RH
11	SB	R	CORNER SENSOR SIGNAL FRONT RH
12	BR	R	CORNER SENSOR SIGNAL FRONT RH
13	P	R	CORNER SENSOR SIGNAL FRONT RH
14	P	R	CORNER SENSOR SIGNAL FRONT RH
15	B	R	CORNER SENSOR SIGNAL FRONT RH
16	V	R	CORNER SENSOR SIGNAL FRONT RH
17	SB	R	CORNER SENSOR SIGNAL FRONT RH
18	LAL	R	CORNER SENSOR SIGNAL FRONT RH
19	Y	R	CORNER SENSOR SIGNAL FRONT RH
20	LAV	R	CORNER SENSOR SIGNAL FRONT RH
21	G	R	CORNER SENSOR SIGNAL FRONT RH
22	R	R	CORNER SENSOR SIGNAL FRONT RH
23	SB	R	CORNER SENSOR SIGNAL FRONT RH

Connector No.	B128
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FV-AH



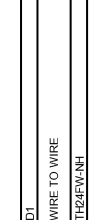
Terminal No.	Color	Wire	Signal Name [Specification]
28	BR	BR	CORNER SENSOR SIGNAL FRONT LH
29	G	BR	CORNER SENSOR SIGNAL FRONT LH
30	V	G	CORNER SENSOR SIGNAL FRONT LH
31	P	G	CORNER SENSOR SIGNAL FRONT LH
32	W	P	CORNER SENSOR SIGNAL FRONT LH
33	W	P	CORNER SENSOR SIGNAL FRONT LH
34	W	P	CORNER SENSOR SIGNAL FRONT LH
35	W	P	CORNER SENSOR SIGNAL FRONT LH
36	W	P	CORNER SENSOR SIGNAL FRONT LH
37	W	P	CORNER SENSOR SIGNAL FRONT LH
38	W	P	CORNER SENSOR SIGNAL FRONT LH
39	W	P	CORNER SENSOR SIGNAL FRONT LH
40	SB	R	CORNER SENSOR SIGNAL FRONT LH

Connector No.	B129
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FV-AH



Terminal No.	Color	Wire	Signal Name [Specification]
6	R	Y	FRONT BUZZER POWER SUPPLY
7	V	G	CORNER SENSOR SIGNAL REAR LH
8	G	G	CORNER SENSOR SIGNAL REAR RH
9	G	G	CORNER SENSOR SIGNAL REAR RH
10	SB	B	FRONT BUZZER DRIVE SIGNAL
11	SB	B	FRONT BUZZER DRIVE SIGNAL
12	SB	B	FRONT BUZZER DRIVE SIGNAL
13	SB	B	FRONT BUZZER DRIVE SIGNAL
14	BR	BR	IGNITION POWER SUPPLY
15	V	V	REAR BUZZER POWER SUPPLY
16	V	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SB	SONAR SYSTEM OFF SWITCH SIGNAL
18	SB	SB	REAR SENSOR POWER SUPPLY
19	G	G	CORNER SENSOR SIGNAL REAR LH
20	G	G	CORNER SENSOR SIGNAL REAR RH

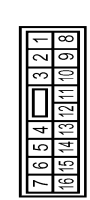
Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH24FV-AH



Terminal No.	Color	Wire	Signal Name [Specification]
12	LG	BR	CORNER SENSOR SIGNAL FRONT RH
13	G	BR	CORNER SENSOR SIGNAL FRONT LH
14	W	G	CORNER SENSOR SIGNAL FRONT LH
15	V	G	CORNER SENSOR SIGNAL FRONT LH
16	Y	P	FRONT SENSOR SIGNAL FRONT LH
17	P	W	CORNER SENSOR SIGNAL FRONT LH
18	P	W	CORNER SENSOR SIGNAL FRONT RH
19	P	W	CORNER SENSOR SIGNAL FRONT RH
20	P	W	CORNER SENSOR SIGNAL FRONT RH
21	P	W	CORNER SENSOR SIGNAL FRONT RH
22	P	W	CORNER SENSOR SIGNAL FRONT RH
23	P	W	CORNER SENSOR SIGNAL FRONT RH
24	P	W	CORNER SENSOR SIGNAL FRONT RH

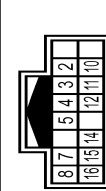
Terminal No.	Color	Wire	Signal Name [Specification]
1	LAV	-	-
2	LAV	-	-
3	W	-	-
4	V	-	-
5	SB	-	-
6	LG	-	-
7	GR	-	-
8	G	-	-
9	Y	-	-
10	B	-	-
11	R	-	-
12	LAV	-	-
13	LAV	-	-
14	LAV	-	-
15	LAV	-	-
16	LAV	-	-
17	LAV	-	-
18	LAV	-	-
19	LAV	-	-
20	LAV	-	-
21	LAV	-	-
22	LAV	-	-
23	L	-	-
24	BG	-	-

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	TH24FV-AH



Terminal No.	Color	Wire	Signal Name [Specification]
1	LAV	-	-
2	R	-	-
3	LAG	-	-
4	B	-	-
5	B	-	-
6	B	-	-
7	LAV	-	-
8	SB	-	-
9	LAGR	-	-
10	LAV	-	-
11	P	-	-
12	LG	-	-
13	LAV	-	-
14	LAV	-	-
15	LAV	-	-
16	B	-	-

Connector No.	D3
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH16MW-AH



Terminal No.	Color	Wire	Signal Name [Specification]
2	LG	-	-
3	LAV	-	-
4	LAV	-	-
5	LAV	-	-

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

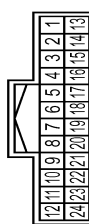
7	GR	-
8	G	-
10	B	-
11	LA/SE	-
12	LA/GR	-
14	LA/B	-
15	B	-
16	Y	-

Connector No.	D12
Connector Name	BSW INDICATOR RH
Connector Type	TH6MW-NH



Terminal No.	Wire	Signal Name [Specification]
1	G	-
4	B	-

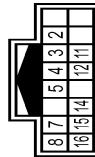
Connector No.	D21
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Wire	Signal Name [Specification]
1	B	-
3	B	-
4	W	-
5	V	-
6	SB	-
7	L	-
8	G	-
9	Y	-

10	B	-
11	G	-
13	LA/W	-
14	LA/G	-
15	LA/GR	-
16	LAP	-
17	LA/SE	-
18	LA/R	-
19	LA/SE	-
20	GR	-
21	LA/G	-
22	R	-
23	BG	-
24	L	-

Connector No.	D23
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH6MW-NH



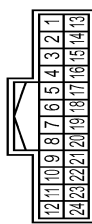
Terminal No.	Wire	Signal Name [Specification]
2	GR	-
3	LA/L	-
4	LA/R	-
5	LA/Y	-
7	L	-
8	G	-
11	LA/BG	-
12	LA/V	-
14	LA/B	-
15	B	-
16	Y	-

Connector No.	D30
Connector Name	BSW INDICATOR LH
Connector Type	TH6MW-NH



Terminal No.	Wire	Signal Name [Specification]
1	R	-
4	B	-

Connector No.	D41
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



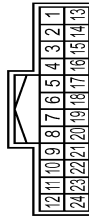
Terminal No.	Wire	Signal Name [Specification]
1	B	-
3	B	-
4	P	-
5	R	-
6	SB	-
7	L	-
8	V	-
9	Y	-
10	B	-
11	G	-
13	LA/Y	-
14	LA/V	-
15	LA/R	-
16	LA/L	-
17	LA/BG	-
18	GR	-
21	LAG	-

Connector No.	D43
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH6MW-NH



Terminal No.	Wire	Signal Name [Specification]
2	GR	-
3	LA/L	-
4	LA/R	-
5	LA/Y	-
7	L	-
8	V	-
10	B	-
11	LA/BG	-
12	LA/V	-
14	LA/B	-
15	B	-
16	Y	-

Connector No.	D61
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Wire	Signal Name [Specification]
2	LA/B	-
3	P	-
4	R	-
5	SB	-
6	LG	-
7	L	-
8	V	-
9	Y	-

JROWC2850GB

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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

10	B	-
11	R	-
13	B	-
14	LAW	-
15	LA/G	-
16	LA/GR	-
17	LAP	-
18	LA/SE	-
19	B	-
20	LG	-
21	BR	-
22	LA/G	-

Connector No.	D62
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	V	-
3	R	-
4	B	-
5	B	-
6	LAL	-
7	LA/BR	-
9	LAY	-
10	LA/BR	-
11	LAL	-

Connector No.	D98
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH6MW-NH



8	7	5	4	3	2
16	15	14	12	11	

Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	-
3	LAP	-
4	LA/G	-
5	LAW	-
7	V	-
8	V	-
11	LASB	-
12	LA/GR	-
14	LAW	-
15	B	-
16	Y	-

Connector No.	D160
Connector Name	WIRE TO WIRE
Connector Type	TH32FM-NH



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 [Specification]
4	W	-
5	W	-
6	W	-
7	W	-
8	W	-
13	W	-
14	W	-
15	W	-
16	W	-

17	W	-
18	W	-
19	W	-
20	W	-
21	W	-
22	W	-
23	W	-
24	W	-
29	W	-
30	W	-
31	W	-
32	W	-

Connector No.	D176
Connector Name	REAR CAMERA
Connector Type	RH06FB-TV



12	4	5
----	---	---

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	GND
2	W	IGN
4	W	VIDEO+
5	W	V-CAM1 L

Connector No.	D177
Connector Name	REAR CAMERA
Connector Type	TH08MW-NH



4	8	7	5
---	---	---	---

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	COMP-
4	W	SERIAL-SIGNAL
5	W	VIDEO+
7	W	GND
8	W	POWER

Connector No.	E12
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH24FGY-NH



36	35	34	33	32	31	30	29	27	26	25
48	47	46	45							

Terminal No.	Color Of Wire	Signal Name [Specification]
25	LG	-
26	W	-
27	SB	-
28	P	-
30	L	-
31	G	-
32	B	-
33	BG	-
34	LG	-
35	V	-
36	Y	-
37	B	-
38	GR	-
39	BR	-
45	L	-
46	P	-
47	W	-
48	R	-

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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

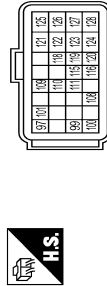
DRIVER ASSISTANCE SYSTEMS

Connector No.	E15
Connector Name	FUSE BLOCK (UB)
Connector Type	INS10FW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
10F	L	-	-
1F	W	-	-
5F	V	-	-
6F	Y	-	-

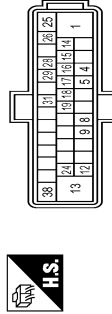
Connector No.	E16
Connector Name	ECM
Connector Type	IR424FB-H28-L-LH



Terminal No.	Color	Wire	Signal Name [Specification]
97	W	-	BAROMETRIC PRESSURE SENSOR
99	P	-	CANH
100	L	-	CANH
101	Y	-	SENSOR POWER SUPPLY
108	R	-	CLUTCH PEDAL POSITION SWITCH
109	LG	-	IGNITION SWITCH
110	G	-	ASC/D STEERING SWITCH
111	BR	-	SENSOR GROUND
115	V	-	STOP LAMP SWITCH
116	GR	-	BRAKE PEDAL POSITION SWITCH
118	SB	-	SENSOR POWER SUPPLY
119	Y	-	ACCELERATION PEDAL POSITION SENSOR 2
120	LG	-	SENSOR GROUND
121	BR	-	POWER SUPPLY FOR ECM
122	V	-	SENSOR POWER SUPPLY
123	B	-	ECM GROUND

124	R	-	SENSOR GROUND
125	B	-	ECM GROUND
126	GR	-	ACCELERATION PEDAL POSITION SENSOR 1
127	R	-	SENSOR GROUND
128	B	-	ECM GROUND

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BE224FB-BHY2-BJ22-RH



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y	-	MOTOR POWER SUPPLY
4	SB	-	FR RH WHEEL SENSOR SIGNAL
5	V	-	BRAKE VACUUM SENSOR POWER SUPPLY
8	P	-	FR LH WHEEL SENSOR SIGNAL
9	Y	-	hill descent control SWITCH SIGNAL
12	LG	-	BRAKE VACUUM SENSOR SIGNAL
13	B	-	GROUND (MOTOR)
14	P	-	CANH
15	BR	-	VDC OFF SWITCH SIGNAL
16	R	-	FR RH WHEEL SENSOR POWER SUPPLY
17	Y	-	RR RH WHEEL SENSOR POWER SUPPLY
18	G	-	RR LH WHEEL SENSOR SIGNAL
19	W	-	FR LH WHEEL SENSOR POWER SUPPLY
24	SHIELD	-	BRAKE VACUUM SENSOR GROUND
25	BR	-	VALVE POWER SUPPLY
26	L	-	CANH
28	GR	-	IGNITION POWER SUPPLY
29	LG	-	RR RH WHEEL SENSOR SIGNAL
31	BR	-	RR LH WHEEL SENSOR POWER SUPPLY
38	B	-	GROUND (VALVE)

Connector No.	E60
Connector Name	ECM
Connector Type	IR424FB-H28-L-LH



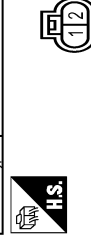
Terminal No.	Color	Wire	Signal Name [Specification]
99	P	-	CAN COMMUNICATION LINE (CANL)
100	L	-	CAN COMMUNICATION LINE (CANH)
103	Y	-	REFRIGERANT PRESSURE SENSOR
104	R	-	SENSOR POWER SUPPLY
109	LG	-	IGNITION SWITCH
110	G	-	ASC/D STEERING SWITCH
111	BR	-	SENSOR GROUND
115	V	-	STOP LAMP SWITCH
116	GR	-	BRAKE PEDAL POSITION SWITCH
117	W	-	PNP SIGNAL
118	SB	-	SENSOR POWER SUPPLY
119	Y	-	ACCELERATION PEDAL POSITION SENSOR 2
120	LG	-	SENSOR GROUND
121	BR	-	POWER SUPPLY FOR ECM
122	V	-	SENSOR POWER SUPPLY
123	BR	-	ECM GROUND
124	W	-	SENSOR GROUND
126	GR	-	ACCELERATION PEDAL POSITION SENSOR 1
127	R	-	SENSOR GROUND
128	BR	-	ECM GROUND

Connector No.	E61
Connector Name	WIRE TO WIRE
Connector Type	IR424MW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	V	-	-
2	L	-	-
3	P	-	-
4	W	-	-
6	P	-	-
7	G	-	-
9	P	-	-
10	BR	-	-
12	GR	-	-
13	SHIELD	-	-
14	LG	-	-
15	P	-	-
16	V	-	-
17	SB	-	-
18	P	-	-
19	LG	-	-
22	R	-	-
23	Y	-	-
24	GR	-	-

Connector No.	E69
Connector Name	REAR WASHER PUMP
Connector Type	HS02FB-4V



DRIVER ASSISTANCE SYSTEMS

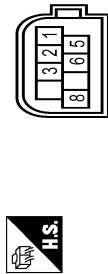
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[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

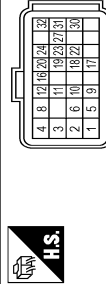
Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	R	-

Connector No.	Signal Name [Specification]
E78	-
Connector Name	DISTANCE SENSOR
Connector Type	AAZ08FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	L	CAN-H
3	R	CAN-L
5	L	CHASSIS COMM-H
6	W	CHASSIS COMM-L
8	P	IGNITION

Connector No.	Signal Name [Specification]
E79	-
Connector Name	ECM
Connector Type	RH24FB-RZ8-R-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	ECM GROUND
2	W	ACCELERATOR PEDAL POSITION SENSOR 1
3	Y	SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 1
4	B	ECM GROUND
5	L	POWER SUPPLY FOR ECM
6	G	SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 1
8	B	ECM GROUND
9	L	FUEL, WATER AND WATER IN FUEL LEVEL SENSOR

10	L	SENSOR POWER SUPPLY ACCELERATOR PEDAL POSITION SENSOR 2
11	V	ACCELERATOR PEDAL POSITION SENSOR 2
12	P	SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR 2
16	BG	STOP LAMP SWITCH [With M/T]
16	R	BRAKE PEDAL POSITION SWITCH [With CVT]
17	LG	IGNITION SWITCH
18	G	ASCD STEERING SWITCH
19	BR	SENSOR GROUND (ASCD STEERING SWITCH)
20	BR	FUEL PUMP CONTROL MODULE (COMMAND)
22	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
23	V	SPEED LIMITER MAIN SWITCH
24	R	CLUTCH PEDAL POSITION SWITCH
27	V	CLUTCH INTERLOCK SWITCH
30	BR	ASCD MAIN SWITCH
31	P	CAN-L
32	L	CAN-H

Connector No.	Signal Name [Specification]
E101	-
Connector Name	WIRE TO WIRE
Connector Type	TH80FDGY-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
5	G	-
11	BR	-
12	W	-
13	P	-
14	SB	-
15	V	-
16	P	-
17	P	-
18	G	-
19	P	-
20	G	-
21	BR	-
22	LG	-
23	Y	-
24	SB	-
25	G	-

26	B	-
27	P	-
28	R	-
29	LG	-
30	P	-
92	BR	-
93	GR	-
94	R	-
95	L	-
97	LG	-

Connector No.	Signal Name [Specification]
E105	-
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
5	V	- [Without ISS]
5	W	- [With ISS]
8	L	-
9	LG	-
10	W	-
20	W	-
21	B	-
22	SHIELD	-
31	Y	-
32	W	-
33	SB	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	GR	-
48	SB	-
51	P	-
52	L	-

53	W	-
54	Y	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	G	-
61	BR	-
62	V	-
63	BR	-
64	GR	-
65	LG	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	R	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	GR	-
82	Y	-
83	SB	-
84	L	-
85	G	-
86	Y	-
87	B	-
88	B	-
91	R	-
92	BR	-
93	W	-
96	GR	-
97	R	-
98	V	-
99	Y	-

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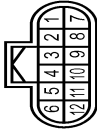
DRIVER ASSISTANCE SYSTEMS

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[DRIVER ASSISTANCE SYSTEM]

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Connector No.	E136
Connector Name	WIRE TO WIRE
Connector Type	RH12FB



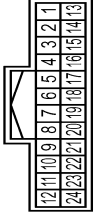
Terminal No.	Color	Wire	Signal Name [Specification]
1	P	-	-
2	G	-	-
3	BR	-	-
4	P	-	-
5	W	-	-
6	R	-	-
7	P	-	-
8	LG	-	-
9	P	-	-
10	P	-	-
11	V	-	-
12	SB	-	-

Connector No.	E151
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS08FGY-PR



Terminal No.	Color	Wire	Signal Name [Specification]
1	R	-	-
2	GR	-	-
3	GR	-	-
4	B	-	-
5	B	-	-
6	LG	-	-

Connector No.	E157
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-AH1



Terminal No.	Color	Wire	Signal Name [Specification]
1	V	-	-
2	L	-	-
3	P	-	-
4	W	-	-
5	P	-	-
6	P	-	-
7	G	-	-
8	P	-	-
9	P	-	-
10	BR	-	-
11	GR	-	-
12	GR	-	-
13	SHIELD	-	-
14	LG	-	-
15	P	-	-
16	V	-	-
17	SB	-	-
18	P	-	-
19	LG	-	-
20	R	-	-
21	V	-	-
22	V	-	-
23	GR	-	-
24	GR	-	-

Connector No.	E165
Connector Name	FRONT CAMERA
Connector Type	RH06FB-IV



Terminal No.	Color	Wire	Signal Name [Specification]
1	V	-	-
2	L	-	-
3	L	-	-
4	LG	-	-
5	SHIELD	-	-

Connector No.	E170
Connector Name	WIRE TO WIRE
Connector Type	RH12MB



Terminal No.	Color	Wire	Signal Name [Specification]
1	P	-	-
2	G	-	-
3	BR	-	-
4	P	-	-
5	W	-	-
6	R	-	-
7	P	-	-
8	LG	-	-
9	P	-	-
10	P	-	-
11	V	-	-
12	SB	-	-

Connector No.	E171
Connector Name	SIDE SENSOR FRONT LH
Connector Type	AD203FB-IV



Terminal No.	Color	Wire	Signal Name [Specification]
1	SB	-	-
2	BR	-	-
3	P	-	-

Connector No.	E172
Connector Name	SIDE SENSOR FRONT RH
Connector Type	AD203FB-IV



Terminal No.	Color	Wire	Signal Name [Specification]
1	SB	-	-
2	R	-	-
3	P	-	-

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A
B
C
D
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N
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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

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Connector No.	F23
Connector Name	TCM
Connector Type	RH40FB-F23-LRH



	33	34	35		37	38	39	40	47	48
	</									

Terminal No.	Color	Wire	Signal Name [Specification]
2	GR	Y	-
4	Y		D RANGE SWITCH
5	BR		N RANGE SWITCH
6	G		R RANGE SWITCH
7	V		P RANGE SWITCH
11	LG		SENSOR GROUND
12	BR		CVT FLUID TEMPERATURE SENSOR
16	SB		SECONDARY PRESSURE SENSOR
17	R		PRIMARY PRESSURE SENSOR
23	P		CANL
24	LG		INPUT SPEED SENSOR
26	BG		SENSOR POWER SUPPLY
30	GR		LINE PRESSURE SOLENOID VALVE
33	L		CANH
34	W		OUTPUT SPEED SENSOR
35	GR		PRIMARY SPEED SENSOR
37	Y		SELECT SOLENOID VALVE
38	G		TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	W		SECONDARY PRESSURE SOLENOID VALVE
40	V		PRIMARY PRESSURE SOLENOID VALVE
41	B		GROUND
42	B		GROUND
45	V		BATTERY POWER SUPPLY
46	V		BATTERY POWER SUPPLY
47	BG		IGNITION POWER SUPPLY
48	BG		IGNITION POWER SUPPLY

Connector No.	F74
Connector Name	IPDM-ER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH24FB-NH



09	07	06	05	04	03	02	30	09	08	07
110		107	104	103			102	101	100	099

Terminal No.	Color	Wire	Signal Name [Specification]
87	L		-
88	P		-
89	W		-
90	R		-
92	GR		-
93	G		- [With R04 Engine]
95	SB		- [With MK20 or CR23 Engine]
96	W		-
97	P		-
98	Y		-
99	BG		-
100	LG		-
101	V		-
102	Y		-
105	W		-
106	BR		-
107	V		-
110	SB		-

Connector No.	F119
Connector Name	TCM
Connector Type	RH40FB-F23-LH



32	33	34	35	37	38	39	40	47	48
23	24	26			30	45	46		
11	12		14	16	17			41	42
1	2	4	5	6	7				

Terminal No.	Color	Wire	Signal Name [Specification]
1	P		ELECTRIC OIL PUMP RELAY
2	GR		-
4	Y		D RANGE SWITCH
5	BR		N RANGE SWITCH
6	G		R RANGE SWITCH
7	V		P RANGE SWITCH
11	LG		SENSOR GROUND
12	BR		CVT FLUID TEMPERATURE SENSOR
14	V		G SENSOR
16	SB		SECONDARY PRESSURE SENSOR
17	R		PRIMARY PRESSURE SENSOR
23	P		CANL
24	LG		INPUT SPEED SENSOR
25	R		ELECTRIC OIL PUMP COMMAND SIGNAL
26	BG		SENSOR POWER SUPPLY
30	GR		LINE PRESSURE SOLENOID VALVE
32	SB		ELECTRIC OIL PUMP STATUS SIGNAL
33	L		CANH
34	W		OUTPUT SPEED SENSOR
35	GR		PRIMARY SPEED SENSOR
37	Y		SELECT SOLENOID VALVE
38	G		TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	W		SECONDARY PRESSURE SOLENOID VALVE
40	V		PRIMARY PRESSURE SOLENOID VALVE
41	B		GROUND
42	B		GROUND
45	V		BATTERY POWER SUPPLY
46	V		BATTERY POWER SUPPLY
47	BG		IGNITION POWER SUPPLY
48	BG		IGNITION POWER SUPPLY

Connector No.	M3
Connector Name	FUSE BLOCK (JIB)
Connector Type	NS16FM-CS



70	69	68	40		30	20	10
100	130	140	100		100	90	80

Terminal No.	Color	Wire	Signal Name [Specification]
10C	LG		-
13C	LAG		-
14C	R		-
15C	L		-
16C	LAW		-
1C	R		-
2C	G		-
3C	Y		-
4C	LG		-
5C	GR		-
6C	LAR		-
7C	Y		-
8C	BR		- [With ISS]
8C	LABR		- [Without ISS]
9C	L		-

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



11		14	15	16
3	4	5	6	8

Terminal No.	Color	Wire	Signal Name [Specification]
3	LG		-
4	B		-
5	B		-
6	L		-
8	Y		-

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< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH2FW-NH

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 [Specification]
1	SB	-
2	V	-
3	SB	-
4	BR	-
5	L	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	Y	-
11	R	-
12	SB	-
13	LG	-
14	V	-
15	SB	-
16	Y	-
17	LA/BR	-
18	LAL	-
20	BG	-
21	BG	-
22	GR	-
23	GR	-
24	P	-
25	L	-
26	PR	-
29	SHIELD	-
30	W	-
31	B	-
32	R	-

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

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 [Specification]
1	B	-
2	B	-
3	V	-
4	V	-
5	BR	-
6	LG	-
7	L	-
8	Y	-
9	G	-
10	SHIELD	-
11	R	-
13	GR	-
14	LA/SE	-
15	LA/GR	-
16	LAV	-
17	LAL	-
18	LABG	-
19	LAVR	-
22	LA/G	-
23	BG	-
24	SB	-

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
3	G	-
4	B	-
5	B	-
6	Y	-
7	R	-
8	L	-
9	BR	-
10	GR	-
11	Y	-
12	BG	-
13	G	-
14	R	-
15	P	-
16	B	-

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

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 [Specification]
1	B	-
3	GR	-
4	Y	-
5	V	-

6	BR	-
7	L	-
8	Y	-
9	G	-
10	SHIELD	-
11	G	-
13	LAV	-
14	LA/G	-
15	LA/GR	-
16	LAVP	-
17	LA/SE	-
18	LAVR	-
19	GR	-
20	GR	-
21	LAVY	-
22	R	-
23	SB	-
24	BG	-

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

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 [Specification]
7	Y	-
8	L	-
9	R	-
13	SB	-
15	SB	-
16	GR	-
17	V	-
18	G	-
19	SB	-
20	R	-
21	B	-



JROWC2856GB

DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

< WIRING DIAGRAM >

DRIVER ASSISTANCE SYSTEMS

Connector No.	M24
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FV-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	Y	BATTERY POWER SUPPLY
4	SB	IGNITION SIGNAL
10	R	CAN-L
12	L	CAN-H
23	SHIELD	CAMERA IMAGE SIGNAL GROUND
24	G	CAMERA IMAGE SIGNAL
25	B	REAR CAMERA GROUND
26	R	REAR CAMERA POWER SUPPLY
27	SHIELD	REAR CAMERA IMAGE SIGNAL (-)
28	W	REAR CAMERA IMAGE SIGNAL (+)
29	Y	SIDE CAMERA DRIVER SIDE GROUND
30	L	SIDE CAMERA DRIVER SIDE POWER SUPPLY
31	SHIELD	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (-)
32	G	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (+)
33	L	SIDE CAMERA PASSENGER SIDE CAMERA GROUND
34	B	SIDE CAMERA PASSENGER SIDE CAMERA POWER SUPPLY
35	SHIELD	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (-)
36	Y	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (+)
37	V	FRONT CAMERA GROUND
38	L	FRONT CAMERA POWER SUPPLY
39	SHIELD	FRONT CAMERA IMAGE SIGNAL (-)
40	LG	FRONT CAMERA IMAGE SIGNAL (+)

Connector No.	M27
Connector Name	NAVI CONTROL UNIT
Connector Type	NH18FV-CS2



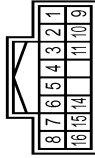
Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	SOUND SIGNAL FRONT SPEAKER LH (With 4 Speaker)
2	Y	SOUND SIGNAL FRONT SPEAKER LH (With 4 Speaker)
3	P	SOUND SIGNAL FRONT LH (With 6 Speaker)
3	R	SOUND SIGNAL FRONT LH (With 4 Speaker)
4	GR	SOUND SIGNAL REAR LH+
5	BR	SOUND SIGNAL REAR LH-
7	W	AUTO A/C INPUT SIGNAL
8	L	CAN-H
9	V	ILLUMINATION SIGNAL
11	G	SOUND SIGNAL FRONT RH+ (With 4 Speaker)
11	W	SOUND SIGNAL FRONT RH+ (With 4 Speaker)
12	GR	SOUND SIGNAL FRONT RH- (With 4 Speaker)
12	V	SOUND SIGNAL FRONT RH- (With 6 Speaker)
13	LG	SOUND SIGNAL REAR RH+
14	Y	SOUND SIGNAL REAR RH-
17	R	CAN-L
18	G	VEHICLE SPEED SIGNAL (6 PULSE)
19	L	BATTERY POWER SUPPLY
20	B	GROUND

Connector No.	M30
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FGV-NH



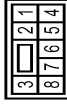
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	P	-
4	G	-
5	L	-

Connector No.	M31
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	INPUT 5
2	SB	OUTPUT 1
3	GR	INPUT 4
4	BG	OUTPUT 4
5	G	INPUT 3
6	W	INPUT 2
7	Y	-
8	V	-
9	G	RR WASH MOTOR
10	BR	OUTPUT 2
11	Y	FR WASH MOTOR
14	LG	IGN
15	P	OUTPUT 3
16	GR	GND

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Type	NS08FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
2	V	-
3	B	-

Connector No.	M37
Connector Name	EPS CONTROL UNIT
Connector Type	TH08FM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
4	SB	IGNITION POWER SUPPLY

JROWC2857GB

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

Connector No.	M41
Connector Name	IN-VEHICLE SENSOR
Connector Type	A02FW

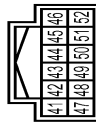


Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	P	-

Connector No.	M42
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	W	ILLUMINATION CONTROL SIGNAL
44	LAV	FUEL LEVEL SENSOR GROUND
45	LAV	BATTERY POWER SUPPLY
46	V	IGNITION SIGNAL [Without ISS]
47	SB	AV COMMUNICATION SIGNAL (H)
48	LG	AV COMMUNICATION SIGNAL (L)
49	Y	OIL LEVEL SENSOR SIGNAL
50	BG	OIL LEVEL SENSOR GROUND
51	LAV	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND



Connector No.	M77
Connector Name	WIPE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LAV	-
5	V	- [Without ISS]
8	W	- [Without ISS]
8	G	-
9	Y	-
10	R	-
20	W	-
21	B	-
31	V	-
32	GR	-
33	G	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	Y	-
48	BG	-
51	GR	-
52	SB	-
53	R	-
54	LAV	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	LAV	-
61	P	-
62	V	-
63	LAVR	-
64	Y	-

65	GR	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	Y	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	L	- [With ISS]
82	GR	- [Without ISS]
83	LG	-
84	SB	-
85	G	-
86	G	-
87	B	-
88	B	-
91	L	-
92	W	-
93	W	-
96	LG	-
97	BR	-
98	V	-
99	R	-

Connector No.	M79
Connector Name	BUZZER (FRONTWARD)
Connector Type	TH04FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LAVR	POWER
3	LAV	INPUT

Connector No.	M81
Connector Name	WIPE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	GR	- [With SOVM]
3	Y	- [Without SOVM]
4	V	-
5	BR	-
6	SB	-
7	B	-
8	L	-
9	Y	-
10	SHIELD	-
11	G	-
13	LAVR	-
14	LAVR	-
15	LAV	-
16	LAV	-
17	LAVR	-
18	GR	-
21	LAV	-

Connector No.	M83
Connector Name	WIPE TO WIRE
Connector Type	TH24MW-NH



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

JROWC2858GB

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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEMS

Terminal No.	Color Of Wire	Signal Name [Specification]
2	B	-
3	W	-
4	P	-
5	SB	-
6	LG	-
7	B	-
8	L	-
9	Y	-
10	SHIELD	-
11	R	-
13	B	-
14	LAW	-
15	LAG	-
16	LAGR	-
17	LAP	-
18	LASB	-
19	B	-
20	LG	-
21	BR	-
22	LAG	-

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Type	INST6MW-CS



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

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

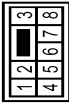
Connector No.	M87
Connector Name	BDM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



60			57	58				51	50	49	48	47	46	45	44	43	42	41		
60	79	78	77	76	75	74	73				68	67				65	64	63		

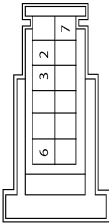
DRIVER ASSISTANCE SYSTEMS

Connector No.	R2
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



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

Connector No.	R22
Connector Name	FRONT CAMERA UNIT
Connector Type	renault_8200280781



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	R	CAN-L
3	R	IGNITION POWER SUPPLY
4	B	GROUND

JROWC2860GB

DAS

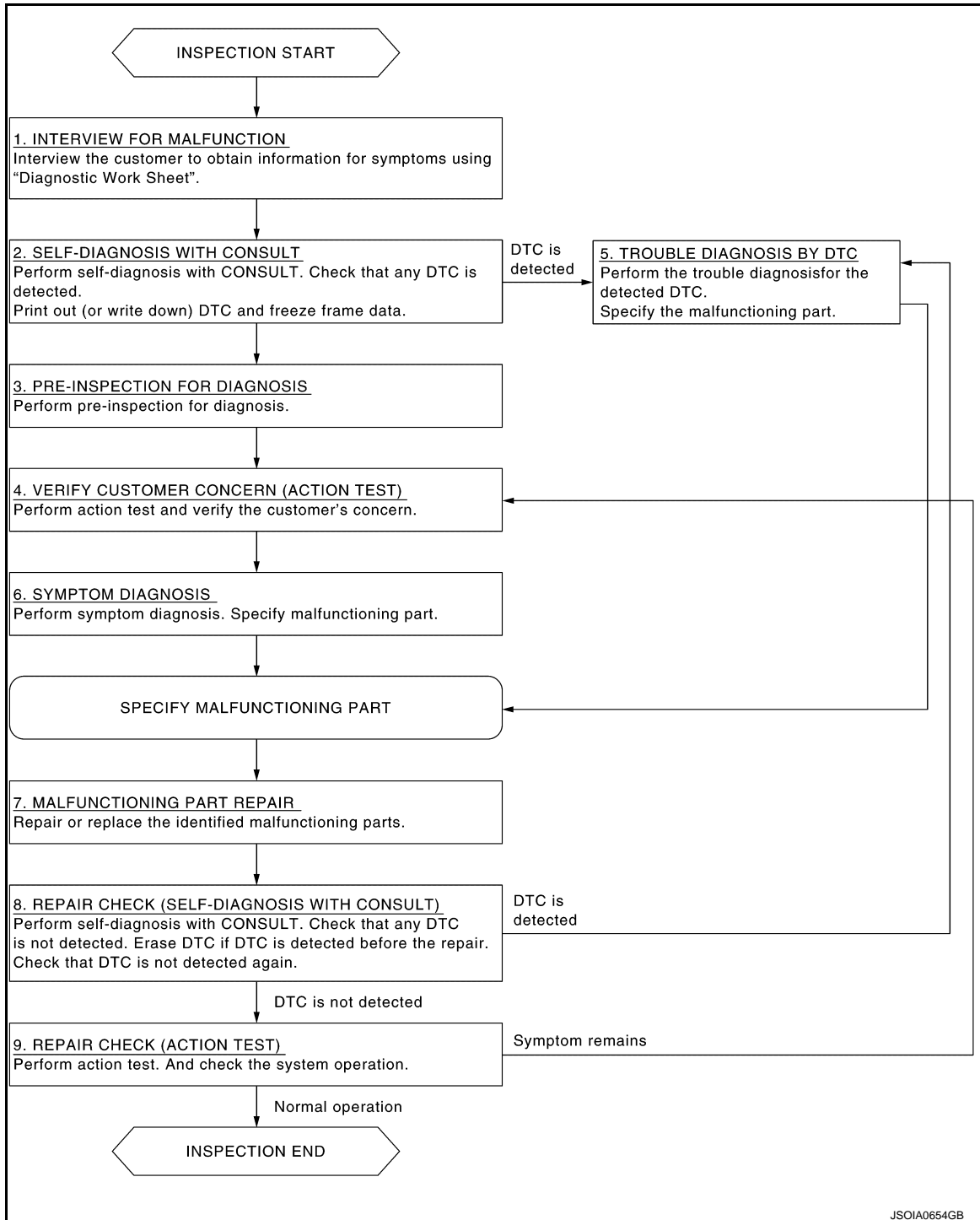
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010727916

OVERALL SEQUENCE



JSOIA0654GB

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

It is also important to clarify the customer concerns before starting the inspection. Interview the customer about the concerns carefully and understand the symptoms fully.

NOTE:

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

The customers are not professionals. Never assume that “maybe the customer means...” or “maybe the customer mentioned this symptom”.

>> GO TO 2.

2.SELF-DIAGNOSIS WITH CONSULT

1. Perform “All DTC Reading” with CONSULT.
2. Check if the DTC is detected on the self-diagnosis results of following.
 - “LANE CAMERA”
 - “AVM”
3. When DTC is detected, follow the instructions below:
 - Record DTC and Freeze Frame Data.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 3.

3.PRE-INSPECTION FOR DIAGNOSIS

Perform pre-inspection for diagnosis.

- Camera aiming adjustment: [DAS-97, "Inspection Procedure"](#)
- Calibrating camera image: [DAS-98, "Inspection Procedure"](#)

>> GO TO 4.

4.ACTION TEST

Perform following systems action test to check the operation status.

- LDW: [DAS-91, "LDW : Work Procedure"](#)
- BSW: [DAS-92, "BSW : Work Procedure"](#)
- TSR: [DAS-94, "TSR : Work Procedure"](#)
- DAA: [DAS-95, "DAA : Work Procedure"](#)

>> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

1. Check the DTC in the self-diagnosis results.
2. Perform trouble diagnosis for the detected DTC.
 - “LANE CAMERA”: [DAS-56, "DTC Index"](#)
 - “AVM”: [DAS-66, "DTC Index"](#)

>> GO TO 8.

6.SYMPTOM DIAGNOSIS

Perform symptom diagnosis. Specify malfunctioning part. Refer to [DAS-140, "Symptom Table"](#).

>> GO TO 7.

7.MALFUNCTION PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 8.

8.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

Perform self-diagnosis with CONSULT. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 9.

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

9. REPAIR CHECK (ACTION TEST)

Perform following systems action test. Also check the system operation.

- LDW: [DAS-91, "LDW : Work Procedure"](#)
- BSW: [DAS-92, "BSW : Work Procedure"](#)
- TSR: [DAS-94, "TSR : Work Procedure"](#)
- DAA: [DAS-95, "DAA : Work Procedure"](#)

Does it operate normally?

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

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ACTION TEST

LDW

LDW : Description

INFOID:0000000010727917

- Perform action test to verify the customer's concern.
- Perform action test and check the system operation after system diagnosis.

WARNING:

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

CAUTION:

- Fully understand the following items well before the road test;
 - Precautions: Refer to [DAS-8, "Precaution for LDW System Service"](#).
 - System description for LDW: Refer to [DAS-16, "LDW : System Description"](#).
 - Handling precaution: Refer to [DAS-40, "Precautions for Lane Departure Warning"](#).

LDW : Work Procedure

INFOID:0000000010727918

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, "Precaution for LDW System Service"](#).
 - System description for LDW: Refer to [DAS-16, "LDW : System Description"](#).
 - Handling precaution: Refer to [DAS-40, "Precautions for Lane Departure Warning"](#).


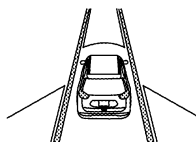
1. CHECK LDW SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 30 seconds or more.
3. Enable the setting of the LDW system on the combination meter.
4. Turn OFF the ignition switch and wait for 5 seconds or more.
5. Check that the previous setting is saved when the engine starts again.

>> GO TO 2.

2. ACTION TEST FOR LDW

1. Enable the setting of the LDW system on the combination meter.
2. Check the LDW operation according to the following table.




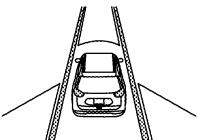
Vehicle condition/ Driver's operation			Action		
Vehicle speed (Approx.)	Turn signal condition	Status of vehicle close to lane marker	Indication on the combination meter		Buzzer
			Upper part	Middle part	
Less than 55 km/h (34 MPH)	—	Close to lane marker	White  JSOIA142ZZZ	White Driving Aids  JSOIA159ZZZ	OFF

DAS

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/ Driver's operation			Action		
Vehicle speed (Approx.)	Turn signal condition	Status of vehicle close to lane marker	Indication on the combination meter		Buzzer
			Upper part	Middle part	
60 km/h (37 MPH) or more	<ul style="list-style-type: none"> • OFF • ON (Opposite to the deviate side) 	Close to lane marker	Orange (Blink)  <small>JSOIA1367ZZ</small>	Orange (Blink) Driving Aids  <small>JSOIA1594ZZ</small>	Short continuous beeps
	ON (Deviate side)	Close to lane marker	White  <small>JSOIA1422ZZ</small>	White Driving Aids  <small>JSOIA1592ZZ</small>	OFF

NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 55 km/h (34 MPH). Refer to [DAS-16, "LDW : System Description"](#).

>> INSPECTION END

BSW

BSW : Description

INFOID:0000000010727919

Always perform the Blind Spot Warning system action test to check that the system operates normally after replacing the around view monitor control unit 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, "Precaution for BSW System Service"](#).
 - System description for Blind Spot Warning: Refer to [DAS-18, "BSW : System Description"](#).
 - Handling precaution: Refer to [DAS-40, "Precautions for Blind Spot Warning"](#).

BSW : Work Procedure

INFOID:0000000010727920

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, "Precaution for BSW System Service"](#).
 - System description for Blind Spot Warning: Refer to [DAS-18, "BSW : System Description"](#).
 - Handling precaution: Refer to [DAS-40, "Precautions for Blind Spot Warning"](#).

1. CHECK BSW SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 30 seconds or more.
3. Check that the BSW system setting can be enabled/disabled on the combination meter.
4. Turn OFF the ignition switch and wait for 5 seconds or more.
5. Check that the previous setting is saved when the engine starts again.

>> GO TO 2.


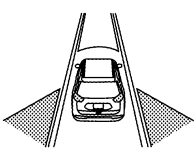

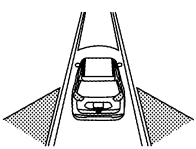

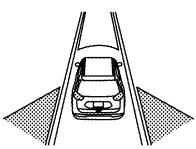

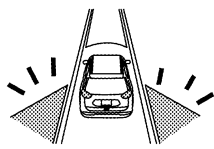

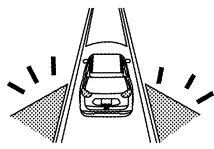
2. BSW SYSTEM ACTION TEST

ACTION TEST

[DRIVER ASSISTANCE SYSTEM]

< BASIC INSPECTION >

1. Enable the setting of the BSW system on the combination meter.
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 BSW indicator	Indication on the combination meter		Buzzer
				Upper part	Middle part	
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	Orange (Blink)  JSOIA1425ZZ	Orange (Blink) Driving Aids  JSOIA1600ZZ	Short continuous beeps
		Vehicle is detected after turn signal operates	Blink	Orange (Blink)  JSOIA1425ZZ	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.

>> INSPECTION END

TSR

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TSR : Description

INFOID:0000000010927844

- Perform action test to verify the customer's concern.
- Perform action test and check the system operation after system diagnosis.

WARNING:

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

CAUTION:

- Fully understand the following items well before the road test;
 - Precautions: Refer to [DAS-8, "Precaution for TSR System Service"](#).
 - System description for TSR: Refer to [DAS-21, "TSR : System Description"](#).
 - Handling precaution: Refer to [DAS-41, "Precautions for Traffic Sign Recognition"](#).

TSR : Work Procedure

INFOID:0000000010927845

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, "Precaution for TSR System Service"](#).
 - System description for TSR: Refer to [DAS-21, "TSR : System Description"](#).
 - Handling precaution: Refer to [DAS-41, "Precautions for Traffic Sign Recognition"](#).

1. CHECK TSR SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 30 seconds or more.
3. Enable the setting of the TSR system on the combination meter.
4. Turn OFF the ignition switch and wait for 5 seconds or more.
5. Check that the previous setting is saved when the engine starts again.

>> GO TO 2.

2. ACTION TEST FOR LDW

1. Enable the setting of the TSR system on the combination meter.
2. Check the TSR operation according to the following table.



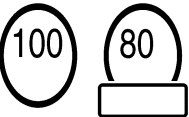
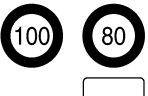
System status	Condition	Display on combination meter	
		Upper part	Middle part
TSR OFF	—	—	Traffic Sign

JSOIA1611ZZ

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

System status	Condition	Display on combination meter	
		Upper part	Middle part
TSR ON	Road sign not detected	—	Traffic Sign  <small>JSOIA1612ZZ</small>
	Road sign detected (except for speed limit signs)	—	This is an example. For details of displayed signs, refer to DAS-21, "TSR : System Description" Traffic Sign  <small>JSOIA1613ZZ</small>
	Road sign detected (Speed limit signs)	This is an example. For details of displayed signs, refer to DAS-21, "TSR : System Description"  <small>JSOIA1614ZZ</small>	This is an example. For details of displayed signs, refer to DAS-21, "TSR : System Description" Traffic Sign  <small>JSOIA1615ZZ</small>

>> INSPECTION END

DAA

DAA : Description

INFOID:0000000010927846

Always perform the TSR system action test to check that the system operates normally after replacing the around view monitor control unit or repairing any TSR 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-9, "Precaution for DAA System Service"](#).
- System description for DAA: Refer to [DAS-24, "DAA : System Description"](#).
- Handling precaution: Refer to [DAS-41, "Precautions for Drive Attention Alert"](#).

DAA : Work Procedure

INFOID:0000000010927847

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-9, "Precaution for DAA System Service"](#).
- System description for DAA: Refer to [DAS-24, "DAA : System Description"](#).
- Handling precaution: Refer to [DAS-41, "Precautions for Drive Attention Alert"](#).

1. CHECK DAA SYSTEM SETTING

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

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ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

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

>> GO TO 2.

2. ACTION TEST FOR DAA

1. Enable the setting of the DAA system on the combination meter.
2. Check the DAA operation according to the following table.

Vehicle condition/ Driver's operation	Driver's condition	Vehicle speed (Approx.)	Action	Display on combination meter
DAA ON	—	0 km/h (0 MPH) ≤ Vehicle speed < 60 km/h (37 MPH)	—	—
	Normal	More than 60 km/h (37 MPH)	Level indicator: Blue	—

>> INSPECTION END

PRE-INSPECTION FOR DIAGNOSIS (CAMERA AIMING ADJUSTMENT)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

PRE-INSPECTION FOR DIAGNOSIS (CAMERA AIMING ADJUSTMENT)

Inspection Procedure

INFOID:0000000010917455

1.CHECK CAMERA LENS AND WINDSHIELD

Are camera lens and windshield contaminated with foreign materials?

YES (When the camera lens is contaminated with foreign materials.)>>Replace front camera unit (Refer to [DAS-149, "Removal and Installation"](#).) and GO TO 2.

YES (When the windshield is contaminated with foreign materials.)>>Clean windshield.

NO >> GO TO 2.

2.CHECK FRONT CAMERA UNIT INSTALLATION CONDITION

Check front camera unit installation condition (installation position, properly tightened, a bent bracket).

Is it properly installed?

YES >> GO TO 3.

NO >> Install front camera unit properly, and perform camera aiming.

3.CHECK VEHICLE HEIGHT

Check vehicle height. Refer to [FSU-24, "Wheelarch Height"](#).

Is vehicle height appropriate?

YES >> INSPECTION END

NO >> Repair vehicle to appropriate height.

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PRE-INSPECTION FOR DIAGNOSIS (CALIBRATING CAMERA IMAGE)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

PRE-INSPECTION FOR DIAGNOSIS (CALIBRATING CAMERA IMAGE)

Inspection Procedure

INFOID:0000000010727921

1.CHECK REAR CAMERA LENS

Are rear camera lens contaminated with foreign materials?

YES >> Clean rear camera lens.

NO >> GO TO 2.

2.CHECK REAR CAMERA INSTALLATION CONDITION

Check rear camera installation condition (e.g. position, looseness, bent in back door).

Is it properly installed?

YES >> INSPECTION END

NO >> Install rear camera properly, and perform rear camera calibration. Refer to [DAS-110. "Work Procedure \(Preparation\)"](#).

ADDITIONAL SERVICE WHEN REPLACING FRONT CAMERA UNIT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING FRONT CAMERA UNIT

Description

INFOID:0000000010917456

Always adjust the camera aiming after removing and installing or replacing the front camera unit.

CAUTION:

The system does not operate normally unless the camera aiming adjustment is performed. Always perform it.

Work Procedure

INFOID:0000000010917457

1. CAMERA AIMING ADJUSTMENT

Perform the camera aiming adjustment with CONSULT. Refer to [DAS-100, "Work Procedure \(Preparation\)"](#).

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

Perform the self-diagnosis of front camera unit with CONSULT. Check if any DTC is detected.

Is any DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to [DAS-56, "DTC Index"](#).

NO >> GO TO 3.

3. LDW AND TSR SYSTEM ACTION TEST

1. Perform the LDW and TSR system action test. Refer to [DAS-91, "LDW : Work Procedure"](#) (LDW) and [DAS-94, "TSR : Work Procedure"](#) (TSR).

2. Check that the LDW and TSR system operates normally.

>> WORK END

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CAMERA AIMING ADJUSTMENT

Description

INFOID:0000000010917460

Always adjust the camera aiming after removing and installing or replacing the front camera unit.

CAUTION:

- Place the vehicle on level ground when the camera aiming adjustment is operated.
- Be sure to place the target correctly according to work procedures because the system may not operate normally.
- Follow the CONSULT when performing the camera aiming. (Camera aiming adjustment cannot be operated without CONSULT.)

Work Procedure (Preparation)

INFOID:0000000010917461

1.PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of front camera unit.

Is any DTC detected?

Except "C1B01">>Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [DAS-56, "DTC Index"](#).
 "C1B01" or no DTC>>GO TO 2.

2.PREPARATION BEFORE CAMERA AIMING ADJUSTMENT

1. Perform pre-inspection for diagnosis. Refer to [DAS-97, "Inspection Procedure"](#).
2. Adjust the tire pressure to the specified pressure value.
3. Maintain no-load in vehicle.
4. Check if coolant and engine oil are filled up to correct level and fuel tank is full.
5. Shift the selector lever to "P" position and release the parking brake. (CVT models)
6. Shift the shift lever to "N" position and release the parking brake.(M/T models)

CAUTION:

Use wheel chocks to the wheels to prevent the vehicle from moving.

7. Clean the windshield.
8. Completely clear off the instrument panel.

NOTE:

If any fixed object is put on instrument panel, cover the upper of the instrument panel with black cloth to prevent an object from reflecting in the windshield.

>> GO TO 3.

3. PREPARATION OF AIMING ADJUSTMENT JIG

Prepare the aiming adjustment jig according to the following procedure and the figure.

1. Prepare six sheets of white paper and black paper, respectively, with dimensions of 120 mm (4.72 in) × 120 mm (4.72 in) to create a left target and right target.

NOTE:

Correct the magnification of print and print the target mark sample in the service manual on the black paper. Refer to [DAS-104, "Work Procedure \(Target Mark Sample\)"](#).

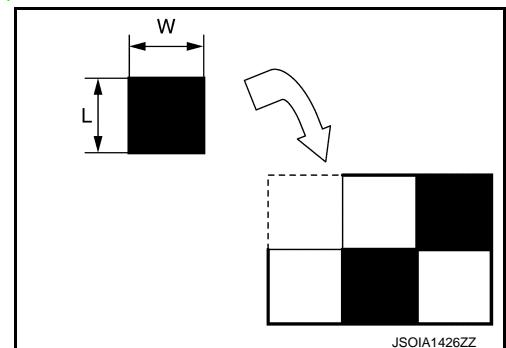
2. Tape three sheets of black paper and three sheets of white paper together to make a target of 360 mm (14.17 in) × 240 mm (9.45 in).

L : 120 mm (4.72 in)

W : 120 mm (4.72 in)

NOTE:

- Use a transparent tape.
- Never apply tape to target surface.
- Never allow a clearance on the black and white boundary.



3. Stick a printed target mark on the board with a scotch tape or a piece of double-sided tape.

NOTE:

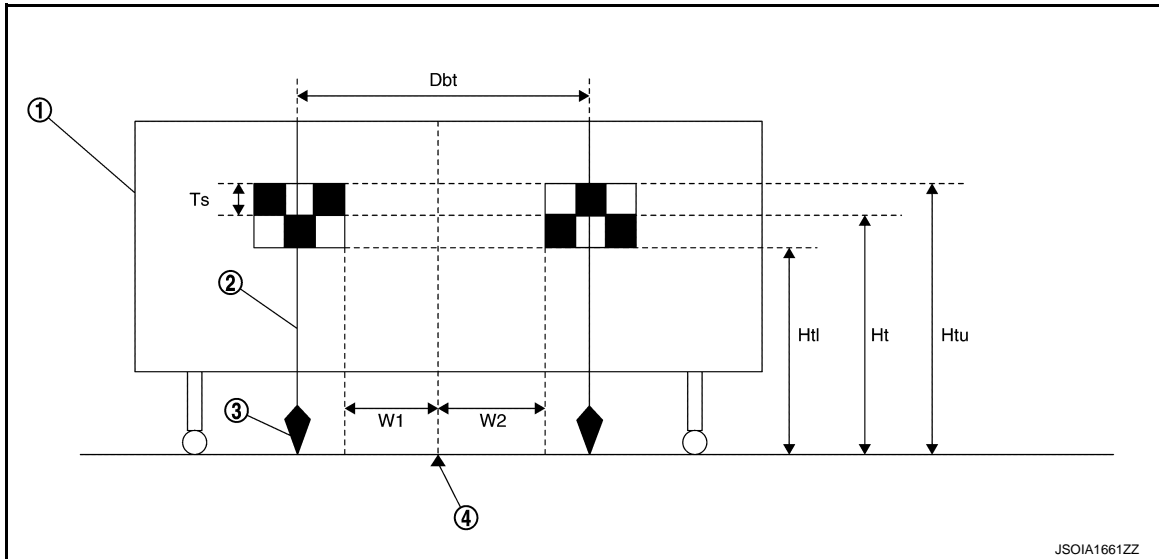
- Use the board that peripheral area of the target is monochrome such as a white-board.

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

- Notice that the cross of the target is horizontal and vertical.



- ① Board ② String ③ Cone
④ Center between two targets

Side of a target (Ts)	: 120 mm (4.72 in)
Height of a target lower end (Hti)	: 1180 mm (46.46 in)
Height of a target center (Ht)	: 1300 mm (51.18 in)
Height of a target upper end (Htu)	: 1420 mm (55.91 in)
Width between a right target center from a left target center (Dbt)	: 720 mm (28.35 in)
W1	: 180 mm (7.09 in)
W2	: 180 mm (7.09 in)

>> Proceed to DAS-101, "Work Procedure (Target Setting)".

Work Procedure (Target Setting)

INFOID:0000000010917462

CAUTION:

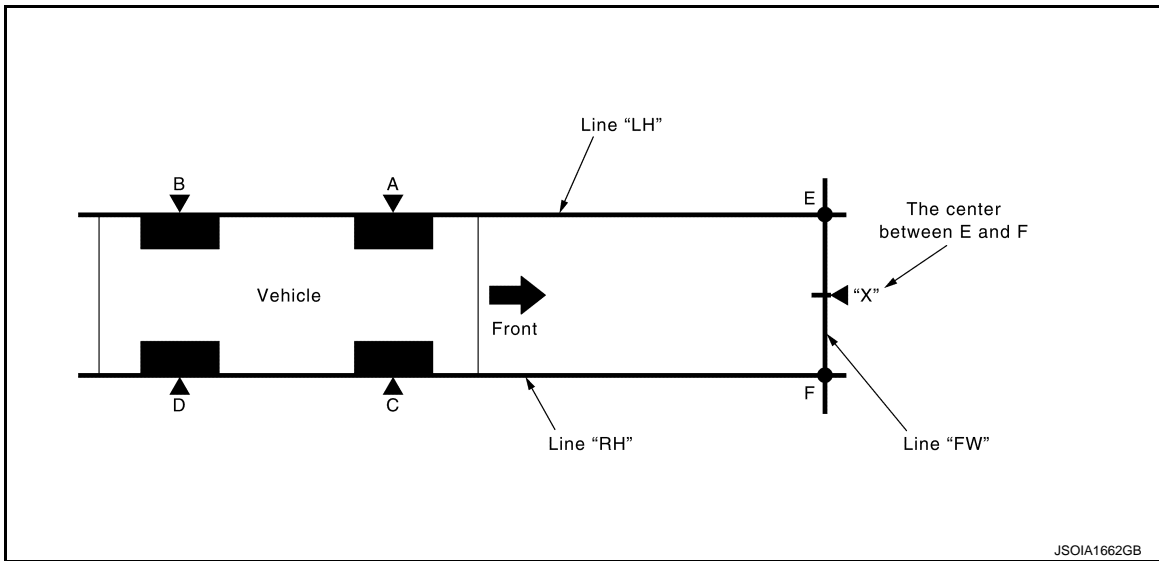
- Be sure to place the target correctly according to work procedures because the system may not operate normally.
- Perform this operation in a horizontal position where there is a clear view for 5 m (16.4 ft) forward and 3 m (9.84 ft) wide.
- Place the target in a well-lighted location. (Poor lighting may make it hard to adjust.)
- The target may not be detected when there is a light source within 1.5 m (4.92 ft) from either side and within 1 m (3.28 ft) upward/downward from the target.
- Check the location of the sun. (Sunlight should not shine directly on the front of the vehicle.)
- The target may not be detected when there is the same pattern of black and white as the target when the pattern is within 1 m (3.28 ft) from either side and upward/downward position from the target. (It is desirable that the vehicle is positioned on the opposite side of a single-color wall.)

1. TARGET SETTING

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]



(A - B) (C - D) : 3000 mm (118.11 in)

1. Mark points "A", "B", "C" and "D" at the center of the lateral surface of each wheels.

NOTE:

Hang a string with a cone from the fender so as to pass through the center of wheel, and then mark a point at the center of the lateral surface of the wheel.

2. Draw line "LH" passing through points "A" and "B" on the left side of vehicle.

NOTE:

Approximately 4 m (13.12 ft) or more from the front end of vehicle.

3. Mark point "E" on the line "LH" at the positions 3000 mm (118.11 in) from point "A".

4. Draw line "RH" passing through points "C" and "D" on the right side of vehicle in the same way as step 2.

NOTE:

Approximately 4 m (13.12 ft) or more from the front end of vehicle.

5. Mark point "F" on the line "RH" at the positions 3000 mm (118.11 in) from point "C".

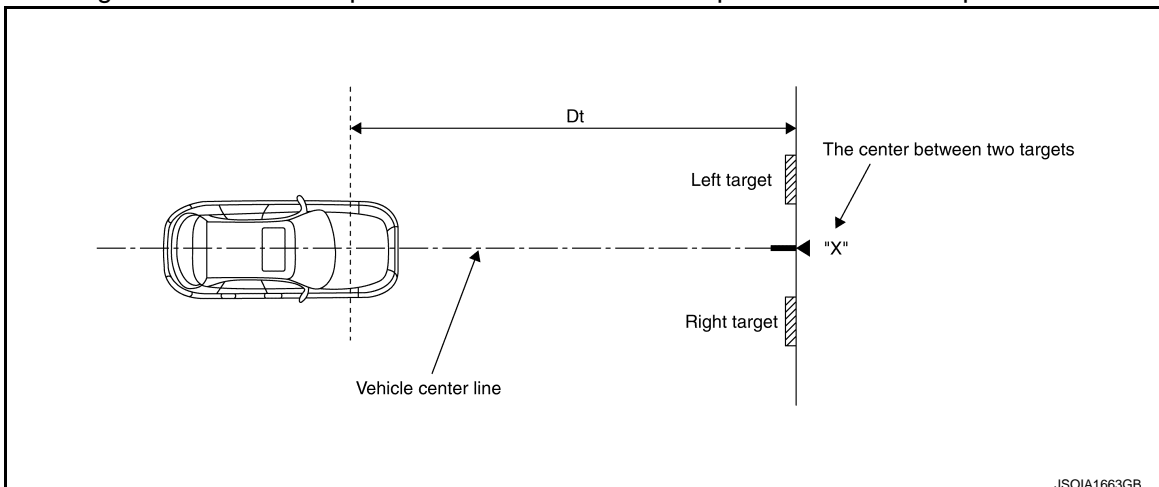
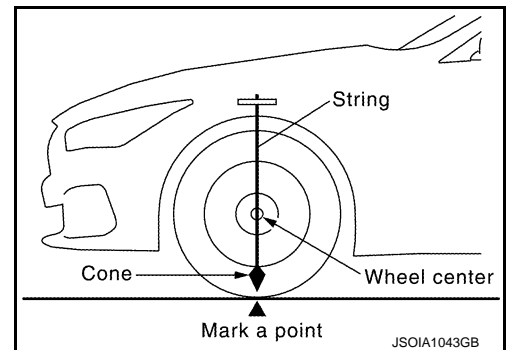
6. Draw line "FW" passing through the points "E" and "F" on the front side of vehicle.

7. Mark point "X" at the center of point "E" and "F" on the line "FW".

CAUTION:

Make sure that "E" to "X" is equal to "F" to "X".

8. Place a target on either side of point "X". Each distance from point "X" must be equal each other.



CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

>> Proceed to [DAS-103, "Work Procedure \(Camera Aiming Adjustment\)"](#).

Work Procedure (Camera Aiming Adjustment)

INFOID:0000000010917463

CAUTION:

Perform the adjustment under unloaded vehicle condition.

1. CHECK VEHICLE HEIGHT

Measure the wheelarch height. Calculate "Dh".

$$Dh [mm] = (Hfl + Hfr) \div 2 - 800$$

Hfl: Front left wheelarch height [mm]

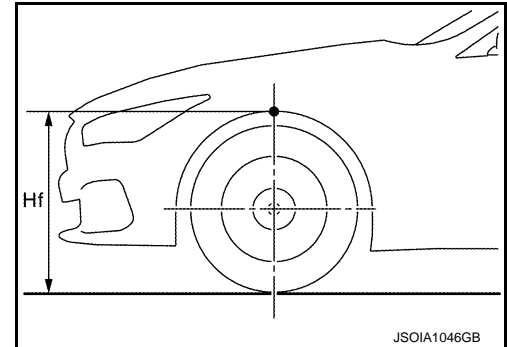
Hfr: Front right wheelarch height [mm]

CAUTION:

Be sure to measure wheelarch height correctly.

NOTE:

"Dh" may be calculated as a minus value.



>> GO TO 2.

2. CAMERA AIMING ADJUSTMENT

With CONSULT

CAUTION:

Operate CONSULT outside the vehicle, and close all the doors. (To retain vehicle attitude appropriately)

1. Select "Work Support" on "LANE CAMERA" with CONSULT.
2. Select "AUTO AIM".
3. Confirm the following items;
 - The target should be accurately placed.
 - The vehicle should be stopped.
4. Select "CHANGE SET" to perform camera aiming.

CAUTION:

- Never select "CHANGE SET" when the target is not accurately placed.
- Wait 5 seconds or more after selecting "CHANGE SET".

5. Input "Dh".
6. Input the following parameters, and then select "CHANGE SET".

Htu	: 1420 mm
Htl	: 1180 mm
Dt	: 3000 mm
Ts	: 120 mm
Dbt	: 720 mm
VP	: 3

7. Confirm the displayed item.
 - "Normally Completed": Select "Completion".
 - "SUSPENSION", "ABNORMALLY COMPLETED": Perform the following services.

Displayed item		Possible cause	Service procedure
SUSPENSION	—	Temporary malfunction in internal processing of the front camera unit.	Go back to step 1.
	00H Routine not activated	Front camera unit malfunction.	Position the target appropriately again. Then perform the aiming again.
	10H Writing error	<ul style="list-style-type: none"> • Temporary malfunction in internal processing of the front camera unit. • Front camera unit malfunction. 	

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Displayed item	Possible cause	Service procedure
ABNORMALLY COMPLETED	2 Front camera unit cannot detect the target • A target is not -yet-placed. • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position.	Position the target appropriately again. Then perform the aiming again.
	3 Roll angle is outside the threshold • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position.	
	4 The size of target is different. (A numerical value input to CONSULT differs from detected size) • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position.	
	7 Yaw/pitch angle is outside the threshold. • The position of the targets is not correct. • The position of the front camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position.	
	13 Waiting for the start or aiming. (Insufficient passage of time from key SW ON to the start of aiming.) • Inappropriate work environment.	

NOTE:

Replace camera unit if "00H Routine not activated" or "10H Writing error" are repeatedly indicated during the above two services are performed.

8. Confirm that "Normally completed" is displayed and then select "End" to close the adjustment procedure.

>> GO TO 3.

3.PERFORM SELF-DIAGNOSIS

With CONSULT

Perform self-diagnosis of "LANE CAMERA" with CONSULT.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [DAS-56, "DTC Index"](#).

NO >> GO TO 4.

4.ACTION TEST

Perform the LDW and TSR system action test. Refer to [DAS-91, "LDW : Work Procedure"](#) (LDW) or [DAS-94, "TSR : Work Procedure"](#) (TSR).

>> WORK END

Work Procedure (Target Mark Sample)

INFOID:0000000010917464

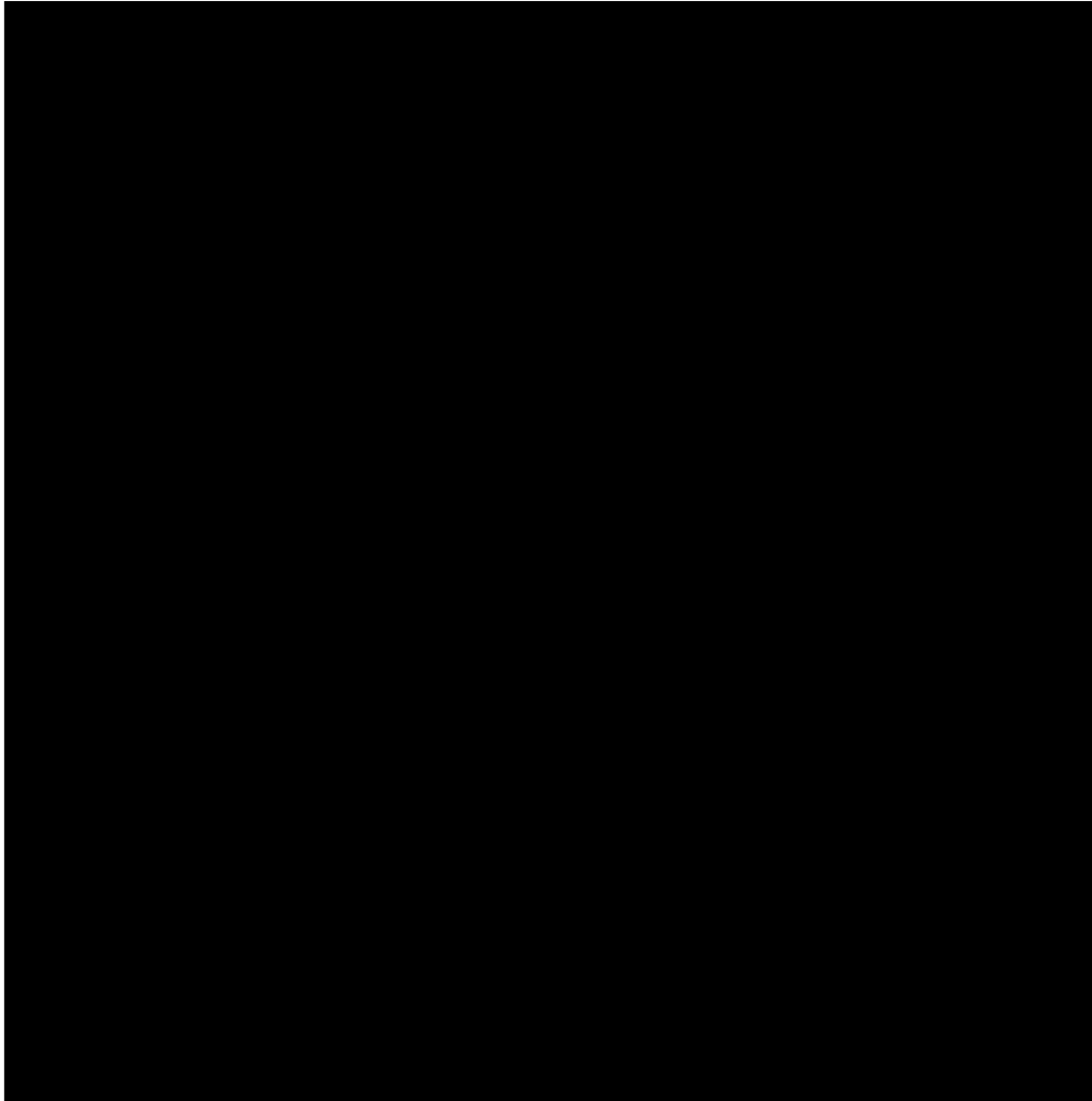
NOTE:

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Change the magnification of print to 250 mm (9.84 in) × 250 mm (9.84 in) and print the target mark sample.



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REAR VIEW CAMERA WASHER/AIR BLOWER FUNCTION INSPECTION

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

REAR VIEW CAMERA WASHER/AIR BLOWER FUNCTION INSPECTION

Inspection Procedure

INFOID:0000000010727922

1. CHECK REAR CAMERA WASHER/AIR BLOWER FUNCTION

1. Start the engine.
2. Select the ACTIVE TEST item "AIR&WASH ACTIVE" of "AVM" with CONSULT.

NOTE:

Before function check, perform the following items:

- Fill with washer fluid.
- Perform ACTIVE TEST item "WASH ACTIVE" of "AVM" with CONSULT for 4 seconds.

3. With operating the test item, check the operation.

Is it properly operated?

Washer fluid ejects 4 - 6 times. (Normal function)>>INSPECTION END.

Washer fluid ejects 7 times or more.>>Properly install or replace air tube.

Washer fluid ejects only once>> Properly install or replace air tube.

Washer fluid does not eject>>Properly install washer tube or replace washer tube and check valve.

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

Description

INFOID:0000000010931470

- Always perform the around view monitor control unit configuration after replacing the around view monitor control unit.
- Always perform the around view monitor calibration after removing and installing or replacing the rear camera.
- Always perform the rear camera calibration after removing and installing or replacing the rear camera.
- Always perform the rear camera calibration after replacing the around view monitor control unit.
- Always perform the around view monitor calibration after replacing the around view monitor control unit.

CAUTION:

The system does not operate normally unless the around view monitor and rear camera calibration are performed. Always perform it.

Work Procedure

INFOID:0000000010931471

1. AROUND VIEW MONITOR CONTROL UNIT CONFIGURATION

Perform the around view monitor control unit configuration with CONSULT. Refer to [AV-159, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2. AROUND VIEW MONITOR CONTROL UNIT CALIBRATION

Perform the around view monitor calibration with CONSULT. Refer to [AV-161, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

>> GO TO 3.

3. REAR CAMERA CALIBRATION

Perform the rear camera calibration with CONSULT. Refer to [DAS-110, "Work Procedure \(Preparation\)"](#).

>> GO TO 4.

4. PERFORM SELF-DIAGNOSIS

Perform the self-diagnosis of around view monitor control unit with CONSULT (AVM). Check if any DTC is detected.

Is any DTC detected?

- YES >> Perform the trouble diagnosis for the detected DTC. Refer to [AV-120, "DTC Index"](#).
- NO >> GO TO 5.

5. LDW AND BSW SYSTEM ACTION TEST

1. Perform the BSW and DAA system action test. Refer to [DAS-92, "BSW : Work Procedure"](#) (BSW) and [DAS-95, "DAA : Work Procedure"](#) (DAA).
2. Check that the BSW and DAA system operates normally.

>> WORK END

DAS

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

Work Procedure

INFOID:0000000010931472

1.SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "Before Replace ECU", and save the current vehicle specification in CONSULT.

Is the vehicle specification saved normally?

YES >> GO TO 2.

NO >> GO TO 4.

2.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to [AV-268. "Removal and Installation"](#).

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Select "Configuration" or "After Replace ECU", and write the vehicle specification saved in CONSULT to around view monitor control unit.

>> GO TO 6.

4.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to [AV-268. "Removal and Installation"](#).

>> GO TO 5.

5.WRITING VEHICLE SPECIFICATION

CONSULT Configuration

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

Setting item		Detail
Items	Setting value	
HANDLE	LHD	LHD models
	RHD	RHD models
TRANSMISSION	A/T	CVT models
	M/T	M/T models
LDW FUNCTION	WITHOUT	Without LDW
	WITH	With LDW
4WD/2WD	2WD	2WD models
	4WD	4WD models
DISPLAY	TYPE C	Without navigation system
	TYPE G	With navigation system
SONAR	WITHOUT	Without sonar system
	WITH	With sonar system

>> GO TO 6.

6.PERFORM SELF-DIAGNOSIS

CONSULT Self Diagnostic Result

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Perform self-diagnosis of CONSULT, and check whether or not DTC U1305 is detected.

Is DTC U1305 detected?

>> GO TO 5.

>> GO TO 7.

7. OPERATION CHECK

Check that the operation of the around view monitor control unit and camera images (fixed guide lines and predictive course lines) are normal.

>> WORK END

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CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

Description

INFOID:0000000010727932

- Always perform the rear camera calibration after removing and installing or replacing the rear camera.
- Always perform the rear camera calibration after replacing the around view monitor control unit.

CAUTION:

- Place the vehicle on level ground when the calibration is operated.
- Follow the CONSULT when performing the calibration. (Rear camera calibration cannot be operated without CONSULT.)

Work Procedure (Preparation)

INFOID:0000000010727933

1.PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of the camera control unit with CONSULT (AVM).

Is any DTC detected?

Except "U1308">>Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [AV-120. "DTC Index"](#).

"U1308" or no DTC>>GO TO 2.

2.PREPARATION BEFORE REAR CAMERA CALIBRATION

1. Perform pre-inspection for diagnosis. Refer to [DAS-98. "Inspection Procedure"](#).
2. Adjust the tire pressure to the specified pressure value.
3. Maintain no-load in vehicle.
4. Check if coolant and engine oil are filled up to correct level and fuel tank is full.
5. Shift the selector lever to "P" position and release the parking brake.
6. Clean the rear camera.

>> GO TO 3.

3.PREPARATION OF CALIBRATION TARGET MARK

1. Prepare six sheets of white paper and black paper, respectively, with dimensions of 200 mm (7.87 in) × 200 mm (7.87 in) to create a left target, right target, and center target.

NOTE:

Correct the magnification of print and print the target mark sample in the service manual on the black paper. Refer to [DAS-114. "Work Procedure \(Target Mark Sample\)"](#).

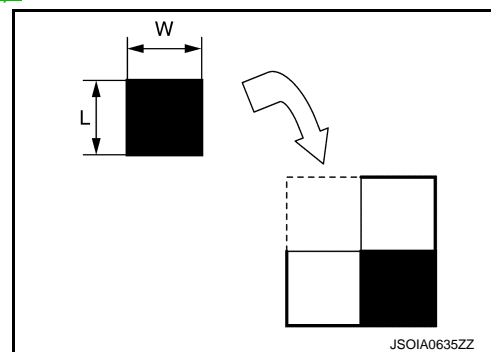
2. Tape two sheets of black paper and two sheets of white paper together to make a target of 400 mm (15.75 in) × 400 mm (15.75 in).

W : 200 mm (7.87 in)

L : 200 mm (7.87 in)

NOTE:

Use a transparent tape.

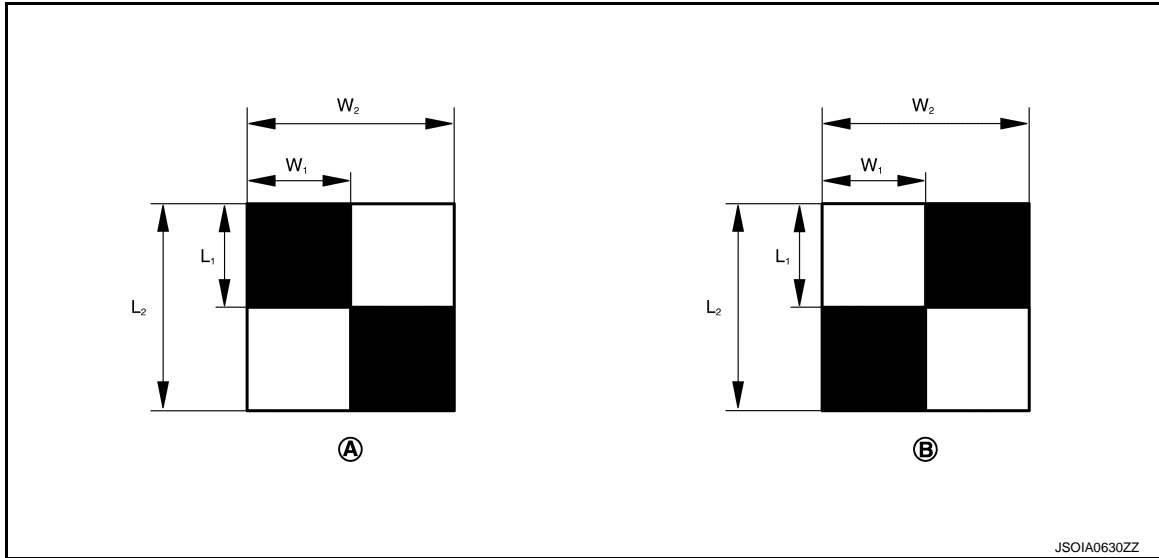


3. Create two more targets according to step 2.

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]



W1 : 200 mm (7.87 in)

W2 : 400 mm (15.75 in)

L1 : 200 mm (7.87 in)

L2 : 400 mm (15.75 in)

(A) Left target and right target

(B) Center target

>> Refer to [DAS-111, "Work Procedure \(Target Setting\)"](#).

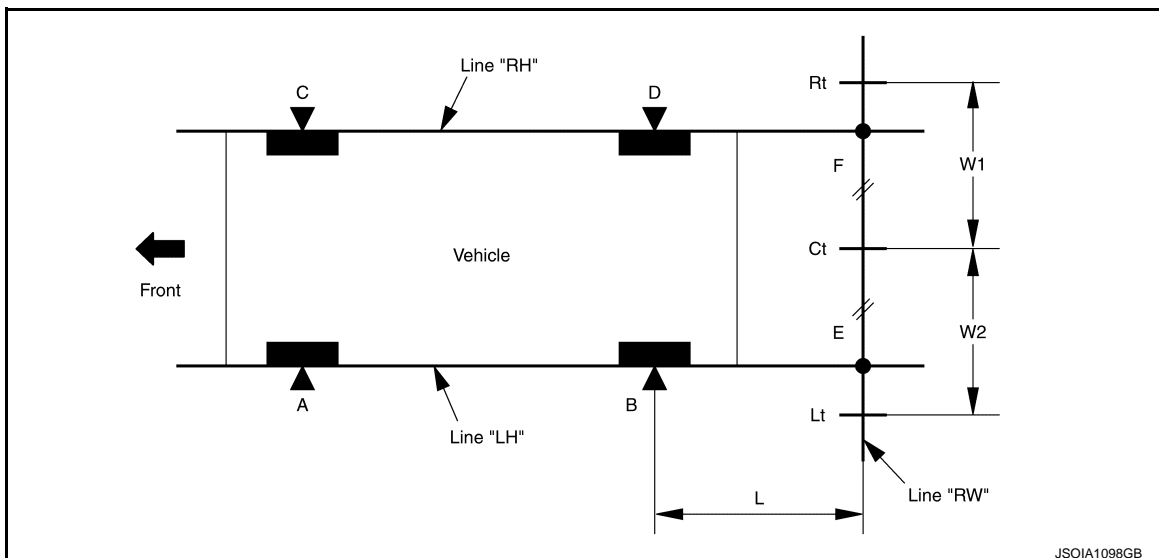
Work Procedure (Target Setting)

INFOID:0000000010727934

CAUTION:

- Perform this operation in a horizontal position where there is a clear view for 3 m (9.84 ft) backward and 4 m (13.12 ft) wide.
- Place the target in a well-lighted location. (Poor lighting may make it hard to adjust.)
- The target may not be detected when it shines by the reflected light of the sun or lighting.
- The target may not be detected when there is the same pattern of black and white as the target when the pattern is within 0.5 m (1.64 ft) from either side and upward/downward position from the target. (It is desirable that the target is positioned on the single-color floor.)

1. TARGET SETTING



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CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Distance between B and E	: 1,444 mm (56.85 in)
Distance between D and F	: 1,444 mm (56.85 in)
Distance W1	: 1,500 mm (59.06 in)
Distance W2	: 1,500 mm (59.06 in)
Distance L	: 1,444 mm (56.85 in)

1. Mark points "A", "B", "C" and "D" at the center of the lateral surface of each wheel.

NOTE:

Hang a string with a cone from the fender so as to pass through the center of wheel, and then mark a point at the center of the lateral surface of the wheel.

2. Draw line "LH" passing through points "A" and "B" on the left side of vehicle.

NOTE:

Approximately 2.2 m (7.22 ft) or more at the rear from the rear axle.

3. Mark point "E" on the line "LH" at the positions 1,444 mm (56.85 in) from point "B".

4. Draw line "RH" passing through points "C" and "D" on the right side of vehicle in the same way as step 2.

NOTE:

Approximately 2.2 m (7.22 ft) or more at the rear from the rear axle.

5. Mark point E on the line "RH" at the positions 1,444 mm (56.85 in) from point "D".

6. Draw line "RW" passing through the points "E" and "F" on the rear of vehicle.

NOTE:

Approximately 1.8 m (5.91 ft) or more at both left and right sides from vehicle center.

7. Mark point "Ct" at the center of point "E" and "F" on the line "RW".

CAUTION:

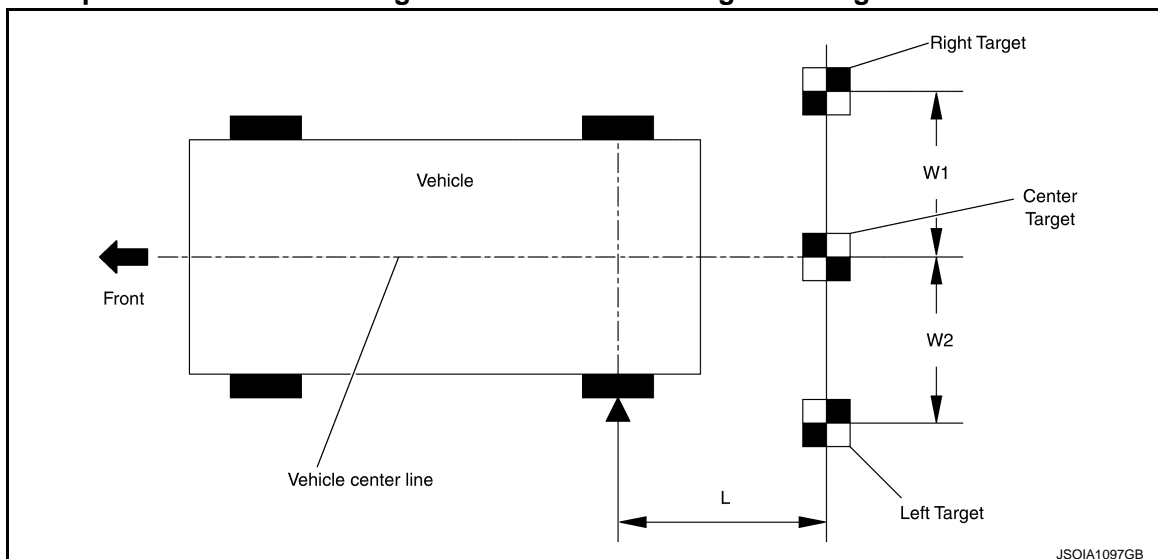
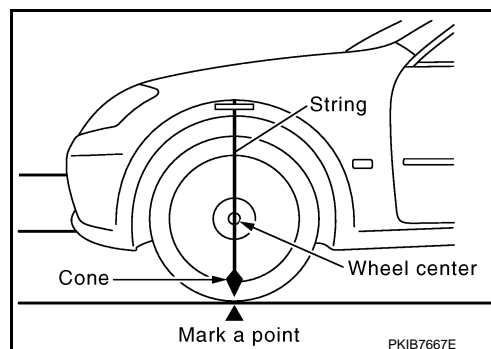
Make sure that "E" to "Ct" is equal to "F" to "Ct".

8. Mark point "Lt" and "Rt" on the line "RW" at the positions 1,500 mm (59.06 in) from point "Ct".

9. Position the center of the target mark to point of "Ct", "Lt" and "Rt".

CAUTION:

To perform an accurate calibration, check that the black-and-white pattern is as shown in the figure. The pattern of the center target differs from that of right/left target.



W1	: 1,500 mm (59.06 in)
W2	: 1,500 mm (59.06 in)
L	: 1,444 mm (56.85 in)

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

>> Refer to [DAS-113. "Work Procedure \(Rear Camera Calibration\)".](#)

Work Procedure (Rear Camera Calibration)

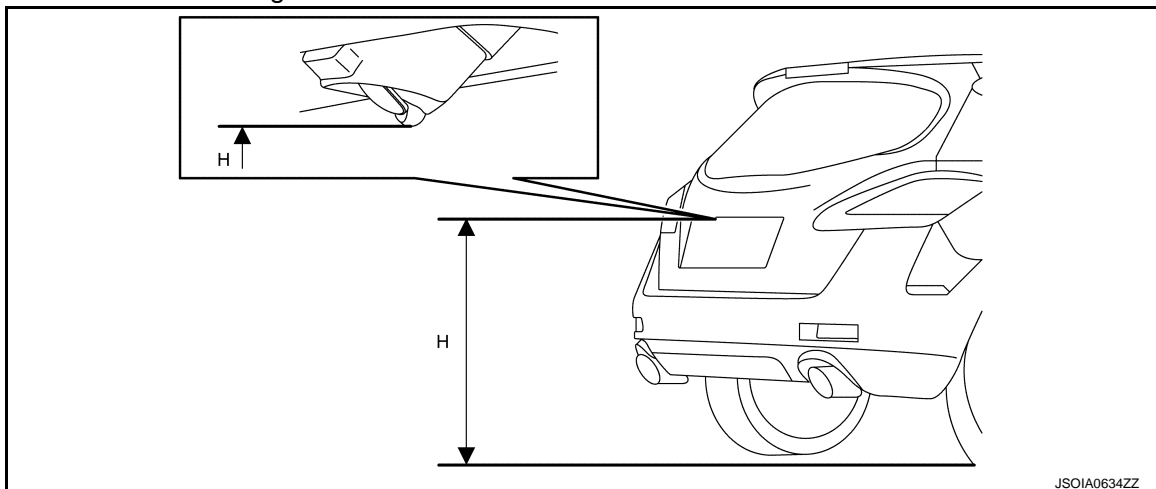
INFOID:0000000010727935

CAUTION:

For accuracy, perform the calibration under the specified vehicle condition (Fuel full, no-load, specified tire pressure, etc.). Refer to [DAS-110. "Work Procedure \(Preparation\)".](#)

1. CHECK REAR CAMERA HEIGHT

Measure the rear camera height.



H: Rear camera height.

>> GO TO 2.

2. REAR CAMERA CALIBRATION

1. Select "Work Support" on "AVM" with CONSULT.
2. Select "REAR CAMERA ITS" and then touch "Start".
3. Touch "OK".
4. Input the rear camera height "H", and then touch "APPLY".
5. Confirm that the same value is displayed on the center display.
6. Confirm the following items;
 - The target should be accurately placed.
 - The vehicle should be stopped.
 - The vehicle should be under the specified vehicle condition.
7. Select "Start" to perform camera aiming.

CAUTION:

To properly maintain vehicle attitude, operate CONSULT outside the vehicle with all the doors closed.

8. Confirm the displayed item.
 - "Completed": Select "Completion".
 - "Not completed": Perform the following services.

DAS

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Displayed item	Code	Possible causes	Service procedure
Check the error contents using the screen of navigation system.	11	<ul style="list-style-type: none"> A target is not-yet-placed. (Center) Target mark reflects the light. (Center) 	<ul style="list-style-type: none"> Position the target appropriately again. (Center) Refer to DAS-111, "Work Procedure (Target Setting)". Shut out the light reflecting on target mark. (Center)
	12	<ul style="list-style-type: none"> A target is not-yet-placed. (Right) Target mark reflects the light. (Right) 	<ul style="list-style-type: none"> Position the target appropriately again. (Right) Refer to DAS-111, "Work Procedure (Target Setting)". Shut out the light reflecting on target mark. (Right)
	13	<ul style="list-style-type: none"> A target is not-yet-placed. (Left) Target mark reflects the light. (Left) 	<ul style="list-style-type: none"> Position the target appropriately again. (Left) Refer to DAS-111, "Work Procedure (Target Setting)". Shut out the light reflecting on target mark. (Left)
	21	A target is dirty. (Center)	Clean target mark. (Center)
	22	A target is dirty. (Right)	Clean target mark. (Right)
	23	A target is dirty. (Left)	Clean target mark. (Left)
	51	<ul style="list-style-type: none"> The position of the target is not correct. (Center) Target mark reflects the light. (Center) The position of the rear camera is not correct. 	<ul style="list-style-type: none"> Set target mark direction as shown in the figure. (Center) Refer to DAS-111, "Work Procedure (Target Setting)". Shut out the light reflecting on target mark. (Center) Install rear camera properly
	52	<ul style="list-style-type: none"> The position of the target is not correct. (Right) Target mark reflects the light. (Right) The position of the rear camera is not correct. 	<ul style="list-style-type: none"> Set target mark direction as shown in the figure. (Right) Refer to DAS-111, "Work Procedure (Target Setting)". Shut out the light reflecting on target mark. (Right) Install rear camera properly
	53	<ul style="list-style-type: none"> The position of the target is not correct. (Left) Target mark reflects the light. (Left) The position of the rear camera is not correct. 	<ul style="list-style-type: none"> Set target mark direction as shown in the figure. (Left) Refer to DAS-111, "Work Procedure (Target Setting)". Shut out the light reflecting on target mark. (Left) Install rear camera properly

>> GO TO 3.

3.PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of around view monitor control unit with CONSULT (AVM).

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [AV-120, "DTC Index"](#).

NO >> GO TO 4.

4.ACTION TEST

Perform the BSW and DAA system action test. Refer to [DAS-92, "BSW : Work Procedure"](#) (BSW) and [DAS-95, "DAA : Work Procedure"](#) (DAA).

>> WORK END

Work Procedure (Target Mark Sample)

INFOID:000000010727936

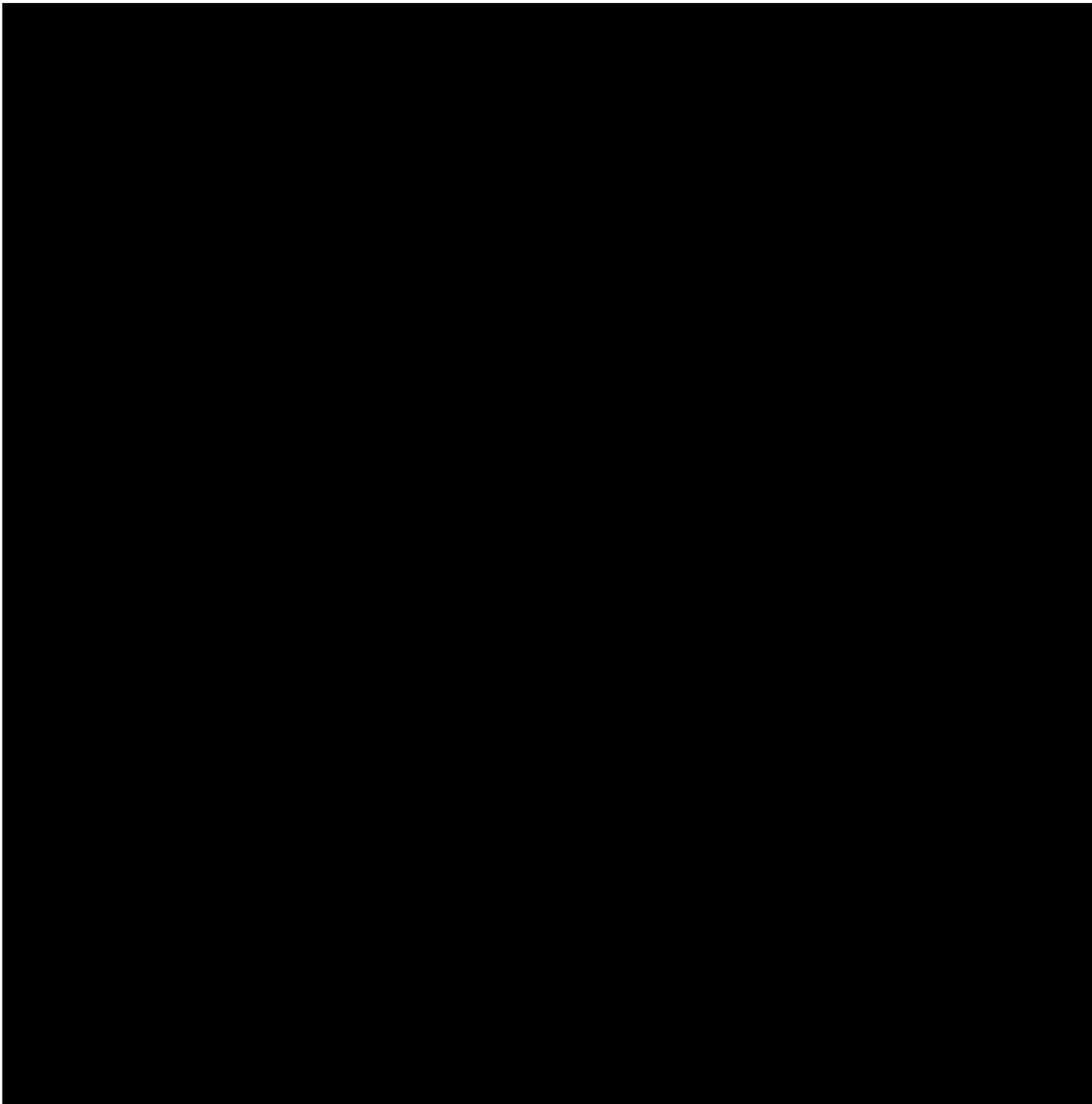
NOTE:

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Change the magnification of print to 200 mm (7.87 in) × 200 mm (7.87 in) and print the target mark sample.



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DTC/CIRCUIT DIAGNOSIS

C1B00 CAMERA UNIT MALF

DTC Description

INFOID:0000000010765932

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
C1B00	CAMERA UNIT MALF (Camera unit malfunction)	If lane camera unit is malfunctioning

POSSIBLE CAUSE

Front camera unit

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B00" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B00" detected as the current malfunction?

- YES >> Refer to [DAS-116, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765933

1.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC other than "C1B00" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-56, "DTC Index"](#).
- NO >> Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

C1B01 CAM AIMING INCMP

DTC Description

INFOID:0000000010765934

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
C1B01	CAM AIMING INCMP (Camera aiming incomplete)	Camera aiming is not completed

POSSIBLE CAUSE

- Front camera aiming is not completed
- Front camera aiming adjustment has been interrupted

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the ignition switch ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B01" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B01" detected as the current malfunction?

- YES >> Refer to [DAS-117. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765935

1.CAMERA AIMING ADJUSTMENT

1. Perform the camera aiming. Refer to [DAS-100. "Work Procedure \(Preparation\)"](#).
2. Erase all self-diagnosis results with CONSULT.
3. Perform "All DTC Reading".
4. Check if the "C1B01" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B01" detected?

- YES >> Replace the front camera unit. Refer to [DAS-149. "Removal and Installation"](#).
- NO >> INSPECTION END

C1B02 VHCL SPD DATA MALF

DTC Description

INFOID:0000000010836777

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
C1B02	VHCL SPD DATA MALF (Vehicle speed data malfunction)	Front camera unit receives an error signal from ABS actuator and electric unit (control unit) via CAN communication

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Front camera unit

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B02" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B02" detected as the current malfunction?

- YES >> Refer to [DAS-118. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010836778

1.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "ABS" using CONSULT.

Are any DTCs detected?

- YES >> Refer to [BRC-84. "DTC Index"](#).
- NO >> Replace front camera unit. Refer to [DAS-149. "Removal and Installation"](#).

C1B03 ABNRML TEMP DETECT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B03 ABNRML TEMP DETECT

DTC Description

INFOID:0000000010765936

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
C1B03	ABNRML TEMP DETECT (Abnormal temperature detect)	Temperature around front camera unit is excessively high

POSSIBLE CAUSE

- Interior room temperature is excessively high
- Front camera unit

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the ignition switch ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B03" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B03" detected as the current malfunction?

- YES >> Refer to [DAS-119. "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765937

1.COOLING FRONT CAMERA UNIT

1. Wait for 10 minutes or more to cool the front camera unit.
2. Erase All self-diagnosis results with CONSULT.
3. Perform "All DTC Reading".
4. Check if the "C1B03" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B03" detected?

- YES >> Replace the front camera unit. Refer to [DAS-149. "Removal and Installation"](#).
NO >> INSPECTION END

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DAS

C1B09 POWER SUPPLY CIRCUIT, C1B0A POWER SUPPLY CIRCUIT2

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B09 POWER SUPPLY CIRCUIT, C1B0A POWER SUPPLY CIRCUIT2

DTC Description

INFOID:0000000010765938

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
C1B09	POWER SUPPLY CIRCUIT (Power supply circuit)	Front camera unit ignition voltage is greater than 16 V for 5 seconds
C1B0A	POWER SUPPLY CIRCUIT 2 (Power supply circuit 2)	Front camera unit ignition voltage is less than 10.5 V for 5 seconds

POSSIBLE CAUSE

- Harness, connector, or fuse
- Front camera unit
- Power supply circuit

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "C1B09" is detected as the current malfunction on the self-diagnosis results of "LANE CAMERA".

Is "C1B09" detected as the current malfunction?

- YES >> Refer to [DAS-120, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765939

1.CHECK FRONT CAMERA UNIT SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of front camera unit. Refer to [DAS-131, "FRONT CAMERA UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:0000000010765940

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Front camera unit is not transmitting or receiving CAN communication signal for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction on the self-diagnosis results of "LANE CAMERA".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-121, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765941

1.PERFORM SELF DIAGNOSTIC

1. Start the engine.
2. Erases DTC.
3. Perform DTC confirmation procedure again. Refer to [DAS-121, "DTC Description"](#).

Is "U1000" detected?

- YES >> Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
NO >> INSPECTION END

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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000010765942

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U1010	CONTROL UNIT(CAN) [Control unit(CAN)]	When detecting error during the initial diagnosis of CAN controller of front camera unit.

POSSIBLE CAUSE

Front camera unit

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1010" is detected as the current malfunction on the self-diagnosis results of "LANE CAMERA".

Is "U1010" detected as the current malfunction?

- YES >> Refer to [DAS-122, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765943

1.PERFORM SELF DIAGNOSTIC

1. Start the engine.
2. Erases DTC.
3. Perform DTC confirmation procedure again. Refer to [DAS-122, "DTC Description"](#).

Is "U1010" detected?

- YES >> Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).
NO >> INSPECTION END

U0122 VDC CAN CIR1 (LDP)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U0122 VDC CAN CIR1 (LDP)

DTC Description

INFOID:0000000010765944

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U0122	VDC CAN CIR1(LDP) [Vehicle dynamic control CAN circuit1 (Lane departure preven- tion)]	Front camera unit receives incorrect signal (P-RUN) from ABS actuator and electric unit (control unit) via CAN communication.

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following functions are suspended.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U0122” is displayed with DTC “U1000”, first diagnose the DTC “U0122”.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if the “U0122” is detected as the current malfunction on the self-diagnosis results of “LANE CAMERA”.

Is “U0122” detected as the current malfunction?

- YES >> Refer to [DAS-123, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765945

1.CHECK DTC PRIORITY

If DTC “U0122” is displayed with DTC “U1000”, first diagnose the DTC “U0122”.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
NO >> GO TO 2.

2.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform “Self Diagnostic Result” of “ABS” using CONSULT.

Are any DTCs detected?

- YES >> Refer to [BRC-84, "DTC Index"](#).
NO >> Replace front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

U0126 STRG SEN CAN 1

DTC Description

INFOID:000000010765946

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U0126	STRG SEN CAN CIR1 (Steering sensor CAN circuit1)	Front camera unit receives an error signal from steering angle sensor via CAN communication

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U0126" is detected as the current malfunction on the self-diagnosis results of "LANE CAMERA".

Is "U0126" detected as the current malfunction?

- YES >> Refer to [DAS-124, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000010765947

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "ABS" using CONSULT.

Are any DTCs detected?

- YES >> Refer to [BRC-84, "DTC Index"](#).
 NO >> Replace front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

U0155 METER CAN 1

DTC Description

INFOID:0000000010765948

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0155	METER CAN CIRC 1 (Meter CAN circuit 1)	Front camera unit receives an error signal from combination meter via CAN communication

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

The following systems are canceled.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U0155" is displayed with DTC "U1000", first diagnose the DTC "U0155".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U0155" is detected as the current malfunction on the self-diagnosis results of "LANE CAMERA".

Is "U0155" detected as the current malfunction?

- YES >> Refer to [DAS-125, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010765949

1.CHECK DTC PRIORITY

If DTC "U0155" is displayed with DTC "U1000", first diagnose the DTC "U0155".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2.CHECK COMBINATION METER SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "METER/M&A" using CONSULT.

Are any DTCs detected?

- YES >> Refer to [MWI-105, "DTC Index"](#).
 NO >> Replace front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

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U0235 DIST SEN CAN CIRC 1

DTC Description

INFOID:000000010836773

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U0235	DIST SEN CAN CIRC 1 (Distance Sensor CAN circuit 1)	If front camera unit detects an error signal that is received from distance sensor via CAN communication

POSSIBLE CAUSE

- Distance sensor
- Front camera unit

FAIL-SAFE

The following systems are canceled.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2. PERFORM SELF DIAGNOSTIC RESULT

1. Start the engine.
2. Perform "Self Diagnostic Result" of "LANE CAMERA" using CONSULT.

Is DTC detected?

- YES >> Refer to [DAS-126, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000010836774

1. CHECK DISTANCE SENSOR SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "LASER/RADAR" using CONSULT.

Are any DTCs detected?

- YES >> Refer to [BRC-247, "DTC Index"](#).
 NO >> Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

U0416 VDC CHECKSUM DIAG

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U0416 VDC CHECKSUM DIAG

DTC Description

INFOID:0000000010836768

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U0416	VDC CAN CIR2(LDP) [Vehicle dynamic control CAN circuit1 (Lane departure preven- tion)]	Front camera unit receives incorrect signal (P-RUN) from ABS actuator and elec- tric unit (control unit) via CAN communication.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Front camera unit

FAIL-SAFE

The following systems are canceled.

- LDW
- TSR

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition ON.
2. Perform "Self Diagnostic Result" of "LANE CAMERA" using CONSULT.

Is DTC detected?

- YES >> Refer to [DAS-127, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010836769

1.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "ABS" using CONSULT.

Are any DTCs detected?

- YES >> Refer to [BRC-84, "DTC Index"](#).
- NO >> Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

DAS

U0428 STRG SEN CAN 2

DTC Description

INFOID:000000010765950

DTC DETECTION LOGIC

DTC	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition
U0428	STRG SEN CAN CIR2 (Steerg sensor CAN circuit2)	If front camera unit detects an error signal that is received from steering angle sensor via CAN communication

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDW system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U0428" is detected as the current malfunction on the self-diagnosis results of "LANE CAMERA".

Is "U0428" detected as the current malfunction?

YES >> Refer to [DAS-128, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000010765951

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-121, "DTC Description"](#).
 NO >> GO TO 2.

2.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "ABS" using CONSULT.

Are any DTCs detected?

YES >> Refer to [BRC-84, "DTC Index"](#).
 NO >> Replace front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

U0433 DIST SEN CAN CIRC 2

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U0433 DIST SEN CAN CIRC 2

DTC Description

INFOID:0000000010836775

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0433	DIST SEN CAN CIRC 2 (Distance sensor CAN circuit 2)	If front camera unit detects an error signal that is received from distance sensor via CAN communication

POSSIBLE CAUSE

- Distance sensor
- Front camera unit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U0433" is displayed with DTC "U1000", first diagnose the DTC "U0433".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-121. "DTC Description"](#).
NO >> GO TO 2.

2.PERFORM SELF DIAGNOSTIC RESULT

1. Start the engine.
2. Perform "Self Diagnostic Result" of "LANE CAMERA" using CONSULT.

Is DTC detected?

- YES >> Refer to [DAS-129. "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010836776

1.CHECK DISTANCE SENSOR SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "LASER/RADAR" using CONSULT.

Are any DTCs detected?

- YES >> Refer to [BRC-247. "DTC Index"](#).
NO >> Replace the front camera unit. Refer to [DAS-149. "Removal and Installation"](#).

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT AROUND VIEW MONITOR CONTROL UNIT

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000011064017

1. CHECK FUSE

Check for blown fuses.

With stop/start system

Power source	Fuse No.
Battery	#63
Ignition switch ON or START	#56

Without stop/start system

Power source	Fuse No.
Battery	#16
Ignition switch ON or START	#30

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK AROUND VIEW MONITOR CONTROL UNIT POWER SUPPLY CIRCUIT

Check voltage between around view monitor control unit harness connector and ground.

With BSW

Around view monitor control unit			Condition	Standard voltage	Reference voltage (Approx.)
Connector	Terminal				
	(+)	(-)	Ignition switch		
	Terminal				
M101	2	1	OFF	9.5 - 16 V	Battery voltage
	3		ON		

Without BSW

Around view monitor control unit			Condition	Standard voltage	Reference voltage (Approx.)
Connector	Terminal				
	(+)	(-)	Ignition switch		
	Terminal				
M24	2	1	OFF	9.5 - 16 V	Battery voltage
	4		ON		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the around view monitor control unit power supply circuit.

3. CHECK AROUND VIEW MONITOR CONTROL UNIT GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the around view monitor control unit connector.
3. Check for continuity between around view monitor control unit harness connector and ground.

With BSW

Around view monitor control unit		Ground	Continuity
Connector	Terminal		Existed
M101	1		

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Without BSW

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M24	1		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the around view monitor control unit ground circuit.

PUMP CONTROL UNIT

PUMP CONTROL UNIT : Diagnosis Procedure

INFOID:000000010727940

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition power supply	33

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK PUMP CONTROL UNIT POWER SUPPLY CIRCUIT

Check voltage between pump control unit harness connector and ground.

Terminal		Condition	Standard voltage	Reference voltage
(+)	(-)			
Pump control unit		Ignition switch	0 - 0.1 V	0 V
Connector	Terminal			
B74	12	OFF	0 - 0.1 V	0 V
		ON	12 - 14 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the pump control unit power supply circuit.

3.CHECK PUMP CONTROL UNIT GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the pump control unit connector.
3. Check for continuity between pump control unit harness connector and ground.

Pump control unit		Ground	Continuity
Connector	Terminal		
B74	5		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the pump control unit ground circuit.

FRONT CAMERA UNIT

FRONT CAMERA UNIT : Diagnosis Procedure

INFOID:000000010836887

1.CHECK FUSE

Check that the following fuses are not blown.

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

With stop/start system

Signal name	Fuse No.
Ignition power supply	#56

Without stop/start system

Signal name	Fuse No.
Ignition power supply	#30

Are the fuses 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 front camera unit connector.
3. Check voltage between front camera unit connector and ground.

Front camera unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
R22	6	—	Ignition switch: OFF	Battery voltage
			Ignition switch: ON	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between front camera unit connector and ground.

Front camera unit		Ground	Continuity
Connector	Terminal		
R22	7	—	Existed

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Component Function Check

INFOID:0000000010727941

1. REAR CAMERA COMMUNICATION

① With CONSULT

1. Turn the ignition switch ON.
2. Select the "DATA MONITOR" mode of "AVM" with CONSULT.
3. Check "R-CAMERA COMM STATUS" indication under the following conditions.

Monitor Item	Condition	Status
R-CAMERA COMM STATUS	Rear camera image is displayed	OK

NOTE:

Refer to [AV-78, "System Description"](#) for around view monitor operation.

Is the inspection result normal?

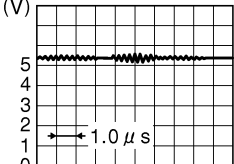
- YES >> INSPECTION END
NO >> [DAS-133, "Diagnosis Procedure"](#)

Diagnosis Procedure

INFOID:0000000010727942

1. CHECK COMMUNICATION SIGNAL

1. Turn the ignition switch ON.
2. Check the signal between around view monitor control unit harness connector terminals.

Terminal			Condition	Reference value
Around view monitor control unit				
Connector	Terminal			
	(+)	(-)		
M102	49	52	Ignition switch ON	<div><div>(V)</div><div></div><div>JSNIA0836GB</div></div>

Is the inspection result normal?

- YES >> Replace the around view monitor control unit. Refer to [AV-268, "Removal and Installation"](#).
NO >> GO TO 2.

2. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect the around view monitor control unit connector and rear camera connector.
3. Check the continuity between the around view monitor control unit harness connector and the rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
M102	49	D177	4	Existed

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

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REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

3. CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR SHORT

Check the continuity between the around view monitor control unit harness connector and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M102	49		Not existed

Is the inspection result normal?

- YES >> Replace the rear camera. Refer to [AV-270. "Removal and Installation"](#).
NO >> Repair or replace the malfunctioning parts.

WASHER PUMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

WASHER PUMP CIRCUIT

Component Function Check

INFOID:0000000010727943

1.CHECK WASHER PUMP CIRCUIT

1. Turn the ignition switch ON.
2. Select the ACTIVE TEST item "WASH ACTIVE" of "AVM" with CONSULT.
3. With operating the test item, check the operation.

On : Rear camera washer is activated.

Off : Rear camera washer is not activated.

Is the inspection result normal?

YES >> INSPECTION END

NO >> [DAS-135, "Diagnosis Procedure"](#)

Diagnosis Procedure

INFOID:0000000010727944

1.CHECK WINDSHIELD WASHER OPERATION

1. Turn the ignition switch ON.
2. Operates windshield washer switch.

Is the operation normal?

YES >> GO TO 2.

NO >> Repair windshield washer circuit.

2.CHECK REAR CAMERA WASHER PUMP POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect rear camera washer pump connector.
3. Turn the ignition switch ON.
4. Select the ACTIVE TEST item "WASH ACTIVE" of "AVM" with CONSULT.
5. Check voltage between rear camera washer pump harness connector and ground.

Terminal			Voltage (Approx.)
(+)		(-)	
Rear camera washer pump			
Connector	Terminal	Ground	
E69	1		12 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair rear camera washer pump power supply circuit.

3.CHECK REAR CAMERA WASHER PUMP GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect pump control unit connector.
3. Check continuity between rear camera washer pump harness connector and the pump control unit harness connector.

Rear camera washer pump		Pump control unit		Continuity
Connector	Terminal	Connector	Terminal	
E69	1	B74	3	Existed

Is the inspection result normal?

YES >> Replace pump control unit. Refer to [DAS-153, "Removal and Installation"](#).

NO >> Repair harness or connector.

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WASHER SWITCH INPUT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

WASHER SWITCH INPUT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000010727945

1. CHECK COMBINATION SWITCH INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect pump control unit connector and combination switch connector.
3. Check continuity between combination switch harness connector and pump control unit harness connector.

Pump control unit		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
B74	10	M31	9	Existed

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

Pump control unit		Ground	Continuity
Connector	Terminal		
B74	10		Not existed

Is the inspection result normal?

- YES >> Replace pump control unit. Refer to [DAS-153, "Removal and Installation"](#).
NO >> Repair harness or connector.

REAR WASHER SWITCH INPUT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

REAR WASHER SWITCH INPUT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000010727946

1. CHECK COMBINATION SWITCH INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect pump control unit connector and combination switch connector.
3. Check continuity between combination switch harness connector and pump control unit harness connector.

Pump control unit		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
B74	9	M31	11	Existed

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

Pump control unit		Ground	Continuity
Connector	Terminal		
B74	9		Existed

Is the inspection result normal?

- YES >> Replace pump control unit. Refer to [DAS-153, "Removal and Installation"](#).
NO >> Repair harness or connector.

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BLIND SPOT WARNING INDICATOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

BLIND SPOT WARNING INDICATOR CIRCUIT

Diagnosis Procedure

INFOID:0000000010727947

1.CHECK BSW INDICATOR CIRCUIT FOR OPEN 1

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit harness connector and BSW indicator harness connector.
3. Check continuity between around view monitor control unit harness connector and BSW indicator harness connector.

Around view monitor control unit		BSW indicator		Continuity
Connector	Terminal	Connector	Terminal	
M101	7	D30 (LH)	1	Existed
	8	D12 (RH)		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2.CHECK BSW INDICATOR CIRCUIT FOR OPEN 2

Check continuity between BSW indicator harness connector and ground.

BSW indicator		Ground	Continuity
Connector	Terminal		
D30 (LH)	4		Existed
D12 (RH)			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK BSW INDICATOR CIRCUIT FOR SHORT

1. Turn ignition switch OFF.
2. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M101	7		Not existed
	8		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE OUTPUT

1. Connect around view monitor control unit harness connector.
2. Check voltage between BSW indicator harness connector and ground.

BLIND SPOT WARNING INDICATOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Terminal			Condition	Voltage (Approx.)
(+)		(-)		
BSW indicator		Ground		
Connector	Terminal			
D30 (LH)	1			
D12 (RH)				
			Approx. 2 sec. after ignition switch OFF ⇒ ON	12 V

Is the inspection result normal?

YES >> Replace BSW indicator.

NO >> Replace the around view monitor control unit. Refer to [AV-268. "Removal and Installation"](#).

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SYMPTOM DIAGNOSIS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000010727948

Before performing diagnosis, check that it is not a symptom caused by normal operation. Refer to [DAS-147, "Description"](#).

Symptom	Confirmation item		Inspection item/Reference page
LDW/BSW system display does not illuminate	All of system display does not illuminate		System settings cannot be turned ON/OFF Refer to DAS-142, "Diagnosis Procedure"
	Other information display is not illuminated		Combination meter Refer to MWI-105, "DTC Index"
LDW/BSW warning display does not illuminate (Buzzer is functioning normally)	Information display is functioning normally	LDW	Remove the front camera unit Refer to DAS-149, "Removal and Installation" .
		BSW	Remove the around view monitor control unit Refer to AV-268, "Removal and Installation" .
	Information display is not functioning normally		On board diagnosis function (Combination meter) Refer to MWI-84, "On Board Diagnosis Function" .
LDW/BSW/DAA warning buzzer is not sounding (Warning display is functioning normally)	—		Chime does not sound. Refer to DAS-143, "Diagnosis Procedure" .
LDW is not functioning normally	LDW system operates even when using turn signal		LDW system operates even when using turn signal Refer to DAS-145, "Diagnosis Procedure" .
	Warning functions are not timely • Does not function when driving on lane markers • Functions when driving in a lane • Functions in a different position from the actual position		Front camera unit aiming adjustment Refer to DAS-100, "Work Procedure (Preparation)" .
BSW is not functioning normally	The system operates once but is cancelled		Check cause of auto-cancel with BSW Refer to DAS-45, "CONSULT Function" .
	BSW system does not operate even when using turn signal		BSW system does not operate even when using turn signal. Refer to DAS-146, "Diagnosis Procedure" .
	BSW indicator does not illuminate		Refer to DAS-138, "Diagnosis Procedure" .
	Warning functions are not timely • Does not function when approaching to an adjacent vehicle • Functions even when the vehicle does not approach to an adjacent vehicle. • Functions in a different position from the actual position • Functions when driving in the middle of lane		Rear camera calibration Refer to DAS-110, "Work Procedure (Preparation)" .
Rear camera washer is not activated (Windshield washer is functioning normally)	—		Refer to DAS-135, "Component Function Check" .
Rear camera wash is insufficient	—		Refer to DAS-106, "Inspection Procedure" .

DRIVER ASSISTANCE SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Symptom	Confirmation item	Inspection item/Reference page
DAA is not functioning normally	A warning is issued even when the driver is in normal condition	Remove the around view monitor control unit Refer to AV-268, "Removal and Installation" .
DAA warning display does not illuminate	Information display is functioning normally	Remove the around view monitor control unit Refer to AV-268, "Removal and Installation" .
	Information display is not functioning normally	On board diagnosis function (Combination meter) Refer to MWI-84, "On Board Diagnosis Function" .
TSR is not functioning normally	<ul style="list-style-type: none"> A road sign different from actual one is displayed or no road sign is displayed A road sign is displayed despite no road sign 	Remove the front camera unit Refer to DAS-149, "Removal and Installation" .
TSR display does not illuminate*	Information display is functioning normally	Remove the front camera unit Refer to DAS-149, "Removal and Installation" .
	Information display is not functioning normally	On board diagnosis function (Combination meter) Refer to MWI-84, "On Board Diagnosis Function" .

*: Check if the road sign can be displayed with TSR. Refer to [DAS-21, "TSR : System Description"](#).

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SYSTEM SETTINGS CANNOT BE TURNED ON/OFF

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

SYSTEM SETTINGS CANNOT BE TURNED ON/OFF

Description

INFOID:0000000010727949

System setting is not selectable on the combination meter.

- Lane Departure Warning (LDW)
- Blind Spot Warning (BSW)
- Traffic Sign Recognition (TSR)
- Driver Attention Alert (DAA)

NOTE:

When the ignition switch is in ACC position, each system settings cannot be changed.

Diagnosis Procedure

INFOID:0000000010727950

1.CHECK SYSTEM SETTING

1. Start the engine.
2. Check that the each system settings is selectable on the combination meter.

Is the inspection result normal?

YES >> GO TO 2.

NO-1 (LDW/TSR)>>GO TO 3.

NO-1 (BSW/DAA)>>GO TO 4.

2.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "LANE CAMERA", "AVM" and "METER/M&A".
Refer to the following.
 - LANE CAMERA: [DAS-56. "DTC Index"](#)
 - AVM: [DAS-66. "DTC Index"](#)
 - METER/M&A: [MWI-105. "DTC Index"](#)

Is any DTC detected?

YES >> Repair or replace malfunctioning parts.

NO >> INSPECTION END

3.CHECK DATA MONITOR OF FRONT CAMERA UNIT

Check that "LDW STATUS DISPLAY" or "TSR STATUS" operates normally in "DATA MONITOR" of "LANE CAMERA" with CONSULT.

Is the inspection result normal?

YES >> Refer to [MWI-84. "On Board Diagnosis Function"](#).

NO >> GO TO 4.

4.CHECK STERING SWITCH

Operate the steering switch to check that the information display on the combination meter operate properly.

Is the inspection result normal?

YES-1 (LDW/TSR)>>Replace the front camera unit. Refer to [DAS-149. "Removal and Installation"](#).

YES-2 (BSW/DAA)>>Replace the around view monitor control unit. Refer to [AV-268. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

CHIME DOES NOT SOUND

Description

INFOID:0000000010727951

The warning chime does not sound when the system is warning to driver.

Diagnosis Procedure

INFOID:0000000010727952

1.CHECK THE VEHICLE SPECIFICATION

Check the vehicle specification.

With sonar system>>GO TO 2.

Without sonar system>>GO TO 3.

2.PERFORM ACTIVE TEST

Check if the warning chime sounds on the active test item "FRONT BUZZER" of "SONAR" with CONSULT.

Does the warning chime sound?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

3.CHECK OPERATION OF METER BUZZER

Check operation of meter buzzer. Refer to [WCS-54, "Component Function Check"](#).

Is the inspection result normal?

YES >> Repair or replace malfunctioning parts.

NO >> GO TO 4.

4.CHECK THE MALFUNCTION SYMPTOM DURING WARNING CHIME OPERATION

Understand the vehicle ahead detection condition when the malfunction occurred. If the warning chime should have sounded, replace the front camera unit or the around view monitor control unit. Refer to following.

• LDW: [DAS-30, "LDW : Menu Displayed by Pressing Each Switch"](#)

• BSW: [DAS-33, "BSW : Menu Displayed by Pressing Each Switch"](#)

• DAA: [DAS-38, "DAA : Menu Displayed by Pressing Each Switch"](#)

Does the warning chime sound?

YES >> INSPECTION END

NO (LDW does not sound.)>>GO TO 5.

NO (BSW or DAA does not sound.)>>GO TO 6.

5.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the "U1000" is detected in self-diagnosis results of "LANE CAMERA".

Is "U1000" detected?

YES >> Check the CAN communication and repair or replace malfunctioning parts. Refer to [DAS-121, "DTC Description"](#).

NO >> GO TO 7.

6.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the "U1000" is detected in self-diagnosis results of "AVM".

Is "U1000" detected?

YES >> Check the CAN communication and repair or replace malfunctioning parts. Refer to [AV-178, "AROUND VIEW MONITOR CONTROL UNIT : DTC Description"](#).

NO >> GO TO 8.

7.REPLACE FRONT CAMERA UNIT

Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

>> GO TO 9.

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CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

8.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace the around view monitor control unit. Refer to [AV-268. "Removal and Installation"](#).

>> GO TO 9.

9.CHECK IF THE EACH SYSTEM IS NORMAL.

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test.Refer to the following.
 - Lane Departure Warning (LDW): [DAS-91. "LDW : Work Procedure"](#)
 - Blind Spot Warning (BSW): [DAS-92. "BSW : Work Procedure"](#)
 - Driver Attention Alert (DAA): [DAS-95. "DAA : Work Procedure"](#)
2. Check if the each system is normal.

>> INSPECTION END

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

Description

INFOID:0000000010727953

The warning of Lane Departure Warning (LDW) is activated during the use of a turn signal.

NOTE:

For the operational conditions of Lane Departure Warning (LDW), refer to [DAS-16, "LDW : System Description"](#).

Diagnosis Procedure

INFOID:0000000010727954

1. CHECK TURN SIGNAL OPERATION

Check that both right and left turn signals are normal.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts. Refer to [EXL-176, "Symptom Table"](#) (LED HEADLAMP) or [EXL-361, "Symptom Table"](#) (HALOGEN HEADLAMP).

2. PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the DTC is detected in self-diagnosis results of "LANE CAMERA". Refer to [DAS-56, "DTC Index"](#).

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts.

NO >> Replace the front camera unit. Refer to [DAS-149, "Removal and Installation"](#).

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DAS

THE SYSTEM DOES NOT OPERATE EVEN WHEN USING TURN SIGNAL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

THE SYSTEM DOES NOT OPERATE EVEN WHEN USING TURN SIGNAL

Description

INFOID:0000000010727955

The warning of Blind Spot Warning (BSW) is not activated during the use of a turn signal.

NOTE:

For the operational conditions of BSW, refer to [DAS-18, "BSW : System Description"](#).

Diagnosis Procedure

INFOID:0000000010727956

1. CHECK TURN SIGNAL OPERATION

Check that both right and left turn signals are normal.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts. Refer to [EXL-176, "Symptom Table"](#) (LED HEADLAMP), or [EXL-361, "Symptom Table"](#) (HALOGEN HEADLAMP).

2. PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the DTC is detected in self-diagnosis results of "AVM" Refer to

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts.

NO >> Replace the around view monitor control unit. Refer to [AV-268, "Removal and Installation"](#).

NORMAL OPERATING CONDITION

Description

INFOID:0000000010727957

LANE DEPARTURE WARNING (LDW)

- If the LDW system malfunctions, it will cancel automatically, and the LDW malfunction message will appear in the vehicle information display.
- LDW system is only a warning device to inform the driver of a potential unintended lane departure. It will not steer the vehicle or prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of the vehicle at all times.
- LDW system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- LDW system may not function properly under the following conditions:
 - On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers; or lane markers covered with water, dirt or snow, etc.
 - On roads where the discontinued lane markers are still detectable.
 - On roads where there are sharp curves.
 - On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. (The LDW system could detect these items as lane markers.)
 - On roads where the traveling lane merges or separates.
 - When the vehicle's traveling direction does not align with the lane marker.
 - When traveling close to the vehicle in front of driver, which obstructs the front camera unit detection range.
 - When the road surface is very dark due to weak ambient light or impaired tail lamp.
 - When rain, snow or dirt adheres to the windshield in front of the front camera unit.
 - When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
 - When strong light enters the front camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
 - When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)
- When driving on a curved road, warning will be late on the outside of the curve.

BLIND SPOT WARNING (BSW)

- The BSW 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 you will move to ensure it is safe to change lanes. Never rely solely on the BSW system.
- The rear camera may not function properly under the following conditions:
 - When towing a trailer.
 - When strong light enters the rear camera. (For example, direct sunlight or headlight from the rear)
 - When ambient brightness changes instantly. (For example, when the vehicle enters or exits a tunnel or passes under a bridge.)
- Automatic washer and blower may not be able to secure detection capability when excessive dirt adheres on the camera lens.
- The rear camera may not be able to detect when certain objects are present such as:
 - Pedestrians, bicycles, animals
 - Several types of vehicles such as motorcycles and very short length vehicle
 - Oncoming vehicles
 - A vehicle approaching rapidly from behind.
 - A vehicle which your vehicle overtakes rapidly.
 - A vehicle that merges or changes lanes rapidly directly next to your vehicle.
- The rear camera may not be able to detect property when your vehicle travels beside the middle section of a vehicle with long wheelbase (for example, trailer truck, semi-trailer, tractor).
- The rear camera detection zone is designed based on a standard lane width. When driving in a wider lane, the camera unit may not detect vehicles in an adjacent lane. When driving in a narrow lane, the camera unit may detect vehicles driving two lanes away.
- The rear camera 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.
- The rear camera may detect reflection image of vehicles or roadside objects that are not actually in the detection zone, especially when the road is wet.

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

TRAFFIC SIGN RECOGNITION (TSR)

- The TSR system is only intended to be a support device to provide the driver with information. It is not a replacement for the driver's attention to traffic conditions or responsibility to drive safely. It cannot prevent accidents due to carelessness. It is the driver's responsibility to stay alert and drive safely at all times.
- The Traffic Sign Recognition system is intended as an aid to careful driving. It is the driver's responsibility to stay alert, drive safely, and observe all road regulations that currently apply, including looking out for road signs.
- The Traffic Sign Recognition system may not function properly under the following conditions:
 - When rain, snow or dirt adheres to the windscreen in front of the front camera unit.
 - When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
 - When strong light enters the camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
 - When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)
 - In areas not covered by the navigation system.
 - If there are deviations in relation to the navigation, for example due to changes in the road routing.
 - When overtaking buses or trucks with speed stickers.

DRIVE ATTENTION ALERT (DAA)

This system is not designed to assist driving impaired due to fatigue, or other causes. Be attentive at all times, and avoid driving when tired. Failure to do so could cause you to lose control of the vehicle, resulting in a serious accident.

REMOVAL AND INSTALLATION

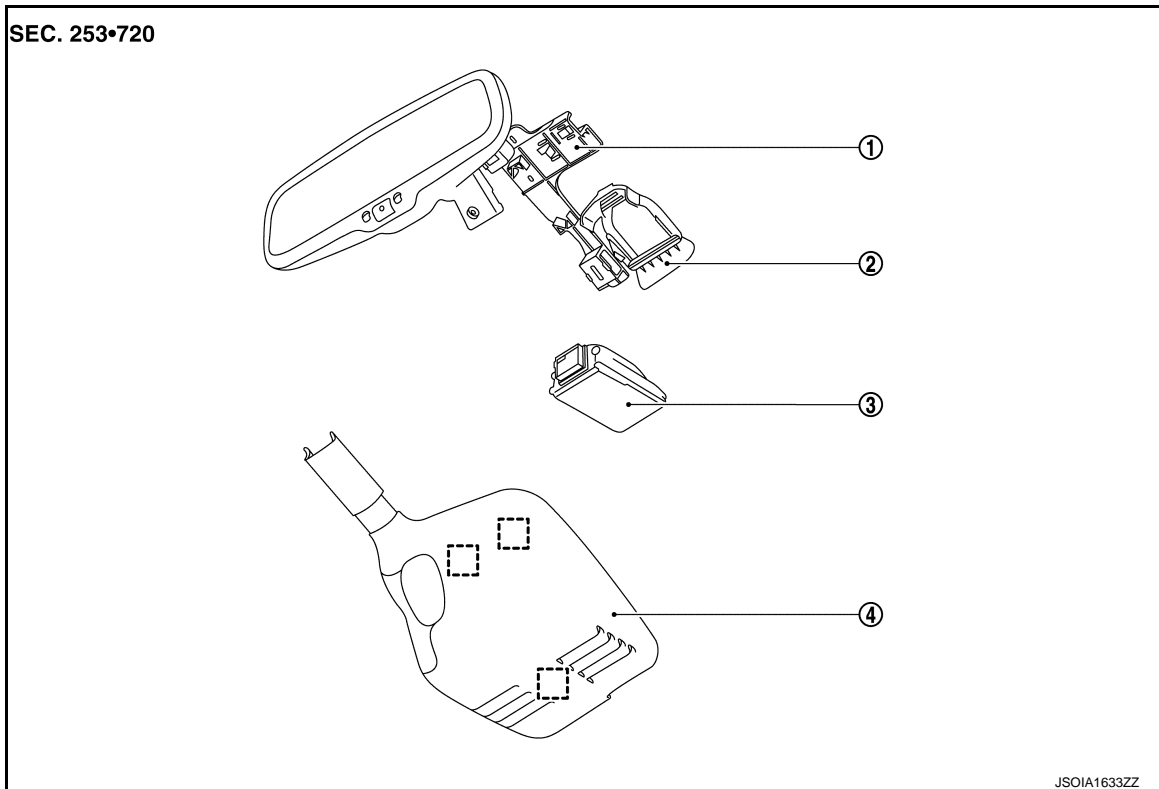
FRONT CAMERA UNIT

Exploded View

INFOID:0000000010946215

CAUTION:

- Never remove the front camera unit bracket and the camera/sensor cover bracket from windshield glass.
- The front camera unit bracket and the front camera unit bracket must be replaced together with windshield glass as an assembly.



- ① Camera/sensor cover bracket ② Front camera unit bracket ③ Front camera unit
- ④ Camera/sensor cover
- : Metal clip

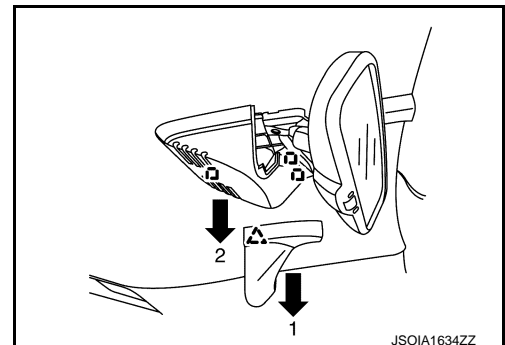
Removal and Installation

INFOID:0000000010946216

REMOVAL

1. Remove the camera/sensor cover in the order from 1 to 2 shown in the figure.

- : Metal clip
- △ : Pawl



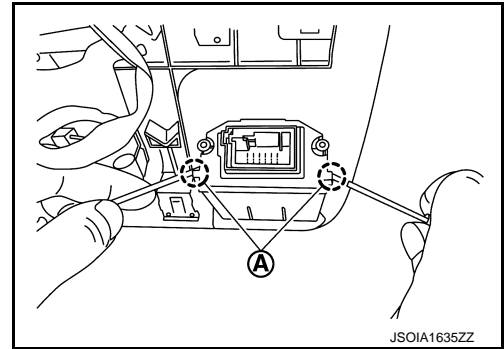
2. Disconnect front camera unit connector.

FRONT CAMERA UNIT

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

3. Release front camera unit fixing pawls ① using removal tool, and then remove front camera unit from front camera unit bracket.



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **Must be perform additional service when replacing front camera unit. Refer to [DAS-99, "Work Procedure"](#).**
- **Never give an impact to the front camera unit.**
- **Perform the camera aiming every time the front camera unit is removed and installed. Refer to [DAS-100, "Work Procedure \(Preparation\)"](#).**

AROUND VIEW MONITOR CONTROL UNIT

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

AROUND VIEW MONITOR CONTROL UNIT

Removal and Installation

INFOID:0000000010727958

Refer to [AV-268. "Removal and Installation"](#).

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REAR CAMERA

Removal and Installation

INFOID:0000000010727959

Refer to [AV-270. "Removal and Installation"](#).

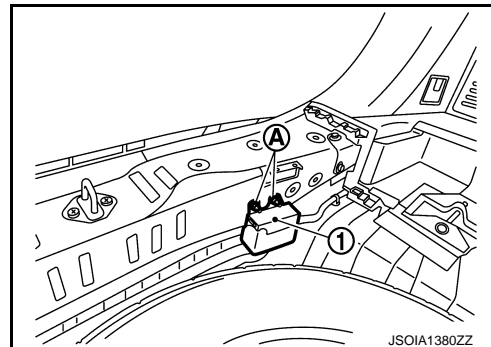
PUMP CONTROL UNIT

Removal and Installation

INFOID:0000000010727960

REMOVAL

1. Remove luggage rear plate. Refer to [INT-41. "LUGGAGE REAR PLATE : Removal and Installation"](#).
2. Remove pump control unit mounting nuts (A), disconnect pump control unit connector and remove pump control unit (1).



INSTALLATION

Install in the reverse order of removal.

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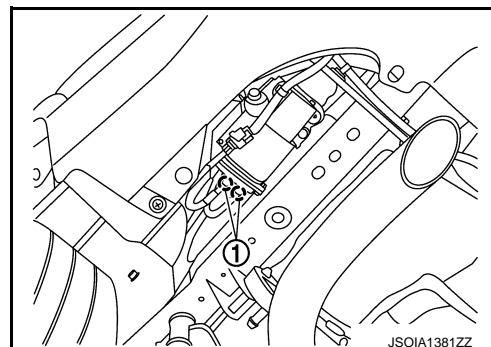
AIR PUMP

Removal and Installation

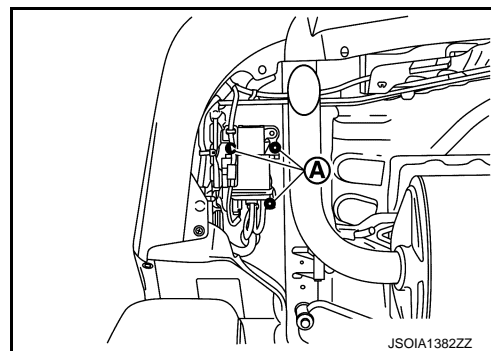
INFOID:000000010727961

REMOVAL

1. Disconnect the air tube ①.



2. Remove bolt ① and harness clip, disconnect air pump connector and remove air pump.



INSTALLATION

Install in the reverse order of removal.

REAR CAMERA WASHER/AIR NOZZLE & TUBE

< REMOVAL AND INSTALLATION >

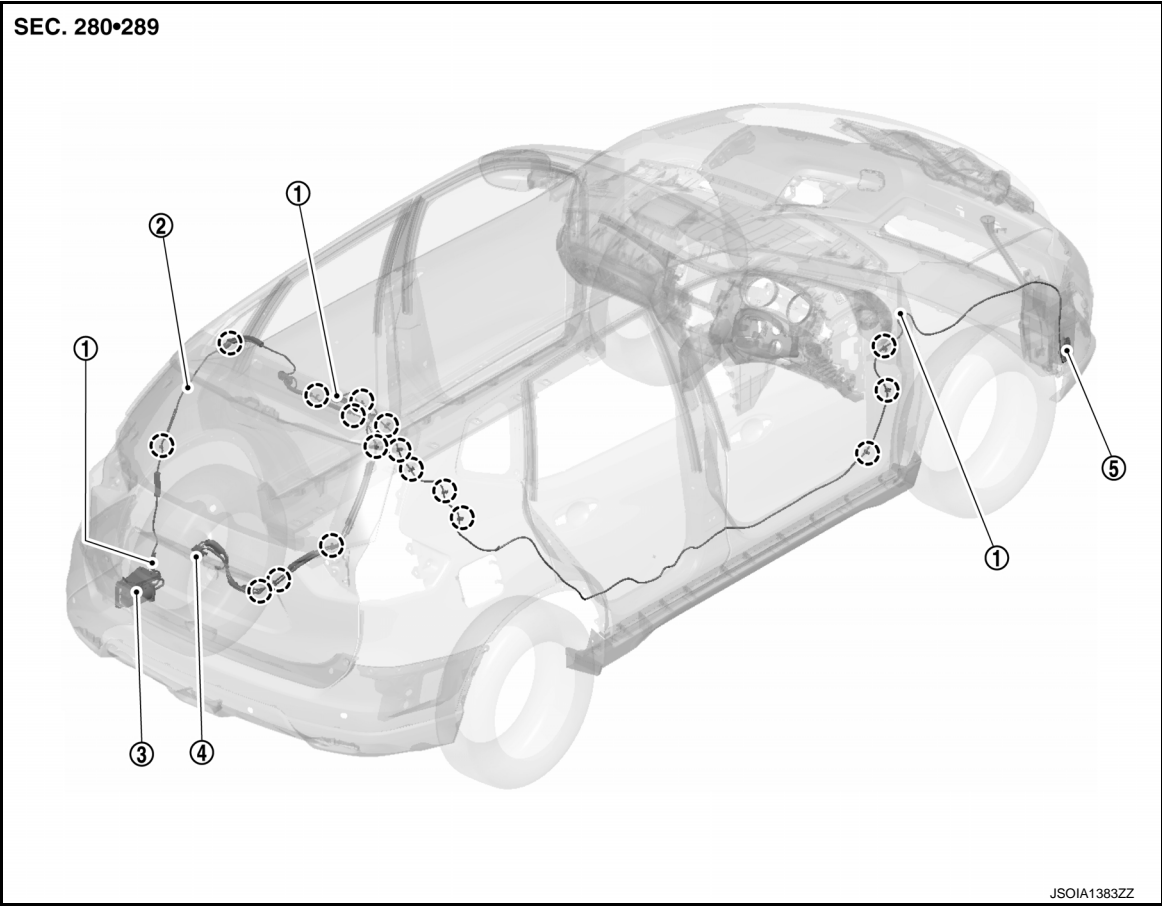
[DRIVER ASSISTANCE SYSTEM]

REAR CAMERA WASHER/AIR NOZZLE & TUBE

Exploded View

INFOID:0000000010727962

REAR VIEW CAMERA WASHER / AIR NOZZLE & TUBE



- | | | |
|--------------------------------------|---------------|---------------------|
| ① Grommet | ② Air tube | ③ Air pump assembly |
| ④ Rear camera with air/washer nozzle | ⑤ Washer pump | ○ Clip |

NOTE:
For washer pump, refer to [DAS-161, "Removal and Installation"](#).

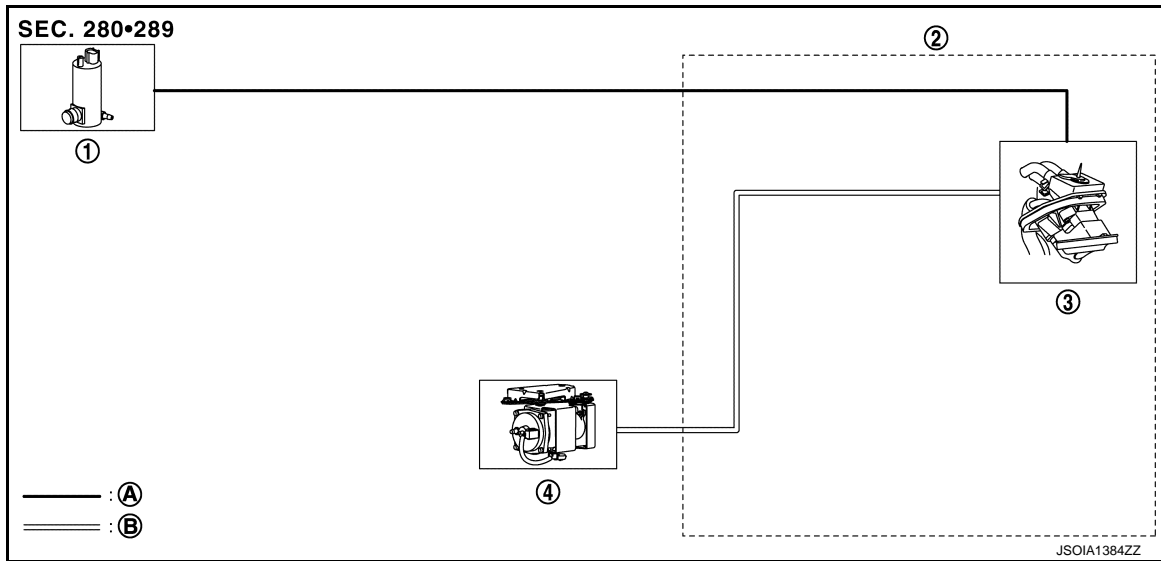
HYDRAULIC LAYOUT

DAS

REAR CAMERA WASHER/AIR NOZZLE & TUBE

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

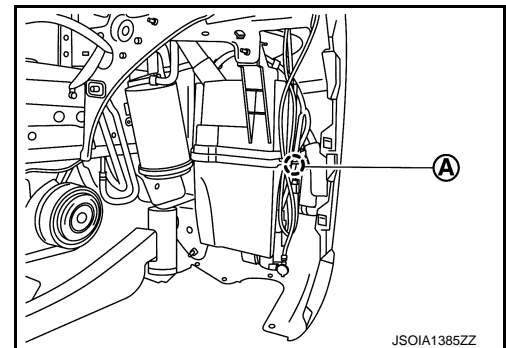


Removal and Installation

INFOID:0000000010727963

REMOVAL

1. Remove front fender protector RH. Refer to [EXT-35, "FENDER PROTECTOR : Removal and Installation"](#).
2. Remove front kicking plate (inner). Refer to [INT-24, "KICKING PLATE : Removal and Installation"](#).
3. Remove dash side finisher. Refer to [INT-26, "DASH SIDE FINISHER : Removal and Installation"](#).
4. Remove headlining assembly. Refer to [INT-37, "Removal and Installation"](#).
5. Remove back door inner finisher. Refer to [INT-47, "Exploded View"](#).
6. Remove washer tube from washer tank and tube clip (A).

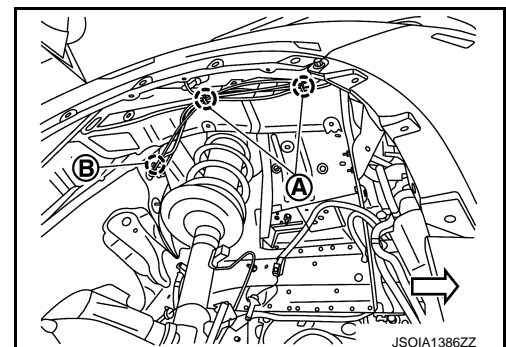


7. Remove washer tube from tube clip (A), then pull washer tube towards interior with grommet (B).

NOTE:

Do not allow washer fluid to spill in the vehicle.

← : Vehicle front

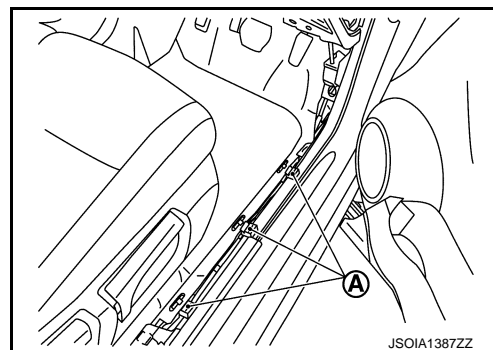


REAR CAMERA WASHER/AIR NOZZLE & TUBE

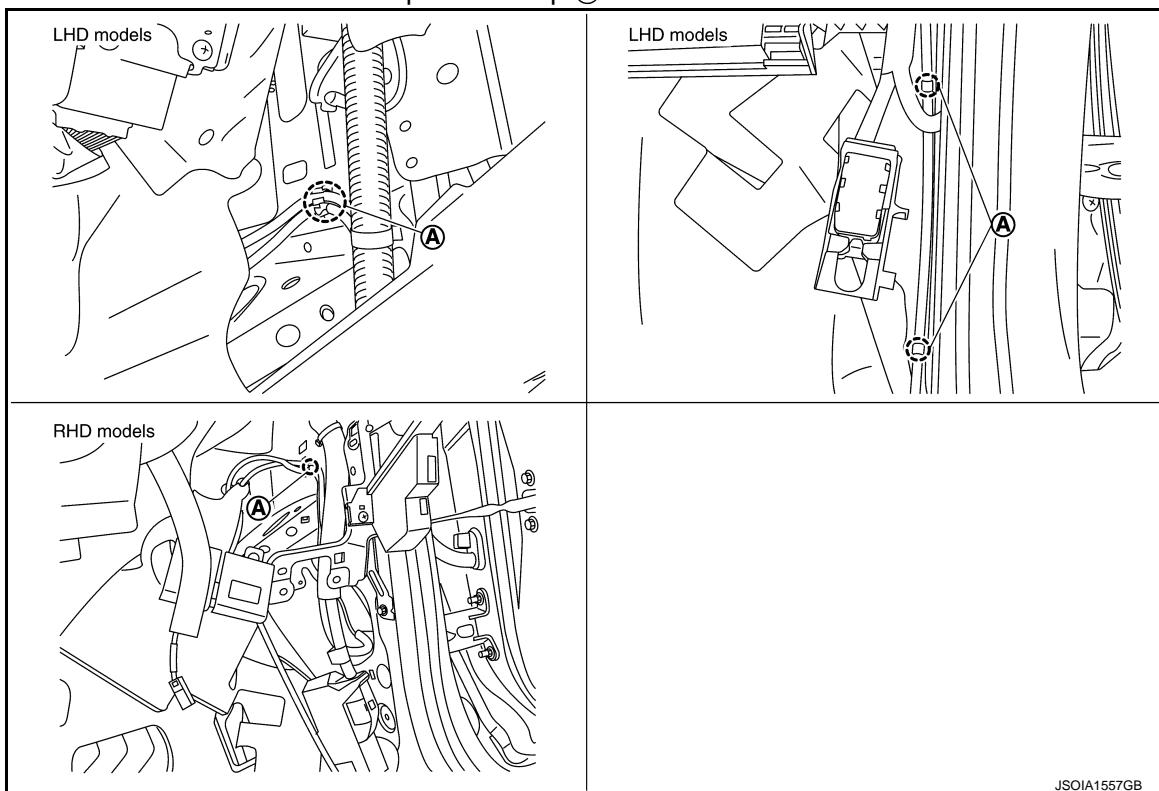
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

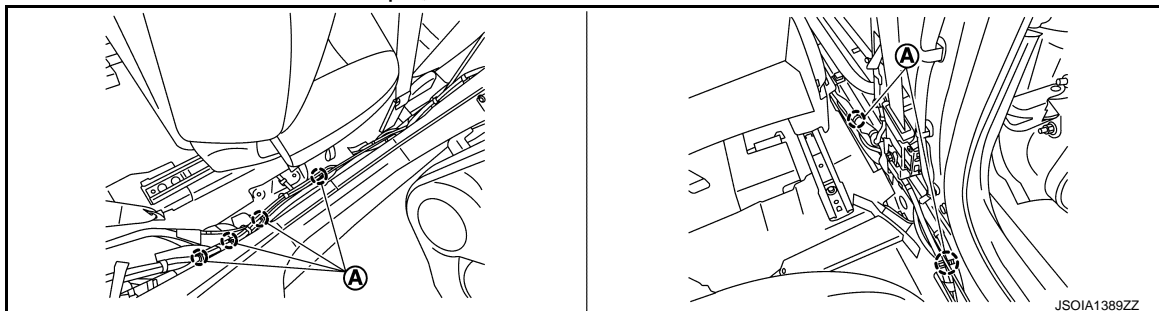
8. Remove washer tube from tube clip (A).



9. Remove washer tube from harness protector clip (A).



10. Remove washer tube from tube clip (A).

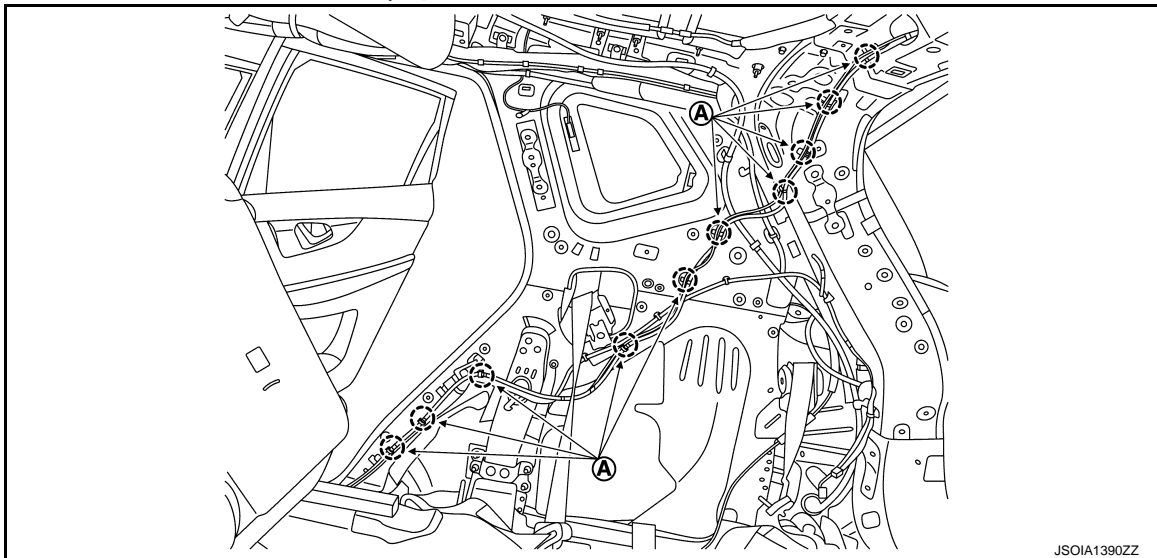


REAR CAMERA WASHER/AIR NOZZLE & TUBE

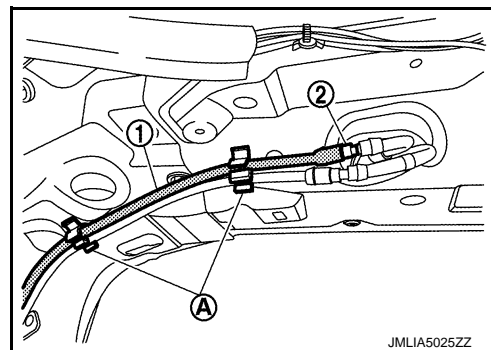
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

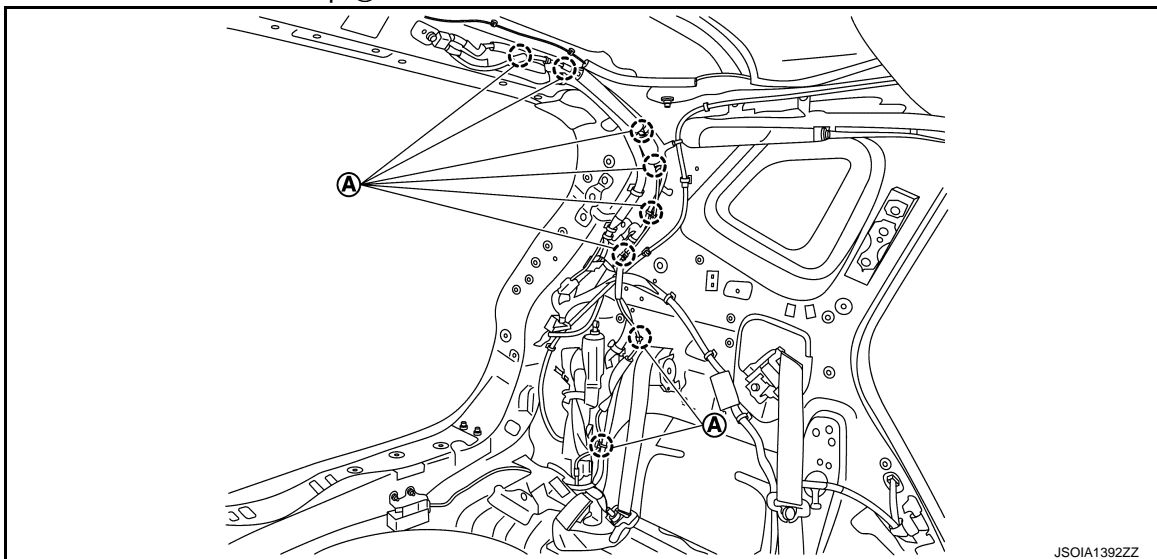
11. Remove washer tube from tube clip (A).



12. Remove washer tube ① from tube clip (A) and joint (2).



13. Remove air tube from tube clip (A).

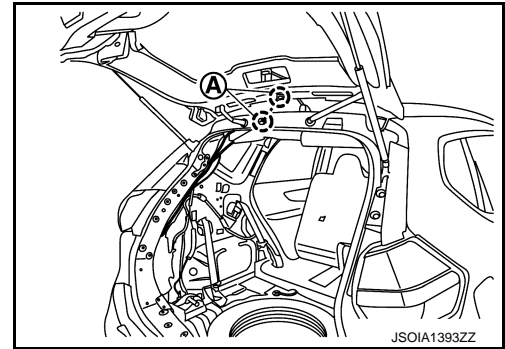


REAR CAMERA WASHER/AIR NOZZLE & TUBE

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

14. Remove air tube protector (A).



15. Since the following washer/air tubes are not replaceable, replace back door assembly when replacement is necessary due to malfunction:

- Between joint described in Step 12 and the rear camera assembly
- Between air tube protector described in Step 14 and the rear camera assembly

INSTALLATION

Note the following items, then install in the reverse order of removal.

CAUTION:

- Securely install grommet to prevent the entry of water and dirt.
- Check washer tube for bend and damage.
- Align the mark of rear camera washer/air tube with the vehicle installation position.

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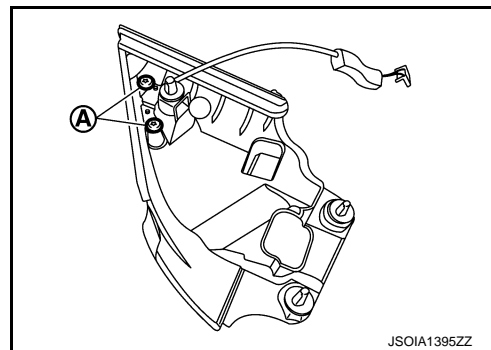
DAS

BSW INDICATOR**Removal and Installation**

INFOID:000000010727964

REMOVAL

1. Remove the door mirror corner cover. Refer to [MIR-27. "DOOR MIRROR ASSEMBLY : Removal and Installation"](#).
2. Remove the bolt ① and remove BSW indicator.

**INSTALLATION**

Install in the reverse order of removal.

WASHER PUMP

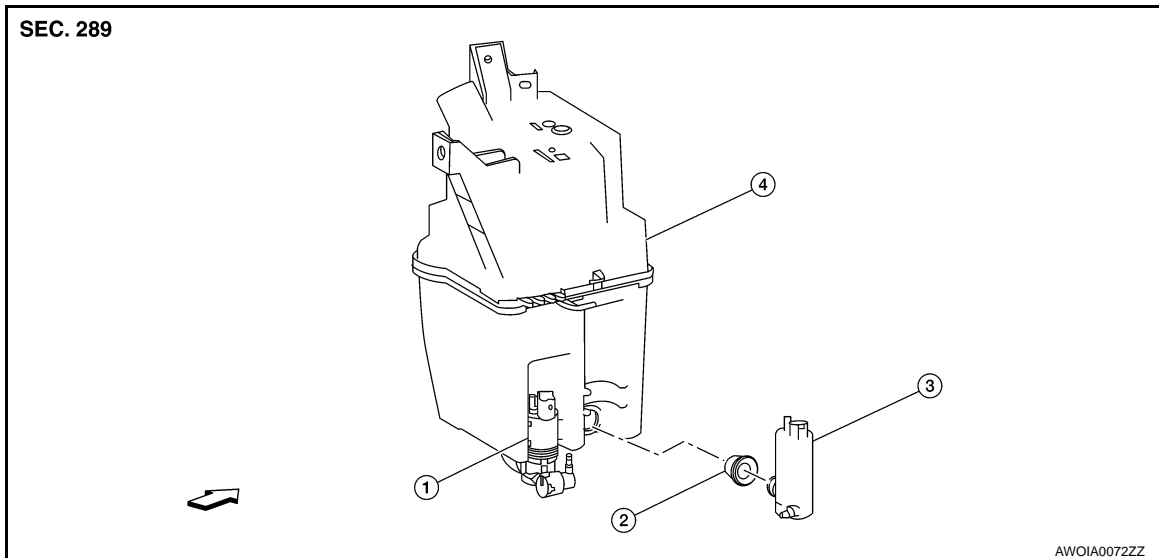
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

WASHER PUMP

Exploded View

INFOID:0000000010727965



1. Washer pump (Front / rear washer) 2. Packing 3. Rear camera washer pump
4. Washer tank
- ⇐ : Vehicle front

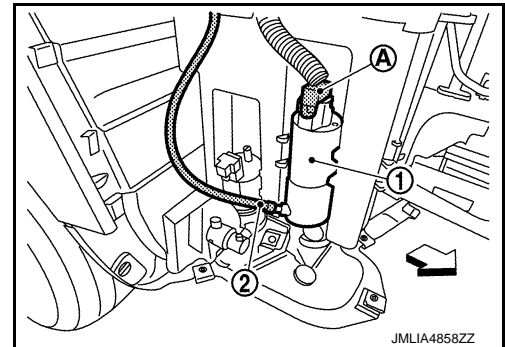
Removal and Installation

INFOID:0000000010727966

REMOVAL

1. Remove the front fender protector RH. Refer to [EXT-35, "FENDER PROTECTOR : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the rear camera washer pump (1) and then remove the rear camera washer tube (2).

⇐ : Vehicle front



3. Remove the rear camera washer pump from washer tank.
4. Remove the packing from washer tank seal.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Add water to the top of washer tank inlet after installing. Check that no leaks exist.

HOW TO USE THIS MANUAL

HOW TO USE THIS SECTION

Information

INFOID:0000000010724535

- Both “VDC” and “ESP” are used in this manual. These indicate the same system.
- Both “hill start assist” and “Uphill start support” are used in this manual. These indicate the same system.
- Both “advanced hill descent control” and “downhill drive support” are used in this manual. These indicate the same system.
- Both “active trace control” and “dynamic cornering enhancement” are used in this manual. These indicate the same system.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000010735360

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precautions for Removing Battery Terminal

INFOID:0000000010735361

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

NOTE:

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.

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

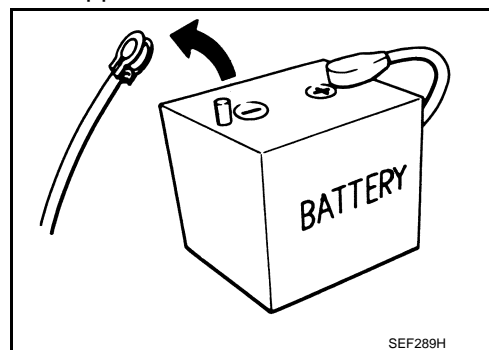
NOTE:

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

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

NOTE:

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



SEF289H

HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.

PRECAUTIONS

[CHASSIS CONTROL]

< PRECAUTION >

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

NOTE:

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

6. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

Precaution for Stop/Start System Service

INFOID:0000000011003230

CAUTION:

When performing an inspection and its related work with the engine at idle, always turn the stop/start OFF switch ON or open the hood to release the stop/start system.

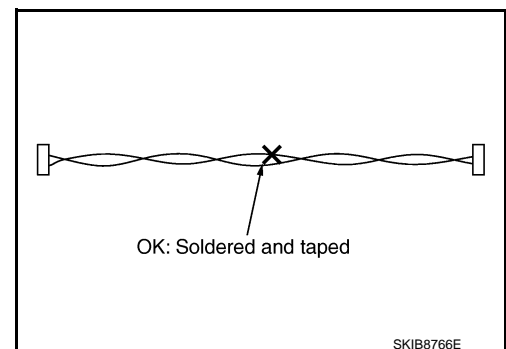
Precautions for Harness Repair

INFOID:0000000010735362

- 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).



PRECAUTIONS

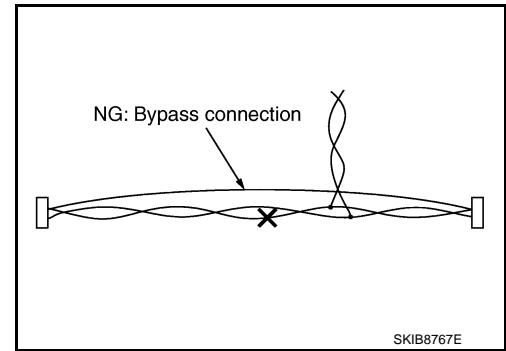
< PRECAUTION >

[CHASSIS CONTROL]

- 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.

Precaution for Chassis Control

INFOID:0000000010721685

- Never disassemble the chassis control module.
- The parts must not be reused if they are dropped.
- Never perform ACTIVE TEST while driving the vehicle.
- When the active trace control function and the active ride control function are activated, the driver may feel some vibration on the brake pedal, hear operating sound, or have feel of the deceleration. This is not a malfunction because it is caused by active engine brake function that is normally operated.
- When the active engine brake function is activated, engine sound becomes loud or the tachometer needle fluctuates. This is not a malfunction because it is caused by active engine brake function that is normally operated.
- Active trace control function, active engine control function and active ride control function are not always activated in any driving conditions.

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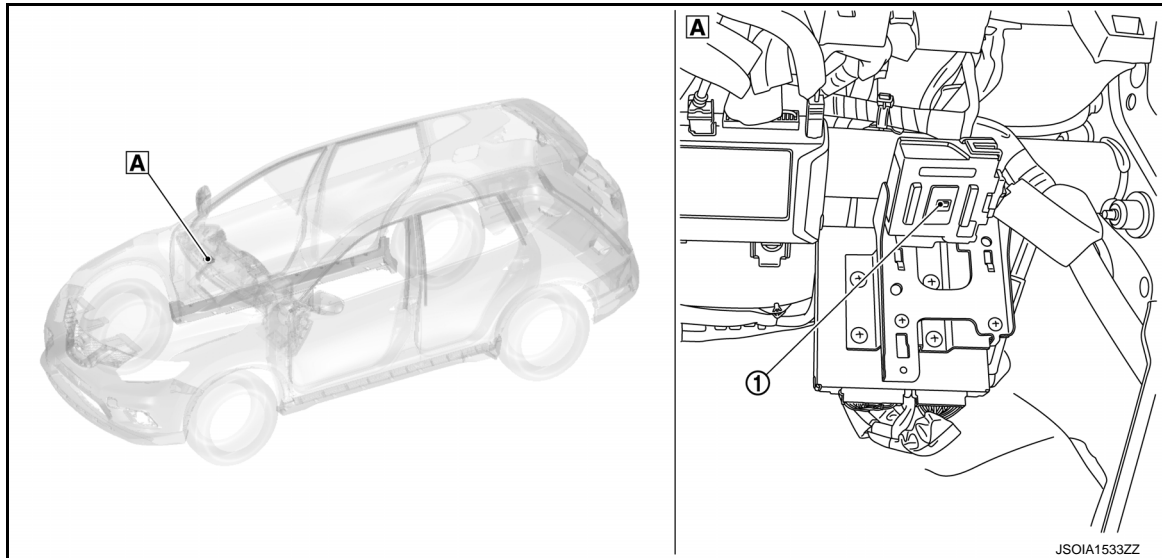
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000010721686

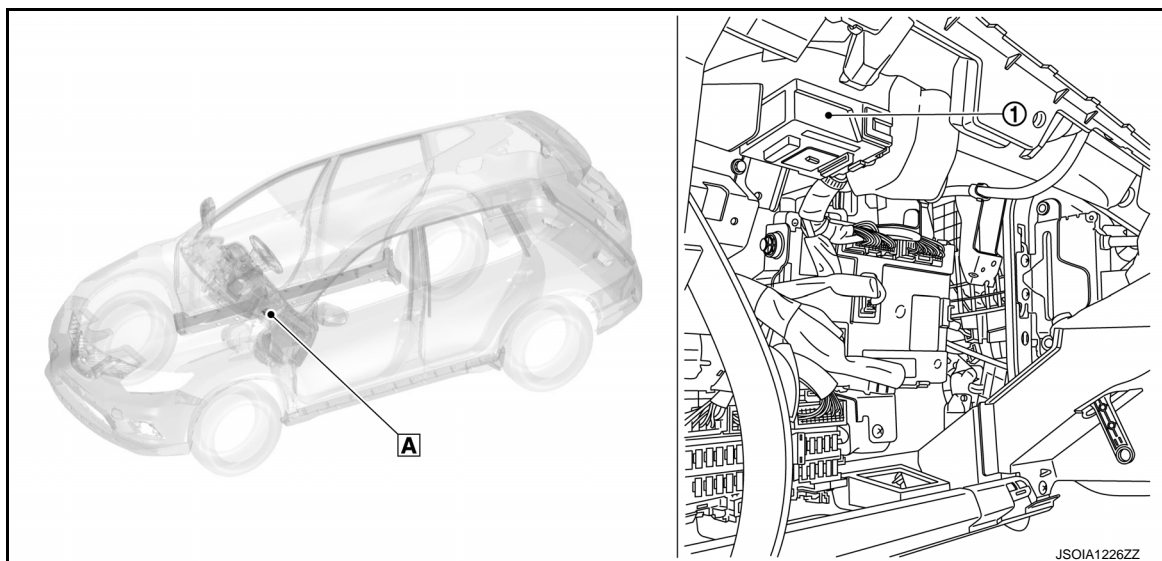
LHD MODELS



A Upside of instrument lower panel RH

No.	Component parts	Function
①	Chassis control module	DAS-167. "Chassis Control Module"

RHD MODELS



A Upside of instrument lower panel LH

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

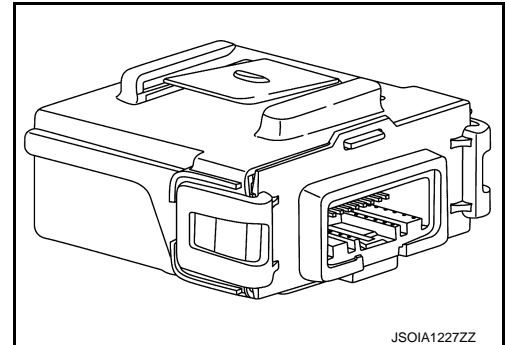
No.	Component parts	Function
①	Chassis control module	DAS-167, "Chassis Control Module"

Chassis Control Module

INFOID:0000000010721687

Chassis control module controls the following systems based on the signals from each sensor, each switch, and each control unit.

- Active trace control function
- Active engine control function
- Active ride control function



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SYSTEM

System Description

INFOID:000000010721688

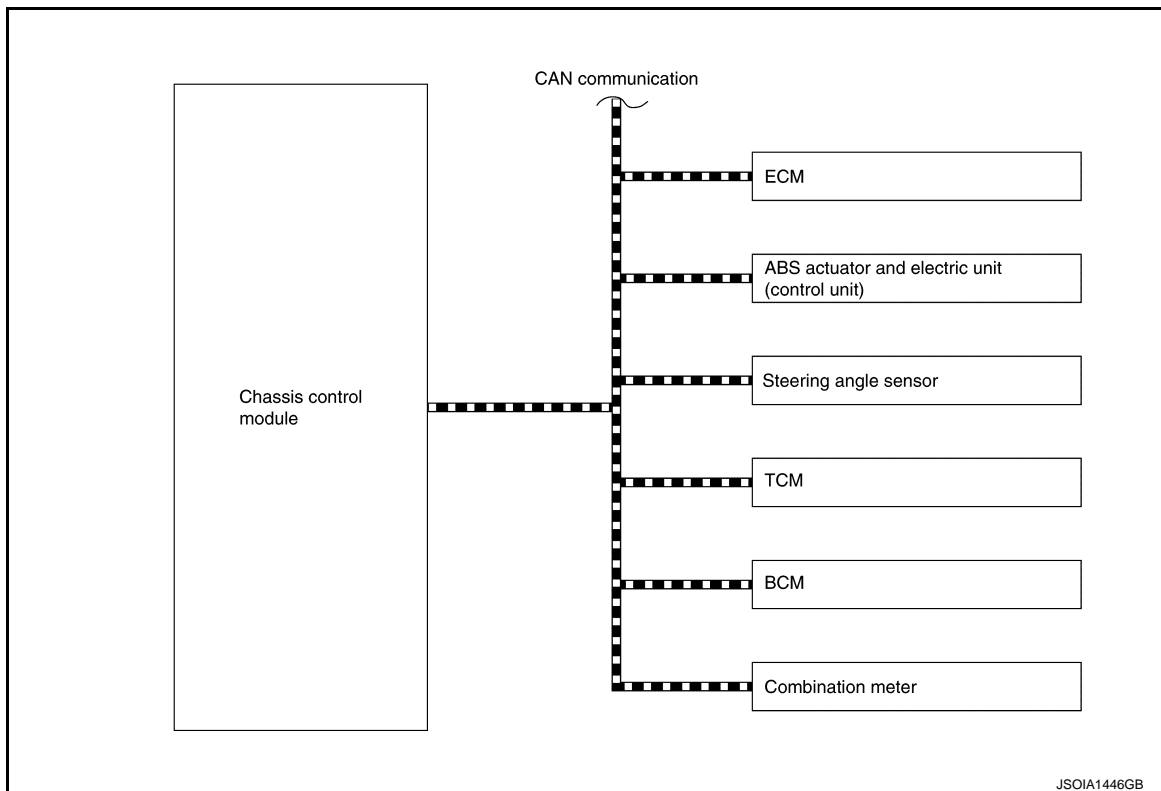
- Chassis control to integrally control the driving system was adopted.
- Chassis control module inputs the necessary information for control from CAN communication and each switch and integrally controls each system. Refer to the following table for systems controlled and input output signals.

Function	Reference page
Active trace control function	DAS-173. "ACTIVE TRACE CONTROL (DYNAMIC CORNERING ENHANCEMENT) FUNCTION : System Description"
Active engine control function	DAS-179. "ACTIVE ENGINE BRAKE FUNCTION : System Description"
Active ride control function	DAS-182. "ACTIVE RIDE CONTROL FUNCTION : System Description"

SYSTEM DIAGRAM

NOTE:

TCM is applied to CVT models.



INPUT SIGNAL AND OUTPUT SIGNAL

Major signal transmission between each unit via communication lines is shown in the following table.

SYSTEM

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Component parts	Signal description
ECM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Accelerator pedal position signal • Engine speed signal • Estimate drive torque signal • Request drive torque signal • ECM malfunction signal • Request drive torque status signal
ABS actuator and electric unit (control unit)	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Front LH wheel speed signal • Front RH wheel speed signal • Rear LH wheel speed signal • Rear RH wheel speed signal • TCS operation signal • VDC operation signal • Side G signal • VDC OFF switch signal • Brake fluid pressure signal • Steering angle signal • VDC accept permission signal • ABS operation signal • Vehicle speed signal • Decel G signal • ABS malfunction signal • VDC malfunction signal • TCS malfunction signal • Yaw rate signal • EBD operation signal • EBD malfunction signal • hill start assist display request signal • hill descent control display request signal <p>Mainly receives the following signals from chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Active trace control signal • Active engine brake control signal • Active ride control signal
BCM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Stop lamp switch signal • Turn signal switch signal • Brake pedal position switch signal • BCM malfunction signal
IPDM E/R	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Ignition switch ON signal
TCM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Current gear position signal • CVT target gear ratio signal • CVT accept permission signal • Input speed signal • TCM malfunction signal

DAS

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SYSTEM

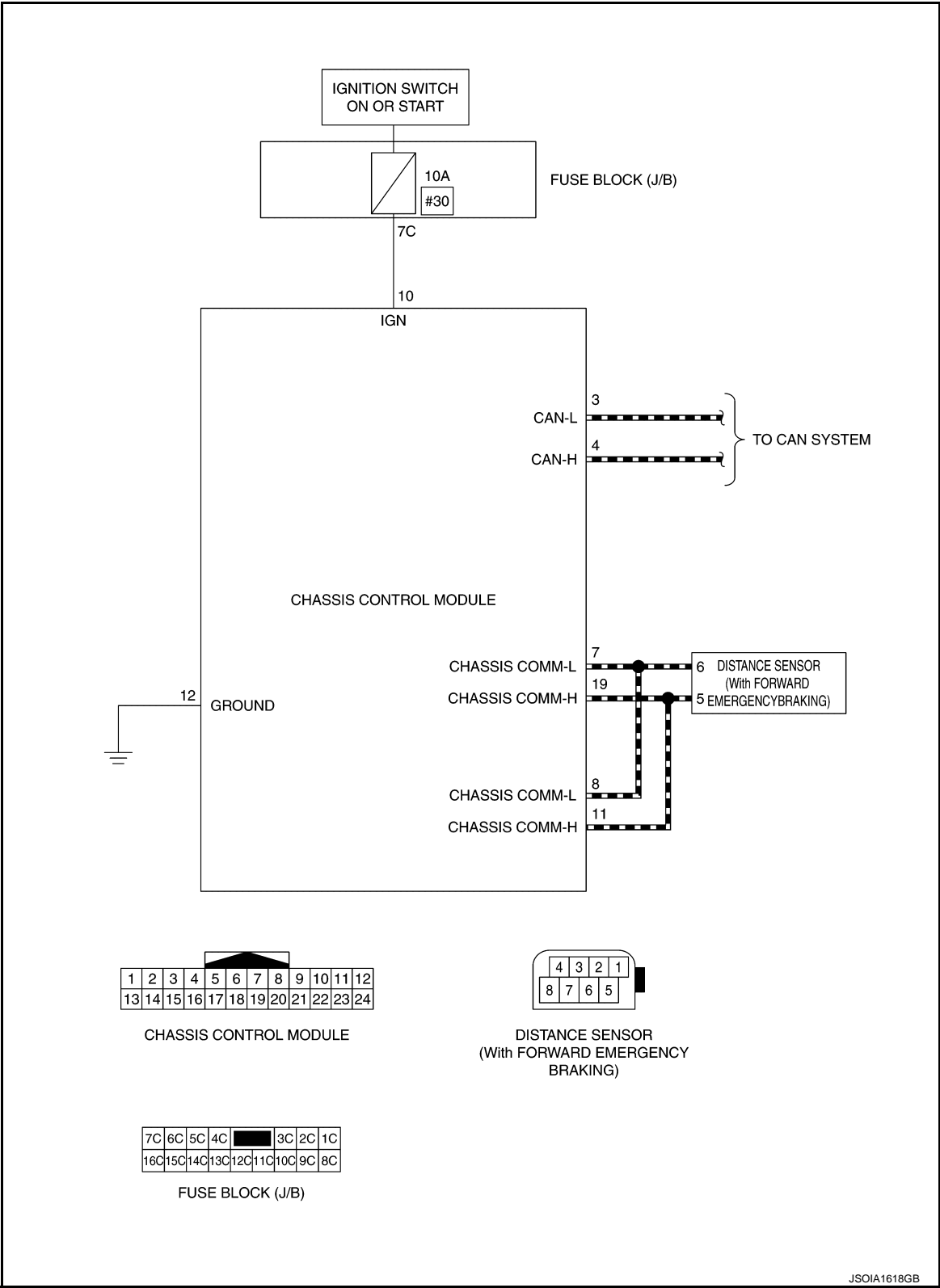
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Component parts	Signal description
Combination meter	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none">• Active trace control setting change request signal• Active engine brake setting change request signal• Combination meter malfunction signal Mainly receives the following signals from chassis control module via CAN communication. <ul style="list-style-type: none">• Curve display request signal• Tire display request signal• Active trace control setting display request signal• Chassis control malfunction display request signal• Active engine brake setting display request signal• Active trace control display request signal• Active engine brake display request signal• Active ride control display request signal• hill start assist display signal• hill descent control display signal
Steering angle sensor	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none">• Steering angle sensor signal

Circuit Diagram

INFOID:0000000010721689



Fail-safe

INFOID:0000000010735364

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.

SYSTEM

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

DTC	Vehicle condition
C1B92-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1B93-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control (engine control) function
C1B94-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
C1B95-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control (brake control) function
C1B99-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BA0-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (brake control) function
C1BA2-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
C1BA5-00	Normal control
C1BAB-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
C1BB2-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BB3-00	
C1BB4-00	
C1BB5-00	
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BB8-00	
C1BB9-00	
C1BBA-00	
C1BBB-00	
C1BBC-00	Normal control
C1BBD-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BC0-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control function
C1BC1-00	
C1BC2-00	
C1BC3-00	
C1BC4-00	The following functions are suspended. <ul style="list-style-type: none"> • Active ride control (brake control) function
C1BC5-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function

SYSTEM

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

DTC	Vehicle condition
C1BC6-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (brake control) function
U1000-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
U1010-49	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
U1A34-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
U1A35-00	
U1A36-00	
U1A39-00	Normal control
U1A3B-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control (engine control) function
U1A42-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
U1A43-00	
U1A48-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
U1A4A-00	
U1A4E-00	The following functions are suspended. <ul style="list-style-type: none"> • Active ride control (engine control) function

ACTIVE TRACE CONTROL (DYNAMIC CORNERING ENHANCEMENT) FUNCTION

ACTIVE TRACE CONTROL (DYNAMIC CORNERING ENHANCEMENT) FUNCTION : System Description

INFOID:0000000010721691

- The steering operation condition by the driver and the information from multiple sensors are computed by the chassis control module, and a command is transmitted to the ABS actuator and electric unit (control unit).
- The ABS actuator and electric unit (control unit) control the brake based on the command from the chassis control module.
- When cornering, driver operation is reduced and vehicle behavior is smoothened.
- When the VDC function is turned OFF with the VDC OFF switch, active trace control function also turns OFF.
- When the active trace control function operates, operation display can be checked on the information display in the combination meter. However, when assist control operates to an excessive degree during cornering, this is not displayed. Refer to [DAS-187, "INFORMATION DISPLAY \(COMBINATION METER\) : Chassis Control Display"](#).
- The active trace control function can be turned ON/OFF by operating the steering switch. However, even when turned OFF, a portion of functions (emergency avoidance, etc.) turn ON. Refer to [MWI-71, "INFORMATION DISPLAY : System Description"](#).
- When a malfunction occurs in active trace control function, the master warning lamp illuminates and at the same time the information display in the combination meter informs the driver.

NOTE:

- Active trace control function may not be effective in all driving environments (traction conditions, etc.).
- When active trace control function operates, vibration may be transmitted to the brake pedal, an operation sound may be heard, and a feeling of deceleration may be felt. These are not symptoms of malfunctions and indicate normal operating conditions.

SYSTEM

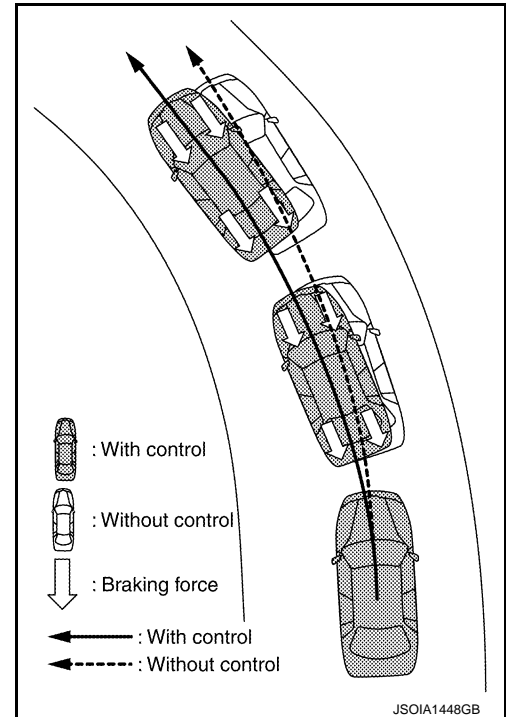
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

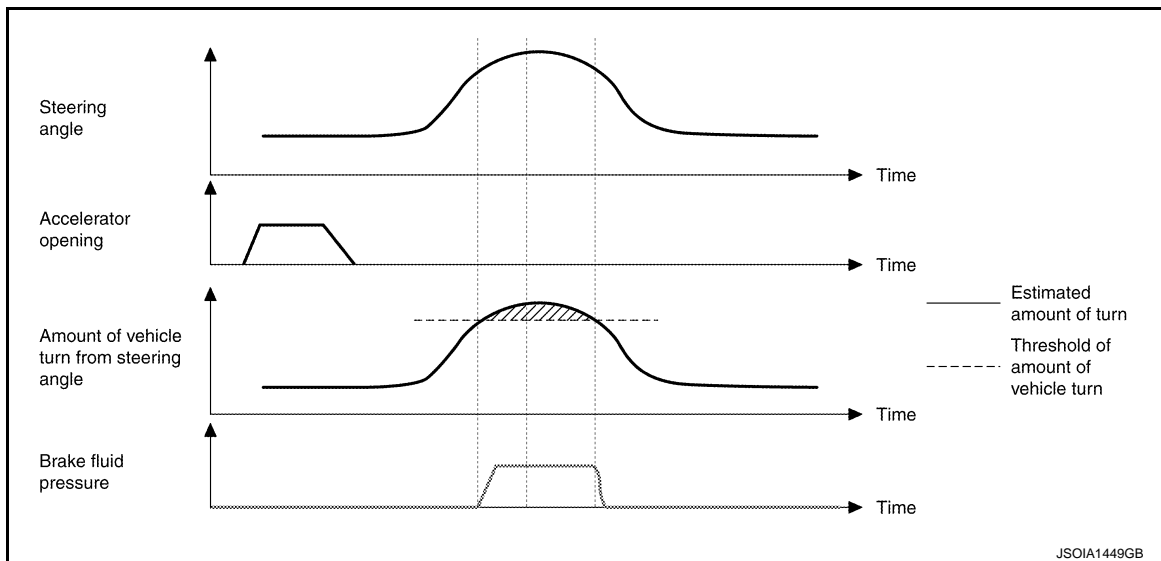
- Even when active trace control function OFF is selected with chassis control setting, it is not turned completely OFF for continuing to provide assistance in scenes where steering load is in the high excess range (emergency avoidance, etc.).

OPERATION CHARACTERISTICS

- This performs assistance when switching from deceleration (brake operation) to acceleration (accelerator operation) when driving on a curve. It operates the brake automatically to stabilize cornering, and smoothens acceleration in the longitudinal and lateral directions.



- The brake is controlled according to the steering operation condition of the driver and the cornering condition of the vehicle.

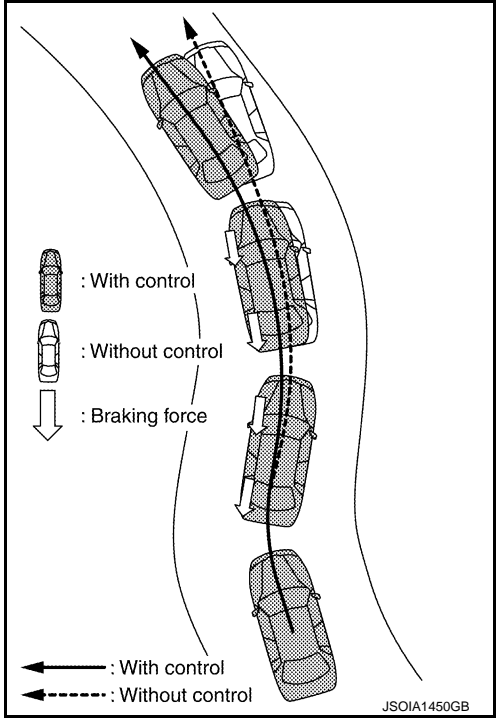


SYSTEM

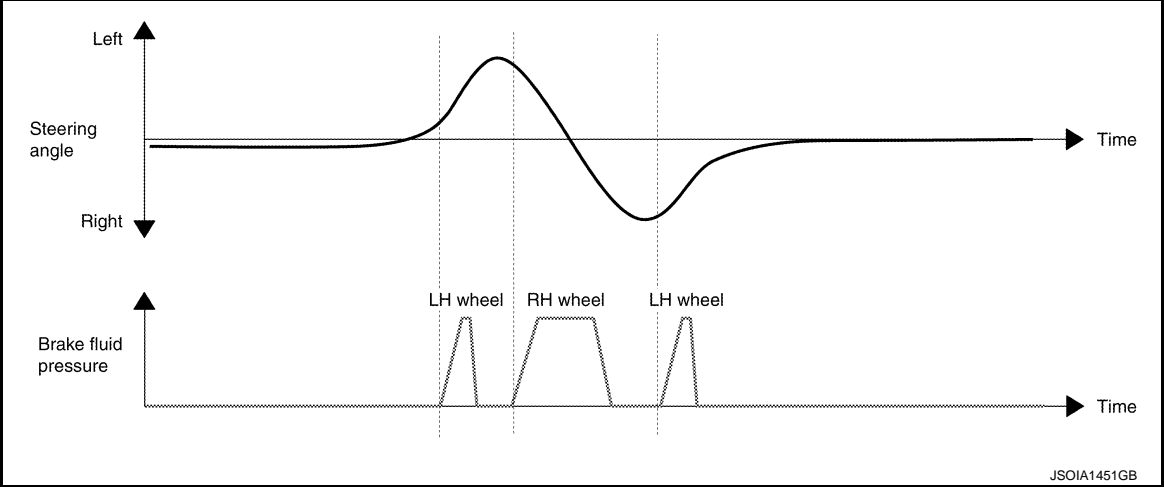
< SYSTEM DESCRIPTION >

- For the purpose of improving responsiveness during excessive steering operation, such as emergency avoidance steering, etc., the brake is applied to the inside wheel of the steering direction and causes turning moment to be generated.

[CHASSIS CONTROL]



- The brake is controlled according to the steering operation condition of the driver.



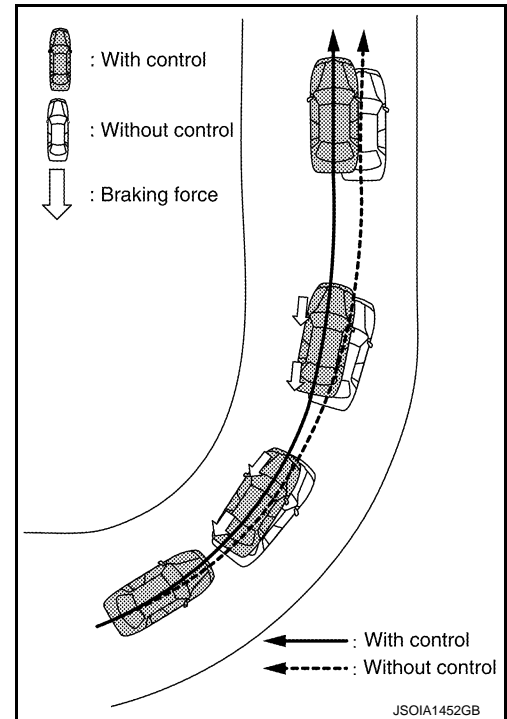
DAS

SYSTEM

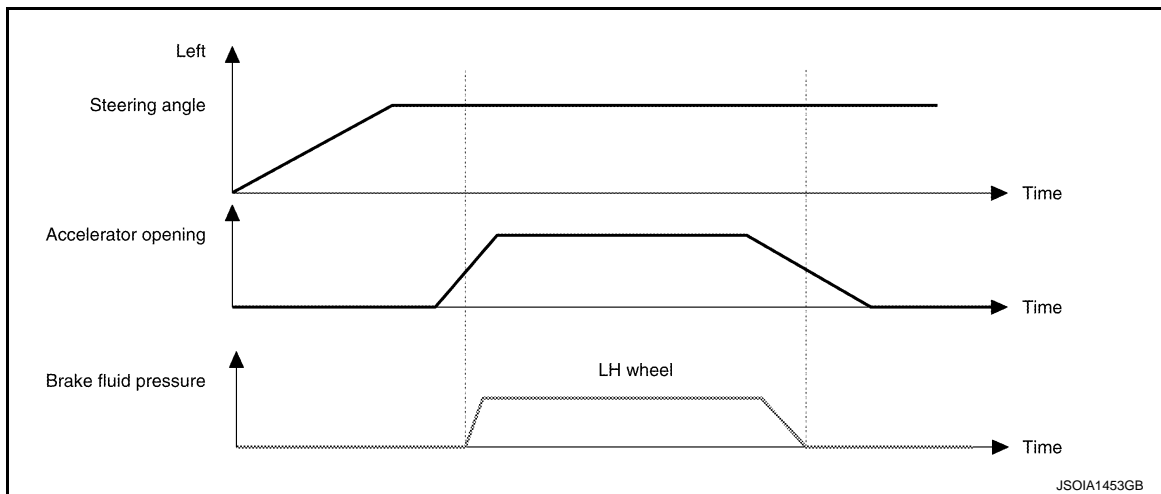
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

- When driving on a curve, change of the steering operation angle is controlled, vehicle movement is smoothened and cornering with a stable feeling is realized simultaneously, by controlling the brake on the inner wheel, according to accelerator operation.



- The brake is controlled according to the steering operation condition of the driver and the cornering condition of the vehicle.

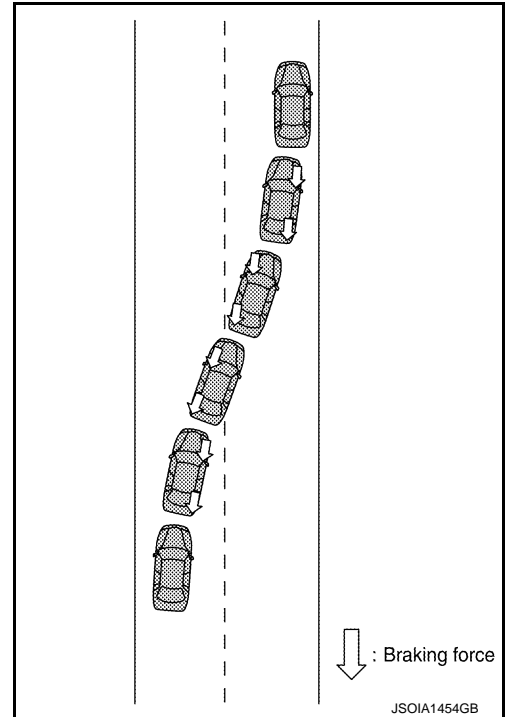


SYSTEM

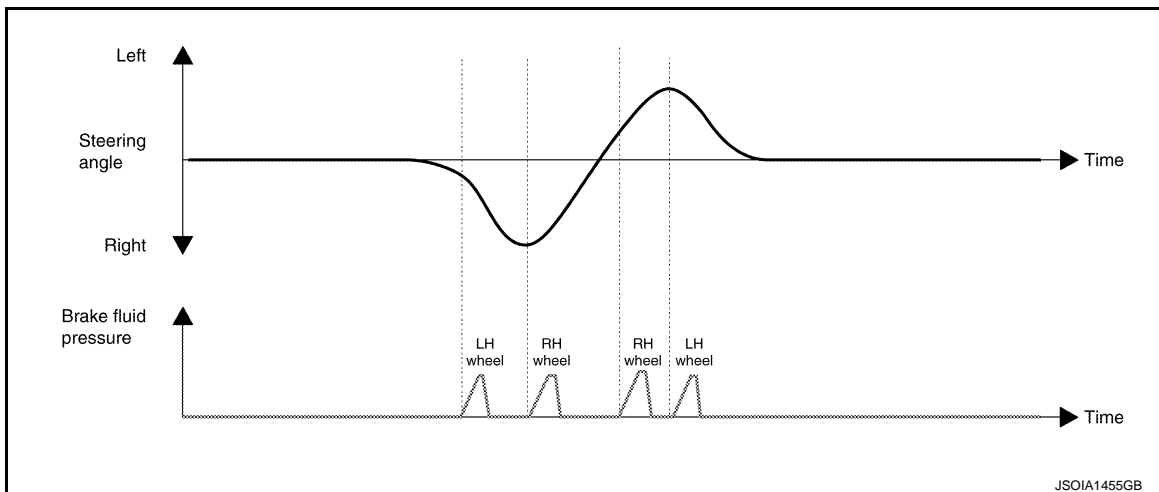
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

- When performing quick lane changes, and other excessive steering operations, the brake is operated automatically, and erratic vehicle behavior due to steering operation is reduced.



- The brake is controlled according to the steering operation condition of the driver and the cornering condition of the vehicle.

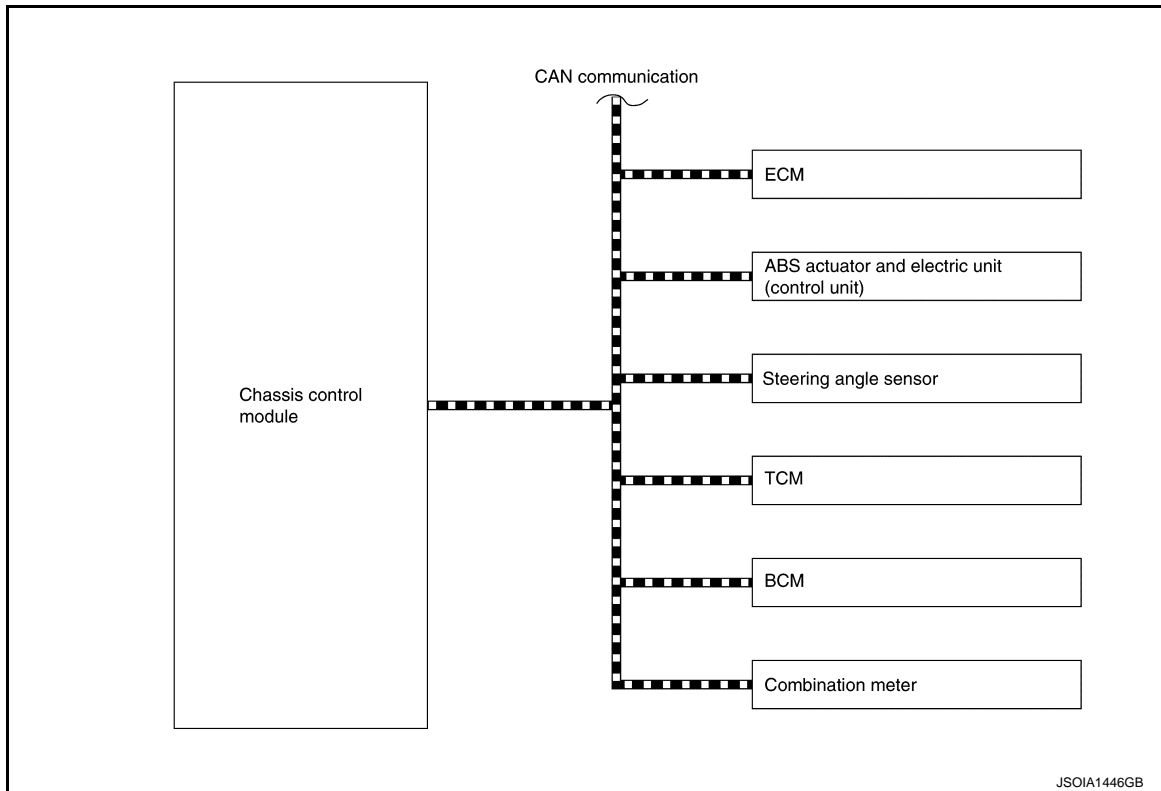


SYSTEM DIAGRAM

NOTE:

TCM is applied to CVT models.

DAS



INPUT SIGNAL AND OUTPUT SIGNAL

Major signal transmission between each unit via communication lines is shown in the following table.

Component parts	Signal description
ECM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Accelerator pedal position signal • Engine speed signal • Estimate drive torque signal • Request drive torque signal • Request drive torque status signal
ABS actuator and electric unit (control unit)	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Front LH wheel speed signal • Front RH wheel speed signal • Rear LH wheel speed signal • Rear RH wheel speed signal • TCS operation signal • VDC operation signal • Side G signal • VDC OFF switch signal • Brake fluid pressure signal • Steering angle signal • VDC accept permission signal <p>Mainly receives the following signals from chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Active trace control signal
BCM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Stop lamp switch signal
IPDM E/R	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Ignition switch ON signal
TCM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Current gear position signal • CVT target gear ratio signal

Component parts	Signal description
Combination meter	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Active trace control setting change request signal Mainly receives the following signals from chassis control module via CAN communication. <ul style="list-style-type: none"> • Curve display request signal • Tire display request signal • Active trace control setting display request signal • Chassis control malfunction display request signal
Steering angle sensor	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Steering angle sensor signal

ACTIVE ENGINE BRAKE FUNCTION

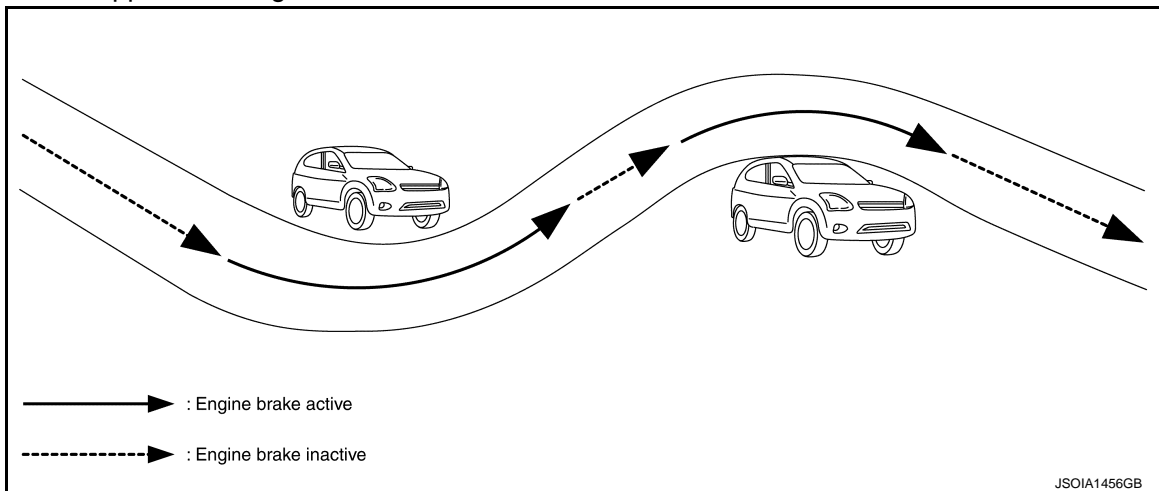
ACTIVE ENGINE BRAKE FUNCTION : System Description

INFOID:000000010721692

- When the active engine brake (cornering control) function operates, operation display can be checked on the information display in the combination meter. Refer to [DAS-187, "INFORMATION DISPLAY \(COMBINATION METER\) : Chassis Control Display"](#).
- The active engine control function can be turned ON/OFF by operating the steering switch. Refer to [MWI-71, "INFORMATION DISPLAY : System Description"](#).

CORNERING CONTROL

- For the purpose of reducing the operation of switching to depress the brake pedal during cornering, the operation information of the driver is computed with the chassis control module and a command is transmitted to TCM.
- Based on the command from the chassis control module, TCM shifts the gear ratio of the transaxle to the low side and applies the engine brake.

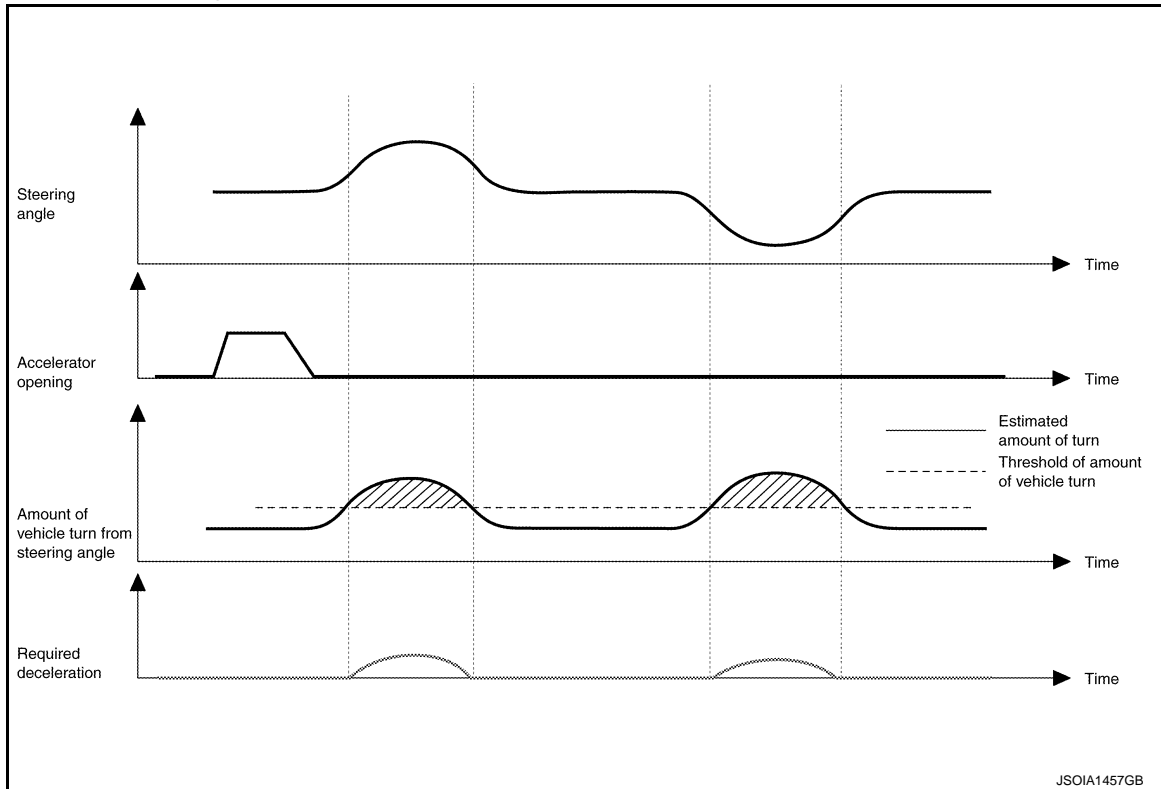


SYSTEM

< SYSTEM DESCRIPTION >

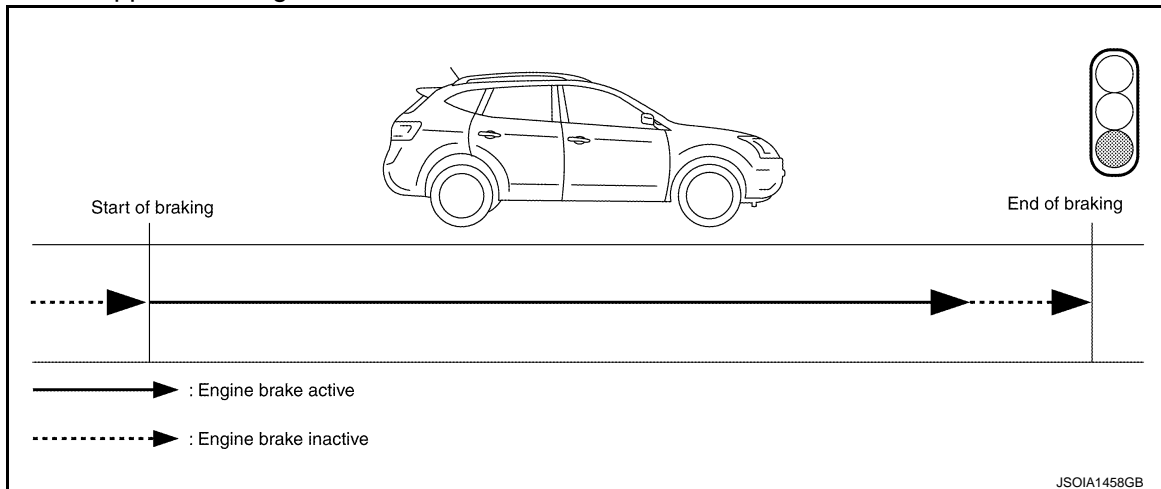
[CHASSIS CONTROL]

- The transaxle is controlled according to the steering operation of the driver, as well as the accelerator pedal condition and cornering condition of the vehicle.



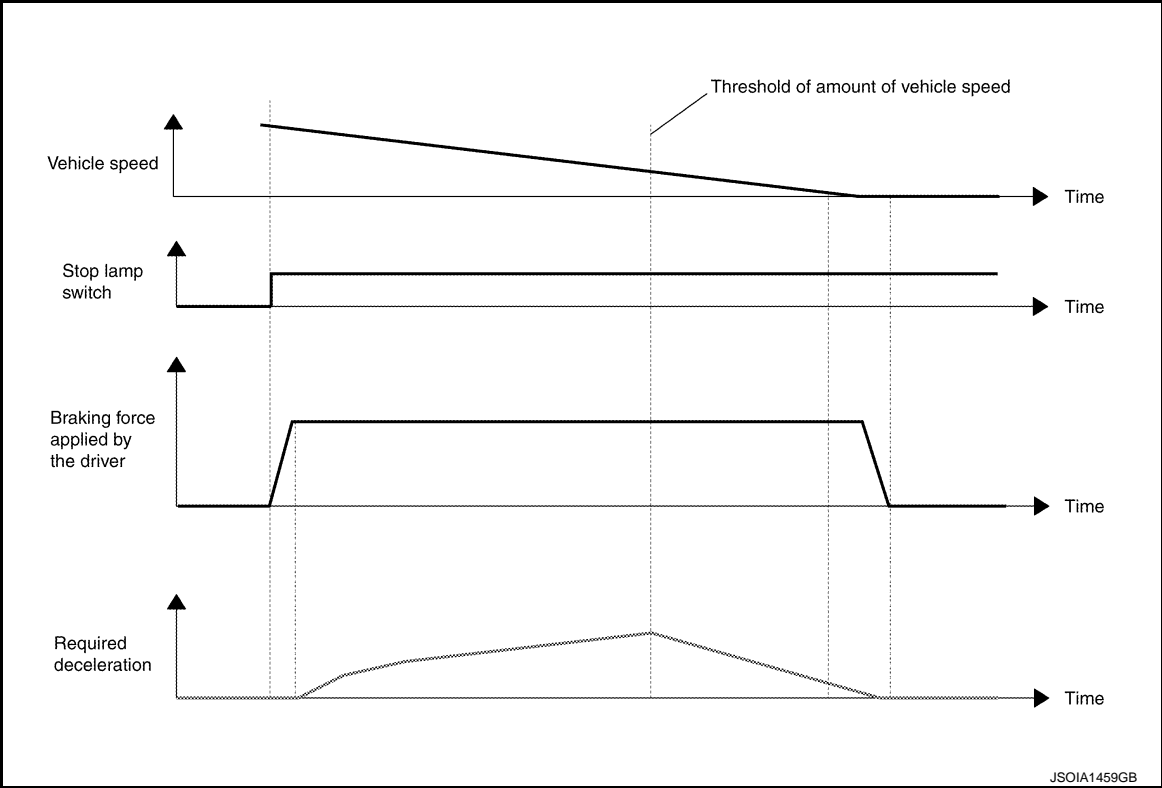
BRAKING CONTROL

- For the purpose of improving the feeling of effectiveness of the brake when decelerating, the brake operation amount of the driver is computed by the chassis control module, and a command is transmitted to TCM.
- Based on the command from the chassis control module, TCM shifts the gear ratio of the transaxle to the low side and applies the engine brake.



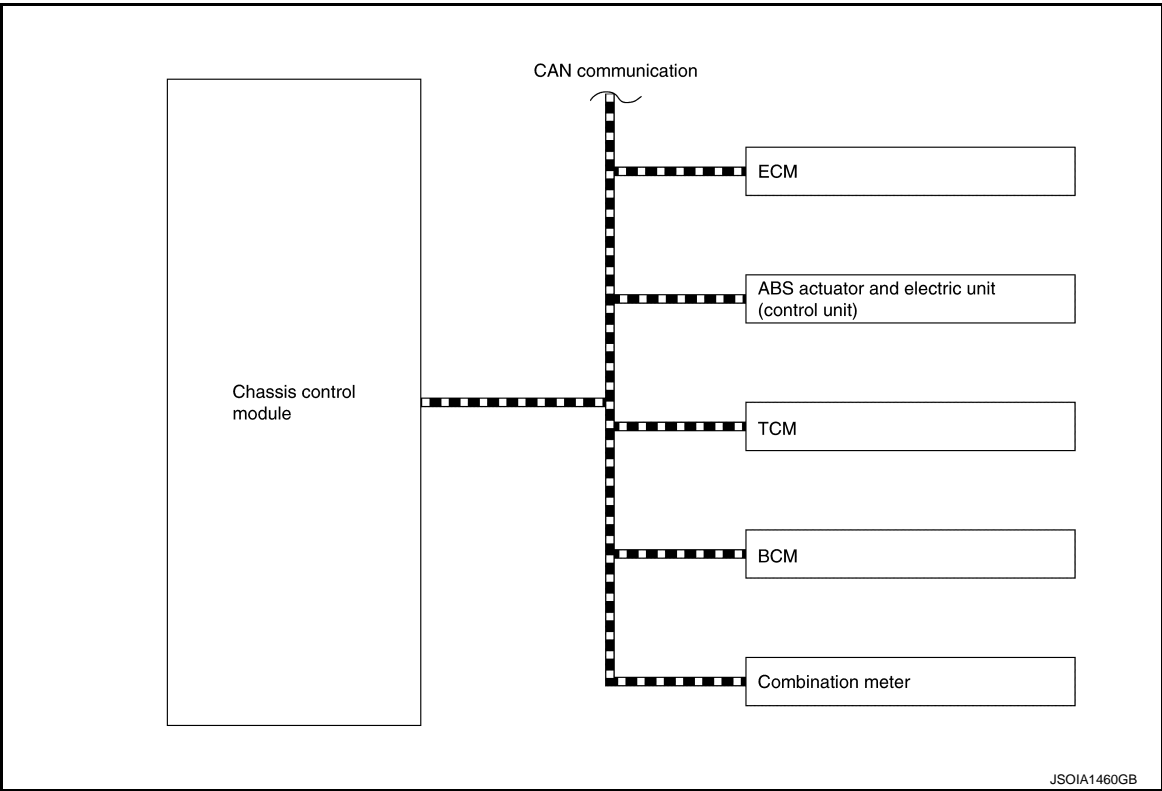
SYSTEM

- The transaxle is controlled according to the brake condition.



SYSTEM DIAGRAM

NOTE:
TCM is applied to CVT models.



INPUT SIGNAL AND OUTPUT SIGNAL

Major signal transmission between each unit via communication lines is shown in the following table.

Component parts	Signal description
ECM	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Accelerator pedal position signal • Estimate drive torque signal • Request drive torque status signal
ABS actuator and electric unit (control unit)	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Front LH wheel speed signal • Front RH wheel speed signal • Rear LH wheel speed signal • Rear RH wheel speed signal • VDC operation signal • Side G signal • Brake fluid pressure signal • Steering angle signal Mainly receives the following signals from chassis control module via CAN communication. <ul style="list-style-type: none"> • Active engine brake control signal
BCM	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Stop lamp switch signal
IPDM E/R	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Ignition switch ON signal
TCM	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • CVT accept permission signal
Combination meter	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> • Active engine brake setting change request signal Mainly receives the following signals from chassis control module via CAN communication. <ul style="list-style-type: none"> • Curve display request signal • Tire display request signal • Active engine brake setting display request signal

ACTIVE RIDE CONTROL FUNCTION

ACTIVE RIDE CONTROL FUNCTION : System Description

INFOID:0000000010721693

- When the VDC function is turned OFF by operation of VDC OFF switch, active ride control function also turns OFF.
- When the active ride control (braking control) function operates, operation display can be checked on the information display in the combination meter. Refer to [DAS-187, "INFORMATION DISPLAY \(COMBINATION METER\) : Chassis Control Display"](#).
- When a malfunction occurs in active ride control function, the master warning lamp illuminates and at the same time the information display in the combination meter informs the driver.

NOTE:

Active ride control function may not be effective in all driving environments (traction conditions, etc.).

ENGINE CONTROL

Riding Comfort Improvement

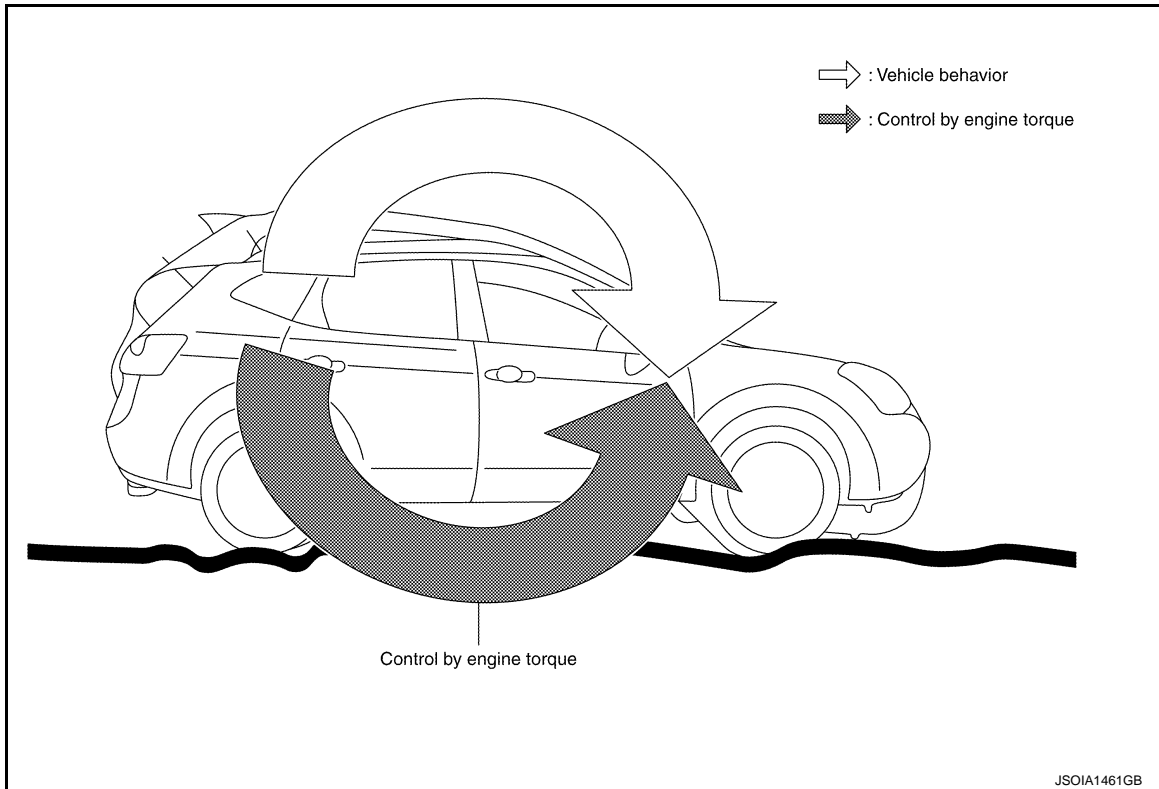
- When driving on an uneven road surface, the rotation of each wheel, the steering angle, and the requested traction torque are computed by the chassis control module and a command is transmitted to ECM.
- Based on the command from the chassis control module, ECM corrects the engine torque that is output.

SYSTEM

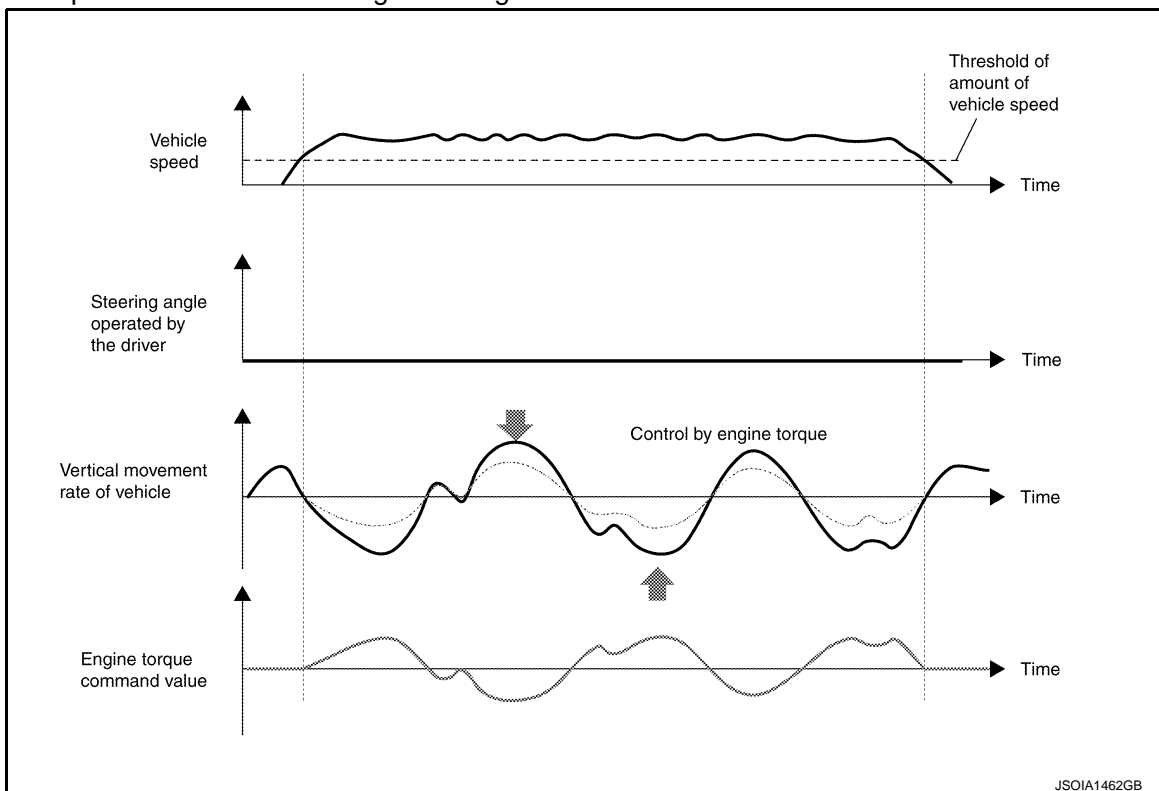
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

- By correcting the engine torque that is output, the load of weight on the front and rear wheels stabilizes and riding comfort is improved.



- Engine torque is corrected according to driving conditions.



Steering Stability

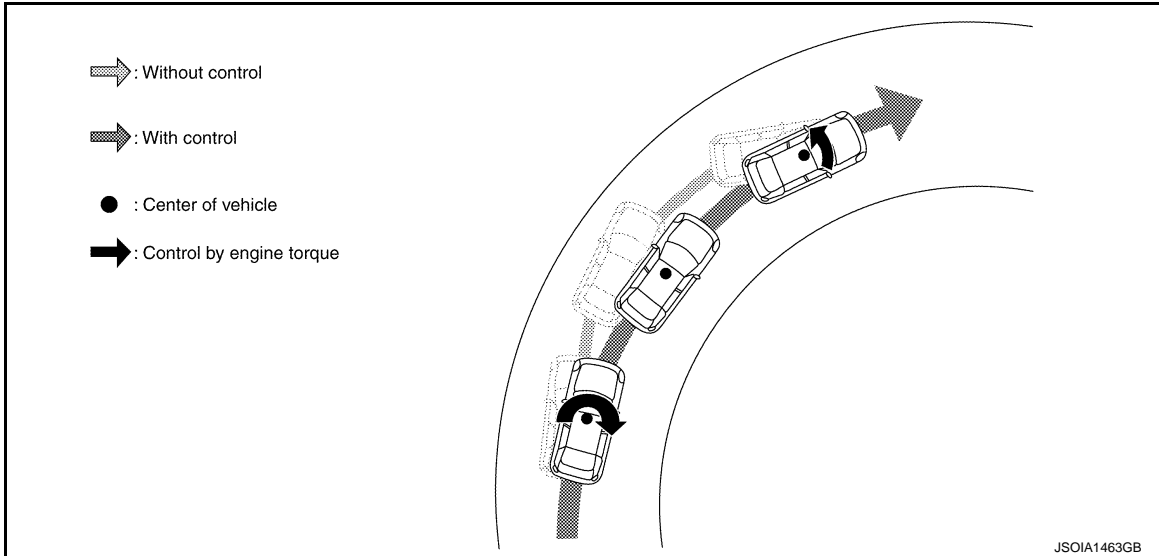
- The rotation of each wheel, the steering angle, and the requested traction torque are computed by the chassis control module and a command is transmitted to ECM.
- Based on the command from the chassis control module, ECM corrects the engine torque that is output.

SYSTEM

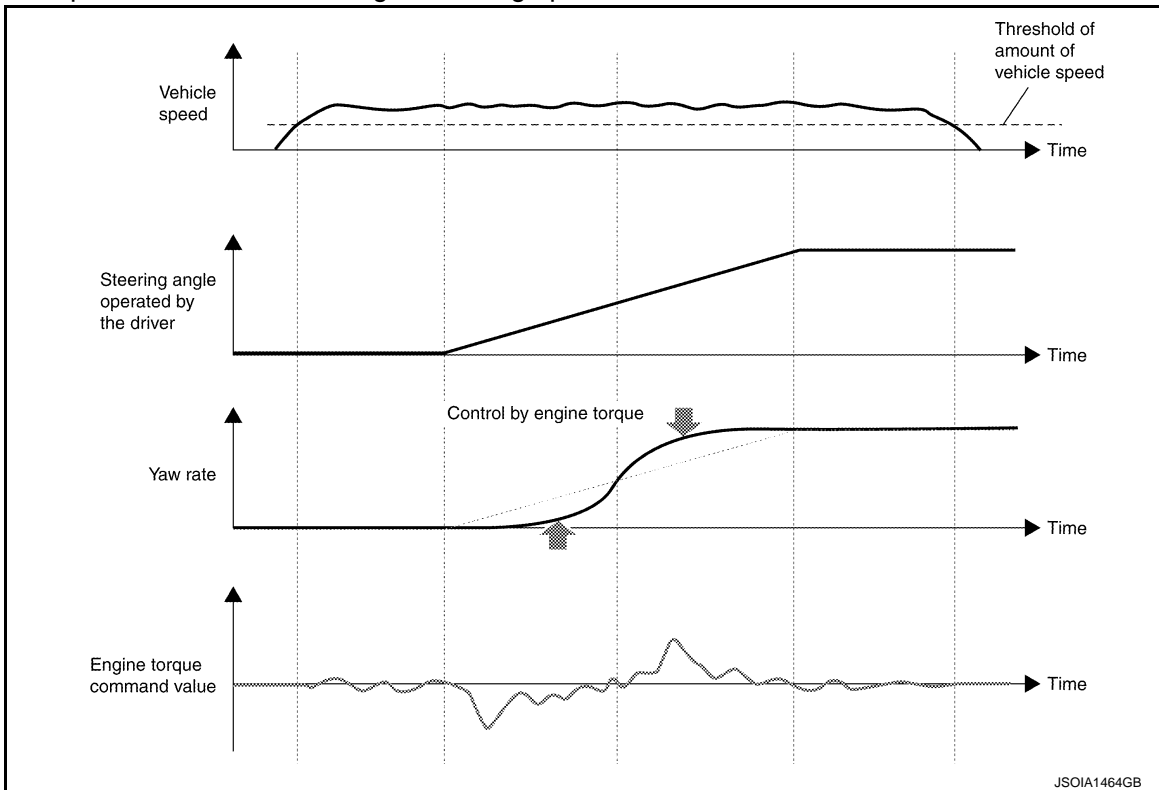
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

- By correcting the engine torque that is output, vehicle behavior during cornering is smoothened.



- Engine torque is corrected according to steering operation conditions.



BRAKING CONTROL

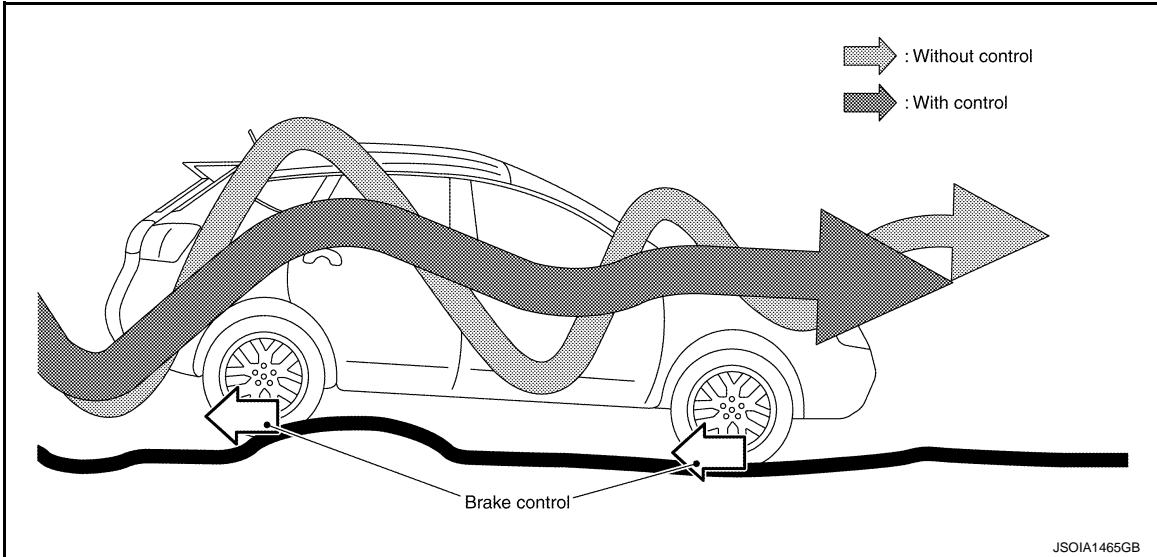
- When driving on an uneven road surface, mainly the rotation speed information of each wheel is computed by the chassis control module to estimate vertical G, and a command is transmitted to the ABS actuator and electric unit (control unit).
- The ABS actuator and electric unit (control unit) control brake fluid pressure (brake force) according to the command from the chassis control module.

SYSTEM

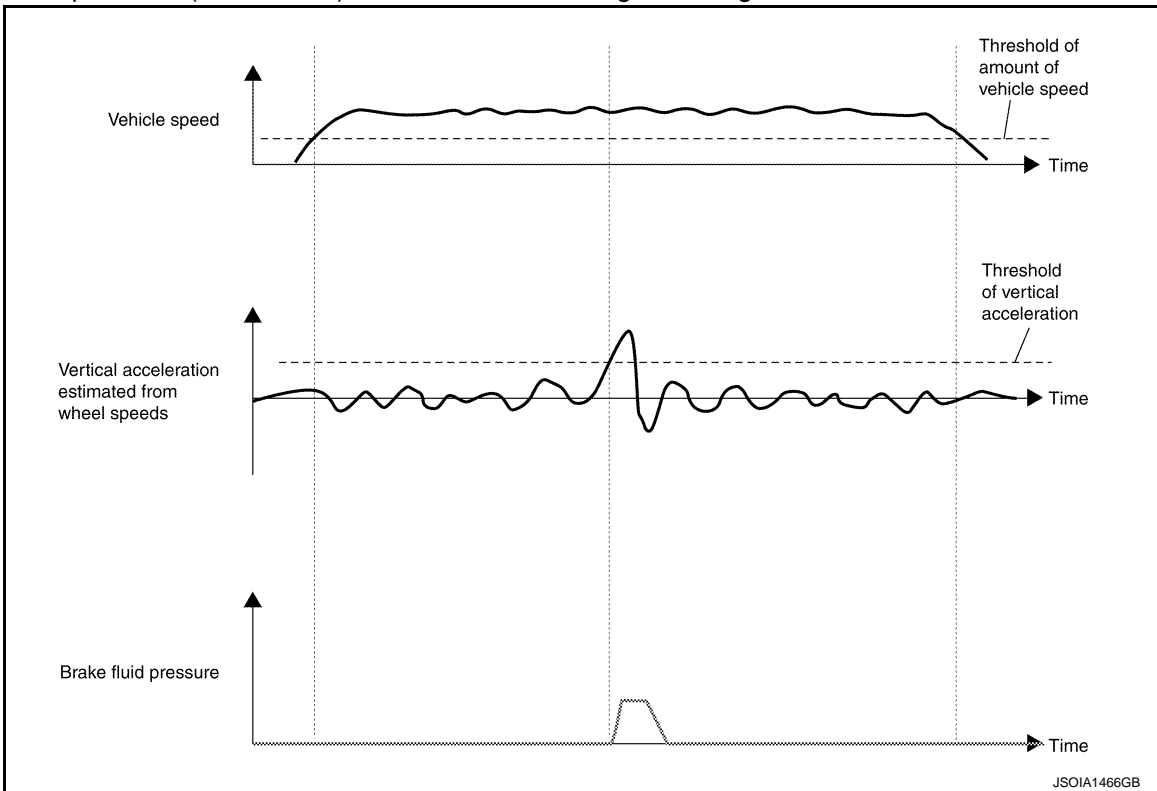
< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

- By controlling the brake fluid pressure (brake force), behavior of the vehicle in the vertical direction decreases, and riding comfort is improved.



- Brake fluid pressure (brake force) is controlled according to driving conditions.



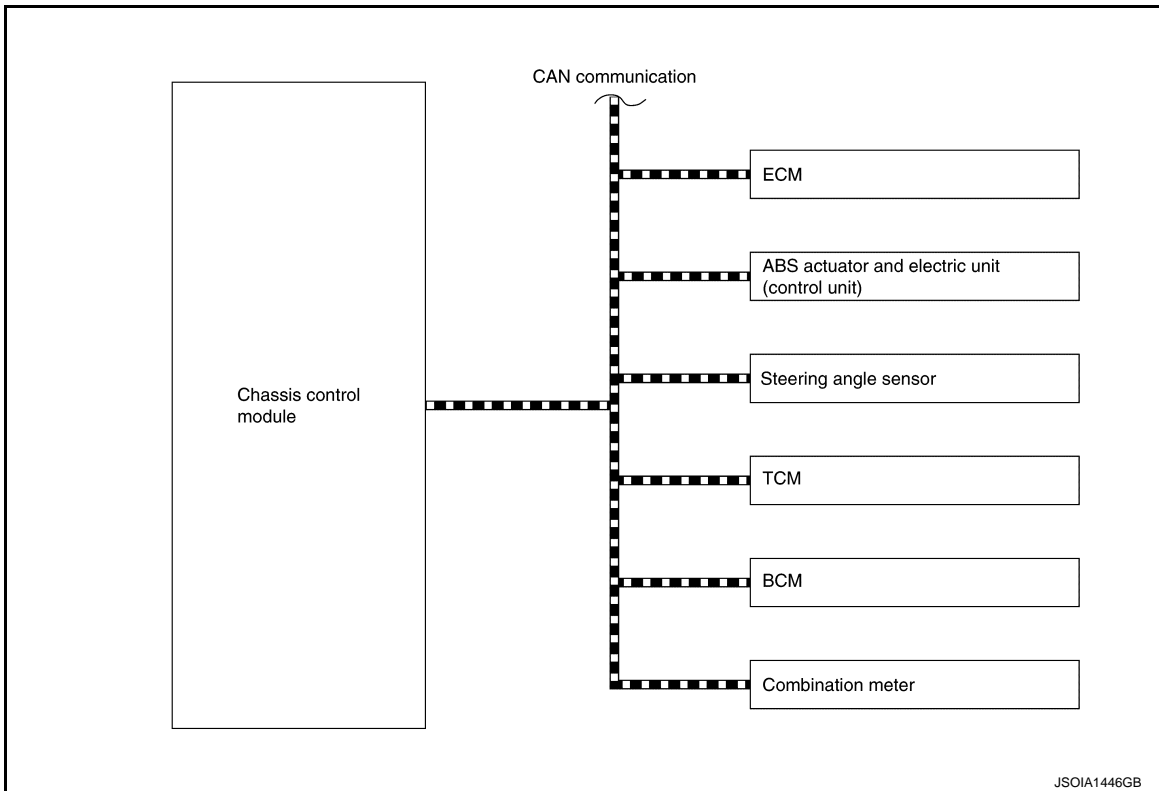
SYSTEM DIAGRAM

NOTE:

TCM is applied to CVT models.

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INPUT SIGNAL AND OUTPUT SIGNAL

Major signal transmission between each unit via communication lines is shown in the following table.

Component parts	Signal description
ECM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Accelerator pedal position signal • Request drive torque signal • Request drive torque status signal • Engine speed signal
ABS actuator and electric unit (control unit)	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Front LH wheel speed signal • Front RH wheel speed signal • Rear LH wheel speed signal • Rear RH wheel speed signal • ABS operation signal • TCS operation signal • VDC operation signal • Vehicle speed signal • Decel G signal • Side G signal • VDC OFF switch signal • Brake fluid pressure signal • VDC accept permission signal <p>Mainly receives the following signals from chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Active ride control signal
BCM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Stop lamp switch signal
IPDM E/R	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Ignition switch ON signal
TCM	<p>Mainly transmits the following signals to chassis control module via CAN communication.</p> <ul style="list-style-type: none"> • Current gear position signal • Input speed signal

SYSTEM

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Component parts	Signal description
Combination meter	Mainly receives the following signals from chassis control module via CAN communication. <ul style="list-style-type: none"> Active ride control display request signal Tire display request signal
Steering angle sensor	Mainly transmits the following signals to chassis control module via CAN communication. <ul style="list-style-type: none"> Steering angle sensor signal

INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display

INFOID:0000000010721694

DESIGN/PURPOSE

- The warning message is displayed on the information display when "Chassis Control" detected the system malfunction.
- Each chassis control system information is displayed on the information display.

NOTE:

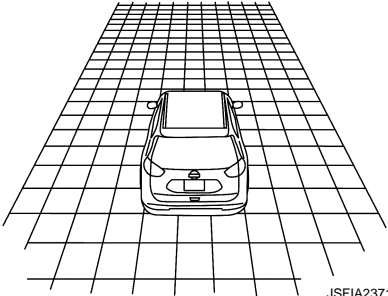
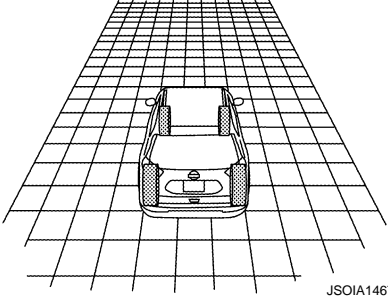
- hill start assist function: Refer to [BRC-67, "INFORMATION DISPLAY \(COMBINATION METER\) : Chassis Control Display"](#).
- Advanced hill descent control function: Refer to [BRC-67, "INFORMATION DISPLAY \(COMBINATION METER\) : Chassis Control Display"](#).

Warning Message

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

System Information

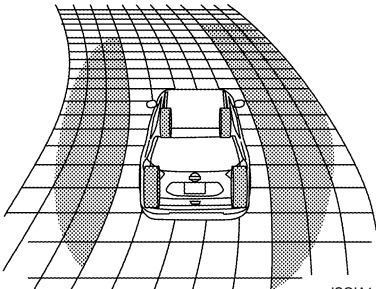
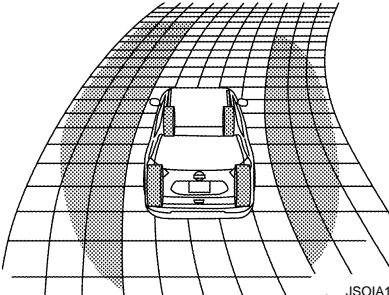
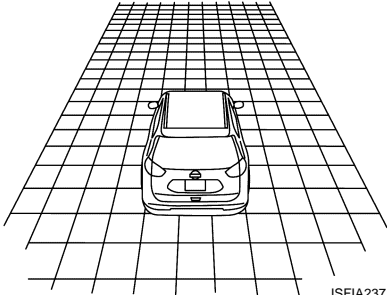
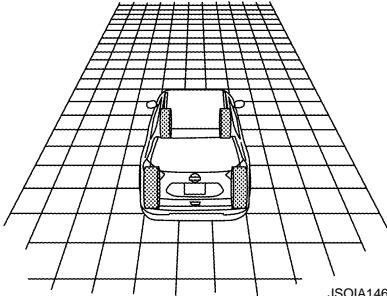
Active trace control

Design	Description
<p>Chassis Control</p>  <p>JSFIA2371ZZ</p>	Active trace control function inactive.
<p>Chassis Control</p>  <p>JSOIA1467ZZ</p>	Active trace control function is active. (Steering angle is less than the specified angle.)

SYSTEM

< SYSTEM DESCRIPTION >

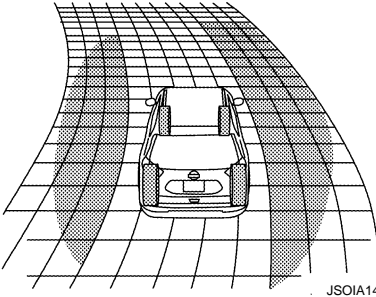
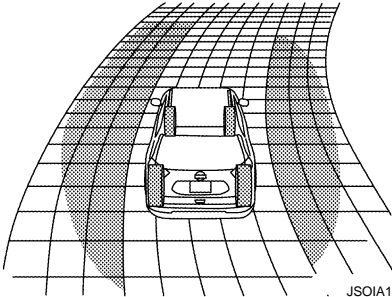
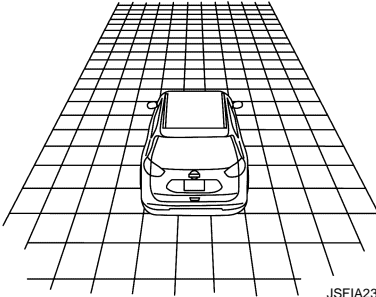
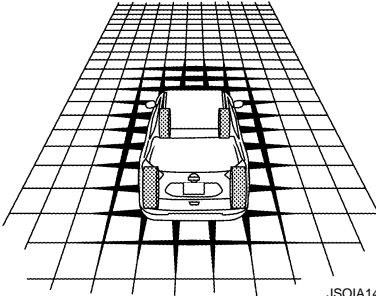
[CHASSIS CONTROL]

Design	Description
<div>Chassis Control</div>  <p>JSOIA1468ZZ</p>	Active trace control function is active. (Steering angle is the specified angle or more in the leftward direction.)
<div>Chassis Control</div>  <p>JSOIA1469ZZ</p>	Active trace control function is active. (Steering angle is the specified angle or more in the rightward direction.)
Active engine brake function	
Design	Description
<div>Chassis Control</div>  <p>JSFIA2371ZZ</p>	Active engine brake (cornering control) function inactive.
<div>Chassis Control</div>  <p>JSOIA1467ZZ</p>	Active engine brake (cornering control) function is active. (Steering angle is less than the specified angle.)

SYSTEM

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Design	Description	
<p>Chassis Control</p>  <p>JSOIA1468ZZ</p>	<p>Active engine brake (cornering control) function is active. (Steering angle is the specified angle or more in the leftward direction.)</p>	A
<p>Chassis Control</p>  <p>JSOIA1469ZZ</p>	<p>Active engine brake (cornering control) function is active. (Steering angle is the specified angle or more in the rightward direction.)</p>	B
Active ride control function		C
Design	Description	
<p>Chassis Control</p>  <p>JSFIA2371ZZ</p>	<p>Active ride control (brake control) function inactive.</p>	D
<p>Chassis Control</p>  <p>JSOIA1470ZZ</p>	<p>Active ride control (brake control) function is active.</p>	E

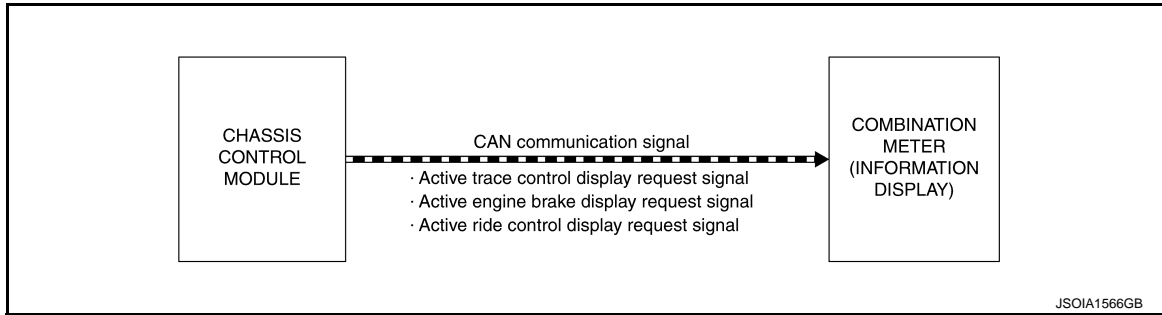
SYNCHRONIZATION WITH MASTER WARNING LAMP

Applicable

Refer to [MWI-47. "WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp".](#)

DAS

SYSTEM DIAGRAM



SIGNAL PATH

Active Trace Control Function

- The chassis control module transmits a active trace control display request signal to the combination meter via CAN communication.
- The combination meter shows the chassis control display on the information display, according to the signal.

Active Engine Brake Function

- The chassis control module transmits a active engine brake display request signal to the combination meter via CAN communication.
- The combination meter shows the chassis control display on the information display, according to the signal.

Active Ride Control Function

- The chassis control module transmits a active ride control display request signal to the combination meter via CAN communication.
- The combination meter shows the chassis control display on the information display, according to the signal.

Malfunction of Chassis Control System Detected

- The chassis control module transmits a chassis control module malfunction signal to the combination meter via CAN communication.
- The combination meter shows the chassis control display on the information display, according to the signal.

WARNING/INDICATOR OPERATING CONDITION

Warning

When all of the following conditions are satisfied

- Ignition switch is ON
- Chassis control system malfunction is detected. Refer to [DAS-204. "DTC Index"](#).

Operating

- Active trace control function: Refer to [DAS-173. "ACTIVE TRACE CONTROL \(DYNAMIC CORNERING ENHANCEMENT\) FUNCTION : System Description"](#).
- Active engine brake function: Refer to [DAS-179. "ACTIVE ENGINE BRAKE FUNCTION : System Description"](#).
- Active ride control function: Refer to [DAS-182. "ACTIVE RIDE CONTROL FUNCTION : System Description"](#).

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000010721695

APPLICATION ITEM

CONSULT can display each diagnostic item using the diagnostic test modes as follows.

Mode	Function description
ECU identification	Parts number of chassis control module can be read.
Self Diagnostic Results	Self-diagnostic results and freeze frame data (FFD) can be read and erased quickly.*
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	<ul style="list-style-type: none">• Read and save the vehicle specification (TYPE ID).• Write the vehicle specification (TYPE ID) when replacing chassis control module.

*: 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-204, "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	—	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.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Item name	Indication/Unit	Display item
SHIFT POSITION	—	Not used
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 the chassis control module malfunction.
CAN DIAG STATUS [Off / On]	Displays CAN network diagnosis status.
STOP LAMP OFF RELAY 1 —	Displayed but not used.
STOP LAMP OFF RELAY 2 —	Displayed but not used.
ESS RELAY —	Displayed but not used.
VEHICLE SPEED [km/h]	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 / INPOSSI]	Displays the electric throttle status.
SHIFT POSITION —	Displayed but not used.
BRAKE SWITCH 2 [Off / On]	Displays the brake pedal position switch operating status (Off: close / On: open).
BRAKE SWITCH 1 [Off / On]	Displays the brake pedal position switch operating status (Off: open / On: close).
STOP LAMP SW [ACT / INACT]	Displays the stop lamp switch status.
PRESS SENSOR [bar]	Displays the brake fluid pressure.
ABS [NORMAL / ABNOR]	Displays the ABS function status.
ABS MALF [NORMAL / ABNOR]	Displays the ABS function status.
EBD [NORMAL / ABNOR]	Displays the EBD function status.
ACCELE PEDAL MALF [NORMAL / ABNOR]	Displays the accelerator pedal status.
TCS [NORMAL / ABNOR]	Displays the TCS function status.
TCS MALF [NORMAL / ABNOR]	Displays the TCS function status.
VDC [NORMAL / ABNOR]	Displays the VDC function status.
VDC MALF [NORMAL / ABNOR]	Displays the VDC function status.
VDC OFF SWITCH [Off / On]	Displays VDC OFF switch status.
PARKING BRAKE —	Displayed but not used.
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.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Item [Unit]	Description	
DRV TRQ CTRL PERMIS 1 [NO PER / PERMIS]	Displays the permission status (basic requirement) of correction to slightly increase/decrease drive torque.	A
DRV TRQ CTRL PERMIS 2 [NO PER / PERMIS]	Displays the permission status (system requirement) of correction to slightly increase/decrease drive torque.	B
DRV TRQ CTRL STOP [REQ / NO REQ]	Displays the stop request status of correction to slightly increase decrease drive torque.	C
DRV TRQ CTRL PROHIBIT [REQ / NO REQ]	Displays the prohibition request status of correction to slightly increase/ decrease drive torque.	
AEB STATUS [Off / On]	Displays the active engine brake (brake control) function operation status.	D
ATC 1 [Off / On]	Displays the active trace control function operation status.	
ATC 2 [Off / On]	Displays the active trace control function operation status.	E
ATC 4 [Off / On]	Displays the active trace control function operation status.	
BRAKE HOLD [ACT / INACT / RELEA]	Displays the brake hold status.	F
ATC 3 [Off / On]	Displays the active trace control function operation status.	
ATC 5 [Off / On]	Displays the active trace control function operation status.	
ARC BRAKE [Off / On]	Displays the active ride control (brake control) function operation status.	G
FL TIRE DISP [DEF / 1]	Displays the status of front LH tire displayed on the information display in the combination meter.	H
FR TIRE DISP [DEF / 1]	Displays the status of front RH tire displayed on the information display in the combination meter.	
RL TIRE DISP [DEF / 1]	Displays the status of rear LH tire displayed on the information display in the combination meter.	I
RR TIRE DISP [DEF / 1]	Displays the status of rear RH tire displayed on the information display in the combination meter.	J
VEHICLE DISP [DEF / 1]	Displays the operating status of active ride control (brake control) function displayed on the information display in the combination meter.	
INTERRUPT DISP [NO REQ / HOLD 1 / HOLD 2 / HDC]	Displays the interruption status on the information display in the combination meter.	K
TURN DISP [N STEER / LEFT / RIGHT]	Displays the turning direction of active trace control function and active engine brake function on the information display in the combination meter.	L
ALC LEVEL [0 – 4]	Displayed but not used.	
ALC STATUS [INACT / ACT]	Displayed but not used.	M
BRAKE HOLD DISP [ACT / INACT / RELEA]	Displays the operating status of hill start assist function displayed on the information display in the combination meter.	
ATC DISP [Off / On]	Displays the operating status of active trace control function displayed on the information display in the combination meter.	N
ARC BRAKE DISP [Off / On]	Displays the operating status of active ride control (brake control) function displayed on the information display in the combination meter.	DAS
HDC DISP [Off / On]	Displays the operating status of advanced hill descent control function displayed on the information display in the combination meter.	P
AEB CVT PERMIT [Off / On]	Displays the transaxle authorized state for active engine brake function.	
AEB STATUS [Off / On]	Displays the setting status of active engine brake function.	
AEB COMMAND 1 [G]	Displays the relative command value of active engine brake function.	
AEB COMMAND 2 —	Displayed but not used.	

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Item [Unit]	Description
AEB SLIP RATE [%]	Displays the slip ratio of active engine brake function is operating.
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.
TURN SIGNAL SWITCH [Off / LEFT/ RIGHT / MALF]	Displays the operating status of turn signal switch.

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.
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.
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.
STOP LAMP OFF RELAY 2 ACTIVE	On	Displayed, but not use.
	Off	Displayed, but not use.
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)
HDC DISP	On	Displays the operating status of advanced hill descent control function displayed on the information display in the combination meter.
	Off	Does not display the operating status of advanced hill descent control function displayed on the information display in the combination meter.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Test item	Operation	Description
BRAKE HOLD DISP	INACT	Does not display the operating status of hill start assist function displayed on the information display in the combination meter.
	ACTIVE	Displays the operating status of hill start assist function displayed on the information display in the combination meter.
	READY	Displays the ready status of hill start assist function displayed on the information display in the combination meter.
	ERROR	Does not display the operating status of hill start assist function displayed on the information display in the combination meter.
AEB DISP	On	Displays the operating status of active engine brake (brake control) function displayed on the information display in the combination meter.
	Off	Does not display the operating status of active engine brake (brake control) function displayed on the information display in the combination meter.
FL TIRE DISP	On	Displays the front LH tire on the information display in the combination meter.
	Off	Does not display the front LH tire on the information display in the combination meter.
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.
VEHICLE DISP	On	Displays the operating status of active ride control (brake control) function displayed on the information display in the combination meter.
	Off	Does not display the operating status of active ride control (brake control) function displayed on the information display in the combination meter.
INTERRUPT DISP	NO REQ	Does not display the interrupt of hill start assist function displayed on the information display in the combination meter.
	READY	Displays the interrupt of ready status of hill start assist function displayed on the information display in the combination meter.
	ACT	Displays the interrupt of operating status of hill start assist function displayed on the information display in the combination meter.
	HDC	Displays the interrupt of operating status of advanced hill descent control function displayed 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.
ATC 1 DISP	On	Displays the active trace control function on the information display in the combination meter.
	Off	Does not display the active trace control function on the information display in the combination meter.
ATC 2 DISP	On	Displays the active trace control function on the information display in the combination meter.
	Off	Does not display the active trace control function on the information display in the combination meter.
ARC DISP	On	Displays the active ride control (brake control) function on the information display in the combination meter.
	Off	Does not display the active ride control (brake control) function on the information display in the combination meter.
ATC 3 DISP	On	Displays the active trace control function on the information display in the combination meter.
	Off	Does not display the active trace control function on the information display in the combination meter.

A

B

C

D

E

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L

M

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DAS

P

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

< SYSTEM DESCRIPTION >

[CHASSIS CONTROL]

Test item	Operation	Description
ATC 4 DISP	On	Displays the active trace control function on the information display in the combination meter.
	Off	Does not display the active trace control function on the information display in the combination meter.
ATC 5 DISP	On	Displays the active trace control function on the information display in the combination meter.
	Off	Does not display the active trace control function on the information display in the combination meter.

RE/PROGRAMMING, CONFIGURATION

Configuration includes the following functions.

Function		Description
Read/Write Configuration	Before replacing ECU	<ul style="list-style-type: none">Allows the reading of vehicle specification (Type ID) written in chassis control module.Allows the reading of vehicle specification (Type ID) store 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.

CAUTION:

Use “Manual Configuration” only when “TYPE ID” of chassis control module cannot be read.

ECU DIAGNOSIS INFORMATION

CHASSIS CONTROL MODULE

Reference Value

INFOID:0000000010721696

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 value in normal operation
IGN VOLT	Ignition switch ON	10 – 16 V
CONTROL MODULE MALF	When chassis control module is normal	Off
	When chassis control module malfunction is detected	On
CAN DIAG STATUS	When diagnosis of CAN communication malfunction is detected	Off
	When diagnosis of CAN communication is normal	On
STP LAMP OFF RELAY 1	Displayed but not used	—
STP LAMP OFF RELAY 2	Displayed but not used	—
ESS RELAY	Displayed but not used	—
VEHICLE SPEED	Vehicle stopped	0 km/h
	Vehicle driving*	Almost same reading as speedometer (Within $\pm 10\%$)
FR WHEEL SPEED	Vehicle stopped	0 rpm
	Vehicle driving*	Increases according to vehicle speed
FL WHEEL SPEED	Vehicle stopped	0 rpm
	Vehicle driving*	Increases according to vehicle speed
RR WHEEL SPEED	Vehicle stopped	0 rpm
	Vehicle driving*	Increases according to vehicle speed
RL WHEEL SPEED	Vehicle stopped	0 rpm
	Vehicle driving*	Increases according to vehicle speed
STEERING ANG SENSOR	When vehicle driving straight	0 \pm 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%

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Monitor item	Condition	Reference value in normal operation
THROTTLE CONTROL	When electric throttle control actuator is normal	NORMAL
	When electric throttle control actuator does not achieve the requirement (measured value is inaccurate)	INCORR
	When electric throttle control actuator does not achieve the requirement (temporary prevention)	PREV
	When electric throttle control actuator does not achieve the requirement (impossible)	IMPOSSI
SHIFT POSITION	Displayed but not used	—
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 depressed	ACT
	When brake pedal is not depressed	INACT
PRESS SENSOR	When brake pedal is not depressed	Approx. 0 bar
	When brake pedal is depressed	0 – 255 bar
ABS	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
ABS MALF	When ABS function is normal	NORMAL
	When ABS function malfunction is detected	ABNOR
EBD	When EBD function is normal	NORMAL
	When EBD function malfunction is detected	ABNOR
ACCELE PEDAL MALF	When accelerator pedal is normal	NORMAL
	When accelerator pedal malfunction is detected	ABNOR
TCS	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
TCS MALF	When TCS function is normal	NORMAL
	When TCS function malfunction is detected	ABNOR
VDC	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
VDC MALF	When VDC function is normal	NORMAL
	When VDC function malfunction is detected	ABNOR
PARKING BRAKE	Displayed but not used	—
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

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Monitor item	Condition	Reference value in normal operation	
DRV TRQ CTRL STOP	When correction is requested to stop	REQ	A
	When correction is not requested to stop	NO REQ	
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested	REQ	B
	When prohibition of correction is not requested	NO REQ	
AEB STATUS	When active engine brake (brake control) function is active	On	C
	When active engine brake (brake control) function is inactive.	Off	
ATC 1	When active trace control function is inactive	Off	D
	When active trace control function is active	On	
ATC 2	When active trace control function is inactive	Off	E
	When active trace control function is active	On	
ATC 4	When active trace control function is inactive	Off	F
	When active trace control function is active	On	
BRAKE HOLD	When brake fluid pressure is hold	ACT	
	When brake fluid pressure is not hold	INACT	G
	When brake fluid pressure is decreases	RELEA	
ATC 3	When active trace control function is inactive	Off	
	When active trace control function is active	On	H
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	I
	When active ride control (brake control) function is active	On	J
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	K
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter	DEF	L
	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	M
	When the rear LH tire is displayed on the information display in the combination meter	1	N
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	DAS
VEHICLE DISP	When the active ride control (brake control) function is not displayed on the information display in the combination meter	DEF	P
	When the active ride control (brake control) function is displayed on the information display in the combination meter	1	

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Monitor item	Condition	Reference value in normal operation
INTERRUPT DISP	When not interrupt displayed on the information display in the combination meter	NO REQ
	When the hill start assist function is not interrupt displayed on the information display in the combination meter	HOLD 1
	When the hill start assist function is not interrupt displayed on the information display in the combination meter	HOLD 2
	When the advanced hill descent control function is not interrupt displayed on the information display in the combination meter	HDC
TURN DISP	When the straight-ahead status is displayed on the information display in the combination meter	N STEER
	When the left turning status is displayed on the information display in the combination meter	LEFT
	When the right turning status is displayed on the information display in the combination meter	RIGHT
ALC LEVEL	Displayed but not used	—
ALC STATUS	Displayed but not used	—
BRAKE HOLD DISP	When the operation condition is satisfied (inactive) status of hill start assist function is displayed on the information display in the combination meter	ACT
	When the operation condition is not satisfied status of hill start assist function is displayed on the information display in the combination meter	INACT
	When the activation status of hill start assist function is displayed on the information display in the combination meter	RELEA
ATC DISP	When the activation of active trace control function is not displayed on the information display in the combination meter	Off
	When the activation of active trace control function is displayed on the information display in the combination meter	On
ARC BRAKE DISP	When the activation of active ride control (brake control) function is displayed on the information display in the combination meter	On
	When the activation of active ride control (brake control) function is not displayed on the information display in the combination meter	Off
HDC DISP	When the activation of advanced hill descent control function is displayed on the information display in the combination meter	On
	When the activation of advanced hill descent control function is not displayed on the information display in the combination meter	Off
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 COMMAND 2	Displayed but not used	—

CHASSIS CONTROL MODULE

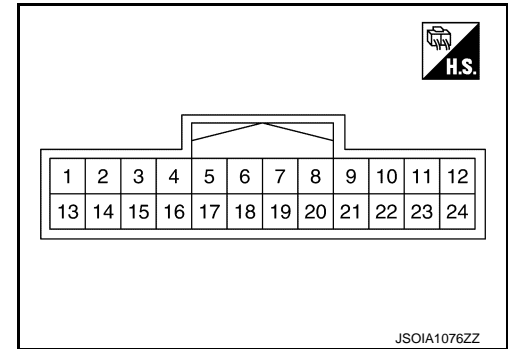
< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Monitor item	Condition	Reference value in normal operation
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
TURN SIGNAL SWITCH	When turn signal lamp is OFF	Off
	When turn signal lamp LH is blinking	LEFT
	When turn signal lamp RH is blinking	RIGHT
	When turn signal lamp system malfunction is detected	MALF

*: 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-L	—	—	—	—
4 (L)		CAN-H	—	—	—	—
7 (W)		Chassis comm-L	—	—	—	—
8 (W)		Chassis comm-L	—	—	—	—
10 (SB)		IGN	Input	Ignition switch ON		6.4 – 16 V
11 (L)		Chassis comm-H	—	—	—	—
12 (B)		GND	—	Ignition switch ON	—	0 V
19 (L)		Chassis comm-H	—	—	—	—

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Fail-safe

INFOID:0000000010721697

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. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1B93-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control (engine control) function
C1B94-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
C1B95-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control (brake control) function
C1B99-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BA0-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (brake control) function
C1BA2-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
C1BA5-00	Normal control
C1BAB-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control (engine control) function
C1BB2-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BB3-00	
C1BB4-00	
C1BB5-00	
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BB8-00	
C1BB9-00	
C1BBA-00	
C1BBB-00	Normal control
C1BBC-00	
C1BBD-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active engine brake function • Active ride control function
C1BC0-00	The following functions are suspended. <ul style="list-style-type: none"> • Active trace control function • Active ride control function
C1BC1-00	
C1BC2-00	
C1BC3-00	

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

DTC	Vehicle condition	
C1BC4-00	The following functions are suspended. • Active ride control (brake control) function	A
C1BC5-00	The following functions are suspended. • Active trace control function	B
C1BC6-00	The following functions are suspended. • Active trace control function • Active ride control (brake control) function	C
U1000-00	The following functions are suspended. • Active trace control function • Active engine brake function • Active ride control function	D
U1010-49	The following functions are suspended. • Active trace control function • Active engine brake function • Active ride control function	E
U1A34-00	The following functions are suspended. • Active trace control function • Active engine brake function • Active ride control function	F
U1A35-00		
U1A36-00		
U1A39-00	Normal control	G
U1A3B-00	The following functions are suspended. • Active trace control function • Active engine brake function • Active ride control (engine control) function	H
U1A42-00	The following functions are suspended. • Active trace control function • Active ride control (engine control) function	I
U1A43-00		
U1A48-00	The following functions are suspended. • Active trace control function • Active engine brake function • Active ride control function	J
U1A4A-00		
U1A4E-00	The following functions are suspended. • Active ride control (engine control) function	K

DTC Inspection Priority Chart

INFOID:0000000010721698

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	M
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 • U1A42-00 STEERING ANGLE SENSOR COMM • U1A43-00 STEERING ANGLE SENSOR COMM • U1A48-00 ECM/HPCM COMM • U1A4A-00 CONTROL MODULE (CAN) • U1A4E-00 ECM/HPCM COMM	N
3	• C1BBD-00 VARIANT CODING	P

DAS

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

Priority	Detected item (DTC)
4	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • C1BB5-00 IGN POWER SUPPLY • C1BB6-00 IGN POWER SUPPLY
6	<ul style="list-style-type: none"> • 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 • U1010-49 CONTROL UNIT (CAN)

DTC Index

INFOID:0000000010721699

DTC	Display item	Refer to
C1B92-00	BRAKE CONTROL SYSTEM	DAS-215, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-217, "DTC Description"
C1B94-00	TM SYSTEM	DAS-219, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-221, "DTC Description"
C1B99-00	CONTROL MODULE	DAS-222, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-223, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-225, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-227, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-228, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-230, "DTC Description"
C1BB3-00	CONTROL MODULE	DAS-231, "DTC Description"
C1BB4-00	CONTROL MODULE	DAS-232, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-233, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-235, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-237, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-238, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-239, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-240, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-241, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-242, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-243, "DTC Description"

CHASSIS CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[CHASSIS CONTROL]

DTC	Display item	Refer to
C1BC0-00	FR WHEEL SENSOR	DAS-244, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-246, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-248, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-250, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-252, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-253, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-254, "DTC Description"
U1000-00	CAN COMM CIRCUIT	DAS-256, "DTC Description"
U1010-49	CONTROL UNIT (CAN)	DAS-257, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-258, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-260, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-262, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-264, "DTC Description"
U1A3B-00	TCM COMM	DAS-266, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-268, "DTC Description"
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-270, "DTC Description"
U1A48-00	ECM/HPCM COMM	DAS-272, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-274, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-275, "DTC Description"

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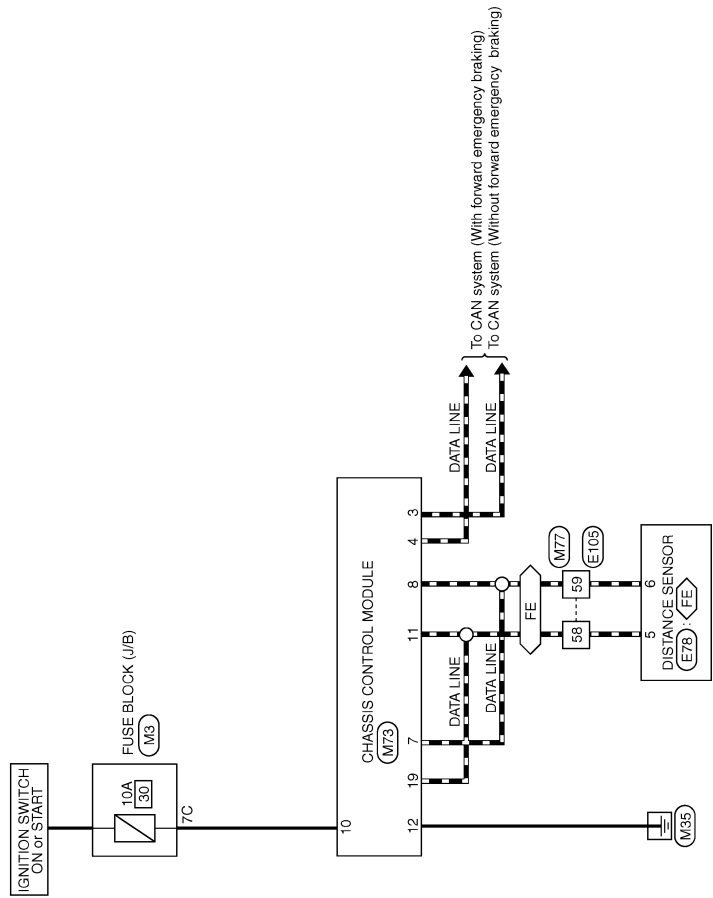
WIRING DIAGRAM

CHASSIS CONTROL

Wiring Diagram

INFOID:0000000010721700

FE : With FEB



CHASSIS CONTROL

2014/03/17

JROWC2861GB

CHASSIS CONTROL

Connector No.	E18
Connector Name	DISTANCE SENSOR
Connector Type	AAZ08FB



CHASSIS CONTROL

58	L	-
59	W	-
60	LAR	-
61	P	-
62	V	-
63	LA/R	-
64	Y	-
65	GR	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	Y	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	-	- [With ISS]
80	LA/L	- [With ISS]
82	GR	-
83	LG	-
84	SB	-
85	G	-
86	G	-
87	B	-
88	B	-
91	L	-
92	W	-
93	W	-
96	LG	-
97	BR	-
98	V	-
99	R	-

JROWC2863GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010721702

DETAILED FLOW

1. INTERVIEW FROM THE CUSTOMER

Clarify customer complaints before inspection. First of all, perform an interview utilizing [DAS-210, "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-202, "Fail-safe"](#).

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

Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC detected?

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

4.

 With CONSULT

Perform DTC confirmation procedures for the error-detected system.

NOTE:

If some DTCs are detected at the same time, determine the order for performing the diagnosis based on [DAS-203, "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 [LAN-7, "Precautions for Harness Repair"](#).

5. REPAIR OR REPLACE ERROR-DETECTED PARTS

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

>> GO TO 6.

6. FINAL CHECK

 With CONSULT

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

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[CHASSIS CONTROL]

Is the symptom reproduced?

YES >> GO TO 3.

NO >> INSPECTION END

Diagnostic Work Sheet

INFOID:0000000010721703

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, Trac-tion motor		Mileage	km (Mile)
Symptom	<input type="checkbox"/> Does not operate () function <input type="checkbox"/> Warning lamp for () turns ON. <input type="checkbox"/> Noise <input type="checkbox"/> Vibration <input type="checkbox"/> Other ()				
	First occurrence <input type="checkbox"/> Recently <input type="checkbox"/> Other ()				
	Frequency of occurrence <input type="checkbox"/> Always <input type="checkbox"/> Under a certain conditions of <input type="checkbox"/> Sometimes (time(s)/day)				
	Climate con-ditions	<input type="checkbox"/> Irrelevant Weather <input type="checkbox"/> Fine <input type="checkbox"/> Cloud <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> Others () Temperature <input type="checkbox"/> Hot <input type="checkbox"/> Warm <input type="checkbox"/> Cool <input type="checkbox"/> Cold <input type="checkbox"/> Temperature [Approx. °C (°F)] Relative humidity <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			
Road conditions <input type="checkbox"/> Urban area <input type="checkbox"/> Suburb area <input type="checkbox"/> Highway <input type="checkbox"/> Mountainous road (uphill or downhill) <input type="checkbox"/> Rough road					
Operating condition, etc. <input type="checkbox"/> Irrelevant <input type="checkbox"/> When traction motor starts <input type="checkbox"/> During idling <input type="checkbox"/> During driving <input type="checkbox"/> During acceleration <input type="checkbox"/> At constant speed driving <input type="checkbox"/> During deceleration <input type="checkbox"/> During cornering (right curve or left curve) <input type="checkbox"/> When steering wheel is steered (to right or to left)					
Other conditions					

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[CHASSIS CONTROL]

Interview sheet					
Customer name	MR/MS	Registration number		Initial year registration	
		Vehicle type		VIN	
Storage date		Engine, Trac-tion motor		Mileage	km (Mile)

Vehicle equipment

Memo

DAS

ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MODULE

< BASIC INSPECTION >

[CHASSIS CONTROL]

ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MODULE

Description

INFOID:0000000010721704

When replaced the chassis control module, configuration of the chassis control module is required. Refer to [DAS-213. "Work Procedure"](#).

CONFIGURATION (CHASSIS CONTROL MODULE)

Work Procedure

INFOID:0000000010721705

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-278, "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-278, "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)

CONFIGURATION (CHASSIS CONTROL MODULE)

< BASIC INSPECTION >

[CHASSIS CONTROL]

Replace the chassis control module. Refer to [DAS-278. "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)

CONSULT Configuration

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.

CAUTION:

Never start the engine.

Is the inspection result normal?

- YES >> GO TO 11.
NO >> Perform self-diagnosis for "CHASSIS CONTROL".

11. PERFORMING SUPPLEMENTARY WORK

With CONSULT

1. Perform "All DTC Reading".
2. Record or print self-diagnosis results and freeze frame data (FFD).
3. Erase self-diagnosis results.

>> End of work.

DTC/CIRCUIT DIAGNOSIS

C1B92-00 BRAKE CONTROL SYSTEM

DTC Description

INFOID:0000000010721706

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B92-00" detected?

YES >> Proceed to [DAS-215. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721707

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

 With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84. "DTC Index"](#).

NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1B92-00", "U1000-00" or other DTC detected?

C1B92-00 BRAKE CONTROL SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("C1B92-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

< DTC/CIRCUIT DIAGNOSIS >

C1B93-00 ENGINE SYSTEM

DTC Description

INFOID:0000000010721708

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Engine system
- ECM
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake function
- Active ride control (engine control) function


DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B93-00" detected?

YES >> Proceed to [DAS-217, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721709

1. CHECK ECM SYSTEM

 With CONSULT

Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> Check the DTC.

- MR20DD: Refer to [EC-109, "DTC Index"](#).
- QR25DE: Refer to [EC-517, "DTC Index"](#).
- R9M: Refer to [EC-908, "DTC Index"](#).

NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.

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< DTC/CIRCUIT DIAGNOSIS >

4. Perform "All DTC Reading".

Are DTC "C1B93-00", "U1000-00" or other DTC detected?YES ("C1B93-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1B94-00 TRANSMISSION SYSTEM

DTC Description

INFOID:0000000010721710

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Transaxle system
- TCM
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active ride control (engine control) function


DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B94-00" detected?

- YES >> Proceed to [DAS-219, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721711

1. CHECK TRANSMISSION SYSTEM

 With CONSULT

Perform self-diagnosis for "TRANSMISSION"

Is DTC detected?

- YES >> Check the DTC.
 • Gasoline engine models: Refer to [TM-288, "DTC Index"](#).
 • Diesel engine models: Refer to [TM-529, "DTC Index"](#).
 NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1B94-00", "U1000-00" or other DTC detected?

C1B94-00 TRANSMISSION SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES ("C1B94-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1B95-00 CONTROL MODULE

DTC Description

INFOID:0000000010721712

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 engine brake function
- Active ride control (brake control) function

DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B95-00" detected?

- YES >> Proceed to [DAS-221, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721713

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B95-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 NO >> INSPECTION END

C1B99-00 CONTROL MODULE

DTC Description

INFOID:0000000010721714

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B99-00" detected?

- YES >> Proceed to [DAS-222. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721715

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1B99-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
 NO >> INSPECTION END

C1BA0-00 CHASSIS CONTROL BRAKE SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA0-00 CHASSIS CONTROL BRAKE SYSTEM

DTC Description

INFOID:0000000010721716

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) system
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active ride control (brake control) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA0-00" detected?

YES >> Proceed to [DAS-223, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721717

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

 With CONSULT


Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BA0-00", "U1000-00" or other DTC detected?

YES ("C1BA0-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

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C1BA0-00 CHASSIS CONTROL BRAKE SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BA2-00 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA2-00 STEERING ANGLE SENSOR

DTC Description

INFOID:0000000010721718

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active ride control (engine control) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA2-00" detected?

- YES >> Proceed to [DAS-225. "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721719

1.CHECK STEERING ANGLE SENSOR SYSTEM


 With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

- YES >> Check the DTC. Refer to [BRC-84. "DTC Index"](#).
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BA2-00", "U1000-00" or other DTC detected?

- YES ("C1BA2-00")>>Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
YES ("U1000-00")>>Refer to [LAN-17. "Trouble Diagnosis Flow Chart"](#).
YES (other DTC)>>Check the DTC.

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C1BA2-00 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

NO >> INSPECTION END

C1BA5-00 CHASSIS CONTROL ENGINE SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BA5-00 CHASSIS CONTROL ENGINE SYSTEM

DTC Description

INFOID:0000000010721720

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-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BA5-00" detected?

YES >> Proceed to [DAS-227. "Diagnosis Procedure"](#).


NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721721

1.CHECK ECM SYSTEM

 With CONSULT

Perform self-diagnosis for "ENGINE".


Is DTC detected?

YES >> Check the DTC.

- MR20DD: Refer to [EC-109. "DTC Index"](#).
- QR25DE: Refer to [EC-517. "DTC Index"](#).
- R9M: Refer to [EC-908. "DTC Index"](#).

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BA5-00", "U1000-00" or other DTC detected?

YES ("C1BA5-00")>>Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17. "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

C1BAB-00 STOP LAMP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BAB-00 STOP LAMP SWITCH

DTC Description

INFOID:0000000010721722

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 trace control function
- Active ride control (engine 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

④With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BAB-00" detected?

- YES >> Proceed to [DAS-228, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721723

1.CHECK STOP LAMP SWITCH SYSTEM

④With CONSULT

Perform self-diagnosis for "BCM".

Is DTC detected?

- YES >> Check the DTC. Refer to [BCS-78, "DTC Index"](#).
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

④With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BAB-00", "U1000-00" or other DTC detected?

- YES ("C1BAB-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

C1BAB-00 STOP LAMP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

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C1BB2-00 CONTROL MODULE

DTC Description

INFOID:0000000010721724

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB2-00" detected?

- YES >> Proceed to [DAS-230. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721725

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB2-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
 NO >> INSPECTION END

C1BB3-00 CONTROL MODULE

DTC Description

INFOID:0000000010721726

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB3-00" detected?

- YES >> Proceed to [DAS-231, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721727

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB3-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 NO >> INSPECTION END

C1BB4-00 CONTROL MODULE

DTC Description

INFOID:0000000010721728

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB4-00" detected?

- YES >> Proceed to [DAS-232. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721729

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB4-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
 NO >> INSPECTION END

C1BB5-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB5-00 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000010721730

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. <ul style="list-style-type: none">Ignition power supply voltage: $6.4\text{ V} \geq$ 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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB5-00" detected?

YES >> Proceed to [DAS-233, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721731

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the connector for disconnection or looseness.
4. Check the pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace error-detected parts, securely lock the harness connector, and GO TO 2.

2.PERFORM SELF-DIAGNOSIS (1)

1. connect the chassis control module harness connector.
2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB5-00" detected?

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C1BB5-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

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

3.CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY

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

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M73	10	Ground	0 V

4. Turn the ignition switch ON.
5. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M73	10	Ground	6.4 – 16 V

Is the inspection result normal?

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

4.CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Check the fuse (#30).
3. Check the continuity and for short circuit between chassis control module harness connector terminal (10) and 10A fuse (#30).
4. Check the continuity between chassis control module harness connector and the ground.

Chassis control module		—	Continuity
Connector	Terminal		
M73	10	Ground	Not existed

Is the inspection result normal?

YES >> Perform trouble diagnosis for ignition power supply.
NO >> Repair or replace error-detected parts.

5.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Check the continuity between chassis control module harness connector and the ground.

Chassis control module		—	Continuity
Connector	Terminal		
M73	12	Ground	Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace error-detected parts.

6.PERFORM SELF-DIAGNOSIS (2)

1. connect the chassis control module harness connector.
2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB5-00" detected?

YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
NO >> INSPECTION END

C1BB6-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BB6-00 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000010721732

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. <ul style="list-style-type: none">Ignition power supply voltage: $16\text{ V} \leq \text{Ignition power supply voltage}$

POSSIBLE CAUSE

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


DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB6-00" detected?

YES >> Proceed to [DAS-235. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721733

1. CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the connector for disconnection or looseness.
4. Check the pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace error-detected parts, securely lock the harness connector, and GO TO 2.

2. PERFORM SELF-DIAGNOSIS (1)

1. connect the chassis control module harness connector.
2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB6-00" detected?

YES >> GO TO 3.

NO >> INSPECTION END

3. CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.

C1BB6-00 IGNITION POWER SUPPLY

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

3. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M73	10	Ground	0 V

4. Turn the ignition switch ON.
5. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M73	10	Ground	6.4 – 16 V

Is the inspection result normal?

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

4.CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Check the fuse (#30).
3. Check the continuity and for short circuit between chassis control module harness connector terminal (10) and 10A fuse (#30).
4. Check the continuity between chassis control module harness connector and the ground.

Chassis control module		—	Continuity
Connector	Terminal		
M73	10	Ground	Not existed

Is the inspection result normal?

- YES >> Perform trouble diagnosis for ignition power supply.
NO >> Repair or replace error-detected parts.

5.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Check the continuity between chassis control module harness connector and the ground.

Chassis control module		—	Continuity
Connector	Terminal		
M73	12	Ground	Existed

Is the inspection result normal?

- YES >> GO TO 6.
NO >> Repair or replace error-detected parts.

6.PERFORM SELF-DIAGNOSIS (2)

1. connect the chassis control module harness connector.
2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB6-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
NO >> INSPECTION END

C1BB7-00 CONTROL MODULE

DTC Description

INFOID:0000000010721734

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 engine brake function
- Active ride control function

TC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB7-00" detected?

- YES >> Proceed to [DAS-237, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721735

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB7-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 NO >> INSPECTION END

C1BB8-00 CONTROL MODULE

DTC Description

INFOID:0000000010721736

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB8-00" detected?

- YES >> Proceed to [DAS-238. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721737

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB8-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
 NO >> INSPECTION END

C1BB9-00 CONTROL MODULE

DTC Description

INFOID:0000000010721738

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB9-00" detected?

- YES >> Proceed to [DAS-239, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721739

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BB9-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 NO >> INSPECTION END

C1BBA-00 CONTROL MODULE

DTC Description

INFOID:0000000010721740

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBA-00" detected?

- YES >> Proceed to [DAS-240. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721741

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBA-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
 NO >> INSPECTION END

C1BBB-00 CONTROL MODULE

DTC Description

INFOID:0000000010721742

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBB-00" detected?

- YES >> Proceed to [DAS-241, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721743

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBB-00" detected?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 NO >> INSPECTION END

C1BBC-00 CONTROL MODULE

DTC Description

INFOID:0000000010721744

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-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBC-00" detected?

YES >> Proceed to [DAS-242, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721745

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBC-00" detected?

YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

NO >> INSPECTION END

C1BBD-00 VARIANT CODING

DTC Description

INFOID:0000000010721746

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBD-00" detected?

- YES >> Proceed to [DAS-243. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721747

1.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BBD-00" detected?

- YES >> Perform configuration. Refer to [DAS-213. "Work Procedure"](#).
 NO >> INSPECTION END

C1BC0-00 FRONT RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC0-00 FRONT RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000010721748

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
C1BC0-00	FR WHEEL SENSOR (Front 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) system
- 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

⑧ With CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC0-00" detected?

YES >> Proceed to [DAS-244, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721749

1.CHECK FRONT RIGHT WHEEL SENSOR SYSTEM

⑧ With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

⑧ With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.

C1BC0-00 FRONT RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

4. Perform "All DTC Reading".

Are DTC "C1BC0-00", "U1000-00" or other DTC detected?

YES ("C1BC0-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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C1BC1-00 FRONT LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC1-00 FRONT LEFT WHEEL SENSOR

DTC Description

INFOID:0000000010721750

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) system
- 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

⑧ With CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC1-00" detected?

YES >> Proceed to [DAS-246, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721751

1.CHECK FRONT LEFT WHEEL SENSOR SYSTEM

⑧ With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

⑧ With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.

C1BC1-00 FRONT LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

4. Perform "All DTC Reading".

Are DTC "C1BC1-00", "U1000-00" or other DTC detected?

YES ("C1BC1-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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C1BC2-00 REAR RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC2-00 REAR RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000010721752

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) system
- 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

⑧ With CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC2-00" detected?

YES >> Proceed to [DAS-248, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721753

1.CHECK REAR RIGHT WHEEL SENSOR SYSTEM

⑧ With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

⑧ With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.

C1BC2-00 REAR RIGHT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

4. Perform "All DTC Reading".
- Are DTC "C1BC2-00", "U1000-00" or other DTC detected?
- YES ("C1BC2-00")>>Replace the chassis control module. Refer to [DAS-278. "Removal and Installation"](#).
- YES ("U1000-00")>>Refer to [LAN-17. "Trouble Diagnosis Flow Chart"](#).
- YES (other DTC)>>Check the DTC.
- NO >> INSPECTION END

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C1BC3-00 REAR LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

C1BC3-00 REAR LEFT WHEEL SENSOR

DTC Description

INFOID:0000000010721754

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) system
- 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

⑧ With CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

5. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC3-00" detected?

YES >> Proceed to [DAS-250, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721755

1.REAR LEFT WHEEL SENSOR SYSTEM

⑧ With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

⑧ With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.

C1BC3-00 REAR LEFT WHEEL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

4. Perform "All DTC Reading".

Are DTC "C1BC3-00", "U1000-00" or other DTC detected?

YES ("C1BC3-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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C1BC4-00 DECEL G SENSOR

DTC Description

INFOID:0000000010721756

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

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

FAIL-SAFE

The following function is suspended.

- Active ride control (brake control) function


DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC4-00" detected?

- YES >> Proceed to [DAS-252, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721757

1. CHECK DECEL G SENSOR SYSTEM

 With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

- YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).
 NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BC4-00", "U1000-00" or other DTC detected?

- YES ("C1BC4-00") >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 YES ("U1000-00") >> Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
 YES (other DTC) >> Check the DTC.
 NO >> INSPECTION END

< DTC/CIRCUIT DIAGNOSIS >

C1BC5-00 SIDE G SENSOR

DTC Description

INFOID:0000000010721758

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

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

FAIL-SAFE

The following functions are suspended.

- Active trace control function


DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".


Is DTC "C1BC5-00" detected?

- YES >> Proceed to [DAS-253, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721759

1. CHECK SIDE G SENSOR SYSTEM

 With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

- YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).
 NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BC5-00", "U1000-00" or other DTC detected?

- YES ("C1BC5-00") >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 YES ("U1000-00") >> Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
 YES (other DTC) >> Check the DTC.
 NO >> INSPECTION END

C1BC6-00 PRESSURE SENSOR

DTC Description

INFOID:0000000010721760

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) system
- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active ride control (brake control) function

DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "C1BC6-00" detected?

- YES >> Proceed to [DAS-254, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721761

1. CHECK BRAKE FLUID PRESSURE SYSTEM


 With CONSULT

Perform self-diagnosis for "ABS".

Is DTC detected?

- YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).
 NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "C1BC6-00", "U1000-00" or other DTC detected?

- YES ("C1BC6-00") >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 YES ("U1000-00") >> Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
 YES (other DTC) >> Check the DTC.

C1BC6-00 PRESSURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

NO >> INSPECTION END

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DAS

U1000-00 CAN COMM CIRCUIT

DTC Description

INFOID:0000000010721762

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1000-00	CAN COMM CIRCUIT (CAN communication circuit)	When CAN communication signal is not continuously transmitted or received for 2 seconds or more.

POSSIBLE CAUSE

- CAN communication system

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1000-00" detected?

- YES >> Proceed to [DAS-256, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721763

Proceed to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

U1010-49 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000010721764

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1010-49	CONTROL UNIT (CAN) [Control unit (CAN)]	When detecting error during the initial diagnosis of CAN controller of chassis control module.

POSSIBLE CAUSE

- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1010-49" detected?

- YES >> Proceed to [DAS-257, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721765

1. CHECK CHASSIS CONTROL MODULE

Check the chassis control module harness connector for disconnection and deformation.

Is the inspection result normal?

- YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
 NO >> Repair or replace error-detected parts.

DAS

U1A34-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A34-00 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000010721766

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) system
- Chassis control module
- CAN communication

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A34-00" detected?

YES >> Proceed to [DAS-258, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721767

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ABS" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection.

U1A34-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

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

1. Turn the ignition switch OFF.
2. Disconnect the ABS actuator and electric unit (control unit) harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (2)

 With CONSULT

1. Connect the ABS actuator and electric unit (control unit) harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "ABS".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A34-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A34-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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DAS

U1A35-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A35-00 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000010721768

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

- Harness or connector
- ABS actuator and electric unit (control unit) system
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A35-00" detected?

YES >> Proceed to [DAS-260, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721769

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ABS" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

U1A35-00 BRAKE CONTROL COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

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

1. Turn the ignition switch OFF.
2. Disconnect the ABS actuator and electric unit (control unit) harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (2)

 With CONSULT

1. Connect the ABS actuator and electric unit (control unit) harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "ABS".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A35-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A35-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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DAS

U1A36-00 BCM COMMUNICATION

DTC Description

INFOID:0000000010721770

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A36-00" detected?

- YES >> Proceed to [DAS-262, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721771

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

- All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
 "TRANSMIT DIAG" is other than "OK">>GO TO 2.
 "BCM" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

Is the inspection result normal?

U1A36-00 BCM COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

- YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.


3.CHECK BCM (1)

1. Turn the ignition switch OFF.
2. Disconnect the BCM harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4.CHECK BCM (2)

 With CONSULT

1. Connect the BCM harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "BCM".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "BCM".

Is DTC detected?

- YES >> Check the DTC. Refer to [BCS-78, "DTC Index"](#).
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A36-00" or other DTC detected?

- YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
YES ("U1A36-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

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DAS

U1A39-00 COMBINATION METER COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A39-00 COMBINATION METER COMMUNICATION

DTC Description

INFOID:0000000010721772

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-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A39-00" detected?

YES >> Proceed to [DAS-264, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721773

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"METER/M&A" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

3. CHECK COMBINATION METER (1)

U1A39-00 COMBINATION METER COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

1. Turn the ignition switch OFF.
2. Disconnect the combination meter harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4. CHECK COMBINATION METER (2)

 With CONSULT

1. Connect the combination meter harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "METER/M&A".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "METER/M&A".

Is DTC detected?

YES >> Check the DTC. Refer to [MWI-105, "DTC Index"](#).

NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A39-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A39-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

DAS

U1A3B-00 TCM COMMUNICATION

DTC Description

INFOID:0000000010721774

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 engine brake function
- Active ride control (engine control) function


DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A3B-00" detected?

YES >> Proceed to [DAS-266, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721775

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"TRANSMISSION" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

Is the inspection result normal?

U1A3B-00 TCM COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

- YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

3.CHECK TCM (1)

1. Turn the ignition switch OFF.
2. Disconnect the TCM harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4.CHECK TCM (2)

 With CONSULT

1. Connect the TCM harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "TRANSMISSION".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "TRANSMISSION".

Is DTC detected?

- YES >> Check the DTC.
 - Gasoline engine models: Refer to [TM-288, "DTC Index"](#).
 - Diesel engine models: Refer to [TM-529, "DTC Index"](#).
- NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A3B-00" or other DTC detected?

- YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
YES ("U1A3B-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).
YES (other DTC)>>Check the DTC.
NO >> INSPECTION END

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U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000010721776

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 control) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A42-00" detected?

YES >> Proceed to [DAS-268, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721777

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ABS" is other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

3.CHECK STEERING ANGLE SENSOR

1. Turn the ignition switch OFF.
2. Disconnect the steering angle sensor harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

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

 With CONSULT

1. Connect the steering angle sensor harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "ABS".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A42-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A42-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000010721778

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 control) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A43-00" detected?

- YES >> Proceed to [DAS-270, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721779

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

- All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
"TRANSMIT DIAG" is other than "OK">>GO TO 2.
"ABS" is other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

3.CHECK STEERING ANGLE SENSOR

1. Turn the ignition switch OFF.
2. Disconnect the steering angle sensor harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

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

 With CONSULT

1. Connect the steering angle sensor harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "ABS".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to [BRC-84, "DTC Index"](#).

NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A43-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A43-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

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DAS

U1A48-00 ECM COMMUNICATION

DTC Description

INFOID:0000000010721780

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 engine brake 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. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A48-00" detected?

YES >> Proceed to [DAS-272, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721781

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

"TRANSMIT DIAG" is other than "OK">>GO TO 2.

"ENGINE" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

Is the inspection result normal?

U1A48-00 ECM COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

3.CHECK ECM (1)

1. Turn the ignition switch OFF.
2. Disconnect the ECM harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4.CHECK ECM (2)

 With CONSULT

1. Connect the ECM harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "ENGINE".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> Check the DTC.

- MR20DD: Refer to [EC-109, "DTC Index"](#).
- QR25DE: Refer to [EC-517, "DTC Index"](#).
- R9M: Refer to [EC-908, "DTC Index"](#).

NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A48-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A48-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

DAS

U1A4A-00 CONTROL MODULE (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

U1A4A-00 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000011003155

DTC DETECTION LOGIC

DTC	Display Item (Trouble diagnosis content)	Malfunction detected condition
U1A4A-00	CONTROL MODULE (CAN) [Control module (CAN)]	<ul style="list-style-type: none">When a malfunction is detected in chassis control module (transmission via CAN communication is impossible).When a malfunction is detected in chassis control module (transmission via chassis communication is impossible).

POSSIBLE CAUSE

- Chassis control module

FAIL-SAFE

The following functions are suspended.

- Active trace control function
- Active engine brake 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

- Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4A-00" detected?

YES >> Proceed to [DAS-274, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011003156

1. PERFORM SELF-DIAGNOSIS

 With CONSULT

- Erase self-diagnosis result for "CHASSIS CONTROL".
- Turn the ignition switch OFF and wait for 10 seconds or more.
- Turn the ignition switch ON.
- Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4A-00" detected?

YES >> Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

NO >> INSPECTION END

U1A4E-00 ECM COMMUNICATION

DTC Description

INFOID:0000000010721782

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 control) function

DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

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

>> GO TO 2.

2. CHECK DTC DETECTION

 With CONSULT

1. Turn the ignition switch OFF to ON.

CAUTION:

Be sure to wait of 10 seconds after turning ignition switch OFF or ON.

2. Perform self-diagnosis for "CHASSIS CONTROL".

Is DTC "U1A4E-00" detected?

- YES >> Proceed to [DAS-275, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-44, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000010721783

1. CHECK CAN DIAGNOSIS SUPPORT MONITOR

 With CONSULT

1. Select "CHASSIS CONTROL" of "CAN Diagnosis Support Monitor".
2. Check malfunction history between each control unit connected to chassis control module.

Check the result of "PAST"?

- All items are "OK">>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
 "TRANSMIT DIAG" is other than "OK">>GO TO 2.
 "ENGINE" is other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect the chassis control module harness connector.
3. Check the chassis control module harness connector terminals No. 3 and 4 for damage or loose connection. (CAN communication line)

Is the inspection result normal?

- YES >> GO TO 5.

U1A4E-00 ECM COMMUNICATION

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

NO >> Recheck terminals for damage or loose connection. Refer to [LAN-7, "Precautions for Harness Repair"](#), and GO TO 5.

3.CHECK ECM (1)

1. Turn the ignition switch OFF.
2. Disconnect the ECM harness connector.
3. Check the 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-7, "Precautions for Harness Repair"](#), and GO TO 4.

4.CHECK ECM (2)

 With CONSULT

1. Connect the ECM harness connector.
2. Connect the chassis control module harness connector.
3. Erase self-diagnosis result for "ENGINE".
4. Turn the ignition switch OFF and wait for 10 seconds or more.
5. Turn the ignition switch ON.
6. Perform self-diagnosis for "ENGINE".

Is DTC detected?

YES >> Check the DTC.

- MR20DD: Refer to [EC-109, "DTC Index"](#).
- QR25DE: Refer to [EC-517, "DTC Index"](#).
- R9M: Refer to [EC-908, "DTC Index"](#).

NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Erase self-diagnosis result for "CHASSIS CONTROL".
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Perform "All DTC Reading".

Are DTC "U1000-00", "U1A4E-00" or other DTC detected?

YES ("U1000-00")>>Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

YES ("U1A4E-00")>>Replace the chassis control module. Refer to [DAS-278, "Removal and Installation"](#).

YES (other DTC)>>Check the DTC.

NO >> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[CHASSIS CONTROL]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000010721784

1.CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY

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

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M73	10	Ground	0 V

4. Turn the ignition switch ON.
5. Check the voltage between chassis control module harness connector and ground.

Chassis control module		—	Voltage
Connector	Terminal		
M73	10	Ground	6.4 – 16 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK CHASSIS CONTROL MODULE IGNITION POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Check the 10A fuse (#30).
3. Check the continuity and for short circuit between chassis control module harness connector terminal (10) and 10A fuse (#30).

Is the inspection result normal?

YES >> Perform trouble diagnosis for ignition power supply.

NO >> Repair or replace error-detected parts.

3.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

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

Chassis control module		—	Continuity
Connector	Terminal		
M73	12	Ground	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace error-detected parts.

4.CHECK TERMINAL

Check the chassis control module pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace error-detected parts.

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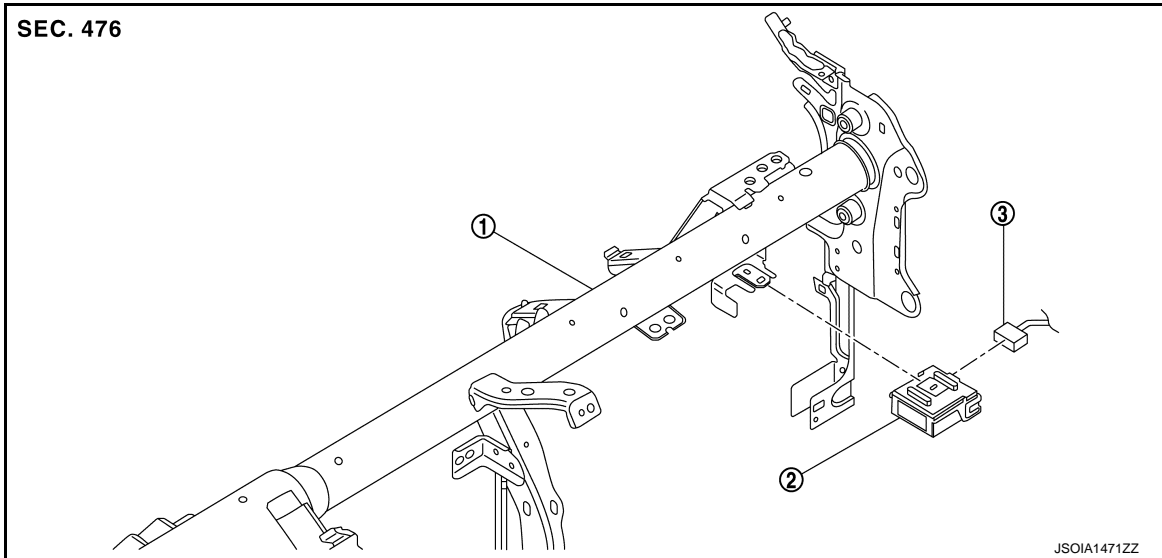
REMOVAL AND INSTALLATION

CHASSIS CONTROL MODULE

Exploded View

INFOID:0000000010721785

LHD MODELS

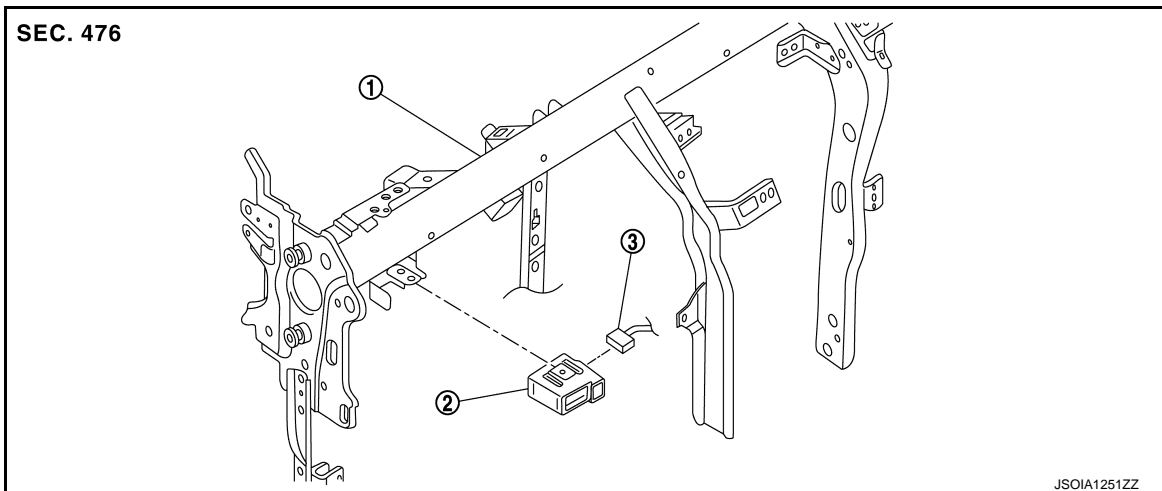


① Steering member

② Chassis control module

③ Chassis control module harness connector

RHD MODELS



① Steering member

② Chassis control module

③ Chassis control module harness connector

Removal and Installation

INFOID:0000000010721786

REMOVAL

CAUTION:

When replacing chassis control module, configuration of chassis control module is required. Refer to [DAS-213, "Work Procedure"](#).

1. Remove the instrument lower panel RH. Refer to [IP-14, "Removal and Installation"](#). (LHD models)
2. Remove the instrument lower panel LH. Refer to [IP-41, "Removal and Installation"](#). (RHD models)

CHASSIS CONTROL MODULE

< REMOVAL AND INSTALLATION >

[CHASSIS CONTROL]

3. Remove the chassis control module.

CAUTION:

Never drop the chassis control module.

INSTALLATION

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

- When replacing the chassis control module, be sure to perform the configuration of chassis control module.
Refer to [DAS-213, "Work Procedure"](#).
- After replace the chassis control module, depress brake pedal and check that the stop lamp turns ON.

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000010721637

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precautions for Removing Battery Terminal

INFOID:0000000011046055

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

NOTE:

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.

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

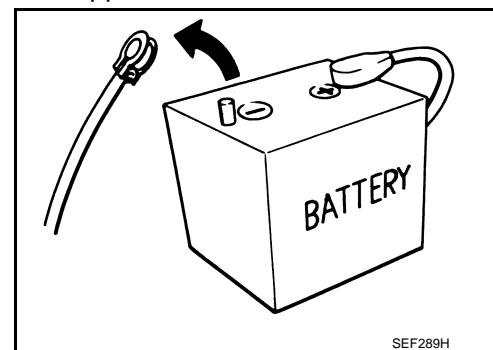
NOTE:

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

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

NOTE:

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



SEF289H

HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.

PRECAUTIONS

< PRECAUTION >

[PARK ASSIST]

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine : 20 minutes
HRA2DDT : 12 minutes
K9K engine : 4 minutes
M9R engine : 4 minutes
R9M engine : 4 minutes
V9X engine : 4 minutes

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

NOTE:

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

6. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

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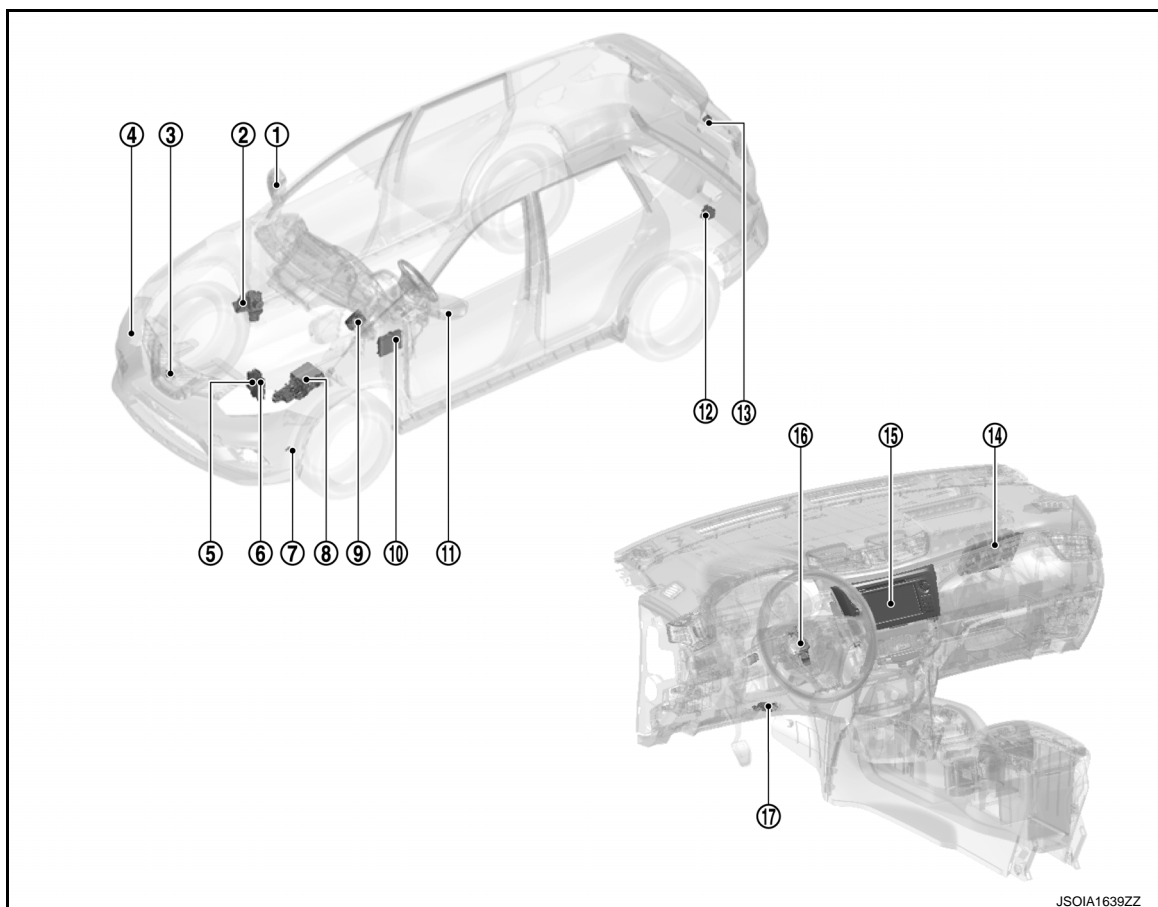
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000010721639

LHD MODELS



JSOIA1639ZZ

No.	Component	Description
①	Side camera RH	<ul style="list-style-type: none"> Refer to AV-77, "Side Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
②	ABS actuator and electric unit (control unit)	<ul style="list-style-type: none"> Transmits the operating status and other information concerning the wheel sensor signal, and the VDC, TCS, and ABS systems, to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to BRC-14, "Component Parts Location".
③	Front camera	<ul style="list-style-type: none"> Refer to AV-76, "Front Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
④	Side sensor front RH	<ul style="list-style-type: none"> Detects a parking space on the right side of the vehicle For details of the installation position, refer to SN-119, "Component Parts Location".
⑤	TCM	<ul style="list-style-type: none"> Transmits the signals related to CVT control to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to TM-235, "CVT CONTROL SYSTEM : Component Parts Location" (Gasoline engine models). For details of the installation position, refer to TM-466, "CVT CONTROL SYSTEM : Component Parts Location" (Diesel engine models).

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[PARK ASSIST]

No.	Component	Description
⑥	ECM	<ul style="list-style-type: none"> Transmits the ECM malfunction signal and engine speed signal to around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to EC-28, "ENGINE CONTROL SYSTEM : Component Parts Location" (MR20DD). For details of the installation position, refer to EC-440, "Component Parts Location" (QR25DE). For details of the installation position, refer to EC-812, "Component Parts Location" (R9M).
⑦	Side sensor front LH	<ul style="list-style-type: none"> Detects a parking space on the left side of the vehicle For details of the installation position, refer to SN-119, "Component Parts Location".
⑧	IPDM E/R	<ul style="list-style-type: none"> Transmits neutral position signal and reverse position switch signal to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to PCS-5, "Component Parts Location".
⑨	EPS control unit	<ul style="list-style-type: none"> Refer to DAS-286, "EPS control unit". For details of the installation position, refer to STC-7, "Component Parts Location".
⑩	BCM	<ul style="list-style-type: none"> Transmits the turn signal switch signal to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location".
⑪	Side camera LH	<ul style="list-style-type: none"> Refer to AV-77, "Side Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
⑫	Sonar control unit	<ul style="list-style-type: none"> Refer to DAS-285, "Sonar Control Unit". For details of the installation position, refer to SN-119, "Component Parts Location".
⑬	Rear camera	<ul style="list-style-type: none"> Refer to AV-77, "Rear Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
⑭	Around view monitor control unit	<ul style="list-style-type: none"> Refer to DAS-285, "Around View Monitor Control Unit". For details of the installation position, refer to AV-64, "Component Parts Location".
⑮	NAVI control unit	<ul style="list-style-type: none"> NAVI control unit performs display of the lines for the around view monitor with Park Assist that are drawn by the around view monitor control unit, as well as display of the switches for the around view monitor with Park Assist, display of guidance messages, and audio guide. Transmits the camera switch signal, Park Assist switch signal, and other signals to the around view monitor control unit via CAN communication. For details of the installation position, refer to AV-64, "Component Parts Location".
⑯	Steering angle sensor	<ul style="list-style-type: none"> Transmits the steering angle sensor signal to the around view monitor control unit via CAN communication. For details of the installation position, refer to BRC-14, "Component Parts Location".
⑰	Sonar buzzer	<ul style="list-style-type: none"> Sounds the buzzer according to the operation signal from the sonar control unit. For details of the installation position, refer to SN-119, "Component Parts Location".

RHD MODELS

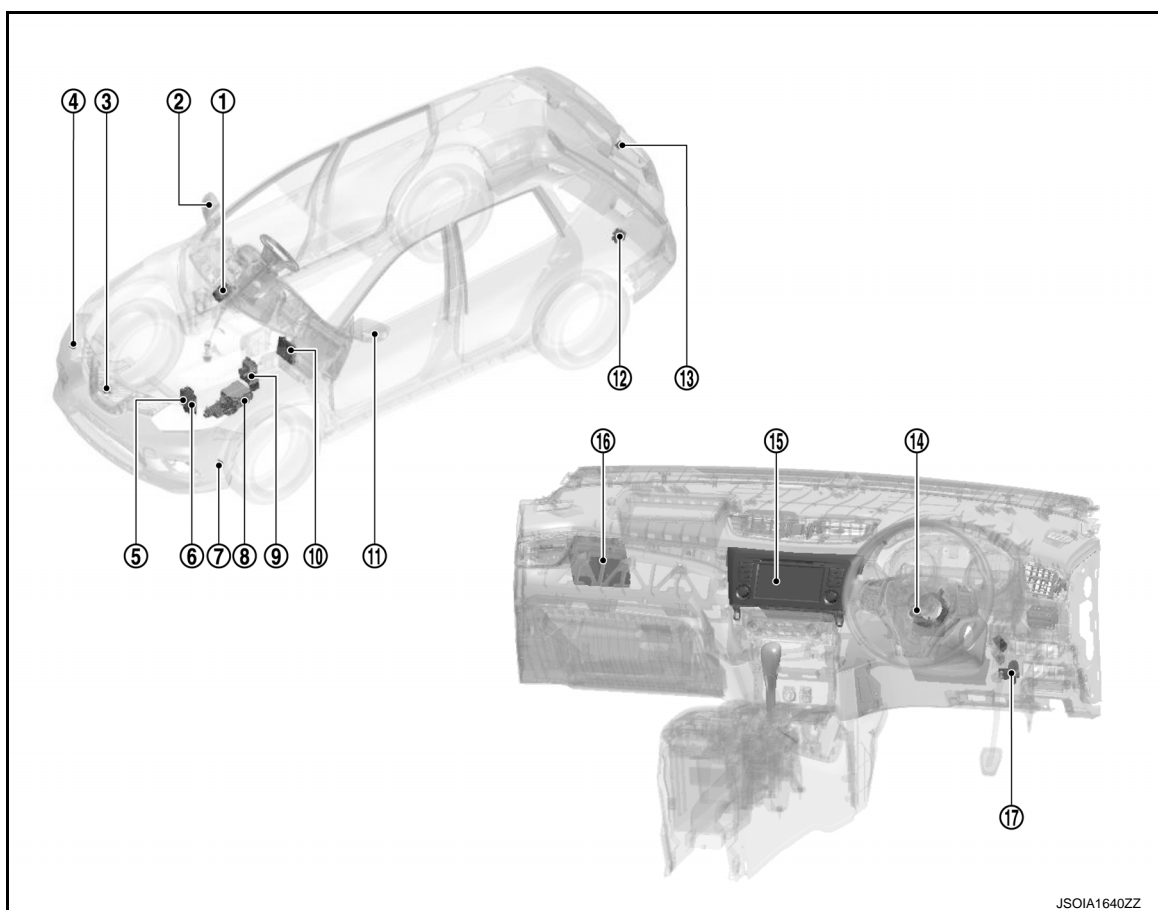
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COMPONENT PARTS

< SYSTEM DESCRIPTION >

[PARK ASSIST]



No.	Component	Description
①	EPS control unit	<ul style="list-style-type: none"> Refer to DAS-286, "EPS control unit". For details of the installation position, refer to STC-7, "Component Parts Location".
②	Side camera RH	<ul style="list-style-type: none"> Refer to AV-77, "Side Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
③	Front camera	<ul style="list-style-type: none"> Refer to AV-76, "Front Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
④	Side sensor front RH	<ul style="list-style-type: none"> Detects a parking space on the right side of the vehicle For details of the installation position, refer to SN-119, "Component Parts Location".
⑤	TCM	<ul style="list-style-type: none"> Transmits the signals related to CVT control to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to TM-235, "CVT CONTROL SYSTEM : Component Parts Location" (Gasoline engine models). For details of the installation position, refer to TM-466, "CVT CONTROL SYSTEM : Component Parts Location" (Diesel engine models).
⑥	ECM	<ul style="list-style-type: none"> Transmits the ECM malfunction signal and engine speed signal to around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to EC-28, "ENGINE CONTROL SYSTEM : Component Parts Location" (MR20DD). For details of the installation position, refer to EC-440, "Component Parts Location" (QR25DE). For details of the installation position, refer to EC-812, "Component Parts Location" (R9M).
⑦	Side sensor front LH	<ul style="list-style-type: none"> Detects a parking space on the left side of the vehicle For details of the installation position, refer to SN-119, "Component Parts Location".
⑧	IPDM E/R	<ul style="list-style-type: none"> Transmits neutral position signal and reverse position switch signal to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to PCS-5, "Component Parts Location".

COMPONENT PARTS

< SYSTEM DESCRIPTION >

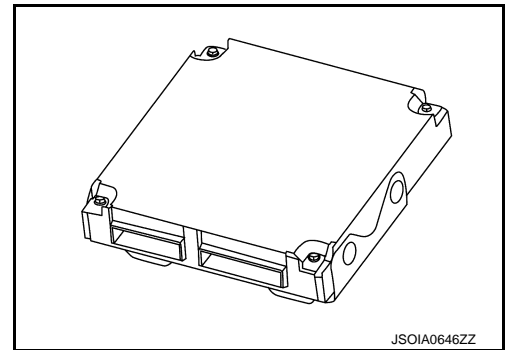
[PARK ASSIST]

No.	Component	Description
⑨	ABS actuator and electric unit (control unit)	<ul style="list-style-type: none"> Transmits the operating status and other information concerning the wheel sensor signal, and the VDC, TCS, and ABS systems, to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to BRC-14, "Component Parts Location".
⑩	BCM	<ul style="list-style-type: none"> Transmits the turn signal switch signal to the around view monitor control unit / sonar control unit via CAN communication. For details of the installation position, refer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location".
⑪	Side camera LH	<ul style="list-style-type: none"> Refer to AV-77, "Side Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
⑫	Sonar control unit	<ul style="list-style-type: none"> Refer to DAS-285, "Sonar Control Unit". For details of the installation position, refer to SN-119, "Component Parts Location".
⑬	Rear camera	<ul style="list-style-type: none"> Refer to AV-77, "Rear Camera". For details of the installation position, refer to AV-64, "Component Parts Location".
⑭	Steering angle sensor	<ul style="list-style-type: none"> Transmits the steering angle sensor signal to the around view monitor control unit via CAN communication. For details of the installation position, refer to BRC-14, "Component Parts Location".
⑮	NAVI control unit	<ul style="list-style-type: none"> NAVI control unit performs display of the lines for the around view monitor with Park Assist that are drawn by the around view monitor control unit, as well as display of the switches for the around view monitor with Park Assist, display of guidance messages, and audio guide. Transmits the camera switch signal, Park Assist switch signal, and other signals to the around view monitor control unit via CAN communication. For details of the installation position, refer to AV-64, "Component Parts Location".
⑯	Around view monitor control unit	<ul style="list-style-type: none"> Refer to DAS-285, "Around View Monitor Control Unit". For details of the installation position, refer to AV-64, "Component Parts Location".
⑰	Sonar buzzer	<ul style="list-style-type: none"> Sounds the buzzer according to the operation signal from the sonar control unit. For details of the installation position, refer to SN-119, "Component Parts Location".

Around View Monitor Control Unit

INFOID:0000000010721640

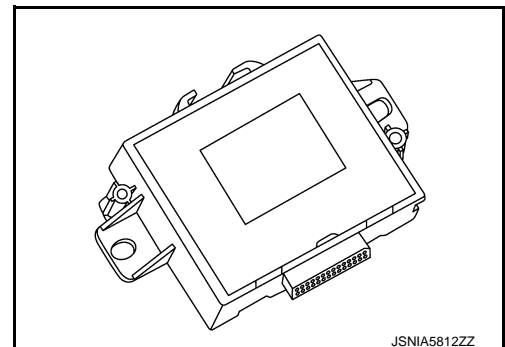
- The around view monitor control unit controls the around view monitor with Park Assist. (Perpendicular parking)
- The around view monitor control unit is located in the rear of the glove box.
- It sends and receives the necessary signals to/from each ECU via CAN communication.
- Power is supplied to each camera when the ignition switch is ON.
- The camera image signals received from the cameras are converted and combined within the around view monitor control unit and then sent to the NAVI control unit.



Sonar Control Unit

INFOID:0000000010727797

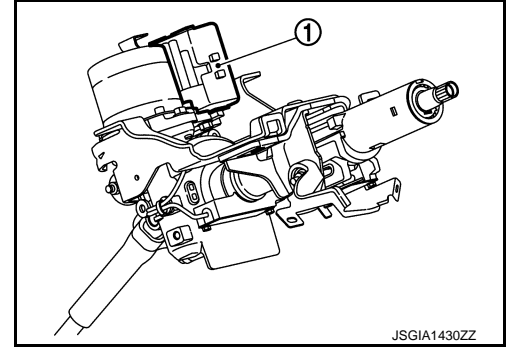
- The sonar control unit controls the around view monitor with Park Assist. (Parallel parking)
- The warning buzzer outputs by inputting the sensor signal from sonar sensor. The warning buzzer outputs the separated buzzer.



EPS control unit

INFOID:0000000010721641

- EPS control unit ① receives the Park Assist status signal for changing from normal operation to Park Assist mode via CAN communication, and the steering angle command signal for steering operation, from the around view monitor control unit or sonar control unit, and controls the Park Assist.



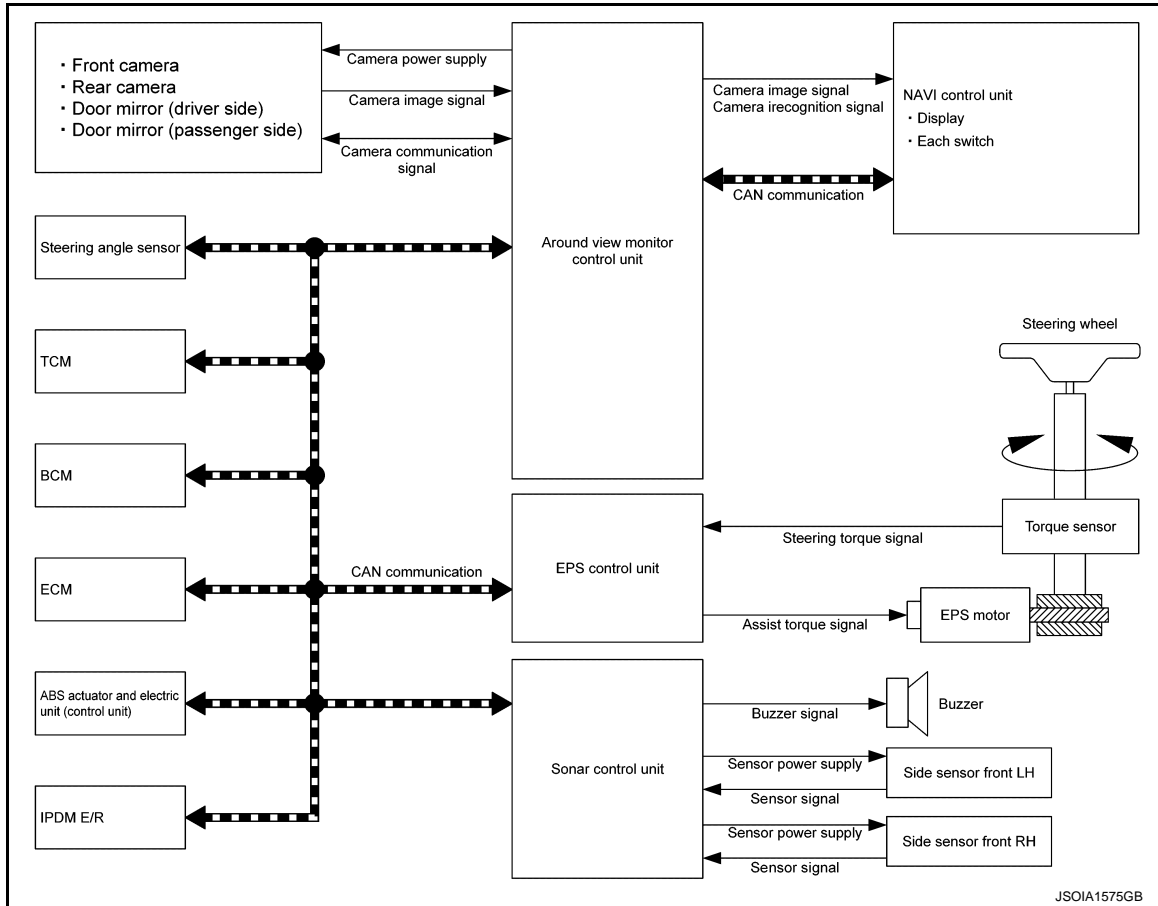
JSGIA1430ZZ

SYSTEM

System Description

INFOID:0000000010721642

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL ITEMS

Input Signal Item

Transmit unit	Reception unit	Signal name		Description
EPS control unit	Around view monitor control unit	CAN	Park Assist permit signal	Receives notice that operation of the around view monitor with Park Assist is permitted.
			EPS torque signal	Receives steering input torque.
Steering angle sensor	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Steering angle sensor signal	Receives the steering wheel rotation amount, angular velocity, and rotation direction.
ABS actuator and electric unit (control unit)	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Vehicle speed signal (ABS)	Receives the wheel speeds from the four wheels.
			VDC operation signal	Receives VDC operation status.
			VDC malfunction signal	Receives VDC malfunction status.
TCM	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	CVT malfunction signal	Receives CVT malfunction status.
			Shift position signal	Receives select lever position.
BCM	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Turn signal switch signal	Receives turn signal switch position.

SYSTEM

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Transmit unit	Reception unit	Signal name		Description
ECM	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Stop/start status signal	Receives stop/start status.
IPDM E/R	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Neutral position signal	Receives select lever neutral position (M/T)
			Reverse switch signal	Receives select lever reverse position (M/T)
NAVI control unit	Around view monitor control unit	CAN	Park Assist switch signal	Receives the around view monitor with Park Assist switch status.
Sonar control unit	Around view monitor control unit	CAN	Sonar indicator display signal	Receives distance to obstacle detected by the sonar sensor.
Side sensor front LH/RH (Sonar sensor)	Sonar control unit	Hard wire	Sensor signal	Detects distance to obstacle.

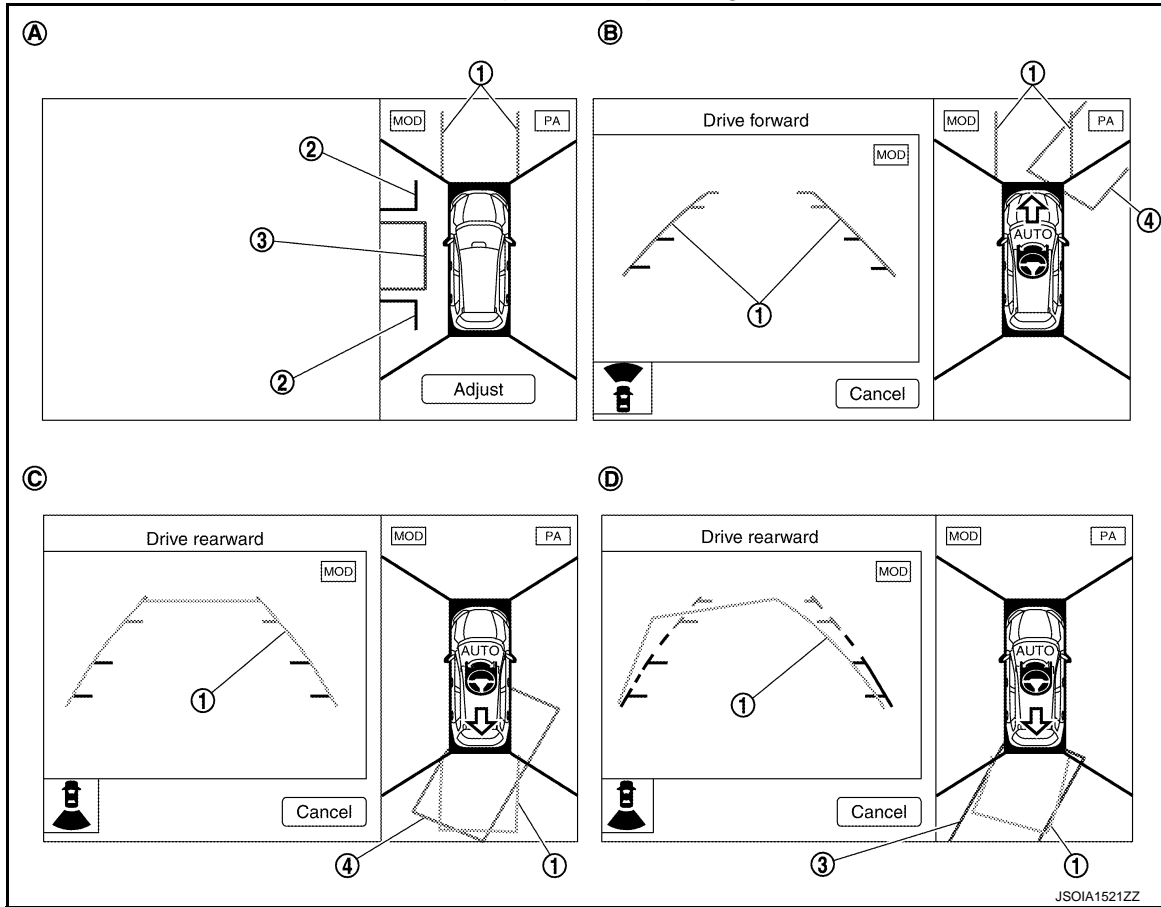
Output Signal Item

Reception unit	Transmit unit	Signal name		Description
EPS control unit	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Steering angle command signal	Transmits signal to operate the steering.
	Around view monitor control unit	CAN	Park Assist status signal	Transmits the around view monitor with Park Assist operation status.
			Park Assist malfunction signal	Transmits the around view monitor with Park Assist malfunction status.
NAVI control unit	<ul style="list-style-type: none"> Around view monitor control unit Sonar control unit 	CAN	Park Assist switch display signal	Transmits the signal to display the around view monitor with Park Assist switch.
Sonar control unit	Around view monitor control unit	CAN	Buzzer drive signal	Transmits the signal to output the around view monitor with Park Assist sound.

FUNCTION DESCRIPTION

- The around view monitor with Park Assist (PA) is designed to assist drivers with perpendicular and parallel parking. This system operates the steering wheel to park the vehicle in the parking space set by the driver on the around view monitor screen (perpendicular mode), or searched by parking sensors (sonar) in the left/right side of the front bumper (parallel mode). Screen guidance for the shift lever operation is also provided during the parking maneuvers.
- When the system is operating, the conditions surrounding the vehicle are displayed on the around view monitor screen, and at the same time the predicted course line, forward/reverse starting position rectangle (perpendicular parking), and other information is also displayed.

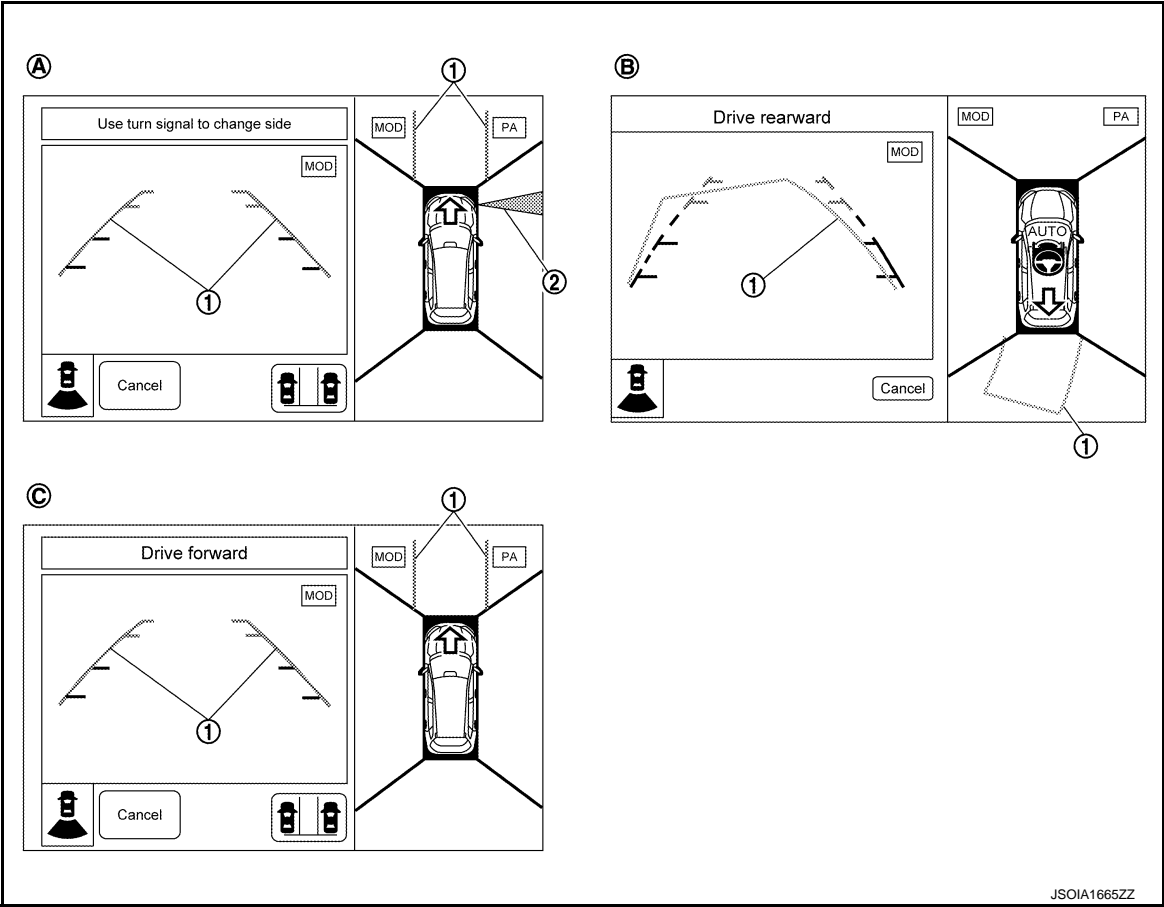
Perpendicular parking



- Ⓐ Setting the target parking position
- Ⓑ Moving the vehicle forward
- Ⓒ Moving the vehicle backward (when reverse starting position rectangle is detected)
- Ⓓ Moving the vehicle backward (when target parking rectangle is detected)

No.	Line/rectangle name	Color	Function
①	Predicted course line	Forward: Green Reverse: Orange	Displays the course that will putting the vehicle into the target parking rectangle.
②	Clearance guide line	Red	Displays the guide lines to avoid a collision to a obstacle.
③	Target parking rectangle	Blue	Displays the position where the driver wants to park.
④	Forward/reverse starting position rectangle	Green	Displays the position to start reversing or turning

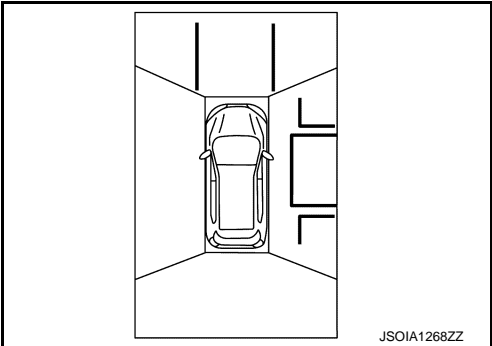
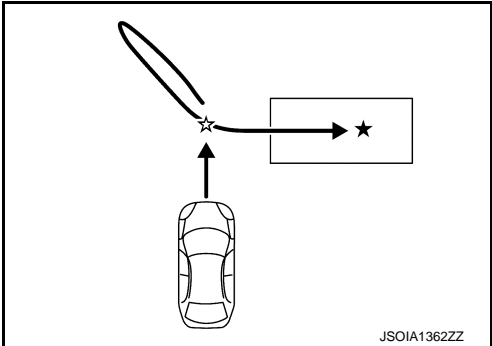
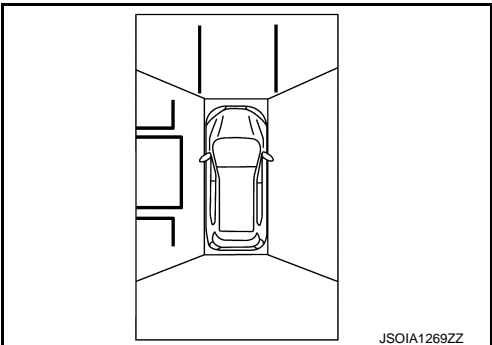
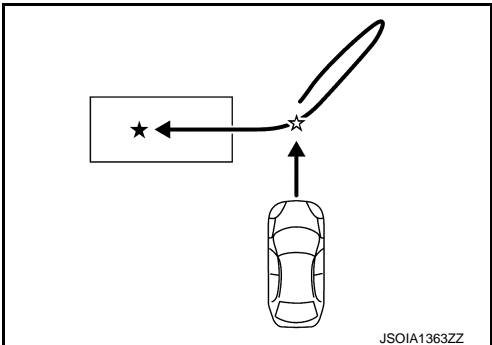
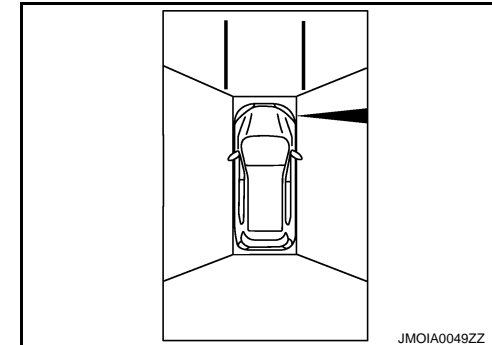
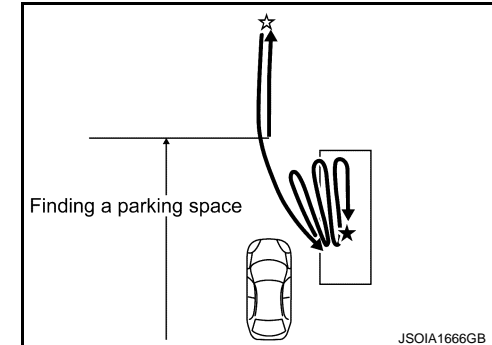
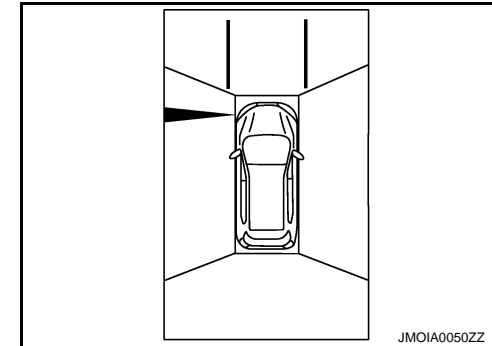
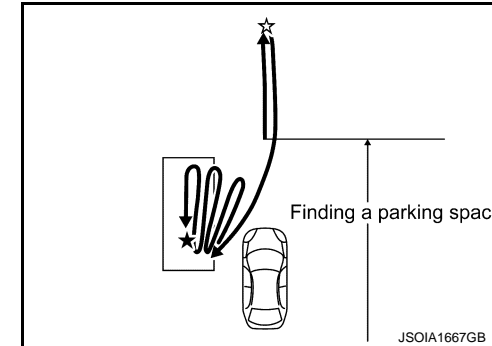
Parallel parking



- (A) Finding a parking space (B) Moving the vehicle backward
(C) Moving the vehicle forward

No.	Line/rectangle name	Color	Function
①	Predicted course line	Forward: Green Reverse: Orange	Displays the predicted course.
②	Sonar indicator	Orange	Displays the sonic wave position and direction.

Available Parking Patterns
The parking patterns supported by the around view monitor with Park Assist are as follows.

	Screen displayed when selecting parking mode	Image of parking course
Perpendicular (R)	 <p>JSOIA1268ZZ</p>	 <p>JSOIA1362ZZ</p>
Perpendicular (L)	 <p>JSOIA1269ZZ</p>	 <p>JSOIA1363ZZ</p>
Parallel (R)	 <p>JMOIA0049ZZ</p>	 <p>JSOIA1666GB</p>
Parallel (L)	 <p>JMOIA0050ZZ</p>	 <p>JSOIA1667GB</p>

NOTE:

☆: Vehicle stop point (start of steering control)

★: Operation end point

Perpendicular Parking

- System operates the steering wheel to park the vehicle in the parking space set by the driver on the bird's-eye view screen.

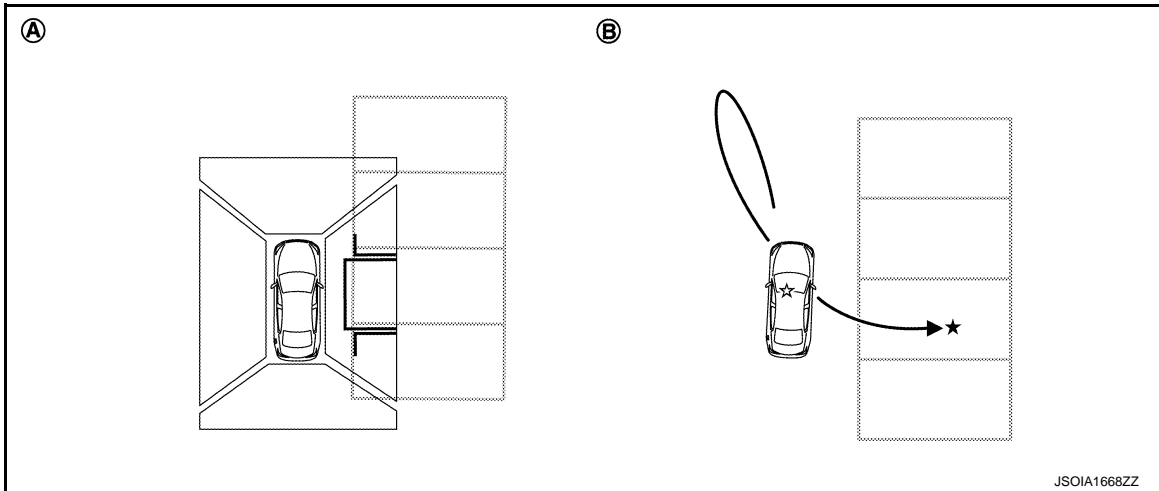
NOTE:

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[PARK ASSIST]

The shift lever, accelerator pedal, brake pedal, and clutch pedal are operated by the driver.



- (A) Setting target parking rectangle (B) Automatic steering control

- ☆ Vehicle stop point (Start of steering control)
- ★ Operation end point

NOTE:

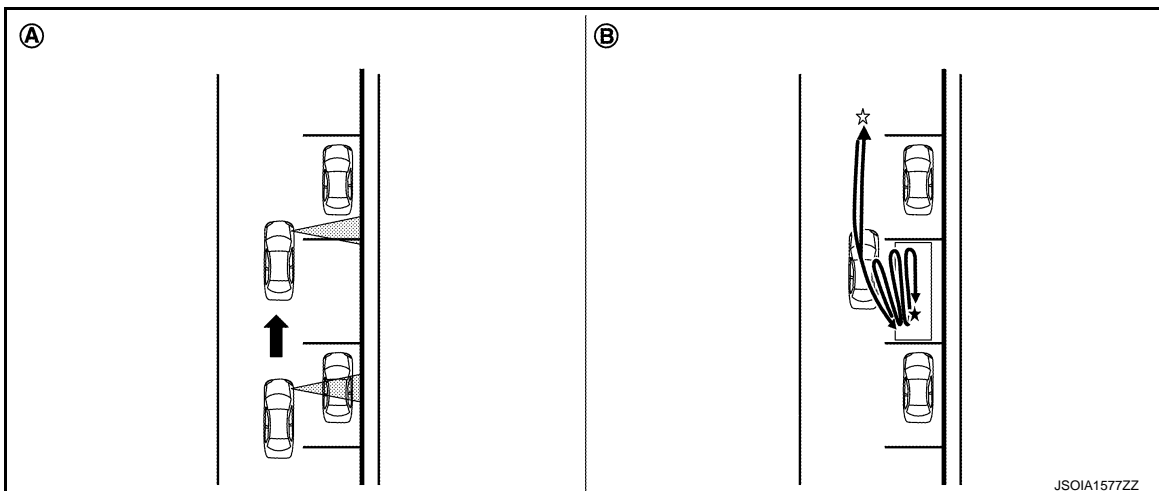
- Operating the turn signal switch allows the switching between right and left.
- When the adjust switch is pressed to set a target parking rectangle, while lines are recognized and fine adjustment is performed.

Parallel Parking

- System operates the steering wheel to park the vehicle in the parking space searched by parking sensors (sonar) in the left/right side of the front bumper.

NOTE:

The shift lever, accelerator pedal, brake pedal, and clutch pedal are operated by the driver.



- (A) Finding a parking space (B) Automatic steering control

- ☆ Vehicle stop point (Start of steering control)
- ★ Operation end point

NOTE:

Operating the turn signal switch allows the switching of scanning directions between right and left.

OPERATION DESCRIPTION (PERPENDICULAR PARKING)

- The around view monitor control unit calculates the trajectory needed to move to the final parking space (target parking rectangle), and the required amount of steering rotation, and performs the following control.
- The forward/reverse starting position rectangle (green) and target parking rectangle (blue) are set based on internal calculations and the shift position signal, and the camera image signal is transmitted to the NAVI control unit in order to show the target position in the display.
- The target steering angle is calculated based on the vehicle speed signal, steering angle sensor signal, and shift position signal. The system transmits the steering angle command via CAN communication to the EPS control unit for performing steering.
- Buzzer drive signal is transmitted to the sonar control unit via CAN communication for outputting the buzzer.
- The sonar indicator display signal is received by CAN communication from the sonar control unit. If an obstacle is present, the camera image signal is transmitted to the NAVI control unit and a warning is shown in the display. For sonar functions, refer to [SN-124, "SONAR SYSTEM : System Description"](#).

Operation Condition

Park Assist switch ON conditions

- The engine is started
- The around view monitor screen (top view) is displayed on the display
- The vehicle speed is less than 30 km/h (18.6 MPH) (Except reverse range/gear)
- The vehicle speed is less than 10 km/h (6.2 MPH) (Reverse range/gear)

Start switch ON conditions

- Vehicle speed is 0 km/h (0 MPH) (vehicle is completely stopped)
- Steering wheel position is straight-ahead
- Selector lever is in the D position.

The Park Assist is deactivated under the following conditions:

- When the steering wheel is operated manually
- When the shift lever is placed in the P range (CVT model).
- When 5 seconds have passed since the shift lever was placed and kept in the N range/neutral position.
- When reverse operations are conducted more than 10 times for steering corrections.
- When the system judges that the conditions (such as worn out or low pressure tires, road conditions, etc.) are not suitable for correct course predictions.
- When the vehicle backs up to a position behind the place from which Park Assist operation started.
- When the vehicle passes the reverse starting position by over 2 m (7 ft).
- When the vehicle speed exceeds approximately 7 km/h (4 MPH).
- When the parking operation by the driver deviates from the Park Assist guidance to some extent.

OPERATION DESCRIPTION (PARALLEL PARKING)

- The sonar control unit detects parking space and performs the Park Assist.
- The sonar control unit calculates the space needed to move to the final parking space, and the required amount of steering rotation, and performs the following control.
- The target steering angle is calculated based on the vehicle speed signal, steering angle sensor signal, and shift position signal/shift lever position. The system transmits the steering angle command via CAN communication to the EPS control unit for performing steering.
- Outputting the buzzer.
- If an obstacle is present, the camera image signal is transmitted to the NAVI control unit and a warning is shown in the display. For sonar functions, refer to [SN-124, "SONAR SYSTEM : System Description"](#).

Operation Condition

Park Assist switch ON conditions

- The engine is started
- The around view monitor screen (top view) is displayed on the display
- The vehicle speed is less than 30 km/h (18.6 MPH) (Except reverse range/gear)
- The vehicle speed is less than 10 km/h (6.2 MPH) (Reverse range/gear)

Start switch ON conditions

- Vehicle speed is 0 km/h (0 MPH) (vehicle is completely stopped)
- Steering wheel position is straight-ahead
- Selector lever is in the D position.

The Park Assist is deactivated under the following conditions:

- When the steering wheel is operated manually.
- When the shift lever is placed in the P range (CVT model).

SYSTEM

[PARK ASSIST]

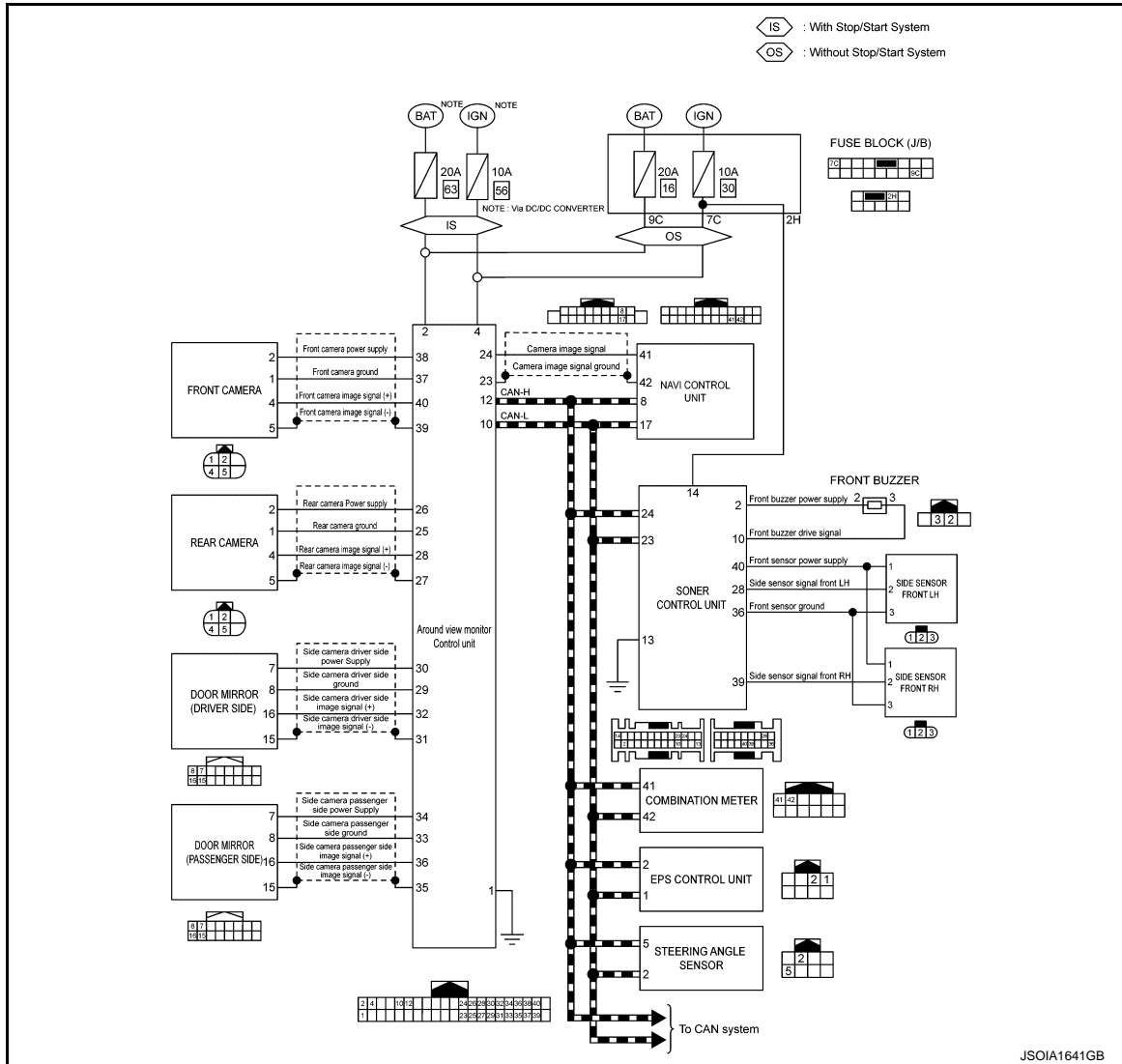
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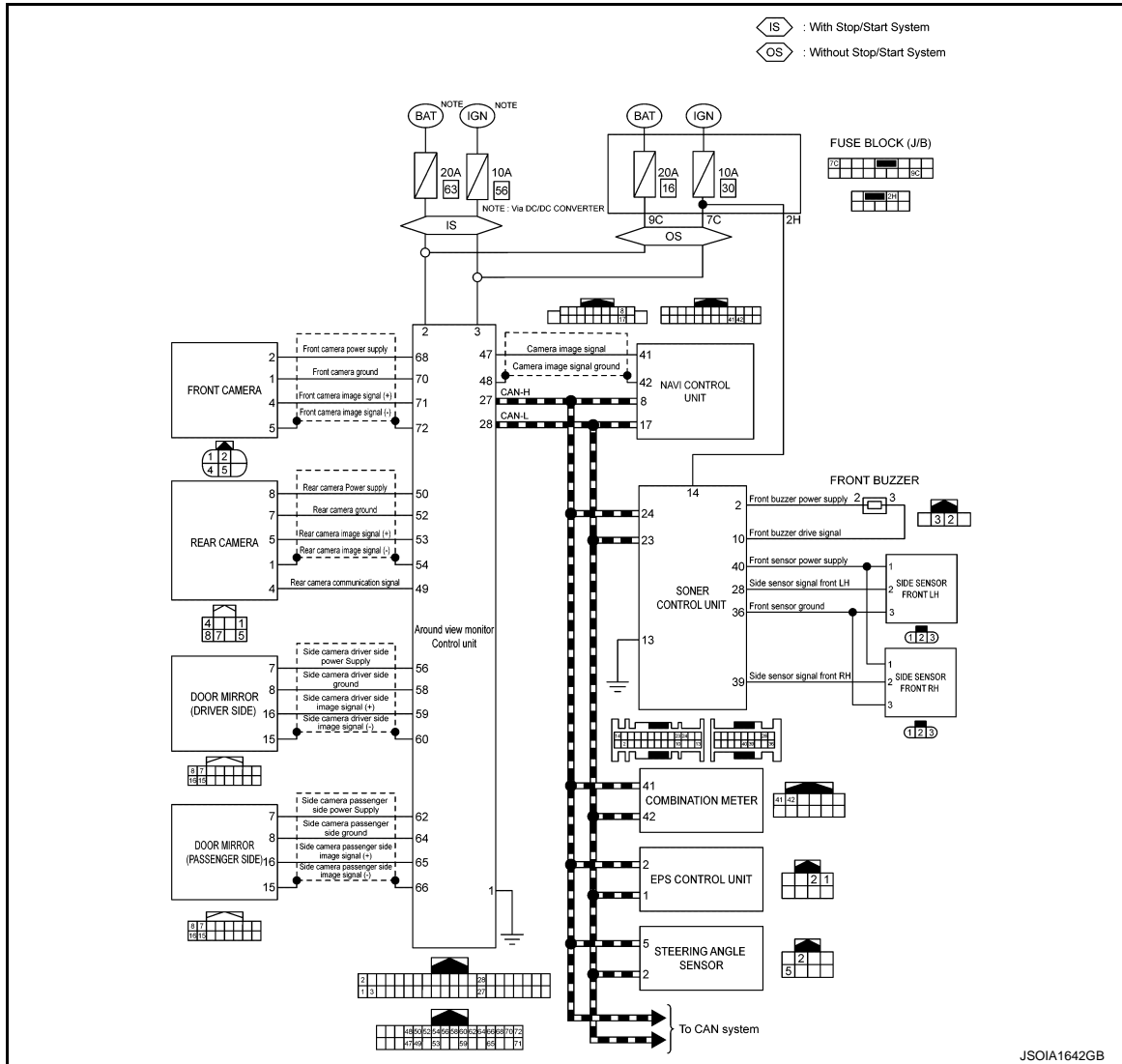
- When 5 seconds have passed since the shift lever was placed and kept in the N range/neutral position.
- When the system judges that the conditions (such as worn out or low pressure tires, road conditions, etc.) are not suitable for correct course predictions.
- When the vehicle speed exceeds approximately 7 km/h (4 MPH).
- When the parking operation by the driver deviates from the Park Assist guidance to some extent.

Circuit Diagram

INFOID:000000010721643

WITHOUT BSW SYSTEM





Fail-Safe (Around View Monitor Control Unit)

INFOID:0000000010752982

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A00 CONTROL UNIT	Around view monitor control unit internal malfunction	Around view monitor with Park Assist is cancel
C1A01 POWER SUPPLY CIRC	<ul style="list-style-type: none"> The battery voltage sent to around view monitor control unit remains less than 7.9 V for 5 seconds The battery voltage sent to around view monitor control unit remains more than 19.3 V for 5 seconds 	Around view monitor with Park Assist is cancel
C1A03 VHCL SPEED SE CIRC	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) received by the around view monitor control unit via CAN communication, are inconsistent	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel

SYSTEM

< SYSTEM DESCRIPTION >



[PARK ASSIST]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A04 ABS/TCS/VDC CIRC	If a malfunction occurs in the VDC/TCS/ABS system	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
C1A07 CVT CIRCUIT	If the CVT is malfunction	Around view monitor with Park Assist is cancel
C1A39 STRG SEN CIR	If the steering angle sensor is malfunction	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel
C1A56 SONAR CIRC	The around view monitor control unit detects that sonar control unit has a malfunction	Around view monitor with Park Assist is cancel
U0122 VDC P-RUN DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
U0416 VDC CHECKSUM DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
U0428 ST ANGLE SENSOR CALIBRATION	Neutral position adjustment of steering angle sensor is not complete.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped
U1000 CAN COMM CIRCUIT	When around view monitor control unit cannot transmit/receive CAN communication signal continuously for 2 seconds or more.	<p>The following functions are stopped</p> <ul style="list-style-type: none"> When communication of steering angle sensor signal is not normal <ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal <ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. LDW system is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped
U1010 CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	MOD (Moving Object Detection) function is stopped.
U111A REAR CAMERA IMAGE SIGNAL	<p>No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	<ul style="list-style-type: none"> Camera image is not displayed (Gray screen display). MOD (Moving Object Detection) function is stopped.

SYSTEM

< SYSTEM DESCRIPTION >

[PARK ASSIST]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U111B SIDE CAMERA RH IMAGE SIGNAL	No-signal status of side camera RH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U111C FRONT CAMERA IMAGE SIGNAL	No-signal status of front camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U111D SIDE CAMERA LH IMAGE SIGNAL	No-signal status of side camera LH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U112F EPS CIRCUIT	If the EPS system is malfunction	Around view monitor with Park Assist is cancel
U1232 ST ANGLE SEN CALIB	Neutral position adjustment of steering angle sensor is performed. NG signal from steering angle sensor is received.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped.
U1302 CAMERA POWER VOLT	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. <ul style="list-style-type: none"> When camera power supply output is ON: 5.9 - 6.5 V When OFF: 0 V by camera power supply measurement. 	Camera power output is stopped
U1304 CAMERA IMAGE CALIB	<ul style="list-style-type: none"> When camera calibration is incomplete. When camera information in around view monitor control unit and information read from camera are not the same. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> Unmatched icon  display (red) is displayed (applicable for unmatched camera only). Around view monitor with Park Assist is cancel.
U1305 CONFIG UNFINISH	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> On applicable camera screen  marking (Red) is displayed. Around view monitor with Park Assist is cancel.
U1308 R-CAMERA (R&L) CALIB JDG-MNT	Camera image calibration is incomplete	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped. Around view monitor with Park Assist is stopped.
U1309 PUMP INPUT CURRENT JUDGE	Around view monitor control unit detects the value of current from pump control unit is incorrect	BSW system is stopped.
U130A PUMP ECU JUDGE	If the pump control unit is malfunction	BSW system is stopped.
U130B RR CAMERA COMM ERROR	Around view monitor control unit receives the incorrect communication signal from rear view camera	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped.

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SYSTEM

< SYSTEM DESCRIPTION >

[PARK ASSIST]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U1320 REPROGRAMMING	Reprogramming of around view monitor control unit is incomplete	Around view monitor with Park Assist is cancel
U150E BCM CIRCUIT	If the BCM is malfunction	Around view monitor with Park Assist is cancel
U1971 SONAR MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from sonar control unit via CAN communication	Around view monitor with Park Assist is cancel
U1972 EPS MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from EPS control unit via CAN communication	Around view monitor with Park Assist is cancel
Other	When around view monitor control unit is not normal.	Switch to camera screen is not allowed.

Fail-Safe (Sonar Control Unit)

INFOID:0000000011025227

The sonar control unit controls as follows if it detects a malfunction in the sonar sensor:

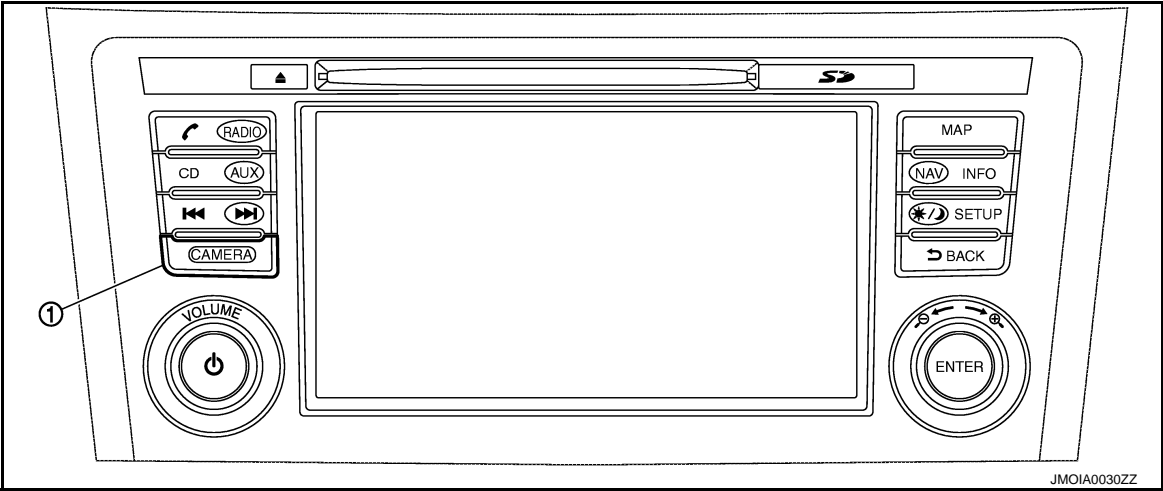
- Obstacle detection function is stopped.
- Alarm display is displayed on the information display of combination meter.
- Parking Assist in parallel mode is stopped.

OPERATION

Switch Name and Function

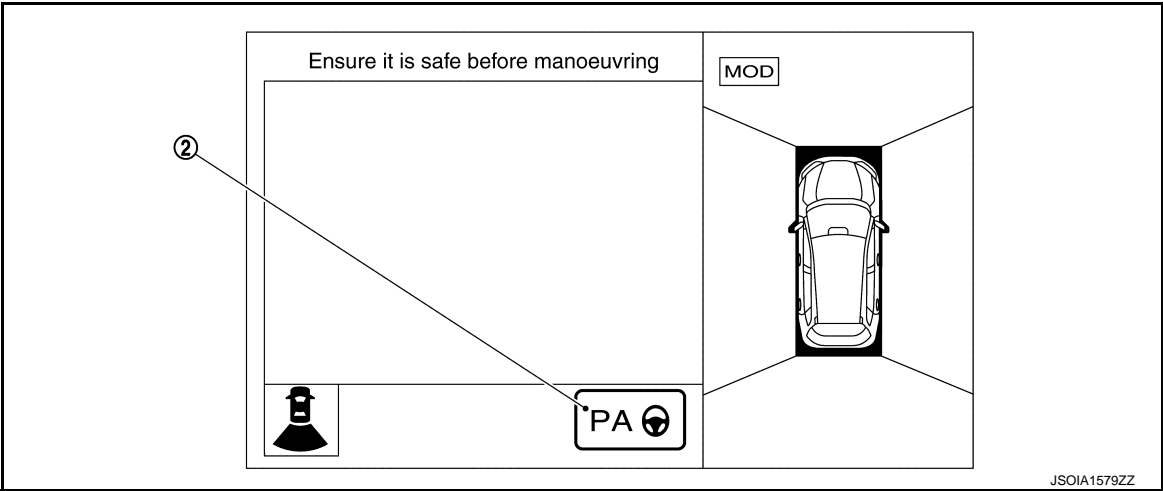
INFOID:000000010721645

MULTIFUNCTION SWITCH



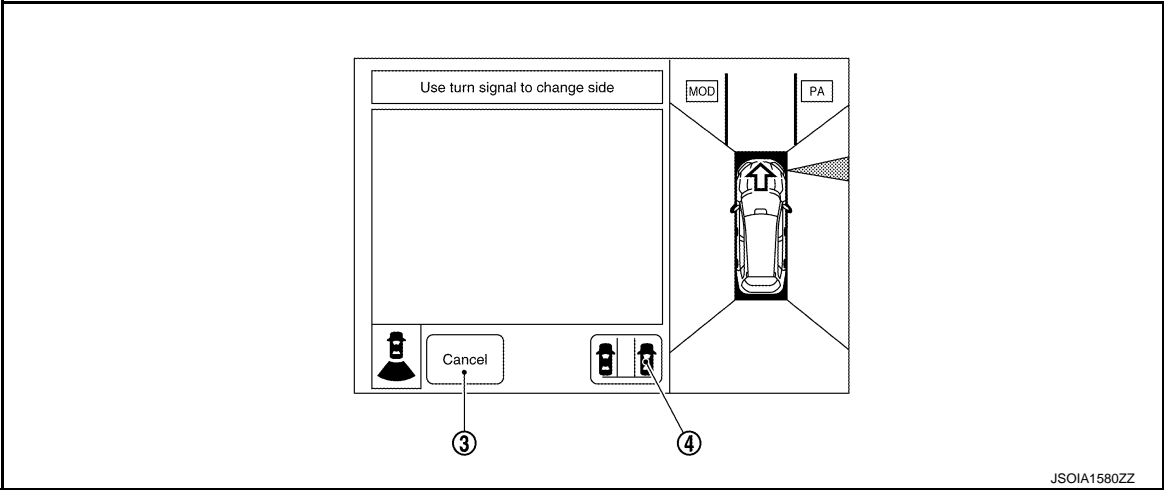
No.	Name	Function
①	Camera switch	Switches the NAVI control unit display between the camera image screen and navigation screen.

DISPLAY 1



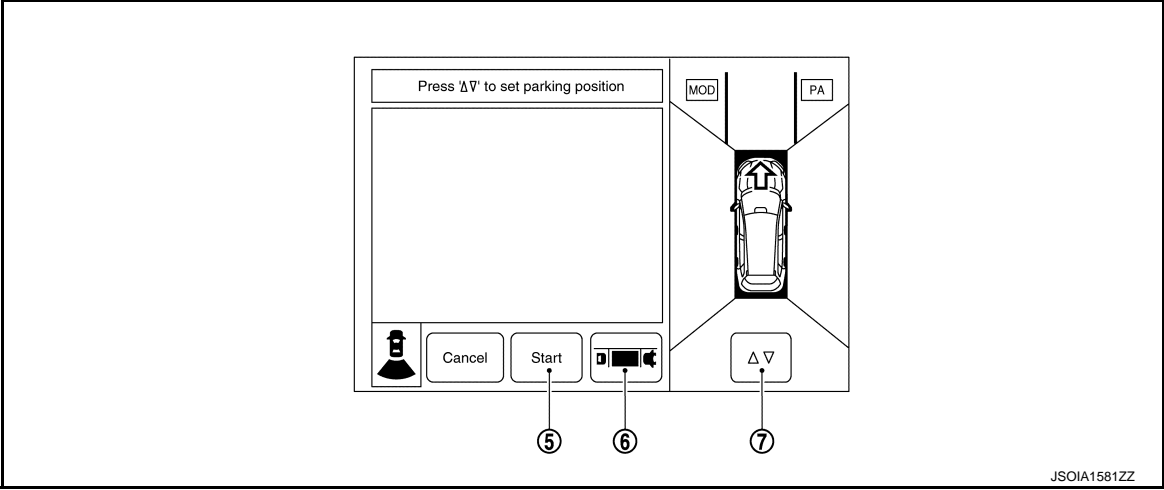
No.	Name	Function
②	PA (Park Assist) switch	Turns ON the Park Assist function.

DISPLAY 2



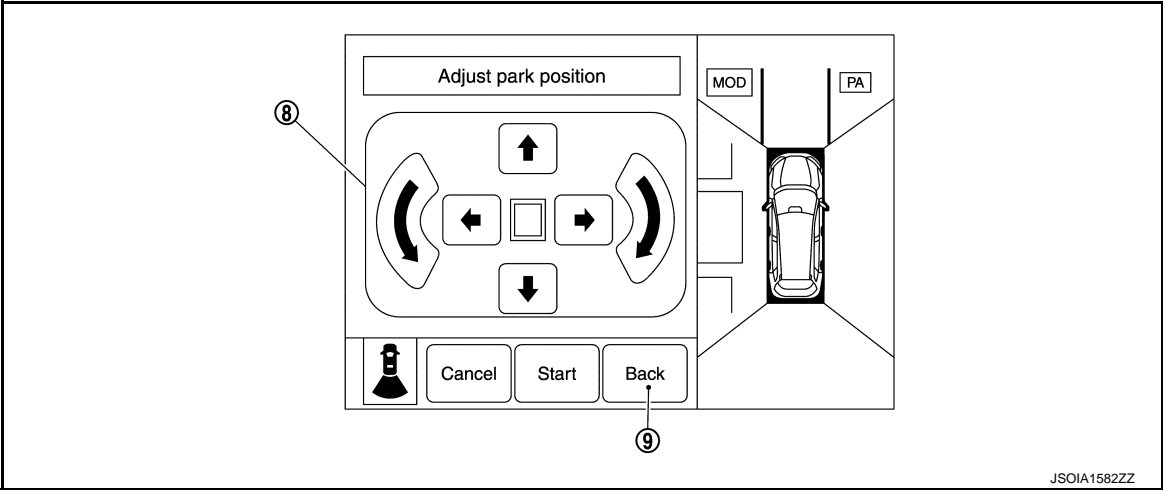
No.	Name	Function
③	Cancel switch	Ends operation of the around view monitor with Park Assist.
④	Perpendicular mode switch	Switches the mode to the perpendicular parking mode.

DISPLAY 3



No.	Name	Function
⑤	Start switch	Starts operation of the Park Assist.
⑥	Parallel mode switch	Switches the mode to the parallel parking mode.
⑦	Adjust switch	Used to make fine adjustments to the parking guide rectangle position.

DISPLAY 4

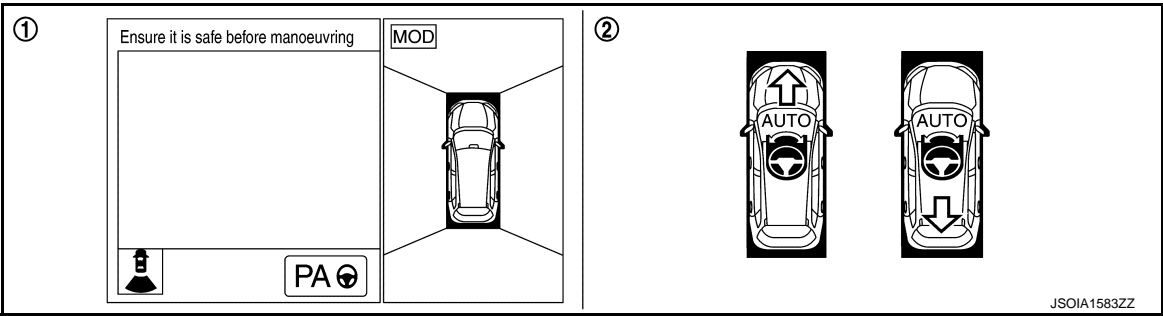


No.	Name	Function
⑧	Parking position adjustment switch	Used to make fine adjustments to the target parking rectangle. NOTE: Can be adjusted by up to approximately 70 cm (27.56 in).
⑨	Back switch	Allows to go back to the previous screen.

Menu Displayed by Pressing Each Switch

INFOID:0000000010721646

SYSTEM DISPLAY



No.	Name	Function
①	Camera image screen	Displays the area around the vehicle, the target parking rectangle, and other information.
②	Automatic steering status display	Indicates that an automated steering control is operating.

WARNING DISPLAY AND VOICE GUIDANCE


System status	Warning/display	Buzzer*	Audio guide
OFF	—	—	—

DAS

OPERATION

< SYSTEM DESCRIPTION >

[PARK ASSIST]

System status		Warning/display	Buzzer*	Audio guide
ON	Vehicle movement judgment in progress	Ensure it is safe before maneuvering	—	—
	At the time of parking space detection (Parallel parking)	Use turn signal to switch side		
	Setting the target parking rectangle (Perpendicular parking)	Stop beside parking space to start Park Assist	—	—
	Park Assist starts	Drive forward	—	"Start Park Assist"
	Vehicle starts to move forward (when steering wheel is turned)	Drive forward	—	"Drive forward"
	Vehicle speed is too fast	Reduce speed	Short beep	—
	The vehicle is moving forward and moves close to the forward/reverse starting position rectangle	Stop and select reverse gear	Long beep	"Select reverse gear"
	The vehicle is moving in reverse and moves close to the forward/reverse starting position rectangle	Stop and select forward gear	Long beep	"Select drive gear"
	Vehicle starts to move in reverse	Drive backward	—	"Drive rearward"
	The target parking rectangle fine adjustment screen is displayed	Adjust park position	—	—
	Park Assist ends	Park Assist finished	Long beep	"Park Assist finished"
	D position is not selected	Select forward gear	—	"Park Assist could not start"
	Steering wheel is not in neutral position	Center steering wheel	—	"Park Assist could not start"
	System malfunction	 Park Assist fault	Long beep	—
	System limit	Park Assist canceled	Long beep	"Park Assist canceled"
	Start is not possible	Park Assist unavailable	—	—

*: Sonar buzzer sounds.

HANDLING PRECAUTION

Precautions for Around View Monitor with Park Assist

INFOID:0000000010721647

- Around view monitor with Park Assist is designed to support the driver's steering wheel operation in a parking lot. It does not automatically lower the vehicle speed or avoid contact with objects. As when performing ordinary parking maneuvers, always look out the windows and check with own eyes to be sure that the surrounding and road conditions are safe for the maneuvers before operating the vehicle. Operate the vehicle slowly during the parking maneuvers. If the vehicle gets close to people or objects near the vehicle, avoid making contact by using the brakes and other maneuvers.
- Do not touch the spoke of the steering wheel while the around view monitor with Park Assist is operating. It could cause injuries to hands or fingers. Keep neckties, scarves, etc. away from the steering wheel since they may get entangled and cause unexpected accidents.
- Do not drive looking only at the screen. It could cause unexpected accidents or cause the vehicle to contact surrounding objects.
- When assistance from the around view monitor with Park Assist is no longer necessary, turn off the system by touching the "Cancel" button on the screen. If the around view monitor with Park Assist remains on, the steering wheel may operate automatically and may cause unexpected accidents.
- Make sure that there is enough space for parking maneuvers before starting to use the around view monitor with Park Assist.
- Keep in mind that the front of the vehicle may swing out towards oncoming traffic while the around view monitor with Park Assist.
- Do not use the around view monitor with Park Assist under the following conditions.
 - On unpaved roads.
 - On slippery roads like snow-covered or frozen roads.
 - On uneven roads with slants, bumps, curbstones, wheel tracks, etc.
 - On curved roads.
 - At mechanical parking facilities.
 - Where parking or stopping is prohibited.
 - When tire chains or a spare tire are installed.
 - When the vehicle is being towed.
 - When the doors (including the back door) are not closed.
 - When transporting a load that protrudes from own vehicle.
 - When the vehicle is laden with heavy loads.

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DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

CONSULT Function

INFOID:000000010752972

CONSULT FUNCTIONS

CONSULT performs the following functions via the CAN communication with the around view monitor control unit.

Diagnosis mode	Description
ECU Identification	Around view monitor control unit part number can be identified.
Self Diagnostic Results	Around view monitor control unit diagnosis is performed. Current and previous malfunctions are displayed collectively.
Data Monitor	Diagnosis of vehicle signal that is received by around view monitor control unit can be performed.
Work Support	<ul style="list-style-type: none">• Calibration and initialization of each camera can be performed.• Fine tuning of Birds-eye view can be performed.• Target line calibration of rear wide view can be performed.• Language of warning message can be selected.• Display of predicted course line can be switched to ON/OFF.• Neutral position adjustment of steering angle sensor can be performed.• Camera screen activation enhancing display can be switched to ON/OFF.• Calibration for BSW can be performed.• Displays causes of system cancellation occurred during system control.
Active Test	Enables an operational check of a load by transmitting a driving signal from the around view monitor control unit to the load.
Configuration	<ul style="list-style-type: none">• The vehicle specification that is written in around view monitor control unit can be displayed or stored.• The vehicle specification can be written when around view monitor control unit is replaced.

ECU IDENTIFICATION

Around view monitor control unit part number can be identified.

SELF DIAGNOSIS RESULT

- Refer to [DAS-324, "DTC Index"](#).
- In CONSULT self-diagnosis, self-diagnosis results and error history are displayed collectively.
- The current malfunction indicates "CRNT". The past malfunction indicates "PAST".
- The timing is displayed as "0" if any of the error codes [U1000] and [U1010] is detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Freeze Frame Data (FFD)

The following vehicle status is recorded when DTC is detected and is displayed on CONSULT.

Item name	Display content
ODO/TRIP METER (km)	Total driving distance (odometer value) upon DTC detection 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.

- Displays the status of the following vehicle signals inputted into the around view monitor control unit.
- For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Remarks
ST ANGLE SENSOR SIGNAL [ON/OFF]	Receiving status of steering angle signal received from steering angle sensor is switched to ON/OFF.
REVERSE SIGNAL [ON/OFF]	Receiving status of reverse signal received from NAVI control unit is displayed by ON/OFF.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Display Item	Remarks
VEHICLE SPEED SIGNAL [ON/OFF]	Receiving status of vehicle speed signal received from ABS actuator and electric unit (control unit) is displayed by ON/OFF.
CAMERA SWITCH SIGNAL [ON/OFF]	Receiving status of camera switch signal received from NAVI control unit is displayed by ON/OFF.
CAMERA OFF SIGNAL [ON/OFF]	Receiving status of camera OFF signal received from NAVI control unit is displayed by ON/OFF.
ST ANGLE SENSOR TYPE [Absolute]	Input type of steering angle sensor is displayed. NOTE: For this vehicle, "Absolute" is displayed.
STEERING GEAR RATIO TYPE [TYPE 0]	Type of steering gear ratio is displayed. NOTE: For this vehicle, "TYPE 0" is displayed.
STEERING POSITION [RHD/LHD]	Steering position is displayed.
REAR CAMERA IMAGE SIGNAL [OK/NG]	Input status of rear camera image signal is displayed by OK/NG in real time.
WASH SW [OFF]	Indicates [On/Off] status of the washer switch signal input. NOTE: For this vehicle, "OFF" is displayed.
R-CAMERA COMM STATUS [OK/NG]	Communication status with rear camera is displayed by OK/NG in real time.
R-CAMERA COMM LINE [OK/NG]	Status of communication line with rear camera is displayed by OK/NG in real time.
F-CAMERA IMAGE SIGNAL [OK/NG]	Input status of front view camera image signal is displayed by OK/NG in real time.
DR-SIDE CAMERA IMAGE SIG [OK/NG]	<ul style="list-style-type: none"> Input status of side camera LH image signal is displayed by OK/NG in real time. (LHD models) Input status of side camera RH image signal is displayed by OK/NG in real time. (RHD models)
PA-SIDE CAMERA IMAGE SIG [OK/NG]	<ul style="list-style-type: none"> Input status of side camera RH image signal is displayed by OK/NG in real time. (LHD models) Input status of side camera LH image signal is displayed by OK/NG in real time. (RHD models)
PUMP COMM STATUS [OK/NG]	Communication status with pump control unit is displayed by OK/NG in real time.
ILL [ON/OFF]	Receiving status of dimmer signal received from BCM is displayed by ON/OFF.
ITS SW 1 [ON/OFF]	Indicates the state of the warning systems switch as seen by the around view monitor control unit.
ITS SW 1 IND [OFF]	Indicates the state of the warning systems switch indicator output. NOTE: For this vehicle, "OFF" is displayed.
TURN SIGNAL [OFF/LEFT/RIGHT]	Indicates [OFF/LEFT/RIGHT] status of the turn signal input.
ITS SW 2 [NO SET]	Indicates the status of warning systems switch as seen by the around view monitor control unit. NOTE: For this vehicle, "NO SET" is displayed.
ITS SW 2 IND [NO SET]	Indicates the status of warning systems switch indicator output. NOTE: For this vehicle, "NO SET" is displayed.
VEHICLE SPEED [km/h]	Vehicle speed from the ABS actuator and electric unit (control unit) is displayed.
IDLE STOP STATUS [ON/OFF]	The stop/start status received from ECM is displayed. NOTE: For this vehicle, "OFF" is displayed.

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DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Display Item	Remarks
TRAILER HITCH SW [ON/OFF]	The towed vehicle connection status is displayed.
STEERING ANGLE [°]	Steering angle received from steering angle sensor is displayed.

WORK SUPPORT

Display Item	Remarks
NON-VIEWABLE AREA REMINDER	ON/OFF setting of the non-viewable area reminder can be performed.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	The position of rear wide view guiding line can be changed.
PREDICTIVE COURSE LINE DIS- PLAY	ON/OFF setting of predictive course line can be performed.
INITIALIZE CAMERA IMAGE CALI- BRATION	The calibration can be initialized to factory shipment condition. NOTE: Calibration of camera image caused by misalignment of the camera installation position is per- formed.
STEERING ANGLE SENSOR AD- JUSTMENT	Steering angle sensor neutral position can be adjusted and registered. CAUTION: For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS ac- tuator control unit side. Refer to BRC-99, "Work Procedure".
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs the calibration of front camera. NOTE: Calibration of camera image caused by misalignment of the camera installation position is per- formed.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	<ul style="list-style-type: none"> Performs the calibration of side camera RH. (LHD models) Performs the calibration of side camera LH. (RHD models) NOTE: Calibration of camera image caused by misalignment of the camera installation position is per- formed.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	<ul style="list-style-type: none"> Performs the calibration of side camera LH. (LHD models) Performs the calibration of side camera RH. (RHD models) NOTE: Calibration of camera image caused by misalignment of the camera installation position is per- formed.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs the calibration of rear camera. NOTE: Calibration of camera image caused by misalignment of the camera installation position is per- formed.
FINE TUNING OF BIRDS-EYE VIEW	The confirmation and adjustment of the difference between each camera can be performed. The fine adjustment function of camera calibration can check and adjust the difference be- tween each camera.
SELECT LANGUAGE OF WARNING MESSAGE	Language of warning message shown during camera image display can be selected. [ENGLISH, SPANISH, FRENCH, DUTCH, GERMAN, ITALIAN, PORTUGAL, RUSSIAN, JAP- ANESE, CHINESE 1 (TRADITIONAL), CHINESE 2 (SIMPLIFIED), KOREAN]
REAR CAMERA ITS	Calibration for BSW can be performed.
CAUSE OF LDW CANCEL	NOTE: The item is displayed, but it is not used.
CAUSE OF BSW CANCEL	Displays causes of automatic system cancellation occurred during control of the BSW system.
CAUSE OF IPA CANCEL	Displays causes of automatic system cancellation occurred during control of the around view monitor with Park Assist system.

NOTE:

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

Display Items for The Cause of BSW Cancel

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Cause of cancellation	Description
REAR CAMERA DIRTY	Rear camera lens is dirty.
TRUNK OPEN	Back door is open.
TRAILER HITCH ON	Towing (by attaching a trailer).
R CAMERA COMM ERR	Communication error between around view monitor control unit and rear camera.
LOW WASH FLUID	Washer fluid level is low.
LO TMP(AIR WIPING)	Ambient temperature drops to -20 °C (-4 °F) or less.
LO TMP(WSH WIPING)	Washer fluid temperature drops to -20 °C (-4 °F) or less.
CAMERA ANGLE ERROR	Improper installation of rear camera.
PUMP C/U COMM ERROR	Communication error between around view monitor control unit and pump control unit.
CAMERA IMAGE ERROR	Camera image signal is malfunction.
NO RECORD	—

Display Items for The Cause of Around View Monitor with Park Assist Cancel

NOTE:

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

Cause of cancellation	Description
STRG SEN CIRCUIT	A malfunction is detected in steering angle sensor.
TRUNK OPEN	Back door is open.
Vehicle towed	A towing vehicle is connected.
VDC CIRCUIT	VDC detects a malfunction.
VHCL SPD UNMATCH	A malfunction is detected in vehicle speed signal.
SONAR CIRCUIT	A sonar control unit malfunction has occurred.
CAN COMM ERROR	The CAN communication signals needed by the Around view monitor control unit cannot be received.
BCM CIRCUIT	BCM detects a malfunction.
ESP CIRCUIT	EPS control unit detects a malfunction.
CVT CIRCUIT	TCM detects a malfunction.
ECM CIRCUIT	ECM detects a malfunction.
DOOR OPEN	A door is open.
VDC OFF	VDC OFF switch is pressed.
SHIFT POSITION	A shift position other than the specified position is detected.
NO RECORD	—

ACTIVE TEST

CAUTION:

- **Never perform “Active Test” while driving the vehicle.**
- **The “Active Test” cannot be performed when the following systems malfunction is displayed.**
- LDW
- BSW
- **Shift the selector lever to “P” position, and then perform the test.**

Test items	Description
LED LH INDICATOR	BSW indicator LH can be illuminated by ON/OFF operations as necessary.
LED RH INDICATOR	BSW indicator RH can be illuminated by ON/OFF operations as necessary.
WASH ACTIVE	Camera washer can be operated by ON/OFF operations as necessary.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

[PARK ASSIST]

< SYSTEM DESCRIPTION >

Test items	Description
AIR ACTIVE	Camera blower can be operated by ON/OFF operations as necessary.
AIR & WASH ACTIVE	Camera blower and washer can be operated by ON/OFF operations as necessary.

LED LH INDICATOR

Test item	Operation	Description	BSW indicator LH
LED LH INDICATOR	Off	Stops transmitting the BSW indicator LH signal below to end the test	OFF
	On	Transmits the BSW indicator LH signal to the BSW indicator	ON

LED RH INDICATOR

Test item	Operation	Description	BSW indicator RH
LED RH INDICATOR	Off	Stops transmitting the BSW indicator RH signal below to end the test	OFF
	On	Transmits the BSW indicator RH signal to the BSW indicator	ON

WASH ACTIVE

Test item	Operation	Description	Rear camera washer
WASH ACTIVE	Off	Stops transmitting the rear camera washer signal below to end the test	OFF
	On	Transmits the rear camera washer signal to the pump control unit via communication line	ON

NOTE:

The test can be performed only when the trunk lid is closed. (Trunk room lamp switch is OFF.)

AIR ACTIVE

Test item	Operation	Description	Rear camera air blower
AIR ACTIVE	Off	Stops transmitting the rear camera air blow signal below to end the test	OFF
	On	Transmits the rear camera air blow signal to the pump control unit via communication line	ON

NOTE:

The test can be performed only when the trunk lid is closed. (Trunk room lamp switch is OFF.)

AIR & WASHER ACTIVE

Test item	Operation	Description	Rear camera air blower and washer
AIR & WASHER ACTIVE	Off	Stops transmitting the rear camera air blow / washer signal below to end the test	OFF
	On	Transmits the rear camera air blow / washer signal to the pump control unit via communication line	ON

NOTE:

The test can be performed only when the trunk lid is closed. (Trunk room lamp switch is OFF.)

CONFIGURATION

Configuration includes functions as follows.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Function		Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in around view monitor control unit to store the specification in CONSULT.
	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the around view monitor control unit.
Manual Configuration		Allows the writing of the vehicle specification into the around view monitor control unit by hand.

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DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

CONSULT Function

INFOID:0000000011025229

APPLICATION ITEMS

CONSULT can display each diagnostic item using the diagnostic test modes shown as follows:

Test mode	Function
Ecu Identification	Sonar control unit part number can be read.
Self Diagnostic Results	Sonar control unit checks the conditions and displays memorized error.
Data Monitor	Sonar control unit input/output data in real time.
Active Test	Gives a drive signal to a load to check the operation.
Work support	Changes setting of each function.
Configuration	<ul style="list-style-type: none">Read and save the vehicle specification.Write the vehicle specification when replacing sonar control unit.

ECU IDENTIFICATION

Displays the part number of the sonar control unit.

SELF-DIAGNOSTIC RESULTS

For details, refer to [SN-28, "DTC Index"](#).

Freeze Frame Data (FFD)

The following vehicle status is recorded when DTC is detected and is displayed on CONSULT.

Item name	Display content
ODO/TRIP METER (km)	Total driving distance (odometer value) upon DTC detection is displayed.
IGN counter (0 ~ 39)	<p>Numerical value is displayed indicating the number of times that ignition switch is turned ON after the DTC is detected.</p> <ul style="list-style-type: none">When "0" is displayed, it indicates that the system is presently malfunctioning.When any numerical number other than "0" is displayed, it indicates that system malfunction in the past is detected, but the system is presently normal. <p>NOTE: Each time when ignition switch turns OFF→ON, numerical number increases from 1→2→3...38→39. When number of times exceeds 39, numeric display does not increase and 39 is displayed until self-diagnosis is erased.</p>

DATA MONITOR

NOTE:

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

Monitor Item	Display/ UNIT	Description
VEHICLE SPEED	km/h	Value of vehicle speed signal.
SONAR C/U POWER SUPPLY	V	Value of battery voltage (Ignition signal)
SENSOR VOLTAGE	V	Value of sensor voltage
DETECTION MODE	MODE1/ MODE2	NOTE: This item is displayed, but cannot be monitored.
SW OPRT AFTER IGN ON	Yes/No	Temporary/permanent OFF operation by the user after turning ON the ignition switch.

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Monitor Item	Display/ UNIT	Description
SONAR TEMPORARY OFF	Yes/No	Sonar system is in temporary OFF state. NOTE: The user can set temporary OFF by canceling the sonar indicator displayed on the combination meter.
SONAR PERMANENT OFF	Yes/No	Sonar system is in permanent OFF state. NOTE: The user can set permanent OFF on the settings screen of the combination meter.
P N RANGE	On/Off	Status of shift position
LED	On/Off	NOTE: This item is displayed, but cannot be monitored.
TRAILER CONNECT	On/Off	NOTE: This item is displayed, but cannot be monitored.
REVERSE RANGE	On/Off	Status of shift position
SHRT DST FRM RR SENS	cm	Display the closest approach detection distance that rear sensor detects.
SHRT DST FRM FR SENS	cm	Display the closest approach detection distance that front sensor detects.
COR[RL]	cm	Distance according to oscillation from corner sensor rear LH and detection by corner sensor rear LH.
COR[RL]->CEN[RL]/CEN[R]	cm	Distance according to oscillation from corner sensor rear LH and detection by center sensor rear LH.
CEN[RL]/CEN[R]->COR[RL]	cm	Distance according to oscillation from center sensor rear LH and detection by corner sensor rear LH.
CEN[RL]/CEN[R]	cm	Distance according to oscillation from center sensor rear LH and detection by center sensor rear LH.
CEN[RL]->CEN[RR]	cm	Distance according to oscillation from center sensor rear LH and detection by center sensor rear RH.
CEN[RR]->CEN[RL]	cm	Distance according to oscillation from center sensor rear RH and detection by center sensor rear LH.
CEN[RR]	cm	Distance according to oscillation from center sensor rear RH and detection by center sensor rear RH.
CEN[RR]/CEN[R]->COR[RR]	cm	Distance according to oscillation from center sensor rear RH and detection by corner sensor rear RH.
COR[RR]->CEN[RR]/CEN[R]	cm	Distance according to oscillation from corner sensor rear RH and detection by center sensor rear RH.
COR[RR]	cm	Distance according to oscillation from corner sensor rear RH and detection by corner sensor rear RH.
COR[FL]	cm	Distance according to oscillation from corner sensor front LH and detection by corner sensor front LH.
COR[FL]->CEN[FL]/CEN[F]	cm	Distance according to oscillation from corner sensor front LH and detection by center sensor front LH.
CEN[FL]/CEN[F]->COR[FL]	cm	Distance according to oscillation from center sensor front LH and detection by corner sensor front LH.
CEN[FL]/CEN[F]	cm	Distance according to oscillation from center sensor front LH and detection by center sensor front LH.
CEN[FL]->CEN[FR]	cm	Distance according to oscillation from center sensor front LH and detection by center sensor front RH.
CEN[FR]->CEN[FL]	cm	Distance according to oscillation from center sensor front RH and detection by center sensor front LH.
CEN[FR]	cm	Distance according to oscillation from center sensor front RH and detection by center sensor front RH.

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DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Monitor Item	Display/ UNIT	Description
CEN[FR]/CEN[F]->COR[FR]	cm	Distance according to oscillation from center sensor front RH and detection by corner sensor front RH.
COR[FR]->CEN[FR]/CEN[F]	cm	Distance according to oscillation from corner sensor front RH and detection by center sensor front RH.
COR[FR]	cm	Distance according to oscillation from corner sensor front RH and detection by corner sensor front RH.
RVRB TIME COR[RL]	ms	Reverberating time of corner sensor rear LH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME COR[RR]	ms	Reverberating time of corner sensor rear RH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME CEN[RL]	ms	Reverberating time of center sensor rear LH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME CEN[RR]	ms	Reverberating time of center sensor rear RH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME COR[FL]	ms	Reverberating time of corner sensor front LH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME COR[FR]	ms	Reverberating time of corner sensor front RH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME CEN[FL]	ms	Reverberating time of center sensor front LH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
RVRB TIME CEN[FR]	ms	Reverberating time of center sensor front RH. NOTE: Reverberating time is a period of time while sensor vibrates by super sonic waves after oscillating super sonic waves.
FRONT BUZZER	On/Off	The operating state of buzzer (frontward) is displayed. • On: Buzzer (frontward) operation • Off: Buzzer (frontward) non-operation
REAR BUZZER	On/Off	The operating state of buzzer (backward) is displayed. • On: Buzzer (backward) operation • Off: Buzzer (backward) non-operation
PSM SYSTEM	NORMAL/ ERROR	The state of a parking space measurement system is displayed.
PARKING MODE	PARA/PER	The parking method is displayed. • PARA: Parallel parking • PER: Perpendicular parking
PSM ACTIVATION	On/Off	The operating state of parking space measurement system is displayed.
PARKING DIRECTION	RIGHT/ LEFT	Parking position is displayed.
PARKING START POSITION	NG/OK	Detection of a parking starting position is displayed.
PARKING SPACE DETECT	NON/DE- TECT	The detection state of a parking space is displayed.

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Monitor Item	Display/ UNIT	Description
COR X POSI FOR VEHI- CLE 1	mm	X position of the vehicles next to a parking space is displayed (horizontal axis).
COR Y POSI FOR VEHI- CLE 1	mm	Y position of the vehicles next to a parking space is displayed (vertical axis).
COR X POSI FOR VEHI- CLE 2	mm	X position of the vehicles next to a parking space is displayed (horizontal axis).
COR Y POSI FOR VEHI- CLE 2	mm	Y position of the vehicles next to a parking space is displayed (vertical axis).
ANGLE BETWEEN 2 CORNERS	deg	The angle of the line which connected the angle of the vehicles of parking space neighbors is displayed.
SIDE[FL]	cm	Distance according to oscillation from side sensor front LH and detection by side sensor front LH.
SIDE[FL]->COR[FL]	cm	Distance according to oscillation from side sensor front LH and detection by corner sensor front LH.
COR[FL]->SIDE[FL]	cm	Distance according to oscillation from corner sensor front LH and detection by side sensor front LH.
COR[FR]->SIDE[FR]	cm	Distance according to oscillation from corner sensor front RH and detection by side sensor front RH.
SIDE[FR]->COR[FR]	cm	Distance according to oscillation from side sensor front RH and detection by corner sensor front RH.
SIDE[FR]	cm	Distance according to oscillation from side sensor front RH and detection by side sensor front RH.
SIDE[RL]	cm	NOTE: This item is displayed, but cannot be monitored.
SIDE[RL]->COR[RL]	cm	
COR[RL]->SIDE[RL]	cm	
COR[RR]->SIDE[RR]	cm	
SIDE[RR]->COR[RR]	cm	
SIDE[RR]	cm	
ATTENUATION TIME SIDE[FL]	ms	Attenuation time of side sensor front LH.
ATTENUATION TIME SIDE[FR]	ms	Attenuation time of side sensor front RH.
ATTENUATION TIME SIDE[RL]	ms	NOTE: This item is displayed, but cannot be monitored.
ATTENUATION TIME SIDE[RR]	ms	

ACTIVE TEST

Active test item	Function
FRONT BUZZER	This test is able to check buzzer (frontward) operation.
REAR BUZZER	This test is able to check buzzer (backward) operation.
LED	NOTE: This item is displayed, but cannot be tested

WORK SUPPORT

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PARK ASSIST]

Work support item	Function
VOLUME SETTING	Adjusts the volume of buzzer.
TRAILER HITCH DETECTION RANGE ADJUSTMENT	Adjusts the distance to trailer hitch. NOTE: After adjusting the distance to trailer hitch, the adjustment value automatically turns to 0 after a lapse of 10 seconds or more after turning the ignition switch from OFF to ON if the trailer hitch is not connected to the vehicle.

CONFIGURATION

Configuration has three functions as follows.

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

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

ECU DIAGNOSIS INFORMATION

AROUND VIEW MONITOR CONTROL UNIT

Reference Value

INFOID:0000000010752974

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
ST ANGLE SENSOR SIGNAL	Ignition switch ON	When steering angle sensor signal is input	ON
		Other than the above	OFF
REVERSE SIGNAL	Ignition switch ON	When selector lever is in "R"	ON
		When selector lever is in any position other than "R"	OFF
VEHICLE SPEED SIGNAL	Ignition switch ON	When vehicle speed is input	ON
		Other than the above	OFF
CAMERA SWITCH SIGNAL	Ignition switch ON	When camera switch signal is input	ON
		Other than the above	OFF
CAMERA OFF SIGNAL	Ignition switch ON	When camera OFF signal is input	ON
		Other than the above	OFF
ST ANGLE SENSOR TYPE	Ignition switch ON	—	Absolute
STEERING GEAR RATIO TYPE	Ignition switch ON	—	TYPE 0
STEERING POSITION	Ignition switch ON	LHD models	LHD
		RHD models	RHD
REAR CAMERA IMAGE SIGNAL	Ignition switch ON	When rear camera image signal input status is normal	OK
		When rear camera image signal input status is not normal	NG
WASH SW	Ignition switch ON	—	OFF
R-CAMERA COMM STATUS	Ignition switch ON	When communication status with rear camera is normal	OK
		When communication status with rear camera is not normal	NG
R-CAMERA COMM LINE	Ignition switch ON	When communication line with rear camera is normal	OK
		When communication line with rear camera is not normal	NG
F-CAMERA IMAGE SIGNAL	Ignition switch ON	When front camera image signal input status is normal	OK
		When front camera image signal input status is not normal	NG
DR-SIDE CAMERA IMAGE SIG	Ignition switch ON	When driver side camera image signal input status is normal	OK
		When driver side camera image signal input status is not normal	NG
PA-SIDE CAMERA IMAGE SIG	Ignition switch ON	When passenger side camera image signal input status is normal	OK
		When passenger side camera image signal input status is not normal	NG

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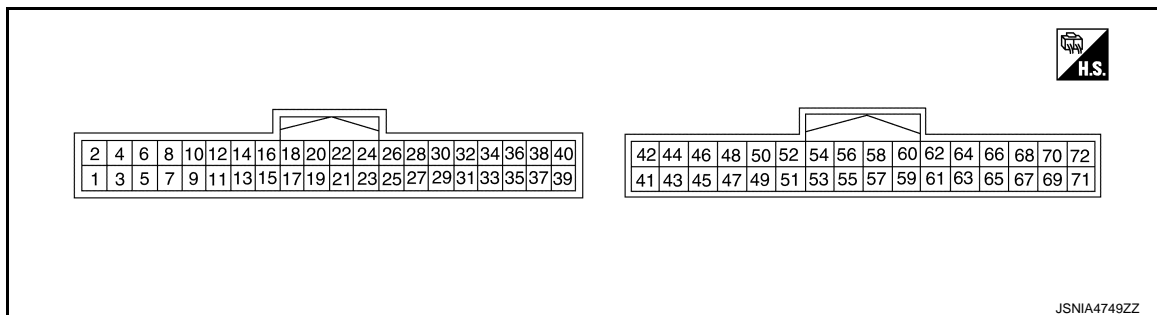
AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Monitor Item	Condition		Value/Status
PUMP COMM STATUS	Ignition switch ON	When communication signal is input	OK
		Other than the above	NG
ILL	Ignition switch ON	When lighting switch is ON	ON
		When lighting switch is OFF	OFF
ITS SW 1	Ignition switch ON	Warning systems switch is ON. (Warning systems ON indicator illuminates.)	ON
		Warning systems switch is OFF. (Warning systems ON indicator OFF.)	OFF
ITS SW 1 IND	Ignition switch ON	—	OFF
TURN SIGNAL	Ignition switch ON	Turn signal RH: ON	RIGHT
		Turn signal LH: ON	LEFT
		Turn signal: OFF	OFF
ITS SW 2	Ignition switch ON	—	NO SET
ITS SW 2 IND	Ignition switch ON	—	NO SET
VEHICLE SPEED	Ignition switch ON		Displays approximately the same speed as the value indicated on the speedometer.
IDLE STOP STATUS	Ignition switch ON	—	OFF
TRAILER HITCH SW	Ignition switch ON	When a towing vehicle is connected	ON
		Other than the above	OFF
STEERING ANGLE	Ignition switch ON		Displays a value that corresponds to the steering angle.

TERMINAL LAYOUT



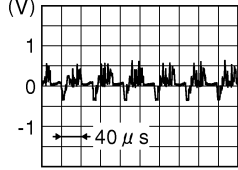
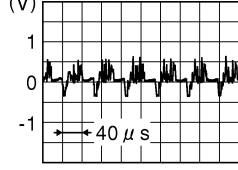
PHYSICAL VALUES

Without BSW

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
2 (Y)	1 (B)	Battery power supply	Input	Ignition switch OFF	—	9.5 - 16 V	Battery voltage
4 (SB)	1 (B)	Ignition signal	Input	Ignition switch ON	—	9.5 - 16 V	Battery voltage
9 (G)	—	Camera switch signal	Input	—	—	—	—
10 (R)	—	CAN-L	Input/ Output	—	—	—	—
12 (L)	—	CAN-H	Input/ Output	—	—	—	—
23	Ground	Camera image signal ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
24 (G)	23	Camera image signal	Output	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. 	
25 (B)	Ground	Rear camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
26 (R)	27	Rear camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. 	
27	Ground	Rear camera image signal (-)	—	Ignition switch ON	—	0 - 0.1 V	0 V
28 (W)	27	Rear camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
29 (Y)	Ground	Driver side camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
30 (L)	29 (Y)	Driver side camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V

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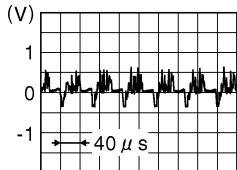
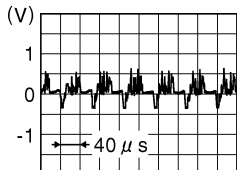
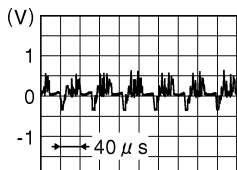
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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

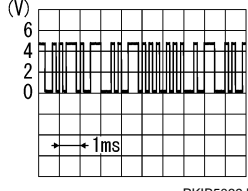
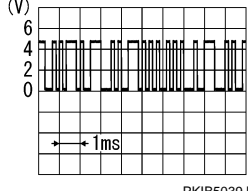
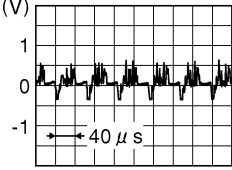
Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
31	Ground	Driver side camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
32 (G)	31	Driver side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  <small>JSNIA0834GB</small>	
33 (L)	Ground	Passenger side camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
34 (B)	33 (L)	Passenger side camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
35	Ground	Passenger side camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
36 (Y)	35	Passenger side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  <small>JSNIA0834GB</small>	
37 (V)	Ground	Front camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
38 (L)	37 (V)	Front camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
39	Ground	Front camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
40 (LG)	39	Front camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  <small>JSNIA0834GB</small>	

With BSW

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	-	Signal name	Input/ Output				
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
2 (Y)	1 (B)	Battery power supply	Input	Ignition switch OFF	—	9.5 - 16 V	Battery voltage
3 (SB)	1 (B)	Ignition signal	Input	Ignition switch ON	—	9.5 - 16 V	Battery voltage
7 (R)	Ground	BSW indicator LH	Output	Ignition switch ON	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check).	5.5 - 16 V	12.0 V
8 (G)	Ground	BSW indicator RH	Output	Ignition switch ON	Approx. 2 sec. after ignition switch OFF ⇒ ON (bulb check)	5.5 - 16 V	12.0 V
27 (L)	—	CAN-H	Input/ Output	—	—	—	—
28 (R)	—	CAN-L	Input/ Output	—	—	—	—
36 (Y)	Ground	Communication sig- nal (CAMERA → PUMP)	Output	Ignition switch ON	—	Input the waveform synchronized with the communication status. 	
37 (V)	Ground	COMM GND	—	Ignition switch ON	—	0 - 0.1 V	0 V
38 (SB)	Ground	Communication sig- nal (PUMP → CAMERA)	Input	Ignition switch ON	—	Input the waveform synchronized with the communication status. 	
47 (G)	48	Camera image signal	Output	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. 	
48	Ground	Camera image signal ground	—	Ignition switch ON	—	0 - 0.1 V	0 V

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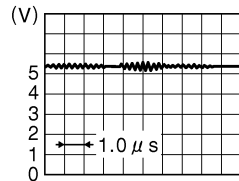
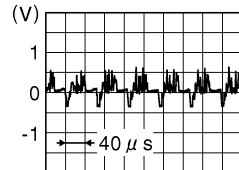
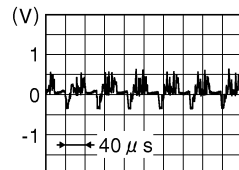
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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

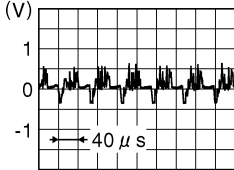
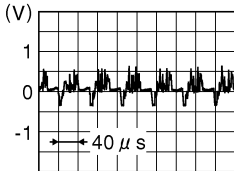
[PARK ASSIST]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
49 (LG)	52 (B)	Rear camera commu- nication signal	Input/ Output	Ignition switch ON	—	Input the waveform synchronized with the communication status. <div></div> JSNIA0836GB	
50 (R)	52 (B)	Rear camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
52 (B)	Ground	Rear camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
53 (W)	54	Rear camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. <div></div> JSNIA0834GB	
54	Ground	Rear camera image signal (-)	—	Ignition switch ON	—	0 - 0.1 V	0 V
56 (L)	58 (Y)	Driver side camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
58 (Y)	Ground	Driver side camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
59 (G)	60	Driver side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal. <div></div> JSNIA0834GB	
60	Ground	Driver side camera image signal (-)	—	Ignition switch ON	—	0 - 0.1 V	0 V
62 (B)	64 (L)	Passenger side cam- era power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
64 (L)	Ground	Passenger side cam- era ground	—	Ignition switch ON	—	0 - 0.1 V	0 V

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Terminal (Wire color)		Description		Condition		Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output				
65 (Y)	66	Passenger side camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  JSNIA0834GB	
66	Ground	Passenger side camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V
68 (L)	70 (V)	Front camera power supply	Output	Ignition switch ON	—	5.0 - 9.0 V	6.0 V
70 (V)	Ground	Front camera ground	—	Ignition switch ON	—	0 - 0.1 V	0 V
71 (LG)	72	Front camera image signal (+)	Input	Ignition switch ON	—	Input the waveform synchronized with the camera image signal.  JSNIA0834GB	
72	Ground	Front camera image signal (—)	—	Ignition switch ON	—	0 - 0.1 V	0 V

Fail-Safe (Around View Monitor Control Unit)

INFOID:000000010752975

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A00 CONTROL UNIT	Around view monitor control unit internal malfunction	Around view monitor with Park Assist is cancel
C1A01 POWER SUPPLY CIRC	<ul style="list-style-type: none"> The battery voltage sent to around view monitor control unit remains less than 7.9 V for 5 seconds The battery voltage sent to around view monitor control unit remains more than 19.3 V for 5 seconds 	Around view monitor with Park Assist is cancel
C1A03 VHCL SPEED SE CIRC	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) received by the around view monitor control unit via CAN communication, are inconsistent	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
C1A04 ABS/TCS/VDC CIRC	If a malfunction occurs in the VDC/TCS/ABS system	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >


[PARK ASSIST]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
C1A07 CVT CIRCUIT	If the CVT is malfunction	Around view monitor with Park Assist is cancel
C1A39 STRG SEN CIR	If the steering angle sensor is malfunction	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel
C1A56 SONAR CIRC	The around view monitor control unit detects that sonar control unit has a malfunction	Around view monitor with Park Assist is cancel
U0122 VDC P-RUN DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
U0416 VDC CHECKSUM DIAGNOSIS	If around view monitor control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication	<ul style="list-style-type: none"> BSW system is cancel DAA system is stopped. MOD (Moving Object Detection) function is cancel Around view monitor with Park Assist is cancel
U0428 ST ANGLE SENSOR CALIBRATION	Neutral position adjustment of steering angle sensor is not complete.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped
U1000 CAN COMM CIRCUIT	When around view monitor control unit cannot transmit/receive CAN communication signal continuously for 2 seconds or more.	<p>The following functions are stopped</p> <ul style="list-style-type: none"> When communication of steering angle sensor signal is not normal <ul style="list-style-type: none"> - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - BSW system is stopped. - DAA system is stopped. When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal <ul style="list-style-type: none"> - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - LDW system is stopped. - BSW system is stopped. - DAA system is stopped. - Around view monitor with Park Assist is stopped
U1010 CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	MOD (Moving Object Detection) function is stopped.
U111A REAR CAMERA IMAGE SIGNAL	<p>No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	<ul style="list-style-type: none"> Camera image is not displayed (Gray screen display). MOD (Moving Object Detection) function is stopped.
U111B SIDE CAMERA RH IMAGE SIGNAL	<p>No-signal status of side camera RH image signal is continued for 500 ms or more while ignition switch is ON.</p> <p>NOTE: Current malfunction is displayed only and is not saved.</p>	Camera image is not displayed (Gray screen display).

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U111C FRONT CAMERA IMAGE SIGNAL	No-signal status of front camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U111D SIDE CAMERA LH IMAGE SIGNAL	No-signal status of side camera LH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U112F EPS CIRCUIT	If the EPS system is malfunction	Around view monitor with Park Assist is cancel
U1232 ST ANGLE SEN CALIB	Neutral position adjustment of steering angle sensor is performed. NG signal from steering angle sensor is received.	<ul style="list-style-type: none"> Predicted course line is not displayed. MOD (Moving Object Detection) function is stopped. BSW system is stopped. DAA system is stopped. Around view monitor with Park Assist is stopped.
U1302 CAMERA POWER VOLT	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. <ul style="list-style-type: none"> When camera power supply output is ON: 5.9 - 6.5 V When OFF: 0 V by camera power supply measurement. 	Camera power output is stopped
U1304 CAMERA IMAGE CALIB	<ul style="list-style-type: none"> When camera calibration is incomplete. When camera information in around view monitor control unit and information read from camera are not the same. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> Unmatched icon  display (red) is displayed (applicable for unmatched camera only). Around view monitor with Park Assist is cancel.
U1305 CONFIG UNFINISH	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.	<ul style="list-style-type: none"> On applicable camera screen  marking (Red) is displayed. Around view monitor with Park Assist is cancel.
U1308 R-CAMERA (R&L) CALIB JDG-MNT	Camera image calibration is incomplete	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped. Around view monitor with Park Assist is stopped.
U1309 PUMP INPUT CURRENT JUDGE	Around view monitor control unit detects the value of current from pump control unit is incorrect	BSW system is stopped.
U130A PUMP ECU JUDGE	If the pump control unit is malfunction	BSW system is stopped.
U130B RR CAMERA COMM ERROR	Around view monitor control unit receives the incorrect communication signal from rear view camera	<ul style="list-style-type: none"> MOD (Moving Object Detection) function is stopped. BSW system is stopped.
U1320 REPROGRAMMING	Reprogramming of around view monitor control unit is incomplete	Around view monitor with Park Assist is cancel
U150E BCM CIRCUIT	If the BCM is malfunction	Around view monitor with Park Assist is cancel

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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U1971 SONAR MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from sonar control unit via CAN communication	Around view monitor with Park Assist is cancelled
U1972 EPS MESSAGE COUNTER DIAG	Around view monitor control unit receives an incorrect signal from EPS control unit via CAN communication	Around view monitor with Park Assist is cancelled
Other	When around view monitor control unit is not normal.	Switch to camera screen is not allowed.

DTC Inspection Priority Chart

INFOID:0000000010752976

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

Priority	Detected items (DTC)
1	U1305: CONFIG UNFINISH
2	U1320: REPROGRAMMING
3	<ul style="list-style-type: none"> U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
4	<ul style="list-style-type: none"> U1232: ST ANGLE SEN CALIB U1304: CAMERA IMAGE CALIB
5	<ul style="list-style-type: none"> U0428: ST ANGLE SENSOR CALIBRATION
6	<ul style="list-style-type: none"> U130B: RR CAMERA COMM ERROR
7	<ul style="list-style-type: none"> U1308: R-CAMERA (R&L) CALIB JDGMNT
8	<ul style="list-style-type: none"> C1A01: POWER SUPPLY VOLTAGE CIRCUIT 1 C1A04: ABS/TCS/VDC CIRC C1A07: CVT SYSTEM C1A39: STRG SEN CIR C1B56: SONAR SYSTEM U0122: VDC P-RUN DIAGNOSIS U0416: VDC CHECKSUM DIAGNOSIS U111A: REAR CAMERA IMAGE SIGNAL U111B: SIDE CAMERA RH IMAGE SIGNAL U111C: FRONT CAMERA IMAGE SIGNAL U111D: SIDE CAMERA LH IMAGE SIGNAL U112F: EPS SYSTEM U1302: CAMERA POWER SUPPLY VOLTAGE U1304: CAMERA CALIBRATION U1309: PUMP INPUT CURRENT JUDGE U130A: PUMP ECU JUDGE U150E: BCM SYSTEM U1971: SONAR MESSAGE COUNTER DIAGNOSIS U1972: EPS MESSAGE COUNTER DIAGNOSIS
9	<ul style="list-style-type: none"> C1A00: CONTROL UNIT C1A03: VHCL SPEED SE CIRC

DTC Index

INFOID:0000000010752977

Fail-safe subject system

- A: Around View Monitor system
- B: MOD (Moving Object Detection)
- C: BSW (Blind Spot Warning)
- D: DAA (Driver Attention Alert)
- E: Around view monitor with Park Assist

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

DTC	Display contents of CONSULT	Fail-safe					Refer to
		System					
		A	B (MOD icon color)	C	D	E	
C1A00	CONTROL UNIT					×	AV-166
C1A01	POWER SUPPLY CIRC					×	AV-167
C1A03	VHCL SPEED SE CIRC		×	×	×	×	AV-168
C1A04	ABS/TCS/VDC CIRC		×	×	×	×	AV-170
C1A07	CVT system					×	AV-171
C1A39	STRG CIRCUIT			×	×		AV-172
C1B56	SONAR CIRC					×	AV-173
U0122	VDC P-RUN DIAGNOSIS		×	×	×	×	AV-174
U0416	VDC CHECKSUM DIAGNOSIS		×	×	×	×	AV-175
U0428	ST ANGLE SENSOR CALIBRATION	×	×	×	×	×	AV-176
U1000 ^{NOTE}	CAN COMM CIRC	×	×	×	×	×	AV-178
U1010	CONTROL UNIT (CAN)	×					AV-180
U111A	REAR CAMERA IMAGE SIGNAL	×					AV-182
U111B	SIDE CAMERA RH IMAGE SIGNAL	×					AV-186
U111C	FRONT CAMERA IMAGE SIGNAL	×					AV-192
U111D	SIDE CAMERA LH IMAGE SIGNAL	×					AV-195
U112F	EPS CIRCUIT					×	AV-201
U1232	ST ANGLE SEN CALIB	×	×	×	×	×	AV-205
U1302	CAMERA POWER VOLT	×					AV-222
U1304	CAMERA IMAGE CALIB	×				×	AV-230
U1305 ^{NOTE}	CONFIG UNFINISH					×	AV-231
U1308	R-CAMERA (R&L) CALIB JDGMNT			×		×	AV-232
U1309	PUMP INPUT CURRENT JUDGE		×	×			AV-233
U130A	PUMP ECU JUDGE		×	×			AV-234
U130B	RR CAMERA COMM ERROR		×	×			AV-235
U1320	REPROGRAMMING					×	AV-237
U150E	BCM CIRCUIT					×	AV-238
U1971	SONAR MESSAGE COUNTER DIAG					×	AV-239
U1972	EPS MESSAGE COUNTER DIAG					×	AV-240

NOTE:

Some systems activate fail-safe when U1000 is detected, and some do not.

- The systems which activate failsafe are those which use the signal from the control unit where communication with the around view monitor control unit is interrupted.
- When U1305 is detected, operates with vehicle settings set to default values.

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

SONAR CONTROL UNIT

Reference Value

INFOID:0000000010924097

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
VEHICLE SPEED	Ignition switch ON	While driving	Input value of vehicle speed signal
SONAR C/U POWER SUPPLY	Ignition switch ON	While driving	Input value of battery voltage
SENSOR VOLTAGE	Ignition switch ON	While driving	Output value of power supply voltage (Approx. 8.0 V)
DETECTION MODE	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	
SW OPRT AFTR IGN ON	Ignition switch ON	Temporary OFF or permanent OFF is set by the user after the ignition switch ON.	Yes
		Other than the above	No
SONAR TEMPORARY OFF	Ignition switch ON	Sonar system is in temporary OFF state.	Yes
		Other than the above	No
SONAR PERMANENT OFF	Ignition switch ON	Sonar system is in permanent OFF state.	Yes
		Other than the above	No
P N RANGE	Ignition switch ON	Shift position: "P" or "N" position	On
		Other than the above	Off
LED	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	
TRAILER CONNECT	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	
REVERSE RANGE	Ignition switch ON	Shift position: "R" position	On
		Other than the above	Off
SHRT DST FRM RR SENS	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.
SHRT DST FRM FR SENS	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.
COR[RL]	Ignition switch ON	When an obstacle is detected by corner sensor rear LH. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]
		When no obstacles exist around corner sensor rear LH.	255 cm (100.39 in)
COR[RL]->CEN[RL]/CEN[R]	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.
CEN[RL]/CEN[R]->COR[RL]	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Monitor Item	Condition		Value/Status	
CEN[RL]/CEN[R]	Ignition switch ON	When an obstacle is detected by center sensor rear LH. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	A
		When no obstacles exist around center sensor rear LH.	255 cm (100.39 in)	B
CEN[RL]->CEN[RR]	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.	C
CEN[RR]->CEN[RL]	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.	D
CEN[RR]	Ignition switch ON	When an obstacle is detected by center sensor rear RH. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	E
		When no obstacles exist around center sensor rear RH.	255 cm (100.39 in)	F
CEN[RR]/CEN[R]->COR[RR]	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.	F
COR[RR]->CEN[RR]/CEN[R]	Ignition switch ON	When obstacles exist around rear bumper.	Distance between rear bumper and obstacle.	G
COR[RR]	Ignition switch ON	When an obstacle is detected by corner sensor rear RH. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	H
		When no obstacles exist around corner sensor rear RH.	255 cm (100.39 in)	I
COR[FL]	Ignition switch ON	When an obstacle is detected by corner sensor front LH. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	J
		When no obstacles exist around corner sensor front LH.	255 cm (100.39 in)	K
COR[FL]->CEN[FL]/CEN[F]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.	L
CEN[FL]/CEN[F]->COR[FL]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.	L
CEN[FL]/CEN[F]	Ignition switch ON	When an obstacle is detected by center sensor front LH. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	M
		When no obstacles exist around center sensor front LH.	255 cm (100.39 in)	N
CEN[FL]->CEN[FR]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.	
CEN[FR]->CEN[FL]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.	DAS
CEN[FR]	Ignition switch ON	When an obstacle is detected by center sensor front RH. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 100 cm (Approx. 10.63 in - 39.73 in)]	P
		When no obstacles exist around center sensor front RH.	255 cm (100.39 in)	
CEN[FR]/CEN[F]->COR[FR]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.	

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Monitor Item	Condition		Value/Status
COR[FR]->CEN[FR]/CEN[F]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.
COR[FR]	Ignition switch ON	When an obstacle is detected by corner sensor front RH. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]
		When no obstacles exist around corner sensor front RH.	255 cm (100.39 in)
RVRB TIME COR[RL]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME COR[RR]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME CEN[RL]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME CEN[RR]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME COR[FL]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME COR[FR]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME CEN[FL]	Ignition switch ON		Approx. 1.5 ms
RVRB TIME CEN[FR]	Ignition switch ON		Approx. 1.5 ms
FRONT BUZZER	When the buzzer (frontward) is operating		On
	Except above		Off
REAR BUZZER	When the buzzer (backward) is operating		On
	Except above		Off
LED	NOTE: This item is displayed, but cannot be monitored.		
PSM SYSTEM	PSM function of park assist is Normal		NORMAL
	PSM function of park assist is Malfunctioning		ERROR
PARKING MODE	Parallel parking		PARA
	Perpendicular parking		PER
PSM ACTIVATION	PSM function of park assist is activated		On
	PSM function of park assist is deactivated		Off
PARKING DIRECTION	Parking the right-hand side.		RIGHT
	Parking the left-hand side.		LEFT
PARKING START POSITION	A parking starting position is reached.		OK
	A parking starting position is not reached.		NG
PARKING SPACE DETECT	The parking space non-detection		NON
	The parking space detection		DETECT
COR X POSI FOR VEHICLE 1	Ignition switch ON		Distance with the vehicles which the sensor detected is displayed. (Horizontal axis)
COR Y POSI FOR VEHICLE 1	Ignition switch ON		Distance with the vehicles which the sensor detected is displayed.(Vertical axis)
COR X POSI FOR VEHICLE 2	Ignition switch ON		Distance with the vehicles which the sensor detected is displayed. (Horizontal axis)
COR Y POSI FOR VEHICLE 2	Ignition switch ON		Distance with the vehicles which the sensor detected is displayed.(Vertical axis)

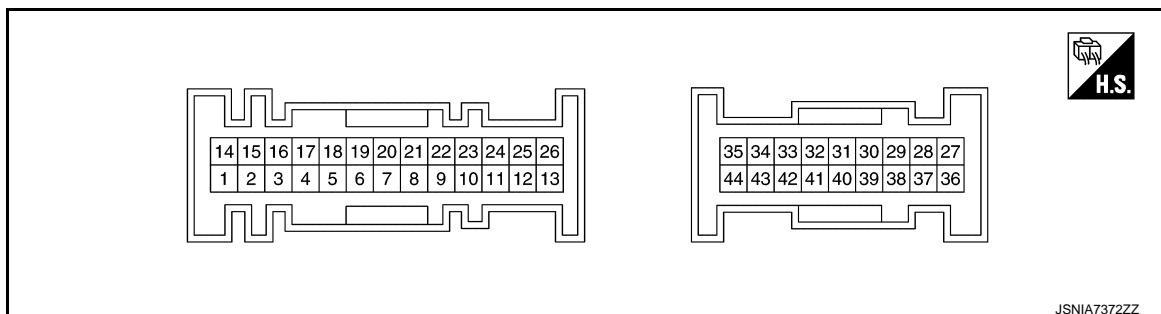
SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Monitor Item	Condition		Value/Status
ANGLE BETWEEN 2 CORNERS	Ignition switch ON		The angle by the position of the vehicles which the sensor detected is displayed.
SIDE[FL]	Ignition switch ON	When an obstacle is detected by side sensor front LH. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]
		When no obstacles exist around side sensor front LH.	255 cm (100.39 in)
SIDE[FL]->COR[FL]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.
COR[FL]->SIDE[FL]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.
COR[FR]->SIDE[FR]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.
SIDE[FR]->COR[FR]	Ignition switch ON	When obstacles exist around front bumper.	Distance between front bumper and obstacle.
SIDE[FR]	Ignition switch ON	When an obstacle is detected by side sensor front RH. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]	Distance between sensor and obstacle. [Approx. 27 cm - 70 cm (Approx. 10.63 in - 27.56 in)]
		When no obstacles exist around side sensor front RH.	255 cm (100.39 in)
SIDE[RL]	NOTE: This item is displayed, but cannot be monitored.		
SIDE[RL]->COR[RL]	NOTE: This item is displayed, but cannot be monitored.		
COR[RL]->SIDE[RL]	NOTE: This item is displayed, but cannot be monitored.		
COR[RR]->SIDE[RR]	NOTE: This item is displayed, but cannot be monitored.		
SIDE[RR]->COR[RR]	NOTE: This item is displayed, but cannot be monitored.		
SIDE[RR]	NOTE: This item is displayed, but cannot be monitored.		
ATTENUATION TIME SIDE[FL]	Ignition switch ON		0.01 - 2.55 ms
ATTENUATION TIME SIDE[FR]	Ignition switch ON		0.01 - 2.55 ms
ATTENUATION TIME SIDE[RL]	NOTE: This item is displayed, but cannot be monitored.		
ATTENUATION TIME SIDE[RR]	NOTE: This item is displayed, but cannot be monitored.		

TERMINAL LAYOUT

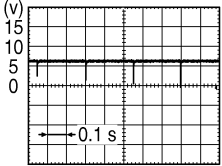
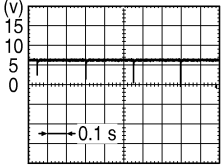
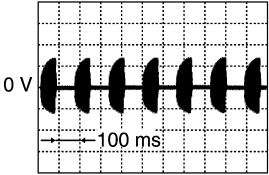
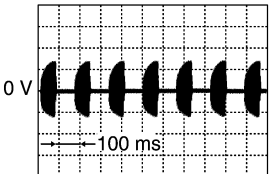


SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

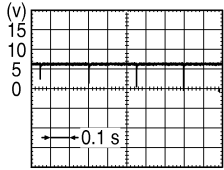
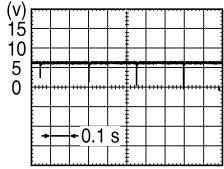
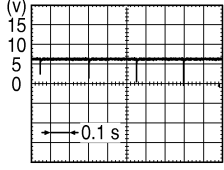
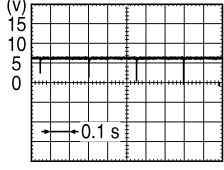
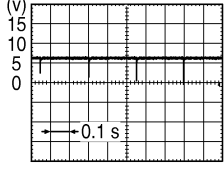
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Standard	Reference value (Approx.)
+	—	Signal name	Input/ Output			
2 (Y)	13 (B)	Front buzzer power supply	Output	[Ignition switch ON]	—	0 V
6 (R)	22 (P)	Corner sensor signal rear LH	Input	[Ignition switch ON] Shift position is in R position.	Waveform according to sensor signal is input	 SKIB8942E
7 (V)	22 (P)	Center sensor signal rear RH	Input	[Ignition switch ON] Shift position is in R position.	Waveform according to sensor signal is input	 SKIB8942E
9 (G)	13 (B)	Rear buzzer drive signal	Input	[Ignition switch ON] When the distance between the sensor and obstacle is approx 60 cm (23.62 in).	—	NOTE: <ul style="list-style-type: none"> Voltage depends on volume. Cycle depends on distance between sensor and obstacle.  JSNIA5232GB
10 (SB)	13 (B)	Front buzzer drive signal	Input	[Ignition switch ON] When the distance between the sensor and obstacle is approx 60 cm (23.62 in).	—	NOTE: <ul style="list-style-type: none"> Voltage depends on volume. Cycle depends on distance between sensor and obstacle.  JSNIA5232GB
13 (B)	Ground	Ground	—	—	—	0 V
14 (BR)	13 (B)	Ignition power supply	Input	—	9.0 - 16.0 V	Battery voltage
15 (Y)	13 (B)	Rear buzzer power supply	Output	[Ignition switch ON]	—	0 V
16 (V)	Ground	Sonar system switch signal	Input	[Ignition switch ON] While pressing the sonar system switch.	2.0 V	2.0 V
				Other than above.	12.0 V	12.0 V

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Terminal (Wire color)		Description		Condition	Standard	Reference value (Approx.)
+	-	Signal name	Input/ Output			
17 (SB)	Ground	Sonar system switch indicator signal	Output	[Ignition switch ON] Sonar system switch indi- cator lamp is ON.	12.0 V	12.0 V
				[Ignition switch ON] Sonar system switch indi- cator lamp is OFF.	0 V	0 V
18 (SB)	22 (P)	Rear sensor power supply	Output	—	—	8.0 V
20 (G)	22 (P)	Center sensor sig- nal rear LH	Input	[Ignition switch ON] Shift position is in R posi- tion.	Waveform ac- cording to sen- sor signal is input	 SKIB8942E
21 (LG)	22 (P)	Corner sensor sig- nal rear RH	Input	[Ignition switch ON] Shift position is in R posi- tion.	Waveform ac- cording to sen- sor signal is input	 SKIB8942E
22 (P)	Ground	Rear sensor ground	—	—	—	0 V
23 (P)	—	CAN-L	Input/ Output	—	—	—
24 (L)	—	CAN-H	Input/ Output	—	—	—
28 (BR)	36 (P)	Side sensor signal front LH	Input	[Ignition switch ON] Shift position is in D posi- tion.	Waveform ac- cording to sen- sor signal is input	 SKIB8942E
29 (G)	36 (P)	Center sensor sig- nal front LH	Input	[Ignition switch ON] Shift position is in D posi- tion.	Waveform ac- cording to sen- sor signal is input	 SKIB8942E
30 (V)	36 (P)	Corner sensor sig- nal front RH	Input	[Ignition switch ON] Shift position is in D posi- tion.	Waveform ac- cording to sen- sor signal is input	 SKIB8942E

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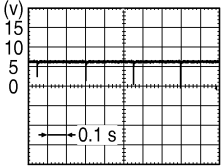
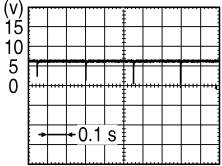
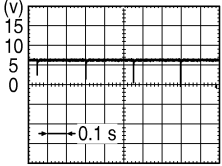
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SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Terminal (Wire color)		Description		Condition	Standard	Reference value (Approx.)
+	—	Signal name	Input/ Output			
36 (P)	Ground	Front sensor ground	—	—	—	0 V
37 (W)	36 (P)	Corner sensor signal front LH	Input	[Ignition switch ON] Shift position is in D position.	Waveform according to sensor signal is input	 SKIB8942E
38 (LG)	36 (P)	Center sensor signal front RH	Input	[Ignition switch ON] Shift position is in D position.	Waveform according to sensor signal is input	 SKIB8942E
39 (R)	36 (P)	Side sensor signal front RH	Input	[Ignition switch ON] Shift position is in D position.	Waveform according to sensor signal is input	 SKIB8942E
40 (SB)	36 (P)	Front sensor power supply	Output	—	—	8.0 V

Fail-Safe (Sonar Control Unit)

INFOID:0000000010924098

The sonar control unit controls as follows if it detects a malfunction in the sonar sensor:

- Obstacle detection function is stopped.
- Alarm display is displayed on the information display of combination meter.
- Parking Assist in parallel mode is stopped.

DTC Inspection Priority Chart

INFOID:0000000010924099

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

Priority	Detected items (DTC)
1	<ul style="list-style-type: none"> • U1000-01: CAN COMM CIRCUIT • U1010-49: CONTROL UNIT (CAN)

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

Priority	Detected items (DTC)	
2	B2724-55: SONAR CONTROL UNIT	A
3	<ul style="list-style-type: none"> • B2720-12: CORNER SENSOR [RL] • B2720-14: CORNER SENSOR [RL] • B2720-55: CORNER SENSOR [RL] • B2720-92: CORNER SENSOR [RL] • B2721-12: CENTER SENSOR [RL] • B2721-14: CENTER SENSOR [RL] • B2721-55: CENTER SENSOR [RL] • B2721-92: CENTER SENSOR [RL] • B2722-12: CENTER SENSOR [RR] • B2722-14: CENTER SENSOR [RR] • B2722-55: CENTER SENSOR [RR] • B2722-92: CENTER SENSOR [RR] • B2723-12: CORNER SENSOR [RR] • B2723-14: CORNER SENSOR [RR] • B2723-55: CORNER SENSOR [RR] • B2723-92: CORNER SENSOR [RR] • B2725-12: REAR BUZZER • B2725-14: REAR BUZZER • B2728-11: LED • B2728-12: LED • B2728-14: LED • B2729-12: CORNER SENSOR [FL] • B2729-14: CORNER SENSOR [FL] • B2729-55: CORNER SENSOR [FL] • B2729-92: CORNER SENSOR [FL] • B272A-12: CENTER SENSOR [FL] • B272A-14: CENTER SENSOR [FL] • B272A-55: CENTER SENSOR [FL] • B272A-92: CENTER SENSOR [FL] • B272B-12: CENTER SENSOR [FR] • B272B-14: CENTER SENSOR [FR] • B272B-55: CENTER SENSOR [FR] • B272B-92: CENTER SENSOR [FR] • B272C-12: CORNER SENSOR [FR] • B272C-14: CORNER SENSOR [FR] • B272C-55: CORNER SENSOR [FR] • B272C-92: CORNER SENSOR [FR] • B272D-12: FRONT BUZZER • B272D-14: FRONT BUZZER • B272E-12: SIDE SENSOR [FL] • B272E-14: SIDE SENSOR [FL] • B272E-55: SIDE SENSOR [FL] • B272E-92: SIDE SENSOR [FL] • B272F-12: SIDE SENSOR [FR] • B272F-14: SIDE SENSOR [FR] • B272F-55: SIDE SENSOR [FR] • B272F-92: SIDE SENSOR [FR] 	B C D E F G H I J K L M N

DTC Index

INFOID:0000000010924100

×: Applicable

DTC	Display item	Reference
U1000-01	CAN COMM CIRCUIT	SN-231, "DTC Description"
U1010-49	CONTROL UNIT (CAN)	SN-232, "DTC Description"
B2720-12	CORNER SENSOR [RL]	SHORT-BAT SN-158, "DTC Description"
B2720-14		OPEN/SHORT-GND SN-160, "DTC Description"
B2720-55		CONFIG ERROR SN-162, "DTC Description"
B2720-92		SENSOR SN-163, "DTC Description"

DAS

P

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PARK ASSIST]

DTC	Display item		Reference
B2721-12	CENTER SENSOR [RL]	SHORT-BAT	SN-164, "DTC Description"
B2721-14		OPEN/SHORT-GND	SN-166, "DTC Description"
B2721-55		CONFIG ERROR	SN-168, "DTC Description"
B2721-92		SENSOR	SN-169, "DTC Description"
B2722-12	CENTER SENSOR [RR]	SHORT-BAT	SN-170, "DTC Description"
B2722-14		OPEN/SHORT-GND	SN-172, "DTC Description"
B2722-55		CONFIG ERROR	SN-174, "DTC Description"
B2722-92		SENSOR	SN-175, "DTC Description"
B2723-12	CORNER SENSOR [RR]	SHORT-BAT	SN-176, "DTC Description"
B2723-14		OPEN/SHORT-GND	SN-178, "DTC Description"
B2723-55		CONFIG ERROR	SN-180, "DTC Description"
B2723-92		SENSOR	SN-181, "DTC Description"
B2724-55	SONAR CONTROL UNIT	CONFIG ERROR	SN-182, "DTC Description"
B2725-12	REAR BUZZER	SHORT-BAT	SN-183, "DTC Description"
B2725-14		OPEN/SHORT-GND	SN-185, "DTC Description"
B2728-11	LED	SHORT-GND	SN-187, "DTC Description"
B2728-12		SHORT-BAT	SN-188, "DTC Description"
B2728-14		OPEN/SHORT-GND	SN-189, "DTC Description"
B2729-12	CORNER SENSOR [FL]	SHORT-BAT	SN-191, "DTC Description"
B2729-14		OPEN/SHORT-GND	SN-193, "DTC Description"
B2729-55		CONFIG ERROR	SN-195, "DTC Description"
B2729-92		SENSOR	SN-196, "DTC Description"
B272A-12	CENTER SENSOR [FL]	SHORT-BAT	SN-197, "DTC Description"
B272A-14		OPEN/SHORT-GND	SN-199, "DTC Description"
B272A-55		CONFIG ERROR	SN-201, "DTC Description"
B272A-92		SENSOR	SN-202, "DTC Description"
B272B-12	CENTER SENSOR [FR]	SHORT-BAT	SN-203, "DTC Description"
B272B-14		OPEN/SHORT-GND	SN-205, "DTC Description"
B272B-55		CONFIG ERROR	SN-207, "DTC Description"
B272B-92		SENSOR	SN-208, "DTC Description"
B272C-12	CORNER SENSOR [FR]	SHORT-BAT	SN-209, "DTC Description"
B272C-14		OPEN/SHORT-GND	SN-211, "DTC Description"
B272C-55		CONFIG ERROR	SN-213, "DTC Description"
B272C-92		SENSOR	SN-214, "DTC Description"
B272D-12	FRONT BUZZER	SHORT-BAT	SN-215, "DTC Description"
B272D-14		OPEN/SHORT-GND	SN-217, "DTC Description"
B272E-12	SIDE SENSOR [FL]	SHORT-BAT	SN-219, "DTC Description"
B272E-14		OPEN/SHORT-GND	SN-221, "DTC Description"
B272E-55		CONFIG ERROR	SN-223, "DTC Description"
B272E-92		SENSOR	SN-224, "DTC Description"
B272F-12	SIDE SENSOR [FR]	SHORT-BAT	SN-225, "DTC Description"
B272F-14		OPEN/SHORT-GND	SN-227, "DTC Description"
B272F-55		CONFIG ERROR	SN-229, "DTC Description"
B272F-92		SENSOR	SN-230, "DTC Description"

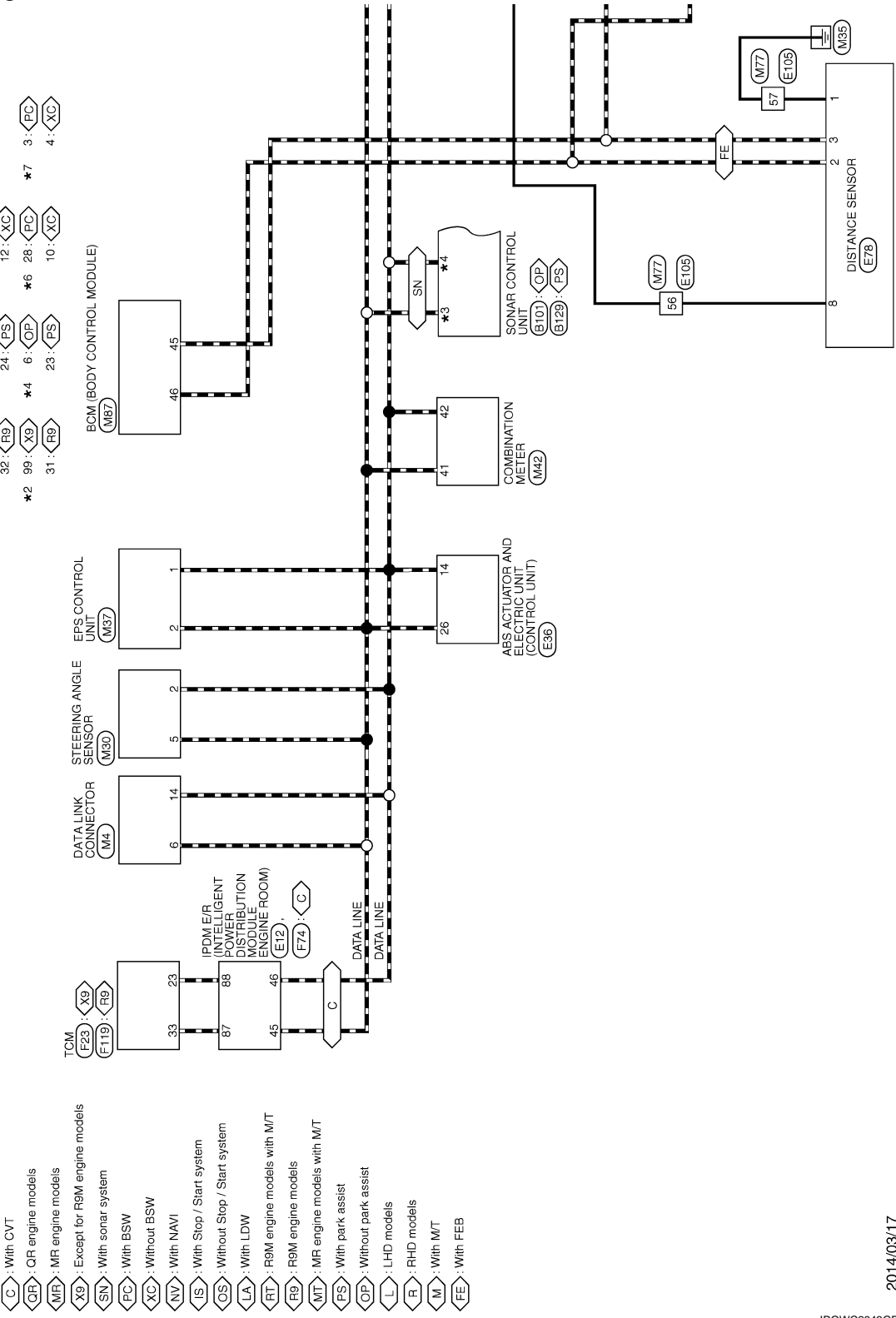
WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

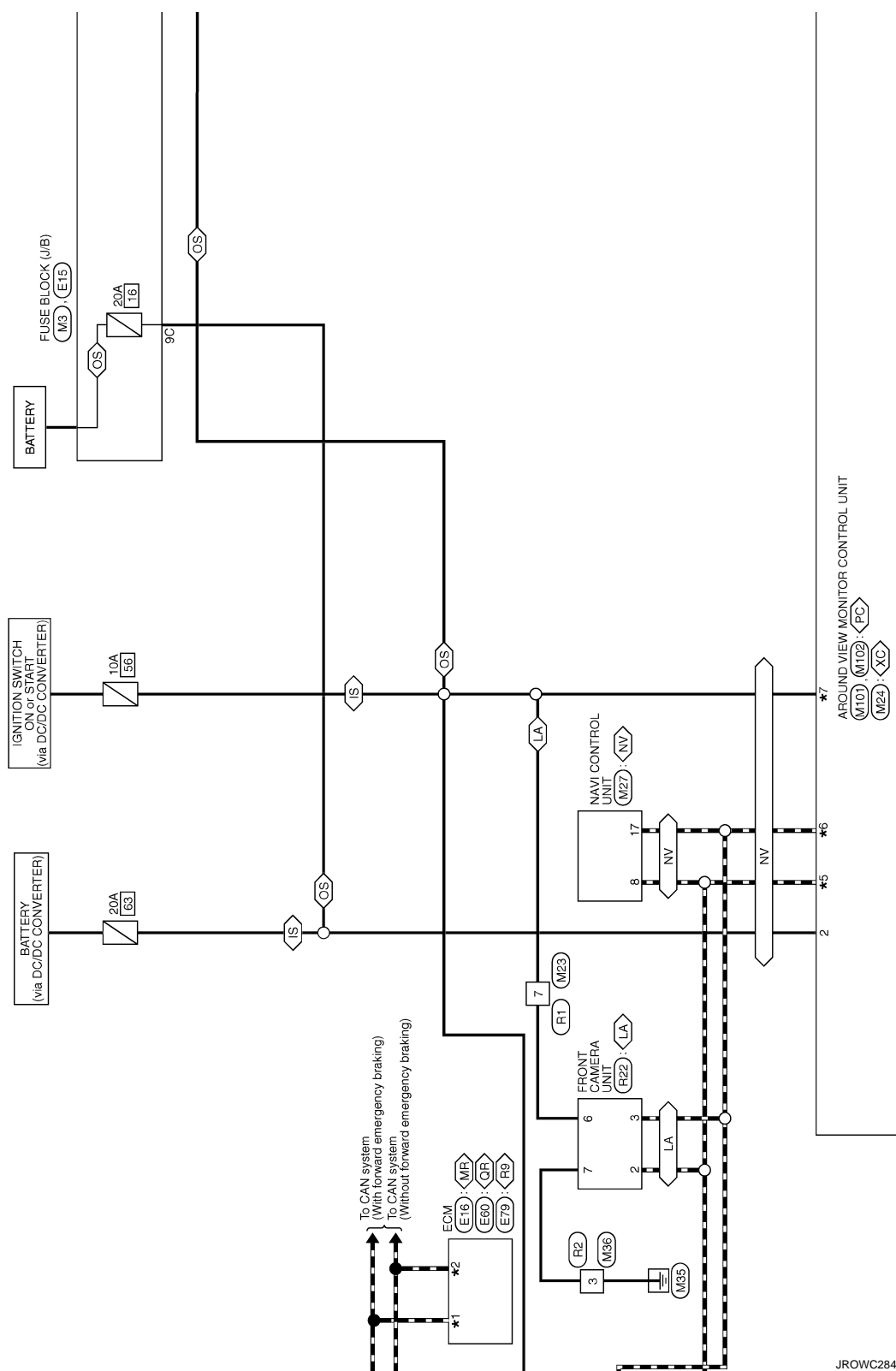
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DRIVER ASSISTANCE SYSTEMS



2014/03/17

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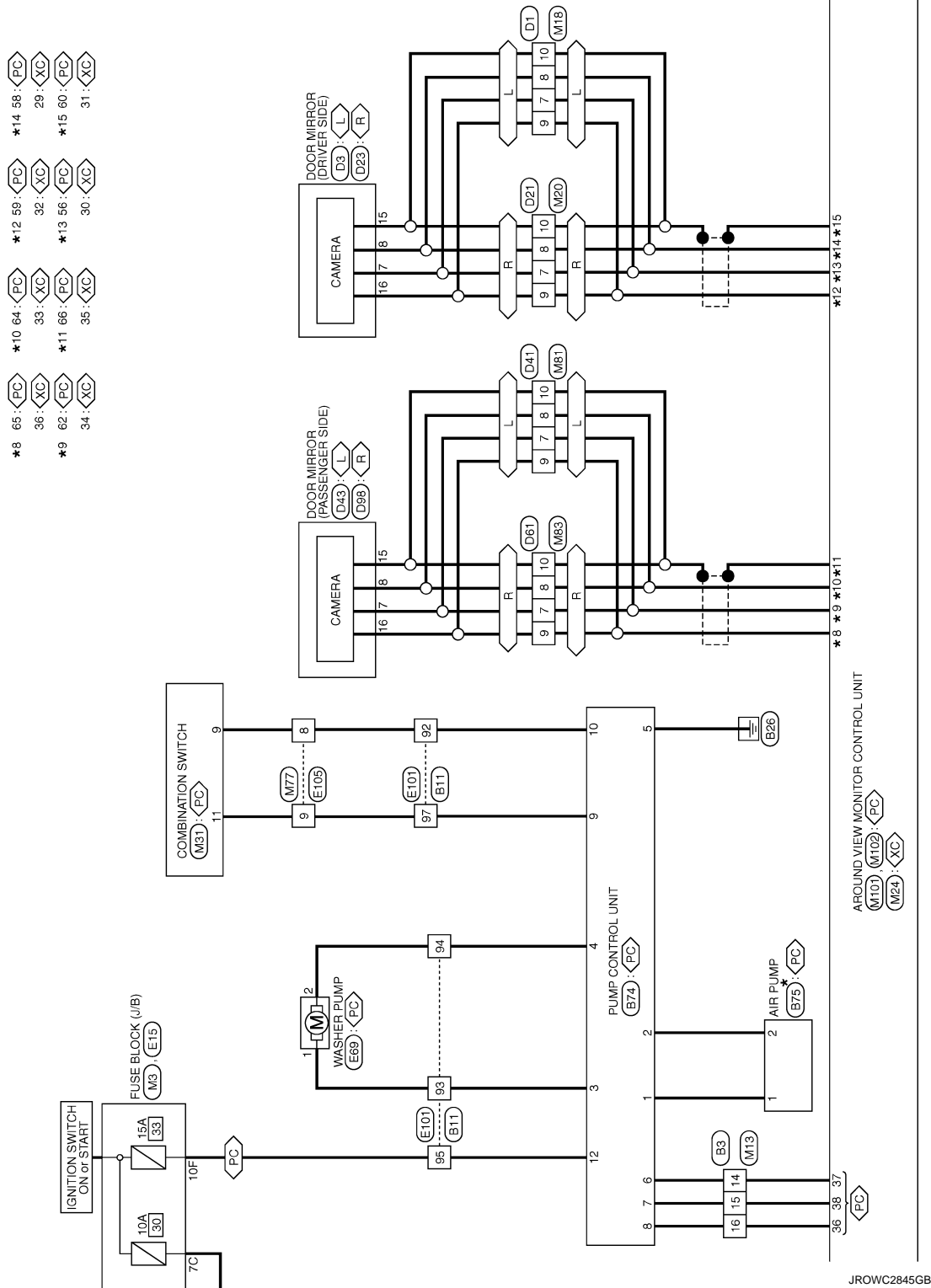


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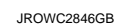
DRIVER ASSISTANCE SYSTEMS

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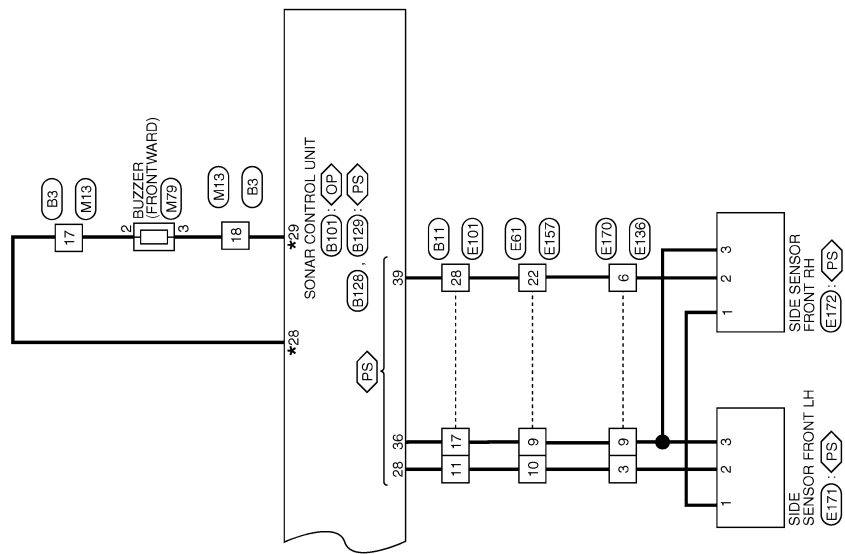
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JROWC2845GB



*28 19 : OP
2 : PS
*29 18 : OP
10 : PS



JROWC2847GB

DRIVER ASSISTANCE SYSTEMS

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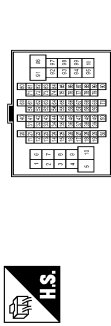
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DRIVER ASSISTANCE SYSTEMS

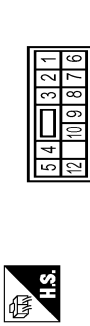
Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH80MDGY-CS16-TM4



Connector No.	B74
Connector Name	PUMP CONTROL UNIT
Connector Type	NS12FM-CS



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

Terminal No.	Color Of Wire	Signal Name [Specification]
4	W	-
5	R	-
6	B	-
7	W	-
8	SHIELD	-
13	W	-
14	V	-
15	BR	-
16	SB	-
17	LAV	-
18	LA/R	-
19	LG	-
20	LAG	-
21	LAG	-
22	Y	-
23	LA/R	-
24	R	-
29	Y	-
30	G	-
31	GR	-
32	LG	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	LA/R	-
5	B	-
11	BR	-
12	W	-
13	P	-
14	SB	-
15	V	-
16	P	-
17	P	-
18	G	-
19	P	-
20	R	-
21	BR	-
22	Y	-
23	B	-
24	SB	-
25	G	-
26	B	-
27	P	-
28	R	-
29	LG	-
30	P	-
92	BR	-
93	GR	-
94	Y	-
95	LG	-
97	LG	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	AIR PUMP POWER SUPPLY
2	LG	AIR PUMP GROUND
3	GR	WASHER PUMP GROUND
4	Y	WASHER PUMP POWER SUPPLY
6	B	GROUND
7	V	COMMUNICATION LINE GROUND
8	BR	COMMUNICATION LINE (PUMP - CAMERA)
9	LG	COMMUNICATION LINE (CAMERA - PUMP)
10	BR	REAR WASHER STATUS
12	LG	IGNITION POWER SUPPLY

Connector No.	B75
Connector Name	AIR PUMP
Connector Type	RH20FB

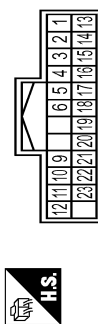


Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	LG	-

JROWC2848GB

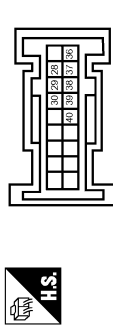
DRIVER ASSISTANCE SYSTEMS

Connector No.	B101
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH



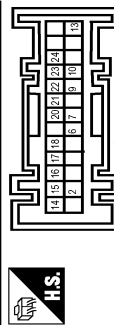
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	CENTER SENSOR SIGNAL FRONT RH
2	G	CENTER SENSOR SIGNAL FRONT LH
3	W	CORNER SENSOR SIGNAL FRONT RH
4	V	CORNER SENSOR SIGNAL FRONT LH
5	L	CORNER SENSOR SIGNAL FRONT RH
6	P	CORNER SENSOR SIGNAL FRONT LH
7	CAN-L	CAN-L
8	CAN-H	CAN-H
9	V	CENTER SENSOR SIGNAL REAR RH
10	LG	CORNER SENSOR SIGNAL REAR RH
11	SB	FRONT SENSOR POWER SUPPLY
12	BR	IGNITION POWER SUPPLY
13	P	FRONT SENSOR GROUND
14	P	REAR SENSOR GROUND
15	B	GROUND
16	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SONAR SYSTEM OFF SWITCH INDICATOR SIGNAL
18	LAL	FRONT BUZZER DRIVE SIGNAL
19	Y	BUZZER POWER SUPPLY
20	LANG	REAR BUZZER DRIVE SIGNAL
21	G	CENTER SENSOR SIGNAL REAR LH
22	R	CORNER SENSOR SIGNAL REAR LH
23	SB	REAR SENSOR POWER SUPPLY

Connector No.	B128
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH



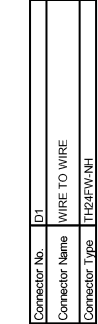
Terminal No.	Color Of Wire	Signal Name [Specification]
28	BR	SIDE SENSOR SIGNAL FRONT LH
29	G	CENTER SENSOR SIGNAL FRONT LH
30	V	CORNER SENSOR SIGNAL FRONT RH
36	P	FRONT SENSOR GROUND
37	W	CORNER SENSOR SIGNAL FRONT LH
38	LG	CENTER SENSOR SIGNAL FRONT RH
39	R	SIDE SENSOR SIGNAL FRONT RH
40	SB	FRONT SENSOR POWER SUPPLY

Connector No.	B129
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	Y	FRONT BUZZER POWER SUPPLY
6	R	CORNER SENSOR SIGNAL REAR LH
7	V	CENTER SENSOR SIGNAL REAR RH
9	G	REAR BUZZER DRIVE SIGNAL
10	SB	FRONT BUZZER DRIVE SIGNAL
13	B	GROUND
14	BR	IGNITION POWER SUPPLY
15	Y	REAR BUZZER POWER SUPPLY
16	V	SONAR SYSTEM OFF SWITCH SIGNAL
17	SB	SONAR SYSTEM OFF SWITCH INDICATOR SIGNAL
18	SB	REAR SENSOR POWER SUPPLY
20	G	CENTER SENSOR SIGNAL REAR LH

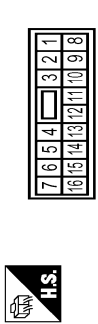
21	LG	CORNER SENSOR SIGNAL REAR RH
22	P	REAR SENSOR GROUND
23	P	CAN-L
24	L	CAN-H



Terminal No.	Color Of Wire	Signal Name [Specification]
12	11	10
9	8	7
6	5	4
3	2	1
24	23	22
21	20	19
18	17	16
15	14	13

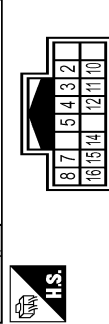
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAV	-
2	LAB	-
3	W	-
4	V	-
5	SB	-
6	LG	-
7	GR	-
8	G	-
9	Y	-
10	B	-
11	R	-
13	LAV	-
14	LAV	-
15	LALG	-
16	LAV	-
17	LAV	-
18	LAVG	-
19	LAV	-
22	LAG	-
23	L	-
24	BG	-

Connector No.	D2
Connector Name	WIPE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAV	-
2	R	-
3	LAG	-
4	B	-
5	B	-
6	LAV	-
7	LAVR	-
8	SB	-
9	LAVR	-
10	LASSB	-
11	P	-
12	LG	-
13	LAV	-
14	LAV	-
15	LAVR	-
16	B	-

Connector No.	D3
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH16MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	-
3	LAV	-
4	LAVR	-
5	LAV	-

DRIVER ASSISTANCE SYSTEMS

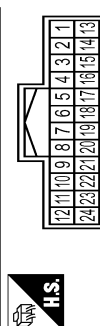
7	GR	-
8	G	-
10	B	-
11	LA/SB	-
12	LA/GR	-
14	LA/B	-
15	B	-
16	Y	-

Connector No.	D12
Connector Name	BSW INDICATOR RH
Connector Type	TH04MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
4	B	-

Connector No.	D21
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	B	-
4	W	-
5	V	-
6	SB	-
7	L	-
8	G	-
	Y	-

10	B	-
11	G	-
13	LAW	-
14	LNG	-
15	LAIR	-
16	LAP	-
17	LAIS	-
18	LAR	-
19	LAISB	-
20	GR	-
21	LARG	-
22	R	-
23	BG	-
24	I	-

Connector No.	D23
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH16MW-NH



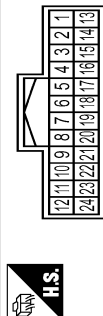
Emitted No.	Color Of Wine	Signal Name (Specification)
1	-	-
2	GR	-
3	LAL	-
4	LAR	-
5	LAV	-
7	L	-
8	G	-
11	LA/BG	-
12	LAV	-
14	LA/B	-
15	B	-
16	Y	-

Connector No.	D30
Connector Name	BSW INDICATOR LH
Connector Type	TH04MW-NH



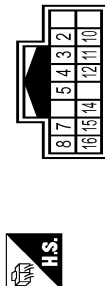
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
4	R	-

Connector No.	D41
Connector Name	WIRE TO WIRE
Connector Type	TH24EW-NH



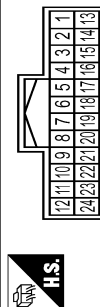
Terminal No.	Color Of Wire	Signal Name (Specification)
1	B	-
3	B	-
4	P	-
5	R	-
6	SB	-
7	L	-
8	V	-
9	Y	-
10	B	-
11	G	-
13	LAY	-
14	LAV	-
15	LAV	-
16	LAL	-
17	LAVB	-
18	GR	-

Connector No.	D43
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH16MW-NH



Terminal No.	Color Of Wire	Signal Name (Specification)
2	GR	-
3	BL	-
4	GR	-
5	GR	-
7	Y	-
8	Y	-
10	B	-
11	LA/GR	-
12	LA/Y	-
14	LA/B	-
15	B	-
16	Y	-

Connector No.	D61
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LA/B	-
3	P	-
4	R	-
5	SB	-
6	LG	-
7	L	-
8	V	-

DRIVER ASSISTANCE SYSTEMS

10	B	-
11	R	-
13	B	-
14	LAW	-
15	LAV	-
16	LAVR	-
17	LAVP	-
18	LAVSE	-
19	B	-
20	LG	-
21	BR	-
22	LAVG	-

Connector No.	D62
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

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



Terminal No.	Wire	Signal Name [Specification]
1	L	-
2	V	-
3	R	-
4	B	-
5	B	-
6	LAV	-
7	LAVR	-
9	LAVP	-
10	LAVBR	-
11	LAVL	-

Connector No.	D98
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH16MW-NH

8	7	5	4	3	2
16	15	14	12	11	



Terminal No.	Wire	Signal Name [Specification]
2	LG	-
3	LAP	-
4	LAV	-
5	LAV	-
7	L	-
8	V	-
11	LAVSB	-
12	LAVGR	-
14	LAVB	-
15	B	-
16	Y	-

Connector No.	D160
Connector Name	WIRE TO WIRE
Connector Type	TH32FM-NH

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.	Wire	Signal Name [Specification]
4	W	-
5	W	-
6	W	-
7	W	-
8	W	-
13	W	-
14	W	-
15	W	-
16	W	-

17	W	-
18	W	-
19	W	-
20	W	-
21	W	-
22	W	-
23	W	-
24	W	-
29	W	-
30	W	-
31	W	-
32	W	-

Connector No.	D176
Connector Name	REAR CAMERA
Connector Type	FR106FB-TV

12	1	2
4	5	



Terminal No.	Wire	Signal Name [Specification]
1	W	GND
2	W	IGN
4	W	VIDEO+
5	W	V-CAM1 L

Connector No.	D177
Connector Name	REAR CAMERA
Connector Type	TH10MW-NH

4	1	5
8	7	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	COMP.
4	W	SERIAL-SIGNAL
5	W	VIDEO+
7	W	GND
8	W	POWER

Connector No.	E12
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH24FGY-NH

36	35	34	33	32	31	30	28	27	26	25	
48	47	46	45						39	38	37



Terminal No.	Color Of Wire	Signal Name [Specification]
25	LG	-
26	W	-
27	SB	-
28	P	-
30	L	-
31	G	-
32	B	-
33	BG	-
34	LG	-
35	V	-
36	Y	-
37	B	-
38	GR	-
39	BR	-
45	L	-
46	P	-
47	W	-
48	R	-

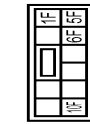
DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[PARK ASSIST]

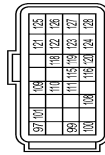
DRIVER ASSISTANCE SYSTEMS

Connector No.	E15
Connector Name	FUSE BLOCK (UB)
Connector Type	INS10FW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
10F	L	-	-
1F	W	-	-
5F	V	-	-
6F	Y	-	-

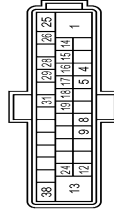
Connector No.	E16
Connector Name	ECM
Connector Type	RI24FB-R28-L-LH



Terminal No.	Color	Wire	Signal Name [Specification]
97	W	-	BAROMETRIC PRESSURE SENSOR
99	P	-	CAN-H
100	L	-	CAN-H
101	Y	-	SENSOR POWER SUPPLY
108	R	-	CLUTCH PEDAL POSITION SWITCH
109	LG	-	IGNITION SWITCH
110	G	-	ASC/D STEERING SWITCH
111	BR	-	SENSOR GROUND
115	V	-	STOP LAMP SWITCH
116	GR	-	BRAKE PEDAL POSITION SWITCH
118	SB	-	SENSOR POWER SUPPLY
119	Y	-	ACCELERATOR PEDAL POSITION SENSOR 2
120	LG	-	SENSOR GROUND
121	BR	-	POWER SUPPLY FOR ECM
122	V	-	SENSOR POWER SUPPLY
123	B	-	ECM GROUND

124	R	SENSOR GROUND
125	B	ECM GROUND
126	GR	ACCELERATOR PEDAL POSITION SENSOR 1
127	R	SENSOR GROUND
128	B	ECM GROUND

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BE234FB-BHY2-BJ22-RH



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y	-	MOTOR POWER SUPPLY
4	SB	-	FR RH WHEEL SENSOR SIGNAL
5	V	-	BRAKE VACUUM SENSOR POWER SUPPLY
8	P	-	FR LH WHEEL SENSOR SIGNAL
9	Y	-	hill descent control SWITCH SIGNAL
12	LG	-	BRAKE VACUUM SENSOR SIGNAL
13	B	-	GROUND (MOTOR)
14	P	-	CAN-L
15	BR	-	VDC OFF SWITCH SIGNAL
16	R	-	FR RH WHEEL SENSOR POWER SUPPLY
17	Y	-	RR RH WHEEL SENSOR POWER SUPPLY
18	G	-	RR LH WHEEL SENSOR SIGNAL
19	W	-	FR LH WHEEL SENSOR POWER SUPPLY
24	SHIELD	-	BRAKE VACUUM SENSOR GROUND
25	BR	-	VALVE POWER SUPPLY
26	L	-	CAN-H
28	GR	-	IGNITION POWER SUPPLY
29	LG	-	RR RH WHEEL SENSOR SIGNAL
31	BR	-	RR LH WHEEL SENSOR POWER SUPPLY
38	B	-	GROUND (VALVE)

Connector No.	E60
Connector Name	ECM
Connector Type	RI24FB-R28-L-LH



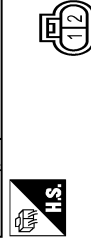
Terminal No.	Color	Wire	Signal Name [Specification]
99	P	-	CAN COMMUNICATION LINE (CAN-L)
100	L	-	CAN COMMUNICATION LINE (CAN-H)
103	Y	-	REFRIGERANT PRESSURE SENSOR
104	R	-	SENSOR POWER SUPPLY
109	LG	-	IGNITION SWITCH
110	G	-	ASC/D STEERING SWITCH
111	BR	-	SENSOR GROUND
115	V	-	STOP LAMP SWITCH
116	GR	-	BRAKE PEDAL POSITION SWITCH
117	W	-	PNP SIGNAL
118	SB	-	SENSOR POWER SUPPLY
119	Y	-	ACCELERATOR PEDAL POSITION SENSOR 2
120	LG	-	SENSOR GROUND
121	BR	-	POWER SUPPLY FOR ECM
122	V	-	SENSOR POWER SUPPLY
123	B	-	ECM GROUND
124	W	-	SENSOR GROUND
126	GR	-	ACCELERATOR PEDAL POSITION SENSOR 1
127	R	-	SENSOR GROUND
128	BR	-	ECM GROUND

Connector No.	E61
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	V	-	-
2	L	-	-
3	P	-	-
4	W	-	-
6	P	-	-
7	G	-	-
9	P	-	-
10	BR	-	-
12	GR	-	-
13	SHIELD	-	-
14	LG	-	-
15	P	-	-
16	V	-	-
17	SB	-	-
18	P	-	-
19	LG	-	-
22	R	-	-
23	Y	-	-
24	GR	-	-

Connector No.	E69
Connector Name	REAR WASHER PUMP
Connector Type	HS02FB-4V



JROWC2852GB

DRIVER ASSISTANCE SYSTEMS

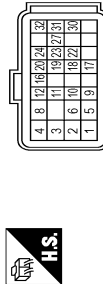
Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	R	-

Connector No.	Signal Name [Specification]
E78	DISTANCE SENSOR
Connector Name	
IAZ208FB	
Connector Type	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	L	CAN-H
3	R	CAN-L
5	L	CHASSIS COMM-H
6	W	CHASSIS COMM-L
8	P	IGNITION

Connector No.	Signal Name [Specification]
E79	ECM
Connector Name	
RH24FB-RZ8-R-RH	
Connector Type	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	ECM GROUND
2	W	ACCELERATOR PEDAL POSITION SENSOR 1
3	Y	ACCELERATOR PEDAL POSITION SENSOR 2
4	B	ECM GROUND
5	L	POWER SUPPLY FOR ECM
6	G	SENSOR POWER SUPPLY/ACCELERATOR PEDAL POSITION SENSOR 1
8	B	ECM GROUND
9	L	FUEL HEATER AND WATER IN FUEL LEVEL SENSOR

10	L	SENSOR POWER SUPPLY/ACCELERATOR PEDAL POSITION SENSOR 2
11	V	ACCELERATOR PEDAL POSITION SENSOR 2
12	P	SENSOR GROUND/ACCELERATOR PEDAL POSITION SENSOR 2
16	BG	STOP LAMP SWITCH [With M/T]
17	R	STOP LAMP SWITCH [With CVT]
18	G	IGNITION SWITCH
19	BR	ASCD STEERING SWITCH
20	BR	SENSOR GROUND (ASCD STEERING SWITCH)
22	G	FUEL PUMP CONTROL MODULE (COMMAND)
23	V	SPEED LIMITER MAIN SWITCH
24	R	CLUTCH PEDAL POSITION SWITCH
27	V	CLUTCH INTERLOCK SWITCH
30	BR	ASCD MAIN SWITCH
31	P	CAN-L
32	L	CAN-H

Connector No.	Signal Name [Specification]
E101	WIRE TO WIRE
Connector Name	
TH80FDGY-CS16-TM4	
Connector Type	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
5	G	-
11	BR	-
12	W	-
13	P	-
14	SB	-
15	V	-
16	P	-
17	P	-
18	G	-
19	P	-
20	G	-
21	BR	-
22	LG	-
23	Y	-
24	SB	-
25	G	-

26	B	-
27	P	-
28	R	-
29	LG	-
30	P	-
32	BR	-
33	GR	-
94	R	-
95	L	-
97	LG	-

Connector No.	Signal Name [Specification]
E105	WIRE TO WIRE
Connector Name	
TH80FW-CS16-TM4	
Connector Type	

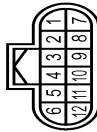


Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
5	V	- [Without ISS]
5	W	- [With ISS]
8	L	-
9	LG	-
10	W	-
20	W	-
21	B	-
22	SHIELD	-
31	Y	-
32	W	-
33	SB	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	GR	-
48	SB	-
51	P	-
52	L	-

53	W	-
54	Y	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	G	-
61	BR	-
62	V	-
63	BR	-
64	GR	-
65	LG	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	R	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	GR	-
82	Y	-
83	SB	-
84	L	-
85	G	-
86	Y	-
87	B	-
88	B	-
91	R	-
92	BR	-
93	W	-
96	GR	-
97	R	-
98	V	-
99	Y	-

DRIVER ASSISTANCE SYSTEMS

Connector No.	E136
Connector Name	WIRE TO WIRE
Connector Type	RH12FB



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

Connector No.	E151
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS08FGY-PR



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	GR	-
3	GR	-
4	B	-
5	B	-
6	LG	-

Connector No.	E157
Connector Name	WIRE TO WIRE
Connector Type	TH24FM-AH



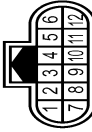
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	L	-
3	P	-
4	W	-
5	P	-
6	P	-
7	G	-
8	P	-
9	P	-
10	BR	-
11	GR	-
12	GR	-
13	SHIELD	-
14	LG	-
15	P	-
16	V	-
17	SB	-
18	P	-
19	LG	-
20	R	-
21	V	-
22	V	-
23	V	-
24	GR	-

Connector No.	E165
Connector Name	FRONT CAMERA
Connector Type	RH08FB-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	L	-
3	LG	-
4	LG	-
5	SHIELD	-

Connector No.	E170
Connector Name	WIRE TO WIRE
Connector Type	RH12MB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	GND
2	G	SIGNAL
3	BR	SIGNAL
4	P	GND
5	W	SIGNAL
6	R	SIGNAL
7	P	GND
8	LG	SIGNAL
9	P	GND
10	P	GND
11	V	SIGNAL
12	SB	POWER

Connector No.	E171
Connector Name	SIDE SENSOR FRONT LH
Connector Type	AZ203FB-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	POWER
2	BR	SIGNAL_GND
3	P	GND

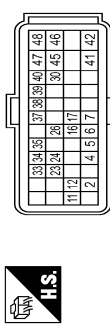
Connector No.	E172
Connector Name	SIDE SENSOR FRONT RH
Connector Type	AZ203FB-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	POWER
2	R	SIGNAL_GND
3	P	GND

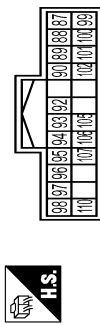
DRIVER ASSISTANCE SYSTEMS

Connector No.	F23
Connector Name	TCM
Connector Type	RH40FB-RZ8L-LRH



Terminal No.	Color	Wire	Signal Name [Specification]
2	GR	-	-
4	Y	-	-
5	BR	-	-
6	G	-	-
7	V	-	-
11	LG	-	-
12	BR	-	-
16	SB	-	-
17	R	-	-
23	P	-	-
24	LG	-	-
26	BG	-	-
30	GR	-	-
33	L	-	-
34	W	-	-
35	GR	-	-
37	Y	-	-
38	G	-	-
39	W	-	-
40	V	-	-
41	B	-	-
42	B	-	-
45	V	-	-
46	V	-	-
47	BG	-	-
48	BG	-	-

Connector No.	F74
Connector Name	POWER INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH24FB-NH



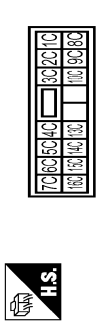
Terminal No.	Color	Wire	Signal Name [Specification]
87	L	-	-
88	P	-	-
89	W	-	-
90	R	-	-
92	GR	-	-
93	G	-	-
94	SB	-	-
95	LG	-	-
96	W	-	-
97	P	-	-
98	Y	-	-
99	BG	-	-
100	LG	-	-
101	V	-	-
102	Y	-	-
105	W	-	-
106	BR	-	-
107	V	-	-
110	SB	-	-

Connector No.	F119
Connector Name	TCM
Connector Type	RH40FB-RZ8L-LH



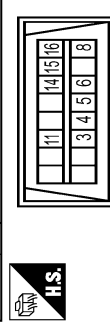
Terminal No.	Color	Wire	Signal Name [Specification]
1	P	-	-
2	GR	-	-
4	Y	-	-
5	BR	-	-
6	G	-	-
7	V	-	-
11	LG	-	-
12	BR	-	-
14	V	-	-
16	SB	-	-
17	R	-	-
23	P	-	-
24	LG	-	-
25	R	-	-
26	BG	-	-
30	GR	-	-
32	SB	-	-
33	L	-	-
34	W	-	-
35	GR	-	-
37	Y	-	-
38	G	-	-
39	W	-	-
40	V	-	-
41	B	-	-
42	B	-	-
45	V	-	-
46	V	-	-
47	BG	-	-
48	BG	-	-

Connector No.	M3
Connector Name	FUSE BLOCK (JIB)
Connector Type	NS16FW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
10C	LG	-	-
13C	LAG	-	-
14C	R	-	-
15C	L	-	-
16C	LAW	-	-
1C	R	-	-
2C	G	-	-
3C	Y	-	-
4C	LG	-	-
5C	GR	-	-
6C	LAR	-	-
7C	Y	-	-
8C	BR	-	-
8C	LABR	-	-
9C	L	-	-

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color	Wire	Signal Name [Specification]
3	LG	-	-
4	B	-	-
5	B	-	-
6	L	-	-
8	Y	-	-

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >


[PARK ASSIST]

DRIVER ASSISTANCE SYSTEMS

11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH2FW-NH

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 [Specification]
1	SB	-
2	V	-
3	SB	-
4	BR	-
5	L	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	Y	-
11	R	-
12	SB	-
13	LG	-
14	V	-
15	SB	-
16	Y	-
17	LA/BR	-
18	LAL	-
20	BG	-
21	BG	-
22	GR	-
23	GR	-
24	P	-
25	L	-
26	BR	-
29	SHIELD	-
30	W	-
31	B	-
32	R	-

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



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 [Specification]
1	B	-
2	B	-
3	Y	-
4	V	-
5	BR	-
6	LG	-
7	L	-
8	Y	-
9	G	-
10	SHIELD	-
11	R	-
13	GR	-
14	LASE	-
15	LA/GR	-
16	LAV	-
17	LAL	-
18	LABG	-
19	LAVR	-
22	LA/G	-
23	BG	-
24	SB	-

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
3	G	-
4	B	-
5	Y	-
6	B	-
7	R	-
8	L	-
9	BR	-
10	GR	-
11	Y	-
12	BG	-
13	G	-
14	R	-
15	P	-
16	B	-

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

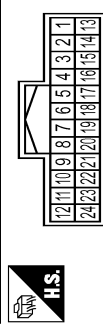


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	GR	-
4	Y	-
5	V	-

6	BR	-
7	L	-
8	Y	-
9	G	-
10	SHIELD	-
11	G	-
13	LAV	-
14	LA/G	-
15	LA/GR	-
16	LAVP	-
17	LA/SB	-
18	LAVR	-
19	GR	-
20	GR	-
21	LAV	-
22	R	-
23	SB	-
24	BG	-

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

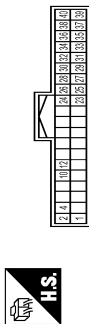


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color Of Wire	Signal Name [Specification]
7	Y	-
8	L	-
9	R	-
13	SB	-
15	SB	-
16	GR	-
17	V	-
18	G	-
19	SB	-
20	R	-
21	B	-

DRIVER ASSISTANCE SYSTEMS

Connector No.	M24
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH



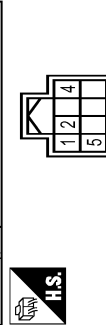
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	Y	BATTERY POWER SUPPLY
4	SB	IGNITION SIGNAL
10	R	CAN-L
12	L	CAN-H
23	SHIELD	CAMERA IMAGE SIGNAL GROUND
24	G	CAMERA IMAGE SIGNAL
25	B	REAR CAMERA GROUND
26	R	REAR CAMERA POWER SUPPLY
27	SHIELD	REAR CAMERA IMAGE SIGNAL (-)
28	W	REAR CAMERA IMAGE SIGNAL (+)
29	Y	SIDE CAMERA DRIVER SIDE GROUND
30	L	SIDE CAMERA DRIVER SIDE POWER SUPPLY
31	SHIELD	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (-)
32	G	SIDE CAMERA DRIVER SIDE IMAGE SIGNAL (+)
33	L	SIDE CAMERA PASSENGER SIDE CAMERA GROUND
34	B	SIDE CAMERA PASSENGER SIDE CAMERA POWER SUPPLY
35	SHIELD	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (-)
36	V	SIDE CAMERA PASSENGER SIDE CAMERA IMAGE SIGNAL (+)
37	V	FRONT CAMERA GROUND
38	L	FRONT CAMERA POWER SUPPLY
39	SHIELD	FRONT CAMERA IMAGE SIGNAL (-)
40	LG	FRONT CAMERA IMAGE SIGNAL (+)

Connector No.	M27
Connector Name	NAVI CONTROL UNIT
Connector Type	NH18FW-CS2

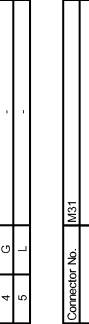


Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	SOUND SIGNAL FRONT SPEAKER LH (W/In 4 Speaker)
3	Y	SOUND SIGNAL FRONT SPEAKER RH (W/In 4 Speaker)
3	P	SOUND SIGNAL FRONT LH (W/In 6 Speaker)
4	R	SOUND SIGNAL FRONT RH (W/In 4 Speaker)
4	GR	SOUND SIGNAL REAR LH+
5	BR	SOUND SIGNAL REAR RH+
7	W	AUTO ACC INPUT SIGNAL
8	L	CAN-H
9	V	ILLUMINATION SIGNAL
11	G	SOUND SIGNAL FRONT RH+ (W/In 4 Speaker)
11	W	SOUND SIGNAL FRONT LH+ (W/In 4 Speaker)
12	GR	SOUND SIGNAL FRONT RH- (W/In 4 Speaker)
12	V	SOUND SIGNAL FRONT RH- (W/In 6 Speaker)
13	LG	SOUND SIGNAL REAR RH+
14	Y	SOUND SIGNAL REAR RH-
17	R	CAN-L
18	G	VEHICLE SPEED SIGNAL (8 PULSE)
19	L	BATTERY POWER SUPPLY
20	B	GROUND

Connector No.	M30
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH18FGY-NH



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



Connector No.	M31
Connector Name	COMBINATION SWITCH
Connector Type	TH18FW-NH

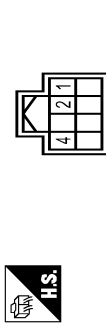
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	INPUT 5
2	SB	OUTPUT 1
3	GR	INPUT 4
4	BG	OUTPUT 4
5	G	INPUT 3
6	W	INPUT 2
7	Y	-
8	V	-
9	G	RR WASH MOTOR
10	BR	OUTPUT 2
11	Y	FR WASH MOTOR
14	LG	IGN
15	P	OUTPUT 3
16	GR	GND

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
2	V	-
3	B	-

Connector No.	M37
Connector Name	EPS CONTROL UNIT
Connector Type	TH18FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
4	SB	IGNITION POWER SUPPLY

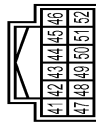
DRIVER ASSISTANCE SYSTEMS

Connector No.	M41
Connector Name	IN-VEHICLE SENSOR
Connector Type	A02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	P	-

Connector No.	M42
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	W	ILLUMINATION CONTROL SIGNAL
44	LAV	FUEL LEVEL SENSOR GROUND
45	LAV	BATTERY POWER SUPPLY
46	LAV	IGNITION SIGNAL [Without ISS]
47	V	IGNITION SIGNAL [With ISS]
48	LG	AV COMMUNICATION SIGNAL (H)
49	Y	AV COMMUNICATION SIGNAL (L)
50	BG	OIL LEVEL SENSOR SIGNAL
51	LAV	OIL LEVEL SENSOR GROUND
52	B	FUEL LEVEL SENSOR SIGNAL
		GROUND

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LAV	-
5	V	- [Without ISS]
8	W	- [Without ISS]
8	G	- [With ISS]
9	Y	-
10	R	-
20	W	-
21	B	-
22	SHIELD	-
31	V	-
32	GR	-
33	G	-
34	LG	-
35	BG	-
36	LG	-
37	V	-
38	G	-
39	BR	-
40	L	-
41	P	-
47	Y	-
48	BG	-
51	GR	-
52	SB	-
53	R	-
54	LAV	-
55	BR	-
56	P	-
57	B	-
58	L	-
59	W	-
60	LAV	-
61	P	-
62	V	-
63	LAV	-
64	Y	-

65	GR	-
66	BG	-
67	L	-
68	R	-
71	V	-
72	L	-
73	Y	-
76	L	-
77	V	-
78	LG	-
79	SHIELD	-
80	L	- [With ISS]
80	LAV	- [Without ISS]
82	GR	-
83	LG	-
84	SB	-
85	G	-
86	G	-
87	B	-
88	B	-
91	L	-
92	W	-
93	W	-
96	LG	-
97	BR	-
98	V	-
99	R	-

Connector No.	M79
Connector Name	BUZZER (FRONTWARD)
Connector Type	TH04FW-NH



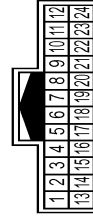
Terminal No.	Color Of Wire	Signal Name [Specification]
2	LAV	POWER
3	LAV	INPUT

Connector No.	M81
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	GR	- [With SOWI]
3	Y	- [Without SOWI]
4	V	-
6	BR	-
6	SB	-
7	B	-
8	L	-
9	Y	-
10	SHIELD	-
11	G	-
13	LASB	-
14	LAV	-
15	LAV	-
16	LAV	-
17	LAV	-
18	GR	-
21	LAV	-

Connector No.	M83
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



DRIVER ASSISTANCE SYSTEMS

Terminal No.	Color Of Wire	Signal Name [Specification]
2	B	-
3	W	-
4	P	-
5	SB	-
6	LG	-
7	B	-
8	L	-
9	Y	-
10	SHIELD	-
11	R	-
13	B	-
14	LAW	-
15	LAG	-
16	LAGR	-
17	LAP	-
18	LASB	-
19	B	-
20	LG	-
21	BR	-
22	LAG	-

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Type	INST6MMV-CS



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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	Y	-
3	W	-
4	B	-
5	B	-
6	Y	-
7	R	-
8	BR	-
9	GR	-
10	GR	-
11	SB	-

Connector No.	M87
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



60			57	56					51	50	49	48	47	46	45	44	43	42	41
60	79	78	77	76	75	74	73					68	67		65	64	63		

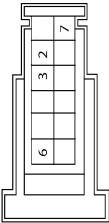
DRIVER ASSISTANCE SYSTEMS

Connector No.	R2
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



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

Connector No.	R22
Connector Name	FRONT CAMERA UNIT
Connector Type	original 8200280781



Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	CAN-H
3	R	CAN-L
6	R	IGNITION POWER SUPPLY
7	B	GROUND

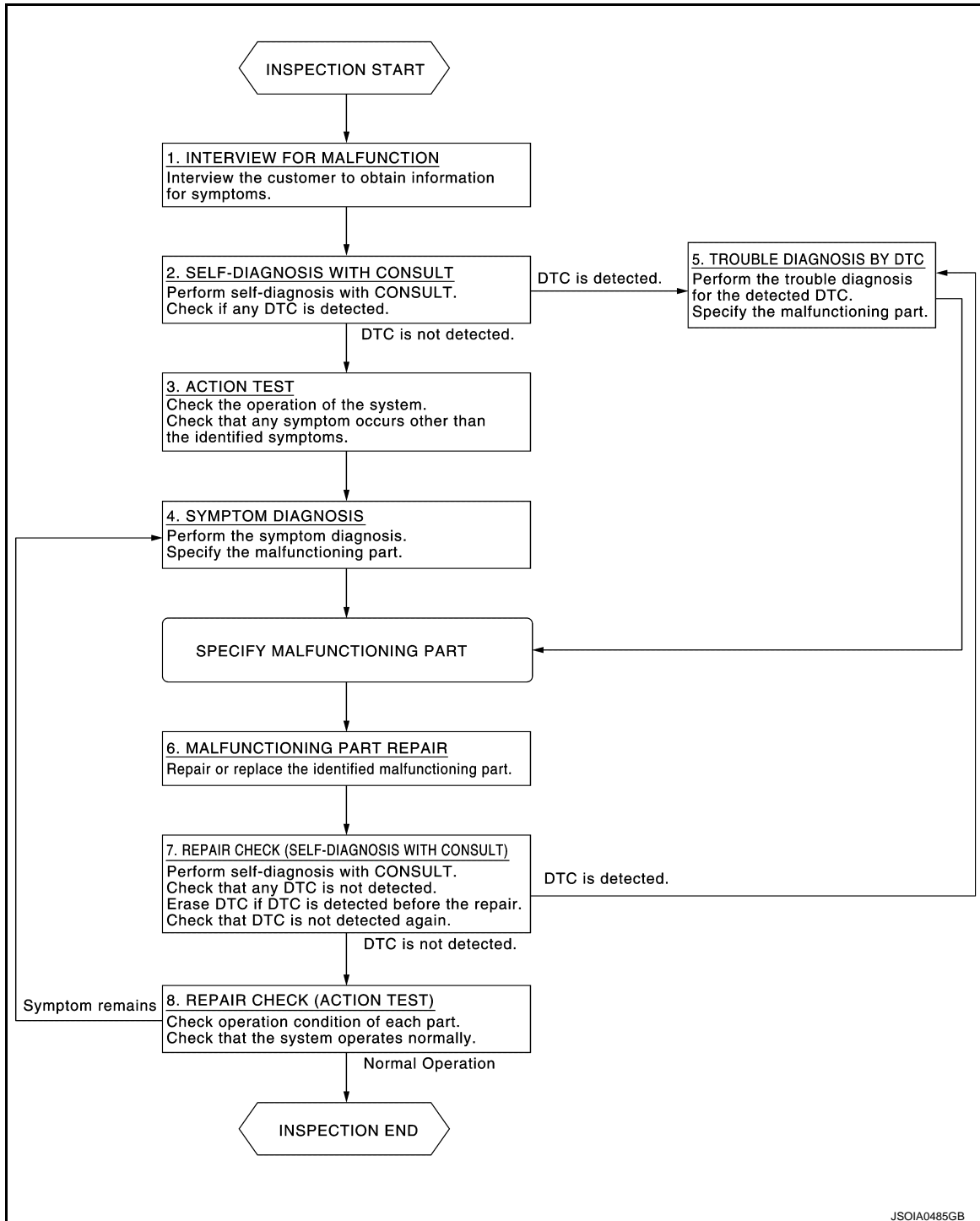
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010721654

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

It is also important to clarify the customer concerns before starting the inspection. Interview the customer about their concerns carefully and understand the symptoms fully.

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[PARK ASSIST]

NOTE:

The customers are not professionals. Never assume that “maybe the customer means...” or “maybe the customer mentioned this symptom”.

>> GO TO 2.

2.SELF-DIAGNOSIS WITH CONSULT

1. Perform “All DTC Reading” with CONSULT.
2. Check if the DTC is detected on the self-diagnosis results of “AVM” and “SONAR”.

Is any DTC detected?

YES >> Record or print self-diagnosis results and freeze frame data (FFD). GO TO 5.

NO >> GO TO 3.

3.ACTION TEST

Perform around view monitor with Park Assist system action test to check the operation status. Refer to [DAS-355, "Description"](#).

Check if any other malfunctions occur.

>> GO TO 4.

4.SYMPTOM DIAGNOSIS

Perform the applicable diagnosis according to the diagnosis chart by symptom. Refer to [DAS-356, "Symptom Table"](#).

>> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

1. Check the DTC in the self-diagnosis results.
2. Perform trouble diagnosis for the detected DTC. Refer to [DAS-324, "DTC Index"](#)

NOTE:

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

>> GO TO 6.

6.MALFUNCTIONING PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 7.

7.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

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

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 8.

8.REPAIR CHECK (ACTION TEST)

Perform the around view monitor with Park Assist system action test. Check that the malfunction symptom is solved or no other symptoms occur.

Is there a malfunction symptom?

YES >> GO TO 4.

NO >> INSPECTION END

ACTION TEST

Description

INFOID:0000000010721655

After the around view monitor is replaced or a malfunction of the around view monitor with Park Assist is repaired, perform an operation inspection and check that the system operates normally.

Work Procedure

INFOID:0000000010721656

1.CHECK OPERATION OF THE AROUND VIEW MONITOR

Check whether or not the around view monitor and sonar system are operating normally. Refer to [AV-78, "System Description"](#) (Around view monitor) or [SN-124, "SONAR SYSTEM : System Description"](#) (Sonar system).

>> GO TO 2.

2.CHECK STARTUP OF THE AROUND VIEW MONITOR WITH PARK ASSIST

1. Press the "Camera switch" to change to the camera screen.
2. Press the "Park Assist (PA) switch" on the screen.
3. Check that the screen changes to the parallel parking mode screen.

>> GO TO 3.

3.CHECK OPERATION OF PARALLEL PARKING MODE

1. Operate a turn signal and check that the detection direction switches.
2. Check that a parking rectangle can be detected in scan mode.

>> GO TO 4.

4.CHECK OPERATION OF PERPENDICULAR PARKING MODE

1. Press the "Perpendicular mode switch" on the screen.
2. Operate a turn signal and check that the detection direction of a target parking rectangle switches.
3. Press the "Adjust switch" on the screen, and check whether or not fine adjustment of the rectangle lines occurs.
4. Check whether or not the automatic adjustment is performed so that the positions of the target parking rectangle (blue) and the actual vehicle rectangle match.
5. Start the Park Assist and check that the vehicle can be properly parked.

>> GO TO 5.

5.CHECK OPERATION OF THE AROUND VIEW MONITOR WITH PARK ASSIST.

1. Press the "Start switch" and perform parking using automatic steering.
2. Check that the steering operates automatically when parking is started.
3. Check that the target parking rectangle and other information is displayed on the screen. Refer to [DAS-287, "System Description"](#) (function description).
4. Check that the obstacle is detected and the warning sound occurs when there is an obstacle in the forward/reverse starting position rectangle.
5. Check that the chime sounds and around view monitor with Park Assist ends automatically when the vehicle moves close to the target parking rectangle (blue).



>> INSPECTION END

SYMPTOM DIAGNOSIS

PARK ASSIST SYMPTOMS

Symptom Table

INFOID:0000000010721657

Symptoms	Check items	Probable malfunction location / Reference
Touch panel cannot be operated.	Touch operation occurs correctly at the same location on the display when the map screen or other screen is displayed.	Replacement of the around view monitor control unit. Refer to AV-268, "Removal and Installation" .
	Touch operation does not occur correctly at the same location on the display when the map screen or other screen is displayed.	NAVI control unit malfunction diagnosis. Refer to AV-252, "Symptom Table" .
Steering does not operate automatically after Park Assist is started.	—	Replacement of the around view monitor control unit. Refer to AV-268, "Removal and Installation" .
System does not cancel when the steering wheel is turned during Park Assist operation.	“  Park Assist fault” is displayed on the screen.	Power steering malfunction diagnosis. Refer to STC-21, "DTC Index" .
	“  Park Assist fault” is not displayed on the screen.	Replacement of the around view monitor control unit. Refer to AV-268, "Removal and Installation" .
Buzzer sound is not output.	—	<ul style="list-style-type: none"> Around view monitor control unit inspection. Refer to AV-155, "AROUND VIEW MONITOR SYSTEM : Work Flow" Sonar control unit inspection. Refer to SN-154, "Work Flow".
Parking space measurement function is not activated.	A sonar system error is displayed.	Sonar control unit inspection. Refer to SN-154, "Work Flow" .

NORMAL OPERATING CONDITION

Description

INFOID:0000000010721658

PRECAUTIONS FOR USE OF THE AROUND VIEW MONITOR WITH PARK ASSIST

- Around view monitor with Park Assist is designed to support the driver's steering wheel operation in a parking lot. It does not automatically lower the vehicle speed or avoid contact with objects. As when performing ordinary parking maneuvers, always look out the windows and check with own eyes to be sure that the surrounding and road conditions are safe for the maneuvers before operating the vehicle. Operate the vehicle slowly during the parking maneuvers. If the vehicle gets close to people or objects near the vehicle, avoid making contact by using the brakes and other maneuvers.
- Do not touch the spoke of the steering wheel while the around view monitor with Park Assist is operating. It could cause injuries to hands or fingers. Keep neckties, scarves, etc. away from the steering wheel since they may get entangled and cause unexpected accidents.
- Do not drive looking only at the screen. It could cause unexpected accidents or cause the vehicle to contact surrounding objects.
- When assistance from the around view monitor with Park Assist is no longer necessary, turn off the system by touching the "Cancel" button on the screen. If the around view monitor with Park Assist remains on, the steering wheel may operate automatically and may cause unexpected accidents.
- Make sure that there is enough space for parking maneuvers before starting to use the around view monitor with Park Assist.
- Keep in mind that the front of the vehicle may swing out towards oncoming traffic while the around view monitor with Park Assist.
- Do not use the around view monitor with Park Assist under the following conditions.
 - On unpaved roads.
 - On slippery roads like snow-covered or frozen roads.
 - On uneven roads with slants, bumps, curbstones, wheel tracks, etc.
 - On curved roads.
 - At mechanical parking facilities.
 - Where parking or stopping is prohibited.
 - When tire chains or a spare tire are installed.
 - When the vehicle is being towed.
 - When the doors (including the back door) are not closed.
 - When transporting a load that protrudes from own vehicle.
 - When the vehicle is laden with heavy loads.

PHENOMENA WHICH CAN BE EASILY MISTAKEN FOR MALFUNCTIONS

Perpendicular Mode

- After the white line is automatically detected and fine adjustment of the target parking rectangle is performed, if the vehicle is moved before "Start" (start switch) is pressed, the target parking rectangle returns to its initial position (position prior to fine adjustment).
- When aligning the parking rectangle position in the display, if the vehicle drives for 5 seconds or more or drives at a speed of 4 km/h or more, then the target parking rectangle and forward/reverse starting position rectangle disappear and the guidance message changes to "Check directly for safety around the vehicle".

Perpendicular Parking Mode and Parallel Parking Mode

- The steering wheel does not fully return to straight-ahead (neutral position) when the around view monitor with Park Assist is ended.

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