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DTC Description 503
Diagnosis Procedure 503

U1A35-00 BRAKE CONTROL COMMUNICATION 505
DTC Description 505
Diagnosis Procedure 505

U1A36-00 BCM/IPDM COMMUNICATION 507
DTC Description 507
Diagnosis Procedure 507

U1A39-00 COMBINATION METER COMMUNICATION 509
DTC Description 509
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U1A3B-00 TCM COMMUNICATION 511
DTC Description 511
Diagnosis Procedure 511

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION 513
DTC Description 513
Diagnosis Procedure 513

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION 515
DTC Description 515
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PRECAUTION

PRECAUTIONS

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

INFOID:0000000014902923

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

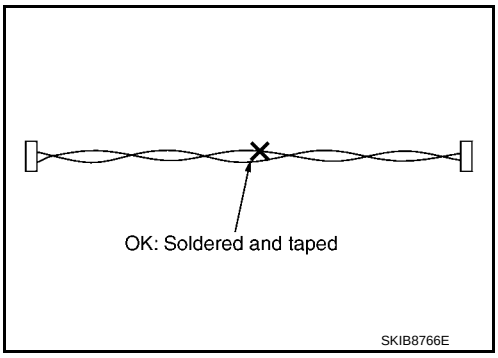
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.**

Precautions For Harness Repair

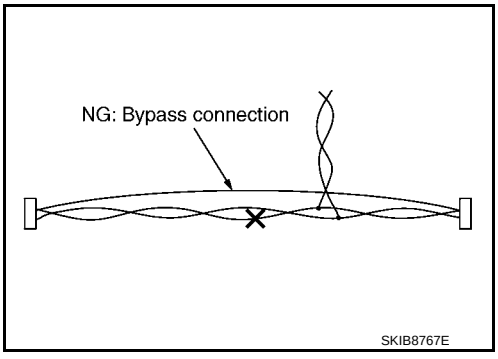
INFOID:0000000014902924

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

- Solder the repaired area and wrap tape around the soldered area.
  NOTE:
  A fray of twisted lines must be within 110 mm (4.33 in).



- Bypass connection is not allowed at the repaired area.
  NOTE:
  Bypass connection may cause ITS communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.

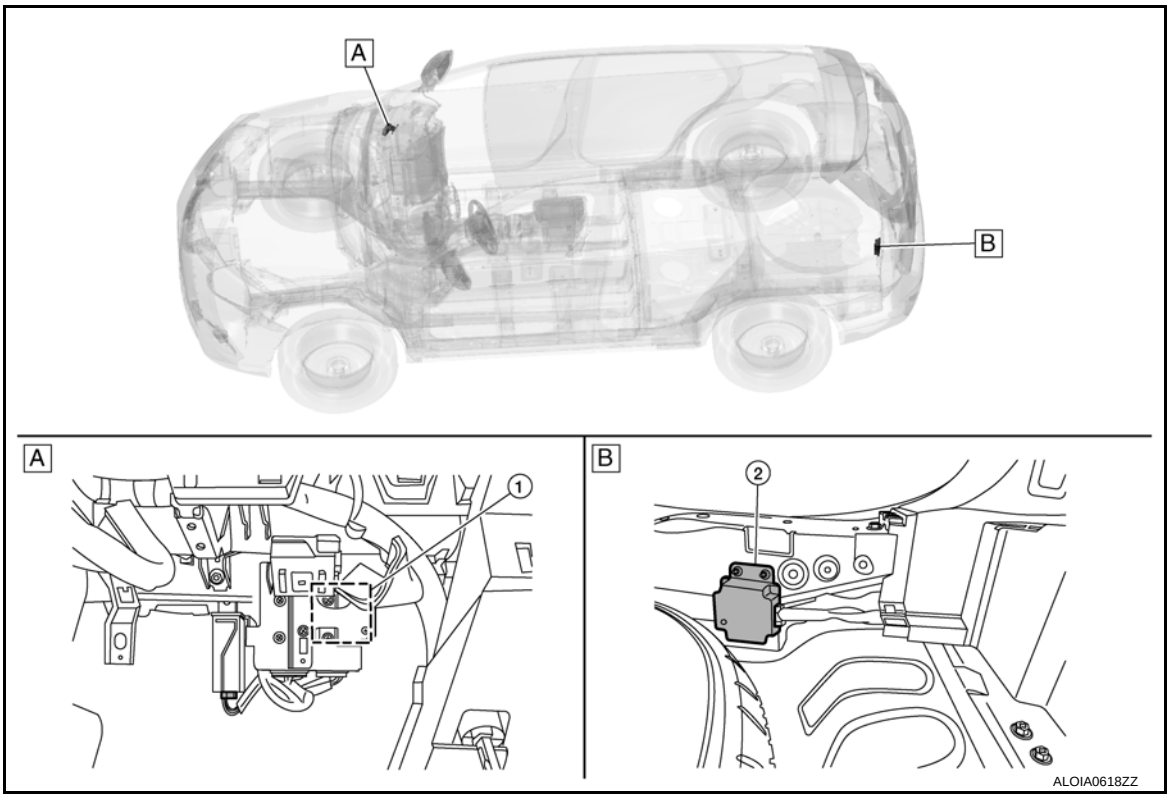


SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000015204098



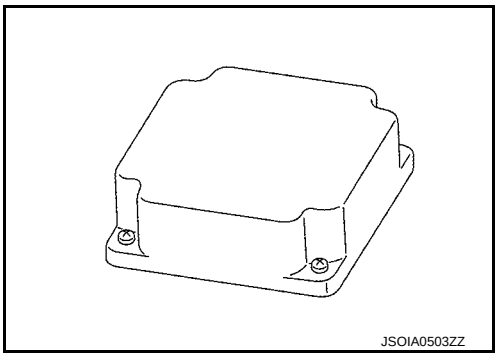
A. View with luggage rear plate removed B. View with glove box housing removed

No.	Component	Description
1.	ADAS control unit	• Controls each system, based on CAN communication, ITS communication, and chassis communication signals received from each control unit • Transmits signals necessary for control between CAN communication, ITS communication, and Chassis communication
2.	ADAS control unit 2 (with FEB)	• Controls each system, based on CAN communication (via ADAS control unit), ITS communication, and chassis communication signals received from each control unit • Transmits signals necessary for control between CAN communication (via ADAS control unit), ITS communication, and Chassis communication
	ADAS control unit 2 (without FEB)	• Controls each system, based on CAN communication, ITS communication, and chassis communication signals received from each control unit • Transmits signals necessary for control between CAN communication, ITS communication, and Chassis communication

ADAS Control Unit

INFOID:0000000015204099

- ADAS control unit is installed below luggage rear plate.
- Communicates with each control unit via CAN communication/ITS communication/Chassis communication.
- ADAS control unit included gateway function, and necessary for system control signals are transmitted to each control unit between CAN communication and ITS communication by the ADAS control unit.
- ADAS control unit controls the each system, based on ITS communication signal, CAN communication signal and chassis communication signal from each control unit.


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ADAS Control Unit 2

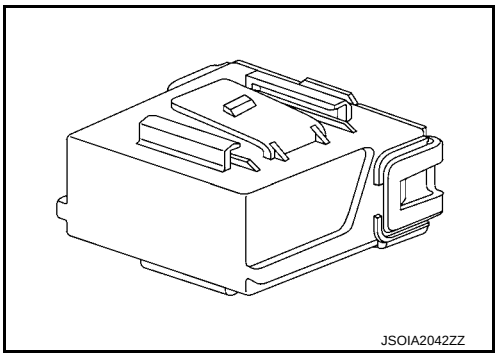
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WITH FEB

- ADAS control unit 2 is installed behind the glove box housing.
- Communicates with each control unit via CAN communication (via ADAS control unit)/ITS communication/ Chassis communication.
- ADAS control unit 2 controls each system, based on ITS communication signal, CAN communication signal (via ADAS control unit), and chassis communication signal from each control unit.

WITHOUT FEB

- ADAS control unit 2 is installed behind the glove box housing.
- Communicates with each control unit via CAN communication/ITS communication/Chassis communication.
- ADAS control unit 2 controls each system, based on ITS communication signal, CAN communication signal, and chassis communication signal from each control unit.


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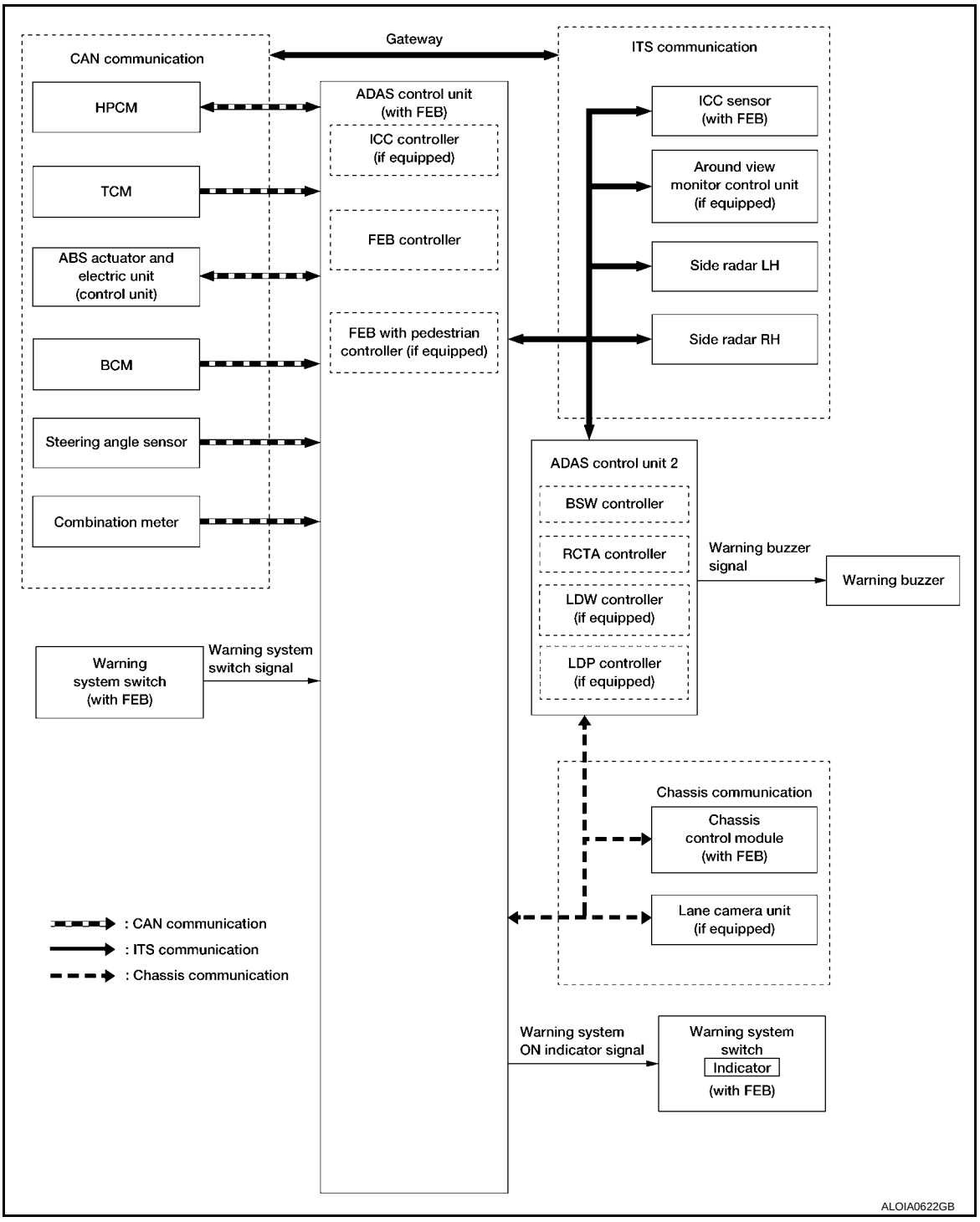
SYSTEM

System Description

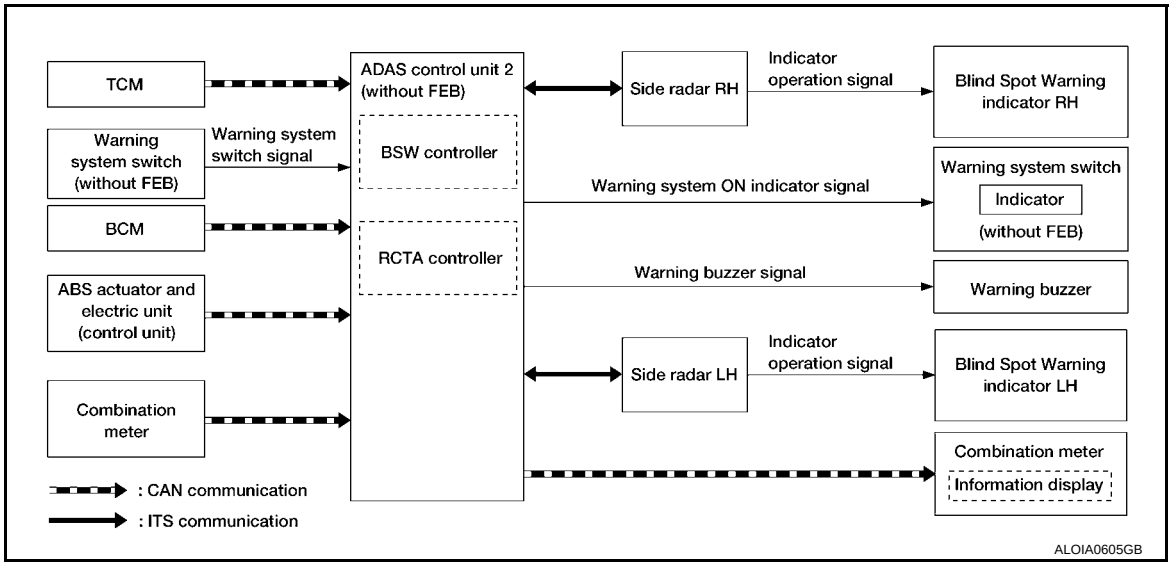
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SYSTEM DIAGRAM

With FEB



Without FEB



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
HPCM	CAN communication	Closed throttle position signal	Receives idle position state (ON/OFF)
		Accelerator pedal position signal	Receives accelerator pedal position (angle)
		ICC prohibition signal	Receives an operable/inoperable state of the ICC system
		ICC steering switch signal: Main switch signal	Receives the operational state of the ICC steering switch
		ICC steering switch signal: SET/COAST switch signal	
		ICC steering switch signal: CANCEL switch signal	
		ICC steering switch signal: RESUME/ACCELERATE switch signal	
		ICC steering switch signal: DISTANCE switch signal	
		Engine speed signal	Receives engine speed
		Stop lamp switch signal	Receives an operational state of the brake pedal
		Brake pedal position switch signal	Receives an operational state of the brake pedal
TCM	CAN communication	Input speed signal	Receives the number of revolutions of input shaft
		Current gear position signal	Receives a current gear position
		Shift position signal	Receives a selector lever position
		Output shaft revolution signal	Receives the number of revolutions of output shaft

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		ABS operation signal	Receives an operational state of ABS
		ABS warning lamp signal	Receives an ON/OFF state of ABS warning lamp
		TCS malfunction signal	Receives a malfunction state of TCS
		TCS operation signal	Receives an operational state of TCS
		VDC OFF switch signal	Receives an ON/OFF state of VDC
		VDC malfunction signal	Receives a malfunction state of VDC
		VDC operation signal	Receives an operational state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
		Stop lamp switch signal	Receives an operational state of the brake pedal
		Yaw rate signal	Receives yaw rate acting on the vehicle
		Side G sensor signal	Receives lateral G acting on the vehicle
BCM	CAN communication	Front wiper request signal	Receives an operational state of front wiper(s)
		Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
		Dimmer signal	Receives ON/OFF state of dimmer signal
Steering angle sensor	CAN communication	Steering angle sensor malfunction signal	Receives a malfunction state of steering angle sensor
		Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
		Steering angle speed signal	Receives the turning angle speed of the steering wheel
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in “Driving Aids” selected with the vehicle information display
		Parking brake switch signal	Receives an operational state of the parking brake
ICC sensor (with FEB)	ITS communication	ICC sensor signal (with FEB)	Receives detection results, such as the presence or absence of a vehicle ahead and distance from the vehicle
Lane camera unit (if equipped)	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
	Chassis communication	Detected pedestrian condition signal	Receives detection results of pedestrian
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone
Warning system switch	Warning system switch signal (with FEB)		Receives an ON/OFF state of the warning system switch
Chassis control module (with FEB)	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
ADAS control unit 2	Warning buzzer signal (without FEB)		Transmits a warning buzzer signal to activate the buzzer

Output Signal Item

Reception unit	Signal name			Description
ECM	CAN communication	ICC operation signal (with FEB)		Transmits an ICC operation signal necessary for intelligent cruise control
ABS actuator and electric unit (control unit) (with FEB)	CAN communication	Brake fluid pressure control signal		Transmits a brake fluid pressure control signal to activate the brake
Combination meter	CAN communication	Meter display signal	Own vehicle indicator signal	Transmits a signal to display a state of the system on the information display
			Vehicle ahead detection indicator signal	
			Set vehicle speed indicator signal	
			Set distance indicator signal	
			SET switch indicator signal	
			MAIN switch indicator signal	
		Blind Spot Warning warning lamp signal		Transmits a Blind Spot Warning warning lamp signal to turn ON the Blind Spot Warning warning lamp
		LDP ON indicator lamp signal		Transmits an LDP ON indicator lamp signal to turn ON the LDP ON indicator lamp
		Lane departure warning lamp signal		Transmits a lane departure warning lamp signal to turn ON the lane departure warning lamp
		ICC warning lamp signal		Transmits an ICC warning lamp signal to turn ON the ICC system warning lamp
		FEB indicator lamp signal		• Transmits a signal to turn ON the FEB indicator • Transmits a signal to turn OFF the FEB indicator
ICC sensor (with FEB)	ITS communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
		Steering angle sensor signal		Transmits a steering angle sensor signal received from the steering angle sensor
Side radar LH, RH	ITS communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
		Blind Spot Warning indicator signal		Transmits a Blind Spot Warning indicator signal to turn ON the Blind Spot Warning indicator
		Blind Spot Warning indicator dimmer signal		Transmits a Blind Spot Warning indicator dimmer signal to dimmer Blind Spot Warning indicator
Warning systems ON indicator	Warning systems ON indicator signal			Turns ON the warning systems ON indicator
ADAS control unit 2	ITS communication	Warning buzzer signal (with FEB)		Transmits a warning buzzer signal to activate the buzzer
Warning buzzer	Warning buzzer signal (without FEB)			Activates warning buzzer

DESCRIPTION

- ADAS* control unit controls the following systems, based on ITS communication signal, CAN communication signal and chassis communication signal from each control unit.

NOTE:

*: Advanced Driver Assistance Systems

- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

System	Reference
Intelligent Cruise Control (ICC)	CCS-14, "System Description"
Forward Emergency Braking (FEB)	BRC-217, "System Description"
Forward Emergency Braking (FEB) with pedestrian	BRC-217, "System Description"
Lane Departure Warning (LDW)	DAS-227, "LDW : System Description"
Lane Departure Prevention (LDP)	DAS-229, "LDP : System Description"
Blind Spot Warning (BSW)	DAS-223, "BSW : System Description"
Rear Cross Traffic Alert (RCTA)	DAS-225, "RCTA : System Description"

Fail-safe (ADAS Control Unit)

INFOID:0000000015259667

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

System	Buzzer	Warning lamp/Warning display	Description
Vehicle-to-vehicle distance control mode	High-pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High-pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High-pitched tone	FEB warning	Cancel

Fail-safe (ADAS Control Unit 2)

INFOID:0000000015259669

If a malfunction occurs in each system, ADAS control unit 2 cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning display	Description
Lane Departure Warning (LDW)	—	Warning systems indicator (Lane position: Yellow)	Cancel
Lane Departure Prevention (LDP)	Low-pitched tone	Warning systems indicator (Lane position: Yellow)	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

CONSULT Function (ICC/ADAS)

INFOID:0000000015204103

APPLICATION ITEMS

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

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

CONFIGURATION

Configuration includes functions as follows.

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

WORK SUPPORT

Work support items	Description
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Vehicle-to-vehicle control mode • Conventional (fixed speed) control mode • Forward Emergency Braking (FEB)

NOTE:

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

Display Items for The Cause of Automatic Cancellation 1

Cause of cancellation	Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Forward Emergency Braking	Description
OPERATING ABS	×		×	ABS function was operated
OPERATING TCS	×	×		TCS function was operated
OPERATING VDC	×	×	×	VDC function was operated
HPCM CIRCUIT	×	×		HPCM did not permit ICC operation
OPE SW VOLT CIRC	×	×		The ICC steering switch input voltage is not within standard range
OP SW DOUBLE TOUCH	×	×		ICC steering switches were pressed at the same time
VHCL SPD DOWN	×	×		Vehicle speed lower than the speed as follows • Vehicle-to-vehicle distance control mode is 24 km/h (15 MPH) • Conventional (fixed speed) cruise control mode is 32 km/h (20 MPH)
WHL SPD ELEC NOISE	×	×		Wheel speed sensor signal caught electromagnetic noise
VDC/TCS OFF SW	×		×	VDC OFF switch was pressed
VHCL SPD UNMATCH	×	×		Wheel speed became different from CVT vehicle speed
TIRE SLIP	×	×		Wheel slipped
IGN LOW VOLT	×	×	×	Decrease in ADAS control unit ignition voltage
PARKING BRAKE ON	×	×		The parking brake is operating
WHEEL SPD UNMATCH	×	×		The wheel speeds of 4 wheels are out of the specified values
INCHING LOST	×			A vehicle ahead is not detected during the following driving when the vehicle speed is approximately 24 km/h (15 MPH) or less
CAN COMM ERROR	×	×	×	ADAS control unit received an abnormal signal with CAN communication
ABS/TCS/VDC CIRC	×	×	×	An abnormal condition occurs in VDC/TCS/ABS system
ECD CIRCUIT	×	×	×	An abnormal condition occurs in ECD system
ENG SPEED DOWN	×	×		Engine speed became extremely low while controlling ICC system
ASCD VHCL SPD DTAC		×		Vehicle speed is detached from set vehicle speed
ASCD DOUBLE COMD		×		Cancel switch and operation switch are detected simultaneously
ICC SENSOR CAN COMM ERR	×		×	Communication error between ADAS control unit and the ICC sensor
ABS WARNING LAMP	×			ABS warning lamp ON
FR RADAR BLOCKED	×		×	Inclusion of dirt or stains on the ICC sensor area of the front bumper
FEB) CURVATURE			×	Road curve was more than the specified value
FEB) YAW RATE			×	Detected yawing speed was more than the specified value
FEB) LTRL ACCELERATION			×	Detected lateral speed is the specified value or more

RADAR INTERFERENCE	×		×	ICC sensor receives electromagnetic interference
NO RECORD	×	×		—

SELF DIAGNOSTIC RESULT

Refer to DAS-39, "DTC Index".

NOTE:

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

DATA MONITOR

NOTE:

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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
MAIN SW [On/Off]	×	×	×	×	Indicates [On/Off] status as judged from ICC steering switch
SET/COAST SW [On/Off]	×	×			Indicates [On/Off] status as judged from ICC steering switch
CANCEL SW [On/Off]	×	×			Indicates [On/Off] status as judged from ICC steering switch
RESUME/ACC SW [On/Off]	×	×			Indicates [On/Off] status as judged from ICC steering switch
DISTANCE SW [On/Off]	×				Indicates [On/Off] status as judged from ICC steering switch
CRUISE OPE [On/Off]	×	×			Indicates whether controlling or not (ON means “controlling”)
BRAKE SW [On/Off]	×	×	×	×	Indicates [On/Off] status as judged from brake pedal position switch signal (HPCM transmits brake switch signal through CAN communication)
STOP LAMP SW [On/Off]	×	×	×	×	Indicates [On/Off] status as judged from stop lamp switch signal (HPCM transmits stop lamp switch signal through CAN communication)
IDLE SW [On/Off]	×				Indicates [On/Off] status of idle switch read from ADAS control unit through CAN communication (HPCM transmits On/Off status through CAN communication)
VHCL SPEED SE [km/h] or [mph]	×	×	×	×	Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication]
ENGINE RPM [rpm]	×				Indicates engine speed read from ADAS control unit through CAN communication (HPCM transmits engine speed signal through CAN communication)
BA WARNING [On/Off]	×				Indicates [On/Off] status of FEB indicator lamp output

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
STP LMP DRIVE [On/Off]	×	×			Indicates [On/Off] status of brake hold drive signal
D RANGE SW [On/Off]	×				Indicates [On/Off] status of “D” or “M” positions read from ADAS control unit through CAN communication; ON when position “D” or “M” (TCM transmits shift position signal through CAN communication).
NP RANGE SW [On/Off]	×				Indicates shift position signal read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
PKB SW [On/Off]	×				Parking brake switch status [On/Off] judged from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)
PWR SUP MONI [V]	×	×			Indicates IGN voltage input by ADAS control unit
VHCL SPD AT [km/h] or [mph]	×				Indicates vehicle speed calculated from CVT vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits CVT vehicle speed sensor signal through CAN communication)
THRTL OPENING [%]	×	×			Indicates throttle position read from ADAS control unit through CAN communication (HPCM transmits accelerator pedal position signal through CAN communication).
GEAR [1, 2, 3, 4, 5, 6, 7]	×				Indicates CVT gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)
MODE SIG [OFF, ICC, ASCD]	×				Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode]
SET DISP IND [On/Off]	×				Indicates [On/Off] status of SET switch indicator output
DISTANCE [m]	×				Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]	×				Indicates the relative speed of the vehicle ahead
LDW SYSTEM ON [On/Off]			×		Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]			×		Indicates [On/Off] status of LDW system display output
LDP ON IND [On/Off]			×		Indicates [On/Off] status of LDP system display output
LANE DPRT W/L [On/Off]			×		Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
LDW BUZZER OUTPUT [On/Off]			×		Indicates [On/Off] status of warning buzzer output
LDP SYSTEM ON [On/Off]			×		Indicates [On/Off] status of LDP system
WARN REQ [On/Off]			×		Indicates an ADAS control unit judged warning state (ON/OFF) of LDP system
READY signal [On/Off]			×		Indicates LDP system settings
Camera lost [Detect/Deviate/Both]			×	×	Indicates a lane marker detection state judged from a lane marker detection signal read by the ADAS control unit via Chassis communication (Lane camera unit transmits a lane marker signal via Chassis communication)

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
Lane unclear [On/Off]			×	×	Indicates an ON/OFF state of the lane marker. The ON/OFF state is judged from a detected lane condition signal read by the ADAS control unit via Chassis communication (The lane camera unit transmits a detected lane condition signal via Chassis communication)
STATUS signal [Stnby/Warn/Cancl/Off]			×		Indicates a control state of LDP system
Shift position [Off, P, R, N, D, M/T1 - 7]			×	×	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
Turn signal [OFF/LH/RH/LH&RH]			×	×	Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication)
SIDE G [G]			×	×	Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication)
FUNC ITEM (FCW) [On/Off]	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒ “Emergency Assist” of the integral switch Forward Emergency Braking
FUNC ITEM (LDW) [On/Off]	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒ “Lane” of the integral switch Lane Departure Warning
FUNC ITEM (BSW) [On/Off]	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒ “Blind spot” of the integral switch Blind Spot Warning
LDP SELECT [On/Off]	×	×	×	×	Indicates an ON/OFF state of LDP system. LDP system can be set to ON/OFF by selecting “Driving Aids”⇒“Lane”of the integral switch
LDW SELECT [On/Off]	×	×	×	×	Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting “Driving Aids”⇒“Lane” of the integral switch
BSW SELECT [On/Off]	×	×	×	×	Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting “Driving Aids”⇒“Blind spot” of the integral switch
BSW/BSI WARN LMP [On/Off]				×	Indicates [On/Off] status of Blind Spot warning malfunction
BSW SYSTEM ON [On/Off]				×	Indicates [On/Off] status of BSW system
FCW SYSTEM ON [On/Off]	×	×			Indicates [On/Off] status of FEB system
BATTERY CIRCUIT OFF [On/Off]					**NOTE:** The item is displayed, but it is not used
LDP WARNING INDICATOR [On/Off]			×		Indicates [On/Off] status of LDP warning display (Yellow) output
LDW ON INDICATOR [On/Off]			×		Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDICATOR [On/Off]			×		Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/VDC OFF]	×	×	×	×	Indicates status of system cancel display output

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
CAMERA HI TEMP MSG [On/Off]			×	×	Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(LDP) [On/Off]	×	×	×	×	Indicates the presence or absence of LDP system.
BSW ON INDICATOR [On/Off]				×	Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]				×	Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]			×		**NOTE:** The item is displayed, but it is not monitored
BSW IND BRIGHT-NESS [Nothing/Bright/Normal/Dark]				×	Indicates status of brightness of Blind Spot Warning indicator

ACTIVE TEST

CAUTION:

- **Never perform “Active Test” while driving the vehicle.**
- **The “Active Test” cannot be performed when the following systems malfunction is displayed.**
  - **ICC system**
  - **LDW**
  - **LDP**
  - **Blind Spot Warning**
- **The “Active Test” cannot be performed when the FEB warning lamp is illuminated.**
- **Shift the selector lever to “P” position, and then perform the test.**

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

METER LAMP

NOTE:

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

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

STOP LAMP

Test item	Operation	Description	Stop lamp
STOP LAMP	Off	Stops transmitting the brake hold drive signal below to end the test	OFF
	On	Transmits the brake hold drive signal	ON

ICC BUZZER

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

BRAKE ACTUATOR

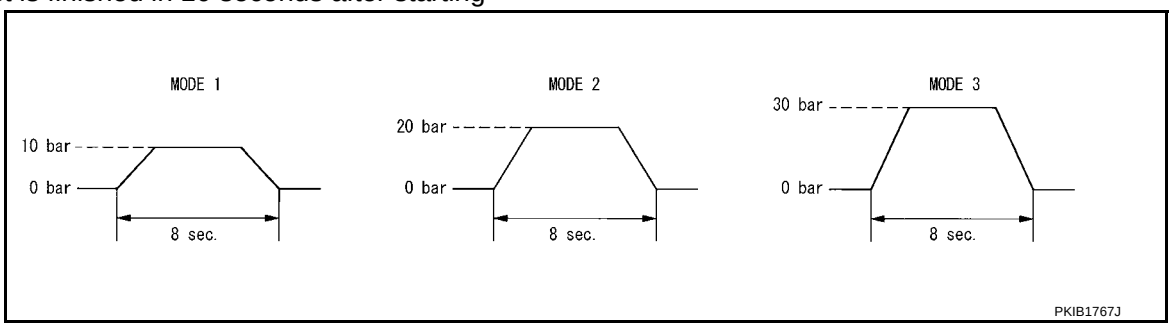
NOTE:

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

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

NOTE:

The test is finished in 10 seconds after starting



LDP BUZZER

Test item	Operation	Description	Warning buzzer
LDP BUZZER	Off	Stops transmitting the warning buzzer signal below to end the test	—
	On	Transmits the warning buzzer signal to the warning buzzer	ON

LDP ON IND

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

LANE DEPARTURE W/L

Test item	Operation	Description	Lane departure system display (Yellow)
LANE DEPARTURE W/L	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDW ON INDICATOR

Test item	Operation	Description	LDW system display (White)
LDW ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDP WARNING INDICATOR

Test item	Operation	Description	LDP malfunction (Yellow)
LDP WARNING INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDW WARNING INDICATOR

Test item	Operation	Description	LDW malfunction (Yellow)
LDW WARNING INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

ECU IDENTIFICATION

Displays ADAS control unit parts number.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT 2)

CONSULT Function (ICC/ADAS 2)

INFOID:0000000015204104

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication using ADAS control unit 2.

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

CONFIGURATION

Configuration includes functions as follows.

NOTE:

Models with FEB system only.

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

SELF DIAGNOSTIC RESULT

Refer to DAS-45, "DTC Index".

NOTE:

- The details of time display are as per the following.
- CRNT: A malfunction is detected now
- PAST: A malfunction was detected in the past
- IGN counter is displayed on FFD (Freeze Frame Data).
- 0: The malfunctions that are detected now
  CAN communication system (U1000-01, U1010-49)
- 1 - 39: It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased.
  Other than CAN communication system (Other than U1000-01, U1010-49)
- 1 - 49: It increases like 0 → 1 → 2 ··· 38 → 49 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.

DATA MONITOR

NOTE:

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

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
MAIN SW [On/Off]					×	×	×	×	Indicates [On/Off] status as judged from ICC steering switch
SET/COAST SW [On/Off]					×	×			Indicates [On/Off] status as judged from ICC steering switch
CANCEL SW [On/Off]					×	×			Indicates [On/Off] status as judged from ICC steering switch
RESUME/ACC SW [On/Off]					×	×			Indicates [On/Off] status as judged from ICC steering switch
DISTANCE SW [On/Off]					×				Indicates [On/Off] status as judged from ICC steering switch
CRUISE OPE [On/Off]					×	×			Indicates whether controlling or not (ON means “controlling”)
BRAKE SW [On/Off]					×	×	×	×	Indicates [On/Off] status as judged from brake pedal position switch signal (HPCM transmits brake pedal position switch signal through CAN communication)
STOP LAMP SW [On/Off]	×		×		×	×	×	×	Indicates [On/Off] status as judged from stop lamp switch signal (HPCM transmits stop lamp switch signal through CAN communication)
IDLE SW [On/Off]					×				Indicates [On/Off] status of idle switch read from ADAS control unit through CAN communication (HPCM transmits On/Off status through CAN communication)
SET DISTANCE [Short/Mid/Long]					×	×			Indicates set distance memorized in ADAS control unit
CRUISE LAMP [On/Off]			×		×	×			Indicates [On/Off] status of MAIN switch indicator output
OWN VHCL [On/Off]			×		×				**NOTE:** The item is displayed, but it is not monitored
VHCL AHEAD [On/Off]			×		×				Indicates [On/Off] status of vehicle ahead detection indicator output
ICC WARNING [On/Off]			×		×				Indicates [On/Off] status of ICC system warning lamp output
BA WARNING [On/Off]			×		×				Indicates [On/Off] status of FEB indicator lamp output
VHCL SPEED SE [km/h] or [mph]		×	×		×	×	×	×	Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication]
SET VHCL SPD [km/h] or [mph]			×		×	×			Indicates set vehicle speed memorized in ADAS control unit
BUZZER O/P [On/Off]	×		×		×				Indicates [On/Off] status of ICC warning chime output
THRTL SENSOR [deg]		×			×	×			**NOTE:** The item is displayed, but it is not monitored

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
ENGINE RPM [rpm]		×			×				Indicates engine speed read from ADAS control unit through CAN communication (HPCM transmits engine speed signal through CAN communication)
WIPER SW [OFF/LOW/HIGH]					×				Indicates wiper [OFF/LOW/HIGH] status (BCM transmits front wiper request signal through CAN communication)
YAW RATE [deg/s]					×				**NOTE:** The item is displayed, but it is not monitored
RELEASE SW NO [On/Off]					×		×	×	**NOTE:** The item is displayed, but it is not monitored
RELEASE SW NC [On/Off]					×		×	×	**NOTE:** The item is displayed, but it is not monitored
STP LMP DRIVE [On/Off]	×		×		×	×			Indicates [On/Off] status of brake hold drive signal
D POSITION SW [On/Off]					×				Indicates [On/Off] status of “D” or “M” positions read from ADAS control unit through CAN communication; ON when position “D” or “M” (TCM transmits shift position signal through CAN communication).
NP RANGE SW [On/Off]			×		×				Indicates shift position signal read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
PKB SW [On/Off]					×				Parking brake switch status [On/Off] judged from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)
PWR SUP MONI [V]	×		×		×	×			Indicates IGN voltage input by ADAS control unit
VHCL SPD AT [km/h] or [mph]		×			×				Indicates vehicle speed calculated from CVT vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits CVT vehicle speed sensor signal through CAN communication)
THRTL OPENING [%]					×	×			Indicates throttle position read from ADAS control unit through CAN communication (HPCM transmits accelerator pedal position signal through CAN communication).
GEAR [1, 2, 3, 4, 5, 6, 7]			×		×				Indicates CVT gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)
CLUTCH SW SIG [On/Off]					×	×			**NOTE:** The item is displayed, but it is not monitored
NP SW SIG [On/Off]					×	×			Indicates [On/Off] status as judged from park/neutral position switch signal (HPCM transmits park/neutral position switch signal through CAN communication).

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
MODE SIG [OFF, ICC, ASCD]					×				Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode]
SET DISP IND [On/Off]			×		×				Indicates [On/Off] status of SET switch indicator output
DISTANCE [m]					×				Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]					×				Indicates the relative speed of the vehicle ahead
FCW SYSTEM ON [On/Off]					×	×			Indicates [On/Off] status of FCW system
LDW SYSTEM ON [On/Off]							×		Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]							×		Indicates [On/Off] status of LDW system display output
LANE DPRT W/L [On/Off]							×		Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
BUZEROUTPUT [On/Off]							×		Indicates [On/Off] status of warning buzzer output
LDP) CAMERA LOST [Detect/Deviate/Both]							×	×	Indicates a lane marker detection state judged from a lane marker detection signal read by the ADAS control unit via ITS communication (Lane camera unit transmits a lane marker signal via ITS communication)
LDP) LANE UNCLEAR [On/Off]							×	×	Indicates an ON/OFF state of the lane marker. The ON/OFF state is judged from a detected lane condition signal read by the ADAS control unit via ITS communication (The lane camera unit transmits a detected lane condition signal via ITS communication)
LDP) SHIFT POSITION [Off, P, R, N, D, M/T1 - 7]							×	×	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
LDP) TURN SIGNAL [OFF/LH/RH/LH&RH]							×	×	Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication)
SIDE G [G]							×	×	Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication)
FUNC ITEM (FCW) [On/Off]				×	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒“Emergency Assist” of the integral switch Forward Emergency Braking

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
FUNC ITEM (LDW) [On/Off]					×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒“Lane” of the integral switch Lane Departure Warning
FUNC ITEM (BSW) [On/Off]					×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒“Blind spot” of the integral switch Blind Spot Warning
FCW SELECT [On/Off]				×	×	×	×	×	Indicates an ON/OFF state of the FCW system. The FCW system can be set to ON/OFF by selecting “Driving Aids”⇒“Emergency brake” of the integral switch
LDW SELECT [On/Off]					×	×	×	×	Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting “Driving Aids”⇒“Lane” of the integral switch
BSW SELECT [On/Off]					×	×	×	×	Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting “Driving Aids”⇒“Blind spot” of the integral switch
WARN SYS SW [On/Off]				×	×	×	×	×	**NOTE:** The item is displayed, but it is not monitored
BSW WARN LMP [On/Off]								×	Indicates [On/Off] status of Blind Spot warning malfunction
BSW SYSTEM ON [On/Off]								×	Indicates [On/Off] status of BSW system
BSW [On/Off]								×	Indicates [On/Off] status of BSW system
BSW/CTA SW [On/Off]	×							×	**NOTE:** The item is displayed, but it is not monitored
BSW/CTA SW IND [On/Off]	×							×	**NOTE:** The item is displayed, but it is not monitored
BATTERY CIRCUIT OFF [On/Off]									**NOTE:** The item is displayed, but it is not used
LDW ON INDICATOR [On/Off]							×		Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDICATOR [On/Off]							×		Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/VDC OFF]			×		×	×			Indicates status of system cancel display output
CAMERA HI TEMP MSG [On/Off]							×		Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(LDP) [On/Off]					×	×			Indicates the presence or absence of LDP system.
BSW ON INDICATOR [On/Off]								×	Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]								×	Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]							×		**NOTE:** The item is displayed, but it is not monitored

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
BSW IND BRIGHTNESS [Nothing/Bright/Normal/Dark]								×	Indicates status of brightness of Blind Spot Warning indicator
G SENSOR SIGNAL [On/Off]									**NOTE:** The item is displayed, but it is not monitored
RADAR COMMAND SIGNAL [Normal/Abnormal]		×							**NOTE:** The item is displayed, but it is not monitored
ICC SYSTEM ON [On/Off]		×							**NOTE:** The item is displayed, but it is not monitored
ICC AVAILABLE COND [On/Off]		×							**NOTE:** The item is displayed, but it is not monitored
FEB AVAILABLE COND [On/Off]				×					**NOTE:** The item is displayed, but it is not monitored
FCW AVAILABLE COND [On/Off]				×					**NOTE:** The item is displayed, but it is not monitored
EBA AVAILABLE COND [On/Off]				×					**NOTE:** The item is displayed, but it is not monitored

ACTIVE TEST

Test item	Description
ADAS buzzer 2	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Intelligent Cruise Control (ICC) • Forward Emergency Brake (FEB) with pedestrian • Forward Emergency Brake (FEB) • Blind Spot Warning (BSW) • Lane Departure Warning (LDW) • Lane Departure Prevention (LDP)

ADAS buzzer 2

Test item	Operation	Description	Warning buzzer
ADAS buzzer 2	On	Stops transmitting the buzzer output signal below to end the test	ON
	Off	Transmits the warning buzzer signal to the driver assistance warning buzzer	—
	End	Returns to the “SELECT TEST ITEM” screen	—

ECU IDENTIFICATION

Displays ADAS control unit 2 parts number.

ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000015204105

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

Monitor item	Condition		Value/Status
MAIN SW	Ignition switch ON	When MAIN switch is pressed	On
		When MAIN switch is not pressed	Off
SET/COAST SW	Ignition switch ON	When SET/COAST switch is pressed	On
		When SET/COAST switch is not pressed	Off
CANCEL SW	Ignition switch ON	When CANCEL switch is pressed	On
		When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
		When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition switch ON	When DISTANCE switch is pressed	On
		When DISTANCE switch is not pressed	Off
CRUISE OPE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC system is controlling	On
		When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake pedal is depressed	Off
		When brake pedal is not depressed	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed	On
		When brake pedal is not depressed	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
ENGINE RPM	Engine running		Equivalent to tachometer reading
BA WARNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
STP LMP DRIVE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC brake hold drive is activated	On
		When ICC brake hold drive is not activated	Off
D RANGE SW	Engine running	When the shift selector is in “D” position or manual mode	On
		When the shift selector is in any position other than “D” or manual mode	Off

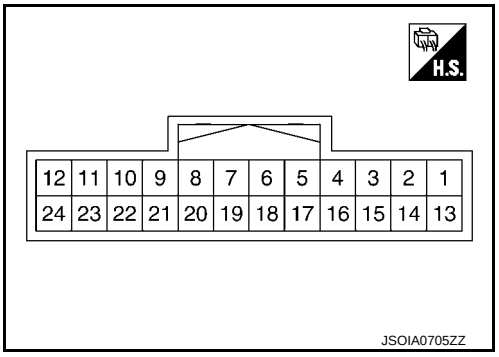
Monitor item	Condition		Value/Status
NP RANGE SW	Engine running	When the shift selector is in “N”, “P” position	On
		When the shift selector is in any position other than “N”, “P”	Off
PKB SW	Ignition switch ON	When the parking brake is applied	On
		When the parking brake is released	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit
VHCL SPD AT	While driving		Value of CVT vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position
GEAR	While driving		Displays the gear position
MODE SIG	Start the engine and press MAIN switch	When ICC system is deactivated	Off
		When vehicle-to-vehicle distance control mode is activated	ICC
		When conventional (fixed speed) cruise control mode is activated	ASCD
SET DISP IND	• Drive the vehicle and activate the conventional (fixed speed) cruise control mode • Press SET/COAST switch	SET vehicle speed indicator ON	On
		SET vehicle speed indicator OFF	Off
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the relative speed.
		When a vehicle ahead is not detected	0.0
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LANE DPRT W/L	Drive the vehicle and activate the LDW system or LDP system	Lane departure warning lamp ON	On
		Lane departure warning lamp OFF	Off
LDW BUZZER OUTPUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning system	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning system	On
		When the buzzer of the following system does not operate • LDW/LDP system • Blind Spot Warning	Off
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
		Lane departure warning is not operating	Off
Camera lost	Drive the vehicle and activate the LDW system or LDP system	Both side lane markers are detected	Detect
		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both

Monitor item	Condition		Value/Status
Lane unclear	While driving	Lane marker is unclear	On
		Lane marker is clear	Off
STATUS signal	Drive the vehicle and activate the LDP system	When the LDP system is ON	Stnby
		When the LDP system is operating	Warn
		When the LDP system is canceled	Cancl
		When the LDP system is OFF	Off
Shift position	• Engine running • While driving		Displays the shift position
Turn signal	Turn signal lamps OFF		Off
	Turn signal lamp LH blinking		LH
	Turn signal lamp RH blinking		RH
	Turn signal lamp LH and RH blinking		LH&RH
SIDE G	While driving	Vehicle turning right	Negative value
		Vehicle turning left	Positive value
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (LDW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
LDP SELECT	Ignition switch ON	"Lane Departure Prevention" set with the integral switch is ON	On
		"Lane Departure Prevention" set with the integral switch is OFF	Off
FCW SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is ON	On
		"Forward Emergency Braking" set with the integral switch is OFF	Off
LDW SELECT	Ignition switch ON	"Lane Departure Warning" set with the integral switch is ON	On
		"Lane Departure Warning" set with the integral switch is OFF	Off
BSW SELECT	Ignition switch ON	"Blind Spot Warning" set with the integral switch is ON	On
		"Blind Spot Warning" set with the integral switch is OFF	Off
BSW/BSI WARN LMP	Engine running	When the BSW system is malfunctioning	On
		When the BSW system is normal	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On
		When the BSW system is OFF	Off
FCW SYSTEM ON	Engine running	When the FEB system is ON	On
		When the FEB system is OFF	Off
BATTERY CIRCUIT OFF	**NOTE:** The item is indicated, but not used		Off
LDP WARNING INDICATOR	Engine running	When the LDP system is malfunctioning	On
		When the LDP system is normal	Off
LDW ON INDICATOR	Engine running	LDW system display ON	On
		LDW system display OFF	Off
LDW WARNING INDICATOR	Engine running	When the LDW system is malfunctioning	On
		When the LDW system is normal	Off

Monitor item	Condition		Value/Status
SYSTEM CANCEL MESSAGE	Engine running	When the vehicle is normal	NOREQ
		When the wheel is slipping	SLIP
		When the VDC is OFF	VDC OFF
CAMERA HI TEMP MSG	Engine running	Lane camera unit high temperature warning display ON	On
		Lane camera unit high temperature warning display OFF	Off
ITS SETTING ITEM(LDP)	Ignition switch ON		On
BSW ON INDICATOR	Engine running	BSW system display ON	On
		BSW system display OFF	Off
SIDE RADAR BLOCK COND	Engine running	Front bumper or side radar is dirty	On
		Front bumper and side radar is clean	Off
LDW WARNING ALERT TIMING	Ignition switch ON	LDW system OFF	Nothing
		Lane departure warning timing is early setting	Early
		Lane departure warning timing is late setting	Late
BSW IND BRIGHT-NESS	Ignition switch ON	BSW system OFF	Nothing
		Blind Spot Warning indicator brightness bright	Bright
		Blind Spot Warning indicator brightness normal	Normal
		Blind Spot Warning indicator brightness dark	Dark

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
1 (L)	Ground	CAN high	—	—	—	—
2 (R)		CAN low	—	—	—	—
5 (B)		Ground	—	Ignition switch ON	—	0 V
6 (L)		ITS communication high	—	—	—	—
7 (Y)		ITS communication low	—	—	—	—
8 (L)		Chassis communication high	—	—	—	—
9 (W)		Chassis communication low	—	—	—	—
12 (P)		Ignition power supply	Input	Ignition switch ON		Battery voltage
18 (W)		Warning system switch (with FEB)	Input	Ignition switch ON	When warning system switch is not pressed	Battery voltage
					When warning system switch is pressed	0 V
19 (BR)		Warning system ON indicator (with FEB)	Output	Ignition switch ON	Warning system ON indicator ON	0 V
					Warning system ON indicator OFF	Battery voltage

Fail-safe (ADAS Control Unit)

INFOID:0000000015204106

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

System	Buzzer	Warning lamp/Warning display	Description
Vehicle-to-vehicle distance control mode	High-pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High-pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High-pitched tone	FEB warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000015204107

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

Priority	Detected items (DTC)	
1	• C1A0A: CONFIG UNFINISHED • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)	
2	• C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • C1A04: ABS/TCS/VDC CIRC • C1A05: BRAKE SW/STOP L SW • C1A06: OPERATION SW CIRC • C1A07: CVT • C1A1A: HPCM CIRCUIT • C1A13: STOP LAMP RLY FIX • C1A14: ECM CIRCUIT • C1A24: NP RANGE • C1A25: SHIFT RANGE IND • C1A26: ECD MODE MALF • C1A33: CAN TRANSMISSION ERR • C1A34: COMMAND ERROR • C1A39: STRG SEN CIR • C1A40: SYSTEM SW CIR • C1B00: CAMERA UNIT MALF • C1B01: CAM AIMING INCMP • C1B03: CAM ABNRMAL TMP DETCT • C1B53: SIDE RDR R MALF • C1B54: SIDE RDR L MALF • C1B59: CCM • C1B82: DIST SEN OFF-CENTER • C1B83: DIST SEN BLOCKED • C1B84: DIST SEN MALFUNCTION • C1B85: DIST SEN ABNORMAL TEMP • C1B86: DIST SEN PWR SUP CIR • C1B5D: FEB OPE COUNT LIMIT • C1B5A: G SENSOR MALF	• U0121: VDC CAN CIR 2 • U0126: STRG SEN CAN CIR 1 • U0235: ICC SENSOR CAN CIRC 1 • U0155: MET CAN CIRC 1 • U0401: ECM CAN CIR 1 • U0402: TCM CAN CIR 1 • U0415: VDC CAN CIR 1 • U0428: STRG SEN CAN CIR 2 • U1500: CAM CAN CIR 2 • U1501: CAM CAN CIR 1 • U1502: ICC SEN CAN COMM CIR • U1503: SIDE RDR L CAN CIR 2 • U1504: SIDE RDR L CAN CIR 1 • U1505: SIDE RDR R CAN CIR 2 • U1506: SIDE RDR R CAN CIR 1 • U1507: LOST COMM (SIDE RDR R) • U1508: LOST COMM (SIDE RDR L) • U150B: ECM CAN CIRC 3 • U150C: VDC CAN CIRC 3 • U150D: TCM CAN CIRC 3 • U150E: BCM CAN CIRC 3 • U151D: HPCM CAN CIRCUIT 2 • U151E: HPCM CAN CIRCUIT 1 • U1513: METER CAN CIRC 3 • U1514: STRG SEN CAN CIRC 3 • U1515: ICC SENSOR CAN CIRC 3 • U1516: CAM CAN CIR 3 • U1518: SIDE RDR L CAN CIRC 3 • U1519: SIDE RDR R CAN CIRC 3
3	• C1A03: VHCL SPEED SE CIRC	
4	• C1A00: CONTROL UNIT	

DTC Index

INFOID:0000000015204108

Systems for fail-safe
- A: Forward Emergency Braking (FEB)
- B: Blind Spot Warning (BSW)/Rear Cross Traffic Alert (RCTA)
- C: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- D: Forward Emergency Braking (FEB) with pedestrian
- E: Vehicle-to-vehicle distance control mode
- F: Conventional (fixed speed) cruise control mode

DTC	CONSULT display	Fail-safe	Reference
CONSULT		System	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	—	—
C1A0A	CONFIG UNFINISHED	A, B, C, D, E, F	DAS-67
C1A00	CONTROL UNIT	A, B, C, D, E, F	DAS-68
C1A01	POWER SUPPLY CIR	A, B, C, D, E, F	DAS-70
C1A02	POWER SUPPLY CIR 2	A, B, C, D	DAS-70
C1A03	VHCL SPEED SE CIRC	A, B, C, D	DAS-72
C1A04	ABS/TCS/VDC CIRC	A, B, C, D	DAS-76
C1A05	BRAKE SW/STOP L SW	A, B, C	DAS-79

Systems for fail-safe

- A: Forward Emergency Braking (FEB)
- B: Blind Spot Warning (BSW)/Rear Cross Traffic Alert (RCTA)
- C: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- D: Forward Emergency Braking (FEB) with pedestrian
- E: Vehicle-to-vehicle distance control mode
- F: Conventional (fixed speed) cruise control mode

DTC	CONSULT display	Fail-safe	Reference
CONSULT		System	
C1A06	OPERATION SW CIRC	A, B	DAS-82
C1A07	CVT CIRCUIT	A, B, C, D	DAS-85
C1A1A	HPCM CIRCUIT	A, B, C, D, E, F	DAS-87
C1A13	STOP_LAMP_RLY_FIX	A, B, C	DAS-90
C1A14	ECM CIRCUIT	A, B, C	DAS-93
C1A24	NP RANGE	A, B, C	DAS-95
C1A25	SHIFT RANGE IND	A, B, C	DAS-97
C1A26	ECD MODE MALF	A, B, C	DAS-99
C1A33	CAN TRANSMISSION ERR	A, B, C, D	DAS-101
C1A34	COMMAND ERROR	A, B, C, D	DAS-103
C1A39	STRG SEN CIR	A, B, C	DAS-104
C1A40	SYSTEM SW CIR	A, B, C	DAS-107
C1B00	CAMERA UNIT MALF	A, B	DAS-109
C1B01	CAM AIMING INCMP	A, B	DAS-111
C1B03	ABNRML TMP DETCT	A, B	DAS-113
C1B53	SIDE RDR R MALF	B	DAS-115
C1B54	SIDE RDR L MALF	B	DAS-117
C1B59	CCM	A, B, C, D	DAS-119
C1B82	DIST SEN OFF CENTER	A, C	DAS-121
C1B83	DIST SEN BLOCKED	A, C	DAS-122
C1B84	DIST SEN MALFUNCTION	A, C	DAS-123
C1B85	DIST SEN ABNORMAL TEMP	A, C	DAS-124
C1B86	DIST SEN PWR SUP CIR	A, C	DAS-125
C1B5A	G SENSOR MALF	A, B, C	DAS-127
C1B5D	FEB OPE COUNT LIMIT	A, B, C	DAS-129
U0121	VDC CAN CIR 2	A, B, C	DAS-130
U0126	STRG SEN CAN CIR 1	A, B, C	DAS-133
U0155	MET CAN CIR 1	A, B, C	DAS-136
U0235	ICC SENSOR CAN CIRC 1	A, C	DAS-138
U0401	ECM CAN CIR 1	A, B, C	DAS-140
U0402	TCM CAN CIR 1	A, B, C	DAS-142
U0415	VDC CAN CIR 1	A, B	DAS-144
U0428	STRG SEN CAN CIR 2	A, C	DAS-147
U1000[NOTE]	CAN COMM CIRCUIT	A, B	DAS-150
U1010	CONTROL UNIT (CAN)	A, B	DAS-153
U150B	ECM CAN CIRC 3	A, B	DAS-155
U150C	VDC CAN CIRC 3	A, B	DAS-157
U150D	TCM CAN CIRC 3	A, B	DAS-159

Systems for fail-safe
- A: Forward Emergency Braking (FEB)
- B: Blind Spot Warning (BSW)/Rear Cross Traffic Alert (RCTA)
- C: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- D: Forward Emergency Braking (FEB) with pedestrian
- E: Vehicle-to-vehicle distance control mode
- F: Conventional (fixed speed) cruise control mode

DTC	CONSULT display	Fail-safe	Reference
CONSULT		System	
U150E	BCM CAN CIRC 3	A, B	DAS-161
U1500	CAM CAN CIR2	B, C	DAS-172
U1501	CAM CAN CIR 1	B, C	DAS-175
U1502	ICC SEN CAN COMM CIR	A	DAS-178
U1503	SIDE RDR L CAN CIR 2	B	DAS-179
U1504	SIDE RDR L CAN CIR 1	B	DAS-182
U1505	SIDE RDR R CAN CIR 2	B	DAS-185
U1506	SIDE RDR R CAN CIR 1	B	DAS-188
U1507	LOST COMM (SIDE RDR R)	B	DAS-191
U1508	LOST COMM (SIDE RDR L)	B	DAS-194
U151D	HPCM CAN CIRCUIT 2	A, B, C, D, E, F	DAS-163
U151E	HPCM CAN CIRCUIT 1	A, B, C, D, E, F	DAS-166
U1513	METER CAN CIRC 3	A, B, C	DAS-197
U1514	STRG SEN CAN CIRC 3	A, B, C	DAS-199
U1515	ICC SENSOR CAN CIRC 3	A	DAS-201
U1516	CAM CAN CIRC 3	B, C	DAS-202
U1518	SIDE RDR L CAN CIRC 3	B	DAS-204
U1519	SIDE RDR R CAN CIRC 3	B	DAS-206

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

ADAS CONTROL UNIT 2

Reference Value

INFOID:0000000015204109

VALUES ON THE DIAGNOSIS TOOL

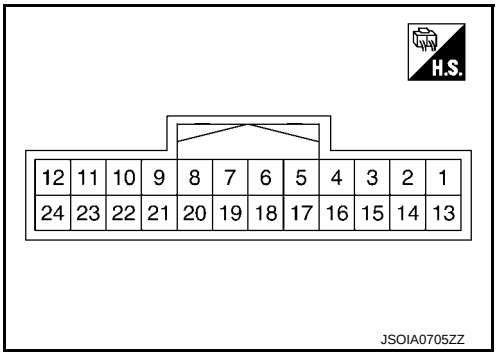
NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition		Value/Status
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed.	Off
		When brake or clutch pedal is not depressed.	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed.	On
		When brake pedal is not depressed.	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
SET VHCL SPD	While driving	When vehicle speed is set.	Displays the set vehicle speed
BUZZER O/P	Engine running	When the buzzer of the following system operates: • FCW system • FEB system	On
		When the buzzer of the following system not operates: • FCW system • FEB system	Off
ENGINE RPM	Engine running		Equivalent to tachometer reading
WIPER SW	Ignition switch ON	Wiper not operating.	Off
		Wiper LO operation.	Low
		Wiper HI operation.	High
BA WARNING	Engine running	FEB OFF indicator lamp ON. • When FEB system is malfunctioning. • When FEB system is turned to OFF.	On
		FEB OFF indicator lamp OFF. • When FEB system is normal. • When FEB system is turned to ON.	Off
D POSITION SW	Engine running	When the selector lever is in “D” position or manual mode.	On
		When the selector lever is in any position other than “D” or manual mode.	Off
NP RANGE SW	Engine running	When the selector lever is in “N”, “P” position.	On
		When the selector lever is in any position other than “N”, “P”.	Off
PKB SW	Ignition switch ON	When the parking brake is applied.	On
		When the parking brake is released.	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit

Monitor item	Condition		Value/Status
VHCL SPD AT	While driving		Value of CVT vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal.	Displays the throttle position
GEAR	While driving		Displays the gear position
NP SW SIG	Ignition switch ON	When the shift lever is in neutral position.	On
		When the shift lever is in any position other than neutral.	Off
SET DISP IND	Press SET/COAST switch	SET switch indicator ON.	On
		SET switch indicator OFF.	Off
DISTANCE	Drive the vehicle and activate the FCW/FEB system	When a vehicle ahead is detected.	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected.	0.0
RELATIVE SPD	Drive the vehicle and activate the FCW/FEB system	When a vehicle ahead is detected.	Displays the relative speed.
		When a vehicle ahead is not detected.	0.0
SIDE G	While driving	Vehicle turning right.	Negative value
		Vehicle turning left.	Positive value
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
FCW SELECT	Ignition switch ON	“Forward Emergency Braking” set with the integral switch is ON.	On
		“Forward Emergency Braking” set with the integral switch is OFF.	Off
BSW SELECT	Ignition switch ON	“Blind Spot Warning” set with the integral switch is ON.	On
		“Blind Spot Warning” set with the integral switch is OFF.	Off
BSWBSI WARN LMP	Engine running	When the BSW system is malfunctioning.	On
		When the BSW system is normal.	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON.	On
		When the BSW system is OFF.	Off
FCW SYSTEM ON	Engine running	When the FEB system is ON.	On
		When the FEB system is OFF.	Off
BSW ON INDICATOR	Engine running	BSW system display ON.	On
		BSW system display OFF.	Off
SIDE RADAR BLOCK COND	Engine running	Rear bumper or side radar is dirty.	On
		Rear bumper or side radar is clean.	Off
BSW IND BRIGHTNESS	Ignition switch ON	BSW system OFF.	Nothing
		Blind Spot Warning indicator brightness bright.	Bright
		Blind Spot Warning indicator brightness normal.	Normal
		Blind Spot Warning indicator brightness dark.	Dark
FEB AVAILABLE COND	Engine running	When the FEB system is available condition.	On
		When the FEB system is not available condition.	Off
EBA AVAILABLE COND	Engine running	When the Brake Assist system is available condition.	On
		When the Brake Assist system is not available condition.	Off

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Ground	Input	—		0 V
2 (L)		ITS communication high	—	—		—
3 (P)		Ignition power supply	Input	Ignition switch ON		Battery voltage
5 (Y)		ITS communication low	—	—		—
6 (Y)		CAN low	—	—		—
9 (L)		CAN high	—	—		—
10 (R)		CAN low	—	—		—
11 (W)		Warning system switch (without FEB)	Input	Ignition switch ON	Warning system switch is not pressed	Battery voltage
					Warning system switch is pressed	0 V
12 (GR)		Warning buzzer signal	Output	Ignition switch ON	Warning buzzer operation	Battery voltage
					Warning buzzer not operating	0 V
17 (BR)		Warning system switch ON indicator (without FEB)	Output	Ignition switch ON	Warning system ON indicator is OFF	Battery voltage
					Warning system ON indicator is ON	0 V
18 (L)		CAN high	—	—		—
24 (B)		Warning buzzer ground	—	—	—	—

Fail-safe (ADAS Control Unit 2)

INFOID:0000000015204110

If a malfunction occurs in each system, ADAS control unit 2 cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning display	Description
Lane Departure Warning (LDW)	—	Warning systems indicator (Lane position: Yellow)	Cancel
Lane Departure Prevention (LDP)	Low-pitched tone	Warning systems indicator (Lane position: Yellow)	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000015204111

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

Priority	Detected items (DTC)	
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN) • U1321: CONFIG UNFINISHED	
2	• C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • C1A04: ABS/TCS/VDC CIRC • C1A05: BRAKE SW/STOP L SW • C1A07: CVT • C1A1A: HPCM CIRCUIT • C1A39: STRG SEN CIR • C1B00: CAMERA UNIT MALF • C1B01: CAM AIMING INCMP • C1B03: CAM ABNRMAL TMP DETCT • C1B53: SIDE RDR R MALF • C1B54: SIDE RDR L MALF	• U0121: VDC CAN CIR 2 • U0126: STRG SEN CAN CIR 1 • U0415: VDC CAN CIR 1 • U0428: STRG SEN CAN CIR 2 • U1402: CVT CAN CIR2 • U1500: CAM CAN CIR 2 • U1501: CAM CAN CIR 1 • U1503: SIDE RDR L CAN CIR 2 • U1504: SIDE RDR L CAN CIR 1 • U1505: SIDE RDR R CAN CIR 2 • U1506: SIDE RDR R CAN CIR 1 • U1507: LOST COMM (SIDE RDR R) • U1508: LOST COMM (SIDE RDR L) • U151D: HPCM CAN CIRCUIT 2 • U151E: HPCM CAN CIRCUIT 1
3	• C1A03: VHCL SPEED SE CIRC	
4	• C1A00: CONTROL UNIT	

DTC Index

INFOID:0000000015204112

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

DTC CONSULT	CONSULT display	Reference
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	—
C1A00	CONTROL UNIT	DAS-68
C1A01	POWER SUPPLY CIR	DAS-71
C1A02	POWER SUPPLY CIR 2	DAS-71
C1A03	VHCL SPEED SE CIRC	DAS-73

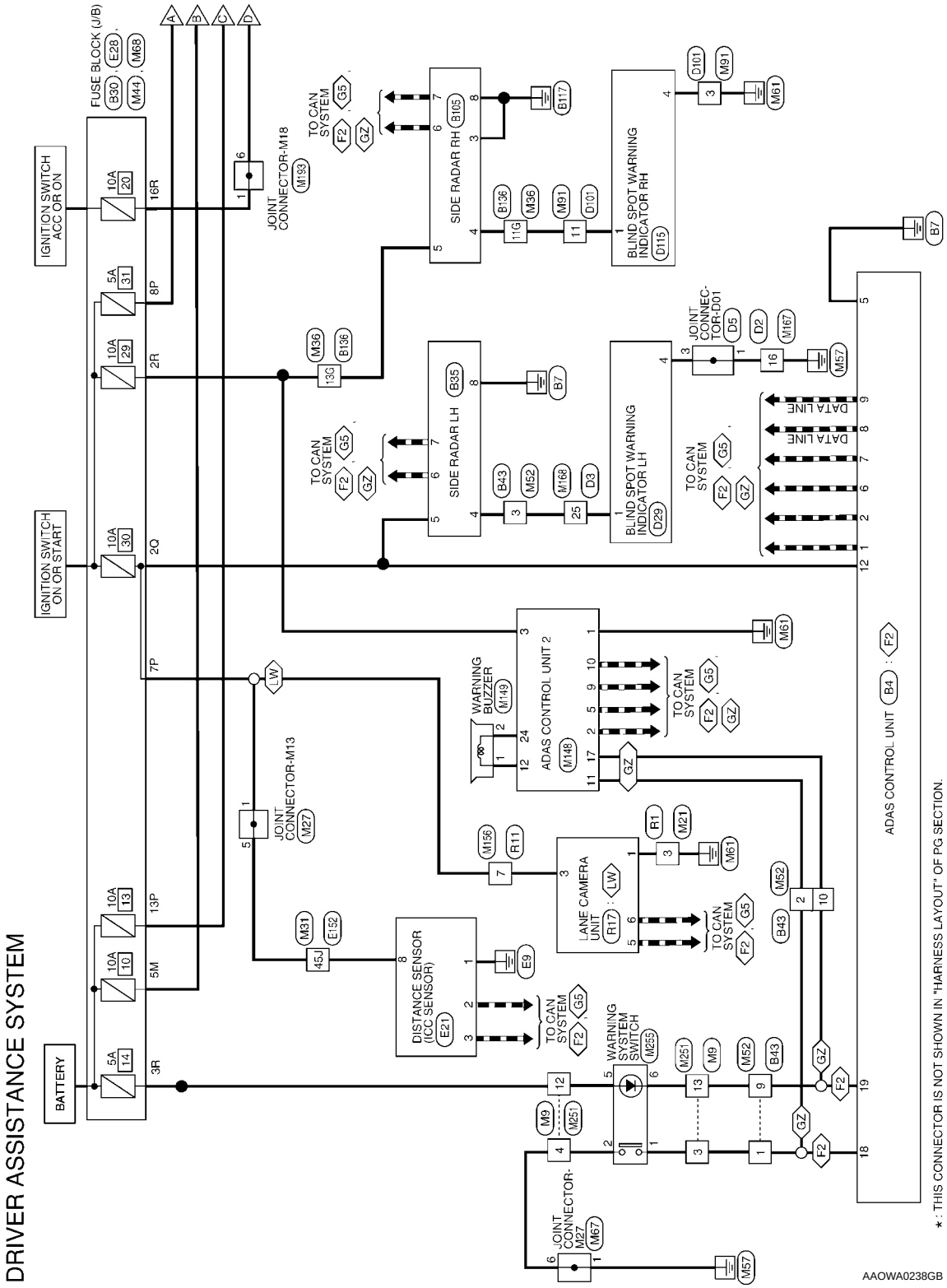
DTC CONSULT	CONSULT display	Reference
C1A04	ABS/TCS/VDC CIRC	DAS-77
C1A05	BRAKE SW/STOP L SW	DAS-80
C1A07	CVT CIRCUIT	DAS-86
C1A1A	HPCM CIRCUIT	DAS-71
C1A39	STRG SEN CIR	DAS-105
C1B00	CAMERA UNIT MALF	DAS-109
C1B01	CAM AIMING INCMP	DAS-112
C1B03	ABNRML TMP DETCT	DAS-114
C1B53	SIDE RDR R MALF	DAS-115
C1B54	SIDE RDR L MALF	DAS-117
U0121	VDC CAN CIR 2	DAS-131
U0126	STRG SEN CAN CIR 1	DAS-134
U0415	VDC CAN CIR 1	DAS-145
U0428	STRG SEN CAN CIR 2	DAS-148
U1000[NOTE]	CAN COMM CIRCUIT	DAS-151
U1010	CONTROL UNIT (CAN)	DAS-154
U1321	CONFIG UNFINISHED	DAS-169
U1402	CVT CAN CIRC 1	DAS-170
U1500	CAM CAN CIR2	DAS-173
U1501	CAM CAN CIR 1	DAS-176
U1503	SIDE RDR L CAN CIR 2	DAS-180
U1504	SIDE RDR L CAN CIR 1	DAS-183
U1505	SIDE RDR R CAN CIR 2	DAS-186
U1506	SIDE RDR R CAN CIR 1	DAS-189
U1507	LOST COMM (SIDE RDR R)	DAS-191
U1508	LOST COMM (SIDE RDR L)	DAS-194
U151D	HPCM CAN CIRCUIT 2	DAS-194
U151E	HPCM CAN CIRCUIT 1	DAS-194

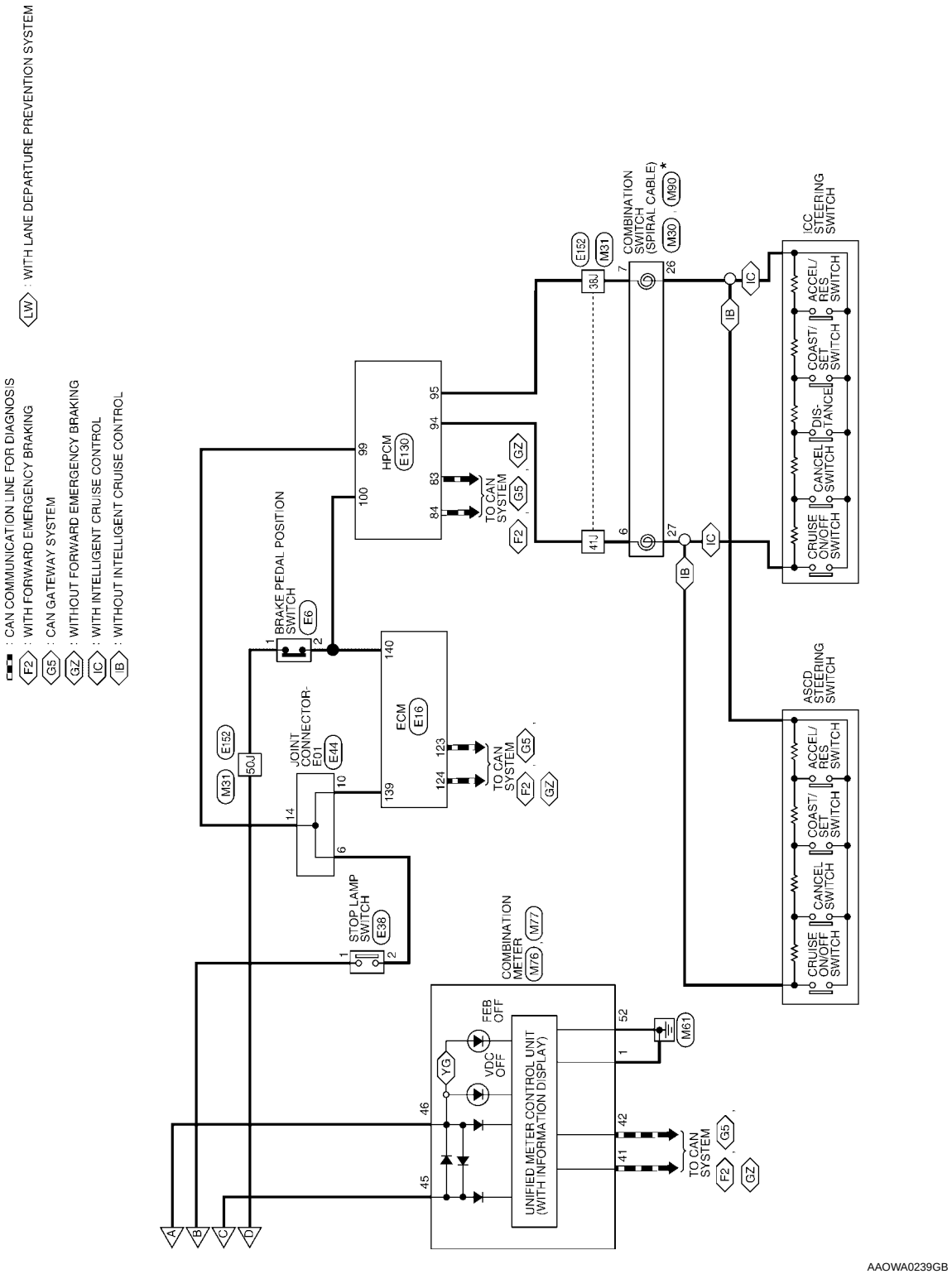
WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

INFOID:0000000015204113




: CAN COMMUNICATION LINE FOR DIAGNOSIS
F2 : WITH FORWARD EMERGENCY BRAKING
G5 : CAN GATEWAY SYSTEM
GZ : WITHOUT FORWARD EMERGENCY BRAKING
IC : WITH INTELLIGENT CRUISE CONTROL
IB : WITHOUT INTELLIGENT CRUISE CONTROL
LW : WITH LANE DEPARTURE PREVENTION SYSTEM
HPCM E130
BRAKE PEDAL POSITION SWITCH E6
ECM E16
JOINT CONNECTOR-E01 E44
STOP LAMP SWITCH E38
COMBINATION METER M76 M77
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
FEB OFF
VDC OFF
YG
M61
TO CAN SYSTEM F2 G5 GZ
COMBINATION SWITCH (SPIRAL CABLE)* M30 M90
E152 M31
38J
41J
50J
ICC STEERING SWITCH
CRUISE ON/OFF SWITCH
CANCEL SWITCH
DIS-TANCE
COAST/ SET SWITCH
ACCEL/ RES SWITCH
ASCD STEERING SWITCH
A B C D
AAOWA0239GB

DRIVER ASSISTANCE SYSTEM CONNECTORS

8	B	GND

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	R	TO MAIN HARNESS
4	L	TO MAIN HARNESS
5	L	TO MAIN HARNESS
6	L	TO MAIN HARNESS
7	L	TO MAIN HARNESS
8	L	TO MAIN HARNESS
9	BR	TO MAIN HARNESS
10	BR	TO MAIN HARNESS
11	–	TO MAIN HARNESS
12	Y	TO MAIN HARNESS
13	R	TO MAIN HARNESS
14	Y	TO MAIN HARNESS
15	Y	TO MAIN HARNESS
16	Y	TO MAIN HARNESS

Connector No.	B105
Connector Name	SIDE RADAR RH
Connector Type	JAD08FB-6P
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8

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

Connector No.	B30
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-CS
Connector Color	WHITE

H.S.

3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

Terminal No.	Color of Wire	Signal Name
1Q	BG	ACCESSORY
2Q	BR	IGNITION
3Q	R	BATTERY
4Q	–	–
5Q	–	–
6Q	LA/L	BATTERY
7Q	–	–
8Q	–	–

Connector No.	B35
Connector Name	SIDE RADAR LH
Connector Type	JAD08FB-5P
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8

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

Connector No.	B4
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	V-CAN H
2	R	V-CAN L
3	–	–
4	–	–
5	B	GND
6	L	ITS-CAN H
7	Y	ITS-CAN L
8	L	IC-CAN H
9	W	IC-CAN L
10	–	–
11	–	–
12	P	IGN
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	W	BSW SW
19	BR	BSW LED
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1G	LA/GR	TO MAIN HARNESS
2G	LA/P	TO MAIN HARNESS
3G	Y	TO MAIN HARNESS
4G	L	TO MAIN HARNESS
5G	G	TO MAIN HARNESS
6G	LA/BR	TO MAIN HARNESS
7G	BR	TO MAIN HARNESS
8G	LA/L	TO MAIN HARNESS
9G	LA/R	TO MAIN HARNESS
10G	R	TO MAIN HARNESS
11G	G	TO MAIN HARNESS
12G	Y	TO MAIN HARNESS
13G	BR	TO MAIN HARNESS
14G	–	TO MAIN HARNESS
15G	Y	TO MAIN HARNESS
16G	–	TO MAIN HARNESS
17G	–	TO MAIN HARNESS
18G	R	TO MAIN HARNESS
19G	R	TO MAIN HARNESS
20G	W	TO MAIN HARNESS
21G	P	TO MAIN HARNESS
22G	P	TO MAIN HARNESS
23G	L	TO MAIN HARNESS
24G	W	TO MAIN HARNESS
25G	L	TO MAIN HARNESS

26G	–	TO MAIN HARNESS
27G	–	TO MAIN HARNESS
28G	–	TO MAIN HARNESS
29G	SB	TO MAIN HARNESS
30G	–	TO MAIN HARNESS
31G	–	TO MAIN HARNESS
32G	–	TO MAIN HARNESS
33G	–	TO MAIN HARNESS
34G	V	TO MAIN HARNESS
35G	BR	TO MAIN HARNESS
36G	SHIELD	TO MAIN HARNESS
37G	LG	TO MAIN HARNESS
38G	V	TO MAIN HARNESS
39G	SHIELD	TO MAIN HARNESS
40G	G	TO MAIN HARNESS
41G	R	TO MAIN HARNESS
42G	–	TO MAIN HARNESS
43G	–	TO MAIN HARNESS
44G	BG	TO MAIN HARNESS
45G	SHIELD	TO MAIN HARNESS
46G	W	TO MAIN HARNESS
47G	R	TO MAIN HARNESS
48G	SHIELD	TO MAIN HARNESS
49G	L	TO MAIN HARNESS
50G	Y	TO MAIN HARNESS
51G	–	TO MAIN HARNESS
52G	–	TO MAIN HARNESS
53G	–	TO MAIN HARNESS
54G	–	TO MAIN HARNESS
55G	–	TO MAIN HARNESS
56G	–	TO MAIN HARNESS
57G	–	TO MAIN HARNESS
58G	–	TO MAIN HARNESS
59G	–	TO MAIN HARNESS
60G	GR	TO MAIN HARNESS
61G	V	TO MAIN HARNESS
62G	–	TO MAIN HARNESS
63G	–	TO MAIN HARNESS
64G	–	TO MAIN HARNESS
65G	–	TO MAIN HARNESS
66G	–	TO MAIN HARNESS
67G	–	TO MAIN HARNESS
68G	–	TO MAIN HARNESS
69G	–	TO MAIN HARNESS
70G	–	TO MAIN HARNESS
71G	–	TO MAIN HARNESS
72G	–	TO MAIN HARNESS
73G	–	TO MAIN HARNESS
74G	–	TO MAIN HARNESS
75G	–	TO MAIN HARNESS
76G	–	TO MAIN HARNESS
77G	–	TO MAIN HARNESS
78G	LA/R	TO MAIN HARNESS

79G	LA/V	TO MAIN HARNESS
80G	LA/B	TO MAIN HARNESS
81G	LA/L	TO MAIN HARNESS
82G	–	TO MAIN HARNESS
83G	–	TO MAIN HARNESS
84G	–	TO MAIN HARNESS
85G	–	TO MAIN HARNESS
86G	–	TO MAIN HARNESS
87G	–	TO MAIN HARNESS
88G	–	TO MAIN HARNESS
89G	–	TO MAIN HARNESS
90G	–	TO MAIN HARNESS
91G	R	TO MAIN HARNESS
92G	BR	TO MAIN HARNESS
93G	W	TO MAIN HARNESS
94G	LA/V	TO MAIN HARNESS
95G	V	TO MAIN HARNESS
96G	G	TO MAIN HARNESS
97G	P	TO MAIN HARNESS
98G	GR	TO MAIN HARNESS
99G	LA/Y	TO MAIN HARNESS
100G	Y	TO MAIN HARNESS

16	B	TO MAIN HARNESS

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO MAIN HARNESS
2	R	TO MAIN HARNESS
3	G	TO MAIN HARNESS
4	BR	TO MAIN HARNESS
5	P	TO MAIN HARNESS
6	LA/L	TO MAIN HARNESS
7	LA/BR	TO MAIN HARNESS
8	SB	TO MAIN HARNESS
9	GR	TO MAIN HARNESS
10	L	TO MAIN HARNESS
11	P	TO MAIN HARNESS
12	LG	TO MAIN HARNESS
13	Y	TO MAIN HARNESS
14	V	TO MAIN HARNESS
15	R	TO MAIN HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	TO MAIN HARNESS
2	GR	TO MAIN HARNESS
3	W	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
3	LA/SB	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
4	V	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
4	LA/BG	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
5	SB	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
5	LA/Y	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
6	LG	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	LA/V	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
7	W	TO MAIN HARNESS
8	V	TO MAIN HARNESS
9	SB	TO MAIN HARNESS
10	LG	TO MAIN HARNESS
11	GR	TO MAIN HARNESS
12	G	TO MAIN HARNESS
13	Y	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	BG	TO MAIN HARNESS
16	L	TO MAIN HARNESS
17	LA/SB	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
17	LA/W	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
18	LA/Y	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
18	LA/W	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
19	LA/LG	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
19	LA/BR	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
20	LA/V	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
20	LA/GR	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)

21	BR	TO MAIN HARNESS
22	W	TO MAIN HARNESS
23	LA/R	TO MAIN HARNESS
24	GR	TO MAIN HARNESS
25	R	TO MAIN HARNESS
26	LA/G	TO MAIN HARNESS
27	LA/LG	TO MAIN HARNESS
28	LA/L	TO MAIN HARNESS
29	LA/Y	TO MAIN HARNESS
30	LA/V	TO MAIN HARNESS
31	LA/BR	TO MAIN HARNESS
32	P	TO MAIN HARNESS

Connector No.	D5
Connector Name	JOINT CONNECTOR-D01
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	LA/B	GROUND
6	B	GROUND (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	LA/B	GROUND (WITH AUTOMATIC DRIVE POSITIONER)
7	B	GROUND
8	LA/B	GROUND

Connector No.	D29
Connector Name	BLIND SPOT WARNING INDICATOR LH
Connector Type	TH04MW-NH
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	R	LED INDICATOR L
2	–	–
3	–	–
4	B	GROUND

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	B	TO MAIN HARNESS
4	P	TO MAIN HARNESS
5	R	TO MAIN HARNESS
6	SB	TO MAIN HARNESS
7	L	TO MAIN HARNESS
8	V	TO MAIN HARNESS
9	Y	TO MAIN HARNESS
10	B	TO MAIN HARNESS
11	G	TO MAIN HARNESS
12	LA/V	TO MAIN HARNESS
13	LA/Y	TO MAIN HARNESS
14	LA/R	TO MAIN HARNESS
15	LA/V	TO MAIN HARNESS
16	LA/L	TO MAIN HARNESS
17	LA/BG	TO MAIN HARNESS
18	GR	TO MAIN HARNESS

19	LG	TO MAIN HARNESS
20	BR	TO MAIN HARNESS
21	LA/G	TO MAIN HARNESS
22	LA/SB	TO MAIN HARNESS
23	LA/BG	TO MAIN HARNESS
24	LA/Y	TO MAIN HARNESS

Connector No.	D115
Connector Name	BLIND SPOT WARNING INDICATOR RH
Connector Type	TH04MW-NH
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	G	LED INDICATOR
2	–	–
3	–	–
4	B	GROUND

Connector No.	E6
Connector Name	BRAKE PEDAL POSITION SWITCH
Connector Type	M02FBR-LC
Connector Color	BROWN

H.S.

2
1

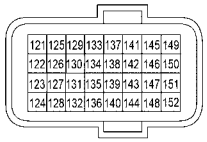
Terminal No.	Color of Wire	Signal Name
1	P	IGNITION
2	GR	SWITCH OUTPUT

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E16
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH
Connector Color	BLACK

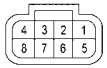
H.S.



Terminal No.	Color of Wire	Signal Name
121	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
122	–	–
123	P	CAN-L
124	L	CAN-H
125	R	SENSOR POWER SUPPLY
126	–	–
127	–	–
128	BG	FUEL TANK TEMPERATURE SENSOR
129	–	–
130	–	–
131	–	–
132	–	–
133	LG	IGNITION SWITCH
134	–	–
135	–	–
136	–	–
137	G	HEV CAN-L
138	L	HEV CAN-H
139	Y	STOP LAMP SWITCH
140	GR	BRAKE PEDAL POSITION SWITCH
141	Y	EVAP CANISTER VENT CONTROL VALVE
142	–	–
143	–	–
144	–	–
145	G	ECM POWER SUPPLY
146	–	–
147	GR	ECM GROUND
148	B	SENSOR GROUND
149	GR	ECM GROUND
150	–	–
151	–	–
152	GR	ECM GROUND

Connector No.	E21
Connector Name	DISTANCE SENSOR
Connector Type	SAZ08FGY
Connector Color	GRAY

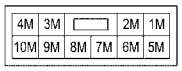
H.S.



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

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1M	–	–
2M	–	–
3M	–	–
4M	–	–
5M	V	BATTERY
6M	Y	O LIGHT POSITION REAR LH
7M	–	–
8M	–	–
9M	–	–
10M	–	–

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC
Connector Color	WHITE

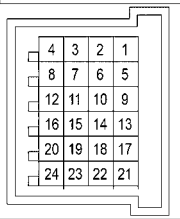
H.S.



Terminal No.	Color of Wire	Signal Name
1	V	BATTERY
2	LG	I BRAKE SW2
3	L	IGNITION
4	W	STOP LAMP SWITCH OUTPUT

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Type	NH24FG-J
Connector Color	GREEN

H.S.



Terminal No.	Color of Wire	Signal Name
1	V	SENSOR GROUND
2	LG	I BRAKE SW2
3	P	CAN-L
4	L	CAN-H
5	B	SENSOR GROUND
6	LG	I BRAKE SW2
7	P	CAN-L
8	L	CAN-H
9	W	SENSOR GROUND
10	Y	STOP LAMP SWITCH
11	P	CAN-L
12	L	CAN-H
13	–	–
14	R	STOP LAMP SWITCH
15	P	CAN-L
16	L	CAN-H
17	BR	EVAP CONTROL SYSTEM PRESSURE SENSOR
18	–	–
19	P	CAN-L
20	L	CAN-H
21	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
22	–	–
23	–	–
24	–	–

AAOIA0834GB

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E130
Connector Name	HPCM
Connector Type	RH24FB-RZ8-L-RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
81	R	12V BATTERY VOLTAGE
82	–	–
83	P	CAN-L
84	L	CAN-H
85	–	–
86	–	–
87	–	–
88	B	DC/DC CONVERTER VOLTAGE STABILIZER SIGNAL
89	–	–
90	–	–
91	–	–
92	–	–
93	Y	IGNITION SIGNAL
94	G	ASCD STEERING SWITCH
95	BR	ASCD STEERING SWITCH GROUND
96	–	–
97	L	HEV SYSTEM CAN-H
98	G	HEV SYSTEM CAN-L
99	R	STOP LAMP SWITCH
100	W	BRAKE PEDAL POSITION SWITCH
101	–	–
102	SB	SENSOR POWER SUPPLY
103	BR	ACCELERATOR PEDAL POSITION SENSOR 2
104	LG	SENSOR GROUND
105	BR	POWER SUPPLY FOR HPCM
106	V	SENSOR POWER SUPPLY
107	–	–
108	B	HPCM GND
109	–	–
110	GR	ACCELERATOR PEDAL POSITION SENSOR 1
111	R	SENSOR GROUND
112	GR	HPCM GND

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	–	TO MAIN HARNESS
2J	Y	TO MAIN HARNESS
3J	–	TO MAIN HARNESS
4J	–	TO MAIN HARNESS
5J	–	TO MAIN HARNESS
6J	–	TO MAIN HARNESS
7J	–	TO MAIN HARNESS
8J	–	TO MAIN HARNESS
9J	BR	TO MAIN HARNESS
10J	–	TO MAIN HARNESS
11J	–	TO MAIN HARNESS
12J	–	TO MAIN HARNESS
13J	–	TO MAIN HARNESS
14J	–	TO MAIN HARNESS
15J	–	TO MAIN HARNESS
16J	–	TO MAIN HARNESS
17J	–	TO MAIN HARNESS
18J	–	TO MAIN HARNESS
19J	–	TO MAIN HARNESS
20J	–	TO MAIN HARNESS
21J	GR	TO MAIN HARNESS
22J	SHIELD	TO MAIN HARNESS
23J	LG	TO MAIN HARNESS
24J	V	TO MAIN HARNESS
25J	L	TO MAIN HARNESS
26J	BR	TO MAIN HARNESS
27J	G	TO MAIN HARNESS

28J	R	TO MAIN HARNESS
29J	L	TO MAIN HARNESS
30J	V	TO MAIN HARNESS
31J	–	TO MAIN HARNESS
32J	–	TO MAIN HARNESS
33J	R	TO MAIN HARNESS
34J	L	TO MAIN HARNESS
35J	BG	TO MAIN HARNESS
36J	LG	TO MAIN HARNESS
37J	GR	TO MAIN HARNESS
38J	BR	TO MAIN HARNESS
39J	–	TO MAIN HARNESS
40J	–	TO MAIN HARNESS
41J	G	TO MAIN HARNESS
42J	W	TO MAIN HARNESS
43J	L	TO MAIN HARNESS
44J	B	TO MAIN HARNESS
45J	SB	TO MAIN HARNESS
46J	BR	TO MAIN HARNESS
47J	W	TO MAIN HARNESS
48J	W	TO MAIN HARNESS
49J	L	TO MAIN HARNESS
50J	P	TO MAIN HARNESS
51J	W	TO MAIN HARNESS
52J	R	TO MAIN HARNESS
53J	SB	TO MAIN HARNESS
54J	LG	TO MAIN HARNESS
55J	W	TO MAIN HARNESS
56J	BG	TO MAIN HARNESS
57J	R	TO MAIN HARNESS
58J	V	TO MAIN HARNESS
59J	BR	TO MAIN HARNESS
60J	P	TO MAIN HARNESS
61J	L	TO MAIN HARNESS
62J	P	TO MAIN HARNESS
63J	L	TO MAIN HARNESS
64J	R	TO MAIN HARNESS
65J	L	TO MAIN HARNESS
66J	BG	TO MAIN HARNESS
67J	–	TO MAIN HARNESS
68J	–	TO MAIN HARNESS
69J	G	TO MAIN HARNESS
70J	L	TO MAIN HARNESS
71J	–	TO MAIN HARNESS
72J	–	TO MAIN HARNESS
73J	–	TO MAIN HARNESS
74J	–	TO MAIN HARNESS
75J	–	TO MAIN HARNESS
76J	–	TO MAIN HARNESS
77J	–	TO MAIN HARNESS
78J	–	TO MAIN HARNESS
79J	SHIELD	TO MAIN HARNESS
80J	B	TO MAIN HARNESS

81J	W	TO MAIN HARNESS
82J	–	TO MAIN HARNESS
83J	–	TO MAIN HARNESS
84J	–	TO MAIN HARNESS
85J	–	TO MAIN HARNESS
86J	–	TO MAIN HARNESS
87J	–	TO MAIN HARNESS
88J	–	TO MAIN HARNESS
89J	–	TO MAIN HARNESS
90J	–	TO MAIN HARNESS
91J	GR	TO MAIN HARNESS
92J	LG	TO MAIN HARNESS
93J	L	TO MAIN HARNESS
94J	L	TO MAIN HARNESS
95J	BR	TO MAIN HARNESS
96J	–	TO MAIN HARNESS
97J	GR	TO MAIN HARNESS
98J	P	TO MAIN HARNESS
99J	W	TO MAIN HARNESS
100J	Y	TO MAIN HARNESS

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH
Connector Color	WHITE

H.S.

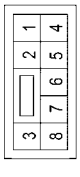
Terminal No.	Color of Wire	Signal Name
1	LG	TO MAIN SUB HARNESS
2	B	TO MAIN SUB HARNESS
3	W	TO MAIN SUB HARNESS
4	B	TO MAIN SUB HARNESS
5	GR	TO MAIN SUB HARNESS
6	BG	TO MAIN SUB HARNESS
7	B	TO MAIN SUB HARNESS
8	B	TO MAIN SUB HARNESS
9	R	TO MAIN SUB HARNESS
10	B	TO MAIN SUB HARNESS
11	R	TO MAIN SUB HARNESS
12	SB	TO MAIN SUB HARNESS
13	BR	TO MAIN SUB HARNESS
14	B	TO MAIN SUB HARNESS
15	R	TO MAIN SUB HARNESS
16	B	TO MAIN SUB HARNESS

AAOIA0835GB

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS
Connector Color	WHITE

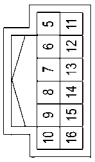
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	TO ROOM LAMP HARNESS
2	V	TO ROOM LAMP HARNESS
3	B	TO ROOM LAMP HARNESS
4	B	TO ROOM LAMP HARNESS
5	–	TO ROOM LAMP HARNESS
6	W	TO ROOM LAMP HARNESS
7	R	TO ROOM LAMP HARNESS
8	Y	TO ROOM LAMP HARNESS

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH
Connector Color	WHITE

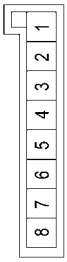
H.S.



Terminal No.	Color of Wire	Signal Name
5	BG	HORN SW
6	LA/R	ACC SW
7	LA/BR	ACC GND
8	Y	AUDIO STRG SW A
9	B	GROUND
10	R	ILL CONT OUT
11	–	–
12	–	–
13	–	–
14	L	AUDIO STRG SHLD
15	GR	AUDIO STRG SW B
16	–	–

Connector No.	M27
Connector Name	JOINT CONNECTOR-M13
Connector Type	SAC08JW
Connector Color	WHITE

H.S.



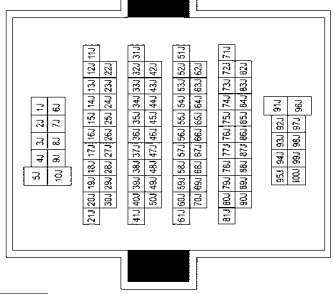
Terminal No.	Color of Wire	Signal Name
1	SB	IGNITION
2	SB	IGNITION
3	SB	IGNITION
4	Y	IGNITION
5	SB	IGNITION
6	SB	IGNITION
7	SB	IGNITION
8	SB	IGNITION

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1J	–	TO ENGINE ROOM HARNESS
2J	R	TO ENGINE ROOM HARNESS
3J	–	TO ENGINE ROOM HARNESS
4J	–	TO ENGINE ROOM HARNESS
5J	–	TO ENGINE ROOM HARNESS
6J	–	TO ENGINE ROOM HARNESS
7J	–	TO ENGINE ROOM HARNESS
8J	–	TO ENGINE ROOM HARNESS
9J	W	TO ENGINE ROOM HARNESS
10J	–	TO ENGINE ROOM HARNESS
11J	–	TO ENGINE ROOM HARNESS
12J	–	TO ENGINE ROOM HARNESS
13J	–	TO ENGINE ROOM HARNESS
14J	–	TO ENGINE ROOM HARNESS
15J	–	TO ENGINE ROOM HARNESS
16J	–	TO ENGINE ROOM HARNESS
17J	–	TO ENGINE ROOM HARNESS
18J	–	TO ENGINE ROOM HARNESS
19J	–	TO ENGINE ROOM HARNESS
20J	–	TO ENGINE ROOM HARNESS
21J	LA/L	TO ENGINE ROOM HARNESS
22J	SHIELD	TO ENGINE ROOM HARNESS
23J	LG	TO ENGINE ROOM HARNESS
24J	V	TO ENGINE ROOM HARNESS
25J	L	TO ENGINE ROOM HARNESS
26J	BR	TO ENGINE ROOM HARNESS
27J	G	TO ENGINE ROOM HARNESS
28J	Y	TO ENGINE ROOM HARNESS
29J	L	TO ENGINE ROOM HARNESS
30J	V	TO ENGINE ROOM HARNESS
31J	–	TO ENGINE ROOM HARNESS
32J	–	TO ENGINE ROOM HARNESS
33J	R	TO ENGINE ROOM HARNESS
33J	Y	TO ENGINE ROOM HARNESS - (WITH DRIVER ASSISTNACE SYSTEM)
34J	L	TO ENGINE ROOM HARNESS
35J	BG	TO ENGINE ROOM HARNESS
36J	GR	TO ENGINE ROOM HARNESS
37J	Y	TO ENGINE ROOM HARNESS
38J	LA/BR	TO ENGINE ROOM HARNESS
39J	–	TO ENGINE ROOM HARNESS
40J	–	TO ENGINE ROOM HARNESS
41J	LA/R	TO ENGINE ROOM HARNESS
42J	W	TO ENGINE ROOM HARNESS
43J	L	TO ENGINE ROOM HARNESS
44J	B	TO ENGINE ROOM HARNESS
45J	SB	TO ENGINE ROOM HARNESS
46J	BR	TO ENGINE ROOM HARNESS
47J	W	TO ENGINE ROOM HARNESS
48J	R	TO ENGINE ROOM HARNESS
49J	SB	TO ENGINE ROOM HARNESS
50J	GR	TO ENGINE ROOM HARNESS
51J	W	TO ENGINE ROOM HARNESS
52J	R	TO ENGINE ROOM HARNESS
53J	BR	TO ENGINE ROOM HARNESS
54J	LG	TO ENGINE ROOM HARNESS
55J	LA/Y	TO ENGINE ROOM HARNESS
56J	LA/V	TO ENGINE ROOM HARNESS
57J	LA/R	TO ENGINE ROOM HARNESS
58J	W	TO ENGINE ROOM HARNESS
59J	BR	TO ENGINE ROOM HARNESS
60J	P	TO ENGINE ROOM HARNESS
61J	L	TO ENGINE ROOM HARNESS
62J	R	TO ENGINE ROOM HARNESS
63J	L	TO ENGINE ROOM HARNESS
64J	R	TO ENGINE ROOM HARNESS
65J	L	TO ENGINE ROOM HARNESS
66J	BG	TO ENGINE ROOM HARNESS
67J	–	TO ENGINE ROOM HARNESS
68J	–	TO ENGINE ROOM HARNESS
69J	G	TO ENGINE ROOM HARNESS
70J	L	TO ENGINE ROOM HARNESS
71J	–	TO ENGINE ROOM HARNESS
72J	–	TO ENGINE ROOM HARNESS
73J	–	TO ENGINE ROOM HARNESS
74J	–	TO ENGINE ROOM HARNESS
75J	–	TO ENGINE ROOM HARNESS
76J	–	TO ENGINE ROOM HARNESS
77J	–	TO ENGINE ROOM HARNESS
78J	–	TO ENGINE ROOM HARNESS
79J	SHIELD	TO ENGINE ROOM HARNESS
80J	B	TO ENGINE ROOM HARNESS
81J	W	TO ENGINE ROOM HARNESS
82J	–	TO ENGINE ROOM HARNESS
83J	–	TO ENGINE ROOM HARNESS
84J	–	TO ENGINE ROOM HARNESS
85J	–	TO ENGINE ROOM HARNESS
86J	–	TO ENGINE ROOM HARNESS
87J	–	TO ENGINE ROOM HARNESS
88J	–	TO ENGINE ROOM HARNESS
89J	–	TO ENGINE ROOM HARNESS
90J	–	TO ENGINE ROOM HARNESS
91J	–	TO ENGINE ROOM HARNESS
92J	Y	TO ENGINE ROOM HARNESS
93J	G	TO ENGINE ROOM HARNESS
94J	L	TO ENGINE ROOM HARNESS
95J	P	TO ENGINE ROOM HARNESS
96J	–	TO ENGINE ROOM HARNESS
97J	SB	TO ENGINE ROOM HARNESS
98J	P	TO ENGINE ROOM HARNESS
99J	LA/R	TO ENGINE ROOM HARNESS
100J	R	TO ENGINE ROOM HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1G	LA/R	TO BODY NO. 2 HARNESS
2G	W	TO BODY NO. 2 HARNESS
3G	Y	TO BODY NO. 2 HARNESS
4G	BG	TO BODY NO. 2 HARNESS
5G	G	TO BODY NO. 2 HARNESS
6G	SB	TO BODY NO. 2 HARNESS
7G	P	TO BODY NO. 2 HARNESS
8G	LA/Y	TO BODY NO. 2 HARNESS
9G	LA/W	TO BODY NO. 2 HARNESS
10G	R	TO BODY NO. 2 HARNESS
11G	G	TO BODY NO. 2 HARNESS
12G	L	TO BODY NO. 2 HARNESS
13G	BR	TO BODY NO. 2 HARNESS
14G	–	TO BODY NO. 2 HARNESS
15G	Y	TO BODY NO. 2 HARNESS
16G	–	TO BODY NO. 2 HARNESS
17G	–	TO BODY NO. 2 HARNESS
18G	R	TO BODY NO. 2 HARNESS
19G	LA/R	TO BODY NO. 2 HARNESS
20G	W	TO BODY NO. 2 HARNESS
21G	BR	TO BODY NO. 2 HARNESS
22G	P	TO BODY NO. 2 HARNESS
23G	L	TO BODY NO. 2 HARNESS
24G	W	TO BODY NO. 2 HARNESS
25G	L	TO BODY NO. 2 HARNESS
26G	–	TO BODY NO. 2 HARNESS
27G	–	TO BODY NO. 2 HARNESS
28G	–	TO BODY NO. 2 HARNESS
29G	–	TO BODY NO. 2 HARNESS
30G	–	TO BODY NO. 2 HARNESS
31G	–	TO BODY NO. 2 HARNESS
32G	–	TO BODY NO. 2 HARNESS
33G	–	TO BODY NO. 2 HARNESS
34G	V	TO BODY NO. 2 HARNESS
35G	BR	TO BODY NO. 2 HARNESS
36G	SHIELD	TO BODY NO. 2 HARNESS
37G	LG	TO BODY NO. 2 HARNESS
38G	V	TO BODY NO. 2 HARNESS
39G	SHIELD	TO BODY NO. 2 HARNESS
40G	G	TO BODY NO. 2 HARNESS
41G	R	TO BODY NO. 2 HARNESS
42G	–	TO BODY NO. 2 HARNESS
43G	–	TO BODY NO. 2 HARNESS
44G	BG	TO BODY NO. 2 HARNESS
45G	SHIELD	TO BODY NO. 2 HARNESS
46G	L	TO BODY NO. 2 HARNESS
47G	Y	TO BODY NO. 2 HARNESS
48G	SHIELD	TO BODY NO. 2 HARNESS
49G	W	TO BODY NO. 2 HARNESS
50G	R	TO BODY NO. 2 HARNESS
51G	–	TO BODY NO. 2 HARNESS
52G	–	TO BODY NO. 2 HARNESS
53G	–	TO BODY NO. 2 HARNESS
54G	–	TO BODY NO. 2 HARNESS
55G	–	TO BODY NO. 2 HARNESS
56G	–	TO BODY NO. 2 HARNESS
57G	–	TO BODY NO. 2 HARNESS
58G	–	TO BODY NO. 2 HARNESS
59G	–	TO BODY NO. 2 HARNESS
60G	GR	TO BODY NO. 2 HARNESS
61G	BR	TO BODY NO. 2 HARNESS
62G	–	TO BODY NO. 2 HARNESS
63G	–	TO BODY NO. 2 HARNESS
64G	–	TO BODY NO. 2 HARNESS
65G	–	TO BODY NO. 2 HARNESS
66G	–	TO BODY NO. 2 HARNESS
67G	–	TO BODY NO. 2 HARNESS
68G	–	TO BODY NO. 2 HARNESS
69G	–	TO BODY NO. 2 HARNESS
70G	–	TO BODY NO. 2 HARNESS
71G	–	TO BODY NO. 2 HARNESS
72G	–	TO BODY NO. 2 HARNESS
73G	–	TO BODY NO. 2 HARNESS
74G	–	TO BODY NO. 2 HARNESS
76G	–	TO BODY NO. 2 HARNESS
77G	–	TO BODY NO. 2 HARNESS
78G	LA/Y	TO BODY NO. 2 HARNESS
79G	LA/V	TO BODY NO. 2 HARNESS
80G	LA/B	TO BODY NO. 2 HARNESS
81G	LA/L	TO BODY NO. 2 HARNESS
82G	–	TO BODY NO. 2 HARNESS
83G	–	TO BODY NO. 2 HARNESS
84G	–	TO BODY NO. 2 HARNESS
85G	–	TO BODY NO. 2 HARNESS
86G	–	TO BODY NO. 2 HARNESS
87G	–	TO BODY NO. 2 HARNESS
88G	–	TO BODY NO. 2 HARNESS
89G	–	TO BODY NO. 2 HARNESS
90G	–	TO BODY NO. 2 HARNESS
91G	R	TO BODY NO. 2 HARNESS
92G	LA/L	TO BODY NO. 2 HARNESS
93G	W	TO BODY NO. 2 HARNESS
94G	LG	TO BODY NO. 2 HARNESS
95G	GR	TO BODY NO. 2 HARNESS
96G	SB	TO BODY NO. 2 HARNESS
97G	LA/BR	TO BODY NO. 2 HARNESS
98G	GR	TO BODY NO. 2 HARNESS
99G	Y	TO BODY NO. 2 HARNESS
100G	V	TO BODY NO. 2 HARNESS

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	G	IGNITION
3P	Y	IGNITION RELAY-2 CONTROL
4P	LG	REAR WINDOW DEFOGGER RELAY OUTPUT
5P	GR	REAR WINDOW DEFOGGER RELAY OUTPUT
6P	LA/R	REAR WINDOW DEFOGGER RELAY CONTROL
7P	Y	IGNITION
8P	V	IGNITION
9P	L	BATTERY
10P	LG	IGNITION
11P	–	–
12P	–	–
13P	G	BATTERY
14P	–	–

15P	L	BATTERY
16P	LA/W	FRONT BLOWER MOTOR RELAY CONTROL

Connector No.	M52
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	TO BODY HARNESS
2	W	TO BODY HARNESS
3	R	TO BODY HARNESS
4	L	TO BODY HARNESS
5	L	TO BODY HARNESS
6	L	TO BODY HARNESS
7	L	TO BODY HARNESS
8	L	TO BODY HARNESS
9	BR	TO BODY HARNESS
10	BR	TO BODY HARNESS
11	–	TO BODY HARNESS
12	Y	TO BODY HARNESS
13	R	TO BODY HARNESS
14	R	TO BODY HARNESS
15	Y	TO BODY HARNESS
16	Y	TO BODY HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M67
Connector Name	JOINT CONNECTOR-M27
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8 7 6 5 4 3 2 1

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	B	GROUND
6	B	GROUND
7	B	GROUND
8	B	GROUND

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1R	V	ILLUMINATION +
2R	G	IGNITION
3R	V	BATTERY
4R	–	–
5R	–	–
6R	LA/L	ACCESSORY
7R	LA/V	BATTERY
8R	–	–
9R	–	–
10R	GR	BATTERY
11R	–	–
12R	–	–
13R	–	–
14R	W	BATTERY
15R	W	BATTERY
16R	GR	ACCESSORY

Connector No.	M76
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	BG	SECURITY
8	–	–
9	GR	ECO MODE SW
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	L	OUTSIDE TEMP SENSOR
16	–	–
17	BG	SATELLITE SW GND
18	SB	TRIP RESET SW
19	–	–
20	Y	OUTSIDE TEMP GND
21	L	GND (STRG SW GND)
22	Y	STRG SW A
23	GR	STRG SW B
24	BR	WASHER SW
25	V	BRAKE OIL SW
26	G	PKB SW
27	–	–
28	Y	DR BELT SW
29	R	SPORT MODE SW
30	LG	M RANGE
31	SB	NOT M RANGE
32	BG	AT SHIFT UP
33	BR	AT SHIFT DOWN
34	–	–
35	–	–
36	GR	ILL UP SW
37	V	ILL DOWN SW
38	G	8P/R OUTPUT
39	W	2P/R OUTPUT
40	–	–

Connector No.	M77
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
43	R	ILL CONT OUT
44	LA/B	FUEL SENSOR GND
45	G	BAT
46	V	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	–	–
50	–	–
51	LA/L	FUEL SENSOR
52	B	G1

Connector No.	M90
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
17	–	–
18	L	AUDIO STRG SW B
19	G	AUDIO STRG SHLD
20	–	–
21	–	–
22	–	–
23	R	ILL (+)
24	Y	ILL (-)
25	P	AUDIO STRG SW A
26	GR	ACC GND
27	V	ACC SW
28	BR	HORN SW

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO FRONT DOOR RH HARNESS
2	GR	TO FRONT DOOR RH HARNESS
3	GR	TO FRONT DOOR RH HARNESS
4	W	TO FRONT DOOR RH HARNESS
5	P	TO FRONT DOOR RH HARNESS
6	SB	TO FRONT DOOR RH HARNESS
7	B	TO FRONT DOOR RH HARNESS
8	L	TO FRONT DOOR RH HARNESS
9	Y	TO FRONT DOOR RH HARNESS
10	SHIELD	TO FRONT DOOR RH HARNESS
11	G	TO FRONT DOOR RH HARNESS
12	V	TO FRONT DOOR RH HARNESS
13	Y	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
13	LA/SB	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
14	R	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
14	LA/GR	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
15	V	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
15	LA/V	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
16	LA/L	TO FRONT DOOR RH HARNESS
17	LA/BG	TO FRONT DOOR RH HARNESS
18	GR	TO FRONT DOOR RH HARNESS
19	LG	TO FRONT DOOR RH HARNESS
20	BR	TO FRONT DOOR RH HARNESS
21	LA/Y	TO FRONT DOOR RH HARNESS
22	SB	TO FRONT DOOR RH HARNESS
23	BG	TO FRONT DOOR RH HARNESS
24	Y	TO FRONT DOOR RH HARNESS

Connector No.	M148
Connector Name	ADAS CONTROL UNIT 2
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	BR	GND
2	L	ITS CAN-H
3	P	IGN
4	-	-
5	Y	ITS CAN-L
6	Y	3RD CAN-L
7	-	-
8	-	-
9	L	V-CAN-H
10	R	V-CAN-L
11	W	BSW SW
12	GR	SPOUT (+)
13	-	-
14	-	-
15	-	-
16	-	-
17	BR	BSW LED
18	L	3RD CAN-H
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	B	SPOUT (-)

Connector No.	M149
Connector Name	WARNING BUZZER
Connector Type	NS02FW-CS
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	GR	SPOUT (+)
2	B	SPOUT (-)

Connector No.	M156
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO ROOM LAMP HARNESS
2	W	TO ROOM LAMP HARNESS
3	SHIELD	TO ROOM LAMP HARNESS
4	R	TO ROOM LAMP HARNESS
5	-	TO ROOM LAMP HARNESS
6	Y	TO ROOM LAMP HARNESS
7	LG	TO ROOM LAMP HARNESS
8	L	TO ROOM LAMP HARNESS
9	R	TO ROOM LAMP HARNESS
10	-	TO ROOM LAMP HARNESS
11	-	TO ROOM LAMP HARNESS
12	-	TO ROOM LAMP HARNESS
13	SB	TO ROOM LAMP HARNESS
14	GR	TO ROOM LAMP HARNESS
15	SB	TO ROOM LAMP HARNESS
16	GR	TO ROOM LAMP HARNESS
17	V	TO ROOM LAMP HARNESS
18	G	TO ROOM LAMP HARNESS
19	SB	TO ROOM LAMP HARNESS
20	R	TO ROOM LAMP HARNESS
21	B	TO ROOM LAMP HARNESS
22	GR	TO ROOM LAMP HARNESS
23	-	TO ROOM LAMP HARNESS
24	-	TO ROOM LAMP HARNESS

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO FRONT DOOR LH HARNESS
2	R	TO FRONT DOOR LH HARNESS
3	G	TO FRONT DOOR LH HARNESS
4	BR	TO FRONT DOOR LH HARNESS
5	P	TO FRONT DOOR LH HARNESS
6	Y	TO FRONT DOOR LH HARNESS - (WITHOUT BOSE AUDIO SYSTEM)
6	LA/L	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
7	R	TO FRONT DOOR LH HARNESS - (WITHOUT BOSE AUDIO SYSTEM)
7	LA/BR	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
8	L	TO FRONT DOOR LH HARNESS
9	LA/BR	TO FRONT DOOR LH HARNESS
10	LA/GR	TO FRONT DOOR LH HARNESS
11	Y	TO FRONT DOOR LH HARNESS
12	BG	TO FRONT DOOR LH HARNESS
13	LA/G	TO FRONT DOOR LH HARNESS
14	LA/R	TO FRONT DOOR LH HARNESS
15	P	TO FRONT DOOR LH HARNESS
16	B	TO FRONT DOOR LH HARNESS

22	GR	TO ROOM LAMP HARNESS
23	-	TO ROOM LAMP HARNESS
24	-	TO ROOM LAMP HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	TO FRONT DOOR LH HARNESS
2	GR	TO FRONT DOOR LH HARNESS
3	SB	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
3	Y	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
4	BG	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
4	V	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
5	Y	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
5	BR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	V	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
6	LG	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
7	Y	TO FRONT DOOR LH HARNESS
8	V	TO FRONT DOOR LH HARNESS
9	BR	TO FRONT DOOR LH HARNESS
10	LG	TO FRONT DOOR LH HARNESS
11	L	TO FRONT DOOR LH HARNESS
12	Y	TO FRONT DOOR LH HARNESS
13	G	TO FRONT DOOR LH HARNESS
14	SHIELD	TO FRONT DOOR LH HARNESS
15	SB	TO FRONT DOOR LH HARNESS
16	BG	TO FRONT DOOR LH HARNESS
17	GR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
17	SB	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	W	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	LA/SB	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
19	BR	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
19	LA/GR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
20	GR	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
20	LA/V	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
21	BR	TO FRONT DOOR LH HARNESS
22	W	TO FRONT DOOR LH HARNESS
23	R	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
23	LA/R	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
24	GR	TO FRONT DOOR LH HARNESS
25	R	TO FRONT DOOR LH HARNESS - LED INDICATOR L
26	LA/G	TO FRONT DOOR LH HARNESS
27	LG	TO FRONT DOOR LH HARNESS
28	L	TO FRONT DOOR LH HARNESS
29	Y	TO FRONT DOOR LH HARNESS
30	V	TO FRONT DOOR LH HARNESS
31	G	TO FRONT DOOR LH HARNESS
32	P	TO FRONT DOOR LH HARNESS

Connector No.	M193
Connector Name	JOINT CONNECTOR-M18
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	GR	ACCESSORY
2	GR	ACCESSORY
3	GR	ACCESSORY
4	GR	ACCESSORY
5	SB	AUTO ACC
6	GR	ACCESSORY
7	GR	ACCESSORY
8	W	ACCESSORY

Connector No.	M251
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	LG	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	W	TO MAIN HARNESS
4	B	TO MAIN HARNESS
5	B	TO MAIN HARNESS
6	BG	TO MAIN HARNESS
7	B	TO MAIN HARNESS
8	B	TO MAIN HARNESS
9	R	TO MAIN HARNESS
10	B	TO MAIN HARNESS
11	G	TO MAIN HARNESS
12	BG	TO MAIN HARNESS
13	BR	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	R	TO MAIN HARNESS
16	B	TO MAIN HARNESS

Connector No.	M255
Connector Name	WARNING SYSTEM SWITCH
Connector Type	TH08FW-NH
Connector Color	WHITE

H.S.

4	6	3
2	1	5

Terminal No.	Color of Wire	Signal Name
1	W	BSW SW
2	B	GROUND
3	G	ILL CONT OUT
4	B	GROUND
5	BG	BATTERY
6	BR	BSW LED

7	-	-
8	-	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS
Connector Color	WHITE

H.S.

1	2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	-	TO MAIN HARNESS
2	P	TO MAIN HARNESS
3	B	TO MAIN HARNESS
4	B	TO MAIN HARNESS
5	-	TO MAIN HARNESS
6	W	TO MAIN HARNESS
7	Y	TO MAIN HARNESS
8	R	TO MAIN HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	R11
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	SHIELD	TO MAIN HARNESS
4	SB	TO MAIN HARNESS
5	–	TO MAIN HARNESS
6	LG	TO MAIN HARNESS
7	LG	TO MAIN HARNESS
8	–	TO MAIN HARNESS
9	–	TO MAIN HARNESS
10	–	TO MAIN HARNESS
11	–	TO MAIN HARNESS
12	–	TO MAIN HARNESS
13	SB	TO MAIN HARNESS
14	P	TO MAIN HARNESS
15	–	TO MAIN HARNESS
16	–	TO MAIN HARNESS
17	–	TO MAIN HARNESS
18	–	TO MAIN HARNESS
19	SB	TO MAIN HARNESS
20	R	TO MAIN HARNESS
21	B	TO MAIN HARNESS
22	L	TO MAIN HARNESS
23	–	TO MAIN HARNESS
24	–	TO MAIN HARNESS

Connector No.	R17
Connector Name	LANE CAMERA UNIT
Connector Type	MUB12FB
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	–	–
3	LG	IGN
4	–	–
5	L	CAN-H
6	Y	CAN-L
7	–	–
8	–	–
9	–	–
10	–	–
11	–	–
12	–	–

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BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT

Description

INFOID:0000000015204114

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

Work Procedure

INFOID:0000000015204115

1. ADAS CONTROL UNIT CONFIGURATION

CONSULT
Perform the ADAS control unit configuration. Refer to DAS-63, "Description".

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

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

Is DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to DAS-39, "DTC Index".
NO >> Inspection End.

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT 2

Description

INFOID:0000000015204116

Always perform the ADAS control unit 2 configuration after replacing the ADAS control unit 2.

Work Procedure

INFOID:0000000015204117

1. ADAS CONTROL UNIT 2 CONFIGURATION

CONSULT
Perform the ADAS control unit 2 configuration. Refer to DAS-65, "Description".

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

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

Is DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to DAS-39, "DTC Index".
NO >> Inspection End.

CONFIGURATION (ADAS CONTROL UNIT)

Description

INFOID:0000000015204118

- Since vehicle specifications are not included in the ADAS control unit after replacement, it is required to write vehicle specifications with CONSULT. Refer to DAS-63, "Work Procedure".
- Configuration has three functions as follows.

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

Work Procedure

INFOID:0000000015204119

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

1.CHECKING PARTS NUMBER

CONSULT
1. Select “Before Replace ECU” of “Read/Write Configuration”.
2. Check that “Parts number” is displayed on CONSULT.

Is “Parts number” displayed?

YES >> GO TO 2.
NO >> GO TO 6.

2.VERIFYING PARTS NUMBER (1)

CONSULT
Compare a “Parts number” displayed on the CONSULT screen with the one searched by using FAST (service parts catalogue) to check that these “Parts number” agree with each other.

NOTE:
For the “Parts number” searched by using FAST (service parts catalog), use the last five digits of the “Parts number”.

>> GO TO 3.

3.SAVING PARTS NUMBER

CONSULT
Save “Parts number” on CONSULT.

>> GO TO 4.

4.REPLACE ADAS CONTROL UNIT (1)

Replace ADAS control unit. Refer to DAS-210, "Removal and Installation".

>> GO TO 5.

5.WRITING (AUTOMATIC WRITING)

CONSULT
1. Select “After Replace ECU” of “Re/programming, Configuration” or that of “Read / Write Configuration”.
2. Select the “Parts number” agreeing with the one stored on CONSULT and the one searched by using FAST (service parts catalogue) to write the “Parts number” into the ADAS control unit.

>> GO TO 8.

6. REPLACE ADAS CONTROL UNIT (2)

Replace ADAS control unit. Refer to DAS-210, "Removal and Installation".

>> GO TO 7.

7. WRITING (MANUAL WRITING)

CONSULT

1. Select “Manual Configuration”.
2. Select the “Parts number” searched by using FAST (service parts catalogue) to write the “Parts number” into the ADAS control unit.
   NOTE:
   For the “Parts number” searched by using FAST (service parts catalog), use the last five digits of the “Parts number”.

>> GO TO 8.

8. VERIFYING PARTS NUMBER (2)

CONSULT

Compare a “Parts number” displayed on the CONSULT screen with the one searched by using FAST (service parts catalogue) to check that these “Parts number” agree with each other.

NOTE:

For the “Parts number” searched by using FAST (service parts catalog), use the last five digits of the “Parts number”.

>> GO TO 9.

9. OPERATION CHECK

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

>> Work End.

CONFIGURATION (ADAS CONTROL UNIT 2)

Description

INFOID:0000000015204120

- Since vehicle specifications are not included in the ADAS control unit 2 after replacement, it is required to write vehicle specifications with CONSULT. Refer to DAS-63, "Work Procedure".
- Configuration has three functions as follows.

Function		Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in ADAS control unit 2 to store the specification in CONSULT.
	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the ADAS control unit 2.
Manual Configuration		Allows the writing of the vehicle specification into the ADAS control unit 2 by hand.

Work Procedure

INFOID:0000000015204121

CAUTION:
- **Use “Manual Configuration” only when “Parts number” of ADAS control unit 2 cannot be read.**
- **If an error occurs during configuration, start over from the beginning.**

1.CHECKING PARTS NUMBER

CONSULT
1. Select “Before Replace ECU” of “Read/Write Configuration”.
2. Check that “Parts number” is displayed on CONSULT.

Is “Parts number” displayed?

YES >> GO TO 2.
NO >> GO TO 6.

2.VERIFYING PARTS NUMBER (1)

CONSULT
Compare a “Parts number” displayed on the CONSULT screen with the one searched by using FAST (service parts catalogue) to check that these “Parts number” agree with each other.

NOTE:
For the “Parts number” searched by using FAST (service parts catalog), use the last five digits of the “Parts number”.

>> GO TO 3.

3.SAVING PARTS NUMBER

CONSULT
Save “Parts number” on CONSULT.

>> GO TO 4.

4.REPLACE ADAS CONTROL UNIT 2 (1)

Replace ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

>> GO TO 5.

5.WRITING (AUTOMATIC WRITING)

CONSULT
1. Select “After Replace ECU” of “Re/programming, Configuration” or that of “Read / Write Configuration”.
2. Select the “Parts number” agreeing with the one stored on CONSULT and the one searched by using FAST (service parts catalogue) to write the “Parts number” into the ADAS control unit 2.

>> GO TO 8.

6. REPLACE ADAS CONTROL UNIT 2 (2)

Replace ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

>> GO TO 7.

7. WRITING (MANUAL WRITING)

CONSULT

1. Select “Manual Configuration”.
2. Select the “Parts number” searched by using FAST (service parts catalogue) to write the “Parts number” into the ADAS control unit 2.
   NOTE:
   For the “Parts number” searched by using FAST (service parts catalog), use the last five digits of the “Parts number”.

>> GO TO 8.

8. VERIFYING PARTS NUMBER (2)

CONSULT

Compare a “Parts number” displayed on the CONSULT screen with the one searched by using FAST (service parts catalogue) to check that these “Parts number” agree with each other.

NOTE:

For the “Parts number” searched by using FAST (service parts catalog), use the last five digits of the “Parts number”.

>> GO TO 9.

9. OPERATION CHECK

Confirm that each function controlled by ADAS control unit 2 operates normally.

>> Work End.

DTC/CIRCUIT DIAGNOSIS

C1A0A CONFIG UNFINISHED

DTC Description

INFOID:0000000015204122

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A0A	CONFIG UNFINISH (Configuration unfinished)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	The vehicle specifications of ADAS control unit is incomplete
		Diagnosis delay time	-

POSSIBLE CAUSE

Vehicle specifications for ADAS control unit is incomplete.

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A01” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A01” detected as the current malfunction?

YES >> Refer to DAS-67, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204123

1. PERFORM CONFIGURATION OF ADAS CONTROL UNIT

CONSULT

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

>> Perform configuration of ADAS control unit. Refer to DAS-63, "Description".

C1A00 CONTROL UNIT
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204124

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A00	CONTROL UNIT (Control unit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit internal malfunction
		Diagnosis delay time	-

POSSIBLE CAUSE
ADAS control unit

FAIL-SAFE
The following systems are canceled:
- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1A00” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A00” detected as the current malfunction?

YES >> Refer to DAS-68, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204125

1.CHECK SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC other than “C1A00” is detected in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-39, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204126

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A00	CONTROL UNIT (Control unit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 internal malfunction
		Diagnosis delay time	-

POSSIBLE CAUSE

ADAS control unit 2

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1A00” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1A00” detected as the current malfunction?

YES >> Refer to DAS-69, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204127

1.CHECK SELF DIAGNOSTIC RESULT

CONSULT

Check if any DTC other than “C1A00” is detected in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-45, "DTC Index".
NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

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

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204128

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A01	POWER SUPPLY CIR (Power supply circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Less than 7.9 V
		Diagnosis delay time	5 seconds or more
C1A02	POWER SUPPLY CIR 2 (Power supply circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	More than 19.3 V
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

- Connector, harness, fuse
- ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A01” or “C1A02” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A01” or “C1A02” detected as the current malfunction?

YES >> Refer to DAS-70, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204129

1. CHECK ADAS CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of ADAS control unit. Refer to DAS-208, "ADAS CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Repair or replace the malfunctioning parts.

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204130

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A01	POWER SUPPLY CIR (Power supply circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Less than 7.9 V
		Diagnosis delay time	5 seconds or more
C1A02	POWER SUPPLY CIR 2 (Power supply circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	More than 19.3 V
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

- Connector, harness, fuse
- ADAS control unit 2

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the BSW or LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A01” or “C1A02” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A01” or “C1A02” detected as the current malfunction?

YES >> Refer to DAS-212, "Removal and Installation".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204131

1.CHECK ADAS CONTROL UNIT 2 POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of ADAS control unit 2. Refer to DAS-208, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".
NO >> Repair or replace the malfunctioning parts.

C1A03 VEHICLE SPEED SENSOR
ADAS CONTROL UNIT
ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204132

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A03	VHCL SPEED SE CIRC (Vehicle speed sensor circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) and the CVT vehicle speed sensor signal (output shaft revolution signal) from TCM, received by the ADAS control unit via CAN communication, are inconsistent
		Diagnosis delay time	–

POSSIBLE CAUSE
- Wheel speed sensor
- ABS actuator and electric unit (control unit)
- Vehicle speed sensor CVT (output speed sensor)
- TCM
- ADAS control unit

FAIL-SAFE
The following systems are canceled:
- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- C1A04: Refer to DAS-76, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Drive the vehicle at 30 km/h (19 MPH) or more.
   CAUTION:
   Always drive safely.
4. Stop the vehicle.
5. Select “All DTC Reading” mode.
6. Check if “C1A03” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A03” detected as the current malfunction?

YES >> Refer to DAS-73, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204133

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- C1A04: Refer to DAS-76, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.CHECK DATA MONITOR

CONSULT
1. Start the engine.
2. Drive the vehicle.
3. Check that the value of “VHCL SPD AT” in “Data Monitor” mode of “ICC/ADAS” is almost the same as the actual vehicle speed.

CAUTION:
Be careful of the vehicle speed.

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> GO TO 3.

3.CHECK TCM SELF-DIAGNOSIS RESULTS

1. Select “All DTC Reading” mode.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".
NO >> GO TO 4.

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

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204134

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A03	VHCL SPEED SE CIRC (Vehicle speed sensor circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) and the CVT vehicle speed sensor signal (output shaft revolution signal) from TCM, received by the ADAS control unit 2 via CAN communication, are inconsistent
		Diagnosis delay time	–

POSSIBLE CAUSE

- Wheel speed sensor
- ABS actuator and electric unit (control unit)
- Vehicle speed sensor CVT (output speed sensor)

- TCM
- ADAS control unit 2

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- C1A04: Refer to DAS-77, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Drive the vehicle at 30 km/h (19 MPH) or more.
   CAUTION:
   Always drive safely.
4. Stop the vehicle.
5. Select “All DTC Reading” mode.
6. Check if “C1A03” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1A03” detected as the current malfunction?

YES >> Refer to DAS-73, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204135

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- C1A04: Refer to DAS-77, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.CHECK DATA MONITOR

CONSULT
1. Start the engine.
2. Drive the vehicle.
3. Check that the value of “VHCL SPD AT” is almost the same as the value of “VHCL SPEED SE” in “Data Monitor” of “ICC/ADAS 2”.

CAUTION:
Be careful of the vehicle speed.

Is the inspection result normal?

YES >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".
NO >> GO TO 3.

3.CHECK TCM SELF-DIAGNOSIS RESULTS

1. Perform “All DTC Reading” mode.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".

NO >> GO TO 4.

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

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

C1A04 ABS/TCS/VDC SYSTEM
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204136

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A04	ABS/TCS/VDC CIRC (ABS/TCS/VDC circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If a malfunction occurs in the VDC/TCS/ABS system
		Diagnosis delay time	–

POSSIBLE CAUSE
ABS actuator and electric unit (control unit)

FAIL-SAFE
The following systems are canceled:
- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A04” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A04” detected as the current malfunction?

YES >> Refer to DAS-76, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204137

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204138

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A04	ABS/TCS/VDC CIRC (ABS/TCS/VDC circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If a malfunction occurs in the VDC/TCS/ABS system
		Diagnosis delay time	–

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A04” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1A04” detected as the current malfunction?

YES >> Refer to DAS-76, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204139

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A05 BRAKE SW/STOP LAMP SW
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204140

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A05	BRAKE SW/STOP L SW (Brake switch/Stop lamp switch)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	ADAS control unit detects an error signal that is received from BCAM via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE
BCM

FAIL-SAFE
The following systems are canceled:
- Vehicle–to–vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY
If DTC “C1A05” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE
CONSULT
1. Start the engine.
2. Turn ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A05” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A05” detected as the current malfunction?

YES >> Refer to DAS-79, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204141

1.CHECK DTC PRIORITY
If DTC “C1A05” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK BCM SELF-DIAGNOSTIC RESULT
CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “BCM”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BCS-48, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204142

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A05	BRAKE SW/STOP L SW (Brake switch/Stop lamp switch)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	ADAS control unit 2 detects an error signal that is received from BCM via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE

BCM

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A05” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1A05” detected as the current malfunction?

YES >> Refer to DAS-80, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204143

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.CHECK BCM SELF-DIAGNOSTIC RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “BCM”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BCS-48, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

C1A06 OPERATION SW

DTC Description

INFOID:0000000015204144

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A06	OPERATION SW CIRC (Operation switch circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	• Any switch of the ICC steering switch is detected as “ON” continuously for 60 seconds • An ON/OFF state judgment of the ICC differs between HPCM and ADAS control unit, and the state continues for 2 seconds or more
		Diagnosis delay time	–

POSSIBLE CAUSE

- ICC steering switch circuit
- ICC steering switch
- HPCM

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Wait for approximately 5 minutes after turning the MAIN switch of ICC system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A06” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A06” detected as the current malfunction?

YES >> Refer to DAS-82, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204145

Regarding Wiring Diagram information, refer to DAS-47, "Wiring Diagram".

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ICC STEERING SWITCH

1. Turn the ignition switch OFF.
2. Disconnect the ICC steering switch connector.
3. Check the ICC steering switch. Refer to DAS-84, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace the ICC steering switch. Refer to CCS-208, "Removal and Installation".

3.CHECK HARNESS BETWEEN SPIRAL CABLE AND HPCM

1. Disconnect the HPCM connector.
2. Check for continuity between the spiral cable harness connector and HPCM harness connector.

Spiral cable		HPCM		Continuity
Connector	Terminal	Connector	Terminal	
M30	6	E130	94	Yes
	7		95	

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

Spiral cable		Ground	Continuity
Connector	Terminal		
M30	6		No
	7		

Is the inspection result normal?

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

4.CHECK SPIRAL CABLE

Check for continuity between spiral cable terminals.

Spiral cable		Continuity
Terminal		
7	26	Yes
6	27	

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace the spiral cable. Refer to SR-16, "Removal and Installation"

5.PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
1. Connect the connectors of ICC steering switch and HPCM connector.
2. Turn the ignition switch ON.
3. Select “All DTC Reading” mode.
4. Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

Component Inspection

INFOID:0000000015204146

1. CHECK ICC STEERING SWITCH

Check resistance between ICC steering switch terminals.

Terminal		Switch operation	Resistance [Ω]
26	27	When pressing MAIN switch	Approx. 1
		When pressing CANCEL switch	Approx. 309
		When pressing DISTANCE switch	Approx. 741
		When pressing SET/COAST switch	Approx. 1406
		When pressing RESUME/ACCELERATE switch	Approx. 2586
		When all switches are not pressed	Approx. 5456

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the ICC steering switch. Refer to CCS-208, "Removal and Installation".

C1A07 CVT
ADAS CONTROL UNIT
ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204147

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A07	CVT MSG CIRCUIT (CVT message error)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If ICC sensor detects an error signal that is received from TCM via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE
TCM

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE
1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if “C1A07” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A07” detected as the current malfunction?

YES >> Refer to DAS-85, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204148

1.CHECK ICC SENSOR SELF DIAGNOSTIC RESULT

CONSULT
Check if “U1000” is also detected with “C1A07” in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK TCM SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".
NO >> Replace the ICC sensor. Refer to CCS-206, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204149

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A07	CVT MSG CIRCUIT (CVT message error)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If ICC sensor detects an error signal that is received from TCM via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:

- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if “C1A07” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A07” detected as the current malfunction?

YES >> Refer to DAS-86, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204150

1.CHECK ICC SENSOR SELF DIAGNOSTIC RESULT

CONSULT

Check if “U1000” is also detected with “C1A07” in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-151, "ADAS CONTROL UNIT 2 : Description".
NO >> GO TO 2.

2.CHECK TCM SELF DIAGNOSTIC RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".
NO >> Replace the ICC sensor. Refer to CCS-208, "Removal and Installation".

C1A1A HPCM
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015244268

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A1A	HPCM CIRCUIT (HPCM circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If HPCM is malfunctioning
		Diagnosis delay time	–

POSSIBLE CAUSE
- HPCM
- ADAS control unit

FAIL-SAFE
The following systems are canceled:
- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

If DTC “C1A1A” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1A1A” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A1A” detected as the current malfunction?

YES >> Refer to DAS-87, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015244269

1. CHECK DTC PRIORITY

If DTC “C1A1A” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2. CHECK SELF DIAGNOSTIC RESULT

CONSULT
Check if “U1000” is detected other than “C1A1A” in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 3.

3.PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015261425

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A1A	HPCM CIRCUIT (HPCM circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If HPCM is malfunctioning
		Diagnosis delay time	–

POSSIBLE CAUSE

- HPCM
- ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “C1A1A” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1A1A” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A1A” detected as the current malfunction?

YES >> Refer to DAS-88, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015261426

1.CHECK DTC PRIORITY

If DTC “C1A1A” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.CHECK SELF DIAGNOSTIC RESULT

CONSULT
Check if “U1000” is detected other than “C1A1A” in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 3.

3.PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A13 STOP LAMP RELAY

DTC Description

INFOID:0000000015204151

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A13	STOP LAMP RLY FIX (Stop lamp switch circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Stop lamp inactive state continues for 0.3 seconds or more despite the outputting of brake hold drive signal
		Diagnosis delay time	–

POSSIBLE CAUSE

- Stop lamp switch circuit
- Stop lamp switch
- Incorrect stop lamp switch installation
- BCM

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A13” is detected as the current malfunction in the “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A13” detected as the current malfunction?

YES >> Refer to DAS-90, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204152

Regarding Wiring Diagram information, refer to DAS-47, "Wiring Diagram".

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.CHECK BCM SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “BCM”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BCS-48, "DTC Index".
NO >> GO TO 3.

3.CHECK STOP LAMP SWITCH

CONSULT
1. Select “Data Monitor” mode of “ICC/ADAS”.
2. Select “STOP LAMP SW”.
3. Check that the function operates normally according to the following conditions:

Monitor item	Condition	Status
STOP LAMP SW	When brake pedal is applied	ON
	When brake pedal is released	OFF

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 4.

4.CHECK STOP LAMP SWITCH INSTALLATION

1. Turn ignition switch OFF.
2. Check stop lamp switch for correct installation. Refer to BR-49, "Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Adjust stop lamp switch installation. Refer to BR-49, "Adjustment".

5.CHECK STOP LAMP SWITCH

1. Disconnect stop lamp switch connector.
2. Check stop lamp switch. Refer to HBC-254, "Component Inspection (Stop Lamp Switch)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace stop lamp switch. Refer to BR-57, "Exploded View".

6.CHECK STOP LAMP FOR ILLUMINATION

1. Connect stop lamp switch connector.
2. Check that the stop lamps illuminate when depressing the brake pedal.

Is the inspection result normal?

YES >> To check malfunction symptom before repair. Refer to GI-54, "Intermittent Incident".
NO >> GO TO 7.

7.CHECK HARNESS BETWEEN STOP LAMP SWITCH AND HPCM

1. Turn the ignition switch OFF.
2. Disconnect stop lamp switch and HPCM connectors.
3. Disconnect BCM connector E29.
4. Check for continuity between the stop lamp switch harness connector and the HPCM harness connector.

Stop lamp switch		HPCM		Continuity
Connector	Terminal	Connector	Terminal	
E38	2	E130	99	Yes

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E38	2		No

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Repair or replace the harness or connector.

C1A14 ECM

DTC Description

INFOID:0000000015204153

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A14	ECM CIRCUIT (ECM circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	If ECM is malfunctioning
		Diagnosis delay time	–

POSSIBLE CAUSE

- Accelerator pedal position sensor
- ECM
- ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

CAUTION:

Always drive safely.

3. Stop the vehicle.
4. Select “All DTC Reading” mode.
5. Check if “C1A14” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A14” detected as the current malfunction?

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

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204154

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

CONSULT
Check if “U1000” is detected other than “C1A14” in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 3.

3. PERFORM SELF-DIAGNOSIS OF ECM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-109, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A24 NP RANGE

DTC Description

INFOID:0000000015204155

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A24	NP RANGE (NP range)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	A mismatch between a shift position signal transmitted from TCM via CAN communication and an current gear position signal continues for 60 seconds or more
		Diagnosis delay time	–

POSSIBLE CAUSE

- TCM
- Transmission range switch

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.CHECK DTC REPRODUCE (1)

CONSULT

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

Is “C1A24” detected as the current malfunction?

YES >> Refer to DAS-96, "Diagnosis Procedure".
NO >> GO TO 3.

3.CHECK DTC REPRODUCE (2)

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

Is “C1A24” detected as the current malfunction?

YES >> Refer to DAS-96, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204156

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.CHECK TCM DATA MONITOR

CONSULT
Check that “RANGE” operates normally in “Data Monitor” mode of “TRANSMISSION”.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Perform diagnosis for transmission range switch circuit and repair or replace the malfunctioning parts. Refer to TM-118, "Diagnosis Procedure".

3.PERFORM TCM SELF-DIAGNOSIS

CONSULT
1. Perform “All DTC Reading” mode.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A25 SHIFT RANGE INDICATOR

DTC Description

INFOID:0000000015204157

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A25	SHIFT RANGE IND (Shift range)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	If ADAS control unit detects an error signal that is received from TCM via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE

- TCM
- Transmission switch

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “C1A25” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE (1)

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Wait for approximately 5 minutes or more after shifting the shift selector to “P” position.
4. Select “All DTC Reading” mode.
5. Check if “C1A25” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A25” detected as the current malfunction?

YES >> Refer to DAS-97, "Diagnosis Procedure".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE (2)

1. Place shift selector to “N” position, wait for approximately 5 minutes or more.
2. Select “All DTC Reading” mode.
3. Check if “C1A25” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A25” detected as the current malfunction?

YES >> Refer to DAS-97, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204158

1.CHECK DTC PRIORITY

If DTC “C1A25” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A26 ECD MODE MALFUNCTION

DTC Description

INFOID:0000000015204159

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A26	ECD MODE MALF (ECD mode malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	If an abnormal condition occurs with ECD system
		Diagnosis delay time	–

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U0415: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U0121: Refer to DAS-130, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “C1A26” detected as the current malfunction?

YES >> Refer to DAS-99, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204160

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U0415: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U0121: Refer to DAS-130, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A33 CAN TRANSMISSION ERROR

DTC Description

INFOID:0000000015204161

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A33	CAN TRANSMISSION ERR (CAN transmission error)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If an error occurs in the CAN communication signal that ADAS control unit transmits to ECM
		Diagnosis delay time	–

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A33” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A33” detected as the current malfunction?

YES >> Refer to DAS-101, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204162

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

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

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A34 COMMAND ERROR

DTC Description

INFOID:0000000015204163

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A34	COMMAND ERROR (Command error)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If an error occurs in the command signal that ADAS control unit transmits to ECM via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Operate the ICC system and drive.
   CAUTION:
   Always drive safely.
3. Stop the vehicle.
4. Select “All DTC Reading” mode.
5. Check if “C1A34” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A34” detected as the current malfunction?

YES >> Refer to DAS-103, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204164

1.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

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

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A39 STEERING ANGLE SENSOR
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204165

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A39	STRG SEN CIR (Steering angle sensor circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If the steering angle sensor is malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A39” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A39” detected as the current malfunction?

YES >> Refer to DAS-104, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204166

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204167

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A39	STRG SEN CIR (Steering angle sensor circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If the steering angle sensor is malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY
If DTC “C1A39” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.
Is applicable DTC detected?
YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE
CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1A39” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1A39” detected as the current malfunction?
YES >> Refer to DAS-105, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204168

1.CHECK DTC PRIORITY
If DTC “C1A39” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.
Is applicable DTC detected?
YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

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

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1A40 SYSTEM SWITCH CIRCUIT

DTC Description

INFOID:0000000015204169

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1A40	SYSTEM SW CIRC (Warning system switch circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Warning system switch remains “ON” (short circuit) for 10 minutes or more
		Diagnosis delay time	–

POSSIBLE CAUSE

- Warning system switch circuit
- Warning system switch
- ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine and wait for approximately 10 minutes or more.
2. Select “All DTC Reading” mode.
3. Check if “C1A40” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A40” detected as the current malfunction?

YES >> Refer to DAS-107, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204170

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1. CHECK WARNING SYSTEM SWITCH CIRCUIT FOR OPEN

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

ADAS control unit		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
B4	18	M255	1	Yes

Is the inspection result normal?

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

2.CHECK WARNING SYSTEM SWITCH CIRCUIT FOR SHORT

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

ADAS control unit		Ground	Continuity
Connector	Terminal		
B4	18		No

Is the inspection result normal?

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

3.CHECK WARNING SYSTEM SWITCH

Check warning system switch. Refer to DAS-108, "Component Inspection Warning System Switch".

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Replace the warning system switch. Refer to DAS-409, "Removal and Installation".

Component Inspection Warning System Switch

INFOID:0000000015204171

1.CHECK WARNING SYSTEM SWITCH

Check continuity of warning system switch terminals.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the warning system switch. Refer to DAS-409, "Removal and Installation".

C1B00 CAMERA UNIT MALF

ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204172

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B00	CAMERA UNIT MALF (Camera unit malfunction)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If lane camera unit is malfunctioning
		Diagnosis delay time	–

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B00” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B00” detected as the current malfunction?

YES >> Refer to DAS-109, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204173

1. CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if “C1B00” is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “C1B00” detected?

YES >> Refer to DAS-109, "ADAS CONTROL UNIT : DTC Description"
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204174

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B00	CAMERA UNIT MALF (Camera unit malfunction)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If lane camera unit is malfunctioning
		Diagnosis delay time	–

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B00” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1B00” detected as the current malfunction?

YES >> Refer to DAS-110, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204175

1.CHECK SELF-DIAGNOSIS RESULTS

CONSULT
Check if “C1B00” is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “C1B00” detected?

YES >> Refer to DAS-109, "ADAS CONTROL UNIT 2 : DTC Description"
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1B01 CAM AIMING INCMP

ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204176

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B01	CAM AIMING INCMP (Camera aiming incomplete)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Camera aiming is not completed
		Diagnosis delay time	–

POSSIBLE CAUSE

- Lane camera aiming is not adjusted
- Lane camera aiming adjustment has been interrupted

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Operate the LDP system and drive.
   CAUTION:
   Always drive safely.
3. Select “All DTC Reading” mode.
4. Check if “C1B01” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B01” detected as the current malfunction?

YES >> Refer to DAS-111, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204177

1. CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if “C1B01” is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “C1B01” detected?

YES >> Refer to DAS-292, "DTC Index"
NO >> GO TO 2.

2. CHECK DATA MONITOR

CONSULT

1. Start the engine.
2. Check that “OK” is indicated for the value of “AIMING RESULT” in “Data Monitor” of “LANE CAMERA”.

Is “OK” indicated?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204178

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B01	CAM AIMING INCMP (Camera aiming incomplete)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Camera aiming is not completed
		Diagnosis delay time	–

POSSIBLE CAUSE

- Lane camera aiming is not adjusted
- Lane camera aiming adjustment has been interrupted

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Operate the LDP system and drive.
   CAUTION:
   Always drive safely.
3. Select “All DTC Reading” mode.
4. Check if “C1B01” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1B01” detected as the current malfunction?

YES >> Refer to DAS-112, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204179

1.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if “C1B01” is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “C1B01” detected?

YES >> Refer to DAS-292, "DTC Index"
NO >> GO TO 2.

2.CHECK DATA MONITOR

CONSULT

1. Start the engine.
2. Check that “OK” is indicated for the value of “AIMING RESULT” in “Data Monitor” of “LANE CAMERA”.

Is “OK” indicated?

YES >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".
NO >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".

C1B03 ABNRML TEMP DETECT

ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204180

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B03	CAM ABNRML TMP DETCT (Camera abnormal temperature detect)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Temperature around lane camera unit is excessively high
		Diagnosis delay time	–

POSSIBLE CAUSE

Interior room temperature is excessively high

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B03” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B03” detected as the current malfunction?

YES >> Refer to DAS-113, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204181

1. CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT

1. Select “All DTC Reading” mode.
2. Check if “C1B03” is detected in “Self Diagnostic Result” mode of “LANE CAMERA”

Is “C1B03” detected?

YES >> Refer to DAS-292, "DTC Index"
NO >> GO TO 2.

2. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

1. Select Erase “All DTC Reading” mode.
2. Select “All DTC Reading” mode.
3. Check if “C1B03” is detected in “Self Diagnostic Result” mode of “ICC/ADAS”

Is “C1B03” detected?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Inspection End.

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204182

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B03	CAM ABNRML TMP DETCT (Camera abnormal temperature detect)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Temperature around lane camera unit is excessively high
		Diagnosis delay time	–

POSSIBLE CAUSE

Interior room temperature is excessively high

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B03” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1A39” detected as the current malfunction?

YES >> Refer to DAS-114, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204183

1.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT

1. Select “All DTC Reading” mode.
2. Check if “C1B03” is detected in “Self Diagnostic Result” mode of “LANE CAMERA”

Is “C1B03” detected?

YES >> Refer to DAS-292, "DTC Index"
NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT 2 SELF-DIAGNOSIS RESULTS

1. Select Erase “Self Diagnostic Results” mode.
2. Select “All DTC Reading” mode.
3. Check if “C1B03” is detected in “Self Diagnostic Result” mode of “ICC/ADAS”

Is “C1B03” detected?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Inspection End.

C1B53 SIDE RADAR RIGHT MALFUNCTION

ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204184

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B53	SIDE RDR R MALF (Side radar right malfunction)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	ADAS control unit detects that side radar RH has a malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “C1B53” detected as the current malfunction?

YES >> Refer to DAS-115, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204185

1. CHECK SELF-DIAGNOSIS RESULTS

CONSULT

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

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index" (SIDE RADAR RH).
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204186

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B53	SIDE RDR R MALF (Side radar right malfunction)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	ADAS control unit 2 detects that side radar RH has a malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “C1B53” detected as the current malfunction?

YES >> Refer to DAS-116, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204187

1.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if “U1000” is detected other than “C1B53” in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index" (SIDE RADAR RH).
NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

C1B54 SIDE RADAR LEFT MALFUNCTION

ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204188

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B54	SIDE RDR L MALF (Side radar left malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects that side radar LH has a malfunction
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B54” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B54” detected as the current malfunction?

YES >> Refer to DAS-115, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204189

1. CHECK SELF DIAGNOSTIC RESULT

CONSULT

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

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. CHECK SELF DIAGNOSTIC RESULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index" (SIDE RADAR LH).
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204190

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B54	SIDE RDR L MALF (Side radar left malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects that side radar LH has a malfunction
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B54” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “C1B54” detected as the current malfunction?

YES >> Refer to DAS-116, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204191

1.CHECK SELF DIAGNOSTIC RESULT

CONSULT
Check if “U1000” is detected other than “C1B54” in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.CHECK SELF DIAGNOSTIC RESULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index" (SIDE RADAR LH).
NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

C1B59 CCM

DTC Description

INFOID:0000000015204192

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B59	CCM CIRCUIT (Chassis control module circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects that chassis control module has a malfunction
		Diagnosis delay time	-

POSSIBLE CAUSE

- Chassis control module
- ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Conventional (fixed speed) cruise control mode
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Operate the ICC system and drive.
   CAUTION:
   Always drive safely.
3. Stop the vehicle.
4. Select “All DTC Reading” mode.
5. Check if “C1B59” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B59” detected as the current malfunction?

YES >> Refer to DAS-119, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204193

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.CHECK SELF DIAGNOSTIC RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-448, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1B82 DISTANCE SENSOR OFF-CENTER

DTC Description

INFOID:0000000015204194

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B82	DIST SEN OFF-CENTER (Distance sensor off-center)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ICC sensor is off the alignment point
		Diagnosis delay time	-

POSSIBLE CAUSE

Radar alignment is off the aiming point

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B82” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B82” detected as the current malfunction?

YES >> Refer to DAS-121, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204195

1.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode “LASER/RADAR“.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-80, "DTC Index".
NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is “C1B82” detected?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Inspection End.

C1B83 DISTANCE SENSOR BLOCKED

DTC Description

INFOID:0000000015204196

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B83	DIST SEN BLOCKED (Distance sensor blocked)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ICC sensor is malfunctioning
		Diagnosis delay time	-

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “C1B84” detected as the current malfunction?

YES >> Refer to DAS-122, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204197

1.CHECK SELF DIAGNOSTIC RESULT

CONSULT

Check if “U1000” is detected in “Self Diagnostic Result” mode of “LASER/RADAR“.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Refer to CCS-80, "DTC Index".
NO >> GO TO 2.

2.CHECK SELF DIAGNOSTIC RESULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS “

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-39, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1B84 DISTANCE SENSOR

DTC Description

INFOID:0000000015204198

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B84	DIST SEN MALFUNCTION (Distance sensor malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ICC sensor is malfunctioning
		Diagnosis delay time	-

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “C1B84” detected as the current malfunction?

YES >> Refer to DAS-123, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204199

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

CONSULT

Check if “U1000” is detected other than “C1B84” in “Self Diagnostic Result” mode of “ICC/ADAS“.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Refer to DAS-150, "ADAS CONTROL UNIT : Description".
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in “Self Diagnostic Result” mode “LASER/RADAR “

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-80, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1B85 DISTANCE SENSOR ABNORMAL TEMP

DTC Description

INFOID:0000000015204200

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B85	DIST SEN ABNORMAL TEMP (Distance sensor abnormal temperature)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ICC sensor judges high temperature abnormality
		Diagnosis delay time	-

POSSIBLE CAUSE

Temperature around the ICC sensor becomes high

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn the ignition switch OFF.
2. Wait for 10 minutes or more to cool the ICC sensor.
3. Start the engine.
4. Turn the ICC system ON.
5. Select “All DTC Reading” mode.
6. Check if “C1B85” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B85” detected as the current malfunction?

YES >> Refer to DAS-124, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204201

1.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

Check if “C1B85” is detected in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B85” detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-124, "DTC Description".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

DTC Description

INFOID:0000000015204202

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B86	DIST SEN PWR SUP CIR (Distance sensor power supply circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ICC sensor power supply voltage is malfunction
		Diagnosis delay time	-

POSSIBLE CAUSE

- Harness, connector, fuse
- ICC sensor

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

CONSULT

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B86” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A86” detected as the current malfunction?

YES >> Refer to DAS-125, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204203

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-80, "DTC Index".

NO >> GO TO 3.

3. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

CONSULT

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

Is “C1B86” detected?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Inspection End.

C1B5A G SENSOR

DTC Description

INFOID:0000000015204204

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B5A	G SENSOR MALF (TCM message error)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from TCM via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “C1B5A” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B5A” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1B5A” detected as the current malfunction?

YES >> Refer to DAS-127, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204205

1.CHECK DTC PRIORITY

If DTC “C1B5A” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

C1B5D FEB OPE COUNT LIMIT

DTC Description

INFOID:0000000015204206

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B5D	FEB OPE COUNT LIMIT (Forward Emergency Braking operation count limit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	FEB system operated 3 times within ignition switch ON
		Diagnosis delay time	-

POSSIBLE CAUSE

FEB system operated 3 times within ignition switch ON.

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.PERFORM ICC SYSTEM ACTION TEST

Perform the ICC system action test. Refer to CCS-102, "Description".

Is there any malfunction symptom?

YES >> Refer to DAS-129, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204207

1.DTC CHECK SELF-DIAGNOSIS RESULTS

CONSULT

1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B5D” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is C1B5D detected as current malfunction?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO >> Perform ICC system action test. Refer to CCS-206, "Removal and Installation".

U0121 VDC CAN 2
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204208

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0121	VDC CAN CIR2 (VDC CAN circuit2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE
ABS actuator and electric unit (control unit)

FAIL-SAFE
The following systems are canceled:
- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY
If DTC “U0121” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE
CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0121” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U0121” detected as the current malfunction?

YES >> Refer to DAS-130, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204209

1.CHECK DTC PRIORITY
If DTC “U0121” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204210

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0121	VDC CAN CIR2 (VDC CAN circuit2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0121” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U0121” detected as the current malfunction?

YES >> Refer to DAS-131, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204211

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0126 STRG SEN CAN 1
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204212

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0126	STRG SEN CAN CIR1 (Steering sensor CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is “U0126” detected as the current malfunction?

YES >> Refer to DAS-133, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204213

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204214

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0126	STRG SEN CAN CIR1 (Steering sensor CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 detects an error signal that is received from steering angle sensor via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “U0126” detected as the current malfunction?

YES >> Refer to DAS-134, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204215

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0155 METER CAN 1

DTC Description

INFOID:0000000015204216

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0155	METER CAN CIRC 3 (Meter CAN circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from combination meter via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

The following systems are canceled:

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0155” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U0155” detected as the current malfunction?

YES >> Refer to DAS-136, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204217

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK COMBINATION METER SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “METER/M&A”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to MWI-32, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0235 ICC SENSOR CAN 1

DTC Description

INFOID:0000000015204218

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0235	ICC SENSOR CAN CIR1 (ICC sensor CAN circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from ICC sensor via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0235” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U0235” detected as the current malfunction?

YES >> Refer to DAS-125, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204219

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-80, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0401 ECM CAN 1

DTC Description

INFOID:0000000015204220

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0401	ECM CAN CIR1 (ECM CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from ECM via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0401” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U0401” detected as the current malfunction?

YES >> Refer to DAS-140, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204221

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ECM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-109, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0402 TCM CAN 1

DTC Description

INFOID:0000000015204222

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0402	TCM CAN CIRC1 (TCM CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from TCM via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0402” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U0402” detected as the current malfunction?

YES >> Refer to DAS-142, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204223

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0415 VDC CAN 1
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204224

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0415	VDC CAN CIR1 (VDC CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE
ABS actuator and electric unit (control unit)

FAIL-SAFE
The following systems are canceled:
- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is “U0415” detected as the current malfunction?

YES >> Refer to DAS-144, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204225

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204226

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0415	VDC CAN CIR1 (VDC CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is “U0415” detected as the current malfunction?

YES >> Refer to DAS-145, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204227

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-152, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U0428 STRG SEN CAN 2
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204228

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0428	CONTROL UNIT (Control unit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is “U0428” detected as the current malfunction?

YES >> Refer to DAS-147, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204229

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Logic

INFOID:0000000015204230

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0428	STRG SEN CAN CIR2 (Steering sensor CAN circuit2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 detects an error signal that is received from steering angle sensor via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY
If DTC “U0428” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.
Is applicable DTC detected?
YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE
CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0428” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U0428” detected as the current malfunction?
YES >> Refer to DAS-148, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204231

1.CHECK DTC PRIORITY
If DTC “U0428” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.
Is applicable DTC detected?
YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1000 CAN COMM CIRCUIT
ADAS CONTROL UNIT

ADAS CONTROL UNIT : Description

INFOID:0000000015204232

CAN COMMUNICATION

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.
CAN communication signal chart. Refer to LAN-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

ITS COMMUNICATION

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

CHASSIS COMMUNICATION

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

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204233

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit is not transmitting or receiving CAN communication signal or ITS communication signal or chassis communication signal for 2 seconds or more
		Diagnosis delay time	-

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled:
- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Forward Emergency Braking (FEB)
- Forward Emergency Braking (FEB) with pedestrian
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected as the current malfunction?

YES >> Refer to DAS-140, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204234

1.PERFORM THE SELF-DIAGNOSIS

CONSULT
1. Turn the ignition switch ON.
2. Turn the ICC or FEB system ON, then wait 30 seconds or more.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected as the current malfunction?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO >> Inspection End.

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : Description

INFOID:0000000015204235

CAN COMMUNICATION

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.
CAN communication signal chart. Refer to LAN-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

ITS COMMUNICATION

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

CHASSIS COMMUNICATION

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

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204236

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 is not transmitting or receiving CAN communication signal or ITS communication signal or chassis communication signal for 2 seconds or more
		Diagnosis delay time	-

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

POSSIBLE CAUSE
- CAN communication system
- ITS communication system
- Chassis communication system

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

NOTE:
With the detection of “U1000” some systems do not perform the fail-safe operation. A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the ADAS control unit 2 becomes inoperable.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1000” detected as the current malfunction?

YES >> Refer to DAS-140, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204237

1.PERFORM THE SELF-DIAGNOSIS

CONSULT
1. Turn the ignition switch ON.
2. Turn the LDP system ON, and then wait for 30 seconds or more.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1000” detected as the current malfunction?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO >> Inspection End.

U1010 CONTROL UNIT (CAN)

ADAS CONTROL UNIT

ADAS CONTROL UNIT : Description

INFOID:0000000015204238

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

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204239

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit detects malfunction by CAN controller initial diagnosis
		Diagnosis delay time	-

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected as the current malfunction?

YES >> Refer to DAS-153, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204240

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn the ICC or FEB system ON.
2. Select “All DTC Reading” mode.
3. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1010” detected as the current malfunction?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : Description

INFOID:0000000015204241

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

ADAS CONTROL UNIT 2 : DTC Logic

INFOID:0000000015204242

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 detects malfunction by CAN controller initial diagnosis
		Diagnosis delay time	-

POSSIBLE CAUSE

ADAS control unit 2

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1000” detected as the current malfunction?

YES >> Refer to DAS-154, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204243

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn the LDP system ON.
2. Select “All DTC Reading” mode.
3. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1010” detected as the current malfunction?

YES >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

U150B ECM CAN 3

DTC Logic

INFOID:0000000015204244

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U150B	ECM CAN CIRC 3 (ECM CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from ECM via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U150B” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U150B” detected as the current malfunction?

YES >> Refer to DAS-155, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204245

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ECM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-109, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U150C VDC CAN 3

DTC Logic

INFOID:0000000015204246

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U150C	VDC CAN CIRC 3 (Control unit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U150C” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U150C” detected as the current malfunction?

YES >> Refer to DAS-157, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204247

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U150D TCM CAN 3

DTC Logic

INFOID:0000000015204248

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U150D	TCM CAN CIRC 3 (TCM CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from TCM via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U150D” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U150D” detected as the current malfunction?

YES >> Refer to DAS-159, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204249

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U150E BCM CAN 3

DTC Logic

INFOID:0000000015204250

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U150E	BCM CAN CIRC 3 (BCM CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from BCM via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

BCM

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U150E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U150E” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U150E” detected as the current malfunction?

YES >> Refer to DAS-161, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204251

1.CHECK DTC PRIORITY

If DTC “U150E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK BCM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “BCM”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BCS-48, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U151D HPCM CAN CIRCUIT 2
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015244270

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition	
U151D	HPCM CAN CIRCUIT 2 (HPCM CAN circuit 2)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	ADAS control unit detects an error signal that is received from HPCM
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE
HPCM

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

If DTC “U151D” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U151D” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U151D” detected as the current malfunction?

YES >> Refer to DAS-163, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015244271

1. CHECK DTC PRIORITY

If DTC “U151D” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015261429

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition	
U151D	HPCM CAN CIRCUIT 2 (HPCM CAN circuit 2)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	ADAS control unit 2 detects an error signal that is received from HPCM
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE
HPCM

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY

If DTC “U151D” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U151D” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U151D” detected as the current malfunction?

YES >> Refer to DAS-164, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015261430

1.CHECK DTC PRIORITY

If DTC “U151D” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U151E HPCM CAN CIRCUIT 1
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015244272

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition	
U151E	HPCM CAN CIRCUIT 1 (HPCM CAN circuit 1)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	CAN communication
		Threshold	ADAS control unit detects an error signal that is received from HPCM
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE
HPCM

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

If DTC “U151E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U151E” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U151E” detected as the current malfunction?

YES >> Refer to DAS-166, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015244273

1. CHECK DTC PRIORITY

If DTC “U151E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015261431

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detecting condition	
U151E	HPCM CAN CIRCUIT 1 (HPCM CAN circuit 1)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	CAN communication
		Threshold	ADAS control unit 2 detects an error signal that is received from HPCM
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE
HPCM

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control (ICC)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U151E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U151E” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U151E” detected as the current malfunction?

YES >> Refer to DAS-167, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015261432

1.CHECK DTC PRIORITY

If DTC “U151E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS OF HPCM

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “EV/HEV”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to HBC-71, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1321 CONFIGURATION

DTC Description

INFOID:0000000015204252

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1321	CONFIG UNFINISHED (Configuration unfinished)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	The vehicle specifications of ADAS control unit 2 is incomplete
		Diagnosis delay time	-

POSSIBLE CAUSE

Vehicle specifications for ADAS control unit 2 is incomplete.

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1321” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1321” detected as the current malfunction?

YES >> Refer to DAS-169, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000015204253

1.PERFORM CONFIGURATION OF ADAS CONTROL UNIT 2

CONSULT
Perform configuration of ADAS control unit 2 when DTC “U1321” is detected.

>> Perform configuration of ADAS control unit 2. Refer to DAS-63, "Work Procedure".

U1402 CVT CAN CIR1

DTC Description

INFOID:0000000015204254

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1402	CVT CAN CIR1 (CVT CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If ADAS control unit 2 detects an error signal that is received from CVT via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

CVT

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1402” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1402” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1402” detected as the current malfunction?

YES >> Refer to DAS-170, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204255

1.CHECK DTC PRIORITY

If DTC “U1402” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.CHECK ECM SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-70, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1500 CAM CAN 2
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204256

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1500	CAM CAN CIRC 2 (Camera can circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from lane camera via chassis communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Lane camera unit

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

If DTC “U1500” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1500” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1500” detected as the current malfunction?

YES >> Refer to DAS-172, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204257

1. CHECK DTC PRIORITY

If DTC “U1500” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-292, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204258

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1500	CAM CAN CIRC 2 (Camera can circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects an error signal that is received from lane camera via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1500” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1500” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1500” detected as the current malfunction?

YES >> Refer to DAS-173, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204259

1.CHECK DTC PRIORITY

If DTC “U1500” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-292, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1501 CAM CAN 1
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204260

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1501	CAM CAN CIRC 1 (Camera can circuit 1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from lane camera via chassis communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Lane camera unit

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “U1501” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1501” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1501” detected as the current malfunction?

YES >> Refer to DAS-175, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204261

1. CHECK DTC PRIORITY

If DTC “U1501” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-292, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204262

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1501	CAM CAN CIRC 1 (Camera can circuit 1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects an error signal that is received from lane camera via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled:
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1501” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1501” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1501” detected as the current malfunction?

YES >> Refer to DAS-176, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204263

1.CHECK DTC PRIORITY

If DTC “U1501” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-292, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1502 ICC SENSOR CAN COMM CIRC

DTC Description

INFOID:0000000015204264

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1502	ICC SEN CAN COMM CIR ((ICC sensor CAN communication circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from ICC sensor via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1502” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1502” detected as the current malfunction?

YES >> Refer to DAS-125, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204265

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-80, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1503 SIDE RDR L CAN 2
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204266

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1503	SIDE RDR L CAN CIR 2 (Side radar left CAN circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from side radar LH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Side radar LH

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1503” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1503” detected as the current malfunction?

YES >> Refer to DAS-179, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204267

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204268

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1503	SIDE RDR L CAN CIR 2 (Side radar left CAN circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects an error signal that is received from side radar LH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1508: Refer to DAS-195, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1503” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1503” detected as the current malfunction?

YES >> Refer to DAS-152, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204269

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index".

NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1504 SIDE RDR L CAN 1
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204270

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1504	SIDE RDR L CAN CIR 1 (Side radar left CAN circuit 1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from side radar LH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Side radar LH

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1504” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1504” detected as the current malfunction?

YES >> Refer to DAS-182, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204271

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204272

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1504	SIDE RDR L CAN CIR 1 (Side radar left CAN circuit 1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects an error signal that is received from side radar LH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1504” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1504” detected as the current malfunction?

YES >> Refer to DAS-183, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204273

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index".
NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1505 SIDE RDR R CAN 2
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204274

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1505	SIDE RDR R CAN CIR 1 (Side radar right CAN circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from side radar RH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Side radar RH

FAIL- SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1507: Refer to DAS-191, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1505” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1505” detected as the current malfunction?

YES >> Refer to DAS-185, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204275

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1507: Refer to DAS-191, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204276

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1505	SIDE RDR R CAN CIR 2 (Side radar right CAN circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects an error signal that is received from side radar RH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar RH

FAIL- SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1507: Refer to DAS-192, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1505” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1505” detected as the current malfunction?

YES >> Refer to DAS-186, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204277

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1507: Refer to DAS-192, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index".
NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1506 SIDE RDR R CAN 1
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204278

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1506	SIDE RDR R CAN CIR 1 (Side radar right CAN circuit 1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from side radar RH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE
Side radar RH

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1507: Refer to DAS-191, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1506” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1506” detected as the current malfunction?

YES >> Refer to DAS-188, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204279

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1507: Refer to DAS-191, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2. CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204280

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1506	SIDE RDR R CAN CIR 1 (Side radar right CAN circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 detects an error signal that is received from side radar RH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1507: Refer to DAS-192, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1506” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1506” detected as the current malfunction?

YES >> Refer to DAS-189, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204281

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description"
- U1507: Refer to DAS-192, "ADAS CONTROL UNIT 2 : DTC Description"

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index".
NO >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

U1507 LOST COMM(SIDE RDR R)
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204282

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1507	LOST COMM(SIDE RDR R) [Lost communication (Side radar right)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit cannot receive ITS communication signal from side radar RH for 2 seconds or more
		Diagnosis delay time	-

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

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1507” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1507” detected as the current malfunction?

YES >> Refer to DAS-191, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204283

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2. CHECK RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Check right/left switching signal circuit. Refer to DAS-379, "Diagnosis Procedure".

Is the inspection result normal?

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

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204284

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1507	LOST COMM(SIDE RDR R) [Lost communication (Side radar right)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 cannot receive ITS communication signal from side radar RH for 2 seconds or more
		Diagnosis delay time	-

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1507” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1507” detected as the current malfunction?

YES >> Refer to DAS-192, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO2- >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204285

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".
NO >> GO TO 2.

2.CHECK RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Check right/left switching signal circuit. Refer to DAS-379, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to LAN-26, "Trouble Diagnosis Flow Chart".

NO >> Repair right/left switching signal circuit.

U1508 LOST COMM(SIDE RDR L)
ADAS CONTROL UNIT

ADAS CONTROL UNIT : DTC Description

INFOID:0000000015204286

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1508	LOST COMM(SIDE RDR L) [Lost communication (Side radar left)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit cannot receive ITS communication signal from side radar LH for 2 seconds or more
		Diagnosis delay time	-

POSSIBLE CAUSE
- Side radar LH harness connector
- ITS communication system
- Side radar LH

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY

If DTC “U1508” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

(E)CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1508” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1508” detected as the current malfunction?

YES >> Refer to DAS-194, "ADAS CONTROL UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204287

1.CHECK DTC PRIORITY

If DTC “U1508” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK SIDE RADAR HARNESS CONNECTOR

1. Turn the ignition switch OFF.
2. Check the terminals and connectors of the side radar LH for damage, bend and short (unit side and connector side).

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to LAN-26, "Trouble Diagnosis Flow Chart".

NO >> Repair the terminal or connector.

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : DTC Description

INFOID:0000000015204288

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1508	LOST COMM(SIDE RDR L) [Lost communication (Side radar left)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit 2 cannot receive ITS communication signal from side radar LH for 2 seconds or more
		Diagnosis delay time	-

POSSIBLE CAUSE

- Side radar LH harness connector
- ITS communication system
- Side radar LH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1508” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1508” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1508” detected as the current malfunction?

YES >> Refer to DAS-195, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204289

1.CHECK DTC PRIORITY

If DTC “U1508” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

NO >> GO TO 2.

2.CHECK SIDE RADAR HARNESS CONNECTOR

1. Turn the ignition switch OFF.
2. Check the terminals and connectors of the side radar LH for damage, bend and short (unit side and connector side).

Is the inspection result normal?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to LAN-26, "Trouble Diagnosis Flow Chart".

NO >> Repair the terminal or connector.

U1513 METER CAN 3

DTC Description

INFOID:0000000015204290

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1513	METER CAN CIR 3 (Meter CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from combination meter via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1513” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1513” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1513” detected as the current malfunction?

YES >> Refer to DAS-197, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204291

1.CHECK DTC PRIORITY

If DTC “U1513” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK COMBINATION METER SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “METER/M&A”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to MWI-32, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1514 STRG SEN CAN 3

DTC Description

INFOID:0000000015204292

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1514	STRG SEN CAN CIR 3 (Steering sensor CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1514” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the ICC or FEB system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1514” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1514” detected as the current malfunction?

YES >> Refer to DAS-199, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204293

1.CHECK DTC PRIORITY

If DTC “U1514” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1515 ICC SENSOR CAN 3

DTC Description

INFOID:0000000015204294

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1515	ICC SENSOR CAN CIR 3 (ICC sensor CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from ICC sensor via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled:

- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1515” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1515” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1515” detected as the current malfunction?

YES >> Refer to DAS-201, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204295

1.CHECK DTC PRIORITY

If DTC “U1515” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-80, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1516 CAM CAN 3

DTC Description

INFOID:0000000015204296

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1516	CAM CAN CIR 3 (Camera CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from lane camera via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1516” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the LDP system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1516” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1516” detected as the current malfunction?

YES >> Refer to DAS-202, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204297

1.CHECK DTC PRIORITY

If DTC “U1516” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-292, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1518 SIDE RDR L CAN 3

DTC Description

INFOID:0000000015204298

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1518	SIDE RDR L CAN CIRC 3 (Side radar left CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from side radar LH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1518” is displayed with DTC “U1000” or “U1508”, first diagnose the DTC “U1000” or “U1508”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1518” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1518” detected as the current malfunction?

YES >> Refer to DAS-204, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204299

1.CHECK DTC PRIORITY

If DTC “U1518” is displayed with DTC “U1000” or “U1508”, first diagnose the DTC “U1000” or “U1508”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1508: Refer to DAS-194, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-286, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

U1519 SIDE RDR R CAN 3

DTC Description

INFOID:0000000015204300

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1519	SIDE RDR R CAN CIR 3 (Side radar right CAN circuit 3)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	ADAS control unit detects an error signal that is received from side radar RH via ITS communication
		Diagnosis delay time	-

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U1519” is displayed with DTC “U1000” or “U1507”, first diagnose the DTC “U1000” or “U1507”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1507: Refer to DAS-191, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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

Is “U1519” detected as the current malfunction?

YES >> Refer to DAS-206, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204301

1.CHECK DTC PRIORITY

If DTC “U1519” is displayed with DTC “U1000” or “U1507”, first diagnose the DTC “U1000” or “U1507”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
- U1000: Refer to DAS-150, "ADAS CONTROL UNIT : DTC Description"
- U1507: Refer to DAS-191, "ADAS CONTROL UNIT : DTC Description"

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-288, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT
ADAS CONTROL UNIT

ADAS CONTROL UNIT : Diagnosis Procedure

INFOID:0000000015204302

Regarding Wiring Diagram information, refer to DAS-47, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuse is not blown.

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

Is the fuse blown?

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

2.CHECK ADAS CONTROL UNIT POWER SUPPLY CIRCUIT

Check voltage between ADAS control unit harness connector and ground.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
ADAS control unit		Ground	Ignition switch	
Connector	Terminal			
B4	12		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the ADAS control unit power supply circuit.

3.CHECK ADAS CONTROL UNIT GROUND CIRCUIT

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

ADAS control unit		Ground	Continuity
Connector	Terminal		
B4	5		Yes

Is the inspection result normal?

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

ADAS CONTROL UNIT 2

ADAS CONTROL UNIT 2 : Diagnosis Procedure

INFOID:0000000015204303

Regarding Wiring Diagram information, refer to DAS-47, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuse is not blown:

Signal name	Fuse No.
Ignition power supply	29 (10A)

Is the fuse blown?

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

2.CHECK ADAS CONTROL UNIT 2 POWER SUPPLY CIRCUIT

Check voltage between ADAS control unit 2 harness connector and ground.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
ADAS control unit 2		Ground	Ignition switch	
Connector	Terminal			
M148	3		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the ADAS control unit 2 power supply circuit.

3.CHECK ADAS CONTROL UNIT GROUND CIRCUIT

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

ADAS control unit 2		Ground	Continuity
Connector	Terminal		
M148	1		Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair the ADAS control unit 2 ground circuit.

REMOVAL AND INSTALLATION

ADAS CONTROL UNIT

Removal and Installation

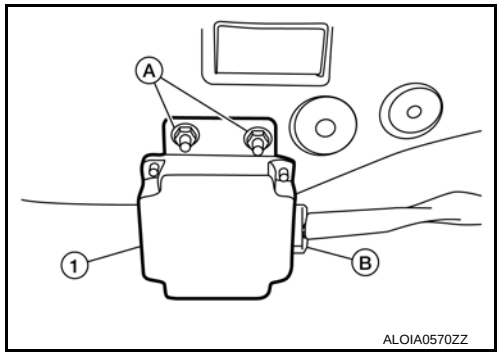
INFOID:0000000014903064

REMOVAL

CAUTION:

Before replacing ADAS control unit, perform “ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT." Refer to DAS-61, "Description".

1. Remove the luggage rear plate. Refer to INT-34, "LUGGAGE REAR PLATE : Removal and Installation".
2. Disconnect the harness connector (B) from the ADAS control unit (1).
3. Remove the nuts (A) and remove the ADAS control unit.



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform “ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT” when replacing ADAS control unit. Refer to DAS-61, "Description".

- Tighten ADAS control unit nuts to specification.

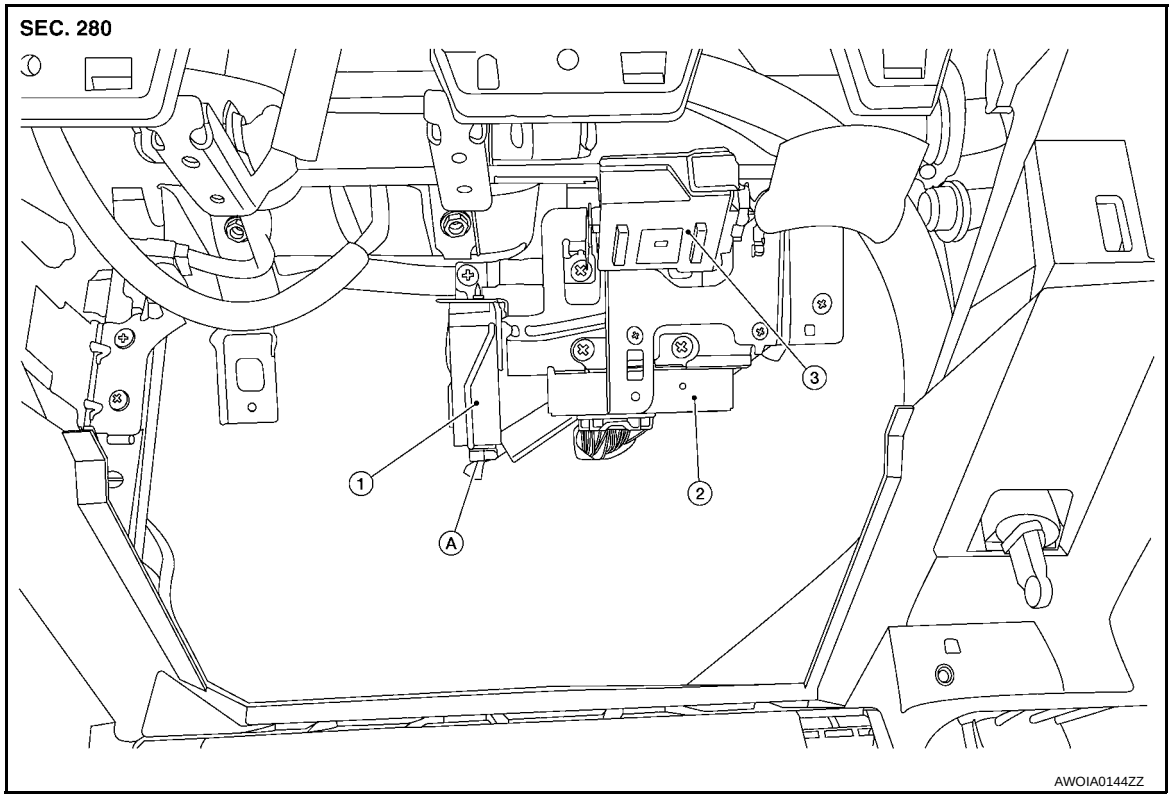
ADAS control unit nuts : 8.3 N·m (0.85 kg-m, 73 in-lb)

ADAS CONTROL UNIT 2

Exploded View

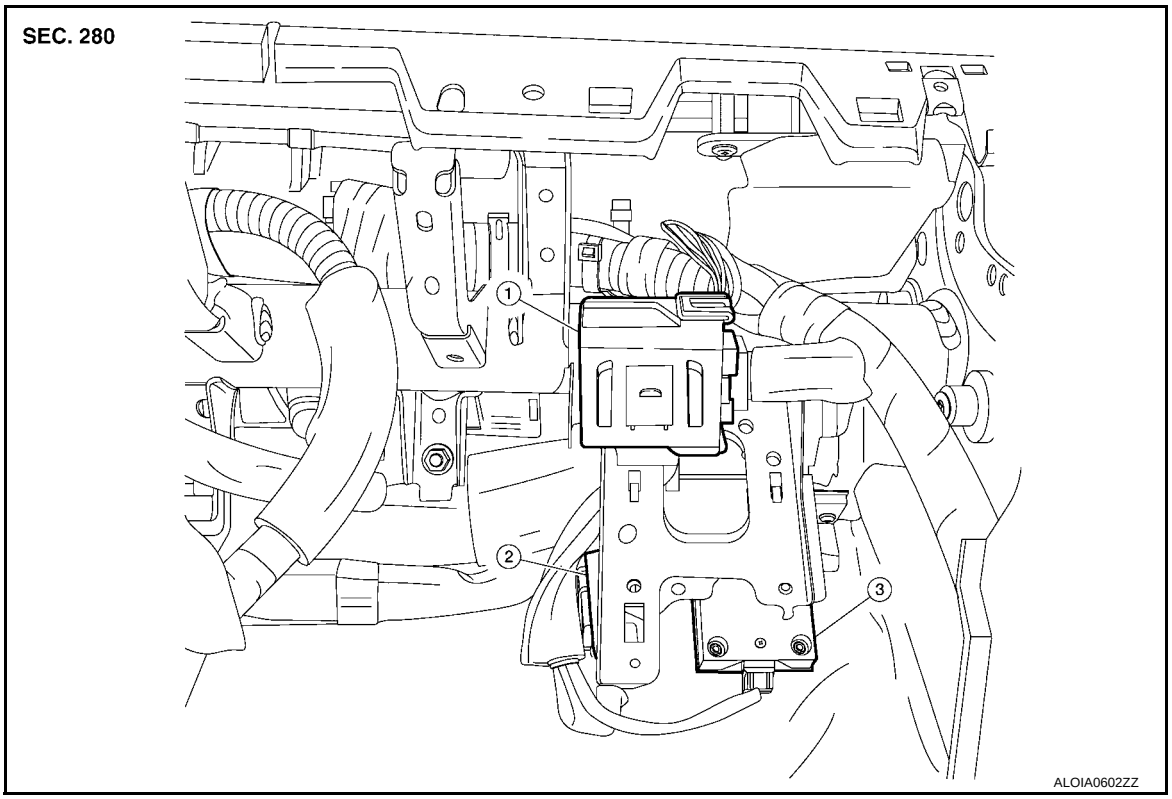
INFOID:0000000014903065

With Around View Monitor



1. Warning systems buzzer
2. Around view monitor control unit
3. Chassis control module
A. Harness connector

Without Around View Monitor



1. Chassis control module
2. ADAS control unit 2
3. Warning systems buzzer

Removal and Installation

INFOID:0000000014903066

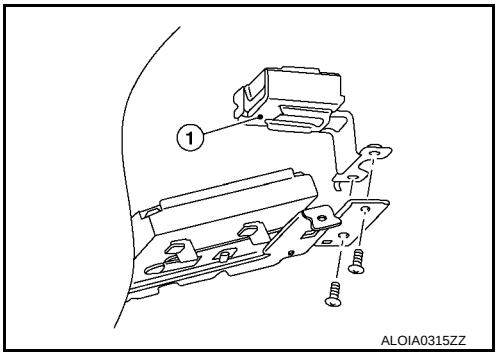
WITH AROUND VIEW MONITOR

REMOVAL

CAUTION:

Before replacing ADAS control unit 2, perform "ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT 2." Refer to DAS-62, "Description".

1. Remove glove box. Refer to IP-23, "Removal and Installation".
2. Remove screws from ADAS control unit 2 bracket (1).



3. Disconnect harness connector from ADAS control unit 2 and remove ADAS control unit 2.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform "ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT 2." Refer to DAS-62, "Description".

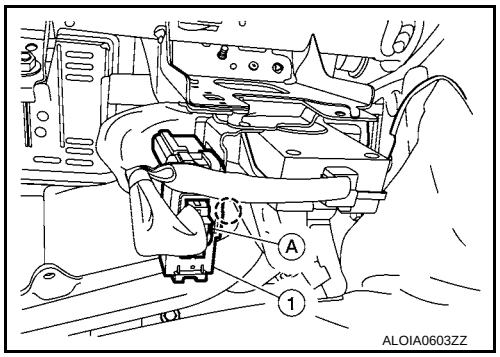
WITHOUT AROUND VIEW MONITOR

Removal

CAUTION:
Before replacing ADAS control unit 2, perform "ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT 2". Refer to DAS-62, "Description".

1. Remove glove box. Refer to IP-23, "Removal and Installation".
2. Disconnect harness connector (A) from ADAS control unit 2 (1).

: Pawl



3. Release pawl and remove ADAS control unit 2.

Installation
Installation is in the reverse order of removal.

CAUTION:
Perform "ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT 2". Refer to DAS-62, "Description".

PRECAUTION

PRECAUTIONS

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

INFOID:0000000014903067

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.**

Precaution for LDW/LDP System Service

INFOID:0000000015200416

WARNING:

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

CAUTION:

- **Do not use the LDP system when driving with free rollers or a chassis dynamometer.**
- **Do not perform the active test while driving.**
- **Do not disassemble the lane camera unit.**
- **Do not use the lane camera unit that is removed from the vehicle.**
- **Do not change LDW initial state ON ⇒ OFF without the consent of the customer.**

Precaution for Blind Spot Warning System Service

INFOID:0000000014903071

WARNING:

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

CAUTION:

- **Do not use the Blind Spot Warning system when driving with free rollers or a chassis dynamometer.**
- **Do not perform the active test while driving.**
- **Do not disassemble the lane camera unit.**
- **Do not use the lane camera unit that is removed from the vehicle.**
- **Do not change BSW initial state ON ⇒ OFF without the consent of the customer.**

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

Lane Camera Unit Maintenance

The lane camera unit for the LDW/LDP system is located above the inside mirror. To keep the proper operation of the LDW/LDP systems and prevent a system malfunction, be sure to observe the following:

- Always keep the windshield clean.
- Do not attach a sticker (including transparent material) or install an accessory near the camera unit.

- Do not place reflective materials, such as white paper or a mirror, on the instrument panel. The reflection of sunlight may adversely affect the camera unit capability of detecting the lane markers.
- Do not strike or damage the areas around the camera unit.
- Do not touch the camera lens or remove the screw located on the camera unit.

System Maintenance

The two side radars for the Blind Spot Warning system are located near the rear bumper.

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

Precaution for FEB System Service

INFOID:0000000014903073

WARNING:

- **Failure to follow the warnings and instructions for proper use of the FEB with pedestrian detection system could result in serious injury or death.**
- **The FEB with pedestrian detection system is a supplemental aid to the driver. 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 or dangerous driving techniques.**
- **The FEB with pedestrian detection system does not function in all driving, traffic, weather, and road conditions.**
- **Listed below are the system limitations for the FEB with pedestrian detection system. Failure to operate the vehicle in accordance with these system limitations could result in serious injury or death.**
- **The FEB with pedestrian detection system cannot detect all vehicles or pedestrians under all conditions.**
- **The FEB with pedestrian detection system does not detect the following objects:**
- **Small pedestrians (including small children), animals and cyclists.**
- **Pedestrians in wheel chairs or using mobile transport such as scooters, child-operated toys, or skateboards.**
- **Pedestrians who are seated or otherwise not in a full upright standing or walking position.**
- **Oncoming vehicles**
- **Crossing vehicles**
- **Obstacles on the roadside.**

CAUTION:

- **The FEB with pedestrian detection system has some performance limitations, for example:**
- **If a stationary vehicle is in the vehicle's path, the FEB with pedestrian detection system will not function when the vehicle is driven at speeds over approximately 50 MPH (80 km/h).**
- **For pedestrian detection, the FEB with pedestrian detection system will not function when the vehicle is driven at speeds over approximately 37 MPH (60 km/h) or below approximately 6 MPH (10 km/h).**
- **The FEB with pedestrian detection system will not function for pedestrians in darkness or in tunnels, even if there is street lighting in the areas.**

- The vehicle's brake lights come on when any braking is performed by the FEB with pedestrian detection system. Depending on vehicle speed and distance to the vehicle or pedestrian ahead, as well as driving and roadway conditions, the system may help the driver avoid a forward collision or may help mitigate the consequences if a collision should be unavoidable. If the driver is handling the steering wheel, accelerating or braking, the FEB with pedestrian detection system will function later or not function.
- The automatic braking will cease under the following conditions:
- When the steering wheel is turned to avoid a collision.
- When the accelerator pedal is depressed.
- When there is no longer a vehicle or pedestrian detected ahead.
- If the FEB with pedestrian detection system has stopped the vehicle, the vehicle will remain at a standstill for approximately 2 seconds before the brakes are released.
- The FEB with pedestrian detection system will be automatically turned on when the engine is started.

Precaution for ICC System Service

INFOID:0000000015200417

CAUTION:

- **Turn MAIN switch OFF in conditions similar to driving, such as free rollers or a chassis dynamometer.**
- **Do not use ICC sensor removed from vehicle. Never disassemble or remodel.**
- **Erase DTC when replacing parts of ICC system, then check operation of ICC system after adjusting radar alignment if necessary.**

Precaution for Work

INFOID:0000000014903075

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

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

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

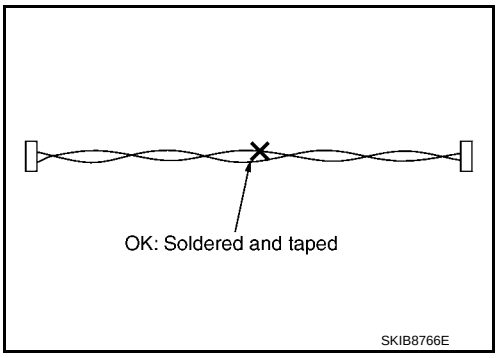
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

Precautions For Harness Repair

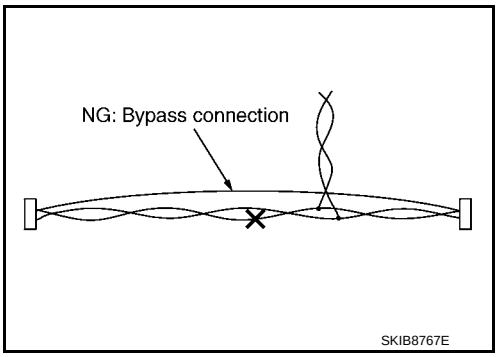
INFOID:0000000014903076

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

- Solder the repaired area and wrap tape around the soldered area.
  NOTE:
  A fray of twisted lines must be within 110 mm (4.33 in).



- Bypass connection is not allowed at the repaired area.
  NOTE:
  Bypass connection may cause ITS communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



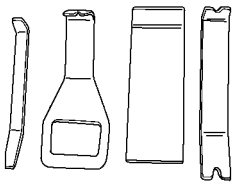
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000014903077

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

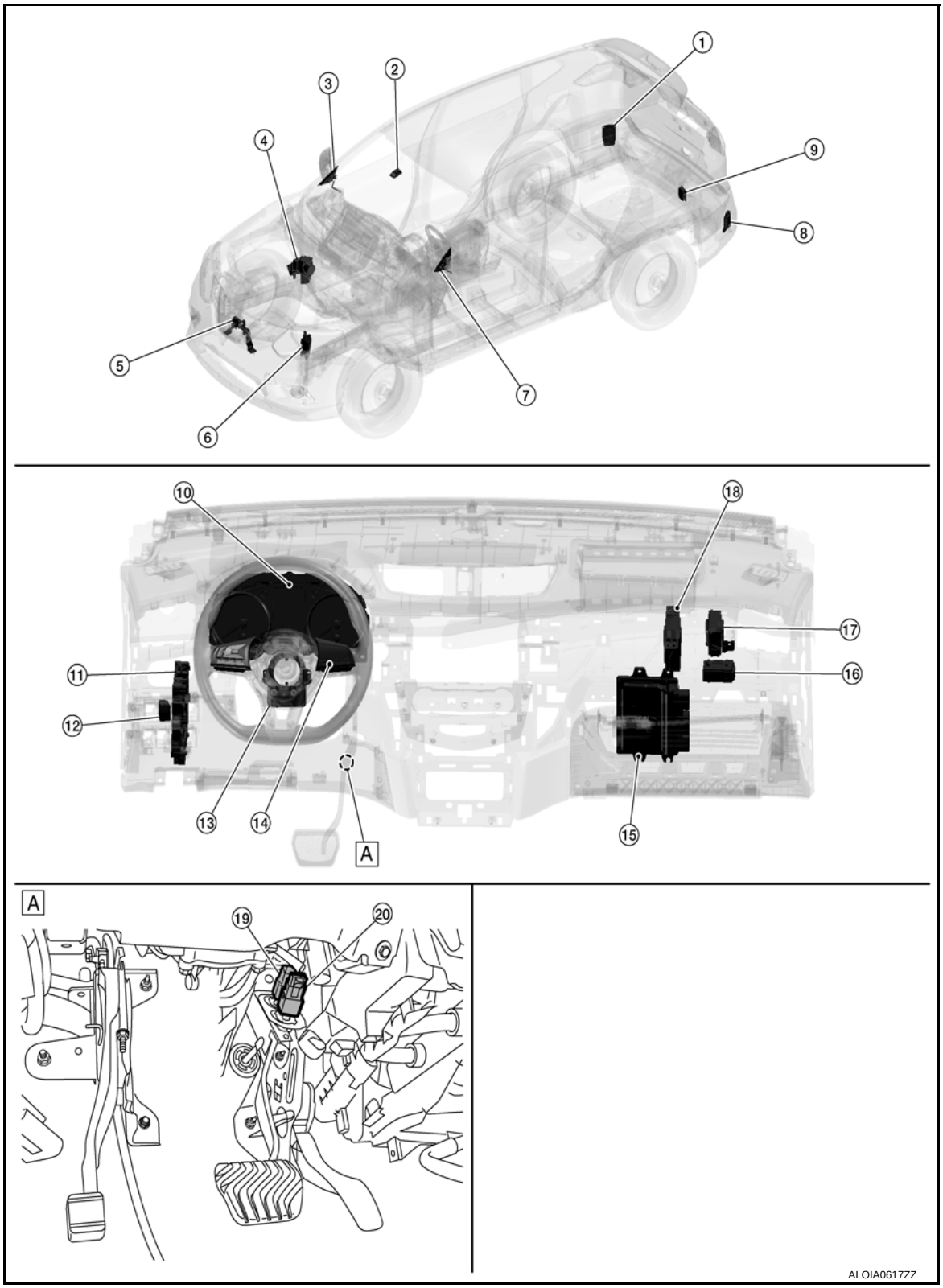
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000015204304



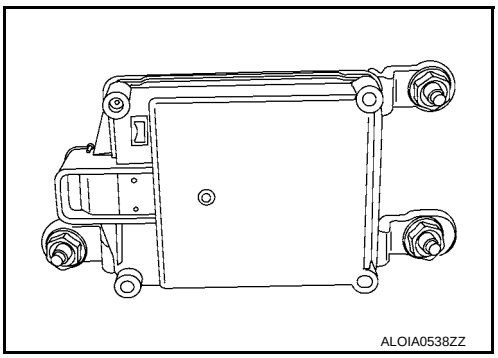
A. View of upper brake pedal area

No.	Component	Description
1.	Side radar RH	Refer to DAS-222, "Side Radar LH/RH"
2.	Lane camera unit (if equipped)	Refer to DAS-221, "Lane Camera Unit"
3.	Blind Spot Warning indicator RH	Refer to DAS-222, "Blind Spot Warning Indicator LH/RH"
4.	ABS actuator and electric unit (control unit) (with FEB)	• ABS actuator and electric unit (control unit) transmits the vehicle speed signal (wheel speed) and VDC/TCS/ABS system operation condition to Chassis control module via CAN communication • ABS actuator and electric unit (control unit) controls the brake, based on a brake fluid pressure control signal received from Chassis control module via CAN communication • Refer to BRC-212, "Component Parts Location" for detailed installation location.
	ABS actuator and electric unit (control unit) (without FEB)	• ABS actuator and electric unit (control unit) transmits the vehicle speed signal (wheel speed) ADAS control unit 2 via CAN communication • Refer to BRC-10, "Component Parts Location" for detailed installation location.
5.	ICC sensor (with FEB)	Refer to DAS-220, "ICC Sensor"
6.	TCM	• TCM transmits the signal related to CVT control to ADAS control unit. • Refer to TM-15, "CVT CONTROL SYSTEM : Component Parts Location" for detailed installation location.
7.	Blind Spot Warning indicator LH	Refer to DAS-222, "Blind Spot Warning Indicator LH/RH"
8.	Side radar LH	Refer to DAS-222, "Side Radar LH/RH"
9.	ADAS control unit (with FEB)	• ADAS control unit calculates a target distance between vehicles and a target speed, based on signals received from each sensor and switch to transmit a brake fluid pressure control signal request to Chassis control module via CAN communication • ADAS control unit transmits the buzzer output signal to the ADAS control unit 2 via ITS communication • Refer to DAS-13, "Component Parts Location" for detailed installation location.
10.	Combination meter	Performs the following operations using the signals received from the ADAS control unit via the CAN communication • Displays the system operation status using the meter display signal • Illuminates the system FEB warning lamp using the FEB warning lamp signal • Refer to MWI-5, "METER SYSTEM : Component Parts Location" for detailed installation location.
11.	BCM	• Transmits the turn indicator signal and position light request signal to ADAS control unit via CAN communication • Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
12.	Warning system switch	Refer to DAS-222, "Warning Systems Switch / Warning Systems ON indicator"
13.	Steering angle sensor (with FEB)	• Measures the rotation amount, rotation speed, and rotation direction of steering wheel, and then transmits them to ADAS control unit and Chassis control module via CAN communication • Refer to BRC-10, "Component Parts Location" for detailed installation location.
14.	ICC steering switch (if equipped)	HPCM receives an ICC steering switch signal and transmits the signal to ADAS control unit via CAN communication
15.	HPCM	• HPCM transmits the stop lamp and brake pedal position switch signals, ICC steering switch signal, etc. to ADAS control unit and Chassis control module via CAN communication • Refer to HBC-12, "Component Parts Location" for detailed installation location.
16.	Chassis control module	• Chassis control module transmits the drive mode signal to the ADAS control unit via chassis communication • Refer to DAS-416, "Component Parts Location" for detailed installation location.
17.	ADAS control unit 2	Refer to DAS-222, "ADAS Control Unit 2"
18.	Warning buzzer	Refer to DAS-222, "Warning Buzzer"

No.	Component	Description
19.	Brake pedal position switch (with FEB)	Refer to DAS-220, "Brake Pedal Position Switch / Stop Lamp Switch"
20.	Stop lamp switch (with FEB)	

ICC Sensor

INFOID:0000000015204305



- ICC sensor is installed on the back of the front grille and detects a vehicle ahead by using millimeter waves.
- ICC sensor detects radar reflected from a vehicle ahead by irradiating radar forward and calculates a distance from the vehicle ahead and relative speed, based on the detected signal.
- ICC sensor transmits the presence/absence of vehicle ahead and the distance from the vehicle to ADAS control unit via ITS communication.

ICC Steering Switch

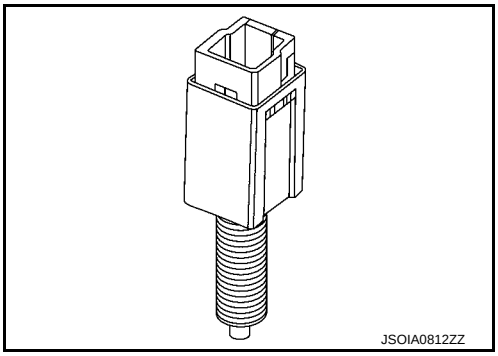
INFOID:0000000015204306

- ICC steering switch is installed to the steering wheel and allows the driver to operate the ICC system by using this switch.
- ICC steering switch allows the ON/OFF of the Intelligent Cruise Control and the settings of a vehicle speed and distance between vehicles.
- ICC steering switch signal is transmitted to HPCM. HPCM transmits the signal to the ADAS control unit via CAN communication.

Brake Pedal Position Switch / Stop Lamp Switch

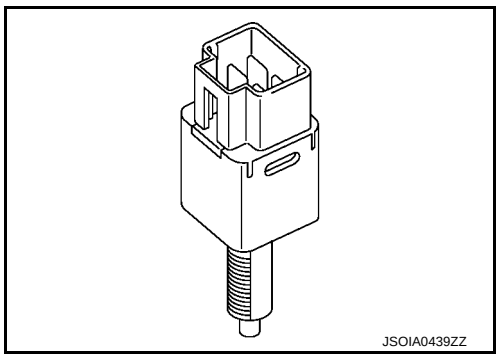
INFOID:0000000015204307

- Brake pedal position switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.



- Brake pedal position switch is turned OFF when depressing the brake pedal.
- Brake pedal position switch signal is input to HPCM. Brake pedal position switch signal is transmitted from HPCM to Chassis control module and ADAS control unit via CAN communication.

- Stop lamp switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.
- Stop lamp switch is turned ON, when depressing the brake pedal.
- Stop lamp switch signal is input to HPCM. Stop lamp switch signal is transmitted from HPCM to Chassis control module and ADAS control unit via CAN communication.


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Combination Meter

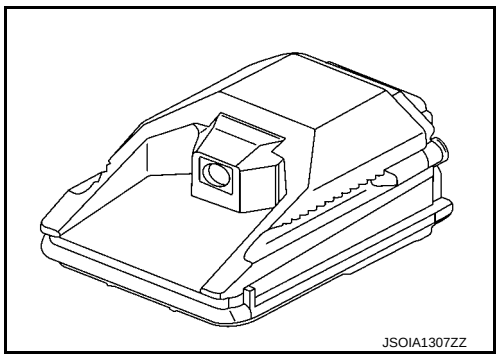
INFOID:0000000015204308

- Transmits driver assistance system selection signal to ADAS control unit (with FEB) via CAN communication.
- Transmits driver assistance system selection signal to ADAS control unit 2 (without FEB) via CAN communication.
- Receives meter display signal from ADAS control unit (with FEB) via CAN communication.
- Receives meter display signal from ADAS control unit 2 (without FEB) via CAN communication.
- Displays the system status according to a signal received from the ADAS control unit (with FEB).
- Displays the system status according to a signal received from the ADAS control unit 2 (without FEB).

Lane Camera Unit

INFOID:0000000015204309

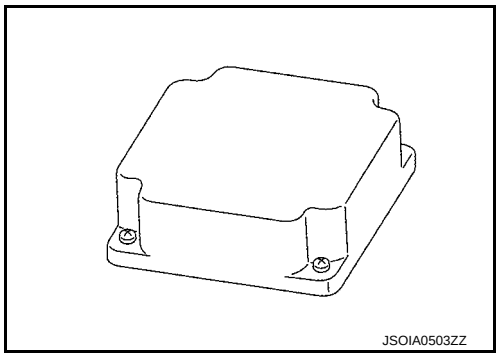
- Lane camera unit is installed to the windshield and detects the lane marker in travel lane.
- Transmits lane marker signal to ADAS control unit via chassis communication.


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ADAS Control Unit

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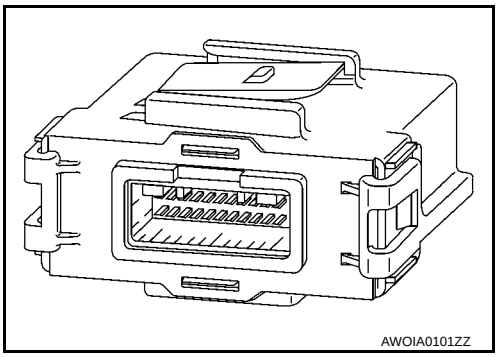
- ADAS control unit is installed below the luggage rear plate.
- Communicates with each control unit via CAN communication/ITS communication/Chassis communication.
- ADAS control unit included gateway function, and necessary for system control signals are transmitted to each control unit between CAN communication and ITS communication by the ADAS control unit.
- ADAS control unit controls the each system, based on ITS communication signal, CAN communication signal and chassis communication signal from each control unit.


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ADAS Control Unit 2

INFOID:0000000015204311

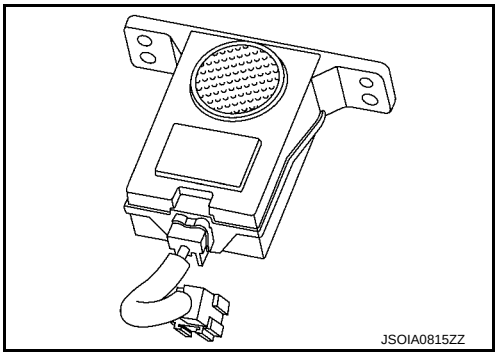
- ADAS control unit 2 is installed behind the glove box assembly.
- Communicates with each control unit via CAN communication, Chassis communication and ITS communication.
- ADAS control unit controls each system, based on ITS communication signals, Chassis communication signals and CAN communication signals from each control unit.



Warning Buzzer

INFOID:0000000015204312

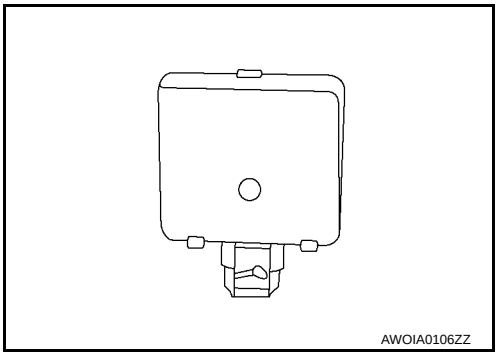
- Warning buzzer is installed behind the glove box assembly.
- When a warning buzzer signal is received, the buzzer sounds.



Side Radar LH/RH

INFOID:0000000015204313

- Installed near the rear bumper, the side radar detects other vehicles beside own vehicle in an adjacent lane.
- Connected with the ADAS control unit 2 via ITS communication, the side radar transmits a vehicle detection signal.
- Receives a Blind Spot Warning indicator signal and a Blind Spot Warning indicator dimmer signal from the ADAS control unit and transmits an indicator operation signal to the Blind Spot Warning indicator LH/RH.
- Since side radar RH and side radar LH have the same specifications, side radar RH has the right/left switching signal circuit for identification.



Blind Spot Warning Indicator LH/RH

INFOID:0000000015204314

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

Warning Systems Switch / Warning Systems ON indicator

INFOID:0000000015204315

- Installed to the instrument lower panel LH, the warning system switch is used to active/deactivate the driver assistance system.
- Warning system switch (ON/OFF) input to ADAS control unit (with FEB).
- Warning system switch (ON/OFF) input to ADAS control unit 2 (without FEB).

NOTE:

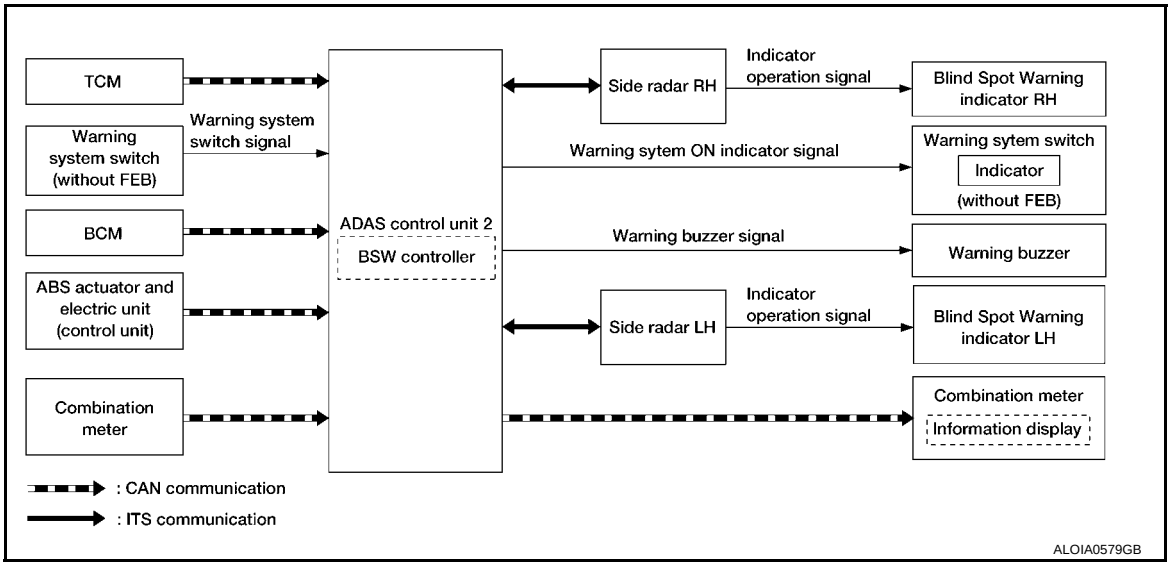
Warning system switch is shared with following systems (ON/OFF).

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

SYSTEM
BSW
BSW : System Description

INFOID:0000000015204316

SYSTEM DIAGRAM



ADAS CONTROL UNIT 2 INPUT/OUTPUT SIGNAL ITEM

ADAS control unit 2 receives signals via CAN communication. It also detects vehicle conditions that are necessary for Blind Spot Warning control.

Input Signal Item

Transmit unit	Signal name		Description
TCM	CAN communication	Shift selector position signal	Receives a shift selector position.
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels.
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp.
		Dimmer signal	Receives ON/OFF state of dimmer signal.
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in “Driver Aids” selected with the integral switch.
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.
Warning system switch	Warning system switch signal		Receives ON/OFF state of the warning system switch.

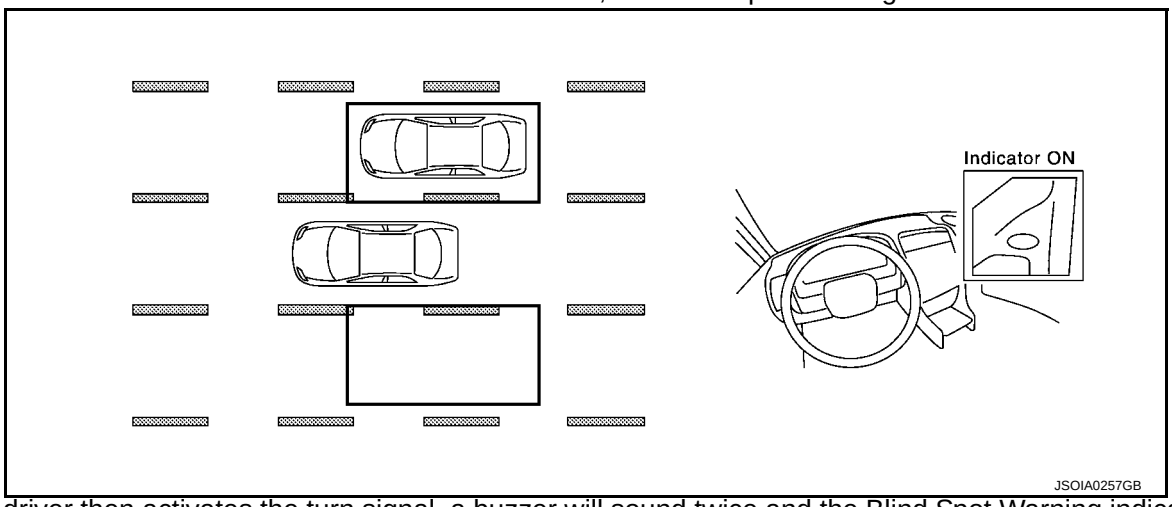
Output Signal Item

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

Reception unit	Signal name	Description
Warning system ON indicator	Warning system ON indicator signal	Turns ON the warning system ON indicator.
Warning buzzer	Warning buzzer signal	Activates warning buzzer.

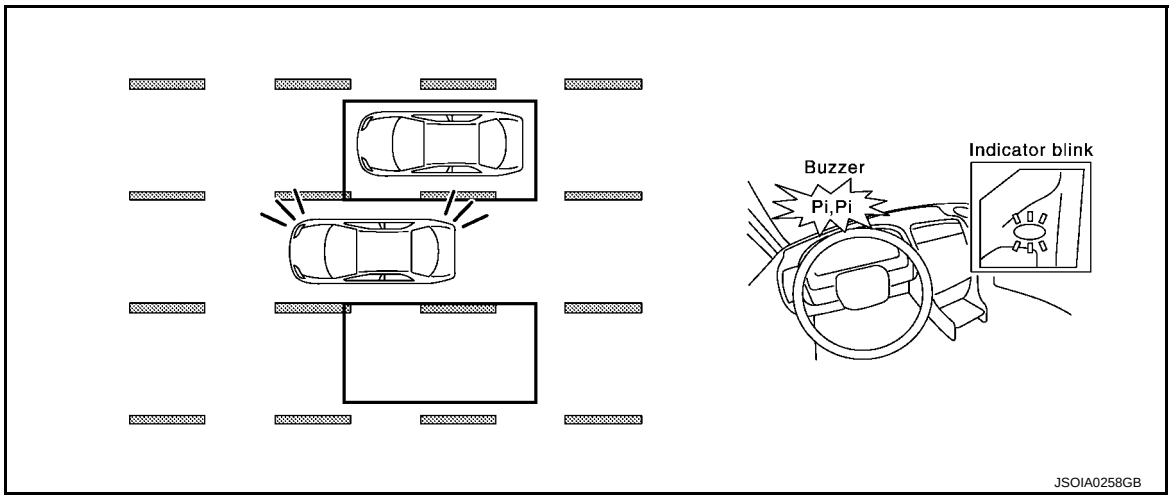
FUNCTION DESCRIPTION

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



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

NOTE:
A buzzer sounds if the side radar has detected a vehicle when the driver activates the turn signal. If a vehicle comes into the detection zone after the driver activates the turn signal, then only the Blind Spot Warning indicator blinks and no buzzer sounds.



BLIND SPOT WARNING SYSTEM OPERATION DESCRIPTION

- ADAS control unit enables BSW system.
- The ADAS control unit turns on the BSW system when it is turned ON by the integral switch.
- Side radar detects a vehicle in the adjacent lane and transmits the vehicle detection signal to ADAS control unit via ITS communication.
- ADAS control unit starts the control as follows, based on a vehicle detection signal, turn signal and dimmer signal transmitted from BCM via CAN communication:

- Blind Spot Warning indicator signal and Blind Spot Warning indicator dimmer signal transmission to side radar.

- Side radar transmits an indicator operation signal to the Blind Spot Warning indicator according to Blind Spot Warning indicator signal and Blind Spot Warning indicator dimmer signal.

OPERATING CONDITION

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

NOTE:

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

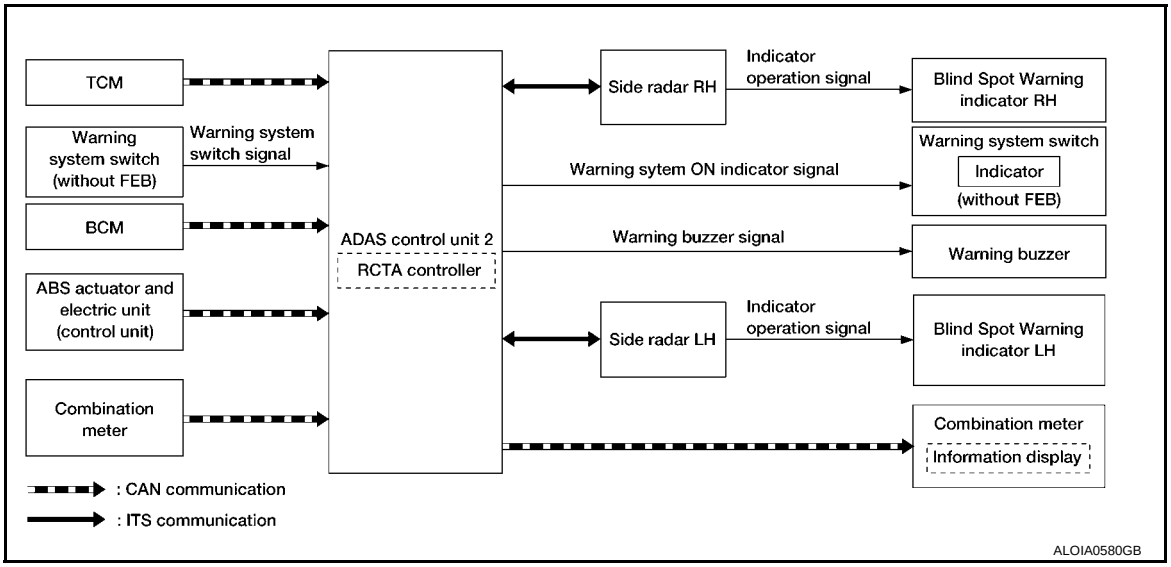
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 18 MPH (29 km/h).
- The Blind Spot Warning system may not function properly, depending on the situation. Refer to DAS-214, "Precaution for Blind Spot Warning System Service".

RCTA

RCTA : System Description

INFOID:0000000015204317

SYSTEM DIAGRAM



ADAS CONTROL UNIT 2 INPUT/OUTPUT SIGNAL ITEM

ADAS control unit receives signals via CAN communication. It also detects vehicle conditions that are necessary for Rear Cross Traffic Alert control.

Input Signal Item

Transmit unit	Signal name		Description
TCM	CAN communication	Shift position signal	Receives a selector lever position
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in “Driver Aids” selected with the integral switch
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.
Warning system switch	Warning system switch signal		Receives ON/OFF state of the warning system switch.

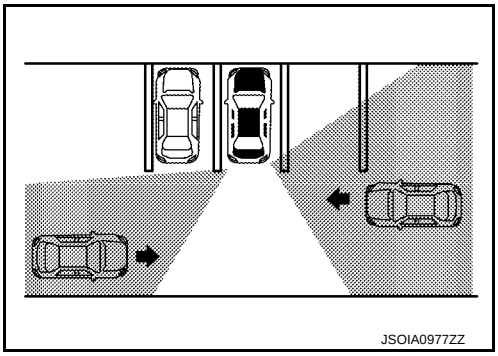
Output Signal Item

Reception unit	Signal name			Description
Combination meter	CAN communication	Meter display signal	BSW system display	Transmits a meter display signal to turn ON the Blind Spot Warning system display
Side radar LH, RH	ITS communication	Blind Spot Warning indicator signal		Transmits a Blind Spot Warning indicator signal to turn ON the Blind Spot Warning indicator
		Blind Spot Warning indicator dimmer signal		Transmits a Blind Spot Warning indicator dimmer signal to dimmer Blind Spot Warning indicator
		Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
Warning system ON indicator	Warning system ON indicator signal			Turns ON the warning system ON indicator.
Warning buzzer	Warning buzzer signal			Activates warning buzzer

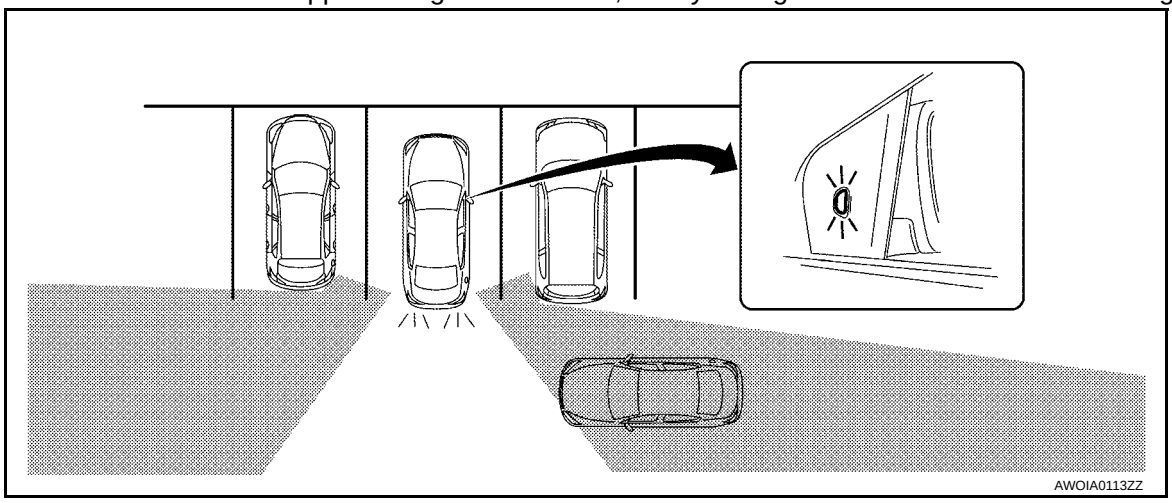
FUNCTION DESCRIPTION

- The Rear Cross Traffic Alert system can help alert the driver of approaching vehicles when the driver is backing out of a parking space.
- The RCTA system uses side radars installed near the rear bumper to detect approaching vehicles.

- The RCTA system operates at speeds below 5 MPH (8 km/h) whenever the vehicle is in reverse.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- The radar sensors detect the approaching vehicle from up to approximately 20 m (66 ft) away.


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- If the radar detects a vehicle approaching from the side, the system gives visual and audible warning.


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- If the side radar detects an approaching vehicle from the side, the RCTA system sounds a beep (single beep), the Blind Spot Warning indicator on the side of the approaching vehicle flashes.

REAR CROSS TRAFFIC ALERT SYSTEM OPERATION DESCRIPTION

- ADAS control unit enables Rear Cross Traffic Alert system.
- The ADAS control unit turns ON the RCTA system when the BSW system is turned ON by the integral switch.
- ADAS control unit starts the control as follows, based on a reverse gear signal and vehicle detection signal.

- Side radar detects a vehicle approaching, and transmits the vehicle detection signal to ADAS control unit via ITS communication.

Operation Condition of Rear Cross Traffic Alert System.

ADAS control unit performs the control when the following conditions are satisfied:

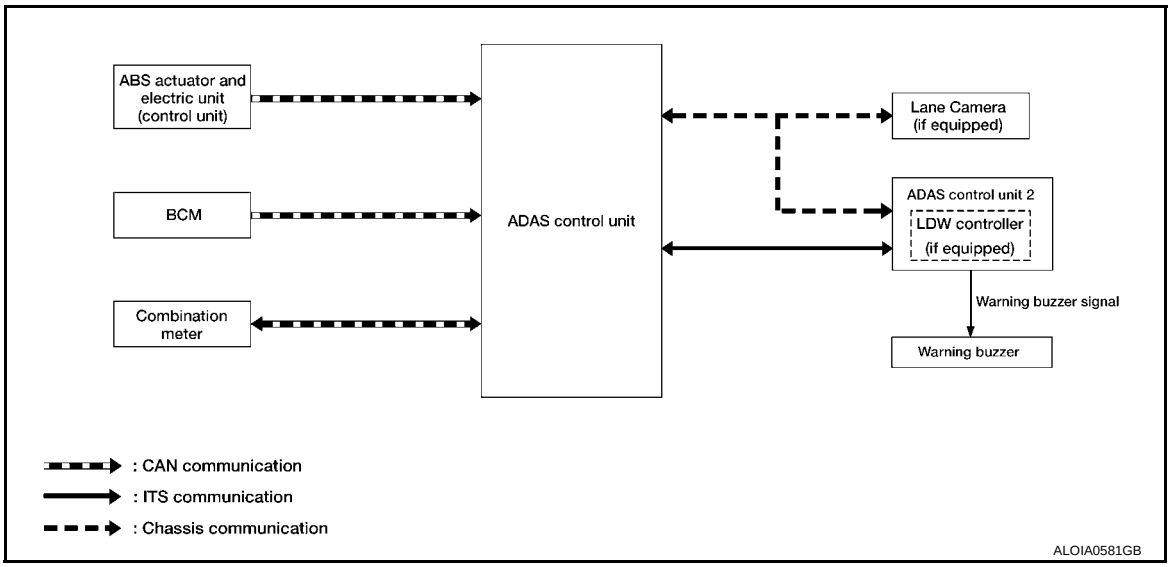
- BSW system: ON (Selected by integral switch)
- When the vehicle is moving in reverse at 5 MPH (8 km/h) or less.

LDW

LDW : System Description

INFOID:0000000015204318

SYSTEM DIAGRAM



ADAS CONTROL UNIT 2 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
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in “Driving Aids” selected with the vehicle information display
Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker

Output Signal Item

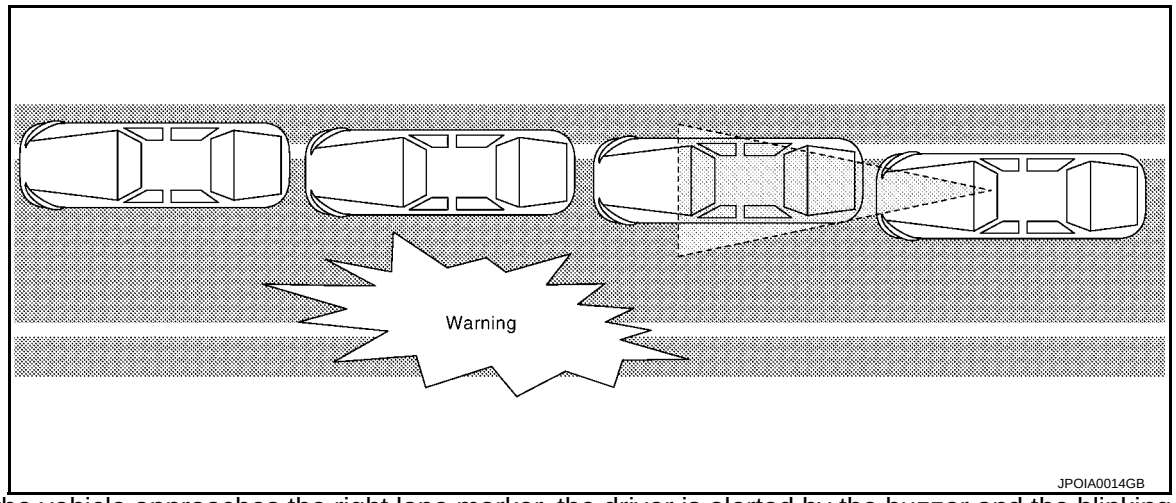
Reception unit	Signal name		Description
Combination meter	CAN communication	Lane departure warning lamp signal	Transmits a lane departure warning lamp signal to turn ON the lane departure warning lamp
Lane camera unit	Chassis communication	Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
		Turn indicator signal	Transmits a turn indicator signal received from BCM

FUNCTION DESCRIPTION

- 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.
- When the vehicle approaches either the left or the right side of the traveling lane, a warning will sound and the lane departure warning lamp (yellow) on the combination meter will blink to alert the driver.
- The warning does not occur during turn signal operation (Lane change side).

- The warning function will stop when the vehicle returns inside of the lane markers.

EXAMPLE



When the vehicle approaches the right lane marker, the driver is alerted by the buzzer and the blinking of lane departure warning lamp (yellow).

OPERATION DESCRIPTION

- When the system is turned ON by operating the warning system switch, ADAS control unit turns ON the warning systems ON indicator.
- Lane camera unit monitors lane markers of the traveling lane. It transmits the detected lane condition signal to ADAS control unit via Chassis communication.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, the ADAS control unit controls the following item to alert the driver.
- Activates warning buzzer
- ADAS control unit transmits a lane departure warning lamp signal to combination meter via CAN communication and turns ON/OFF the lane departure warning lamp (yellow).

OPERATING CONDITION

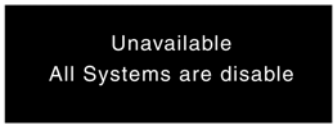
- Warning systems ON indicator: ON
- Vehicle speed: approximately 60 km/h (37 MPH) or more
- Turn indicator signal: After 2 seconds or more from turned OFF

NOTE:

- When the LDW system setting on the vehicle information display is ON.
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 50 km/h (30 MPH)
- LDP ON indicator lamp is OFF
- The LDW system may not function properly, depending on the situation. Refer to DAS-236, "Precautions for Lane Departure Warning/Lane Departure Prevention".

Fail-safe Indication

Vehicle condition/ Driver's operation	Warning systems ON indicator	Indication on the combination meter
When DTC is detected (Except “C1B01” and “C1B03”)	ON	
Camera aiming is not completed (“C1B01”is detected) **NOTE:** This is detected while driving the vehicle and the indication remains ON until the ignition switch is turned OFF	ON	

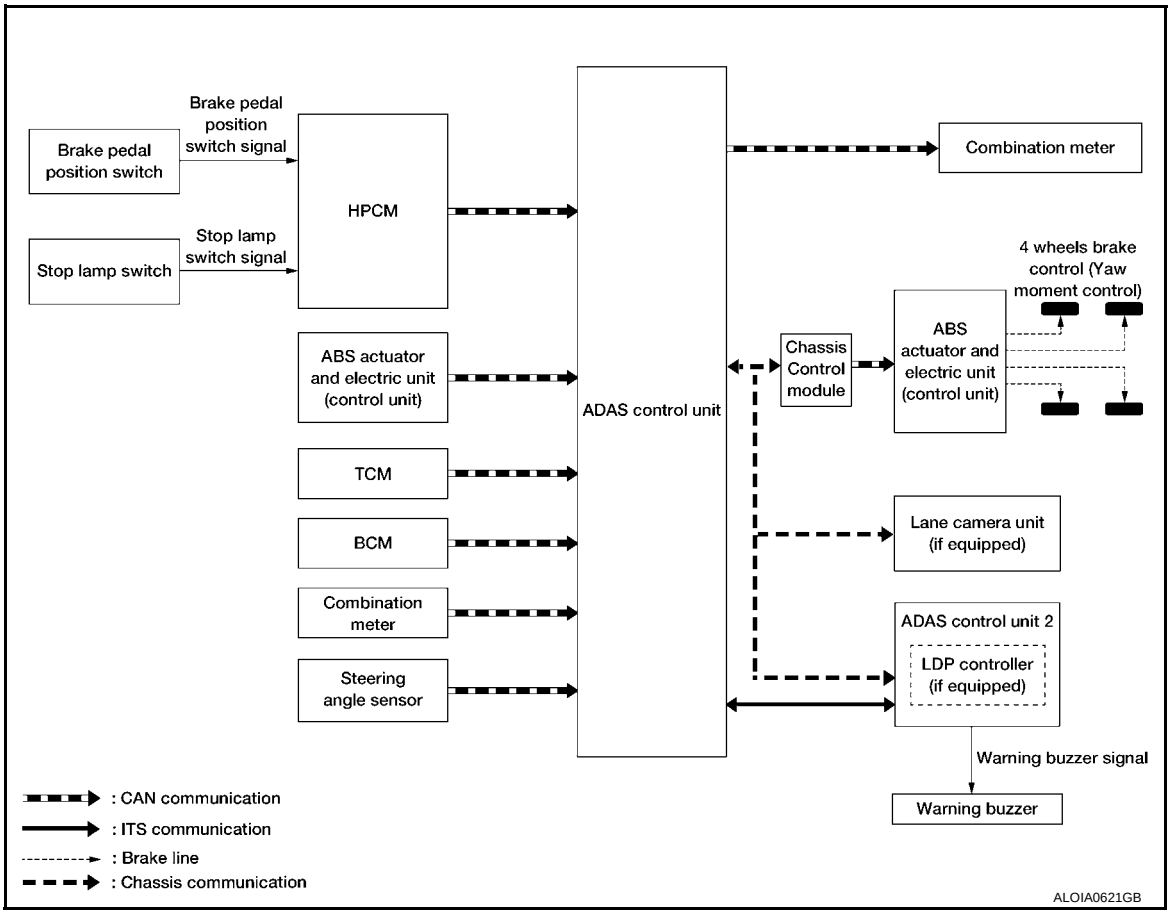
Vehicle condition/ Driver's operation	Warning systems ON indicator	Indication on the combination meter
When DTC is detected (Except “C1B01” and “C1B03”)	ON	 ALOIA0099GB
Camera aiming is not completed (“C1B01” is detected) **NOTE:** This is detected while driving the vehicle and the indication remains ON until the ignition switch is turned OFF	ON	
Temporary disabled status at high temperature (“C1B03” is detected)	OFF	Unavailable: High Cabin Temp
When the warning system switch is pressed (When the settings of LDW system, PFCW system, and BSW system on the vehicle information display are “OFF”)	Blink	 ALOIA0132GB

LDP

LDP : System Description

INFOID:0000000015204319

SYSTEM DIAGRAM



ALOIA0621GB

ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
HPCM	CAN communication	Brake pedal position switch signal	Receives Brake pedal position switch state
		Accelerator pedal position signal	Receives accelerator pedal position (angle)
		Stop lamp switch signal	Receives stop lamp switch state
		Engine speed signal	Receives engine speed
TCM	CAN communication	Input speed signal	Receives the number of revolutions of input shaft
		Current gear position signal	Receives a current gear position
		Shift position signal	Receives a selector lever position
		Output shaft revolution signal	Receives the number of revolutions of output shaft
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		ABS operation signal	Receives an operational state of ABS
		TCS malfunction signal	Receives a malfunction state of TCS
		TCS operation signal	Receives an operational state of TCS
		VDC OFF switch signal	Receives an ON/OFF state of VDC
		VDC malfunction signal	Receives a malfunction state of VDC
		VDC operation signal	Receives an operational state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
		Yaw rate signal	Receives yaw rate acting on the vehicle
		Side G sensor signal	Receives lateral G acting on the vehicle
Combination meter	CAN communication	Parking brake switch signal	Receives an operational state of the parking brake
		System selection signal	Receives a selection state of each item in "Driver Aids"
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 malfunction signal	Receives a malfunction state of steering angle sensor
		Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
		Steering angle speed signal	Receives the turning angle speed of the steering wheel
Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker

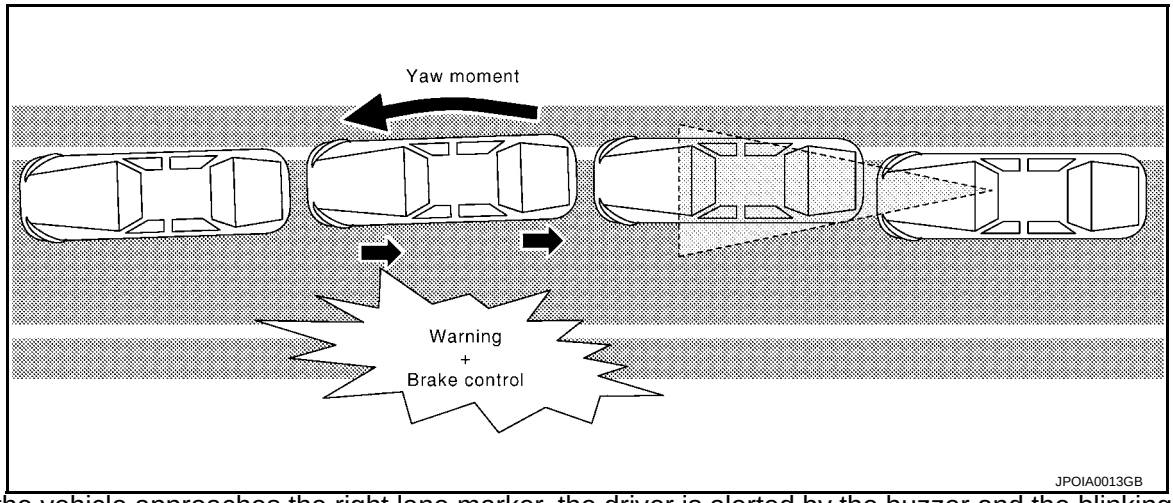
Output Signal Item

Reception unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Target yaw moment signal	Transmits a target yaw moment signal to generate yaw moment to the vehicle
Combination meter	CAN communication	LDP ON indicator lamp signal	Transmits an LDP ON indicator lamp signal to turn ON the LDP ON indicator lamp
		Lane departure warning lamp signal	Transmits an lane departure warning lamp signal to turn ON the lane departure warning lamp
Lane camera unit	Chassis communication	Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
		Turn indicator signal	Transmits a turn indicator signal received from BCM
Chassis control module	CAN communication	Brake request signal	Transmits a warning buzzer request signal to the ADAS control unit 2 to activate the warning buzzer

FUNCTION DESCRIPTION

- Lane Departure Prevention (LDP) system provides a lane departure warning and brake control assistance when the vehicle is driven at speeds of approximately 60 km/h (37 MPH) or more.
- When the vehicle approaches either the left or the right side of the traveling lane, a warning sounds and the lane departure warning lamp (yellow) on the combination meter blinks to alert the driver. Then, the LDP system automatically applies the brakes for a short period of time to help assist the driver to return the vehicle to the center of the traveling lane.
- Warning and brake control are not performed during turn signal operation (lane change side).
- The warning and assist functions stop when the vehicle returns to a position inside of the lane marker.

EXAMPLE



When the vehicle approaches the right lane marker, the driver is alerted by the buzzer and the blinking of lane departure warning lamp (yellow). Simultaneously, the left brake is controlled independently to generate force toward the direction to recover the vehicle from the lane departure.

OPERATION DESCRIPTION

- When the system is turned ON in the vehicle information display driver assistance system settings, ADAS control unit transmits LDP ON indicator signal to combination meter via CAN communication.
- Lane camera unit monitors lane markers of the traveling lane. It transmits the detected lane condition signal to Chassis control module via Chassis communication.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, Chassis control module controls the following items:
- Transmits a warning buzzer request signal to the ADAS control unit 2 via Chassis communication to activate the warning buzzer.
- Transmits a lane departure warning lamp signal to combination meter via CAN communication.
- Calculates necessary yaw moment to transmit a target yaw moment signal to ABS actuator and electric unit (control unit) via CAN communication.
- When receiving the target yaw moment signal, ABS actuator and electric unit (control unit) controls brake pressure of four wheels, respectively.
- When receiving the signal from ADAS control unit, combination meter turns ON/OFF the lane departure warning lamp (yellow) and the LDP ON indicator lamp (green).

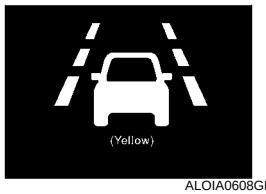
OPERATING CONDITION

- LDP ON indicator lamp: ON
- Vehicle speed: approximately 60 km/h (37 MPH) or more
- Turn indicator signal: After 2 seconds or more from turned OFF

NOTE:

- When the LDP system setting in the vehicle information display is ON.
- After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 50 km/h (30 MPH).
- The LDP system may not function properly, depending on the situation. Refer to DAS-236, "Precautions for Lane Departure Warning/Lane Departure Prevention".

Fail-safe Indication

Vehicle condition/ Driver's operation	Indication on the combination meter	Buzzer
When DTC is detected (Except “C1B01” and “C1B03”)	 ALOIA0608GB	Beep
Camera aiming is not completed (“C1B01”is detected) **NOTE:** This is detected while driving the vehicle and the indication remains ON until the ignition switch is turned OFF		
Temporary disabled status at high temperature (“C1B03”is detected)	Unavailable High Cabin Temp	Beep
Temporary disabled status during rain	Unavailable Road is slippery	Beep
Temporary disabled status when the VDC system is turned OFF	Unavailable VDC OFF	Beep
When the settings of LDP system in the vehicle information display are OFF.	LDP OFF (green)	—

Fail-safe (ADAS Control Unit)

INFOID:0000000015259671

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

System	Buzzer	Warning lamp/Warning display	Description
Vehicle-to-vehicle distance control mode	High-pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High-pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High-pitched tone	FEB warning	Cancel

Fail-safe (ADAS Control Unit 2)

INFOID:0000000015259672

If a malfunction occurs in each system, ADAS control unit 2 cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning display	Description
Lane Departure Warning (LDW)	—	Warning systems indicator (Lane position: Yellow)	Cancel
Lane Departure Prevention (LDP)	Low-pitched tone	Warning systems indicator (Lane position: Yellow)	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

Fail-safe (Side Radar)

INFOID:0000000015259673

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)
If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)
When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Rear Cross Traffic Alert (RCTA)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Fail-safe (Lane Camera Unit)

INFOID:0000000015259674

FAIL-SAFE CONTROL BY DTC

Lane Departure Warning (LDW)

If a malfunction occurs in the lane camera unit, ADAS control unit cancels control, and turns ON the lane departure warning lamp in the combination meter.

Lane Departure Prevention (LDP)

If a malfunction occurs in the lane camera unit, ADAS control unit cancels control, sounds a beep, and turns ON the lane departure warning lamp in the combination meter.

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

Lane Departure Warning (LDW)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the lane departure warning lamp (yellow) in the combination meter will blinks.
- When interior temperature is reduced, the system will resume operation automatically and the lane departure warning lamp (yellow) in the combination meter will stop blinking.

Lane Departure Prevention (LDP)

- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and lane departure warning lamp (yellow) in the combination meter will blinks.
- When interior temperature is reduced, the system will resume and the lane departure warning lamp (yellow) in the combination meter will stop blinking.

Fail-safe (ICC Sensor)

INFOID:0000000015259675

If a malfunction occurs in the ICC sensor, ADAS control unit cancels control, sounds a beep, and turns ON the ICC system warning lamp in the combination meter.

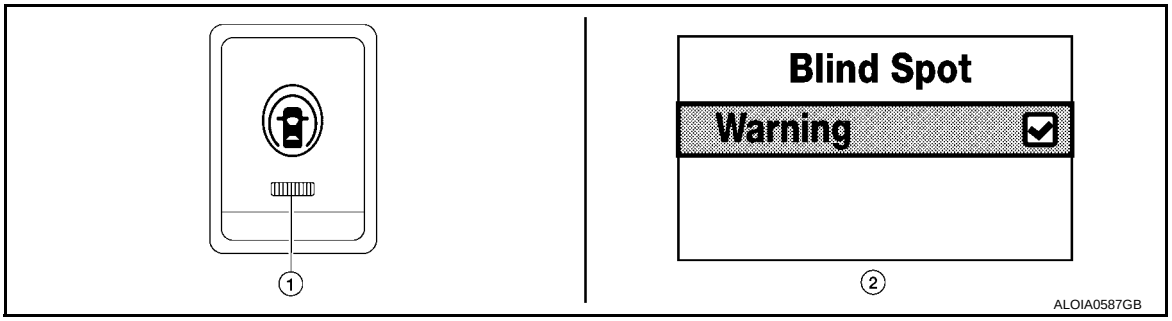
OPERATION

BSW

BSW : Switch Name and Function

INFOID:0000000015204325

BSW

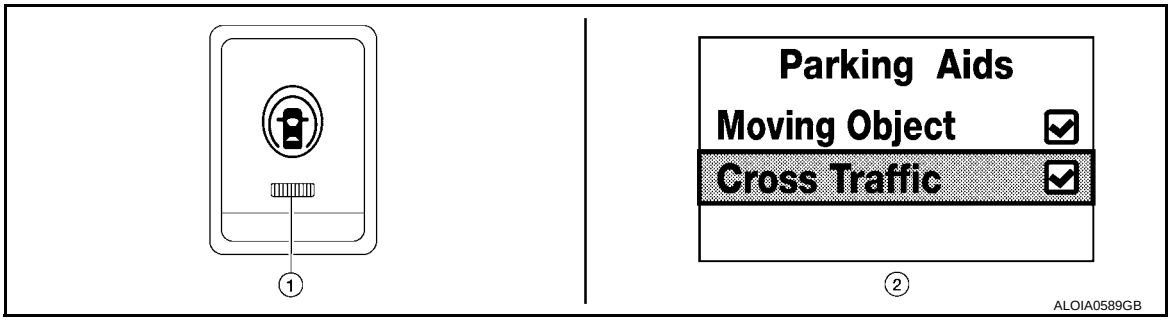


No.	Switch name	Description
1.	Warning system switch	Turns BSW system ON/OFF (When the setting of BSW system in the vehicle information display is ON)
2.	BSW system setting screen (The vehicle information display)	Turns setting of BSW system can be switched between ON and OFF

RCTA

RCTA : Switch Name and Function

INFOID:0000000015204326

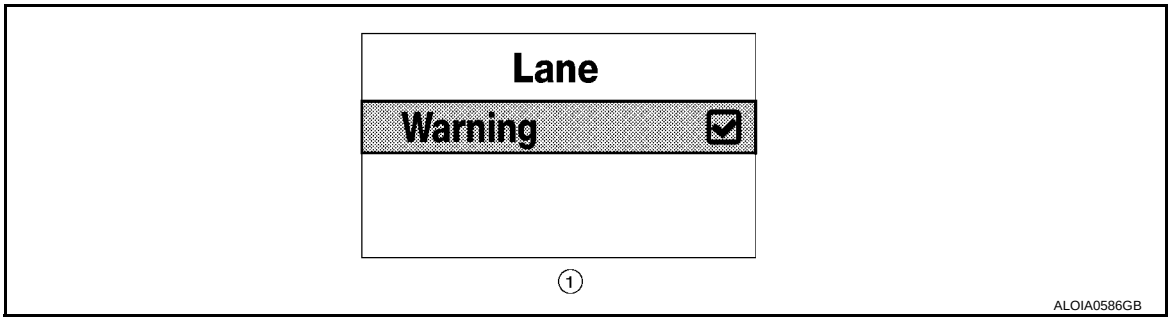


No.	Switch name	Description
1.	Warning system switch	Turns RCTA system ON/OFF (When the setting of RCTA system in the vehicle information display is ON)
2.	RCTA system setting screen (The vehicle information display)	Turns setting of RCTA system can be switched between ON and OFF

LDW

LDW : Switch Name and Function

INFOID:0000000015204327

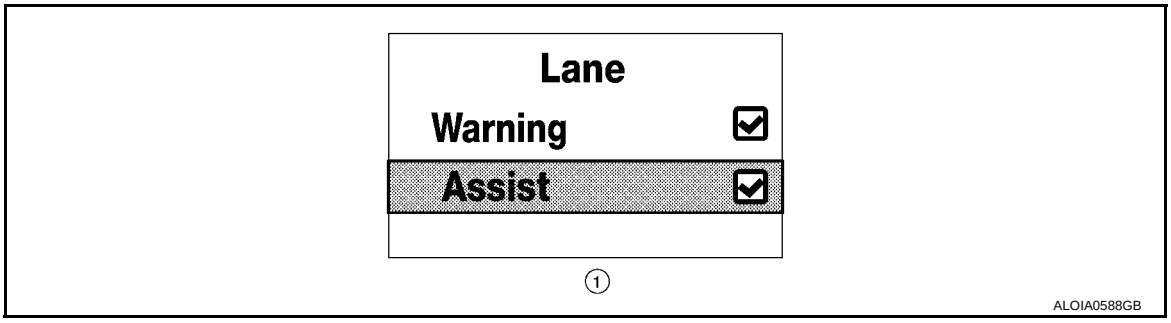


No.	Switch name	Description
1.	LDW system setting screen (The vehicle information display)	The setting of LDW system can be switched between ON and OFF

LDP

LDP : Switch Name and Function

INFOID:0000000015204328



No.	Switch name	Description
1.	LDP system settings screen (the vehicle information display)	The setting of LDP system can be switched between ON and OFF

HANDLING PRECAUTION

Precautions for Lane Departure Warning/Lane Departure Prevention

INFOID:0000000015204329

LANE CAMERA UNIT HANDLING

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

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

LANE DEPARTURE WARNING (LDW)

- If the LDW system malfunctions, it will cancel automatically, and the LDW malfunction message will appear in the vehicle information display.
- LDW system is only a warning device to inform the driver of a potential unintended lane departure. It will not steer the vehicle or prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of the vehicle at all times.
- LDW system will not operate at speeds below approximately 60 km/h (37 MPH) or if it cannot detect lane markers.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- LDW system may not function properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers; or lane markers covered with water, dirt or snow, etc.
- On roads where the discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. (The LDW system could detect these items as lane markers.)
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)

LANE DEPARTURE PREVENTION (LDP)

- If the LDP system malfunctions, it will cancel automatically, and the LDP malfunction message will appear in the vehicle information display.
- The LDP system will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- LDP system is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers in certain roads, weather or driving conditions.
- Using the LDP system under some conditions of road, lane marker or weather, or when driver change lanes without using the turn signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- The LDP system will not operate at speeds below approximately 60 km/h (37 MPH) or if it cannot detect lane markers.
- Do not use the LDP system under the following conditions as it may not function properly:
- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.

- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake or steering parts or suspension parts.

• Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
• The functions of the LDP system (warning and, system application of the steering or brakes) may or may not operate properly under the following conditions:

- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (The LDP system could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)

Precautions for Blind Spot Warning

INFOID:0000000015204330

SIDE RADAR HANDLING

• Side radar for Blind Spot Warning system is located inside the rear bumper.
• Always keep the rear bumper near the side radar clean.
• Do not attach a sticker (including transparent material), install an accessory or paint work near the side radar.
• Do not strike or damage the areas around the side radar.
• Do not strike, damage, and scratch the side radar, especially the vent seal (gray circular) area, under repair.

BLIND SPOT WARNING

• The Blind Spot Warning system is not a replacement for proper driving procedure and is not designed to prevent contact with vehicles or objects. When changing lanes, always use the side and rear mirrors and turn and look in the direction driver will move to ensure it is safe to change lanes. Never rely solely on the Blind Spot Warning system.
• The Blind Spot Warning system may not provide the warning for vehicles that pass through the detection zone quickly.
• Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.
• The side radar may not be able to detect and activate Blind Spot Warning when certain objects are present such as:

- Pedestrians, bicycles, animals.
- Several types of vehicles such as motorcycles.
- Oncoming vehicles.
- Vehicles remaining in the detection zone when driver accelerate from a stop.
- A vehicle merging into an adjacent lane at a speed approximately the same as vehicle.
- A vehicle approaching rapidly from behind.
- A vehicle which vehicle overtakes rapidly.

• Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
• The side radar detection zone is designed based on a standard lane width. When driving in a wider lane, the side radar may not detect vehicles in an adjacent lane. When driving in a narrow lane, the side radar may detect vehicles driving two lanes away.
• The side radar is designed to ignore most stationary objects, however, objects such as guardrails, walls, foliage and parked vehicles may occasionally be detected. This is a normal operating condition.

Precautions for Rear Cross Traffic Alert

INFOID:0000000015204331

SIDE RADAR HANDLING

- Side radar for Rear Cross Traffic Alert system is located inside the rear bumper.
- Always keep the rear bumper near the side radar clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work near the side radar.
- Do not strike or damage the areas around the side radar.
- Do not strike, damage, and scratch the side radar, especially the vent seal (gray circular) area, under repair.

REAR CROSS TRAFFIC ALERT

- Always check surroundings and turn to check what is behind you before backing up. The radar sensors detect approaching (moving) vehicles. The radar sensors cannot detect every object such as:
- Pedestrians, bicycles, motorcycles, animals or child operated toy vehicles.
- A vehicle that passing at speeds greater than approximately 30 KM/H (19 MPH)
- A vehicle that passing at speeds lower than approximately 8 KM/H (5 MPH)
- The radar sensors may not detect approaching vehicles in certain situations:
- When the vehicle that is parked next to you obstructs the beam of the radar sensor.
- When the vehicle is parked in an angled parking space.
- When the vehicle is parked on an incline.
- When an approaching vehicle turns into your vehicles parking lot isle.
- When the angle formed by your vehicle is too small.
- The following conditions may reduce the ability of the radar to detect other vehicles:
- Severe weather
- Road spray
- Ice build up on the vehicle
- Frost on the vehicle
- Dirt build up on the vehicle
- Do not attach stickers (including transparent material), install accessories or apply additional paint near the radar sensors. These conditions may reduce the ability of the radar to detect other vehicles.
- Do not use RCTA systems when towing a trailer.
- Excessive noise (e.g. audio system volume, open vehicle window) will interfere with the chime sound and it may not be heard.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

CONSULT Function (ICC/ADAS)

INFOID:0000000015240199

APPLICATION ITEMS

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

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

CONFIGURATION

Configuration includes functions as follows.

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

WORK SUPPORT

Work support items	Description
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems • Vehicle-to-vehicle control mode • Conventional (fixed speed) control mode • Forward Emergency Braking (FEB)

NOTE:

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

Display Items for The Cause of Automatic Cancellation 1

Cause of cancellation	Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Forward Emergency Braking	Description
OPERATING ABS	×		×	ABS function was operated
OPERATING TCS	×	×		TCS function was operated
OPERATING VDC	×	×	×	VDC function was operated
HPCM CIRCUIT	×	×		HPCM did not permit ICC operation
OPE SW VOLT CIRC	×	×		The ICC steering switch input voltage is not within standard range
OP SW DOUBLE TOUCH	×	×		ICC steering switches were pressed at the same time
VHCL SPD DOWN	×	×		Vehicle speed lower than the speed as follows • Vehicle-to-vehicle distance control mode is 24 km/h (15 MPH) • Conventional (fixed speed) cruise control mode is 32 km/h (20 MPH)
WHL SPD ELEC NOISE	×	×		Wheel speed sensor signal caught electromagnetic noise
VDC/TCS OFF SW	×		×	VDC OFF switch was pressed
VHCL SPD UNMATCH	×	×		Wheel speed became different from CVT vehicle speed
TIRE SLIP	×	×		Wheel slipped
IGN LOW VOLT	×	×	×	Decrease in ADAS control unit ignition voltage
PARKING BRAKE ON	×	×		The parking brake is operating
WHEEL SPD UNMATCH	×	×		The wheel speeds of 4 wheels are out of the specified values
INCHING LOST	×			A vehicle ahead is not detected during the following driving when the vehicle speed is approximately 24 km/h (15 MPH) or less
CAN COMM ERROR	×	×	×	ADAS control unit received an abnormal signal with CAN communication
ABS/TCS/VDC CIRC	×	×	×	An abnormal condition occurs in VDC/TCS/ABS system
ECD CIRCUIT	×	×	×	An abnormal condition occurs in ECD system
ENG SPEED DOWN	×	×		Engine speed became extremely low while controlling ICC system
ASCD VHCL SPD DTAC		×		Vehicle speed is detached from set vehicle speed
ASCD DOUBLE COMD		×		Cancel switch and operation switch are detected simultaneously
ICC SENSOR CAN COMM ERR	×		×	Communication error between ADAS control unit and the ICC sensor
ABS WARNING LAMP	×			ABS warning lamp ON
FR RADAR BLOCKED	×		×	Inclusion of dirt or stains on the ICC sensor area of the front bumper
FEB) CURVATURE			×	Road curve was more than the specified value
FEB) YAW RATE			×	Detected yawing speed was more than the specified value
FEB) LTRL ACCELERATION			×	Detected lateral speed is the specified value or more

RADAR INTERFERENCE	×		×	ICC sensor receives electromagnetic interference
NO RECORD	×	×		—

SELF DIAGNOSTIC RESULT

Refer to DAS-271, "DTC Index".

NOTE:

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

DATA MONITOR

NOTE:

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

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
MAIN SW [On/Off]	×	×	×	×	Indicates [On/Off] status as judged from ICC steering switch
SET/COAST SW [On/Off]	×	×			Indicates [On/Off] status as judged from ICC steering switch
CANCEL SW [On/Off]	×	×			Indicates [On/Off] status as judged from ICC steering switch
RESUME/ACC SW [On/Off]	×	×			Indicates [On/Off] status as judged from ICC steering switch
DISTANCE SW [On/Off]	×				Indicates [On/Off] status as judged from ICC steering switch
CRUISE OPE [On/Off]	×	×			Indicates whether controlling or not (ON means “controlling”)
BRAKE SW [On/Off]	×	×	×	×	Indicates [On/Off] status as judged from brake pedal position switch signal (HPCM transmits brake switch signal through CAN communication)
STOP LAMP SW [On/Off]	×	×	×	×	Indicates [On/Off] status as judged from stop lamp switch signal (HPCM transmits stop lamp switch signal through CAN communication)
IDLE SW [On/Off]	×				Indicates [On/Off] status of idle switch read from ADAS control unit through CAN communication (HPCM transmits On/Off status through CAN communication)
VHCL SPEED SE [km/h] or [mph]	×	×	×	×	Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication]
ENGINE RPM [rpm]	×				Indicates engine speed read from ADAS control unit through CAN communication (HPCM transmits engine speed signal through CAN communication)
BA WARNING [On/Off]	×				Indicates [On/Off] status of FEB indicator lamp output

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
STP LMP DRIVE [On/Off]	×	×			Indicates [On/Off] status of brake hold drive signal
D RANGE SW [On/Off]	×				Indicates [On/Off] status of “D” or “M” positions read from ADAS control unit through CAN communication; ON when position “D” or “M” (TCM transmits shift position signal through CAN communication).
NP RANGE SW [On/Off]	×				Indicates shift position signal read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
PKB SW [On/Off]	×				Parking brake switch status [On/Off] judged from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)
PWR SUP MONI [V]	×	×			Indicates IGN voltage input by ADAS control unit
VHCL SPD AT [km/h] or [mph]	×				Indicates vehicle speed calculated from CVT vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits CVT vehicle speed sensor signal through CAN communication)
THRTL OPENING [%]	×	×			Indicates throttle position read from ADAS control unit through CAN communication (HPCM transmits accelerator pedal position signal through CAN communication).
GEAR [1, 2, 3, 4, 5, 6, 7]	×				Indicates CVT gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)
MODE SIG [OFF, ICC, ASCD]	×				Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode]
SET DISP IND [On/Off]	×				Indicates [On/Off] status of SET switch indicator output
DISTANCE [m]	×				Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]	×				Indicates the relative speed of the vehicle ahead
LDW SYSTEM ON [On/Off]			×		Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]			×		Indicates [On/Off] status of LDW system display output
LDP ON IND [On/Off]			×		Indicates [On/Off] status of LDP system display output
LANE DPRT W/L [On/Off]			×		Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
LDW BUZZER OUTPUT [On/Off]			×		Indicates [On/Off] status of warning buzzer output
LDP SYSTEM ON [On/Off]			×		Indicates [On/Off] status of LDP system
WARN REQ [On/Off]			×		Indicates an ADAS control unit judged warning state (ON/OFF) of LDP system
READY signal [On/Off]			×		Indicates LDP system settings
Camera lost [Detect/Deviate/Both]			×	×	Indicates a lane marker detection state judged from a lane marker detection signal read by the ADAS control unit via Chassis communication (Lane camera unit transmits a lane marker signal via Chassis communication)

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
Lane unclear [On/Off]			×	×	Indicates an ON/OFF state of the lane marker. The ON/OFF state is judged from a detected lane condition signal read by the ADAS control unit via Chassis communication (The lane camera unit transmits a detected lane condition signal via Chassis communication)
STATUS signal [Stnby/Warn/Cancl/Off]			×		Indicates a control state of LDP system
Shift position [Off, P, R, N, D, M/T1 - 7]			×	×	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
Turn signal [OFF/LH/RH/LH&RH]			×	×	Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication)
SIDE G [G]			×	×	Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication)
FUNC ITEM (FCW) [On/Off]	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒ “Emergency Assist” of the integral switch Forward Emergency Braking
FUNC ITEM (LDW) [On/Off]	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒ “Lane” of the integral switch Lane Departure Warning
FUNC ITEM (BSW) [On/Off]	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒ “Blind spot” of the integral switch Blind Spot Warning
LDP SELECT [On/Off]	×	×	×	×	Indicates an ON/OFF state of LDP system. LDP system can be set to ON/OFF by selecting “Driving Aids”⇒“Lane”of the integral switch
LDW SELECT [On/Off]	×	×	×	×	Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting “Driving Aids”⇒“Lane” of the integral switch
BSW SELECT [On/Off]	×	×	×	×	Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting “Driving Aids”⇒“Blind spot” of the integral switch
BSW/BSI WARN LMP [On/Off]				×	Indicates [On/Off] status of Blind Spot warning malfunction
BSW SYSTEM ON [On/Off]				×	Indicates [On/Off] status of BSW system
FCW SYSTEM ON [On/Off]	×	×			Indicates [On/Off] status of FEB system
BATTERY CIRCUIT OFF [On/Off]					**NOTE:** The item is displayed, but it is not used
LDP WARNING INDICATOR [On/Off]			×		Indicates [On/Off] status of LDP warning display (Yellow) output
LDW ON INDICATOR [On/Off]			×		Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDICATOR [On/Off]			×		Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/VDC OFF]	×	×	×	×	Indicates status of system cancel display output

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	Description
CAMERA HI TEMP MSG [On/Off]			×	×	Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(LDP) [On/Off]	×	×	×	×	Indicates the presence or absence of LDP system.
BSW ON INDICATOR [On/Off]				×	Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]				×	Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]			×		**NOTE:** The item is displayed, but it is not monitored
BSW IND BRIGHT-NESS [Nothing/Bright/Normal/Dark]				×	Indicates status of brightness of Blind Spot Warning indicator

ACTIVE TEST

CAUTION:

- **Never perform “Active Test” while driving the vehicle.**
- **The “Active Test” cannot be performed when the following systems malfunction is displayed.**
  - **ICC system**
  - **LDW**
  - **LDP**
  - **Blind Spot Warning**
- **The “Active Test” cannot be performed when the FEB warning lamp is illuminated.**
- **Shift the selector lever to “P” position, and then perform the test.**

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

METER LAMP

NOTE:

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

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

STOP LAMP

Test item	Operation	Description	Stop lamp
STOP LAMP	Off	Stops transmitting the brake hold drive signal below to end the test	OFF
	On	Transmits the brake hold drive signal	ON

ICC BUZZER

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

BRAKE ACTUATOR

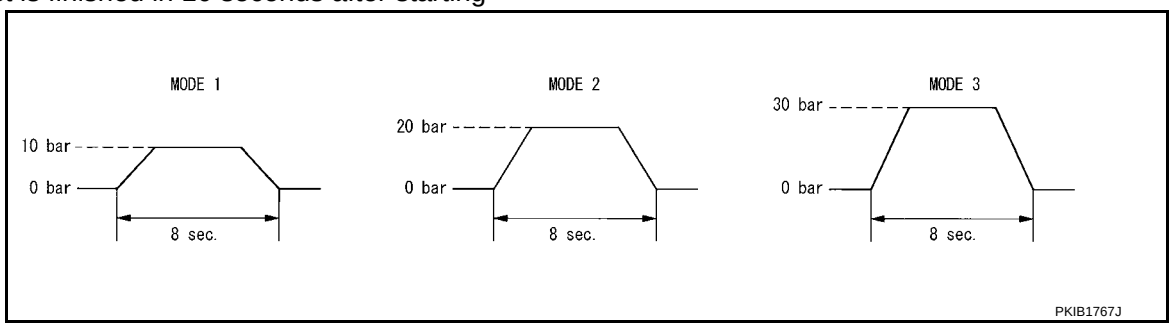
NOTE:

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

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

NOTE:

The test is finished in 10 seconds after starting



LDP BUZZER

Test item	Operation	Description	Warning buzzer
LDP BUZZER	Off	Stops transmitting the warning buzzer signal below to end the test	—
	On	Transmits the warning buzzer signal to the warning buzzer	ON

LDP ON IND

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

LANE DEPARTURE W/L

Test item	Operation	Description	Lane departure system display (Yellow)
LANE DEPARTURE W/L	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDW ON INDICATOR

Test item	Operation	Description	LDW system display (White)
LDW ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDP WARNING INDICATOR

Test item	Operation	Description	LDP malfunction (Yellow)
LDP WARNING INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDW WARNING INDICATOR

Test item	Operation	Description	LDW malfunction (Yellow)
LDW WARNING INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

ECU IDENTIFICATION

Displays ADAS control unit parts number.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT 2)

CONSULT Function (ICC/ADAS 2)

INFOID:0000000015240200

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication using ADAS control unit 2.

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

CONFIGURATION

Configuration includes functions as follows.

NOTE:

Models with FEB system only.

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

SELF DIAGNOSTIC RESULT

Refer to DAS-277, "DTC Index".

NOTE:

- The details of time display are as per the following.
- CRNT: A malfunction is detected now
- PAST: A malfunction was detected in the past
- IGN counter is displayed on FFD (Freeze Frame Data).
- 0: The malfunctions that are detected now
  CAN communication system (U1000-01, U1010-49)
- 1 - 39: It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased.
  Other than CAN communication system (Other than U1000-01, U1010-49)
- 1 - 49: It increases like 0 → 1 → 2 ··· 38 → 49 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.

DATA MONITOR

NOTE:

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

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
MAIN SW [On/Off]					×	×	×	×	Indicates [On/Off] status as judged from ICC steering switch
SET/COAST SW [On/Off]					×	×			Indicates [On/Off] status as judged from ICC steering switch
CANCEL SW [On/Off]					×	×			Indicates [On/Off] status as judged from ICC steering switch
RESUME/ACC SW [On/Off]					×	×			Indicates [On/Off] status as judged from ICC steering switch
DISTANCE SW [On/Off]					×				Indicates [On/Off] status as judged from ICC steering switch
CRUISE OPE [On/Off]					×	×			Indicates whether controlling or not (ON means “controlling”)
BRAKE SW [On/Off]					×	×	×	×	Indicates [On/Off] status as judged from brake pedal position switch signal (HPCM transmits brake pedal position switch signal through CAN communication)
STOP LAMP SW [On/Off]	×		×		×	×	×	×	Indicates [On/Off] status as judged from stop lamp switch signal (HPCM transmits stop lamp switch signal through CAN communication)
IDLE SW [On/Off]					×				Indicates [On/Off] status of idle switch read from ADAS control unit through CAN communication (HPCM transmits On/Off status through CAN communication)
SET DISTANCE [Short/Mid/Long]					×	×			Indicates set distance memorized in ADAS control unit
CRUISE LAMP [On/Off]			×		×	×			Indicates [On/Off] status of MAIN switch indicator output
OWN VHCL [On/Off]			×		×				**NOTE:** The item is displayed, but it is not monitored
VHCL AHEAD [On/Off]			×		×				Indicates [On/Off] status of vehicle ahead detection indicator output
ICC WARNING [On/Off]			×		×				Indicates [On/Off] status of ICC system warning lamp output
BA WARNING [On/Off]			×		×				Indicates [On/Off] status of FEB indicator lamp output
VHCL SPEED SE [km/h] or [mph]		×	×		×	×	×	×	Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication]
SET VHCL SPD [km/h] or [mph]			×		×	×			Indicates set vehicle speed memorized in ADAS control unit
BUZZER O/P [On/Off]	×		×		×				Indicates [On/Off] status of ICC warning chime output
THRTL SENSOR [deg]		×			×	×			**NOTE:** The item is displayed, but it is not monitored

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
ENGINE RPM [rpm]		×			×				Indicates engine speed read from ADAS control unit through CAN communication (HPCM transmits engine speed signal through CAN communication)
WIPER SW [OFF/LOW/HIGH]					×				Indicates wiper [OFF/LOW/HIGH] status (BCM transmits front wiper request signal through CAN communication)
YAW RATE [deg/s]					×				**NOTE:** The item is displayed, but it is not monitored
RELEASE SW NO [On/Off]					×		×	×	**NOTE:** The item is displayed, but it is not monitored
RELEASE SW NC [On/Off]					×		×	×	**NOTE:** The item is displayed, but it is not monitored
STP LMP DRIVE [On/Off]	×		×		×	×			Indicates [On/Off] status of brake hold drive signal
D POSITION SW [On/Off]					×				Indicates [On/Off] status of “D” or “M” positions read from ADAS control unit through CAN communication; ON when position “D” or “M” (TCM transmits shift position signal through CAN communication).
NP RANGE SW [On/Off]			×		×				Indicates shift position signal read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
PKB SW [On/Off]					×				Parking brake switch status [On/Off] judged from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)
PWR SUP MONI [V]	×		×		×	×			Indicates IGN voltage input by ADAS control unit
VHCL SPD AT [km/h] or [mph]		×			×				Indicates vehicle speed calculated from CVT vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits CVT vehicle speed sensor signal through CAN communication)
THRTL OPENING [%]					×	×			Indicates throttle position read from ADAS control unit through CAN communication (HPCM transmits accelerator pedal position signal through CAN communication).
GEAR [1, 2, 3, 4, 5, 6, 7]			×		×				Indicates CVT gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)
CLUTCH SW SIG [On/Off]					×	×			**NOTE:** The item is displayed, but it is not monitored
NP SW SIG [On/Off]					×	×			Indicates [On/Off] status as judged from park/neutral position switch signal (HPCM transmits park/neutral position switch signal through CAN communication).

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
MODE SIG [OFF, ICC, ASCD]					×				Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode]
SET DISP IND [On/Off]			×		×				Indicates [On/Off] status of SET switch indicator output
DISTANCE [m]					×				Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]					×				Indicates the relative speed of the vehicle ahead
FCW SYSTEM ON [On/Off]					×	×			Indicates [On/Off] status of FCW system
LDW SYSTEM ON [On/Off]							×		Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]							×		Indicates [On/Off] status of LDW system display output
LANE DPRT W/L [On/Off]							×		Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
BUZEROUTPUT [On/Off]							×		Indicates [On/Off] status of warning buzzer output
LDP) CAMERA LOST [Detect/Deviate/Both]							×	×	Indicates a lane marker detection state judged from a lane marker detection signal read by the ADAS control unit via ITS communication (Lane camera unit transmits a lane marker signal via ITS communication)
LDP) LANE UNCLEAR [On/Off]							×	×	Indicates an ON/OFF state of the lane marker. The ON/OFF state is judged from a detected lane condition signal read by the ADAS control unit via ITS communication (The lane camera unit transmits a detected lane condition signal via ITS communication)
LDP) SHIFT POSITION [Off, P, R, N, D, M/T1 - 7]							×	×	Indicates shift position read from ADAS control unit through CAN communication (TCM transmits shift position signal through CAN communication)
LDP) TURN SIGNAL [OFF/LH/RH/LH&RH]							×	×	Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication)
SIDE G [G]							×	×	Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication)
FUNC ITEM (FCW) [On/Off]				×	×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒“Emergency Assist” of the integral switch Forward Emergency Braking

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
FUNC ITEM (LDW) [On/Off]					×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒“Lane” of the integral switch Lane Departure Warning
FUNC ITEM (BSW) [On/Off]					×	×	×	×	Indicates systems which can be set to ON/OFF by selecting “Driver Aids”⇒“Blind spot” of the integral switch Blind Spot Warning
FCW SELECT [On/Off]				×	×	×	×	×	Indicates an ON/OFF state of the FCW system. The FCW system can be set to ON/OFF by selecting “Driving Aids”⇒“Emergency brake” of the integral switch
LDW SELECT [On/Off]					×	×	×	×	Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting “Driving Aids”⇒“Lane” of the integral switch
BSW SELECT [On/Off]					×	×	×	×	Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting “Driving Aids”⇒“Blind spot” of the integral switch
WARN SYS SW [On/Off]				×	×	×	×	×	**NOTE:** The item is displayed, but it is not monitored
BSW WARN LMP [On/Off]								×	Indicates [On/Off] status of Blind Spot warning malfunction
BSW SYSTEM ON [On/Off]								×	Indicates [On/Off] status of BSW system
BSW [On/Off]								×	Indicates [On/Off] status of BSW system
BSW/CTA SW [On/Off]	×							×	**NOTE:** The item is displayed, but it is not monitored
BSW/CTA SW IND [On/Off]	×							×	**NOTE:** The item is displayed, but it is not monitored
BATTERY CIRCUIT OFF [On/Off]									**NOTE:** The item is displayed, but it is not used
LDW ON INDICATOR [On/Off]							×		Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDICATOR [On/Off]							×		Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/VDC OFF]			×		×	×			Indicates status of system cancel display output
CAMERA HI TEMP MSG [On/Off]							×		Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(LDP) [On/Off]					×	×			Indicates the presence or absence of LDP system.
BSW ON INDICATOR [On/Off]								×	Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]								×	Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]							×		**NOTE:** The item is displayed, but it is not monitored

Monitored item [Unit]	A-TEST I/O SIG	RADAR ICC (MAIN)	RADAR ICC (SUB)	FCW/FEB SIG	CAMERA ICC (ALL)	CAMERA ICC (MAIN)	LDW (MAIN)	BSW (MAIN)	Description
BSW IND BRIGHTNESS [Nothing/Bright/Normal/Dark]								×	Indicates status of brightness of Blind Spot Warning indicator
G SENSOR SIGNAL [On/Off]									**NOTE:** The item is displayed, but it is not monitored
RADAR COMMAND SIGNAL [Normal/Abnormal]		×							**NOTE:** The item is displayed, but it is not monitored
ICC SYSTEM ON [On/Off]		×							**NOTE:** The item is displayed, but it is not monitored
ICC AVAILABLE COND [On/Off]		×							**NOTE:** The item is displayed, but it is not monitored
FEB AVAILABLE COND [On/Off]				×					**NOTE:** The item is displayed, but it is not monitored
FCW AVAILABLE COND [On/Off]				×					**NOTE:** The item is displayed, but it is not monitored
EBA AVAILABLE COND [On/Off]				×					**NOTE:** The item is displayed, but it is not monitored

ACTIVE TEST

Test item	Description
ADAS buzzer 2	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Intelligent Cruise Control (ICC) • Forward Emergency Brake (FEB) with pedestrian • Forward Emergency Brake (FEB) • Blind Spot Warning (BSW) • Lane Departure Warning (LDW) • Lane Departure Prevention (LDP)

ADAS buzzer 2

Test item	Operation	Description	Warning buzzer
ADAS buzzer 2	On	Stops transmitting the buzzer output signal below to end the test	ON
	Off	Transmits the warning buzzer signal to the driver assistance warning buzzer	—
	End	Returns to the “SELECT TEST ITEM” screen	—

ECU IDENTIFICATION

Displays ADAS control unit 2 parts number.

DIAGNOSIS SYSTEM (ICC SENSOR)

CONSULT Function (LASER/RADAR)

INFOID:0000000015240214

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

APPLICATION ITEMS

CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with ICC sensor.

Diagnosis mode	Description
Self Diagnostic Result	Displays malfunctioning system memorized in ICC sensor
Data Monitor	Displays real-time input/output data of ICC sensor
Work support	It can monitor the adjustment direction indication in order to perform the radar adjustment operation smoothly
ECU identification	Displays ICC sensor part number
CAN Diag Support Monitor	The results of transmit/receive diagnosis of ITS communication can be read

SELF DIAGNOSTIC RESULT

Refer to DAS-286, "DTC Index".

DATA MONITOR

Monitored item [Unit]	Description
VHCL SPEED SE [km/h] or [mph]	Vehicle speed judged from a vehicle speed signal read by the ICC sensor via ITS communication is displayed [ADAS control unit receives a vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the calculated vehicle speed to ICC sensor via ITS communication]
YAW RATE [deg/s]	Indicates yaw rate read from ADAS control unit through ITS communication (ADAS control unit receives yaw rate signal from ABS actuator and electric unit (control unit) via CAN communication and transmits yaw rate calculated by the ADAS control unit) Yaw rate judged from a yaw rate signal read by ICC sensor via ITS communication is displayed [ADAS control unit receives a yaw rate signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the calculated yaw rate to ICC sensor via ITS communication]
PWR SUP MONI [V]	Indicates IGN voltage input by ICC sensor
DISTANCE [m]	Indicates the distance from the vehicle ahead
RELATIVE SPD [m/s]	Indicates the relative speed of the vehicle ahead
Failsafe unit temperature	**NOTE:** The item is indicated, but not used
Failsafe alignment condition	**NOTE:** The item is indicated, but not used
Failsafe alignment complete	**NOTE:** The item is indicated, but not used
Connector direction	**NOTE:** The item is indicated, but not used
RADAR OFFSET [m]	**NOTE:** The item is indicated, but not used
RADAR HEIGHT [m]	**NOTE:** The item is indicated, but not used

Monitored item [Unit]	Description
L/R ADJUST [deg]	Indicates a horizontal correction value of the radar
U/D ADJUST [deg]	Indicates a vertical correction value of the radar
STEERING ANGLE [deg]	The steering angle is displayed
STRG ANGLE SPEED [deg/s]	The steering angle speed is displayed
Horizontal Alignment value	**NOTE:** The item is indicated, but not used
Vertical Alignment value	**NOTE:** The item is indicated, but not used
Vehicle status for alignment	**NOTE:** The item is indicated, but not used
Alignment status	**NOTE:** The item is indicated, but not used

WORK SUPPORT

Work support items	Description
MILLIWAVE RADAR ADJUST	Outputs millimeter waves, calculates the displacement in radar direction, and indicates an adjustment direction

ICC sensor Adjust

ECU IDENTIFICATION

ICC sensor part number is displayed.

DIAGNOSIS SYSTEM (SIDE RADAR LH)

CONSULT Function (SIDE RADAR LEFT)

INFOID:0000000015204335

DESCRIPTION

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

Select diag mode	Function
Self Diagnostic Result	Displays memorized DTC in the side radar.
Data Monitor	Displays real-time data of side radar.
Active Test	Enables operation check of electrical loads by sending driving signal to them.
ECU Identification	Displays part number of side radar.

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Displays memorized DTC in side radar LH. Refer to DAS-286, "DTC Index".

FFD (Freeze Frame Data)

The side radar records the following data when the malfunction is detected.

Freeze Frame Data item	Description
VHCL SP from ADAS	The vehicle speed (from ADAS control unit) at the moment a malfunction is detected is displayed
TURN SIG STATUS	Turn signal status at the moment a malfunction is detected is displayed

DATA MONITOR

NOTE:

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

Monitored item [Unit]	Description
BSW/CTA WARN STATUS [On/Off]	Indicates [ON/OFF] status of vehicle detection
CTA SYSTEM ON [On/Off]	Indicates [ON/OFF] status of Rear Cross Traffic Alert system
BSW STATUS [On/Off]	Indicates [ON/OFF] status of Blind Spot Warning system
VHCL SPD SE [km/h]	Indicates vehicle speed [km/h]
TURN SIGNAL [LH/RH/Off]	Indicates the [LH/RH/OFF] operation of the signal
SHIFT POSITION [P/R/N/D]	Indicates position of transmission range switch
LUMINANCE (LEFT) [Hi/Lo]	Indicates the left side luminance level of the radar
LUMINANCE (RIGHT) [Hi/Lo]	Indicates the right side luminance level of the radar

ACTIVE TEST

CAUTION:

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

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

DIAGNOSIS SYSTEM (SIDE RADAR RH)

CONSULT Function (SIDE RADAR RIGHT)

INFOID:0000000015204336

DESCRIPTION

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

Select diag mode	Function
Self Diagnostic Result	Displays memorized DTC in the side radar.
Data Monitor	Displays real-time data of side radar.
Active Test	Enables operation check of electrical loads by sending driving signal to them.
ECU Identification	Displays part number of side radar.

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Displays memorized DTC in side radar RH. Refer to DAS-288, "DTC Index".

FFD (Freeze Frame Data)

The side radar records the following data when the malfunction is detected.

Freeze Frame Data item	Description
VHCL SP from ADAS	The vehicle speed (from ADAS control unit) at the moment a malfunction is detected is displayed
TURN SIG STATUS	Turn signal status at the moment a malfunction is detected is displayed

DATA MONITOR

NOTE:

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

Monitored item [Unit]	Description
BSW/CTA WARN STATUS [On/Off]	Indicates [On/Off] status of vehicle detection
CTA SYSTEM ON [On/Off]	Indicates [On/Off] status of Rear Cross Traffic Alert system
BSW STATUS [On/Off]	Indicates [On/Off] status of Blind Spot Warning system
VHCL SPD SE [km/h]	Indicates vehicle speed [km/h]
TURN SIGNAL [LH/RH/Off]	Indicates the [LH/RH/OFF] operation of the turn signal
SHIFT POSITION [P/R/N/D]	Indicates position of transmission range switch
LUMINANCE (LEFT) [Hi/Lo]	Indicates the left side luminance level of the radar
LUMINANCE (RIGHT) [Hi/Lo]	Indicates the right side luminance level of the radar

ACTIVE TEST

CAUTION:

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

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

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000015204337

APPLICATION ITEMS

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

Diagnosis mode	Description
Work support	Performs the camera aiming.
Self Diagnostic Result	Displays the name of a malfunctioning system stored in the lane camera unit
Data Monitor	Displays lane camera unit input/output data in real time
Ecu Identification	Displays lane camera unit part number
CAN Diag Support Monitor	Displays a reception/transmission state of chassis communication
Configuration	• The vehicle specification that is written in lane camera unit can be displayed or stored • The vehicle specification can be written when lane camera unit is replaced

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-292, "DTC Index".

FREEZE FRAME DATA (FFD)

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

CONSULT screen item (Indication/Unit)	Description
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 lane camera unit high temperature judgment.
WIPER (Off/Lo/Hi)	Displays the wiper operating status.
TURN SIGNAL (Off/LH/ RH/LH&RH)	Displays status of “Turn signal” received from BCM via CAN communication.
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)	**NOTE:** The item is indicated, but not monitored.
BRAKE OPERATION STATUS (Off/On/CNFRM/UNKWN)	Displays the brake operating status.
AIMING DONE (not finished/finished)	Displays status that camera aiming is done.

Monitored item (Unit)	Description
AIMING RESULT (NOK/OK)	Displays result of camera aiming.
STEERING ANGLE (deg)	Displays the steering angle sent from the steering angle sensor.
YAW RATE (deg/s)	Displays the yaw rate.
FCTRY AIM YAW (deg)	Displays the yaw angle result of camera aiming.
FCTRY AIM ROL (deg)	Displays the roll angle result of camera aiming.
FCTRY AIM PIT (deg)	Displays the pitch angle result of camera aiming.
LDW FUNCTION (NORMAL/MALF)	Displays LDW function status.
LDW SETTING DISPLAY (NTHNG)	**NOTE:** The item is indicated, but not monitored.
DRIVER ASSIST SYSTEM BZZR (NO REQ)	**NOTE:** The item is indicated, but not monitored.
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)	**NOTE:** The item is indicated, but not monitored.
HBA FUNCTION	**NOTE:** The item is indicated, but not monitored.
DISTANCE (m)	Displays the distance between the vehicle and an object detected by the lane camera unit.
RELATIVE SPEED (m/s)	Displays the relative velocity to an object detected by the lane camera unit.
HBA REQUEST (NO REQ)	**NOTE:** The item is indicated, but not monitored.
LOW BEAM STATUS (Off)	**NOTE:** The item is indicated, but not monitored.
HIGH BEAM STATUS (Off)	**NOTE:** The item is indicated, but not monitored.
NO-ENTRY SIGN DISPLAY	**NOTE:** The item is indicated, but not monitored.

CONFIGURATION

Configuration includes functions as follows.

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

ECU IDENTIFICATION

Displays lane camera unit parts number.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000015240209

APPLICATION ITEM

CONSULT can display each diagnostic item using the diagnostic test modes as follows.

Mode	Function description
ECU identification	Parts number of chassis control module can be read.
Self Diagnostic Result	Self-diagnostic results and freeze frame data can be read and erased quickly.*1
Data Monitor	Input/Output data in chassis control module can be read.
Active Test	Send the drive signal from CONSULT to the actuator. The operation check can be performed.
Re/programming, Configuration	• Read and save the vehicle specification (TYPE ID). • Write the vehicle specification (TYPE ID) when replacing Chassis Control Module.

*1: The following diagnosis information is erased by erasing.
- DTC
- Freeze frame data (FFD)

ECU IDENTIFICATION

Chassis control module part number can be read.

SELF DIAGNOSTIC RESULT

Refer to DAS-300, "DTC Index".

When “CRNT” is displayed on “self-diagnosis result”
- The system is presently malfunctioning.

When “PAST” is displayed on “self-diagnosis result”
- System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)
When DTC is detected, a vehicle state shown below is recorded and displayed on CONSULT.

Item name	Indication/Unit	Display item
Odometer/Trip meter	km	Total mileage (Odometer value) of the moment a particular.
DTC LOCAL CODE	—	DTC code is displayed but not used.
CAN DIAG PERMIS CONDITION	Off / On	Displays CAN network diagnosis status.
BRAKE SWITCH 1	Off / On	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 2	Off / On	Displays brake switch operating status (Off: open / On: close).
ABS	NORMAL / ABNOR	Displays ABS function status.
TCS	NORMAL / ABNOR	Displays TCS function status.
VDC	NORMAL / ABNOR	Displays VDC function status.
VEHICLE SPEED	km	Displays the vehicle speed.
FR WHEEL SPEED	rpm	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	rpm	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	rpm	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	rpm	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	deg	Displays the steering angle from the steering angle sensor.
SIDE G SENSOR	G	Displays the side G.
DECEL G SENSOR	G	Displays the decel G.
YAW RATE SENSOR	deg/s	Displays the yaw rate.
THRTL OPENING	%	Displays the electric throttle position.
PRESS SENSOR	bar	Displays the brake fluid pressure.

DATA MONITOR

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

Item [Unit]		Description
IGN VOLT	[V]	Displays the ignition power supply voltage.
CONTROL MODULE MALF	[Off / On]	Displays chassis control module malfunction.
CAN DIAG STATUS	[Off / On]	Displays CAN network diagnosis status.
VEHICLE SPEED	[km/m]	Displays the vehicle speed.
FR WHEEL SPEED	[rpm]	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	[rpm]	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	[rpm]	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	[rpm]	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	[deg]	Displays the steering angle from the steering angle sensor.
DECEL G SENSOR	[G]	Displays the decel G.
SIDE G SENSOR	[G]	Displays the side G.
YAW RATE SENSOR	[deg/s]	Displays the yaw rate.
ACCELE PEDAL POSITION	[%]	Displays the accelerator pedal position.
THROTTLE CONTROL	[NORMAL / INCORR / PREV / IN-POSSI]	Displays the electric throttle status.
BRAKE SWITCH 2	[Off / On]	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 1	[Off / On]	Displays brake switch operating status (Off: open / On: close).
STOP LAMP SW	[INACT / ACT]	Displays the stop lamp switch status.
PRESS SENSOR	[bar]	Displays the brake fluid pressure.
ABS	[NORMAL / ABNOR]	Displays ABS function status.
ABS MALF	[NORMAL / ABNOR]	Displays ABS function status.
EBD	[NORMAL / ABNOR]	Displays EBD function status.
TCS	[NORMAL / ABNOR]	Displays TCS function status.
TCS MALF	[NORMAL / ABNOR]	Displays TCS function status.
VDC	[NORMAL / ABNOR]	Displays VDC function status.
VDC MALF	[NORMAL / ABNOR]	Displays VDC function status.
VDC OFF SWITCH	[Off / On]	Displays VDC OFF switch status.
DRV TRQ CTRL MODE	[INITIAL / NORMAL / STOP 1 / STOP 2 / LIMIT 1 / PROHIBI]	Displays the status of correction to slightly increase/decrease the drive torque.
DRV TRQ CTRL PERMIS 1	[NO PER / PERMIS]	Displays the permission status (basic requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PERMIS 2	[NO PER / PERMIS]	Displays the permission status (system requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL STOP	[REQ / NO REQ]	Displays the stop request status of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PROHIBIT	[REQ / NO REQ]	Displays the prohibition request status of correction to slightly increase/decrease drive torque.
AEB	[Off / On]	Displays the Active Engine Brake (corner) function operating status
ATC 1	[Off / On]	Displays active trace control function operating status.
ATC 2	[Off / On]	Displays active trace control function operating status.
ATC 3	[Off / On]	Displays active trace control function operating status.

Item [Unit]		Description
ATC 4	[Off / On]	Displays active trace control function operating status.
ATC 5	[Off / On]	Displays active trace control function operating status.
BRAKE HOLD	[INACT / ACT / RELEA]	Displays the status of Hill Start Assist function.
FL TIRE DISP	[DEF / 1]	Displays tire status.
FR TIRE DISP	[DEF / 1]	Displays tire status.
RL TIRE DISP	[DEF / 1]	Displays tire status.
RR TIRE DISP	[DEF / 1]	Displays tire status.
VEHICLE DISP	[Off / On]	Displays Active Ride Control (brake) activation status.
INTERRUPT DISP	[NOREQ / HOLD1 / HOLD2 / HDC]	Displays the interruption status.
TURN DISP	[NSTEER / LEFT / RIGHT]	Displays the turn status.
BRAKE HOLD DISP	[INACT / ACT / RELEA]	Displays the brake hold status.
ATC DISP	[Off / On]	Displays Active Trace Control status.
ARC BRAKE DISP	[Off / On]	Displays the status of Active Ride Control (brake).
HDC DISP	[Off / On]	Displays the Hill Descent Control.
AEB CVT PERMIT	[Off / On]	Displays the CVT authorized state for Active Engine Brake.
AEB STATUS	[Off / On]	Displays the setting status of Active Engine Brake function.
AEB COMMAND 1	[0.0000]	Displays the relative command value of Active Engine Brake.
AEB SLIP RATE	[%]	Displays slip ratio of Active Engine Brake.
ATC SETTING	[Off / On]	Displays the setting status of Active Trace Control function by steering switch.
AEB SETTING	[Off / On]	Displays the setting status of Active Engine Brake function by steering switch.
ARC BRAKE	[Off / On]	Displays the Active Ride Control function status.

ACTIVE TEST

The active test is used to determine and identify details of a malfunction, based on self-diagnosis test results and data obtained in the DATA MONITOR. In response to instructions from CONSULT, instead of those from chassis control module on the vehicle, a drive signal is sent to the actuator to check its operation.

CAUTION:

- **Never perform ACTIVE TEST while driving the vehicle.**
- **Always bleed air from brake system before active test.**
- **Never perform active test when system is malfunctioning.**

NOTE:

- When active test is performed while depressing the brake pedal, the brake pedal depressing stroke may change. This is not a malfunction.
- During an active test, sometimes a chassis control warning is displayed and the master warning lamp illuminates on the information display in the combination meter; however, this is not a malfunction.

Test item	Operation	Description
BRAKE ACTUATOR 1 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 3	Start	Controls brake fluid pressure.

Test item	Operation	Description
MASTER WARNING ACTIVE	On	If touching “On” with the master warning lamp not illuminated, the master warning lamp illuminates. Stops in approximately 1 minute.
	Off	The master warning lamp turns OFF. (vehicle in normal state)
FL TIRE DISP	On	Displays the front LH tire on the information display in the combination meter.
	Off	Does not display the front LH tire on the information display in the combination meter.
FR TIRE DISP	On	Displays the front RH tire on the information display in the combination meter.
	Off	Does not display the front RH tire on the information display in the combination meter.
RL TIRE DISP	On	Displays the rear LH tire on the information display in the combination meter.
	Off	Does not display the rear LH tire on the information display in the combination meter.
RR TIRE DISP	On	Displays the rear RH tire on the information display in the combination meter.
	Off	Does not display the rear RH tire on the information display in the combination meter.
TURN DISP	NO DISP	Does not display the turning status on the information display in the combination meter.
	LH	Displays the LH turning status on the information display in the combination meter.
	RH	Displays the RH turning status on the information display in the combination meter.
	ROUND	Displayed but not used.
ATC 1 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATC 2 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
HDC DISP	On	Displays Hill Descent Control active status on the information display on the combination meter.
	Off	Displays Hill Descent Control inactive status on the information display on the combination meter.
BRAKE HOLD DISP	INACT	Displays inactive status of controls on the information display on the combination meter.
	READY	Displays ready status of Hill Start Assist on the information display on the combination meter.
	ACTIVE	Displays active status of Hill Start Assist on the information display on the combination meter.
	ERROR	Displays inactive status of controls on the information display on the combination meter.
AEB DISP	On	Displays Active Engine Brake (corner) active status on the information display in the combination meter.
	Off	Displays Active Engine Brake (corner) inactive status on the information display in the combination meter.

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

RE/PROGRAMMING, CONFIGURATION

Configuration includes the following functions.

Function		Description
Read/Write Configuration	Before replacing ECU	Allows the reading of vehicle specification (Type ID) written in Chassis Control Module to store the specification in CONSULT.
	After replacing ECU	Allows the writing of vehicle information (Type ID) stored in CONSULT into the Chassis Control Module.
Manual Configuration		Allows the writing of vehicle specification (Type ID) into the Chassis Control Module by hand.

CAUTION:

Use “Manual Configuration” only when “TYPE ID” of Chassis Control Module cannot be read.

ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000015240201

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

Monitor item	Condition		Value/Status
MAIN SW	Ignition switch ON	When MAIN switch is pressed	On
		When MAIN switch is not pressed	Off
SET/COAST SW	Ignition switch ON	When SET/COAST switch is pressed	On
		When SET/COAST switch is not pressed	Off
CANCEL SW	Ignition switch ON	When CANCEL switch is pressed	On
		When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
		When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition switch ON	When DISTANCE switch is pressed	On
		When DISTANCE switch is not pressed	Off
CRUISE OPE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC system is controlling	On
		When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake pedal is depressed	Off
		When brake pedal is not depressed	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed	On
		When brake pedal is not depressed	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
ENGINE RPM	Engine running		Equivalent to tachometer reading
BA WARNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
STP LMP DRIVE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC brake hold drive is activated	On
		When ICC brake hold drive is not activated	Off
D RANGE SW	Engine running	When the shift selector is in “D” position or manual mode	On
		When the shift selector is in any position other than “D” or manual mode	Off

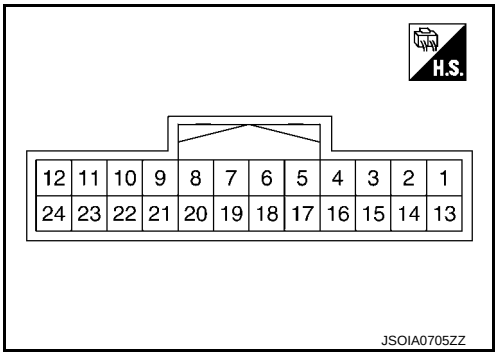
Monitor item	Condition		Value/Status
NP RANGE SW	Engine running	When the shift selector is in “N”, “P” position	On
		When the shift selector is in any position other than “N”, “P”	Off
PKB SW	Ignition switch ON	When the parking brake is applied	On
		When the parking brake is released	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit
VHCL SPD AT	While driving		Value of CVT vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position
GEAR	While driving		Displays the gear position
MODE SIG	Start the engine and press MAIN switch	When ICC system is deactivated	Off
		When vehicle-to-vehicle distance control mode is activated	ICC
		When conventional (fixed speed) cruise control mode is activated	ASCD
SET DISP IND	• Drive the vehicle and activate the conventional (fixed speed) cruise control mode • Press SET/COAST switch	SET vehicle speed indicator ON	On
		SET vehicle speed indicator OFF	Off
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the relative speed.
		When a vehicle ahead is not detected	0.0
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LANE DPRT W/L	Drive the vehicle and activate the LDW system or LDP system	Lane departure warning lamp ON	On
		Lane departure warning lamp OFF	Off
LDW BUZZER OUTPUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning system	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning system	On
		When the buzzer of the following system does not operate • LDW/LDP system • Blind Spot Warning	Off
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
		Lane departure warning is not operating	Off
Camera lost	Drive the vehicle and activate the LDW system or LDP system	Both side lane markers are detected	Detect
		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both

Monitor item	Condition		Value/Status
Lane unclear	While driving	Lane marker is unclear	On
		Lane marker is clear	Off
STATUS signal	Drive the vehicle and activate the LDP system	When the LDP system is ON	Stnby
		When the LDP system is operating	Warn
		When the LDP system is canceled	Cancl
		When the LDP system is OFF	Off
Shift position	• Engine running • While driving		Displays the shift position
Turn signal	Turn signal lamps OFF		Off
	Turn signal lamp LH blinking		LH
	Turn signal lamp RH blinking		RH
	Turn signal lamp LH and RH blinking		LH&RH
SIDE G	While driving	Vehicle turning right	Negative value
		Vehicle turning left	Positive value
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (LDW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
LDP SELECT	Ignition switch ON	"Lane Departure Prevention" set with the integral switch is ON	On
		"Lane Departure Prevention" set with the integral switch is OFF	Off
FCW SELECT	Ignition switch ON	"Forward Emergency Braking" set with the integral switch is ON	On
		"Forward Emergency Braking" set with the integral switch is OFF	Off
LDW SELECT	Ignition switch ON	"Lane Departure Warning" set with the integral switch is ON	On
		"Lane Departure Warning" set with the integral switch is OFF	Off
BSW SELECT	Ignition switch ON	"Blind Spot Warning" set with the integral switch is ON	On
		"Blind Spot Warning" set with the integral switch is OFF	Off
BSW/BSI WARN LMP	Engine running	When the BSW system is malfunctioning	On
		When the BSW system is normal	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On
		When the BSW system is OFF	Off
FCW SYSTEM ON	Engine running	When the FEB system is ON	On
		When the FEB system is OFF	Off
BATTERY CIRCUIT OFF	**NOTE:** The item is indicated, but not used		Off
LDP WARNING INDICATOR	Engine running	When the LDP system is malfunctioning	On
		When the LDP system is normal	Off
LDW ON INDICATOR	Engine running	LDW system display ON	On
		LDW system display OFF	Off
LDW WARNING INDICATOR	Engine running	When the LDW system is malfunctioning	On
		When the LDW system is normal	Off

Monitor item	Condition		Value/Status
SYSTEM CANCEL MESSAGE	Engine running	When the vehicle is normal	NOREQ
		When the wheel is slipping	SLIP
		When the VDC is OFF	VDC OFF
CAMERA HI TEMP MSG	Engine running	Lane camera unit high temperature warning display ON	On
		Lane camera unit high temperature warning display OFF	Off
ITS SETTING ITEM(LDP)	Ignition switch ON		On
BSW ON INDICATOR	Engine running	BSW system display ON	On
		BSW system display OFF	Off
SIDE RADAR BLOCK COND	Engine running	Front bumper or side radar is dirty	On
		Front bumper and side radar is clean	Off
LDW WARNING ALERT TIMING	Ignition switch ON	LDW system OFF	Nothing
		Lane departure warning timing is early setting	Early
		Lane departure warning timing is late setting	Late
BSW IND BRIGHT-NESS	Ignition switch ON	BSW system OFF	Nothing
		Blind Spot Warning indicator brightness bright	Bright
		Blind Spot Warning indicator brightness normal	Normal
		Blind Spot Warning indicator brightness dark	Dark

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
1 (L)	Ground	CAN high	—	—	—	—
2 (R)		CAN low	—	—	—	—
5 (B)		Ground	—	Ignition switch ON	—	0 V
6 (L)		ITS communication high	—	—	—	—
7 (Y)		ITS communication low	—	—	—	—
8 (L)		Chassis communication high	—	—	—	—
9 (W)		Chassis communication low	—	—	—	—
12 (P)		Ignition power supply	Input	Ignition switch ON		Battery voltage
18 (W)		Warning system switch (with FEB)	Input	Ignition switch ON	When warning system switch is not pressed	Battery voltage
					When warning system switch is pressed	0 V
19 (BR)		Warning system ON indicator (with FEB)	Output	Ignition switch ON	Warning system ON indicator ON	0 V
					Warning system ON indicator OFF	Battery voltage

Fail-safe (ADAS Control Unit)

INFOID:0000000015240202

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

System	Buzzer	Warning lamp/Warning display	Description
Vehicle-to-vehicle distance control mode	High-pitched tone	ICC system warning	Cancel
Conventional (fixed speed) cruise control mode	High-pitched tone	ICC system warning	Cancel
Forward Emergency Braking (FEB)	High-pitched tone	FEB warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000015240203

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

Priority	Detected items (DTC)	
1	• C1A0A: CONFIG UNFINISHED • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)	
2	• C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • C1A04: ABS/TCS/VDC CIRC • C1A05: BRAKE SW/STOP L SW • C1A06: OPERATION SW CIRC • C1A07: CVT • C1A1A: HPCM CIRCUIT • C1A13: STOP LAMP RLY FIX • C1A14: ECM CIRCUIT • C1A24: NP RANGE • C1A25: SHIFT RANGE IND • C1A26: ECD MODE MALF • C1A33: CAN TRANSMISSION ERR • C1A34: COMMAND ERROR • C1A39: STRG SEN CIR • C1A40: SYSTEM SW CIR • C1B00: CAMERA UNIT MALF • C1B01: CAM AIMING INCMP • C1B03: CAM ABNRMAL TMP DETCT • C1B53: SIDE RDR R MALF • C1B54: SIDE RDR L MALF • C1B59: CCM • C1B82: DIST SEN OFF-CENTER • C1B83: DIST SEN BLOCKED • C1B84: DIST SEN MALFUNCTION • C1B85: DIST SEN ABNORMAL TEMP • C1B86: DIST SEN PWR SUP CIR • C1B5D: FEB OPE COUNT LIMIT • C1B5A: G SENSOR MALF	• U0121: VDC CAN CIR 2 • U0126: STRG SEN CAN CIR 1 • U0235: ICC SENSOR CAN CIRC 1 • U0155: MET CAN CIRC 1 • U0401: ECM CAN CIR 1 • U0402: TCM CAN CIR 1 • U0415: VDC CAN CIR 1 • U0428: STRG SEN CAN CIR 2 • U1500: CAM CAN CIR 2 • U1501: CAM CAN CIR 1 • U1502: ICC SEN CAN COMM CIR • U1503: SIDE RDR L CAN CIR 2 • U1504: SIDE RDR L CAN CIR 1 • U1505: SIDE RDR R CAN CIR 2 • U1506: SIDE RDR R CAN CIR 1 • U1507: LOST COMM (SIDE RDR R) • U1508: LOST COMM (SIDE RDR L) • U150B: ECM CAN CIRC 3 • U150C: VDC CAN CIRC 3 • U150D: TCM CAN CIRC 3 • U150E: BCM CAN CIRC 3 • U151D: HPCM CAN CIRCUIT 2 • U151E: HPCM CAN CIRCUIT 1 • U1513: METER CAN CIRC 3 • U1514: STRG SEN CAN CIRC 3 • U1515: ICC SENSOR CAN CIRC 3 • U1516: CAM CAN CIR 3 • U1518: SIDE RDR L CAN CIRC 3 • U1519: SIDE RDR R CAN CIRC 3
3	• C1A03: VHCL SPEED SE CIRC	
4	• C1A00: CONTROL UNIT	

DTC Index

INFOID:0000000015240204

Systems for fail-safe
- A: Forward Emergency Braking (FEB)
- B: Blind Spot Warning (BSW)/Rear Cross Traffic Alert (RCTA)
- C: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- D: Forward Emergency Braking (FEB) with pedestrian
- E: Vehicle-to-vehicle distance control mode
- F: Conventional (fixed speed) cruise control mode

DTC	CONSULT display	Fail-safe	Reference
CONSULT		System	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	—	—
C1A0A	CONFIG UNFINISHED	A, B, C, D, E, F	DAS-67
C1A00	CONTROL UNIT	A, B, C, D, E, F	DAS-68
C1A01	POWER SUPPLY CIR	A, B, C, D, E, F	DAS-70
C1A02	POWER SUPPLY CIR 2	A, B, C, D	DAS-70
C1A03	VHCL SPEED SE CIRC	A, B, C, D	DAS-72
C1A04	ABS/TCS/VDC CIRC	A, B, C, D	DAS-76
C1A05	BRAKE SW/STOP L SW	A, B, C	DAS-79

Systems for fail-safe

- A: Forward Emergency Braking (FEB)
- B: Blind Spot Warning (BSW)/Rear Cross Traffic Alert (RCTA)
- C: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- D: Forward Emergency Braking (FEB) with pedestrian
- E: Vehicle-to-vehicle distance control mode
- F: Conventional (fixed speed) cruise control mode

DTC	CONSULT display	Fail-safe	Reference
CONSULT		System	
C1A06	OPERATION SW CIRC	A, B	DAS-82
C1A07	CVT CIRCUIT	A, B, C, D	DAS-85
C1A1A	HPCM CIRCUIT	A, B, C, D, E, F	DAS-87
C1A13	STOP_LAMP_RLY_FIX	A, B, C	DAS-90
C1A14	ECM CIRCUIT	A, B, C	DAS-93
C1A24	NP RANGE	A, B, C	DAS-95
C1A25	SHIFT RANGE IND	A, B, C	DAS-97
C1A26	ECD MODE MALF	A, B, C	DAS-99
C1A33	CAN TRANSMISSION ERR	A, B, C, D	DAS-101
C1A34	COMMAND ERROR	A, B, C, D	DAS-103
C1A39	STRG SEN CIR	A, B, C	DAS-104
C1A40	SYSTEM SW CIR	A, B, C	DAS-107
C1B00	CAMERA UNIT MALF	A, B	DAS-109
C1B01	CAM AIMING INCMP	A, B	DAS-111
C1B03	ABNRML TMP DETCT	A, B	DAS-113
C1B53	SIDE RDR R MALF	B	DAS-115
C1B54	SIDE RDR L MALF	B	DAS-117
C1B59	CCM	A, B, C, D	DAS-119
C1B82	DIST SEN OFF CENTER	A, C	DAS-121
C1B83	DIST SEN BLOCKED	A, C	DAS-122
C1B84	DIST SEN MALFUNCTION	A, C	DAS-123
C1B85	DIST SEN ABNORMAL TEMP	A, C	DAS-124
C1B86	DIST SEN PWR SUP CIR	A, C	DAS-125
C1B5A	G SENSOR MALF	A, B, C	DAS-127
C1B5D	FEB OPE COUNT LIMIT	A, B, C	DAS-129
U0121	VDC CAN CIR 2	A, B, C	DAS-130
U0126	STRG SEN CAN CIR 1	A, B, C	DAS-133
U0155	MET CAN CIR 1	A, B, C	DAS-136
U0235	ICC SENSOR CAN CIRC 1	A, C	DAS-138
U0401	ECM CAN CIR 1	A, B, C	DAS-140
U0402	TCM CAN CIR 1	A, B, C	DAS-142
U0415	VDC CAN CIR 1	A, B	DAS-144
U0428	STRG SEN CAN CIR 2	A, C	DAS-147
U1000[NOTE]	CAN COMM CIRCUIT	A, B	DAS-150
U1010	CONTROL UNIT (CAN)	A, B	DAS-153
U150B	ECM CAN CIRC 3	A, B	DAS-155
U150C	VDC CAN CIRC 3	A, B	DAS-157
U150D	TCM CAN CIRC 3	A, B	DAS-159

Systems for fail-safe

- A: Forward Emergency Braking (FEB)
- B: Blind Spot Warning (BSW)/Rear Cross Traffic Alert (RCTA)
- C: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- D: Forward Emergency Braking (FEB) with pedestrian
- E: Vehicle-to-vehicle distance control mode
- F: Conventional (fixed speed) cruise control mode

DTC	CONSULT display	Fail-safe	Reference
CONSULT		System	
U150E	BCM CAN CIRC 3	A, B	DAS-161
U1500	CAM CAN CIR2	B, C	DAS-172
U1501	CAM CAN CIR 1	B, C	DAS-175
U1502	ICC SEN CAN COMM CIR	A	DAS-178
U1503	SIDE RDR L CAN CIR 2	B	DAS-179
U1504	SIDE RDR L CAN CIR 1	B	DAS-182
U1505	SIDE RDR R CAN CIR 2	B	DAS-185
U1506	SIDE RDR R CAN CIR 1	B	DAS-188
U1507	LOST COMM (SIDE RDR R)	B	DAS-191
U1508	LOST COMM (SIDE RDR L)	B	DAS-194
U151D	HPCM CAN CIRCUIT 2	A, B, C, D, E, F	DAS-163
U151E	HPCM CAN CIRCUIT 1	A, B, C, D, E, F	DAS-166
U1513	METER CAN CIRC 3	A, B, C	DAS-197
U1514	STRG SEN CAN CIRC 3	A, B, C	DAS-199
U1515	ICC SENSOR CAN CIRC 3	A	DAS-201
U1516	CAM CAN CIRC 3	B, C	DAS-202
U1518	SIDE RDR L CAN CIRC 3	B	DAS-204
U1519	SIDE RDR R CAN CIRC 3	B	DAS-206

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

ADAS CONTROL UNIT 2

Reference Value

INFOID:0000000015240205

VALUES ON THE DIAGNOSIS TOOL

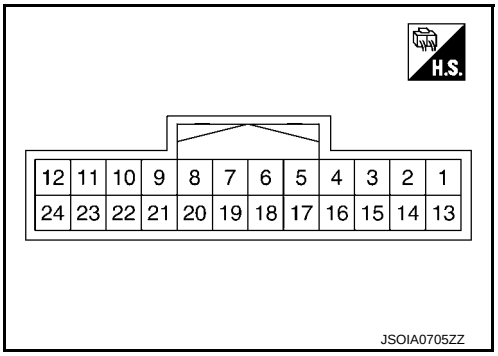
NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition		Value/Status
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed.	Off
		When brake or clutch pedal is not depressed.	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed.	On
		When brake pedal is not depressed.	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
SET VHCL SPD	While driving	When vehicle speed is set.	Displays the set vehicle speed
BUZZER O/P	Engine running	When the buzzer of the following system operates: • FCW system • FEB system	On
		When the buzzer of the following system not operates: • FCW system • FEB system	Off
ENGINE RPM	Engine running		Equivalent to tachometer reading
WIPER SW	Ignition switch ON	Wiper not operating.	Off
		Wiper LO operation.	Low
		Wiper HI operation.	High
BA WARNING	Engine running	FEB OFF indicator lamp ON. • When FEB system is malfunctioning. • When FEB system is turned to OFF.	On
		FEB OFF indicator lamp OFF. • When FEB system is normal. • When FEB system is turned to ON.	Off
D POSITION SW	Engine running	When the selector lever is in “D” position or manual mode.	On
		When the selector lever is in any position other than “D” or manual mode.	Off
NP RANGE SW	Engine running	When the selector lever is in “N”, “P” position.	On
		When the selector lever is in any position other than “N”, “P”.	Off
PKB SW	Ignition switch ON	When the parking brake is applied.	On
		When the parking brake is released.	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit

Monitor item	Condition		Value/Status
VHCL SPD AT	While driving		Value of CVT vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal.	Displays the throttle position
GEAR	While driving		Displays the gear position
NP SW SIG	Ignition switch ON	When the shift lever is in neutral position.	On
		When the shift lever is in any position other than neutral.	Off
SET DISP IND	Press SET/COAST switch	SET switch indicator ON.	On
		SET switch indicator OFF.	Off
DISTANCE	Drive the vehicle and activate the FCW/FEB system	When a vehicle ahead is detected.	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected.	0.0
RELATIVE SPD	Drive the vehicle and activate the FCW/FEB system	When a vehicle ahead is detected.	Displays the relative speed.
		When a vehicle ahead is not detected.	0.0
SIDE G	While driving	Vehicle turning right.	Negative value
		Vehicle turning left.	Positive value
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
FCW SELECT	Ignition switch ON	“Forward Emergency Braking” set with the integral switch is ON.	On
		“Forward Emergency Braking” set with the integral switch is OFF.	Off
BSW SELECT	Ignition switch ON	“Blind Spot Warning” set with the integral switch is ON.	On
		“Blind Spot Warning” set with the integral switch is OFF.	Off
BSWBSI WARN LMP	Engine running	When the BSW system is malfunctioning.	On
		When the BSW system is normal.	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON.	On
		When the BSW system is OFF.	Off
FCW SYSTEM ON	Engine running	When the FEB system is ON.	On
		When the FEB system is OFF.	Off
BSW ON INDICATOR	Engine running	BSW system display ON.	On
		BSW system display OFF.	Off
SIDE RADAR BLOCK COND	Engine running	Rear bumper or side radar is dirty.	On
		Rear bumper or side radar is clean.	Off
BSW IND BRIGHTNESS	Ignition switch ON	BSW system OFF.	Nothing
		Blind Spot Warning indicator brightness bright.	Bright
		Blind Spot Warning indicator brightness normal.	Normal
		Blind Spot Warning indicator brightness dark.	Dark
FEB AVAILABLE COND	Engine running	When the FEB system is available condition.	On
		When the FEB system is not available condition.	Off
EBA AVAILABLE COND	Engine running	When the Brake Assist system is available condition.	On
		When the Brake Assist system is not available condition.	Off

TERMINAL LAYOUT

PHYSICAL VALUES



Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Ground	Input	—		0 V
2 (L)		ITS communication high	—	—		—
3 (P)		Ignition power supply	Input	Ignition switch ON		Battery voltage
5 (Y)		ITS communication low	—	—		—
6 (Y)		CAN low	—	—		—
9 (L)		CAN high	—	—		—
10 (R)		CAN low	—	—		—
11 (W)		Warning system switch (without FEB)	Input	Ignition switch ON	Warning system switch is not pressed	Battery voltage
					Warning system switch is pressed	0 V
12 (GR)		Warning buzzer signal	Output	Ignition switch ON	Warning buzzer operation	Battery voltage
					Warning buzzer not operating	0 V
17 (BR)		Warning system switch ON indicator (without FEB)	Output	Ignition switch ON	Warning system ON indicator is OFF	Battery voltage
					Warning system ON indicator is ON	0 V
18 (L)		CAN high	—	—		—
24 (B)		Warning buzzer ground	—	—	—	—

Fail-safe (ADAS Control Unit 2)

INFOID:0000000015240206

If a malfunction occurs in each system, ADAS control unit 2 cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

System	Buzzer	Warning lamp/Warning display	Description
Lane Departure Warning (LDW)	—	Warning systems indicator (Lane position: Yellow)	Cancel
Lane Departure Prevention (LDP)	Low-pitched tone	Warning systems indicator (Lane position: Yellow)	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000015240207

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

Priority	Detected items (DTC)	
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN) • U1321: CONFIG UNFINISHED	
2	• C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • C1A04: ABS/TCS/VDC CIRC • C1A05: BRAKE SW/STOP L SW • C1A07: CVT • C1A1A: HPCM CIRCUIT • C1A39: STRG SEN CIR • C1B00: CAMERA UNIT MALF • C1B01: CAM AIMING INCMP • C1B03: CAM ABNRMAL TMP DETCT • C1B53: SIDE RDR R MALF • C1B54: SIDE RDR L MALF	• U0121: VDC CAN CIR 2 • U0126: STRG SEN CAN CIR 1 • U0415: VDC CAN CIR 1 • U0428: STRG SEN CAN CIR 2 • U1402: CVT CAN CIR2 • U1500: CAM CAN CIR 2 • U1501: CAM CAN CIR 1 • U1503: SIDE RDR L CAN CIR 2 • U1504: SIDE RDR L CAN CIR 1 • U1505: SIDE RDR R CAN CIR 2 • U1506: SIDE RDR R CAN CIR 1 • U1507: LOST COMM (SIDE RDR R) • U1508: LOST COMM (SIDE RDR L) • U151D: HPCM CAN CIRCUIT 2 • U151E: HPCM CAN CIRCUIT 1
3	• C1A03: VHCL SPEED SE CIRC	
4	• C1A00: CONTROL UNIT	

DTC Index

INFOID:0000000015240208

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

DTC CONSULT	CONSULT display	Reference
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	—
C1A00	CONTROL UNIT	DAS-68
C1A01	POWER SUPPLY CIR	DAS-71
C1A02	POWER SUPPLY CIR 2	DAS-71
C1A03	VHCL SPEED SE CIRC	DAS-73

DTC CONSULT	CONSULT display	Reference
C1A04	ABS/TCS/VDC CIRC	DAS-77
C1A05	BRAKE SW/STOP L SW	DAS-80
C1A07	CVT CIRCUIT	DAS-86
C1A1A	HPCM CIRCUIT	DAS-71
C1A39	STRG SEN CIR	DAS-105
C1B00	CAMERA UNIT MALF	DAS-109
C1B01	CAM AIMING INCMP	DAS-112
C1B03	ABNRML TMP DETCT	DAS-114
C1B53	SIDE RDR R MALF	DAS-115
C1B54	SIDE RDR L MALF	DAS-117
U0121	VDC CAN CIR 2	DAS-131
U0126	STRG SEN CAN CIR 1	DAS-134
U0415	VDC CAN CIR 1	DAS-145
U0428	STRG SEN CAN CIR 2	DAS-148
U1000[NOTE]	CAN COMM CIRCUIT	DAS-151
U1010	CONTROL UNIT (CAN)	DAS-154
U1321	CONFIG UNFINISHED	DAS-169
U1402	CVT CAN CIRC 1	DAS-170
U1500	CAM CAN CIR2	DAS-173
U1501	CAM CAN CIR 1	DAS-176
U1503	SIDE RDR L CAN CIR 2	DAS-180
U1504	SIDE RDR L CAN CIR 1	DAS-183
U1505	SIDE RDR R CAN CIR 2	DAS-186
U1506	SIDE RDR R CAN CIR 1	DAS-189
U1507	LOST COMM (SIDE RDR R)	DAS-191
U1508	LOST COMM (SIDE RDR L)	DAS-194
U151D	HPCM CAN CIRCUIT 2	DAS-194
U151E	HPCM CAN CIRCUIT 1	DAS-194

ICC SENSOR

Reference Value

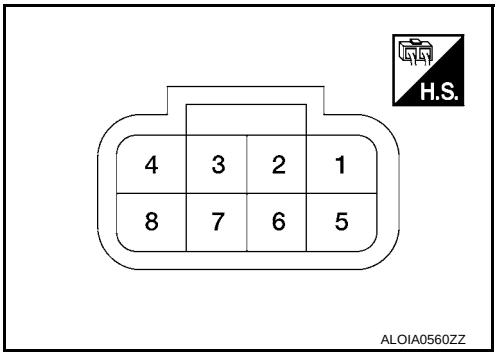
INFOID:0000000015240215

VALUES ON THE DIAGNOSIS TOOL

Monitor item	Condition		Value/Status
VHCL SPEED SE	While driving		Value of vehicle speed signal (wheel speed)
YAW RATE	While driving	Vehicle stopped	0.0
		Vehicle turning right	Positive value
		Vehicle turning left	Negative value
PWR SUP MONI	Ignition switch ON		Power supply voltage value of ICC sensor
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the relative speed
		When a vehicle ahead is not detected	0.0
Failsafe unit temperature	**NOTE:** The item is indicated, but not used		—
Failsafe condition	**NOTE:** The item is indicated, but not used		—
Failsafe alignment complete	**NOTE:** The item is indicated, but not used		—
Connector direction	**NOTE:** The item is indicated, but not used		—
RADAR OFFSET	**NOTE:** The item is indicated, but not used		—
RADAR HEIGHT	**NOTE:** The item is indicated, but not used		—
L/R ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Horizontal correction value is displayed
U/D ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Vertical correction value is displayed
STEERING ANGLE	Ignition switch ON	When setting the steering wheel in straight-ahead position	0.0
		When turning the steering wheel 90° rightward	+90
		When turning the steering wheel 90° leftward	-90
STRG ANGLE SPEED	Ignition switch ON	At the time of turning the steering wheel	Steering wheel turning speed is displayed
Horizontal Alignment value			Displays the radar horizontal angle

Monitor item	Condition	Value/Status
Vertical Alignment value	**NOTE:** The item is indicated, but not used	—
Vehicle status for Alignment	**NOTE:** The item is indicated, but not used	—

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (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 (R)	—	ITS communication-L	—	—	—	—
3 (L)		ITS communication-H	—	—	—	—
8 (SB)	1 (B)	Ignition power supply	Input	Ignition switch ON	9.5 - 16 V	Battery voltage

Fail-safe (ICC Sensor)

INFOID:0000000015240216

If a malfunction occurs in the ICC sensor, ADAS control unit cancels control, sounds a beep, and turns ON the ICC system warning lamp in the combination meter.

DTC Inspection Priority Chart

INFOID:0000000015240217

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

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• C1A50: ADAS MALFUNCTION

Priority	Detected items (DTC)
3	• C1A01: POWER SUPPLY CIR • C1A02: POWER SUPPLY CIR 2 • C1A03: VHCL SPEED CIRC • C1A04: ABS/TCS/VDC CIRC • C1A05: BRAKE SW/STOP L SW • C1A06: OPERATION SW • C1A14: ECM CIRCUIT • C1A15: GEAR POSITION • C1A23: UNIT LOW TEMP • C1A24: NP RANGE • C1A26: ECD MODE MALF • C1A27: ECD PWR SUPLY CIR • C1A33: CAN TRANSMISSION ERR • C1A34: COMMAND ERROR • C1A35: APA CIR • C1A39: STRG SEN CIR • C1B58: DR ASSIST BUZZER CIRCUIT • C1B83: DIST SEN BLOCKED • C1F01: APA MOTOR MALF • C1F02: APA C/U MALF • C1F05: APA PWR SUPLY CIR • U0104: ADAS CAN CIR1 • U0121: VDC CAN CIR2 • U0126: STRG SEN CAN CIR1 • U0235: ICC SENSOR CAN CIR1 • U0401: ECM CAN CIR2 • U0402: TCM CAN CIR2 • U0415: VDC CAN CIR1 • U150B: ECM CAN CIR3 • U150C: VDC CAN CIRC3 • U150D: TCM CAN CIRC3 • U150E:BCM CAN CIRC3 • U1513: METER CAN CIRC3 • U1514: STRG SEN CAN CIRC3 • U1515: ICC SENSOR CAN CIRC3
4	• C1A00: CONTROL UNIT

DTC Index

INFOID:0000000015290523

NOTE:

• The details of time display are as per the following.

- 0: The malfunctions that are detected now
  CAN communication system (U1000, U1010)
- 1 - 39: It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 39, it is fixed to 39 until the self-diagnosis results are erased.
  Other than CAN communication system (Other than U1000, U1010)
- 1 - 49: It increases like 0 → 1 → 2 ··· 38 → 49 after returning to the normal condition whenever the ignition switch OFF → ON. It returns to 0 when a malfunction is detected again in the process.
- If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.

×: Applicable

DTC	CONSULT display	ICC system warning lamp	Fail-safe function				Reference
CONSULT			Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Forward Collision Warning (FCW)	Forward Emergency Braking (FEB)	
C1A00	CONTROL UNIT	ON	×	×	×	×	CCS-110, "ICC SENSOR : DTC Logic"
C1A01	POWER SUPPLY CIR	ON	×	×	×	×	CCS-113, "ICC SENSOR : DTC Logic"
C1A02	POWER SUPPLY CIR2	ON	×	×	×	×	CCS-113, "ICC SENSOR : DTC Logic"
C1A03	VHCL_SPEED SE CIRC	ON	×	×	×	×	CCS-115, "ADAS CONTROL UNIT : DTC Description"
C1A04	ABS/TCS/VDC_CIRC	ON	×	×	×	×	CCS-119, "ADAS CONTROL UNIT : DTC Description"
C1A05	BRAKE_SW/STOP_L_SW	ON	×	×	×	×	CCS-122, "ADAS CONTROL UNIT : DTC Description"
C1A06	OPERATION_SW_CIRC	ON	×	×	×	×	CCS-125, "DTC Logic"
C1A07	CVT MSG CIRCUIT	ON	×	×	×	×	CCS-128, "DTC Logic"
C1A14	ECM_CIRCUIT	ON	×	×	×	×	CCS-129, "DTC Description"
C1A15	GEAR_POSITION	ON	×	×	×	×	CCS-131, "Description"
C1A23	UNIT HIGH TEMP	ON	×	×	×	×	CCS-133, "DTC Logic"
C1A24	NP_RANGE	ON	×	×	×	×	CCS-134, "DTC Description"
C1A26	ECD_MODE_MALF	ON	×	×	×	×	CCS-136, "DTC Description"
C1A27	ECD_PWR_SUPLY_CIR	ON	×	×	×	×	CCS-138, "DTC Logic"

DTC	CONSULT display	ICC system warning lamp	Fail-safe function				Reference
CONSULT			Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Forward Collision Warning (FCW)	Forward Emergency Braking (FEB)	
C1A33	CAN TRANSMISSION ERROR	ON	×	×	×	×	CCS-140, "DTC Description"
C1A34	COMMAND ERROR	ON	×	×	×	×	CCS-142, "DTC Description"
C1A39	STRG SEN CIR	ON	×	×	×	×	CCS-145, "ICC SENSOR : DTC Logic"
C1B82	DISTANCE SENSOR OFF-CENTER	ON	×	×	×	×	CCS-186, "DTC Logic"
C1B83	DISTANCE SENSOR BLOCKED	ON	×	×	×	×	CCS-186, "DTC Logic"
C1B58	DR ASSIST BUZZER CIRCUIT	ON	×	×	×	×	CCS-186, "DTC Logic"
C1B83	DIST SEN BLOCKED	ON	×	×	×	×	CCS-147, "DTC Logic"
U0121	VDC CAN CIR2	ON	×	×	×	×	CCS-150, "ICC SENSOR : DTC Logic"
U0126	STRG SEN CAN CIR1	ON	×	×	×	×	CCS-154, "ICC SENSOR : DTC Logic"
U0235	ICC SENSOR CAN CIR1	ON	×	×	×	×	CCS-155, "DTC Logic"
U0401	ECM CAN CIR1	ON	×	×	×	×	CCS-156, "DTC Description"
U0402	TCM CAN CIRC1	ON	×	×	×	×	CCS-158, "DTC Description"
U0415	VDC CAN CIR1	ON	×	×	×	×	CCS-162, "ICC SENSOR : DTC Logic"
U0428	STRG SEN CAN CIR2	ON	×	×	×	×	CCS-165, "ICC SENSOR : DTC Logic"
U1000	CAN COMM CIRCUIT	ON	×	×	×	×	CCS-169, "ICC SENSOR : DTC Logic"
U1010	CONTROL UNIT (CAN)	ON	×	×	×	×	CCS-172, "ICC SENSOR : DTC Logic"

DTC	CONSULT display	ICC system warning lamp	Fail-safe function				Reference
CONSULT			Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Forward Collision Warning (FCW)	Forward Emergency Braking (FEB)	
U150B	ECM CAN CIRC3	ON	×	×	×	×	CCS-173, "DTC Logic"
U150C	VDC CAN CIRC3	ON	×	×	×	×	CCS-175, "DTC Logic"
U150D	TCM CAN CIRC3	ON	×	×	×	×	CCS-177, "DTC Logic"
U150E	BCM CAN CIRC3	ON	×	×	×	×	CCS-179, "DTC Logic"
U1513	METER CAN CIRC#	ON	×	×	×	×	CCS-181, "DTC Description"
U1514	STRG SEN CAN CIRC3	ON	×	×	×	×	CCS-183, "DTC Description"
U1515	ICC SENSOR CAN CIRC3	ON	×	×	×	×	CCS-185, "DTC Description"

SIDE RADAR LH

Reference Value

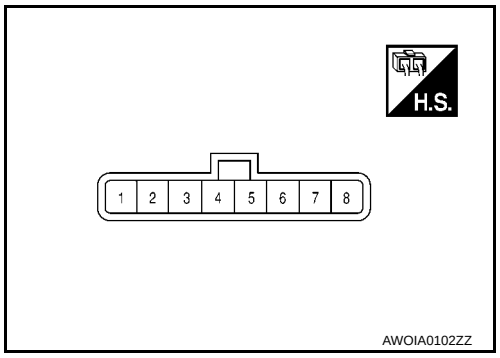
INFOID:0000000015204351

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

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

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail-safe (Side Radar)

INFOID:0000000015204352

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)
When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.
- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Rear Cross Traffic Alert (RCTA)
When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.
- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

DTC Inspection Priority Chart

INFOID:0000000015204353

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• U0104: ADAS CAN CIR 1 • U0405: ADAS CAN CIR 2 • U0415: VDC CAN CIR 1
3	C1B50: SIDE RDR MALFUNCTION
4	• C1B51: BSW/BSI IND SHORT CIR • C1B52: BSW/BSI IND OPEN CIR • C1B55: RADAR BLOCKAGE
5	• C1B30: SOW LEFT UNIT FAILURE • U216C: SIDE RADAR LEFTT

DTC Index

INFOID:0000000015204354

×: Applicable

DTC		Fail-safe	Reference page
		Blind Spot Warning/Rear Cross Traffic Alert	
C1B30	SOW LEFT UNIT FAILURE	×	DAS-338
C1B50	SIDE RDR MALFUNCTION	×	DAS-342
C1B51	BSW/BSI IND SHORT CIR	×	DAS-343
C1B52	BSW/BSI IND OPEN CIR	×	DAS-345
C1B55	RADAR BLOCKAGE	×	DAS-347
U1000	CAN COMM CIRCUIT	×	DAS-364
U1010	CONTROL UNIT (CAN)	×	DAS-368
U0104	ADAS CAN CIR1	×	DAS-349
U0405	ADAS CAN CIR2	×	DAS-357
U0415	VDC CAN CIR 1	×	DAS-359
U216C	SIDE RADAR LEFT	×	DAS-372

SIDE RADAR RH

Reference Value

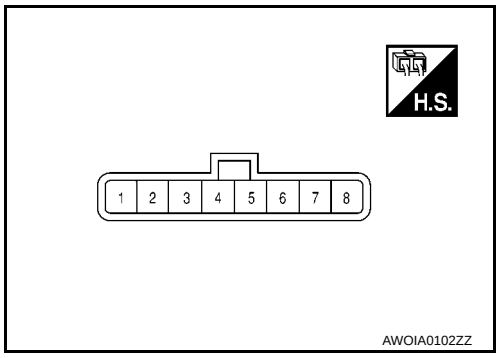
INFOID:0000000015204355

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

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

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail-safe (Side Radar)

INFOID:0000000015204356

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)
When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.
- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Rear Cross Traffic Alert (RCTA)
When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.
- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

DTC Inspection Priority Chart

INFOID:0000000015204357

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• U0104: ADAS CAN CIR 1 • U0405: ADAS CAN CIR 2 • U0415: VDC CAN CIR 1
3	C1B50: SIDE RDR MALFUNCTION
4	• C1B51: BSW/BSI IND SHORT CIR • C1B52: BSW/BSI IND OPEN CIR • C1B55: RADAR BLOCKAGE
5	• C1B40: SOW RIGHT UNIT FAILURE • U216E: SIDE RADAR RIGHT

DTC Index

INFOID:0000000015204358

×: Applicable

DTC		Fail-safe	Reference page
		Blind Spot Warning/Rear Cross Traffic Alert warning	
C1B40	SOW RIGHT UNIT FAILURE	×	DAS-340
C1B50	SIDE RDR MALFUNCTION	×	DAS-342
C1B51	BSW/BSI IND SHORT CIR	×	DAS-343
C1B52	BSW/BSI IND OPEN CIR	×	DAS-345
C1B55	RADAR BLOCKAGE	×	DAS-347
U1000	CAN COMM CIRCUIT	×	DAS-365
U1010	CONTROL UNIT (CAN)	×	DAS-369
U0104	ADAS CAN CIR1	×	DAS-349
U0405	ADAS CAN CIR2	×	DAS-357
U0415	VDC CAN CIR 1	×	DAS-359
U216E	SIDE RADAR RIGHT	×	DAS-372

LANE CAMERA UNIT

Reference Value

INFOID:0000000015204359

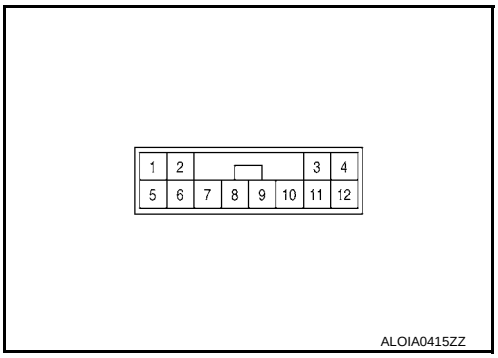
VALUE ON THE DIAGNOSIS TOOL

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

Monitor item	Condition		Value/Status
CAMERA HIGH TEMP	When the temperature around lane camera unit is adequate		NORMAL
	When the temperate around the lane camera unit is high		HIGH
WIPER	Ignition switch ON	Wiper position is High	Hi
		Wiper position is Low	Lo
		Wiper position is OFF	Off
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
VEHICLE SPEED	While drive		km/h
DRIVER ASSIST SYSTEM SET	**NOTE:** The item is displayed, but it is not monitored		NO REQ
BRAKE OPERATION STATUS	When brake pedal is depressed		Off
	When brake pedal is depressed		On
	When brake pedal is securely depressed		CNFRM
	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		Approx. 0.0 deg
	When steering wheel is steered		Value of steering angle (deg)
YAW RATE	Vehicle stopped		Approx. 0 deg/s
	Turning right		Negative value
	Turning left		Positive value
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
LDW FUNCTION	When LDW function is ON		NORMAL
	When LDW function malfunction is detected		MALF
LDW SETTING DISPLAY	**NOTE:** The item is displayed, but it is not monitored		NTHNG
DRIVER ASSIST SYSTEM BZZR	**NOTE:** The item is displayed, but it is not monitored		NO REQ
LDW LEFT	Left side lane maker is not detected		Off
	Left side lane maker is detected		On

Monitor item	Condition		Value/Status
LDW RIGHT	Right side lane maker is not detected		Off
	Right side lane maker is detected		On
LDW STATUS DISPLAY	**NOTE:** The item is displayed, but it is not monitored		Off
HBA FUNCTION	**NOTE:** The item is displayed, but it is not monitored		—
DISTANCE	Drive the vehicle and FEB system ON	When the lane camera detects an object to be controlled	Displays distance from vehicle ahead
		When the lane camera does not detect an object to be controlled	0.0 m
RELATIVE SPEED	Drive the vehicle and FEB system ON	When the lane camera detects an object to be controlled	Displays relative velocity
		When the lane camera does not detect an object to be controlled	0.0 m/s
HBA REQUEST	**NOTE:** The item is displayed, but it is not monitored		—
LOW BEAM STATUS	**NOTE:** The item is displayed, but it is not monitored		—
HIGH BEAM STATUS	**NOTE:** The item is displayed, but it is not monitored		—
NO-ENTRY SIGN DISPLAY	**NOTE:** The item is displayed, but it is not monitored		—

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	–	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0 V
3 (LG)		Ignition power supply	Input	Ignition switch ON	Battery voltage
5 (L)		ITS communication high	—	—	—
6 (Y)		ITS communication low	—	—	—

Fail-safe (Lane Camera Unit)

INFOID:0000000015204360

FAIL-SAFE CONTROL BY DTC

Lane Departure Warning (LDW)
If a malfunction occurs in the lane camera unit, ADAS control unit cancels control, and turns ON the lane departure warning lamp in the combination meter.

Lane Departure Prevention (LDP)
If a malfunction occurs in the lane camera unit, ADAS control unit cancels control, sounds a beep, and turns ON the lane departure warning lamp in the combination meter.

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

Lane Departure Warning (LDW)
- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the lane departure warning lamp (yellow) in the combination meter will blinks.
- When interior temperature is reduced, the system will resume operation automatically and the lane departure warning lamp (yellow) in the combination meter will stop blinking.

Lane Departure Prevention (LDP)
- If the vehicle is parked in direct sunlight under high temperature conditions, the system may be deactivated automatically. And the buzzer sounds and lane departure warning lamp (yellow) in the combination meter will blinks.
- When interior temperature is reduced, the system will resume and the lane departure warning lamp (yellow) in the combination meter will stop blinking.

DTC Inspection Priority Chart

INFOID:0000000015204361

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

Priority	Detected items (DTC)
1	• U1000-01: CAN COMM CIRCUIT [ELECTRICAL MALFUNCTION] • U1010-49: CONTROL UNIT (CAN) [INTERNAL ELECTRONIC ERROR] • U1321-55: CONFIG UNFINISHED [NOT CONFIGURED] • U1322-01: CONFIG WRITE ERROR [ELECTRICAL MALFUNCTION]
2	• C1B00-4B: CAMERA UNIT MALF [OVER TEMPERATURE] • C1B01-54: CAM AIMING INCMP [MISSING CALIBRATION] • C1B09-17: POWER SUPPLY CIRCUIT [CIRC VOLT ABOVE THRESHOLD] • C1B0A-16: POWER SUPPLY CIRCUIT [CIRC VOLT BELOW THRESHOLD] • U0104-00: ADAS CAN CIRC 1 • U0122-00: VDC CAN CIR 1 (LDP) • U0126-00: STRG SEN CAN CIR 1 • U0405-83: ADAS CAN CIRC 2 [PROTECT CALCULATION ERROR] • U0428-83: STRG SEN CAN CIR2 [PROTECT CALCULATION ERROR]
3	• C1B00-04: CAMERA UNIT MALF [SYSTEM INTERNAL MALFUNCTION] • C1B00-41: CAMERA UNIT MALF • C1B00-44: CAMERA UNIT MALF • C1B00-45: CAMERA UNIT MALF • C1B00-46: CAMERA UNIT MALF • C1B00-47: CAMERA UNIT MALF • C1B00-48: CAMERA UNIT MALF • C1B00-49: CAMERA UNIT MALF [INTERNAL ELECTRONIC ERROR] • C1B00-52: CAMERA UNIT MALF • C1B00-56: CAMERA UNIT MALF • C1B00-57: CAMERA UNIT MALF • C1B00-87: CAMERA UNIT MALF [MISSING MESSAGE]

DTC Index

INFOID:0000000015204362

×: Applicable

DTC		Warning display		Fail-safe	
		LDW system warning	LDP system warning	LDW/LDP	Reference
C1B00-4B	CAMERA UNIT MALF	ON	ON	ON	DAS-334, "LANE CAMERA UNIT : Diagnosis Procedure (C1B00-4B)"
C1B00-04	CAMERA UNIT MALF	ON	ON	ON	DAS-335, "LANE CAMERA UNIT : Diagnosis Procedure (C1B00-04,41,44,45,46,47,48,49,52,56,57,87)"
C1B00-41	CAMERA UNIT MALF	ON	ON	ON	
C1B00-44	CAMERA UNIT MALF	ON	ON	ON	
C1B00-45	CAMERA UNIT MALF	ON	ON	ON	
C1B00-46	CAMERA UNIT MALF	ON	ON	ON	
C1B00-47	CAMERA UNIT MALF	ON	ON	ON	
C1B00-48	CAMERA UNIT MALF	ON	ON	ON	
C1B00-49	CAMERA UNIT MALF	ON	ON	ON	
C1B00-52	CAMERA UNIT MALF	ON	ON	ON	
C1B00-56	CAMERA UNIT MALF	ON	ON	ON	
C1B00-57	CAMERA UNIT MALF	ON	ON	ON	
C1B00-87	CAMERA UNIT MALF	ON	ON	ON	
C1B01-54	CAMERA AIMING INCMP	ON	ON	ON	DAS-336, "LANE CAMERA UNIT : Diagnosis Procedure"
C1B09-17	POWER SUPPLY CIRC	ON	ON	ON	DAS-337, "Diagnosis Procedure"
C1B0A-16	POWER SUPPLY CIRC 2	ON	ON	ON	DAS-363
U1000-01	CAN COMM CIRCUIT	ON	ON	ON	DAS-363, "LANE CAMERA UNIT : Diagnosis Procedure"
U1010-49	CONTROL UNIT (CAN)	ON	ON	ON	DAS-367, "LANE CAMERA UNIT : Diagnosis Procedure"
U0104-00	ADAS CAN CIRC	ON	ON	ON	DAS-350, "LANE CAMERA UNIT : DTC Description"
U0122-00	VDC CAN CIRC1 (LDP)	ON	ON	ON	DAS-352, "Diagnosis Procedure"
U0126-00	STRG_SEN_CAN_CIR 1	ON	ON	ON	DAS-354, "LANE CAMERA UNIT : Diagnosis Procedure"

DTC		Warning display		Fail-safe	
		LDW system warning	LDP system warning	LDW/LDP	Reference
U0405-83	ADAS CAN CIR 2	ON	ON	ON	DAS-356, "LANE CAMERA UNIT : Diagnosis Procedure"
U0428-83	STRG_SEN_CAN_CIR 2	ON	ON	ON	DAS-361, "LANE CAMERA UNIT : Diagnosis Procedure"
U1321-55	CONFIGURATION DATA ERROR	ON	ON	ON	DAS-370, "Diagnosis Procedure"
U1322-01	CONFIG WRITE ERROR	ON	ON	ON	DAS-371, "Diagnosis Procedure"

CHASSIS CONTROL MODULE

Reference Value

INFOID:0000000015240210

CONSULT DATA MONITOR STANDARD VALUE

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

Monitor item	Condition	Reference values in normal operation
IGN VOLT	Ignition switch ON.	10 – 16 V
CONTROL MODULE MALF	When chassis control module is normal.	Off
	When chassis control module malfunction is detected.	On
CAN DIAG STATUS	When diagnosis of CAN communication malfunction is detected.	Off
	When diagnosis of CAN communication is normal.	On
VEHICLE SPEED	Vehicle Stopped.	0 km/h (0 MPH)
	Driving*	Almost same reading as speedometer (within ±10%).
FR WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
FL WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
RR WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
RL WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
STEERING ANG SENSOR	When driving straight.	0±3.5 deg.
	When steering wheel is steered to RH by 90°.	Approx. +90 deg.
	When steering wheel is steered to LH by 90°.	Approx. –90 deg.
DECEL G SENSOR	Vehicle stopped.	Approx. 0 G.
	When during acceleration.	Positive value.
	When during deceleration.	Negative value.
SIDE G SENSOR	Vehicle stopped.	Approx. 0 G.
	When right turn.	Negative value.
	When left turn.	Positive value.
YAW RATE SENSOR	Vehicle stopped.	Approx. 0 deg/s.
	When right turn.	Negative value.
	When left turn.	Positive value.
ACCELE PEDAL POSITION	When accelerator pedal is released.	0%
	When accelerator pedal is depressed.	0 – 100%
THROTTLE CONTROL	When electric throttle control actuator is normal.	NORMAL
	When the electric throttle control actuator does not achieve the requirement (measured value is inaccurate).	INCORR
	When the electric throttle control actuator does not achieve the requirement (temporary prevention).	PREV
	When the electric throttle control actuator does not achieve the requirement (impossible).	IMPOSSI

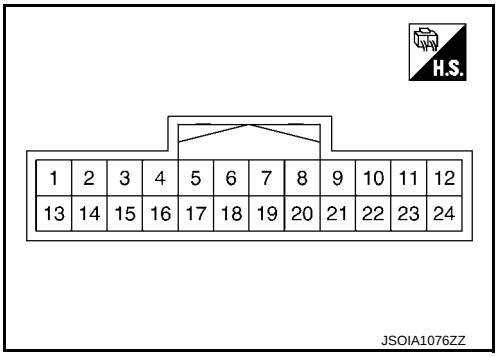
Monitor item	Condition	Reference values in normal operation
BRAKE SWITCH 2	When brake pedal is not depressed.	Off
	When brake pedal is depressed.	On
BRAKE SWITCH 1	When brake pedal is depressed.	Off
	When brake pedal is not depressed.	On
STOP LAMP SW	When brake pedal is not depressed.	INACT
	When brake pedal is depressed.	ACT
PRESS SENSOR	When brake pedal is not depressed.	Approx. 0 bar
	when brake pedal is depressed.	0 – 255 bar
ABS	When ABS function is normal.	NORMAL
	When ABS function malfunction is detected.	ABNOR
ABS MALF	When ABS function is normal.	NORMAL
	When ABS function malfunction is detected.	ABNOR
EBD	When EBD function is normal.	NORMAL
	When EBD function malfunction is detected.	ABNOR
TCS	When TCS function is normal.	NORMAL
	When TCS function malfunction is detected.	ABNOR
TCS MALF	When TCS function is normal.	NORMAL
	When TCS function malfunction is detected.	ABNOR
VDC	When VDC function is normal.	NORMAL
	When VDC function malfunction is detected.	ABNOR
VDC MALF	When VDC function is normal.	NORMAL
	When VDC function malfunction is detected.	ABNOR
VDC OFF SWITCH	When VDC OFF switch is OFF.	Off
	When VDC OFF switch is ON.	On
DRV TRQ CTRL MODE	When correction coefficients are initialized.	INITIAL
	When correction is executed.	NORMAL
	When correction is stopped (computing is impossible).	STOP 1
	When correction is stopped (computing is possible).	STOP 2
	When correction is limited.	LIMIT 1
	When correction is prohibited.	PROHIBI
DRV TRQ CTRL PERMIS 1	When correction is permitted (basic requirement).	PERMIS
	When correction is not permitted (basic requirement).	NO PER
DRV TRQ CTRL PERMIS 2	When correction is permitted (system requirement).	PERMIS
	When correction is not permitted (system requirement).	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop.	REQ
	When correction is not requested to stop.	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested.	REQ
	When prohibition of correction is not requested.	NO REQ
AEB	When Active Engine Brake (corner) function is active.	On
	When Active Engine Brake (corner) function is inactive.	Off
ATC 1	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 2	When active trace control function is inactive.	Off
	When active trace control function is active.	On

Monitor item	Condition	Reference values in normal operation
ATC 3	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 4	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 5	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ARC BRAKE	When active ride control (brake control) function is inactive	Off
	When active ride control (brake control) function is active	On
BRAKE HOLD	When Hill Start Assist function is inactive.	INACT
	When Hill Start Assist function is ready.	ACT
	When Hill Start Assist function is active.	RELEA
FL TIRE DISP	When the front LH tire is not displayed on the information display in the combination meter.	DEF
	When the front LH tire is displayed on the information display in the combination meter.	1
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter.	DEF
	When the front RH tire is displayed on the information display in the combination meter.	1
RL TIRE DISP	When the rear LH tire is not displayed on the information display in the combination meter.	DEF
	When the rear LH tire is displayed on the information display in the combination meter.	1
RR TIRE DISP	When the rear RH tire is not displayed on the information display in the combination meter.	DEF
	When the rear RH tire is displayed on the information display in the combination meter.	1
VEHICLE DISP	When active ride control (brake) effect is not displayed on the information display in the combination meter.	Off
	When active ride control (brake) effect is displayed on the information display in the combination meter.	On
INTERRUPT DISP	When interrupt display is not displayed on the information display in the combination meter.	NOREQ
	When Hill Start Assist function (ready) is displayed on the information display in the combination meter.	HOLD1
	When Hill Start Assist function (active) is displayed on the information display in the combination meter.	HOLD2
	When Hill Descent Control function is displayed on the information display in the combination meter.	HDC
TURN DISP	When the straight-ahead status is displayed on the information display in the combination meter.	N STEER
	When the left turning status is displayed on the information display in the combination meter.	LEFT
	When the right turning status is displayed on the information display in the combination meter.	RIGHT
BRAKE HOLD DISP	When Hill Start Assist function is not displayed on the information display in the combination meter.	INACT
	When Hill Start Assist function (ready) is displayed on the information display in the combination meter.	ACT
	When Hill Start Assist function (active) is displayed on the information display in the combination meter.	RELEA

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

*: Check tire pressure under normal conditions.

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/Output			
3 (P)	Ground	CAN low	—	—	—	—
4 (L)		CAN high	—	—	—	—
7 (W)	Ground	Chassis comm low	—	—	—	—
8 (W)		Chassis comm high	—	—	—	—

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

Fail-Safe (Chassis Control Module)

INFOID:0000000015240211

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

DTC	Vehicle condition
C1B92-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1B93-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine) • Active Engine Brake
C1B94-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1B95-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
C1B99-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BA0-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
C1BA2-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1BA5-00	Normal control
C1BAB-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
C1BB2-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB3-00	
C1BB4-00	
C1BB5-00	
C1BB6-00	Normal control

DTC	Vehicle condition
C1BB7-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB8-00	
C1BB9-00	
C1BBA-00	
C1BBB-00	
C1BBC-00	Normal control
C1BBD-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BC0-00	The following functions are suspended: • Active Trace Control • Active Ride Control
C1BC1-00	
C1BC2-00	
C1BC3-00	
C1BC4-00	The following functions are suspended: • Active Ride Control (brake)
C1BC5-00	The following functions are suspended: • Active Trace Control
C1BC6-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
U1000-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A34-00	
U1A35-00	
U1A36-00	
U1A39-00	Normal control
U1A3B-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake) • Active Engine Brake
U1A42-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
U1A43-00	
U1A48-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A4A-00	
U1A4B-00	
U1A4E-00	The following functions are suspended: • Active Ride Control

DTC Inspection Priority Chart

INFOID:0000000015240212

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

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

DTC Index

INFOID:0000000015240213

DTC	Display item	Refer to
C1B92-00	BRAKE CONTROL SYSTEM	DAS-458, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-460, "DTC Description"
C1B94-00	TM SYSTEM	DAS-462, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-464, "DTC Description"
C1B99-00	CONTROL NODULE	DAS-465, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-466, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-468, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-470, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-472, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-474, "DTC Description"
C1BB3-00	CONTROL MODULE	DAS-475, "DTC Description"

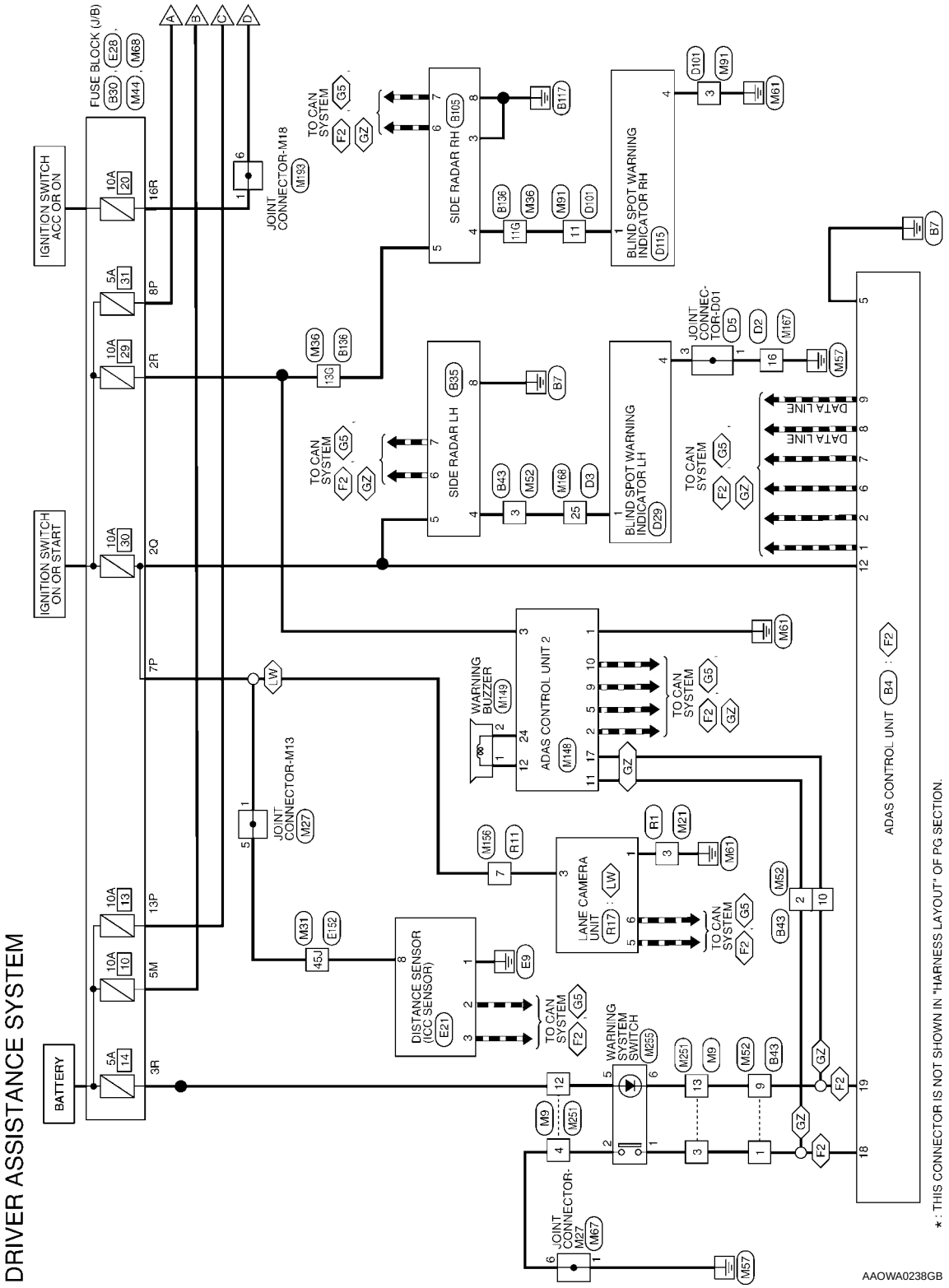
DTC	Display item	Refer to
C1BB4-00	CONTROL MODULE	DAS-476, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-477, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-479, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-481, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-482, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-483, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-484, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-485, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-486, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-487, "DTC Description"
C1BC0-00	FR WHEEL SENSOR	DAS-488, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-490, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-492, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-494, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-496, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-498, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-500, "DTC Description"
U1000-00	CAN COMMUNICATION	DAS-502, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-503, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-505, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-507, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-509, "DTC Description"
U1A3B-00	TCM COMM	DAS-511, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-513, "DTC Description"
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-515, "DTC Description"
U1A48-00	ECM/HPCM COMM	DAS-517, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-519, "DTC Description"
U1A4B-00	CONTROL MODULE (CAN)	DAS-520, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-521, "DTC Description"

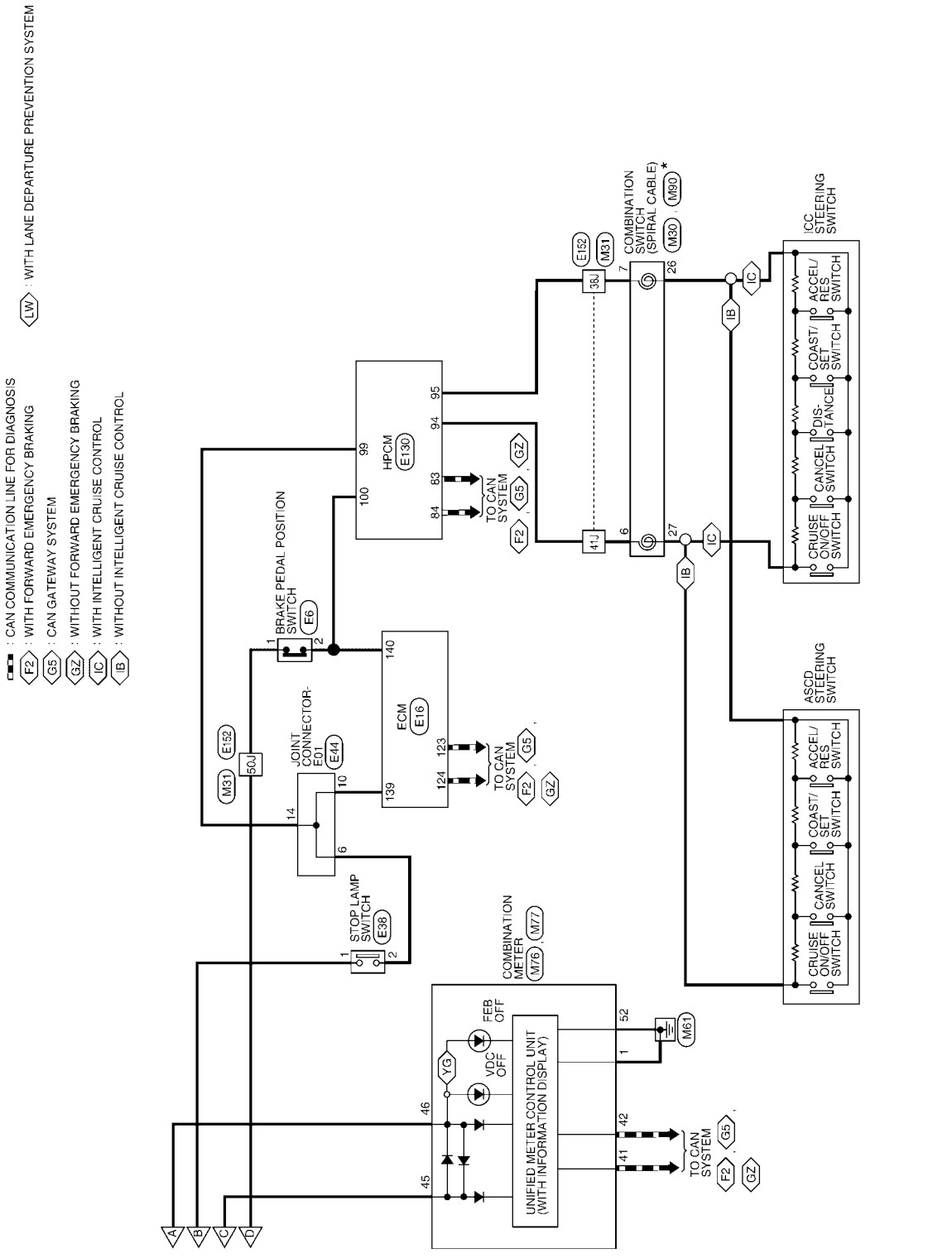
WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

INFOID:0000000015240219




: CAN COMMUNICATION LINE FOR DIAGNOSIS
F2 : WITH FORWARD EMERGENCY BRAKING
G5 : CAN GATEWAY SYSTEM
GZ : WITHOUT FORWARD EMERGENCY BRAKING
IC : WITH INTELLIGENT CRUISE CONTROL
IB : WITHOUT INTELLIGENT CRUISE CONTROL
LW : WITH LANE DEPARTURE PREVENTION SYSTEM
HPCM E130
ECM E16
BRAKE PEDAL POSITION SWITCH E6
JOINT CONNECTOR-E01 E44
STOP LAMP SWITCH E38
COMBINATION METER M76 M77
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
FEB OFF
VDC OFF
COMBINATION SWITCH (SPIRAL CABLE) M30 M90
ICC STEERING SWITCH
ASCD STEERING SWITCH
CRUISE ON/OFF SWITCH
CANCEL SWITCH
COAST/ SET SWITCH
ACCEL/ RES SWITCH
DIS-TANCE
TO CAN SYSTEM
M61
AAOWA0239GB

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B4
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	V-CAN H
2	R	V-CAN L
3	–	–
4	–	–
5	B	GND
6	L	ITS-CAN H
7	Y	ITS-CAN L
8	L	IC-CAN H
9	W	IC-CAN L
10	–	–
11	–	–
12	P	IGN
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	W	BSW SW
19	BR	BSW LED
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–

Connector No.	B30
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-CS
Connector Color	WHITE

H.S.

3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

Terminal No.	Color of Wire	Signal Name
1Q	BG	ACCESSORY
2Q	BR	IGNITION
3Q	R	BATTERY
4Q	–	–
5Q	–	–
6Q	LA/L	BATTERY
7Q	–	–
8Q	–	–

Connector No.	B35
Connector Name	SIDE RADAR LH
Connector Type	JAD08FB-5P
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8

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

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	R	TO MAIN HARNESS
4	L	TO MAIN HARNESS
5	L	TO MAIN HARNESS
6	L	TO MAIN HARNESS
7	L	TO MAIN HARNESS
8	L	TO MAIN HARNESS
9	BR	TO MAIN HARNESS
10	BR	TO MAIN HARNESS
11	–	TO MAIN HARNESS
12	Y	TO MAIN HARNESS
13	R	TO MAIN HARNESS
14	Y	TO MAIN HARNESS
15	Y	TO MAIN HARNESS
16	Y	TO MAIN HARNESS

Connector No.	B105
Connector Name	SIDE RADAR RH
Connector Type	JAD08FB-6P
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8

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

8	B	GND

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1G	LA/GR	TO MAIN HARNESS
2G	LA/P	TO MAIN HARNESS
3G	Y	TO MAIN HARNESS
4G	L	TO MAIN HARNESS
5G	G	TO MAIN HARNESS
6G	LA/BR	TO MAIN HARNESS
7G	BR	TO MAIN HARNESS
8G	LA/L	TO MAIN HARNESS
9G	LA/R	TO MAIN HARNESS
10G	R	TO MAIN HARNESS
11G	G	TO MAIN HARNESS
12G	Y	TO MAIN HARNESS
13G	BR	TO MAIN HARNESS
14G	–	TO MAIN HARNESS
15G	Y	TO MAIN HARNESS
16G	–	TO MAIN HARNESS
17G	–	TO MAIN HARNESS
18G	R	TO MAIN HARNESS
19G	R	TO MAIN HARNESS
20G	W	TO MAIN HARNESS
21G	P	TO MAIN HARNESS
22G	P	TO MAIN HARNESS
23G	L	TO MAIN HARNESS
24G	W	TO MAIN HARNESS
25G	L	TO MAIN HARNESS

26G	–	TO MAIN HARNESS
27G	–	TO MAIN HARNESS
28G	–	TO MAIN HARNESS
29G	SB	TO MAIN HARNESS
30G	–	TO MAIN HARNESS
31G	–	TO MAIN HARNESS
32G	–	TO MAIN HARNESS
33G	–	TO MAIN HARNESS
34G	V	TO MAIN HARNESS
35G	BR	TO MAIN HARNESS
36G	SHIELD	TO MAIN HARNESS
37G	LG	TO MAIN HARNESS
38G	V	TO MAIN HARNESS
39G	SHIELD	TO MAIN HARNESS
40G	G	TO MAIN HARNESS
41G	R	TO MAIN HARNESS
42G	–	TO MAIN HARNESS
43G	–	TO MAIN HARNESS
44G	BG	TO MAIN HARNESS
45G	SHIELD	TO MAIN HARNESS
46G	W	TO MAIN HARNESS
47G	R	TO MAIN HARNESS
48G	SHIELD	TO MAIN HARNESS
49G	L	TO MAIN HARNESS
50G	Y	TO MAIN HARNESS
51G	–	TO MAIN HARNESS
52G	–	TO MAIN HARNESS
53G	–	TO MAIN HARNESS
54G	–	TO MAIN HARNESS
55G	–	TO MAIN HARNESS
56G	–	TO MAIN HARNESS
57G	–	TO MAIN HARNESS
58G	–	TO MAIN HARNESS
59G	–	TO MAIN HARNESS
60G	GR	TO MAIN HARNESS
61G	V	TO MAIN HARNESS
62G	–	TO MAIN HARNESS
63G	–	TO MAIN HARNESS
64G	–	TO MAIN HARNESS
65G	–	TO MAIN HARNESS
66G	–	TO MAIN HARNESS
67G	–	TO MAIN HARNESS
68G	–	TO MAIN HARNESS
69G	–	TO MAIN HARNESS
70G	–	TO MAIN HARNESS
71G	–	TO MAIN HARNESS
72G	–	TO MAIN HARNESS
73G	–	TO MAIN HARNESS
74G	–	TO MAIN HARNESS
75G	–	TO MAIN HARNESS
76G	–	TO MAIN HARNESS
77G	–	TO MAIN HARNESS
78G	LA/R	TO MAIN HARNESS

79G	LA/V	TO MAIN HARNESS
80G	LA/B	TO MAIN HARNESS
81G	LA/L	TO MAIN HARNESS
82G	–	TO MAIN HARNESS
83G	–	TO MAIN HARNESS
84G	–	TO MAIN HARNESS
85G	–	TO MAIN HARNESS
86G	–	TO MAIN HARNESS
87G	–	TO MAIN HARNESS
88G	–	TO MAIN HARNESS
89G	–	TO MAIN HARNESS
90G	–	TO MAIN HARNESS
91G	R	TO MAIN HARNESS
92G	BR	TO MAIN HARNESS
93G	W	TO MAIN HARNESS
94G	LA/V	TO MAIN HARNESS
95G	V	TO MAIN HARNESS
96G	G	TO MAIN HARNESS
97G	P	TO MAIN HARNESS
98G	GR	TO MAIN HARNESS
99G	LA/Y	TO MAIN HARNESS
100G	Y	TO MAIN HARNESS

16	B	TO MAIN HARNESS

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO MAIN HARNESS
2	R	TO MAIN HARNESS
3	G	TO MAIN HARNESS
4	BR	TO MAIN HARNESS
5	P	TO MAIN HARNESS
6	LA/L	TO MAIN HARNESS
7	LA/BR	TO MAIN HARNESS
8	SB	TO MAIN HARNESS
9	GR	TO MAIN HARNESS
10	L	TO MAIN HARNESS
11	P	TO MAIN HARNESS
12	LG	TO MAIN HARNESS
13	Y	TO MAIN HARNESS
14	V	TO MAIN HARNESS
15	R	TO MAIN HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	TO MAIN HARNESS
2	GR	TO MAIN HARNESS
3	W	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
3	LA/SB	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
4	V	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
4	LA/BG	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
5	SB	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
5	LA/Y	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
6	LG	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	LA/V	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
7	W	TO MAIN HARNESS
8	V	TO MAIN HARNESS
9	SB	TO MAIN HARNESS
10	LG	TO MAIN HARNESS
11	GR	TO MAIN HARNESS
12	G	TO MAIN HARNESS
13	Y	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	BG	TO MAIN HARNESS
16	L	TO MAIN HARNESS
17	LA/SB	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
17	LA/W	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
18	LA/Y	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
18	LA/W	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
19	LA/LG	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
19	LA/BR	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
20	LA/V	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
20	LA/GR	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)

21	BR	TO MAIN HARNESS
22	W	TO MAIN HARNESS
23	LA/R	TO MAIN HARNESS
24	GR	TO MAIN HARNESS
25	R	TO MAIN HARNESS
26	LA/G	TO MAIN HARNESS
27	LA/LG	TO MAIN HARNESS
28	LA/L	TO MAIN HARNESS
29	LA/Y	TO MAIN HARNESS
30	LA/V	TO MAIN HARNESS
31	LA/BR	TO MAIN HARNESS
32	P	TO MAIN HARNESS

Connector No.	D5
Connector Name	JOINT CONNECTOR-D01
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	LA/B	GROUND
6	B	GROUND (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	LA/B	GROUND (WITH AUTOMATIC DRIVE POSITIONER)
7	B	GROUND
8	LA/B	GROUND

Connector No.	D29
Connector Name	BLIND SPOT WARNING INDICATOR LH
Connector Type	TH04MW-NH
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	R	LED INDICATOR L
2	–	–
3	–	–
4	B	GROUND

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	B	TO MAIN HARNESS
4	P	TO MAIN HARNESS
5	R	TO MAIN HARNESS
6	SB	TO MAIN HARNESS
7	L	TO MAIN HARNESS
8	V	TO MAIN HARNESS
9	Y	TO MAIN HARNESS
10	B	TO MAIN HARNESS
11	G	TO MAIN HARNESS
12	LA/V	TO MAIN HARNESS
13	LA/Y	TO MAIN HARNESS
14	LA/R	TO MAIN HARNESS
15	LA/V	TO MAIN HARNESS
16	LA/L	TO MAIN HARNESS
17	LA/BG	TO MAIN HARNESS
18	GR	TO MAIN HARNESS

19	LG	TO MAIN HARNESS
20	BR	TO MAIN HARNESS
21	LA/G	TO MAIN HARNESS
22	LA/SB	TO MAIN HARNESS
23	LA/BG	TO MAIN HARNESS
24	LA/Y	TO MAIN HARNESS

Connector No.	D115
Connector Name	BLIND SPOT WARNING INDICATOR RH
Connector Type	TH04MW-NH
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	G	LED INDICATOR
2	–	–
3	–	–
4	B	GROUND

Connector No.	E6
Connector Name	BRAKE PEDAL POSITION SWITCH
Connector Type	M02FBR-LC
Connector Color	BROWN

H.S.

2
1

Terminal No.	Color of Wire	Signal Name
1	P	IGNITION
2	GR	SWITCH OUTPUT

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E16
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH
Connector Color	BLACK

H.S.

121	125	129	133	137	141	145	149
122	126	130	134	138	142	146	150
123	127	131	135	139	143	147	151
124	128	132	136	140	144	148	152

Terminal No.	Color of Wire	Signal Name
121	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
122	–	–
123	P	CAN-L
124	L	CAN-H
125	R	SENSOR POWER SUPPLY
126	–	–
127	–	–
128	BG	FUEL TANK TEMPERATURE SENSOR
129	–	–
130	–	–
131	–	–
132	–	–
133	LG	IGNITION SWITCH
134	–	–
135	–	–
136	–	–
137	G	HEV CAN-L
138	L	HEV CAN-H
139	Y	STOP LAMP SWITCH
140	GR	BRAKE PEDAL POSITION SWITCH
141	Y	EVAP CANISTER VENT CONTROL VALVE
142	–	–
143	–	–
144	–	–
145	G	ECM POWER SUPPLY
146	–	–
147	GR	ECM GROUND
148	B	SENSOR GROUND
149	GR	ECM GROUND
150	–	–
151	–	–
152	GR	ECM GROUND

Connector No.	E21
Connector Name	DISTANCE SENSOR
Connector Type	SAZ08FGY
Connector Color	GRAY

H.S.

4	3	2	1
8	7	6	5

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

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS
Connector Color	WHITE

H.S.

4M	3M		2M	1M
10M	9M	8M	7M	6M	5M

Terminal No.	Color of Wire	Signal Name
1M	–	–
2M	–	–
3M	–	–
4M	–	–
5M	V	BATTERY
6M	Y	O LIGHT POSITION REAR LH
7M	–	–
8M	–	–
9M	–	–
10M	–	–

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC
Connector Color	WHITE

H.S.

3	4
1	2

Terminal No.	Color of Wire	Signal Name
1	V	BATTERY
2	LG	I BRAKE SW2
3	L	IGNITION
4	W	STOP LAMP SWITCH OUTPUT

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Type	NH24FG-J
Connector Color	GREEN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	SENSOR GROUND
2	LG	I BRAKE SW2
3	P	CAN-L
4	L	CAN-H
5	B	SENSOR GROUND
6	LG	I BRAKE SW2
7	P	CAN-L
8	L	CAN-H
9	W	SENSOR GROUND
10	Y	STOP LAMP SWITCH
11	P	CAN-L
12	L	CAN-H
13	–	–
14	R	STOP LAMP SWITCH
15	P	CAN-L
16	L	CAN-H
17	BR	EVAP CONTROL SYSTEM PRESSURE SENSOR
18	–	–
19	P	CAN-L
20	L	CAN-H
21	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
22	–	–
23	–	–
24	–	–

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E130
Connector Name	HPCM
Connector Type	RH24FB-RZ8-L-RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
81	R	12V BATTERY VOLTAGE
82	–	–
83	P	CAN-L
84	L	CAN-H
85	–	–
86	–	–
87	–	–
88	B	DC/DC CONVERTER VOLTAGE STABILIZER SIGNAL
89	–	–
90	–	–
91	–	–
92	–	–
93	Y	IGNITION SIGNAL
94	G	ASCD STEERING SWITCH
95	BR	ASCD STEERING SWITCH GROUND
96	–	–
97	L	HEV SYSTEM CAN-H
98	G	HEV SYSTEM CAN-L
99	R	STOP LAMP SWITCH
100	W	BRAKE PEDAL POSITION SWITCH
101	–	–
102	SB	SENSOR POWER SUPPLY
103	BR	ACCELERATOR PEDAL POSITION SENSOR 2
104	LG	SENSOR GROUND
105	BR	POWER SUPPLY FOR HPCM
106	V	SENSOR POWER SUPPLY
107	–	–
108	B	HPCM GND
109	–	–
110	GR	ACCELERATOR PEDAL POSITION SENSOR 1
111	R	SENSOR GROUND
112	GR	HPCM GND

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	–	TO MAIN HARNESS
2J	Y	TO MAIN HARNESS
3J	–	TO MAIN HARNESS
4J	–	TO MAIN HARNESS
5J	–	TO MAIN HARNESS
6J	–	TO MAIN HARNESS
7J	–	TO MAIN HARNESS
8J	–	TO MAIN HARNESS
9J	BR	TO MAIN HARNESS
10J	–	TO MAIN HARNESS
11J	–	TO MAIN HARNESS
12J	–	TO MAIN HARNESS
13J	–	TO MAIN HARNESS
14J	–	TO MAIN HARNESS
15J	–	TO MAIN HARNESS
16J	–	TO MAIN HARNESS
17J	–	TO MAIN HARNESS
18J	–	TO MAIN HARNESS
19J	–	TO MAIN HARNESS
20J	–	TO MAIN HARNESS
21J	GR	TO MAIN HARNESS
22J	SHIELD	TO MAIN HARNESS
23J	LG	TO MAIN HARNESS
24J	V	TO MAIN HARNESS
25J	L	TO MAIN HARNESS
26J	BR	TO MAIN HARNESS
27J	G	TO MAIN HARNESS
28J	R	TO MAIN HARNESS
29J	L	TO MAIN HARNESS
30J	V	TO MAIN HARNESS
31J	–	TO MAIN HARNESS
32J	–	TO MAIN HARNESS
33J	R	TO MAIN HARNESS
34J	L	TO MAIN HARNESS
35J	BG	TO MAIN HARNESS
36J	LG	TO MAIN HARNESS
37J	GR	TO MAIN HARNESS
38J	BR	TO MAIN HARNESS
39J	–	TO MAIN HARNESS
40J	–	TO MAIN HARNESS
41J	G	TO MAIN HARNESS
42J	W	TO MAIN HARNESS
43J	L	TO MAIN HARNESS
44J	B	TO MAIN HARNESS
45J	SB	TO MAIN HARNESS
46J	BR	TO MAIN HARNESS
47J	W	TO MAIN HARNESS
48J	W	TO MAIN HARNESS
49J	L	TO MAIN HARNESS
50J	P	TO MAIN HARNESS
51J	W	TO MAIN HARNESS
52J	R	TO MAIN HARNESS
53J	SB	TO MAIN HARNESS
54J	LG	TO MAIN HARNESS
55J	W	TO MAIN HARNESS
56J	BG	TO MAIN HARNESS
57J	R	TO MAIN HARNESS
58J	V	TO MAIN HARNESS
59J	BR	TO MAIN HARNESS
60J	P	TO MAIN HARNESS
61J	L	TO MAIN HARNESS
62J	P	TO MAIN HARNESS
63J	L	TO MAIN HARNESS
64J	R	TO MAIN HARNESS
65J	L	TO MAIN HARNESS
66J	BG	TO MAIN HARNESS
67J	–	TO MAIN HARNESS
68J	–	TO MAIN HARNESS
69J	G	TO MAIN HARNESS
70J	L	TO MAIN HARNESS
71J	–	TO MAIN HARNESS
72J	–	TO MAIN HARNESS
73J	–	TO MAIN HARNESS
74J	–	TO MAIN HARNESS
75J	–	TO MAIN HARNESS
76J	–	TO MAIN HARNESS
77J	–	TO MAIN HARNESS
78J	–	TO MAIN HARNESS
79J	SHIELD	TO MAIN HARNESS
80J	B	TO MAIN HARNESS
81J	W	TO MAIN HARNESS
82J	–	TO MAIN HARNESS
83J	–	TO MAIN HARNESS
84J	–	TO MAIN HARNESS
85J	–	TO MAIN HARNESS
86J	–	TO MAIN HARNESS
87J	–	TO MAIN HARNESS
88J	–	TO MAIN HARNESS
89J	–	TO MAIN HARNESS
90J	–	TO MAIN HARNESS
91J	LG	TO MAIN HARNESS
92J	L	TO MAIN HARNESS
93J	L	TO MAIN HARNESS
94J	L	TO MAIN HARNESS
95J	BR	TO MAIN HARNESS
96J	–	TO MAIN HARNESS
97J	GR	TO MAIN HARNESS
98J	P	TO MAIN HARNESS
99J	W	TO MAIN HARNESS
100J	Y	TO MAIN HARNESS

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	TO MAIN SUB HARNESS
2	B	TO MAIN SUB HARNESS
3	W	TO MAIN SUB HARNESS
4	B	TO MAIN SUB HARNESS
5	GR	TO MAIN SUB HARNESS
6	BG	TO MAIN SUB HARNESS
7	B	TO MAIN SUB HARNESS
8	B	TO MAIN SUB HARNESS
9	R	TO MAIN SUB HARNESS
10	B	TO MAIN SUB HARNESS
11	R	TO MAIN SUB HARNESS
12	SB	TO MAIN SUB HARNESS
13	BR	TO MAIN SUB HARNESS
14	B	TO MAIN SUB HARNESS
15	R	TO MAIN SUB HARNESS
16	B	TO MAIN SUB HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS
Connector Color	WHITE

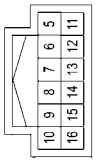
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	TO ROOM LAMP HARNESS
2	V	TO ROOM LAMP HARNESS
3	B	TO ROOM LAMP HARNESS
4	B	TO ROOM LAMP HARNESS
5	–	TO ROOM LAMP HARNESS
6	W	TO ROOM LAMP HARNESS
7	R	TO ROOM LAMP HARNESS
8	Y	TO ROOM LAMP HARNESS

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH
Connector Color	WHITE

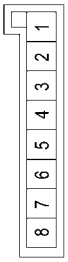
H.S.



Terminal No.	Color of Wire	Signal Name
5	BG	HORN SW
6	LA/R	ACC SW
7	LA/BR	ACC GND
8	Y	AUDIO STRG SW A
9	B	GROUND
10	R	ILL CONT OUT
11	–	–
12	–	–
13	–	–
14	L	AUDIO STRG SHLD
15	GR	AUDIO STRG SW B
16	–	–

Connector No.	M27
Connector Name	JOINT CONNECTOR-M13
Connector Type	SAC08JW
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	SB	IGNITION
2	SB	IGNITION
3	SB	IGNITION
4	Y	IGNITION
5	SB	IGNITION
6	SB	IGNITION
7	SB	IGNITION
8	SB	IGNITION

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	–	TO ENGINE ROOM HARNESS
2J	R	TO ENGINE ROOM HARNESS
3J	–	TO ENGINE ROOM HARNESS
4J	–	TO ENGINE ROOM HARNESS
5J	–	TO ENGINE ROOM HARNESS
6J	–	TO ENGINE ROOM HARNESS
7J	–	TO ENGINE ROOM HARNESS
8J	–	TO ENGINE ROOM HARNESS
9J	W	TO ENGINE ROOM HARNESS
10J	–	TO ENGINE ROOM HARNESS
11J	–	TO ENGINE ROOM HARNESS
12J	–	TO ENGINE ROOM HARNESS
13J	–	TO ENGINE ROOM HARNESS
14J	–	TO ENGINE ROOM HARNESS
15J	–	TO ENGINE ROOM HARNESS
16J	–	TO ENGINE ROOM HARNESS
17J	–	TO ENGINE ROOM HARNESS
18J	–	TO ENGINE ROOM HARNESS
19J	–	TO ENGINE ROOM HARNESS
20J	–	TO ENGINE ROOM HARNESS
21J	LA/L	TO ENGINE ROOM HARNESS
22J	SHIELD	TO ENGINE ROOM HARNESS
23J	LG	TO ENGINE ROOM HARNESS
24J	V	TO ENGINE ROOM HARNESS
25J	L	TO ENGINE ROOM HARNESS
26J	BR	TO ENGINE ROOM HARNESS
27J	G	TO ENGINE ROOM HARNESS
28J	Y	TO ENGINE ROOM HARNESS
29J	L	TO ENGINE ROOM HARNESS
30J	V	TO ENGINE ROOM HARNESS
31J	–	TO ENGINE ROOM HARNESS
32J	–	TO ENGINE ROOM HARNESS
33J	R	TO ENGINE ROOM HARNESS
33J	Y	TO ENGINE ROOM HARNESS - (WITH DRIVER ASSISTNACE SYSTEM)
34J	L	TO ENGINE ROOM HARNESS
35J	BG	TO ENGINE ROOM HARNESS
36J	GR	TO ENGINE ROOM HARNESS
37J	Y	TO ENGINE ROOM HARNESS
38J	LA/BR	TO ENGINE ROOM HARNESS
39J	–	TO ENGINE ROOM HARNESS
40J	–	TO ENGINE ROOM HARNESS
41J	LA/R	TO ENGINE ROOM HARNESS
42J	W	TO ENGINE ROOM HARNESS
43J	L	TO ENGINE ROOM HARNESS
44J	B	TO ENGINE ROOM HARNESS
45J	SB	TO ENGINE ROOM HARNESS
46J	BR	TO ENGINE ROOM HARNESS
47J	W	TO ENGINE ROOM HARNESS
48J	R	TO ENGINE ROOM HARNESS
49J	SB	TO ENGINE ROOM HARNESS
50J	GR	TO ENGINE ROOM HARNESS
51J	W	TO ENGINE ROOM HARNESS
52J	R	TO ENGINE ROOM HARNESS
53J	BR	TO ENGINE ROOM HARNESS
54J	LG	TO ENGINE ROOM HARNESS
55J	LA/Y	TO ENGINE ROOM HARNESS
56J	LA/V	TO ENGINE ROOM HARNESS
57J	LA/R	TO ENGINE ROOM HARNESS
58J	W	TO ENGINE ROOM HARNESS
59J	BR	TO ENGINE ROOM HARNESS
60J	P	TO ENGINE ROOM HARNESS
61J	L	TO ENGINE ROOM HARNESS
62J	R	TO ENGINE ROOM HARNESS
63J	L	TO ENGINE ROOM HARNESS
64J	R	TO ENGINE ROOM HARNESS
65J	L	TO ENGINE ROOM HARNESS
66J	BG	TO ENGINE ROOM HARNESS
67J	–	TO ENGINE ROOM HARNESS
68J	–	TO ENGINE ROOM HARNESS
69J	G	TO ENGINE ROOM HARNESS
70J	L	TO ENGINE ROOM HARNESS
71J	–	TO ENGINE ROOM HARNESS
72J	–	TO ENGINE ROOM HARNESS
73J	–	TO ENGINE ROOM HARNESS
74J	–	TO ENGINE ROOM HARNESS
75J	–	TO ENGINE ROOM HARNESS
76J	–	TO ENGINE ROOM HARNESS
77J	–	TO ENGINE ROOM HARNESS
78J	–	TO ENGINE ROOM HARNESS
79J	SHIELD	TO ENGINE ROOM HARNESS
80J	B	TO ENGINE ROOM HARNESS
81J	W	TO ENGINE ROOM HARNESS
82J	–	TO ENGINE ROOM HARNESS
83J	–	TO ENGINE ROOM HARNESS
84J	–	TO ENGINE ROOM HARNESS
85J	–	TO ENGINE ROOM HARNESS
86J	–	TO ENGINE ROOM HARNESS
87J	–	TO ENGINE ROOM HARNESS
88J	–	TO ENGINE ROOM HARNESS
89J	–	TO ENGINE ROOM HARNESS
90J	–	TO ENGINE ROOM HARNESS
91J	–	TO ENGINE ROOM HARNESS
92J	Y	TO ENGINE ROOM HARNESS
93J	G	TO ENGINE ROOM HARNESS
94J	L	TO ENGINE ROOM HARNESS
95J	P	TO ENGINE ROOM HARNESS
96J	–	TO ENGINE ROOM HARNESS
97J	SB	TO ENGINE ROOM HARNESS
98J	P	TO ENGINE ROOM HARNESS
99J	LA/R	TO ENGINE ROOM HARNESS
100J	R	TO ENGINE ROOM HARNESS

AAOIA0837GB

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1G	LA/R	TO BODY NO. 2 HARNESS
2G	W	TO BODY NO. 2 HARNESS
3G	Y	TO BODY NO. 2 HARNESS
4G	BG	TO BODY NO. 2 HARNESS
5G	G	TO BODY NO. 2 HARNESS
6G	SB	TO BODY NO. 2 HARNESS
7G	P	TO BODY NO. 2 HARNESS
8G	LA/Y	TO BODY NO. 2 HARNESS
9G	LA/W	TO BODY NO. 2 HARNESS
10G	R	TO BODY NO. 2 HARNESS
11G	G	TO BODY NO. 2 HARNESS
12G	L	TO BODY NO. 2 HARNESS
13G	BR	TO BODY NO. 2 HARNESS
14G	–	TO BODY NO. 2 HARNESS
15G	Y	TO BODY NO. 2 HARNESS
16G	–	TO BODY NO. 2 HARNESS
17G	–	TO BODY NO. 2 HARNESS
18G	R	TO BODY NO. 2 HARNESS
19G	LA/R	TO BODY NO. 2 HARNESS
20G	W	TO BODY NO. 2 HARNESS
21G	BR	TO BODY NO. 2 HARNESS
22G	P	TO BODY NO. 2 HARNESS
23G	L	TO BODY NO. 2 HARNESS
24G	W	TO BODY NO. 2 HARNESS
25G	L	TO BODY NO. 2 HARNESS
26G	–	TO BODY NO. 2 HARNESS
27G	–	TO BODY NO. 2 HARNESS
28G	–	TO BODY NO. 2 HARNESS
29G	–	TO BODY NO. 2 HARNESS
30G	–	TO BODY NO. 2 HARNESS
31G	–	TO BODY NO. 2 HARNESS
32G	–	TO BODY NO. 2 HARNESS
33G	–	TO BODY NO. 2 HARNESS
34G	V	TO BODY NO. 2 HARNESS
35G	BR	TO BODY NO. 2 HARNESS
36G	SHIELD	TO BODY NO. 2 HARNESS
37G	LG	TO BODY NO. 2 HARNESS
38G	V	TO BODY NO. 2 HARNESS
39G	SHIELD	TO BODY NO. 2 HARNESS
40G	G	TO BODY NO. 2 HARNESS
41G	R	TO BODY NO. 2 HARNESS
42G	–	TO BODY NO. 2 HARNESS
43G	–	TO BODY NO. 2 HARNESS
44G	BG	TO BODY NO. 2 HARNESS
45G	SHIELD	TO BODY NO. 2 HARNESS
46G	L	TO BODY NO. 2 HARNESS
47G	Y	TO BODY NO. 2 HARNESS
48G	SHIELD	TO BODY NO. 2 HARNESS
49G	W	TO BODY NO. 2 HARNESS
50G	R	TO BODY NO. 2 HARNESS
51G	–	TO BODY NO. 2 HARNESS
52G	–	TO BODY NO. 2 HARNESS
53G	–	TO BODY NO. 2 HARNESS
54G	–	TO BODY NO. 2 HARNESS
55G	–	TO BODY NO. 2 HARNESS
56G	–	TO BODY NO. 2 HARNESS
57G	–	TO BODY NO. 2 HARNESS
58G	–	TO BODY NO. 2 HARNESS
59G	–	TO BODY NO. 2 HARNESS
60G	GR	TO BODY NO. 2 HARNESS
61G	BR	TO BODY NO. 2 HARNESS
62G	–	TO BODY NO. 2 HARNESS
63G	–	TO BODY NO. 2 HARNESS
64G	–	TO BODY NO. 2 HARNESS
65G	–	TO BODY NO. 2 HARNESS
66G	–	TO BODY NO. 2 HARNESS
67G	–	TO BODY NO. 2 HARNESS
68G	–	TO BODY NO. 2 HARNESS
69G	–	TO BODY NO. 2 HARNESS
70G	–	TO BODY NO. 2 HARNESS
71G	–	TO BODY NO. 2 HARNESS
72G	–	TO BODY NO. 2 HARNESS
73G	–	TO BODY NO. 2 HARNESS
74G	–	TO BODY NO. 2 HARNESS
76G	–	TO BODY NO. 2 HARNESS
77G	–	TO BODY NO. 2 HARNESS
78G	LA/Y	TO BODY NO. 2 HARNESS
79G	LA/W	TO BODY NO. 2 HARNESS
80G	LA/B	TO BODY NO. 2 HARNESS
81G	LA/L	TO BODY NO. 2 HARNESS
82G	–	TO BODY NO. 2 HARNESS
83G	–	TO BODY NO. 2 HARNESS
84G	–	TO BODY NO. 2 HARNESS
85G	–	TO BODY NO. 2 HARNESS
86G	–	TO BODY NO. 2 HARNESS
87G	–	TO BODY NO. 2 HARNESS
88G	–	TO BODY NO. 2 HARNESS
89G	–	TO BODY NO. 2 HARNESS
90G	–	TO BODY NO. 2 HARNESS
91G	R	TO BODY NO. 2 HARNESS
92G	LA/L	TO BODY NO. 2 HARNESS
93G	W	TO BODY NO. 2 HARNESS
94G	LG	TO BODY NO. 2 HARNESS
95G	GR	TO BODY NO. 2 HARNESS
96G	SB	TO BODY NO. 2 HARNESS
97G	LA/BR	TO BODY NO. 2 HARNESS
98G	GR	TO BODY NO. 2 HARNESS
99G	Y	TO BODY NO. 2 HARNESS
100G	V	TO BODY NO. 2 HARNESS

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	G	IGNITION
3P	Y	IGNITION RELAY-2 CONTROL
4P	LG	REAR WINDOW DEFOGGER RELAY OUTPUT
5P	GR	REAR WINDOW DEFOGGER RELAY OUTPUT
6P	LA/R	REAR WINDOW DEFOGGER RELAY CONTROL
7P	Y	IGNITION
8P	V	IGNITION
9P	L	BATTERY
10P	LG	IGNITION
11P	–	–
12P	–	–
13P	G	BATTERY
14P	–	–

15P	L	BATTERY
16P	LA/W	FRONT BLOWER MOTOR RELAY CONTROL

Connector No.	M52
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH
Connector Color	WHITE

H.S.

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

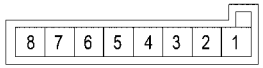
Terminal No.	Color of Wire	Signal Name
1	W	TO BODY HARNESS
2	W	TO BODY HARNESS
3	R	TO BODY HARNESS
4	L	TO BODY HARNESS
5	L	TO BODY HARNESS
6	L	TO BODY HARNESS
7	L	TO BODY HARNESS
8	L	TO BODY HARNESS
9	BR	TO BODY HARNESS
10	BR	TO BODY HARNESS
11	–	TO BODY HARNESS
12	Y	TO BODY HARNESS
13	R	TO BODY HARNESS
14	R	TO BODY HARNESS
15	Y	TO BODY HARNESS
16	Y	TO BODY HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M67
Connector Name	JOINT CONNECTOR-M27
Connector Type	SAC08JW
Connector Color	WHITE

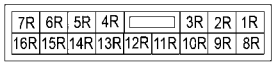
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	B	GROUND
6	B	GROUND
7	B	GROUND
8	B	GROUND

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS
Connector Color	BROWN

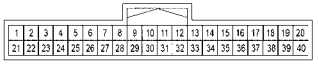
H.S.



Terminal No.	Color of Wire	Signal Name
1R	V	ILLUMINATION +
2R	G	IGNITION
3R	V	BATTERY
4R	–	–
5R	–	–
6R	LA/L	ACCESSORY
7R	LA/V	BATTERY
8R	–	–
9R	–	–
10R	GR	BATTERY
11R	–	–
12R	–	–
13R	–	–
14R	W	BATTERY
15R	W	BATTERY
16R	GR	ACCESSORY

Connector No.	M76
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE

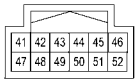
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	BG	SECURITY
8	–	–
9	GR	ECO MODE SW
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	L	OUTSIDE TEMP SENSOR
16	–	–
17	BG	SATELLITE SW GND
18	SB	TRIP RESET SW
19	–	–
20	Y	OUTSIDE TEMP GND
21	L	GND (STRG SW GND)
22	Y	STRG SW A
23	GR	STRG SW B
24	BR	WASHER SW
25	V	BRAKE OIL SW
26	G	PKB SW
27	–	–
28	Y	DR BELT SW
29	R	SPORT MODE SW
30	LG	M RANGE
31	SB	NOT M RANGE
32	BG	AT SHIFT UP
33	BR	AT SHIFT DOWN
34	–	–
35	–	–
36	GR	ILL UP SW
37	V	ILL DOWN SW
38	G	8P/R OUTPUT
39	W	2P/R OUTPUT
40	–	–

Connector No.	M77
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH
Connector Color	WHITE

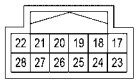
H.S.



Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
43	R	ILL CONT OUT
44	LA/B	FUEL SENSOR GND
45	G	BAT
46	V	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	–	–
50	–	–
51	LA/L	FUEL SENSOR
52	B	G1

Connector No.	M90
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
17	–	–
18	L	AUDIO STRG SW B
19	G	AUDIO STRG SHLD
20	–	–
21	–	–
22	–	–
23	R	ILL (+)
24	Y	ILL (-)
25	P	AUDIO STRG SW A
26	GR	ACC GND
27	V	ACC SW
28	BR	HORN SW

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO FRONT DOOR RH HARNESS
2	GR	TO FRONT DOOR RH HARNESS
3	GR	TO FRONT DOOR RH HARNESS
4	W	TO FRONT DOOR RH HARNESS
5	P	TO FRONT DOOR RH HARNESS
6	SB	TO FRONT DOOR RH HARNESS
7	B	TO FRONT DOOR RH HARNESS
8	L	TO FRONT DOOR RH HARNESS
9	Y	TO FRONT DOOR RH HARNESS
10	SHIELD	TO FRONT DOOR RH HARNESS
11	G	TO FRONT DOOR RH HARNESS
12	V	TO FRONT DOOR RH HARNESS
13	Y	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
13	LA/SB	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
14	R	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
14	LA/GR	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
15	V	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
15	LA/V	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
16	LA/L	TO FRONT DOOR RH HARNESS
17	LA/BG	TO FRONT DOOR RH HARNESS
18	GR	TO FRONT DOOR RH HARNESS
19	LG	TO FRONT DOOR RH HARNESS
20	BR	TO FRONT DOOR RH HARNESS
21	LA/Y	TO FRONT DOOR RH HARNESS
22	SB	TO FRONT DOOR RH HARNESS
23	BG	TO FRONT DOOR RH HARNESS
24	Y	TO FRONT DOOR RH HARNESS

Connector No.	M148
Connector Name	ADAS CONTROL UNIT 2
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	BR	GND
2	L	ITS CAN-H
3	P	IGN
4	–	–
5	Y	ITS CAN-L
6	Y	3RD CAN-L
7	–	–
8	–	–
9	L	V-CAN-H
10	R	V-CAN-L
11	W	BSW SW
12	GR	SPOUT (+)
13	–	–
14	–	–
15	–	–
16	–	–
17	BR	BSW LED
18	L	3RD CAN-H
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	B	SPOUT (-)

Connector No.	M149
Connector Name	WARNING BUZZER
Connector Type	NS02FW-CS
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	GR	SPOUT (+)
2	B	SPOUT (-)

Connector No.	M156
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO ROOM LAMP HARNESS
2	W	TO ROOM LAMP HARNESS
3	SHIELD	TO ROOM LAMP HARNESS
4	R	TO ROOM LAMP HARNESS
5	–	TO ROOM LAMP HARNESS
6	Y	TO ROOM LAMP HARNESS
7	LG	TO ROOM LAMP HARNESS
8	L	TO ROOM LAMP HARNESS
9	R	TO ROOM LAMP HARNESS
10	–	TO ROOM LAMP HARNESS
11	–	TO ROOM LAMP HARNESS
12	–	TO ROOM LAMP HARNESS
13	SB	TO ROOM LAMP HARNESS
14	GR	TO ROOM LAMP HARNESS
15	SB	TO ROOM LAMP HARNESS
16	GR	TO ROOM LAMP HARNESS
17	V	TO ROOM LAMP HARNESS
18	G	TO ROOM LAMP HARNESS
19	SB	TO ROOM LAMP HARNESS
20	R	TO ROOM LAMP HARNESS
21	B	TO ROOM LAMP HARNESS
22	GR	TO ROOM LAMP HARNESS
23	–	TO ROOM LAMP HARNESS
24	–	TO ROOM LAMP HARNESS

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO FRONT DOOR LH HARNESS
2	R	TO FRONT DOOR LH HARNESS
3	G	TO FRONT DOOR LH HARNESS
4	BR	TO FRONT DOOR LH HARNESS
5	P	TO FRONT DOOR LH HARNESS
6	Y	TO FRONT DOOR LH HARNESS - (WITHOUT BOSE AUDIO SYSTEM)
6	LA/L	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
7	R	TO FRONT DOOR LH HARNESS - (WITHOUT BOSE AUDIO SYSTEM)
7	LA/BR	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
8	L	TO FRONT DOOR LH HARNESS
9	LA/BR	TO FRONT DOOR LH HARNESS
10	LA/GR	TO FRONT DOOR LH HARNESS
11	Y	TO FRONT DOOR LH HARNESS
12	BG	TO FRONT DOOR LH HARNESS
13	LA/G	TO FRONT DOOR LH HARNESS
14	LA/R	TO FRONT DOOR LH HARNESS
15	P	TO FRONT DOOR LH HARNESS
16	B	TO FRONT DOOR LH HARNESS

22	GR	TO ROOM LAMP HARNESS
23	–	TO ROOM LAMP HARNESS
24	–	TO ROOM LAMP HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	TO FRONT DOOR LH HARNESS
2	GR	TO FRONT DOOR LH HARNESS
3	SB	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
3	Y	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
4	BG	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
4	V	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
5	Y	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
5	BR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	V	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
6	LG	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
7	Y	TO FRONT DOOR LH HARNESS
8	V	TO FRONT DOOR LH HARNESS
9	BR	TO FRONT DOOR LH HARNESS
10	LG	TO FRONT DOOR LH HARNESS
11	L	TO FRONT DOOR LH HARNESS
12	Y	TO FRONT DOOR LH HARNESS
13	G	TO FRONT DOOR LH HARNESS
14	SHIELD	TO FRONT DOOR LH HARNESS
15	SB	TO FRONT DOOR LH HARNESS
16	BG	TO FRONT DOOR LH HARNESS
17	GR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
17	SB	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	W	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	LA/SB	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
19	BR	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
19	LA/GR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
20	GR	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
20	LA/V	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
21	BR	TO FRONT DOOR LH HARNESS
22	W	TO FRONT DOOR LH HARNESS
23	R	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
23	LA/R	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
24	GR	TO FRONT DOOR LH HARNESS
25	R	TO FRONT DOOR LH HARNESS LED INDICATOR L
26	LA/G	TO FRONT DOOR LH HARNESS
27	LG	TO FRONT DOOR LH HARNESS
28	L	TO FRONT DOOR LH HARNESS
29	Y	TO FRONT DOOR LH HARNESS
30	V	TO FRONT DOOR LH HARNESS
31	G	TO FRONT DOOR LH HARNESS
32	P	TO FRONT DOOR LH HARNESS

Connector No.	M193
Connector Name	JOINT CONNECTOR-M18
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	GR	ACCESSORY
2	GR	ACCESSORY
3	GR	ACCESSORY
4	GR	ACCESSORY
5	SB	AUTO ACC
6	GR	ACCESSORY
7	GR	ACCESSORY
8	W	ACCESSORY

Connector No.	M251
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	LG	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	W	TO MAIN HARNESS
4	B	TO MAIN HARNESS
5	B	TO MAIN HARNESS
6	BG	TO MAIN HARNESS
7	B	TO MAIN HARNESS
8	B	TO MAIN HARNESS
9	R	TO MAIN HARNESS
10	B	TO MAIN HARNESS
11	G	TO MAIN HARNESS
12	BG	TO MAIN HARNESS
13	BR	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	R	TO MAIN HARNESS
16	B	TO MAIN HARNESS

Connector No.	M255
Connector Name	WARNING SYSTEM SWITCH
Connector Type	TH08FW-NH
Connector Color	WHITE

H.S.

4	6	3
2	1	5

Terminal No.	Color of Wire	Signal Name
1	W	BSW SW
2	B	GROUND
3	G	ILL CONT OUT
4	B	GROUND
5	BG	BATTERY
6	BR	BSW LED

7	-	-
8	-	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS
Connector Color	WHITE

H.S.

1	2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	-	TO MAIN HARNESS
2	P	TO MAIN HARNESS
3	B	TO MAIN HARNESS
4	B	TO MAIN HARNESS
5	-	TO MAIN HARNESS
6	W	TO MAIN HARNESS
7	Y	TO MAIN HARNESS
8	R	TO MAIN HARNESS

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	R11
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	SHIELD	TO MAIN HARNESS
4	SB	TO MAIN HARNESS
5	–	TO MAIN HARNESS
6	LG	TO MAIN HARNESS
7	LG	TO MAIN HARNESS
8	–	TO MAIN HARNESS
9	–	TO MAIN HARNESS
10	–	TO MAIN HARNESS
11	–	TO MAIN HARNESS
12	–	TO MAIN HARNESS
13	SB	TO MAIN HARNESS
14	P	TO MAIN HARNESS
15	–	TO MAIN HARNESS
16	–	TO MAIN HARNESS
17	–	TO MAIN HARNESS
18	–	TO MAIN HARNESS
19	SB	TO MAIN HARNESS
20	R	TO MAIN HARNESS
21	B	TO MAIN HARNESS
22	L	TO MAIN HARNESS
23	–	TO MAIN HARNESS
24	–	TO MAIN HARNESS

Connector No.	R17
Connector Name	LANE CAMERA UNIT
Connector Type	MUB12FB
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	–	–
3	LG	IGN
4	–	–
5	L	CAN-H
6	Y	CAN-L
7	–	–
8	–	–
9	–	–
10	–	–
11	–	–
12	–	–

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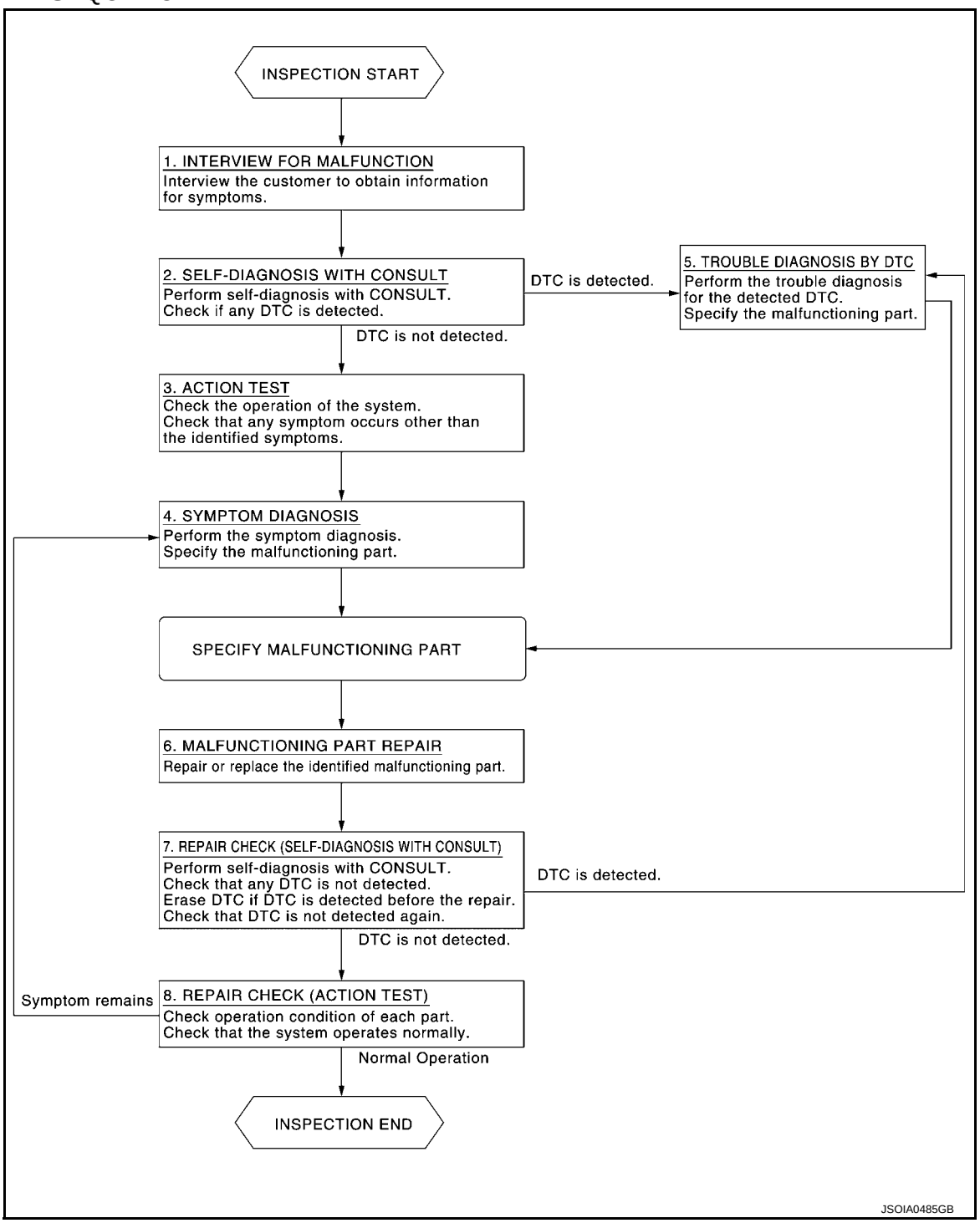
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000015204368

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

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

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

>> GO TO 2.

2.SELF-DIAGNOSIS WITH CONSULT

CONSULT
1. Select “All DTC Reading” mode.
2. Check if the DTC is detected in the self-diagnosis results of the following:
- “ICC/ADAS”
- “LASER/RADAR”
- “LANE CAMERA”
- “SIDE RADAR LEFT”
- “SIDE RADAR RIGHT”
- “ICC/ADAS 2”

Is any DTC detected?

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

3.ACTION TEST

Perform system action test to check the operation status of the following:
- BSW: Refer to DAS-330, "BSW : Description".
- RCTA: Refer to DAS-331, "RCTA : Description".
- LDW/LDP: Refer to DAS-331, "LDW/LDP : 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-386, "Symptom Table".

>> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

1. Check the DTC in the self-diagnosis results.
2. Perform trouble diagnosis for the detected DTC following:
- “ICC/ADAS”: Refer to DAS-271, "DTC Index"
- “LASER/RADAR” Refer to CCS-80, "DTC Index"
- “LANE CAMERA”: Refer to DAS-292, "DTC Index"
- “SIDE RADAR LEFT”: Refer to DAS-286, "DTC Index"
- “SIDE RADAR RIGHT”: Refer to DAS-288, "DTC Index"
- “ICC/ADAS 2”: Refer to DAS-277, "DTC Index"

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

>> GO TO 6.

6.MALFUNCTIONING PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 7.

7.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

CONSULT
1. Erase self-diagnosis results.
2. Select “All DTC Reading” mode again after repairing or replacing the specific items.

3. Check if any DTC is detected in self-diagnosis results of following:
- “ICC/ADAS”
- “LASER/RADAR”
- “LANE CAMERA”
- “SIDE RADAR LEFT”
- “SIDE RADAR RIGHT”
- “ICC/ADAS 2”

Is any DTC detected?

YES >> GO TO 5.
NO >> GO TO 8.

8. REPAIR CHECK (ACTION TEST)

Perform the following system action test. Check that the malfunction symptom is solved or no other symptoms occur.
- BSW: Refer to DAS-330, "BSW : Description".
- RCTA: Refer to DAS-331, "RCTA : Description".
- LDW/LDP: Refer to DAS-331, "LDW/LDP : Description".

Is there a malfunction symptom?

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

ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

Description

INFOID:0000000015259797

- Always perform the radar alignment aiming adjustment after removing and installing or replacing the ICC sensor.
  CAUTION:
  The system does not operate normally unless the ICC sensor is aligned properly.
- Perform the ICC system action test to check that the ICC system operates normally.

Work Procedure

INFOID:0000000015259798

1. RADAR ALIGNMENT ADJUSTMENT

Adjust the radar alignment.

>> GO TO 2.

2. ICC SYSTEM ACTION TEST

1. Perform the ICC system action test. Refer to CCS-102, "Description".
2. Check that the ICC system operates normally.

>> Inspection End.

ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT

Description

INFOID:0000000015204371

Always perform the lane camera unit configuration and adjust the camera aiming after;
- Removing and installing the lane camera unit
- Replacing the lane camera unit
- Replacing windshield glass

Refer to DAS-320, "Work Procedure".

CAUTION:

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

Work Procedure

INFOID:0000000015204372

1. LANE CAMERA UNIT CONFIGURATION

CONSULT

Perform lane camera unit configuration. Refer to DAS-329, "Description".

>> GO TO 2.

2. CAMERA AIMING ADJUSTMENT

CONSULT

Perform lane camera aiming adjustment. Refer to DAS-322, "Description".

>> GO TO 3.

3. PERFORM SELF-DIAGNOSIS

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “LANE CAMERA”.
3. Check DTC.

Is any DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to DAS-292, "DTC Index".

NO >> GO TO 4.

4. PERFORM ACTION TEST

1. Perform the LDW/LDP system action test. Refer to DAS-331, "LDW/LDP : Description".
2. Check that the LDW and LDP systems operate normally.

>> Work End.

PRE-INSPECTION FOR DIAGNOSIS

LANE CAMERA UNIT

LANE CAMERA UNIT : Inspection Procedure

INFOID:0000000015204373

1. CHECK CAMERA LENS AND WINDSHIELD

Are camera lens and windshield contaminated with foreign materials?

YES >> Clean camera lens and windshield.
NO >> GO TO 2.

2. CHECK LANE CAMERA UNIT INSTALLATION CONDITION

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

Is it properly installed?

YES >> GO TO 3.
NO >> Install lane camera unit properly, and perform camera aiming. Refer to DAS-322, "Description".

3. CHECK VEHICLE HEIGHT

Check vehicle height. Refer to FSU-28, "Wheelarch Height (Unladen*)".

Is vehicle height appropriate?

YES >> Inspection End.
NO >> Repair vehicle to appropriate height.

CAMERA AIMING ADJUSTMENT

Description

INFOID:0000000015204374

Always adjust the camera aiming after removing and installing or replacing the lane camera unit. Refer to DAS-322, "Work Procedure (Preparation)".

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:0000000015204375

1. PERFORM SELF-DIAGNOSIS

CONSULT

Select “Self Diagnostic Result” mode of “LANE CAMERA”.

Is any DTC detected?

Except “C1B01”>>Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to DAS-292, "DTC Index".

“C1B01” or no DTC>>GO TO 2.

2. PREPARATION BEFORE CAMERA AIMING ADJUSTMENT

1. Perform pre-inspection for diagnosis. Refer to DAS-321, "LANE CAMERA UNIT : Inspection Procedure".
2. Adjust the tire pressure to the specified pressure value.
3. Maintain no-load in vehicle.
4. Check if coolant and engine oil are filled up to correct level and fuel tank is full.
5. Shift the selector lever to “P” position and release the parking brake.
6. Clean the windshield.
7. Completely clear off the instrument panel.

   NOTE:

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

>> GO TO 3.

3. PREPARATION OF AIMING ADJUSTMENT JIG

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

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-327, "Work Procedure (Target Mark Sample)".

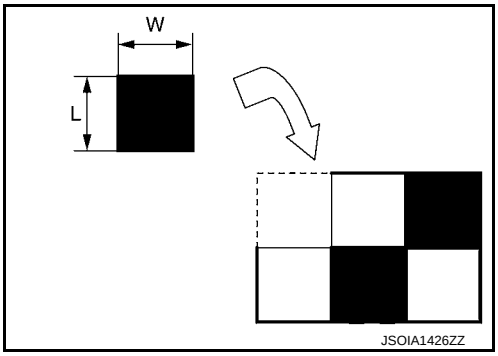
2. Tape three sheets of black paper and three sheets of white paper together to make a target of 360 mm (14.17 in) × 240 mm (9.45 in).

   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.

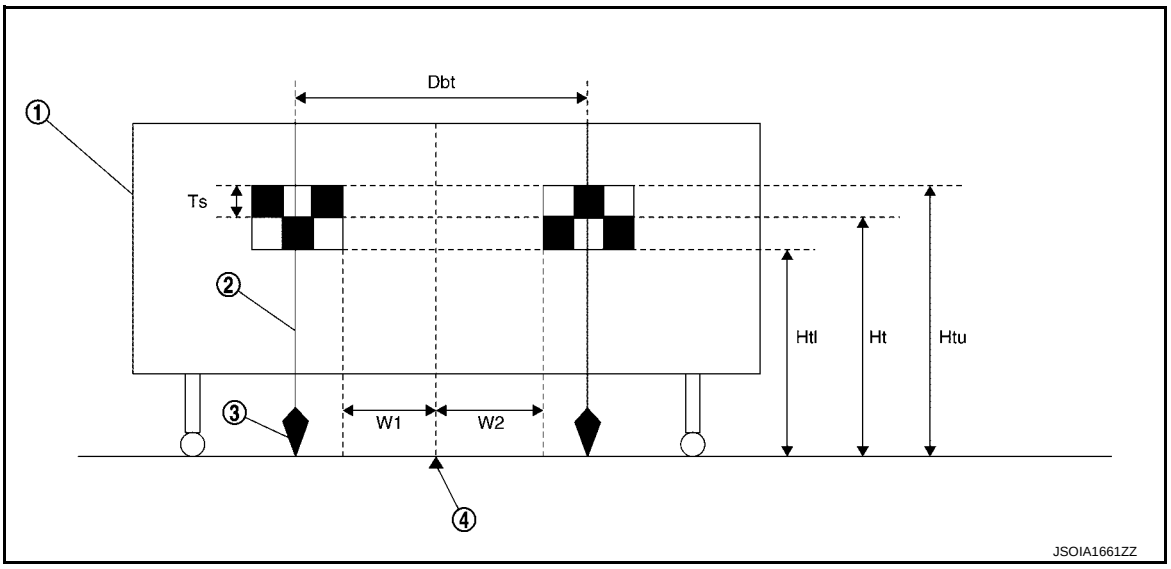


3. Stick a printed target mark on the board with a scotch tape or a piece of double-sided tape.

   NOTE:

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

- 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 (Htl)	**: 1,180 mm (46.46 in)**
Height of a target center (Ht)	**: 1,300 mm (51.18 in)**
Height of a target upper end (Htu)	**: 1,420 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)**

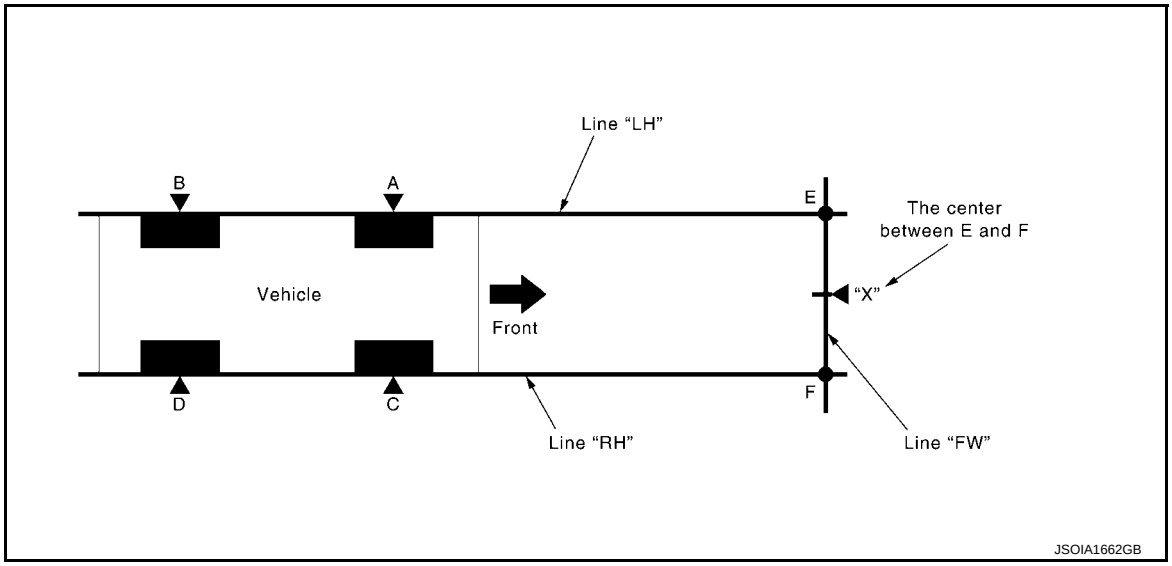
>> Proceed to DAS-323, "Work Procedure (Target Setting)".

Work Procedure (Target Setting)

INFOID:0000000015204376

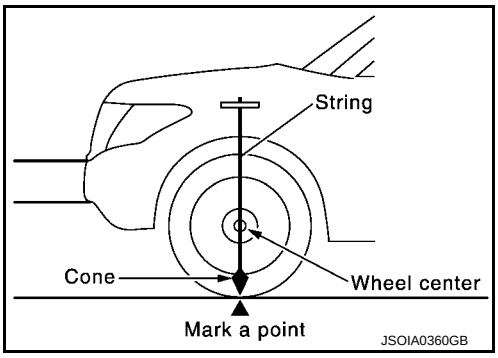
CAUTION:
- **Be sure to place the target correctly according to work procedures because the system may not operate normally.**
- **Perform this operation in a horizontal position where there is a clear view for 5 m (16.4 ft) forward and 3 m (9.84 ft) wide.**
- **Place the target in a well-lighted location. (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.)**

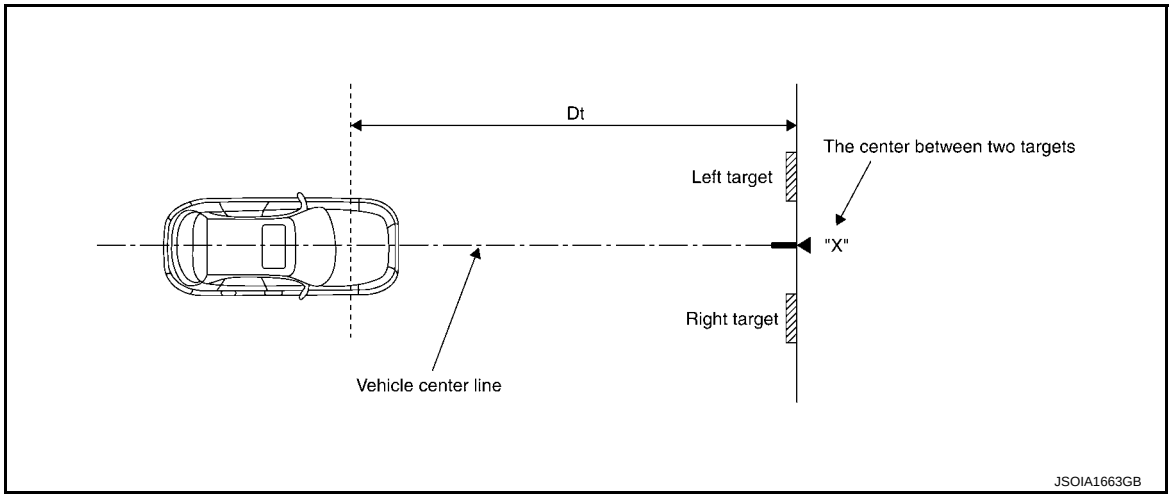
1. TARGET SETTING



A – E (C – F) : 3,000 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 3,000 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 3,000 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.





Dt : 3,000 mm (118.11 in)

>> Proceed to DAS-325, "Work Procedure (Camera Aiming Adjustment)".

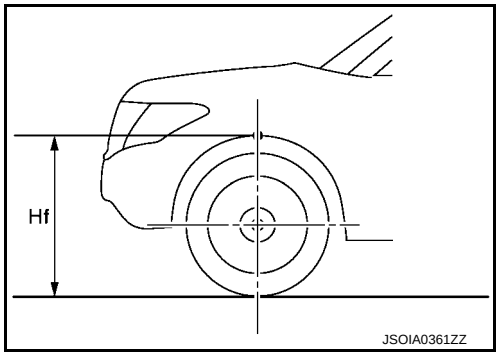
Work Procedure (Camera Aiming Adjustment)

INFOID:0000000015204377

CAUTION:
Perform the adjustment under unloaded vehicle condition.

1. CHECK VEHICLE HEIGHT

Measure the wheelarch height. Calculate “Dh”.



Dh [mm] = (Hfl + Hfr) ÷ 2 – 790
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

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	**: 1,420 mm**
Htl	**: 1,180 mm**
Dt	**: 3,000 mm**
Ts	**: 120 mm**
Dbt	**: 720 mm**
VP	**: 0**

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 lane camera unit.	Go back to step 1.
	00H Routine not activated	Lane camera unit malfunction.	Position the target appropriately again. Then perform the aiming again.
	10H Writing error	• Temporary malfunction in internal processing of the lane camera unit. • Lane camera unit malfunction.	
ABNORMALLY COMPLETED	2	Lane camera unit cannot detect the target • A target is not-yet-placed. • The position of the targets is not correct. • The position of the lane 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 lane camera unit is not correct. • Inappropriate work environment. • Inappropriate vehicle condition. • Input value is not correct against actual setting position.	
	4	Yaw/pitch angle is outside the threshold. • The position of the targets is not correct. • The position of the lane 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.	
	14	Configuration of the lane camera unit is not completed.	Complete the configuration of the lane camera unit. Refer to DAS-329, "Description". Then turn the ignition switch OFF→ON Then position the target appropriately again.
		Ignition switch is not turned OFF→ON after the configuration of the lane camera unit is completed.	Turn the ignition switch OFF→ON. Then position the target appropriately again.

NOTE:
Replace lane 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-292, "DTC Index".

NO >> GO TO 4.

4.ACTION TEST

Perform the LDW/LDP system action test. Refer to DAS-331, "LDW/LDP : Description".

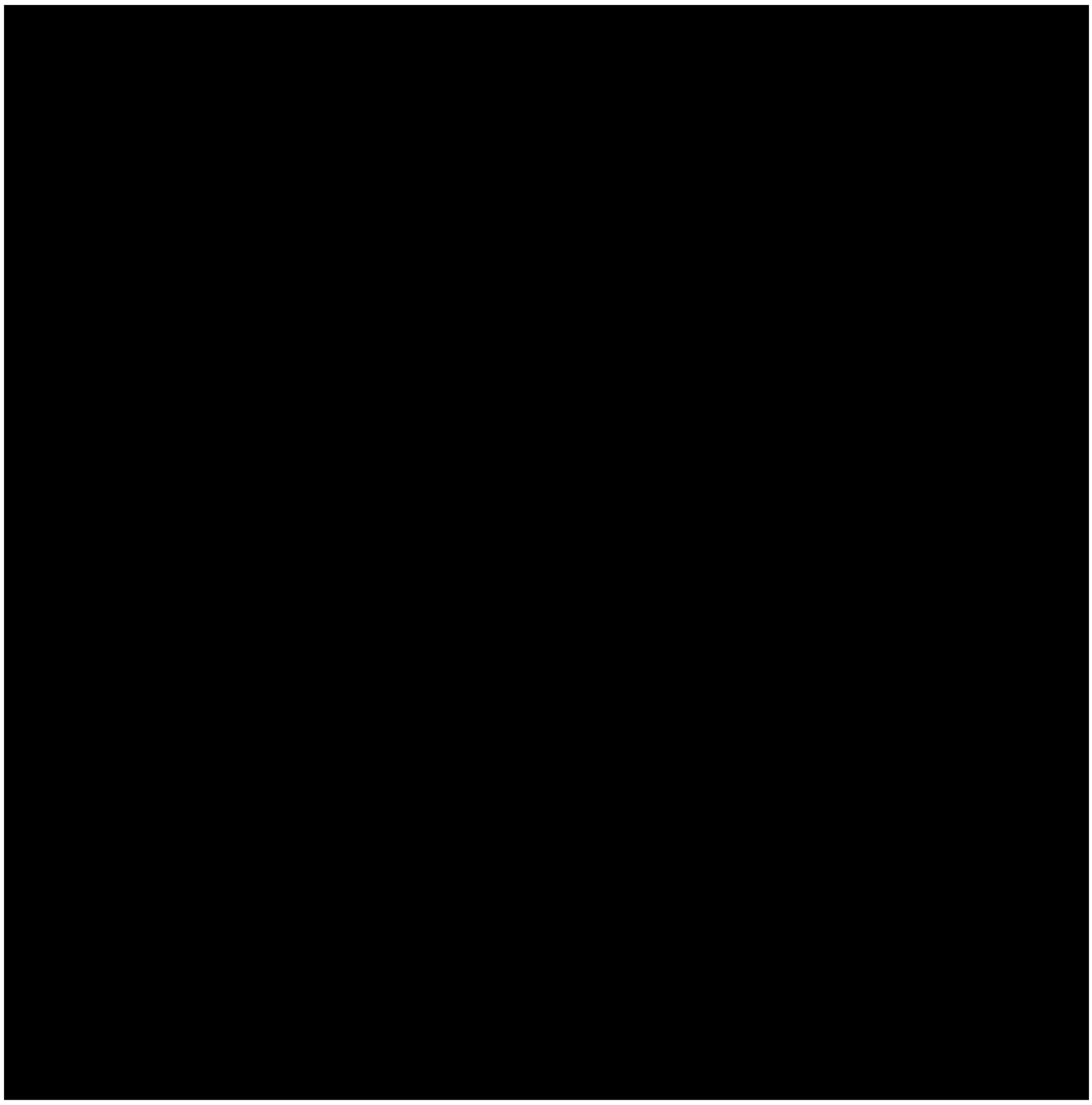
>> Work End.

Work Procedure (Target Mark Sample)

INFOID:0000000015204378

NOTE:

Change the magnification of print to 120 mm (4.72 in) × 120 mm (4.72 in) and print the target mark sample.



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CONFIGURATION (LANE CAMERA UNIT)

Description

INFOID:0000000015204379

- Since vehicle specifications are not included in the lane camera unit after replacement, it is required to write vehicle specifications with CONSULT. Refer to DAS-329, "Work Procedure".
- Configuration has three functions as follows.

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

Work Procedure

INFOID:0000000015204380

1.SAVING VEHICLE SPECIFICATION

CONSULT
Select “READ CONFIGURATION” to save or print current vehicle specification.

Is vehicle specification saved normally?

YES >> GO TO 2.
NO >> GO TO 4.

2.REPLACE LANE CAMERA UNIT

Replace lane camera unit. Refer to DAS-410, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT
Select “WRITE CONFIGURATION - Config file” to write vehicle specification.

>> GO TO 6.

4.REPLACE LANE CAMERA UNIT

Replace lane camera unit. Refer to DAS-410, "Removal and Installation".

>> GO TO 5.

5.WRITING VEHICLE SPECIFICATION

CONSULT
1. Select “WRITE CONFIGURATION - Manual selection”
2. Touch “Next”.
3. Touch “OK”.
4. Check that the configuration has been successfully written and touch “End”.

>> GO TO 6.

6.OPERATION CHECK

Confirm that LDW/LDP systems operate normally. Refer to DAS-331, "LDW/LDP : Description".

>> Work End.

ACTION TEST

BSW

BSW : Description

INFOID:0000000015204381

Always perform the Blind Spot Warning system action test to check that the system operates normally after replacing the side radar LH/RH, or repairing any Blind Spot Warning system malfunction.

WARNING:
Be careful of traffic conditions and safety around the vehicle when performing road test.
CAUTION:
Fully understand the following items well before the road test;
- **Precautions: Refer to DAS-214, "Precaution for Blind Spot Warning System Service".**
- **System description for Blind Spot Warning: Refer to DAS-223, "BSW : System Description".**
- **Normal operating condition: Refer to DAS-399, "Description".**

BSW : Inspection Procedure

INFOID:0000000015204382

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-214, "Precaution for Blind Spot Warning System Service".**
- **System description for Blind Spot Warning: Refer to DAS-223, "BSW : System Description".**
- **Normal operating condition: Refer to DAS-399, "Description".**

1.CHECK BSW SYSTEM SETTING

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

>> GO TO 2.

2.BSW SYSTEM ACTION TEST

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

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

>> Inspection End.

RCTA

RCTA : Description

INFOID:0000000015204383

Always perform the RCTA system action test to check that the system operates normally after replacing the side radar LH/RH, or repairing any BSW/RCTA 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-214, "Precaution for Blind Spot Warning System Service".**
- **System description for RCTA: Refer to DAS-225, "RCTA : System Description".**
- **Normal operating condition: Refer to DAS-399, "Description".**

RCTA : Work Procedure

INFOID:0000000015204384

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-214, "Precaution for Blind Spot Warning System Service".**
- **System description for RCTA: Refer to DAS-225, "RCTA : System Description".**
- **Normal operating condition: Refer to DAS-399, "Description".**

1.CHECK BSW/RCTA SYSTEM SETTING

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

>> GO TO 2.

2.ACTION TEST FOR RCTA

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

Vehicle condition		Action	Buzzer
• R range • 5 MPH (8 km/h)	If the radar detects an approaching vehicle from the side.	• Chime sound (single beep) • Flashes Blind Spot Warning indicator on the side of the approaching vehicle is detected. • Yellow rectangular frame appears in the display.	Single beep
	No approaching vehicle	No action	—

>> Inspection End.

LDW/LDP

LDW/LDP : Description

INFOID:0000000015204385

- 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-214, "Precaution for LDW/LDP System Service".**
- **System description for LDW: Refer to DAS-227, "LDW : System Description".**
- **System description for LDP: Refer to DAS-229, "LDP : System Description".**
- **Handling precaution: Refer to DAS-236, "Precautions for Lane Departure Warning/Lane Departure Prevention".**

LDW/LDP : Inspection Procedure

INFOID:0000000015204386

WARNING:
Be careful of traffic conditions and safety around the vehicle when performing road test.
CAUTION:
- **Precautions: Refer to DAS-214, "Precaution for LDW/LDP System Service".**
- **System description for LDW: Refer to DAS-227, "LDW : System Description".**
- **System description for LDP: Refer to DAS-229, "LDP : System Description".**
- **Handling precaution: Refer to DAS-236, "Precautions for Lane Departure Warning/Lane Departure Prevention".**

1.CHECK LDW SYSTEM SETTING

1. Start the engine.
2. Check that the LDW system setting can be enabled/disabled in the vehicle information display.
3. Turn OFF the ignition switch and wait for 30 seconds or more.
4. Check that the previous setting is saved when the engine starts again.

>> GO TO 2.

2.ACTION TEST FOR LDW

1. Enable the setting of the LDW system in the vehicle information display.
2. Check the LDW operation according to the following table.

Vehicle condition/ Driver's operation		Action	Warning systems ON indicator	Indication on the combination meter	Buzzer
Less than Approx. 50 km/h (30 MPH)	Close to lane marker	No action	ON	OFF	—
Approx. 60 km/h (37 MPH) or more	Close to lane marker	Warning • Buzzer sounds • Warning lamp blinks	ON	Orange (Blink)  ALOIA0104ZZ	Short continuous beeps
	• Close to lane marker • Turn signal ON (Deviate side)	No action	ON	OFF	—

NOTE:
After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 50 km/h (30 MPH). Refer to DAS-227, "LDW : System Description".

>> GO TO 3.

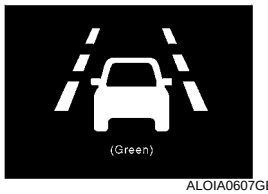
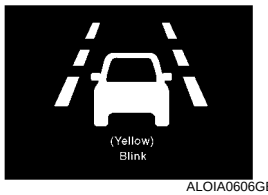
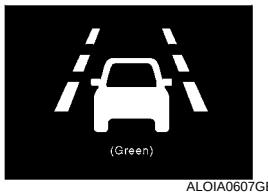
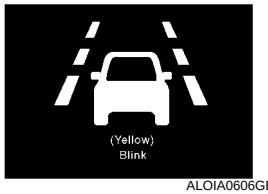
3.CHECK LDP SYSTEM SETTING

1. Start the engine.
2. Check that the LDP system setting can be enabled/disabled in the vehicle information display.
3. Turn OFF the ignition switch and wait for 30 seconds or more.
4. Check that the previous setting is saved when the engine starts again.

>> GO TO 4.

4.ACTION TEST FOR LDP

1. Enable the setting of the LDP system in the vehicle information display.
2. Check the LDP operation according to the following table.

Vehicle condition/ Driver's operation		Action	Indication on the combination meter	Buzzer
Less than Approx. 50 km/h (30 MPH)	Close to lane marker	No action	 ALOIA0607GB	—
Approx. 60 km/h (37 MPH) or more	Close to lane marker	Warning and yawing • Buzzer sounds • Warning lamp blinks • Brake control	 ALOIA0606GB	Short continuous beeps
	• Close to lane marker • Turn signal ON (Deviate side)	No action	 ALOIA0607GB	—
	Close to lane marker with soft braking	Warning • Buzzer sounds • Warning lamp blinks	 ALOIA0606GB	Short continuous beeps
	• VDC OFF Switch OFF ⇒ ON (VDC system ON ⇒ OFF) • Road condition is wet • Lane camera temperature is high	Cancellation • Buzzer sounds • Each message is displayed	Each message is displayed	Beep

NOTE:
After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 50 km/h (30 MPH). Refer to DAS-229, "LDP : System Description".

>> Inspection End.

DTC/CIRCUIT DIAGNOSIS

C1B00 CAMERA UNIT MALF

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Description

INFOID:0000000015204387

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B00-4B	CAMERA UNIT MALF (Camera unit malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Temperature around lane camera unit is excessively high. (Above 100°C)
		Diagnosis delay time	5 seconds or more
C1B00-04,41,44,45,46,47,48,49,52,56,57,87	CAMERA UNIT MALF (Camera unit malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	• Configuration of the lane camera unit is not completed. • If lane camera unit is malfunctioning
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

- Interior room temperature is excessively high.
- Configuration of the lane camera unit is not completed.
- Lane camera

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check “Self Diagnostic Result” mode of “LANE CAMERA”.

Is DTC detected?

YES-1 >> DTC “C1B00-4B”: Refer to DAS-334, "LANE CAMERA UNIT : Diagnosis Procedure (C1B00-4B)".
YES-2 >> DTC “C1B00-04,41,44,45,46,47,48,49,52,56,57,87,”: Refer to DAS-335, "LANE CAMERA UNIT : Diagnosis Procedure (C1B00-04,41,44,45,46,47,48,49,52,56,57,87)".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure (C1B00-4B)

INFOID:0000000015204388

1.COOLING LANE CAMERA UNIT AND ERASE DTC

CONSULT

1. Wait for 10 minutes or more to cool the lane camera unit.
2. Select “Self Diagnostic Result” mode of “LANE CAMERA”.
3. Erase DTC and then repeat “DTC CONFIRMATION PROCEDURE”. Refer to DAS-334, "LANE CAMERA UNIT : DTC Description".

Is “C1B00-4B” detected?

YES >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".
NO >> Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure (C1B00-04,41,44,45,46,47,48,49,52,56,57,87)

INFOID:0000000015204389

1. CHECK SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC other than “C1B00-04,41,44,45,46,47,48,49,52,56,57,87” is detected in “Self Diagnostic Result” of mode “LANE CAMERA”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-292, "DTC Index".
NO >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".

C1B01 CAM AIMING INCMP
LANE CAMERA UNIT
LANE CAMERA UNIT : DTC Description

INFOID:0000000015204390

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B01-54	CAM AIMING INCMP (Camera aiming incomplete)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Camera aiming is not completed
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE
- Lane camera aiming is not adjusted
- Lane camera aiming adjustment has been interrupted

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE
1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B01-54” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “C1B01-54” detected as the current malfunction?

YES >> Refer to DAS-336, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204391

1.CAMERA AIMING ADJUSTMENT

1. Perform the camera aiming. Refer to DAS-322, "Description".
2. Erase DTC and then repeat “DTC CONFIRMATION PROCEDURE”. Refer to DAS-336, "LANE CAMERA UNIT : DTC Description".

Is “C1B01-54” detected?

YES >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".
NO >> Inspection End.

C1B09 POWER SUPPLY CIRCUIT, C1B0A POWER SUPPLY CIRCUIT2

DTC Description

INFOID:0000000015204392

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B09-17	POWER SUPPLY CIRCUIT (Power supply circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Lane camera unit ignition voltage is greater than 16V
		Diagnosis delay time	5 seconds or more
C1B0A-16	POWER SUPPLY CIRCUIT2 (Power supply circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Lane camera unit ignition voltage is less than 10.5V
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B09-17” or “C1B0A-16” is detected as the current malfunction on the “Self Diagnostic Result” mode of “LANE CAMERA”.

Are “C1B09-17” or “C1B0A-16” detected as the current malfunction?

YES >> Refer to DAS-337, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204393

1. CHECK LANE CAMERA UNIT SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of lane camera unit. Refer to DAS-377, "LANE CAMERA UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".
NO >> Repair or replace harness or connectors.

C1B30 SOW LEFT UNIT FAILURE

DTC Description

INFOID:0000000015204394

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B30	SOW LEFT UNIT FAILURE (Side radar malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If side radar left is malfunctioning
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

Side radar left

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “C1B30” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar Left).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B30” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is “C1B30” detected as the current malfunction?

YES >> Refer to DAS-359, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204395

1.CHECK DTC PRIORITY

If DTC “C1B30” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar Left).
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunction part. Refer to DAS-286, "DTC Index" (Side Radar Left).

NO >> Replace the side radar LH. Refer to DAS-405, "Removal and Installation".

C1B40 SOW RIGHT UNIT FAILURE

DTC Description

INFOID:0000000015204396

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B40	SOW RIGHT UNIT FAILURE (Side radar malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If side radar right is malfunctioning
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

Side radar right

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “C1B40” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar Right).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B40” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is “C1B40” detected as the current malfunction?

YES >> Refer to DAS-359, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204397

1.CHECK DTC PRIORITY

If DTC “C1B40” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar Right).
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunction part. Refer to DAS-288, "DTC Index" (Side Radar Right).

NO >> Replace the side radar RH. Refer to DAS-405, "Removal and Installation".

C1B50 SIDE RADAR MALFUNCTION

DTC Description

INFOID:0000000015244184

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B50	SIDE RDR MALFUNCTION (Side radar malfunction)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Side radar malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

Side radar

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B50” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is “C1B50” detected as the current malfunction?

YES >> Refer to DAS-342, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015244185

1. PERFORM SELF DIAGNOSTIC RESULT

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “SIDE RADAR LEFT/RIGHT”.
3. Select “ERASE”.
4. Turn ignition switch OFF.
5. Turn ignition switch ON.
6. Select “Self Diagnostic Result” mode of “SIDE RADAR LEFT/RIGHT”.
7. Check if any DTC other than “C1B50” is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT/RIGHT”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning part. Refer to DAS-288, "DTC Index" (Side Radar Right) or DAS-286, "DTC Index" (Side Radar Left).
NO >> Replace the faulty side radar. Refer to DAS-405, "Removal and Installation".

C1B51 BLIND SPOT WARNING INDICATOR SHORT CIRCUIT

DTC Description

INFOID:0000000015255348

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B51	BSW/BSI IND SHORT CIR (Blind Spot Warning indicator short circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Short circuit in Blind Spot Warning indicator circuit is detected. (Over current is detected)
		Diagnosis delay time	–

POSSIBLE CAUSE

- Blind Spot Warning indicator circuit.
- Blind Spot Warning indicator.
- Side radar.

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B51” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is “C1B51” detected as the current malfunction?

YES >> Refer to DAS-343, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204401

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1. CHECK BLIND SPOT WARNING INDICATOR CIRCUIT FOR OPEN

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

Side radar		Blind Spot Warning indicator		Continuity
Connector	Terminal	Connector	Terminal	
B35 (LH)	4	D29 (LH)	1	Yes
B105 (RH)		D115 (RH)		

Is the inspection result normal?

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

2.CHECK BLIND SPOT WARNING INDICATOR GROUND CIRCUIT FOR OPEN

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

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

Is the inspection result normal?

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

3.CHECK SIDE RADAR VOLTAGE OUTPUT

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

Blind Spot Warning indicator		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
D29 LH	1		Ignition switch OFF ⇒ ON (Approx. 2 sec.)	6 V
D115 RH				

Is the inspection result normal?

YES >> Replace Blind Spot Warning indicator. Refer to DAS-406, "Removal and Installation".
NO >> Replace side radar. Refer to DAS-405, "Removal and Installation".

C1B52 BLIND SPOT WARNING INDICATOR OPEN CIRCUIT

DTC Description

INFOID:0000000015255349

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B52	BSW/BSI IND OPEN CIR (Blind Spot Warning indicator open circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Open circuit in Blind Spot Warning indicator circuit is detected
		Diagnosis delay time	–

POSSIBLE CAUSE

- Blind Spot Warning indicator circuit.
- Blind Spot Warning indicator.
- Side radar.

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Select “All DTC Reading” mode.
3. Check if “C1B52” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is “C1B52” detected as the current malfunction?

YES >> Refer to DAS-345, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204403

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1. CHECK BLIND SPOT WARNING INDICATOR CIRCUIT FOR OPEN

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

Side radar		Blind Spot Warning indicator		Continuity
Connector	Terminal	Connector	Terminal	
B35 (LH)	4	D29 LH	1	Yes
B105 (RH)		D115 RH		

Is the inspection result normal?

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

2.CHECK BLIND SPOT WARNING INDICATOR GROUND CIRCUIT FOR OPEN

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

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

Is the inspection result normal?

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

3.CHECK SIDE RADAR VOLTAGE OUTPUT

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

Blind Spot Warning indicator		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
D29 LH	1		Ignition switch OFF ⇒ ON (Approx. 2 sec.)	6 V
D115 RH				

Is the inspection result normal?

YES >> Replace Blind Spot Warning indicator. Refer to DAS-406, "Removal and Installation".
NO >> Replace side radar. Refer to DAS-405, "Removal and Installation".

C1B55 RADAR BLOCKAGE

DTC Description

INFOID:0000000015255350

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B55	RADAR BLOCKAGE (Radar blockage)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Side radar is blocked
		Diagnosis delay time	–

NOTE:

DTC “C1B55” may be detected under the following conditions except for possible cause. (Explain to the customer about the difference between the contamination detection function and the indication when the malfunction is detected and tell them “This is not malfunction”.)

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.
- Due to the nature of radar technology it is possible to get a blockage warning and not actually be blocked. This is rare and is known as a false blockage warning. A false blocked condition either self-clears or clears after an ignition cycle.

POSSIBLE CAUSE

Stain or foreign materials is deposited.

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “C1B55” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is DTC “C1B55” detected?

YES >> Refer to DAS-347, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015255351

1.CHECK THE REAR BUMPER

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

>> GO TO 2.

2.CHECK THE SIDE RADAR

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

>> GO TO 3.

3.CHECK THE SIDE RADAR INSTALL CONDITION

Check side radar installation condition (installation position, properly tightened, a bent bracket).

>> GO TO 4.

4. INTERVIEW

1. Ask if there is stain or foreign materials.
2. Ask if there is any temporary ambient condition such as splashing water, mist or fog.
3. Ask if there is any object such as ice, frost or dirt obstructing the side radar.

Is any of above conditions seen?

YES >> Explain to the customer about the difference between the blockage detection function and the indication when the malfunction is detected and tell them “This is not malfunction”.

NO >> Inspection End.

U0104 ADAS CAN 1
SIDE RADAR

SIDE RADAR : DTC Description

INFOID:0000000015255352

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0104	ADAS CAN CIR1 (ADAS control unit CAN circuit 1)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Side radar detected an error of ITS communication signal that was received from ADAS control unit
		Diagnosis delay time	–

POSSIBLE CAUSE
ADAS control unit

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U0104” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar LH) or DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar RH).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if U0104 is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is DTC “U0104” detected?

YES >> Refer to DAS-349, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR : Diagnosis Procedure

INFOID:0000000015255353

1.CHECK DTC PRIORITY

If DTC “U0104” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar LH) or DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar RH).
NO >> GO TO 2.

2.SELF DIAGNOSTIC RESULT OF ADAS CONTROL UNIT

CONSULT
1. Start the engine.

2. Turn the Blind Spot Warning system ON.
3. Select “Self Diagnostic Result” mode of “ICC/ADAS”.

Is DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-271, "DTC Index".
NO >> Replace side radar LH or side radar RH. Refer to DAS-405, "Removal and Installation"

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Description

INFOID:0000000015204408

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0104-00	ADAS CAN CIRC 1 (ADAS control unit CAN circuit 1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If lane camera unit detects an error signal that is received from ADAS control unit or ADAS control unit2 via CAN communication
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

- ADAS control unit
- ADAS control unit 2

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U0104-00” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0104-00” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U0104-00” detected as the current malfunction?

YES >> Refer to DAS-350, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204409

1.CHECK DTC PRIORITY

If DTC “U0104-00” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS and ICC/ADAS2”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-271, "DTC Index" (ADAS Control unit) and DAS-277, "DTC Index" (ADAS Control unit 2).
NO >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".

U0122 VDC CAN CIR1 (LDP)

DTC Description

INFOID:0000000015204410

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0122-00	VDC CAN CIR1(LDP) [Vehicle dynamic control CAN circuit1 (Lane departure prevention)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Front camera unit receives incorrect signal (P-RUN) from ABS actuator and electric unit (control unit) via chassis communication.
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U0122-00” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0122-00” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U0122-00” detected as the current malfunction?

YES >> Refer to DAS-352, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204411

1.CHECK DTC PRIORITY

If DTC “U0122-00” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Are any DTCs detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace front camera unit. Refer to DAS-410, "Removal and Installation".

U0126 STRG SEN CAN 1
LANE CAMERA UNIT
LANE CAMERA UNIT : DTC Description

INFOID:0000000015204412

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0126-00	STRG SEN CAN CIR1 (Steering angle sensor CAN circuit1)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If lane camera unit detects an error signal that is received from steering angle sensor via chassis communication
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

If DTC “U0126” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if the “U0126-00” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U0126” detected as the current malfunction?

YES >> Refer to DAS-354, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204413

1. CHECK DTC PRIORITY

If DTC “U0126-00” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".

U0405 ADAS CAN 2
LANE CAMERA UNIT
LANE CAMERA UNIT : DTC Description

INFOID:0000000015204414

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0405-83	ADAS CAN CIR2 (ADAS control unit CAN circuit 2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If lane camera unit detects an error signal that is received from ADAS control unit or ADAS control unit 2 can communication.
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE
ADAS control unit
ADAS control unit 2

FAIL-SAFE
The following systems are canceled:
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE
1. CHECK DTC PRIORITY

If DTC “U0405-83” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if U0405-83 is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is DTC “U0405-83” detected?

YES >> Refer to DAS-356, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204415

1. CHECK DTC PRIORITY

If DTC “U0405-83” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

2. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS” and “ICC/ADAS2”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-271, "DTC Index" (ADAS control unit) and DAS-277, "DTC Index" (ADAS control unit 2).
NO >> Replace lane camera unit. Refer to DAS-410, "Removal and Installation".

SIDE RADAR

SIDE RADAR : DTC Description

INFOID:0000000015255354

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0405	ADAS CAN CIR2 (ADAS control unit CAN circuit 2)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	Side radar detected an error of ITS communication signal that was received from ADAS control unit
		Diagnosis delay time	–

POSSIBLE CAUSE
ADAS control unit.

FAIL-SAFE
The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE
1.CHECK DTC PRIORITY

If DTC “U0405” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar LH) or DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar RH).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if U0405 is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is DTC “U0405” detected?

YES >> Refer to DAS-357, "SIDE RADAR : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR : Diagnosis Procedure

INFOID:0000000015255355

1.CHECK DTC PRIORITY

If DTC “U0104” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar LH) or DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar RH).

NO >> GO TO 2.

2. SELF DIAGNOSTIC RESULT OF ADAS CONTROL UNIT

Ⓔ CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “Self Diagnostic Result” mode of “ICC/ADAS”.

Is DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-271, "DTC Index".

NO >> Replace side radar LH or side radar RH. Refer to DAS-405, "Removal and Installation"

U0415 VDC CAN 1

DTC Description

INFOID:0000000015204418

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0415	VDC CAN CIR2 (VDC message failure)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If side radar detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar Left) or DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar Right).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0415” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR LEFT/RIGHT”.

Is “U0415” detected as the current malfunction?

YES >> Refer to DAS-359, "DTC Description".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204419

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar Left) or DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar Right).
NO >> GO TO 2.

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

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the side radar LH or RH. Refer to DAS-405, "Removal and Installation".

U0428 STRG SEN CAN 2
LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Description

INFOID:0000000015204420

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U0428-83	STRG SEN CAN CIR2 (Steering angle sensor CAN circuit2)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Lane camera unit receives an error signal from steering angle sensor via chassis control
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled.
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U0428-83” is displayed with DTC “U1000-01”, first diagnose the DTC “U1000-01”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

2.PERFORM DTC COMFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U0428-83” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U0428-83” detected as the current malfunction?

YES >> Refer to DAS-361, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204421

1.CHECK DTC PRIORITY

If DTC “U0428-83” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-363, "LANE CAMERA UNIT : DTC Description".
NO >> GO TO 2.

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

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-61, "DTC Index".

NO >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".

U1000 CAN COMM CIRCUIT

LANE CAMERA UNIT

LANE CAMERA UNIT : Description

INFOID:0000000015204422

ITS COMMUNICATION

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

LANE CAMERA UNIT : DTC Description

INFOID:0000000015204423

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1000-01	CAN COMM CIRCUIT (CAN communication circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If lane camera unit is not transmitting or receiving ITS communication signal for 2 seconds or more
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1000-01” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U1000-01” detected as the current malfunction?

YES >> Refer to DAS-363, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204424

1. PERFORM THE SELF-DIAGNOSIS

CONSULT

1. Turn the ignition switch ON.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1000-01” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U1000-01” detected as the current malfunction?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000015204425

CAN COMMUNICATION

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.
CAN communication signal chart. Refer to LAN-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

ITS COMMUNICATION

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

SIDE RADAR LH : DTC Description

INFOID:0000000015255356

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If side radar LH is not transmitting or receiving ITS communication signal
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is “U1000” detected?

YES >> Refer to DAS-364, "SIDE RADAR LH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000015255357

1.SELF DIAGNOSTIC RESULT

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON, and then wait for 30 seconds or more.
3. Perform “ALL DTC READING” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is “U1000” detected?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000015204428

CAN COMMUNICATION

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.
CAN communication signal chart. Refer to LAN-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

ITS COMMUNICATION

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

SIDE RADAR RH : DTC Description

INFOID:0000000015255360

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If side radar RH is not transmitting or receiving ITS communication signal
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled:
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT/LEFT”.

Is “U1000” detected?

YES >> Refer to DAS-364, "SIDE RADAR LH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000015255361

1. SELF DIAGNOSTIC RESULT

CONSULT
1. Start the engine.
2. Turn the Blind Spot Warning system ON, and then wait for 30 seconds or more.
3. Select “All DTC Reading” mode.
4. Check if “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is “U1000” detected?

YES >> Refer to LAN-26, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

U1010 CONTROL UNIT (CAN)

LANE CAMERA UNIT

LANE CAMERA UNIT : Description

INFOID:0000000015204431

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

LANE CAMERA UNIT : DTC Description

INFOID:0000000015204432

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1010-49	CONTROL UNIT (CAN) [Control unit (CAN)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If lane camera unit detects malfunction by CAN controller initial diagnosis
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010-49” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U1010-49” detected as the current malfunction?

YES >> Refer to DAS-367, "LANE CAMERA UNIT : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204433

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn the FEB or LDW system ON.
2. Select “All DTC Reading” mode.
3. Check if “U1010-49” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U1010-49” detected as the current malfunction?

YES >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".
NO >> Inspection End.

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000015255362

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

SIDE RADAR LH : DTC Description

INFOID:0000000015255363

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If side radar LH detects malfunction by CAN controller initial diagnosis
		Diagnosis delay time	–

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is “U1010” detected?

YES >> Refer to DAS-368, "SIDE RADAR LH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000015255364

1. SELF DIAGNOSTIC RESULT

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is “U1010” detected?

YES >> Replace the side radar LH. Refer to DAS-405, "Removal and Installation".
NO >> Inspection End.

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000015255365

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

SIDE RADAR RH : DTC Description

INFOID:0000000015255366

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	Diagnosis condition	When Ignition switch is ON.
		Signal (terminal)	–
		Threshold	If Side radar RH detects malfunction by CAN controller initial diagnosis
		Diagnosis delay time	–

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is “U1010” detected?

YES >> Refer to DAS-369, "SIDE RADAR RH : Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000015255367

1.SELF DIAGNOSTIC RESULT

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is “U1010” detected?

YES >> Replace the side radar RH. Refer to DAS-405, "Removal and Installation".
NO >> Inspection End.

U1321 CONFIGURATION

DTC Description

INFOID:0000000015204440

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1321-55	CONFIGURATION DATA ERROR (Configuration data error)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Configuration of the lane camera unit is incomplete
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

- Configuration of the lane camera unit has been interrupted
- Lane camera unit

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1321-55” is detected as the current malfunction on the “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U1321-55” detected as the current malfunction?

YES >> Refer to DAS-370, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204441

1. PERFORM CONFIGURATION OF LANE CAMERA UNIT

CONSULT

1. Perform configuration of the lane camera unit. Refer to DAS-329, "Description".
2. Erase DTC.
3. Perform DTC confirmation procedure. Refer to DAS-370, "DTC Description".

Is DTC “U1321-55” detected?

YES >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".
NO >> Inspection End.

U1322 CONFIGURATION

DTC Description

INFOID:0000000015204442

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1322-01	CONFIG WRITE ERROR (Configuration write error)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	Configuration of the lane camera unit is incomplete.
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

- Configuration of the lane camera unit has been interrupted
- Lane camera unit

FAIL-SAFE

The following systems are canceled:

- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Forward Emergency Braking (FEB) with pedestrian
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the FEB or LDW system ON.
3. Select “All DTC Reading” mode.
4. Check if “U1322-01” is detected as the current malfunction in “Self Diagnostic Result” mode of “LANE CAMERA”.

Is “U1322-01” detected as the current malfunction?

YES >> Refer to DAS-371, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204443

1. PERFORM CONFIGURATION OF LANE CAMERA UNIT

CONSULT

1. Perform configuration of the lane camera unit. Refer to DAS-329, "Description".
2. Erase DTC.
3. Perform DTC confirmation procedure. Refer to DAS-371, "DTC Description".

Is DTC “U1322-01” detected?

YES >> Replace the lane camera unit. Refer to DAS-410, "Removal and Installation".
NO >> Inspection End.

U216C SIDE RADAR LEFT

DTC Description

INFOID:0000000015204444

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U216C	SIDE RADAR LEFT (Side Radar Left message failure)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If the side radar left is malfunctioning
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

Side radar left

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U216C” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar Left).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U216C” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”.

Is “U216C” detected as the current malfunction?

YES >> Refer to DAS-359, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204445

1.CHECK DTC PRIORITY

If DTC “U216C” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-364, "SIDE RADAR LH : DTC Description" (Side Radar Left).
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR LEFT”

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunction part. Refer to DAS-286, "DTC Index" (Side Radar Left).

NO >> Replace the side radar LH. Refer to DAS-405, "Removal and Installation".

U216E SIDE RADAR RIGHT

DTC Description

INFOID:0000000015204446

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U216E	SIDE RADAR RIGHT (Side radar right message failure)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
		Threshold	If side radar right is malfunctioning
		Diagnosis delay time	5 seconds or more

POSSIBLE CAUSE

Side radar right

FAIL-SAFE

The following systems are canceled:

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC “U216E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar Right).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the Blind Spot Warning system ON.
3. Select “All DTC Reading” mode.
4. Check if “U216E” is detected as the current malfunction in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”.

Is “U216E” detected as the current malfunction?

YES >> Refer to DAS-359, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015204447

1.CHECK DTC PRIORITY

If DTC “U216E” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to DAS-365, "SIDE RADAR RH : DTC Description" (Side Radar Right).
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “SIDE RADAR RIGHT”

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunction part. Refer to DAS-288, "DTC Index" (Side Radar Right).

NO >> Replace the side radar RH. Refer to DAS-405, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

SIDE RADAR LH

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000015204448

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuses are not blown:

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

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals			Condition	Voltage (Approx.)
(+)		(–)		
Side radar LH		Ground	Ignition switch	
Connector	Terminal			
B35	5		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between side radar LH harness connectors and ground.

Side radar LH		Ground	Continuity
Connector	Terminal		
B35	8		Yes

Is the inspection result normal?

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

SIDE RADAR RH

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000015204449

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuses are not blown:

Signal name	Fuse No.
Ignition power supply	29 (10A)

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals			Condition	Voltage (Approx.)
(+)		(–)		
Side radar RH		Ground	Ignition switch	
Connector	Terminal			
B105	5		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between side radar RH harness connectors and ground.

Side radar RH		Ground	Continuity
Connector	Terminal		
B105	3		Yes
	8		

Is the inspection result normal?

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

LANE CAMERA UNIT

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000015204450

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuse is not blown.

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

Is the fuse blown?

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

2.CHECK LANE CAMERA UNIT POWER SUPPLY CIRCUIT

Check voltage between lane camera unit harness connector and ground.

Terminal			Condition	Voltage (Approx.)
(+)		(–)		
Lane camera unit		Ground	Ignition switch	
Connector	Terminal			
R17	3		OFF	0 V
			ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the lane camera unit power supply circuit.

3.CHECK LANE CAMERA UNIT GROUND CIRCUIT

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

Lane camera unit		Ground	Continuity
Connector	Terminal		
R17	1		Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair the lane camera unit ground circuit.

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000015204451

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Check the terminals and connectors of the side radar RH for damage, bend and short (unit side and connector side).

Is the inspection result normal?

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

2.CHECK CONTINUITY RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

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

Side radar RH		Ground	Continuity
Connector	Terminal		
B105	3		Yes

Is the inspection result normal?

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

WARNING BUZZER CIRCUIT

Component Function Check

INFOID:0000000015204452

1.CHECK WARNING BUZZER

CONSULT
1. Select “ADAS buzzer 2” of “ICC/ADAS 2”.
2. Select “ADAS buzzer 2” in “Active Test” mode.
3. Touch “ON”“OFF”that it operates normally.

Is the inspection result normal?

YES >> Inspection End.
NO >> Refer to DAS-380, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000015204453

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK WARNING BUZZER SIGNAL CIRCUIT FOR OPEN

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

ADAS control unit 2		Warning buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M148	12	M149	1	Yes
	24		2	

Is the inspection result normal?

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

2.CHECK WARNING BUZZER SIGNAL CIRCUIT FOR SHORT

Check continuity between the ADAS control unit 2 harness connector and ground.

ADAS control unit 2		Ground	Continuity
Connector	Terminal		
M148	12		No
	24		

Is the inspection result normal?

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

3.CHECK WARNING BUZZER

Check warning buzzer. Refer to DAS-380, "Component Inspection".

Is the inspection result normal?

YES >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".
NO >> Replace the warning buzzer. Refer to DAS-408, "Removal and Installation".

Component Inspection

INFOID:0000000015204454

1.CHECK WARNING BUZZER

1. Turn ignition switch OFF.
2. Disconnect warning buzzer connector.
3. Check resistance between warning buzzer terminals.

Terminal		Resistance
1	2	Approx. 6 Ω

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace warning buzzer. Refer to DAS-408, "Removal and Installation".

WARNING SYSTEM SWITCH CIRCUIT

Diagnosis Procedure

INFOID:0000000015204455

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK WARNING SYSTEM SWITCH INPUT CIRCUIT FOR OPEN OR SHORT TO GROUND

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

ADAS control unit 2		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
M148	11	M255	1	Yes

4. Check continuity between warning system switch harness connector and ground.

Warning system switch		Ground	Continuity
Connector	Terminal		
M255	1		No

Is the inspection result normal?

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

2.CHECK WARNING SYSTEM SWITCH INPUT CIRCUIT FOR SHORT TO VOLTAGE

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

Warning system switch		Ground	Voltage (Approx.)
Connector	Terminal		
M255	1		0V

Is the inspection result normal?

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

3.CHECK WARNING SYSTEM SWITCH GROUND CIRCUIT

Check continuity between warning system switch harness connector and ground.

Warning system switch		Ground	Continuity
Connector	Terminal		
M255	2		Yes

Is the inspection result normal?

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

4.CHECK WARNING SYSTEM SWITCH

Check warning system switch. Refer to DAS-383, "Component Inspection".

Is the inspection result normal?

YES >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".
NO >> Replace the warning system switch. Refer to DAS-409, "Removal and Installation".

Component Inspection

INFOID:0000000015204456

1. CHECK WARNING SYSTEM SWITCH

Check continuity of warning system switch.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the warning system switch. Refer to DAS-409, "Removal and Installation".

WARNING SYSTEMS ON INDICATOR CIRCUIT

Diagnosis Procedure

INFOID:0000000015204457

Regarding Wiring Diagram information, refer to DAS-302, "Wiring Diagram".

1.CHECK WARNING SYSTEM ON INDICATOR CIRCUIT

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

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

Is the inspection result normal?

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

2.CHECK WARNING SYSTEMS ON INDICATOR CIRCUIT FOR OPEN OR SHORT TO GROUND

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

ADAS control unit 2		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
M148	17	M255	6	Yes

4. Check continuity between warning system switch harness connector and ground.

Warning system switch		Ground	Continuity
Connector	Terminal		
M255	6		No

Is the inspection result normal?

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

3.CHECK WARNING SYSTEMS ON INDICATOR

Check the warning systems ON indicator. Refer to DAS-384, "Component Inspection".

Is the inspection result normal?

YES >> Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".
NO >> Replace warning system switch. Refer to DAS-409, "Removal and Installation".

Component Inspection

INFOID:0000000015204458

1.CHECK WARNING SYSTEMS ON INDICATOR

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

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the warning system switch. Refer to DAS-409, "Removal and Installation".

SYMPTOM DIAGNOSIS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000015204459

BLIND SPOT WARNING/REAR CROSS TRAFFIC ALERT

CAUTION:

Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

NOTE:

Refer to the operation condition of the Blind Spot Warning system.

- Blind Spot Warning system: DAS-223, "BSW : System Description".
- Rear Cross Traffic Alert system: DAS-225, "RCTA : System Description".

Symptom		Possible cause	Inspection item/Reference page
Indicator/warning lamps do not illuminate when ignition switch OFF ⇒ ON.	Blind Spot Warning lamp (orange) does not illuminate	• Blind Spot Warning lamp signal (CAN) - Combination meter - ADAS control unit 2 • Blind Spot Warning lamp (combination meter)	• ADAS control unit Active test “BSW/BSI WARNING LAMP”. Refer to DAS-20, "CONSULT Function (ICC/ADAS)". • ADAS control unit Data monitor “BSW/BSI WARN LMP”. Refer to DAS-20, "CONSULT Function (ICC/ADAS)" • ADAS control unit 2 Data monitor “BSW/BSI WARN LMP”. Refer to DAS-28, "CONSULT Function (ICC/ADAS 2)" • Combination meter Data monitor “BSW IND” Refer to MWI-21, "CONSULT Function (METER/M&A)"
	All of indicator/warning lamps do not illuminate; • Blind Spot Warning lamp • Warning systems ON indicator	• Power supply and ground circuit of ADAS control unit 2 • ADAS control unit 2 • Combination meter	Power supply and ground circuit of ADAS control unit 2. Refer to DAS-208, "ADAS CONTROL UNIT 2 : Diagnosis Procedure"
	Warning systems ON indicator (on the warning systems switch) does not illuminate	• Harness between ADAS control unit 2 and warning systems switch • Warning systems switch • ADAS control unit 2	Warning systems ON indicator circuit. Refer to DAS-384, "Diagnosis Procedure"
	Blind Spot Warning indicator does not turn ON	• Harness between side radar and Blind Spot Warning indicator • Side radar LH/RH • Blind Spot Warning indicator	Perform self-diagnosis of side radar. Refer to DAS-255, "CONSULT Function (SIDE RADAR LEFT)" or DAS-257, "CONSULT Function (SIDE RADAR RIGHT)".

Symptom		Possible cause	Inspection item/Reference page
BSW system is not activated. (Indicator/warning lamps illuminate when ignition switch OFF ⇒ ON.)	Warning systems ON indicator is not turned ON ⇔ OFF when operating warning systems switch	• Harness between ADAS control unit 2 and waning systems switch • Harness between warning systems switch and ground • ADAS control unit 2 • Warning systems switch	• Warning systems switch circuit. Refer to DAS-382, "Diagnosis Procedure". • BSW system setting cannot be turned ON/OFF on the information display. Refer to DAS-388, "BLIND SPOT WARNING : Diagnosis Procedure"
	Buzzer is not sounding	• Power supply and ground circuit of ADAS control unit 2 • Harness between the ADAS control unit 2 and warning buzzer • Warning buzzer • ADAS control unit 2	Power supply and ground circuit of ADAS control unit 2. Refer to DAS-208, "ADAS CONTROL UNIT 2 : Diagnosis Procedure" Warning buzzer circuit. Refer to DAS-380, "Diagnosis Procedure"

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

LDW/LDP

LDW/LDP : Description

INFOID:0000000015204460

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

LDW/LDP : Diagnosis Procedure

INFOID:0000000015204461

1.CHECK LDP SYSTEM SETTING

1. Start the engine.
2. Check that the LDP system setting can be turned ON/OFF in the combination meter information display using the steering switch.

Is the inspection result normal?

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

2.CHECK STEERING SWITCH CIRCUIT

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

Is the inspection result normal?

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

3.CHECK STEERING SWITCH RESISTANCE

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

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-81, "Removal and Installation".
NO >> Replace steering switch. Refer to AV-65, "Removal and Installation".

BLIND SPOT WARNING

BLIND SPOT WARNING : Description

INFOID:0000000015204462

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

BLIND SPOT WARNING : Diagnosis Procedure

INFOID:0000000015204463

1.CHECK BSW SYSTEM SETTING

1. Start the engine.
2. Check that the BSW system setting can be turned ON/OFF in the combination meter information display using the steering switch.

Is the inspection result normal?

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

2.CHECK STEERING SWITCH CIRCUIT

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

Is the inspection result normal?

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

3.CHECK STEERING SWITCH RESISTANCE

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

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-81, "Removal and Installation".
NO >> Replace steering switch. Refer to AV-65, "Removal and Installation".

CHIME DOES NOT SOUND

Description

INFOID:0000000015204464

The warning chime may not sound in some cases when there is a short distance between vehicles. Some examples are:

- When the vehicles are traveling at the same speed and the distance between vehicles is not changing.
- When the vehicle ahead is traveling faster and the distance between vehicles is increasing.
- When a vehicle cuts in near own vehicle.
- The warning chime will not sound when own vehicle approaches vehicles that are parked or moving slowly.
- The warning chime does not sound when the system does not detect any vehicle ahead. (Diagnose the conditions under which the system is detecting the vehicle ahead and when the system is malfunctioning. If there is any malfunction in detecting the vehicle ahead, check the system following the DAS-392, "Description".)

Diagnosis Procedure

INFOID:0000000015204465

1.PERFORM ACTIVE TEST

CONSULT

1. Select “ICC/ADAS 2”.
2. Select “ADAS buzzer 2” in “Active Test” mode.
3. Touch “ON” or “OFF” to check that the function operates normally.

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 3.

2.CHECK THE MALFUNCTION SYMPTOM DURING WARNING CHIME OPERATION

Understand the vehicle ahead detection condition when the malfunction occurred. If the warning chime should have sounded, replace the ADAS control unit 2. Refer to DAS-208, "ADAS CONTROL UNIT 2 : Diagnosis Procedure".

>> GO TO 9.

3.PERFORM THE SELF-DIAGNOSIS

CONSULT

1. Select “All DTC Reading” mode.
2. Check if “U1000” is detected in “Self Diagnostic Result” mode of “ICC/ADAS 2”.

Is “U1000” detected?

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

4.CAN COMMUNICATIONS INSPECTION

Check the CAN communication and repair or replace malfunctioning parts. Refer to DAS-151, "ADAS CONTROL UNIT 2 : DTC Description".

>> GO TO 10.

5.PERFORM THE SELF-DIAGNOSIS OF ADAS CONTROL UNIT 2

CONSULT

1. Select “All DTC Reading” mode.
2. Check if any DTC is detected as the current malfunction in “Self Diagnostic Result” mode “ICC/ADAS 2”.

Is any DTC detected?

YES >> Repair or replace malfunctioning parts. Refer to DAS-45, "DTC Index".
NO >> GO TO 6.

6.CHECK WARNING BUZZER CIRCUIT

Check warning buzzer circuit. Refer to DAS-380, "Diagnosis Procedure".

Is the inspection result normal?

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

7. CHECK WARNING BUZZER

Check warning buzzer. Refer to DAS-380, "Component Inspection".

Is the inspection result normal?

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

8. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts.

>> GO TO 9.

9. REPLACE ADAS CONTROL UNIT 2

Replace the ADAS control unit 2. Refer to DAS-212, "Removal and Installation".

>> GO TO 10.

10. CHECK EACH SYSTEM

CONSULT

1. Select Erase “All DTC Reading” mode.
2. Select “All DTC Reading” mode again after performing the action test. (Refer to CCS-102, "Description" for ICC action test).
3. Check if the each system is normal.

>> Inspection End.

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

Description

INFOID:0000000015204466

Symptom check: Detection function may become unstable under the following conditions.
- When the vehicle is driving on a curve such as S-curve where the curvature changes.
- When the vehicle is driving on up-and-down road or passing the peak or foot of slope or passing the break of the inclination of hill.

Diagnosis Procedure

INFOID:0000000015204467

1. VISUAL CHECK (1)

Check front bumper grille near the ICC sensor for contamination and foreign materials.

Do foreign materials adhere?

YES >> GO TO 2.
NO >> GO TO 3.

2. WIPE OUT DIRT AND FOREIGN OBJECTS

Wipe out the contamination and/or foreign materials from the front bumper grille near the ICC sensor.

>> GO TO 7.

3. VISUAL CHECK (2)

Check ICC sensor for cracks and/or scratches.

Are there cracks?

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

4. PERFORM RADAR ALIGNMENT

CONSULT
1. Perform radar alignment. Refer to CCS-95, "Description".
2. Perform action test. Refer to CCS-102, "Description".
3. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> Inspection End.
NO >> GO TO 5.

5. REPLACE ICC SENSOR

CONSULT
1. Replace the ICC sensor. Refer to CCS-206, "Removal and Installation".
2. Perform radar alignment. Refer to CCS-95, "Description".
3. Perform action test. Refer to CCS-102, "Description".
4. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> Inspection End.
NO >> GO TO 6.

6. REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

>> GO TO 7.

7. CHECK ICC SYSTEM

CONSULT
1. Erase “All DTC Reading” mode.

2. Select “All DTC Reading” mode again after performing the action test. (Refer to CCS-102, "Description" for action test.)
3. Check that the ICC system is normal.

>> Inspection End.

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

Description

INFOID:0000000015204468

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

Diagnosis Procedure

INFOID:0000000015204469

1.CHECK INFORMATION DISPLAY

1. Start the self-diagnosis mode of combination meter. Refer to MWI-19, "On Board Diagnosis Function".
2. Check that the information display is displayed normally.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the combination meter. Refer to MWI-81, "Removal and Installation".

2.VISUAL CHECK (1)

Check front bumper grille near the ICC sensor for contamination and/or foreign materials.

Do foreign materials adhere?

YES >> GO TO 3.
NO >> GO TO 4.

3.WIPE OUT DIRT AND FOREIGN MATERIALS

Wipe out the contamination and/or foreign materials from the front bumper grille near the ICC sensor.

>> GO TO 8.

4.VISUAL CHECK (2)

Check ICC sensor for cracks and/or scratches.

Are there cracks?

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

5.PERFORM RADAR ALIGNMENT

CONSULT
1. Perform radar alignment. Refer to CCS-95, "Description".
2. Perform action test. Refer to CCS-102, "Description".
3. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> Inspection End.
NO >> GO TO 6.

6.REPLACE ICC SENSOR

CONSULT
1. Replace the ICC sensor. Refer to CCS-206, "Removal and Installation".
2. Perform radar alignment. Refer to CCS-95, "Description".
3. Perform action test. Refer to CCS-102, "Description".
4. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> Inspection End.
NO >> GO TO 7.

7.REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

>> GO TO 8.

8.CHECK ICC SYSTEM

CONSULT
1. Select Erase “All DTC Reading” mode.
2. Select “All DTC Reading” mode again after performing the action test. (Refer to CCS-102, "Description" for action test.)
3. Check that the ICC system is normal.

>> Inspection End.

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

Description

INFOID:0000000015204470

The warning of Lane Departure Warning (LDW) and Lane Departure Prevention (LDP) and the yaw moment control are activated during the use of a turn signal.

NOTE:

For the operational conditions of Lane Departure Warning (LDW) and Lane Departure Prevention (LDP), refer to the following descriptions.

- LDW: DAS-227, "LDW : System Description"
- LDP: DAS-229, "LDP : System Description"

Diagnosis Procedure

INFOID:0000000015204471

1.CHECK TURN SIGNAL OPERATION

Check that both right and left turn signals operate normally.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts. Refer to EXL-236, "Symptom Table" (with LED headlamps) or EXL-105, "Symptom Table" (with halogen headlamps).

2.CHECK SELF-DIAGNOSIS RESULTS

CONSULT

1. Select “All DTC Reading” mode.
2. Check any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS”. Refer to DAS-271, "DTC Index".

Is any DTC detected?

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

NO >> Replace ADAS control unit. Refer to DAS-210, "Removal and Installation".

LANE DEPARTURE WARNING LAMP DOES NOT TURN ON

Description

INFOID:0000000015204472

The lane departure warning lamp in the combination meter does not turn ON when turning on the ignition switch

Diagnosis Procedure

INFOID:0000000015204473

1.CHECK LANE DEPARTURE WARNING LAMP

CONSULT
1. Select “ICC/ADAS”.
2. Select “LANE DEPARTURE W/L” in “Active Test” mode.
3. Touch “ON” or “OFF” to check that the function operates normally.

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 2.

2.CHECK COMBINATION METER

CONSULT
1. Select “Data Monitor” mode of “METER/M&A”.
2. Select “LDW IND”.
3. Check that the function operates normally according to the following conditions:

Monitor item	Condition	Status
LDW IND	Ignition ON	On
	Ignition OFF	Off

Is the inspection result normal?

YES >> Replace the combination meter. Refer to MWI-81, "Removal and Installation".
NO >> GO TO 3.

3.CHECK SELF-DIAGNOSIS RESULTS OF COMBINATION METER

CONSULT
1. Select “All DTC Reading” mode.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “METER/M&A”. Refer to MWI-32, "DTC Index".

Is any DTC detected?

YES >> Repair or replace malfunctioning parts.
NO >> GO TO 4.

4.CHECK SELF-DIAGNOSIS RESULTS OF ADAS CONTROL UNIT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS”. Refer to DAS-271, "DTC Index".

Is any DTC detected?

YES >> Repair or replace malfunctioning parts.
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

LDP ON INDICATOR LAMP DOES NOT TURNED ON

Description

INFOID:0000000015262166

The LDP ON indicator lamp in the combination meter does not turn ON when turning on the ignition switch

Diagnosis Procedure

INFOID:0000000015262167

1.CHECK LDP ON INDICATOR LAMP

CONSULT
1. Select “ICC/ADAS”.
2. Select “LDP ON IND” in “Active Test” mode.
3. Touch “ON” or “OFF” to check that the function operates normally.

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 2.

2.CHECK COMBINATION METER

CONSULT
1. Select “Data Monitor” mode of “METER/M&A”.
2. Select “LDP IND”.
3. Check that the function operates normally according to the following conditions:

Monitor item	Condition	Status
LDP IND	Ignition ON	On
	Ignition OFF	Off

Is the inspection result normal?

YES >> Replace the combination meter. Refer to MWI-81, "Removal and Installation".
NO >> GO TO 3.

3.CHECK SELF-DIAGNOSIS RESULTS OF COMBINATION METER

CONSULT
1. Select “All DTC Reading” mode.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “METER/M&A”. Refer to MWI-32, "DTC Index".

Is any DTC detected?

YES >> Repair or replace malfunctioning parts.
NO >> GO TO 4.

4.CHECK SELF-DIAGNOSIS RESULTS OF ADAS CONTROL UNIT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS”. Refer to DAS-271, "DTC Index".

Is any DTC detected?

YES >> Repair or replace malfunctioning parts.
NO >> Replace the ADAS control unit. Refer to DAS-210, "Removal and Installation".

NORMAL OPERATING CONDITION

Description

INFOID:0000000015204476

PRECAUTIONS FOR LANE DEPARTURE WARNING (LDW)

- If the LDW system malfunctions, it will cancel automatically, and the LDW malfunction message will appear in the vehicle information display.
- LDW system is only a warning device to inform the driver of a potential unintended lane departure. It will not steer the vehicle or prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of the vehicle at all times.
- LDW system will not operate at speeds below approximately 60 km/h (37 MPH) or if it cannot detect lane markers.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- LDW system may not function properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers; or lane markers covered with water, dirt or snow, etc.
- On roads where the discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. (The LDW system could detect these items as lane markers.)
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)

PRECAUTIONS FOR LANE DEPARTURE PREVENTION (LDP)

- If the LDP system malfunctions, it will cancel automatically, and the LDP malfunction message will appear in the vehicle information display.
- The LDP system will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- LDP system is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers in certain roads, weather or driving conditions.
- Using the LDP system under some conditions of road, lane marker or weather, or when driver change lanes without using the turn signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- The LDP system will not operate at speeds below approximately 60 km/h (37 MPH) or if it cannot detect lane markers.
- Do not use the LDP system under the following conditions as it may not function properly:
- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake or steering parts or suspension parts.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- The functions of the LDP system (warning and, system application of the steering or brakes) may or may not operate properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.

- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (The LDP system could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)

PRECAUTIONS FOR BLIND SPOT WARNING/REAR CROSS TRAFFIC ALERT

- The Blind Spot Warning/Rear Cross Traffic Alert systems are not a replacement for proper driving procedure and are not designed to prevent contact with vehicles or objects. When changing lanes, always use the side and rear mirrors and turn and look in the direction driver will move to ensure it is safe to change lanes. Never rely solely on the Blind Spot Warning system.
- The RCTA system is integrated into the BSW system. There is not a separate selection in the vehicle information display for the RCTA system. When the BSW is disabled, the RCTA system is also disabled.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.
- The side radar may not be able to detect and activate Blind Spot Warning when certain objects are present such as:
- Pedestrians, bicycles, animals.
- Several types of vehicles such as motorcycles.
- Oncoming vehicles.
- Vehicles remaining in the detection zone when driver accelerate from a stop.
- A vehicle merging into an adjacent lane at a speed approximately the same as vehicle.
- A vehicle approaching rapidly from behind.
- A vehicle which vehicle overtakes rapidly.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The side radar detection zone is designed based on a standard lane width. When driving in a wider lane, the side radar may not detect vehicles in an adjacent lane. When driving in a narrow lane, the side radar may detect vehicles driving two lanes away.
- The side radar are designed to ignore most stationary objects, however objects such as guardrails, walls, foliage and parked vehicles may occasionally be detected. This is a normal operating condition.

REAR CROSS TRAFFIC ALERT (RCTA)

- The RCTA system is not a replacement for proper driving procedures and is not designed to prevent contact with vehicles or objects. When backing out of parking space, always use the side and rear mirrors and turn and look in the direction driver will move. Never rely solely on the RCTA system.
- The RCTA system is integrated into the BSW system. There is not a separate selection in the vehicle information display for the RCTA system. When the BSW is disabled, the RCTA system is also disabled.
- Always check surroundings and turn to check what is behind driver before backing up. The side radar detect approaching (moving) vehicles. The side radar cannot detect every object such as:
- Pedestrians, bicycles, motorcycles, animals or child operated toy vehicles.
- A vehicle that is passing at speeds greater than approximately 30 km/h (19 MPH).
- A vehicle that is passing at speeds lower than approximately 8 km/h (5 MPH).
- The side radar may not detect approaching vehicles in certain situations:
- When a vehicle parked next to you obstructs the beam of the side radar.
- When the vehicle is parked in an angled parking space.
- When the vehicle is parked on inclined ground.
- When an approaching vehicle turns into own vehicle's parking lot aisle.
- When the angle formed by own vehicle and approaching vehicle is small.
- The following conditions may reduce the ability of the radar to detect other vehicles:
- Severe weather
- Road spray
- Ice build up on the vehicle
- Frost build up on the vehicle
- Dirt build up on the vehicle

- Do not attach stickers (including transparent material), install accessories or apply additional paint near the side radar. These conditions may reduce the ability of the radar to detect other vehicles.
- Excessive noise (e.g. audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.

REMOVAL AND INSTALLATION

ICC STEERING SWITCH

Removal and Installation

INFOID:0000000015187369

The steering switch is serviced as an assembly. Refer to CCS-208, "Removal and Installation".

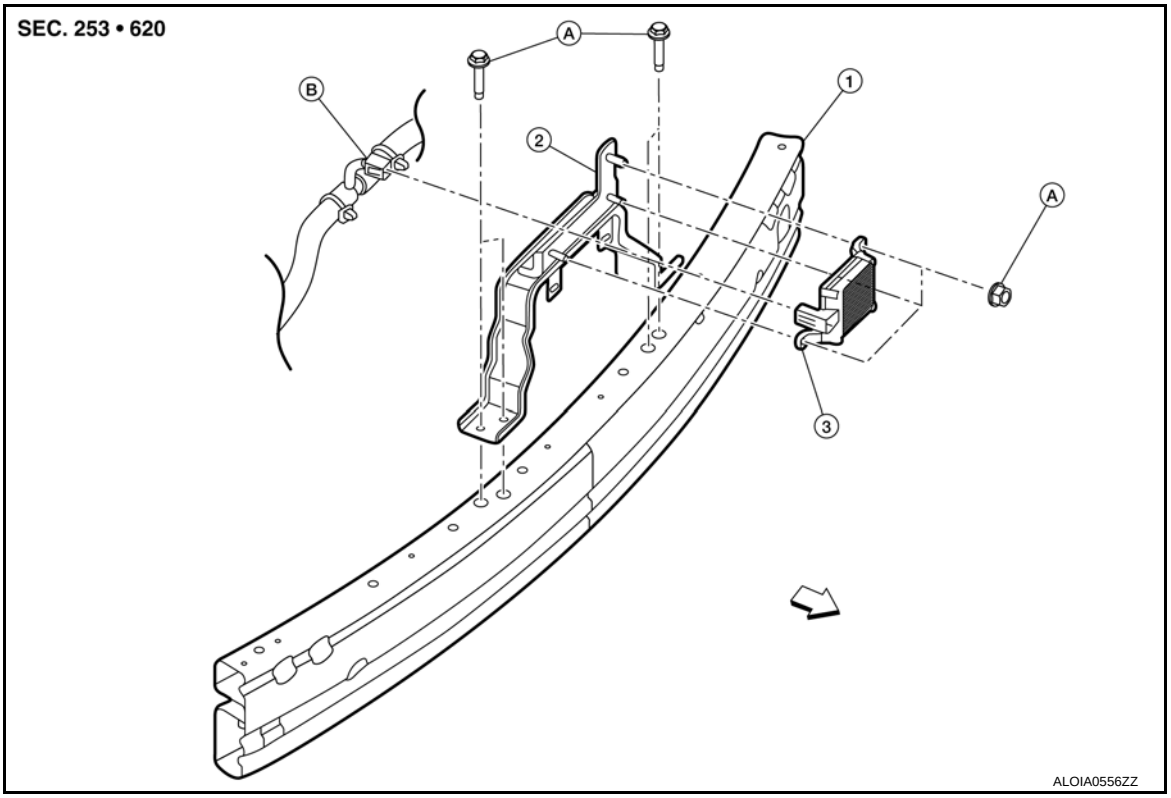
CAUTION:

Always perform ICC system action test to check that the ICC system operates normally after replacing the ICC sensor or repairing any ICC system malfunction. Refer to CCS-102, "Description".

ICC SENSOR

Exploded View

INFOID:0000000014903247



1. Front bumper reinforcement
2. ICC sensor bracket
3. ICC sensor
A. Refer to INSTALLATION.
B. ICC sensor harness connector
⇦ Front

Removal and Installation

INFOID:0000000014903248

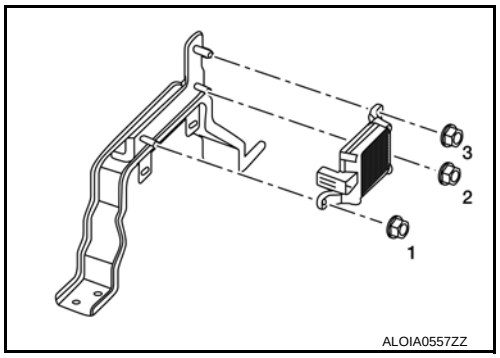
REMOVAL

1. Remove front grille. Refer to EXT-33, "Removal and Installation".
2. Disconnect harness connector from ICC sensor.
3. Remove ICC sensor nuts and remove ICC sensor.
4. Remove bolts and remove ICC sensor bracket (if necessary).

INSTALLATION

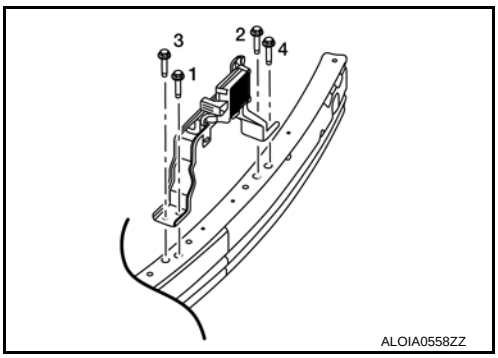
1. Install ICC sensor and ICC sensor nuts finger-tight.
2. Tighten ICC sensor nuts to the specified torque in the sequence shown.

ICC sensor nuts : 10.0 N·m (1.0 kg-m, 7 ft-lb)



3. Install ICC sensor bracket and ICC sensor bracket bolts finger-tight (if necessary).
4. Tighten ICC sensor bracket bolts to the specified torque in the sequence shown.

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



5. Installation of the remaining components is in the reverse order of removal.

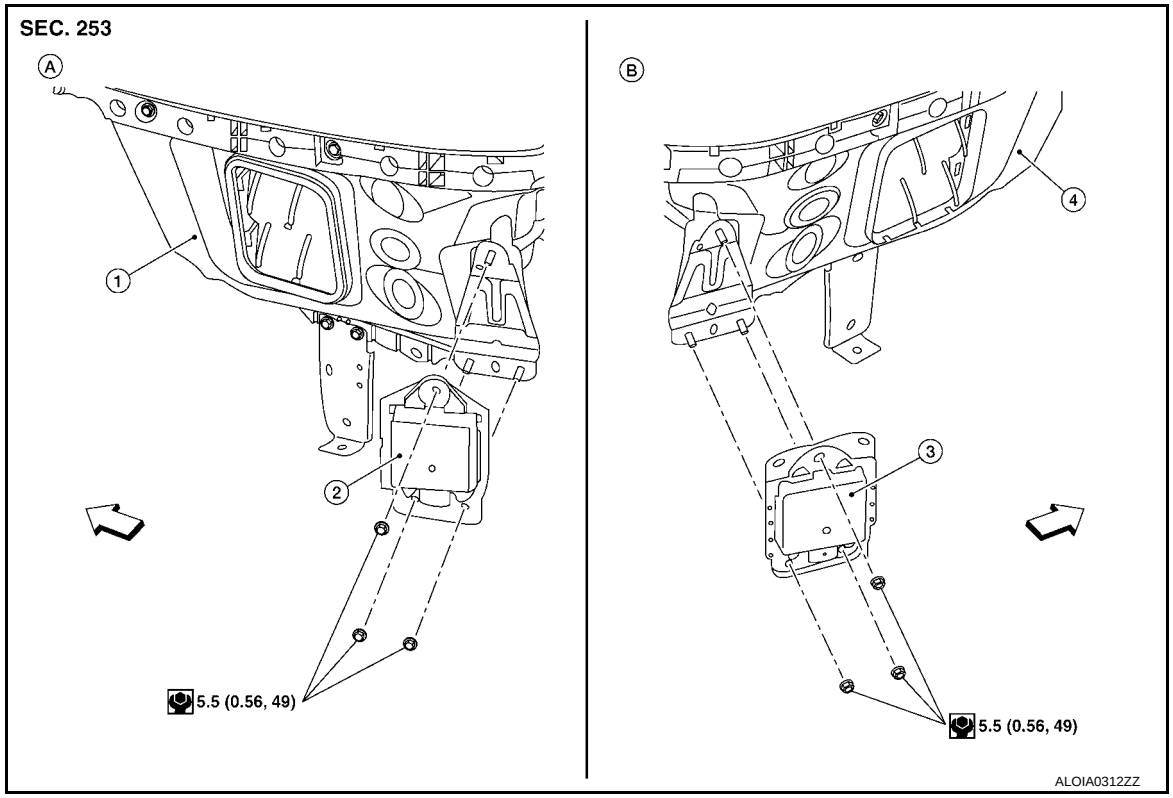
CAUTION:

- **Always perform "ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR" after removal, installation, or replacement of ICC sensor. Refer to DAS-319, "Description".**
- **Do not drop or shock ICC sensor.**
- **Make sure ICC sensor harness is installed without any twists.**

SIDE RADAR

Exploded View

INFOID:0000000014903249



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

⇦ Front

Removal and Installation

INFOID:0000000014903250

REMOVAL

1. Remove the rear bumper fascia. Refer to EXT-29, "Removal and Installation".
2. Disconnect the harness connector from the side radar.
3. Remove nuts and remove the side radar.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **Do not use the side radar if the lens has flaws.**
- **Perform Blind Spot Warning system action test after side radar installation is complete. Refer to DAS-330, "BSW : Description".**

NOTE:

- Always lock the side radar connector.
- Do not touch the side radar lens and keep lens area clean.

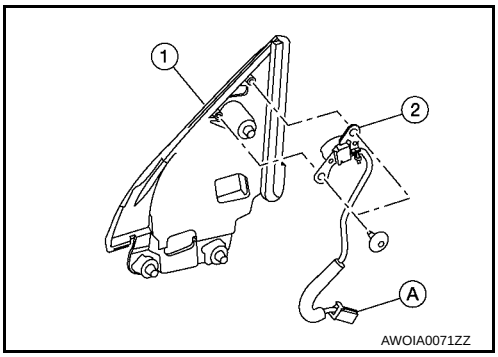
BLIND SPOT WARNING INDICATOR

Removal and Installation

INFOID:0000000014903251

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

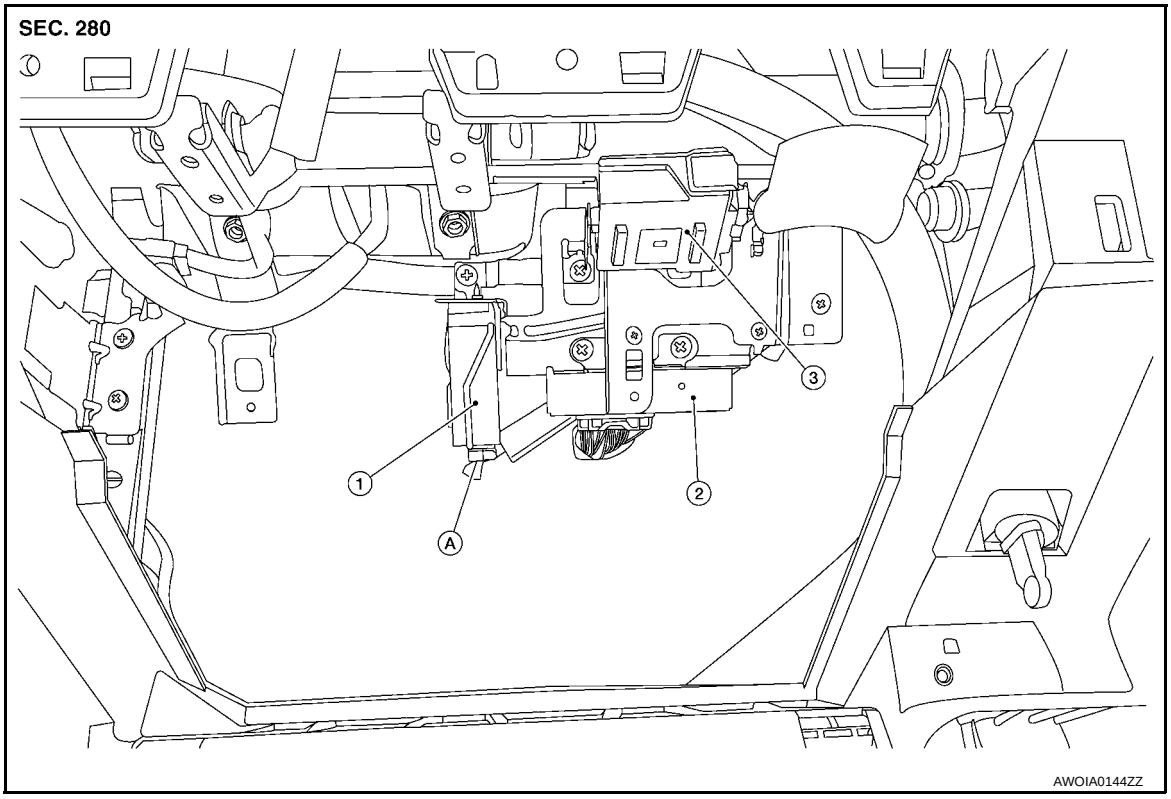
Perform Blind Spot Warning system action test after blind spot warning indicator installation is complete. Refer to DAS-330, "BSW : Description".

WARNING SYSTEMS BUZZER

Exploded View

INFOID:0000000014903252

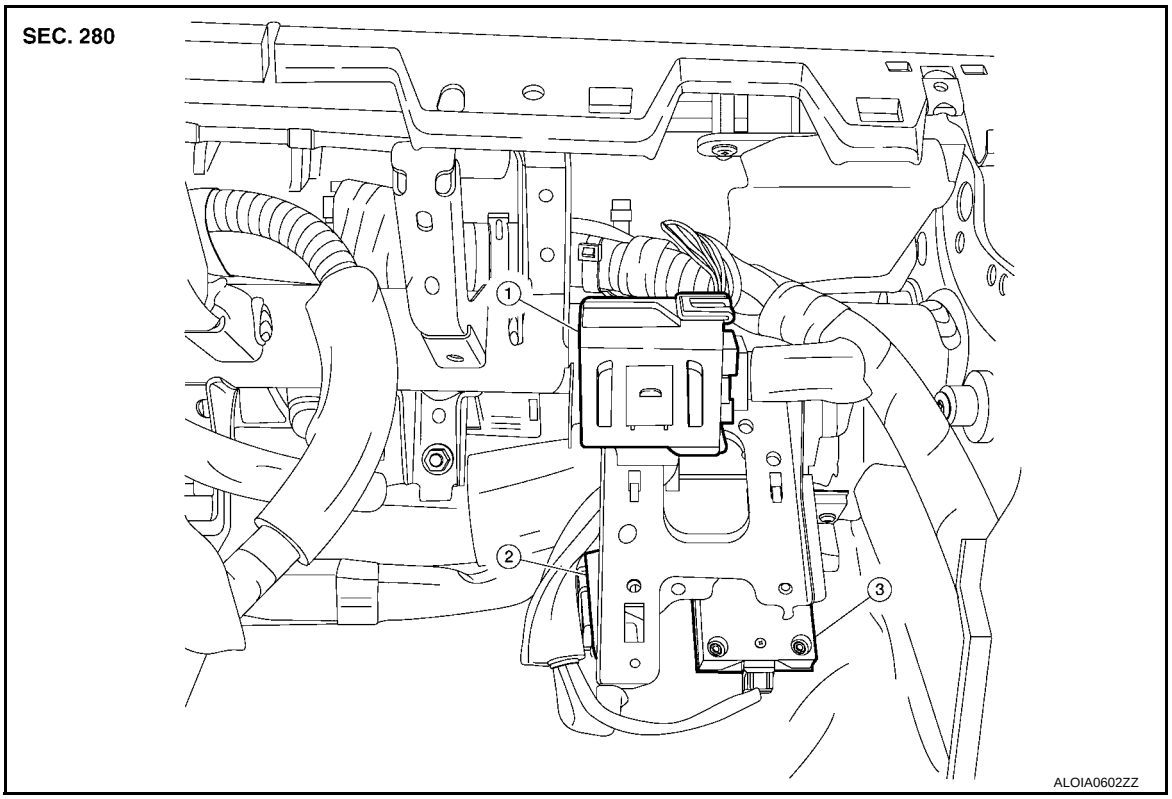
With Around View Monitor



1. Warning systems buzzer
2. Around view monitor control unit
3. Chassis control module

A. Harness connector

Without Around View Monitor



1. Chassis control module
2. ADAS control unit 2
3. Warning systems buzzer

Removal and Installation

INFOID:0000000014903253

REMOVAL

1. Remove glove box. Refer to IP-23, "Removal and Installation".
2. Disconnect harness connector from warning systems buzzer.
3. Remove screw and remove warning systems buzzer from vehicle.

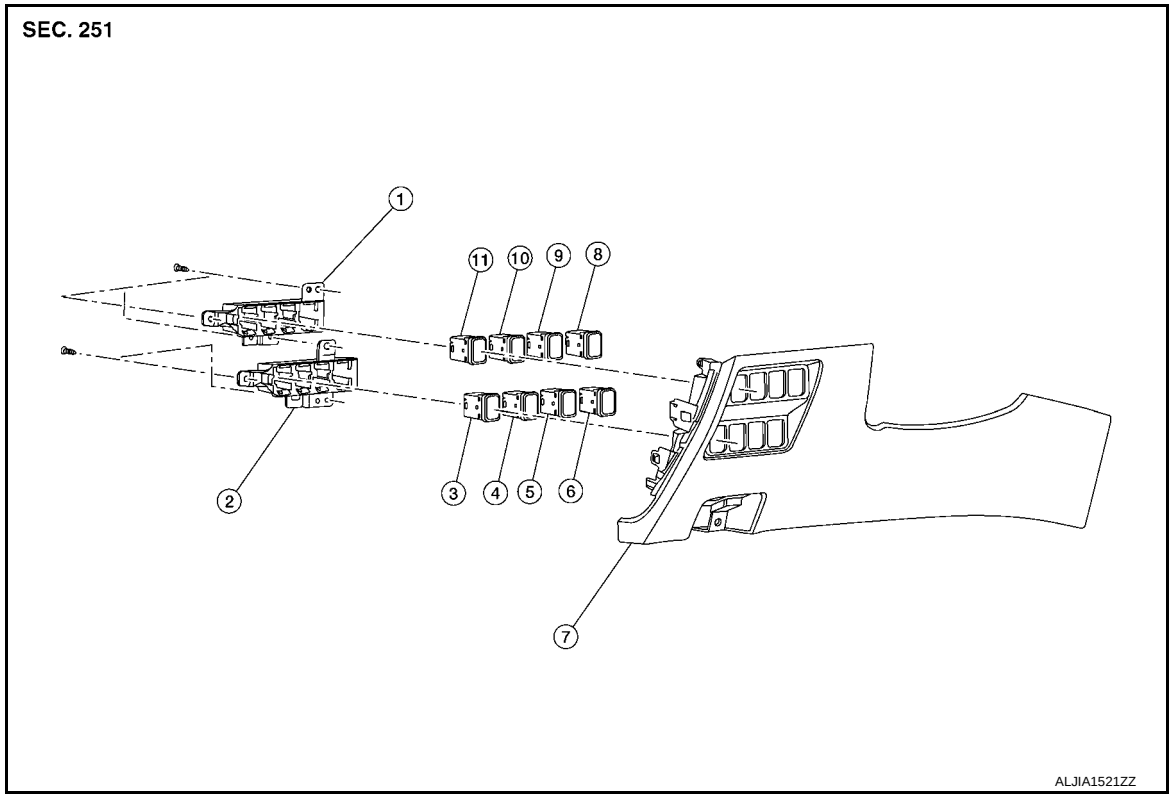
INSTALLATION

Installation is in the reverse order of removal.

WARNING SYSTEMS SWITCH

Exploded View

INFOID:0000000014903254



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

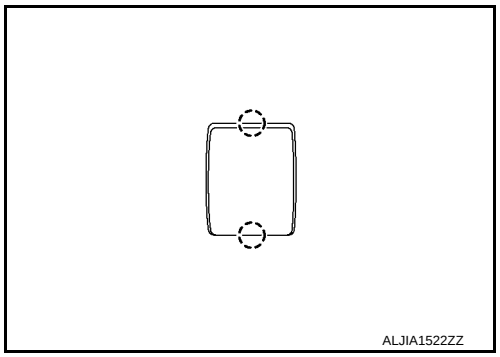
Removal and Installation

INFOID:0000000014903255

REMOVAL

1. Remove instrument lower panel LH. Refer to IP-22, "Removal and Installation".
2. Remove screws and upper switch carrier, then remove screws and lower switch carrier.
3. Release pawls using suitable tool, then remove warning systems switch from the lower switch carrier.

: Pawl



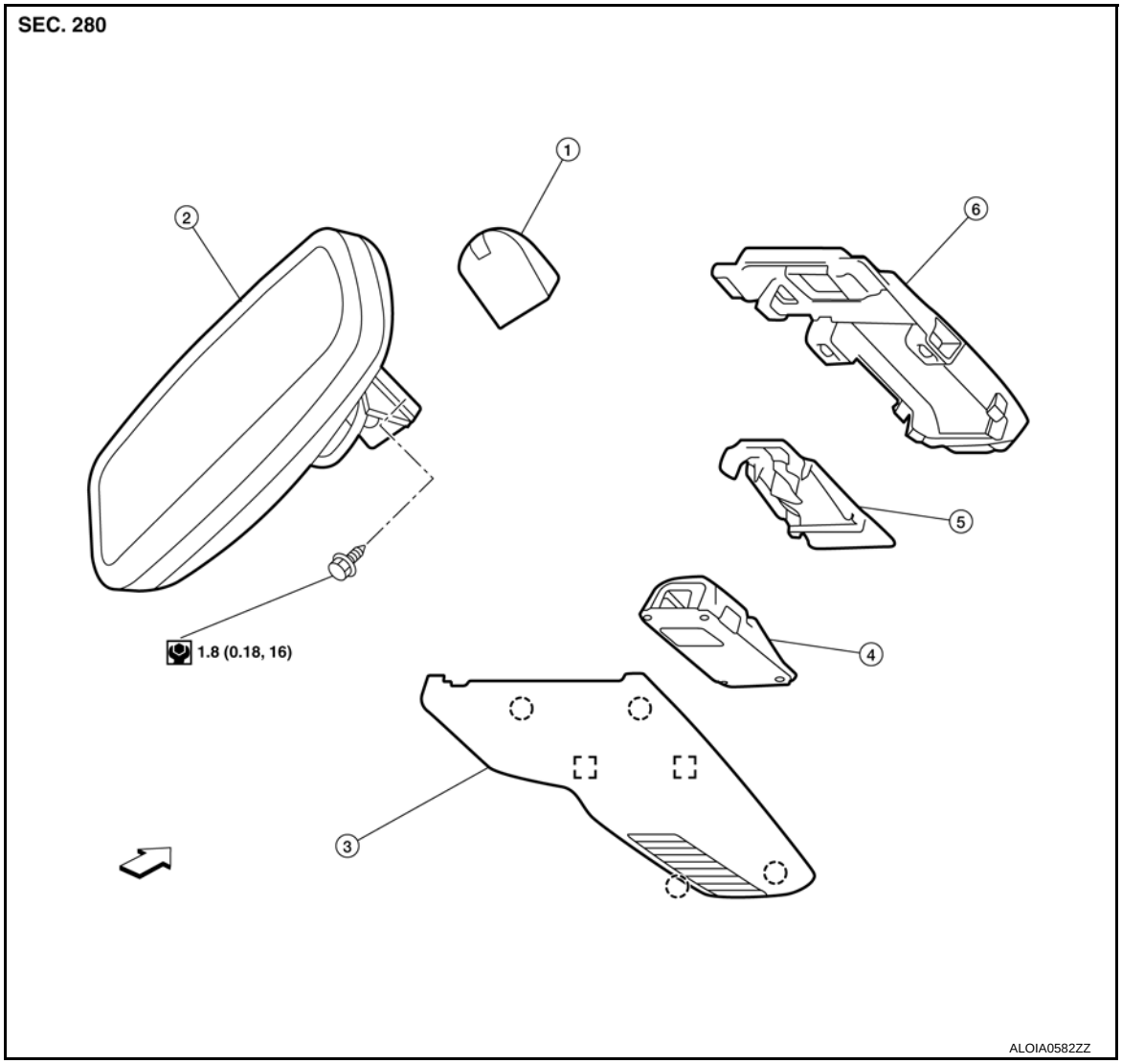
INSTALLATION

Installation is in the reverse order of removal.

LANE CAMERA UNIT

Exploded View

INFOID:0000000014903256



1. Mirror base
2. Inside mirror
3. Lane camera unit cover
4. Lane camera unit
5. Lane camera unit bracket
6. Lane camera unit cover bracket

Pawl | Metal clip | Front

Removal and Installation

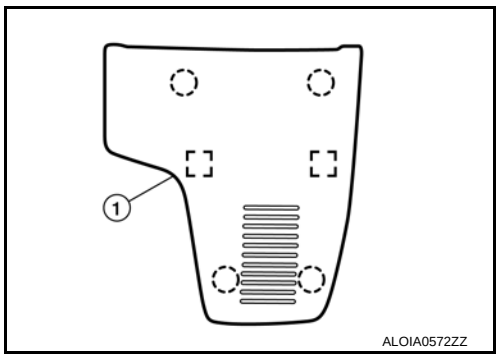
INFOID:0000000014903257

REMOVAL

1. Release clips and pawls using suitable tool and remove the lane camera unit cover (1).

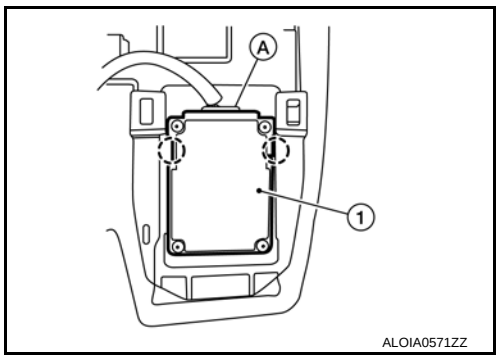
: Pawl

: Metal Clip



2. Release pawls using suitable tool and remove the lane camera unit (1) from the lane camera unit bracket.
3. Disconnect harness connector (A) from the lane camera unit and remove.

: Pawl



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **Do not touch or shock the lane camera unit lens area or drop the lane camera unit.**
- **Make sure that the lane camera unit harness is not twisted after installation.**
- **Align the lane camera unit cover clips with the cover bracket holes and install by hand. Do not use excessive force.**
- **Perform "ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT" when removing or replacing the lane camera unit. Refer to DAS-320, "Description".**

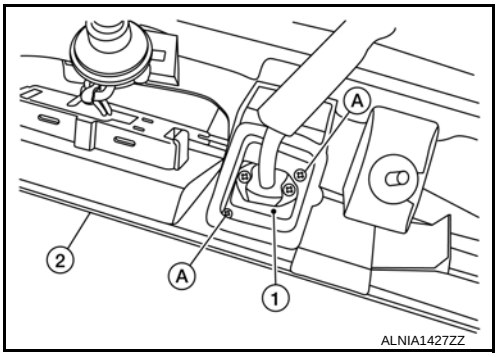
REAR VIEW CAMERA

Removal and Installation

INFOID:0000000014903258

REMOVAL

1. Remove back door outer upper finisher. Refer to EXT-63, "Removal and Installation".
2. Remove rear view camera screws (A), then remove rear view camera (1) from the back door outer upper finisher (2).



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform camera image calibration if equipped with around view monitor. Refer to AV-406, "Description".

PRECAUTION

PRECAUTIONS

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

INFOID:0000000014903259

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.**

Precaution for Work

INFOID:0000000014903260

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

- Water soluble dirt:

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

- Oily dirt:

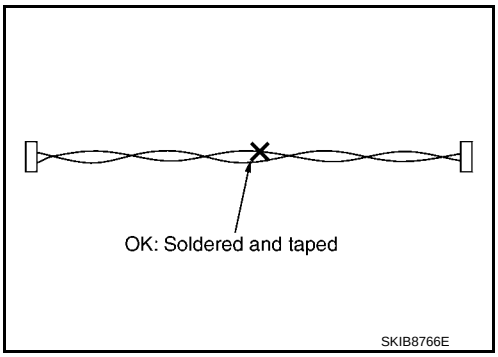
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

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

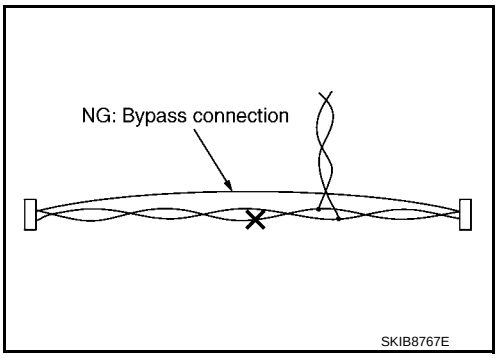
Precautions for Harness Repair

INFOID:0000000014903261

- Solder the repaired area and wrap tape around the soldered area.
  NOTE:
  A fray of twisted lines must be within 110 mm (4.33 in).



- Bypass connection is never allowed at the repaired area.
  NOTE:
  Bypass connection may cause CAN communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



- Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

Precautions for Chassis control

INFOID:0000000014903262

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

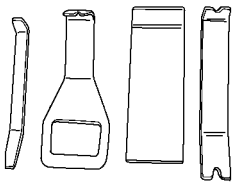
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000014903263

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

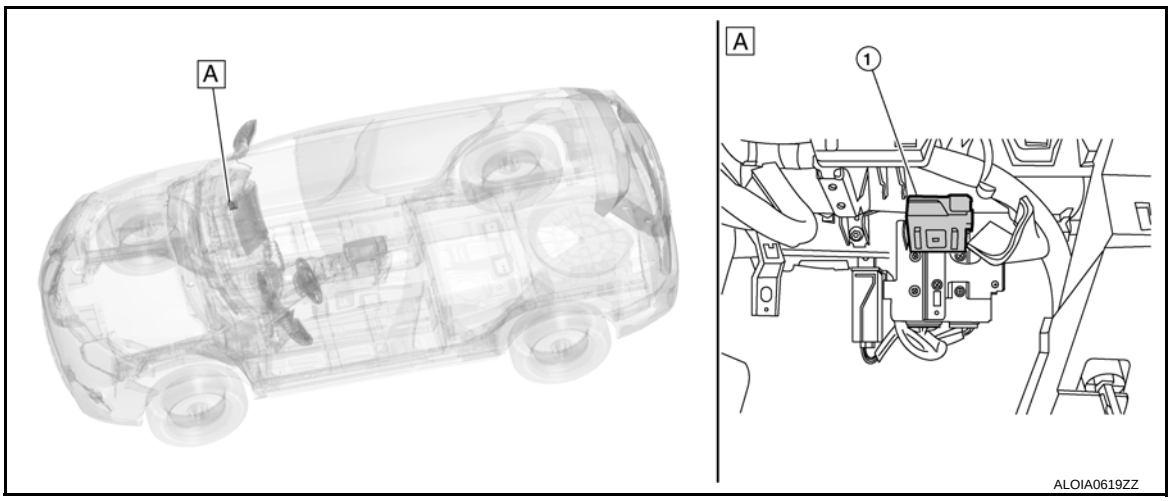
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000014903264



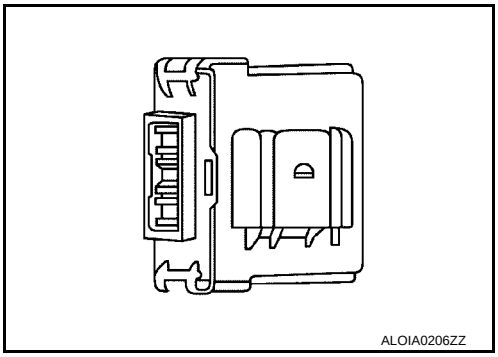
A. View with glove box assembly removed

No.	Component parts	Function
1.	Chassis control module	DAS-416, "Chassis Control Module"

Chassis Control Module

INFOID:0000000014903265

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



SYSTEM

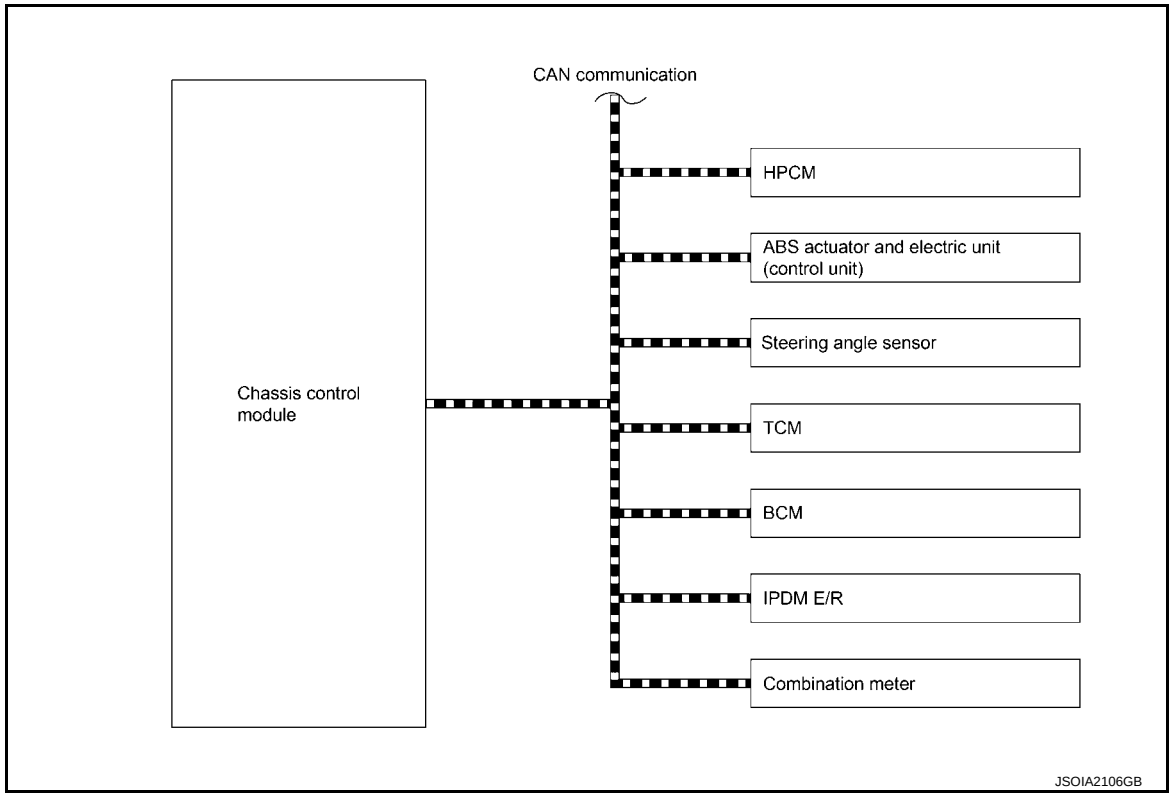
System Description

INFOID:0000000015216673

- 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-420, "ACTIVE TRACE CONTROL FUNCTION : System Description"
Active engine brake function	DAS-426, "ACTIVE ENGINE BRAKE FUNCTION : System Description"
Active ride control function	DAS-429, "ACTIVE RIDE CONTROL FUNCTION : System Description"

SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

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

Component parts	Signal description
HPCM	Mainly transmits the following signals to chassis control module via CAN communication. • Accelerator pedal position signal • Engine speed signal • Estimate drive torque signal • Request drive torque signal • HPCM malfunction 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. • 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 Mainly receives the following signals from chassis control module via CAN communication. • Active trace control signal • Active engine brake control signal • Active ride control signal
BCM	Mainly transmits the following signals to chassis control module via CAN communication. • Stop lamp switch signal • Turn signal switch signal • Brake pedal position switch signal • BCM malfunction signal
IPDM E/R	Mainly transmits the following signals to chassis control module via CAN communication. • Ignition switch ON signal
TCM	Mainly transmits the following signals to chassis control module via CAN communication. • Current gear position signal • CVT target gear ratio signal • CVT accept permission signal • Input speed signal • TCM malfunction signal
Combination meter	Mainly transmits the following signals to chassis control module via CAN communication. • 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. • 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
Steering angle sensor	Mainly transmits the following signals to chassis control module via CAN communication. • Steering angle sensor signal

Fail-Safe (Chassis Control Module)

INFOID:0000000015259633

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

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

DTC	Vehicle condition
C1BC4-00	The following functions are suspended: • Active Ride Control (brake)
C1BC5-00	The following functions are suspended: • Active Trace Control
C1BC6-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
U1000-00 U1A34-00 U1A35-00 U1A36-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A39-00	Normal control
U1A3B-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake) • Active Engine Brake
U1A42-00 U1A43-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
U1A48-00 U1A4A-00 U1A4B-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A4E-00	The following functions are suspended: • Active Ride Control

ACTIVE TRACE CONTROL FUNCTION

ACTIVE TRACE CONTROL FUNCTION : System Description

INFOID:0000000015216674

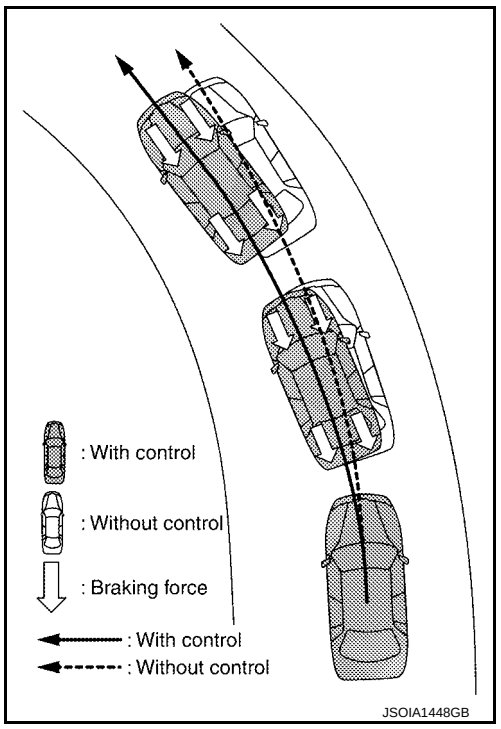
- The steering operation condition by the driver and the information from multiple sensors are computed by the chassis control module, and a command is transmitted to the ABS actuator and electric unit (control unit).
- The ABS actuator and electric unit (control unit) control the brake based on the 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-434, "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.
- 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:

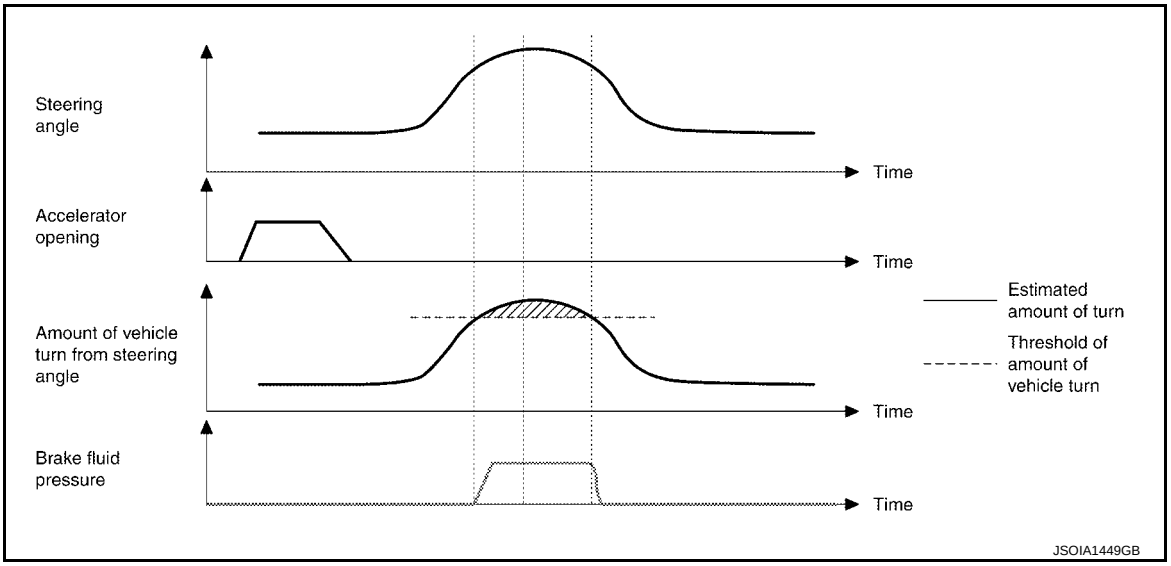
- Active trace control function may not be effective in all driving environments (traction conditions, etc.).
- When active trace control function operates, vibration may be transmitted to the brake pedal, an operation sound may be heard, and a feeling of deceleration may be felt. These are not symptoms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

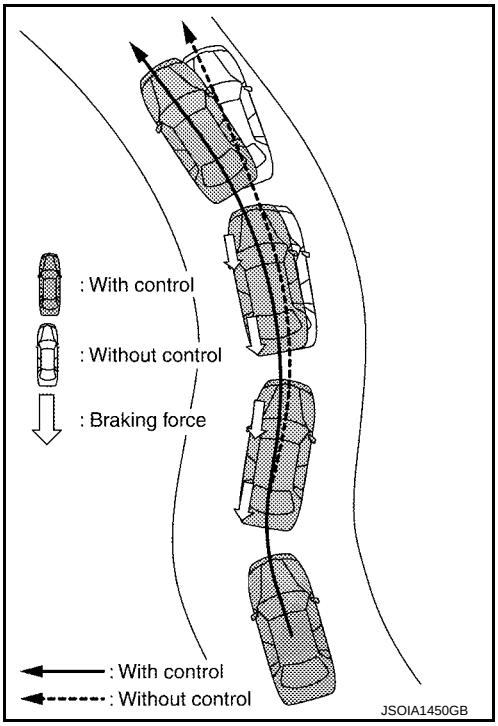
- This performs assistance when switching from deceleration (brake operation) to acceleration (accelerator operation) when driving on a curve. It operates the brake automatically to stabilize cornering, and smoothens acceleration in the longitudinal and lateral directions.



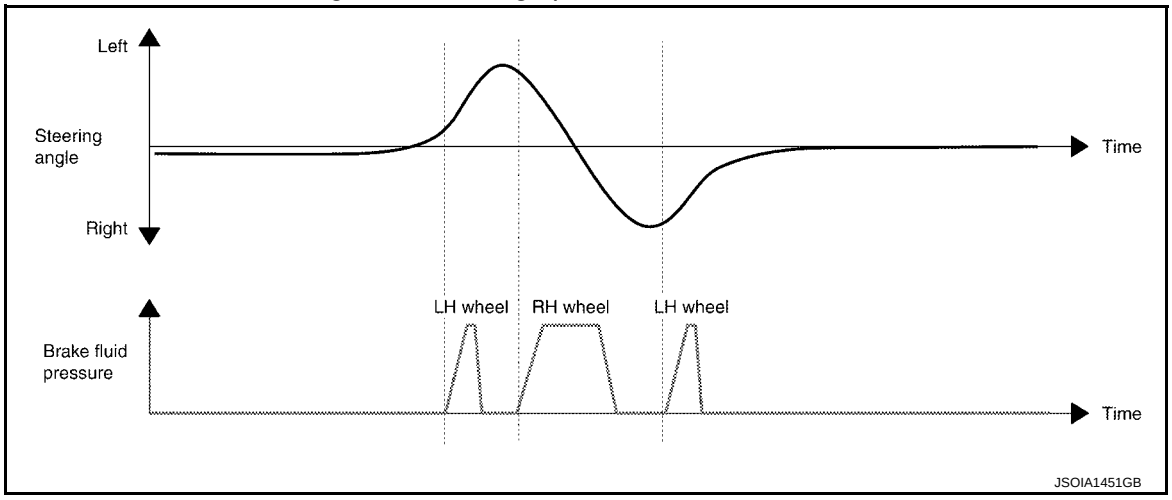
- The brake is controlled according to the steering operation condition of the driver and the cornering condition of the vehicle.



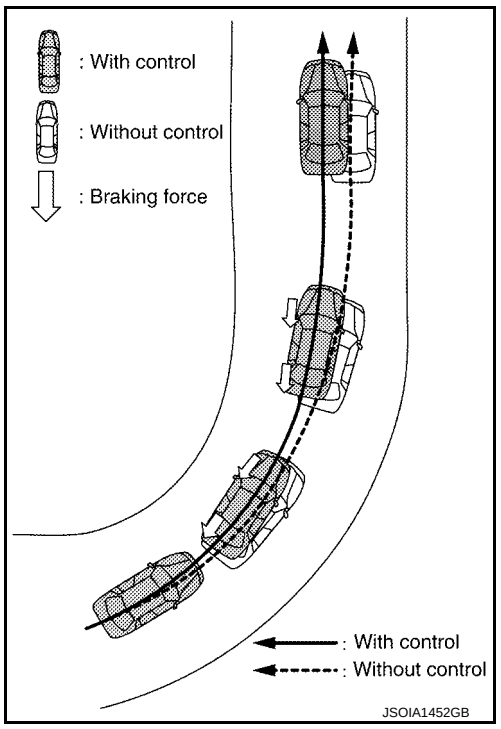
- For the purpose of improving responsiveness during excessive steering operation, such as emergency avoidance steering, etc., the brake is applied to the inside wheel of the steering direction and causes turning moment to be generated.



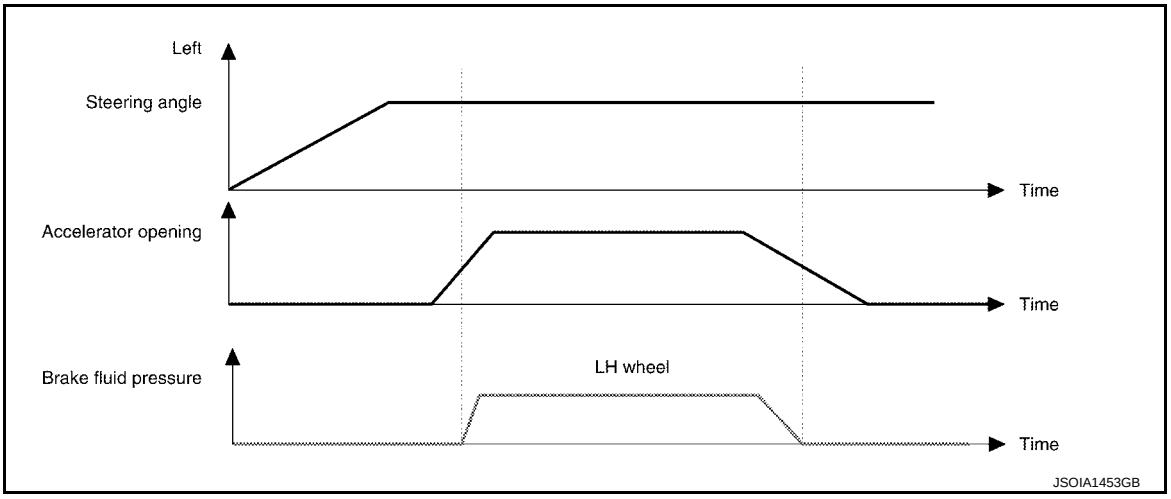
- The brake is controlled according to the steering operation condition of the driver.



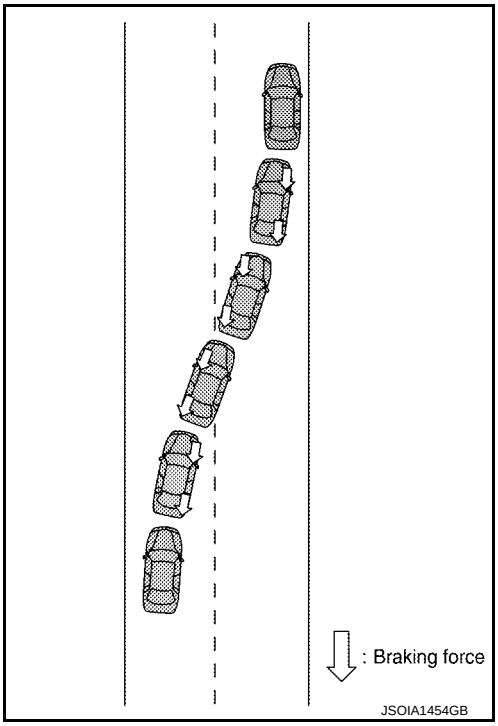
- When driving on a curve, change of the steering operation angle is controlled, vehicle movement is smoothened and cornering with a stable feeling is realized simultaneously, by controlling the brake on the inner wheel, according to accelerator operation.



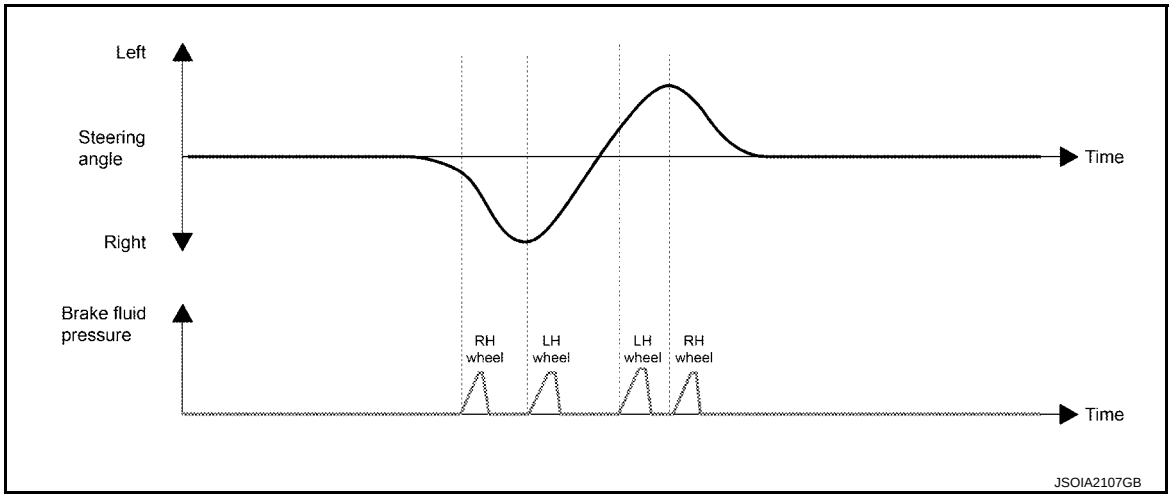
- The brake is controlled according to the steering operation condition of the driver and the cornering condition of the vehicle.



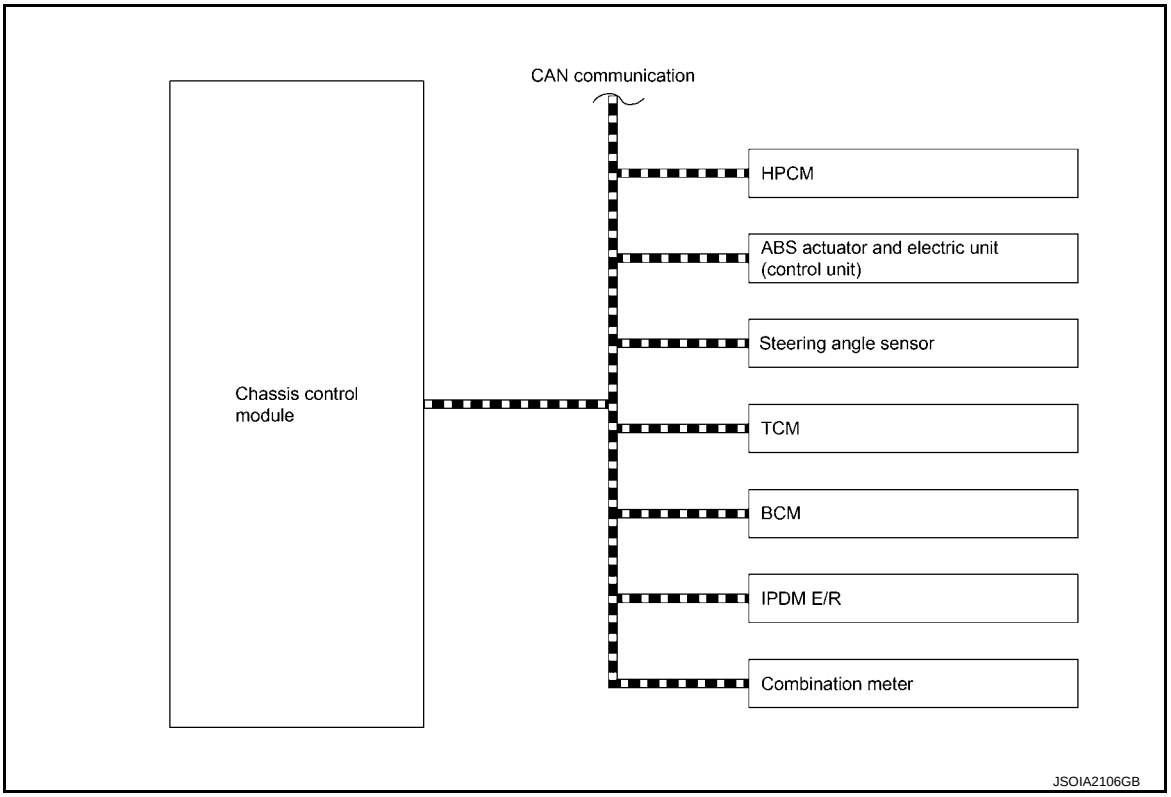
• When performing quick lane changes, and other excessive steering operations, the brake is operated automatically, and erratic vehicle behavior due to steering operation is reduced.



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



SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

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

Component parts	Signal description
HPCM	Mainly transmits the following signals to chassis control module via CAN communication. • 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)	Mainly transmits the following signals to chassis control module via CAN communication. • 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 Mainly receives the following signals from chassis control module via CAN communication. • Active trace control signal
BCM	Mainly transmits the following signals to chassis control module via CAN communication. • Stop lamp switch signal
IPDM E/R	Mainly transmits the following signals to chassis control module via CAN communication. • Ignition switch ON signal
TCM	Mainly transmits the following signals to chassis control module via CAN communication. • 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. • Active trace control setting change request signal Mainly receives the following signals from chassis control module via CAN communication. • Curve display request signal • Tire display request signal • Active trace control setting display request signal • Active trace control display request signal • Chassis control malfunction display request signal
Steering angle sensor	Mainly transmits the following signals to chassis control module via CAN communication. • Steering angle sensor signal

ACTIVE ENGINE BRAKE FUNCTION

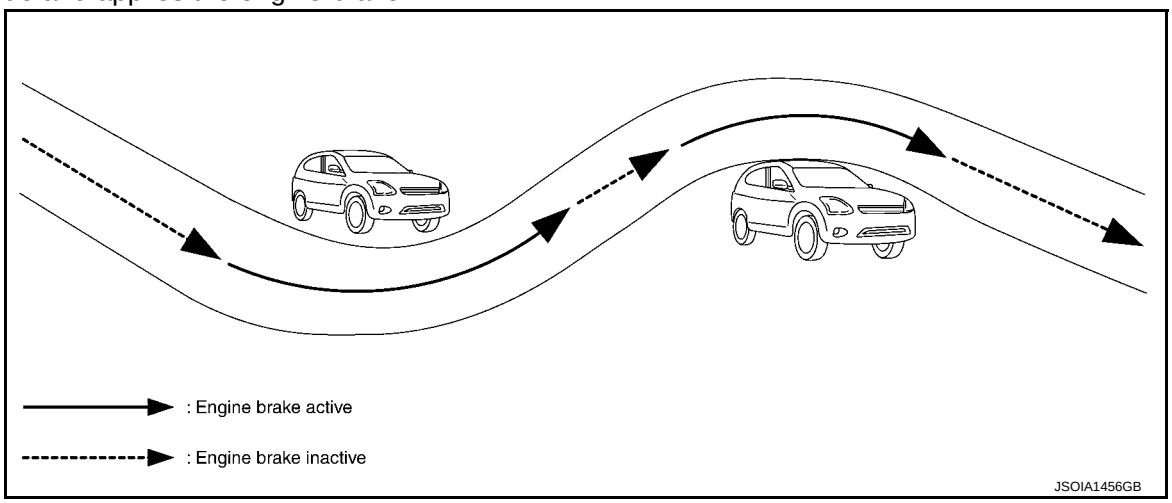
ACTIVE ENGINE BRAKE FUNCTION : System Description

INFOID:0000000015216675

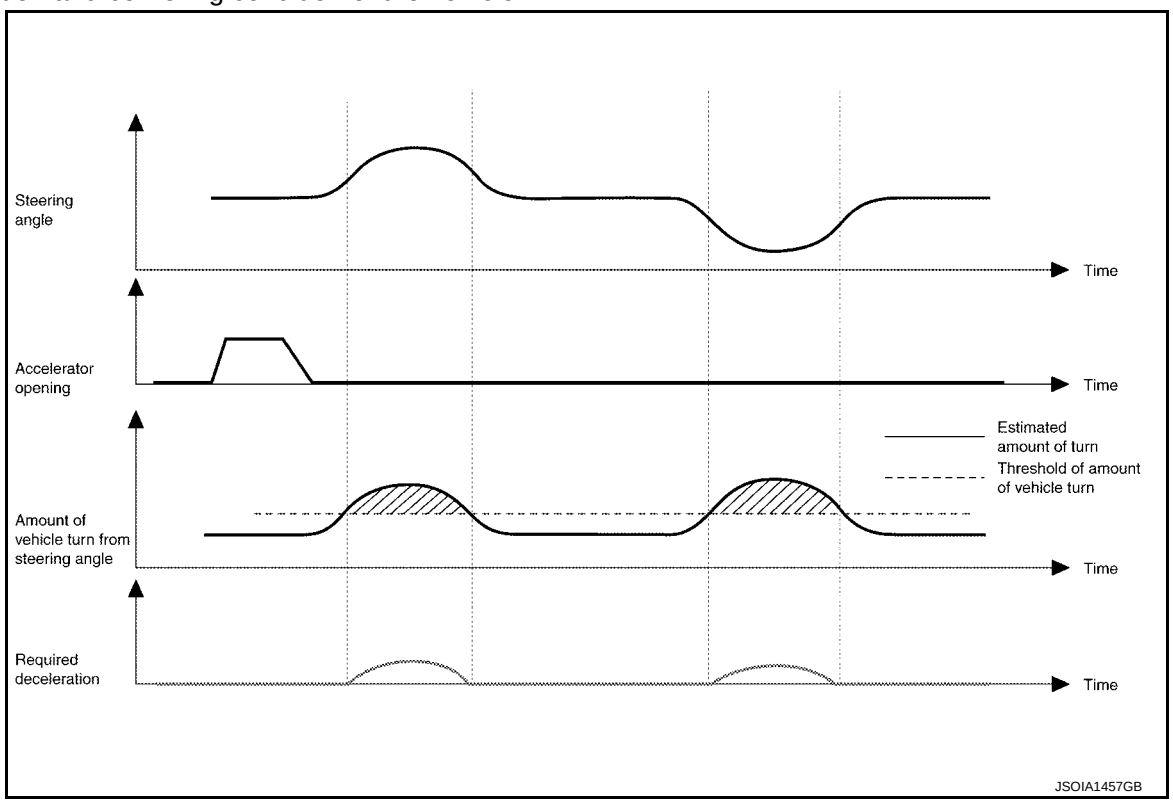
- When the active engine brake (cornering control) function operates, operation display can be checked on the information display in the combination meter. Refer to DAS-434, "INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display".
- The active engine brake function can be turned ON/OFF by operating the steering switch.

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.

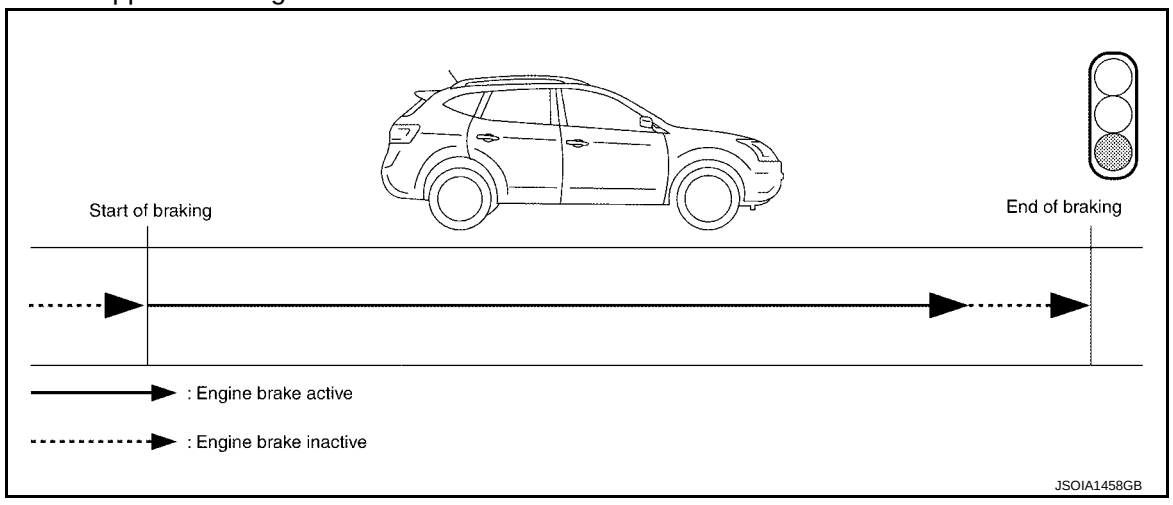


- The transaxle is controlled according to the steering operation of the driver, as well as the accelerator pedal condition and cornering condition of the vehicle.

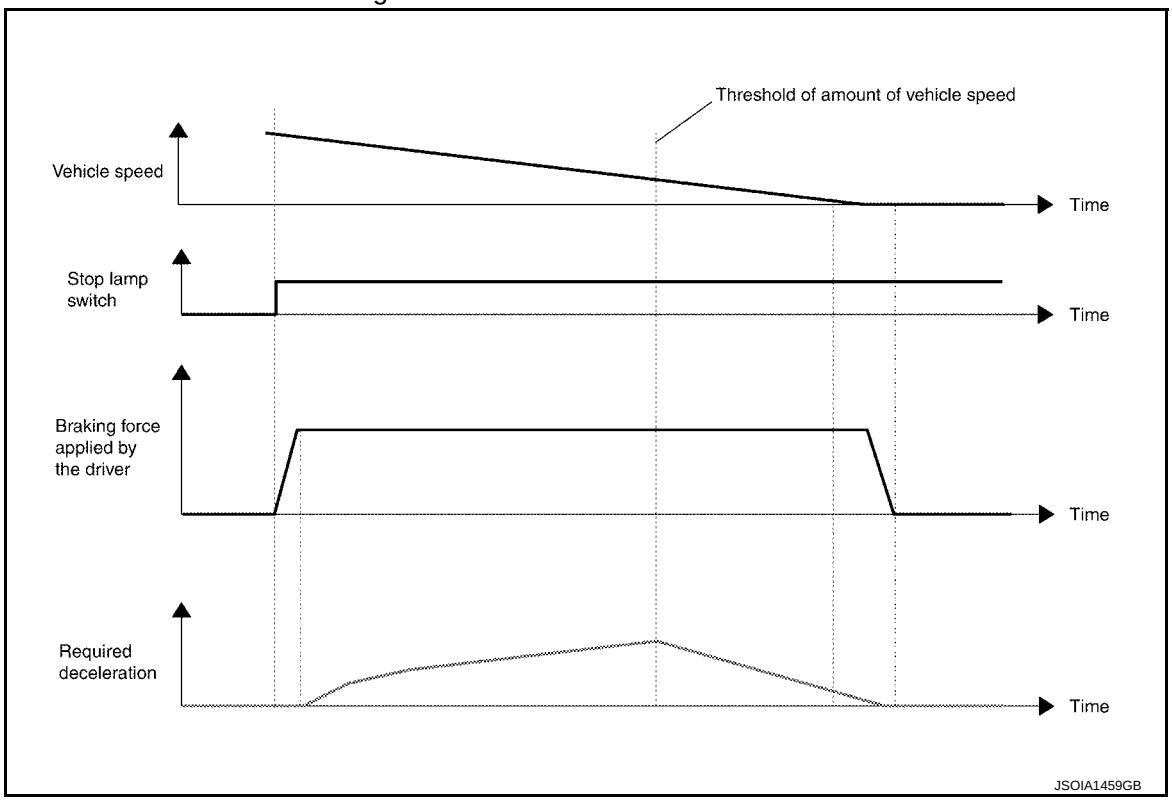


BRAKING CONTROL

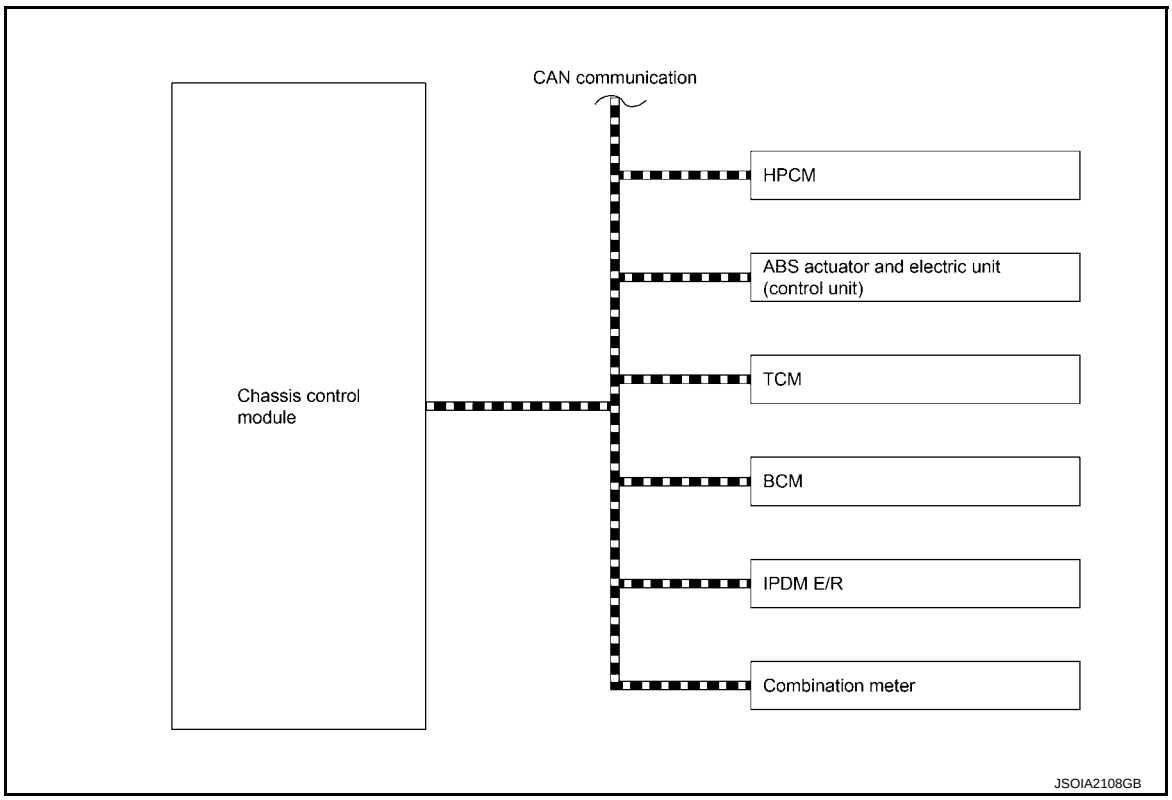
- For the purpose of improving the feeling of effectiveness of the brake when decelerating, the brake operation amount of the driver is computed by the chassis control module, and a command is transmitted to TCM.
- Based on the command from the chassis control module, TCM shifts the gear ratio of the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



- The transaxle is controlled according to the brake condition.



SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

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

Component parts	Signal description
HPCM	Mainly transmits the following signals to chassis control module via CAN communication. • 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. • 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. • Active engine brake control signal
BCM	Mainly transmits the following signals to chassis control module via CAN communication. • Stop lamp switch signal
IPDM E/R	Mainly transmits the following signals to chassis control module via CAN communication. • Ignition switch ON signal
TCM	Mainly transmits the following signals to chassis control module via CAN communication. • CVT accept permission signal
Combination meter	Mainly transmits the following signals to chassis control module via CAN communication. • Active engine brake setting change request signal Mainly receives the following signals from chassis control module via CAN communication. • Curve display request signal • Tire display request signal • Active engine brake setting display request signal • Active engine brake display request signal

ACTIVE RIDE CONTROL FUNCTION

ACTIVE RIDE CONTROL FUNCTION : System Description

INFOID:0000000015216676

- 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-434, "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.

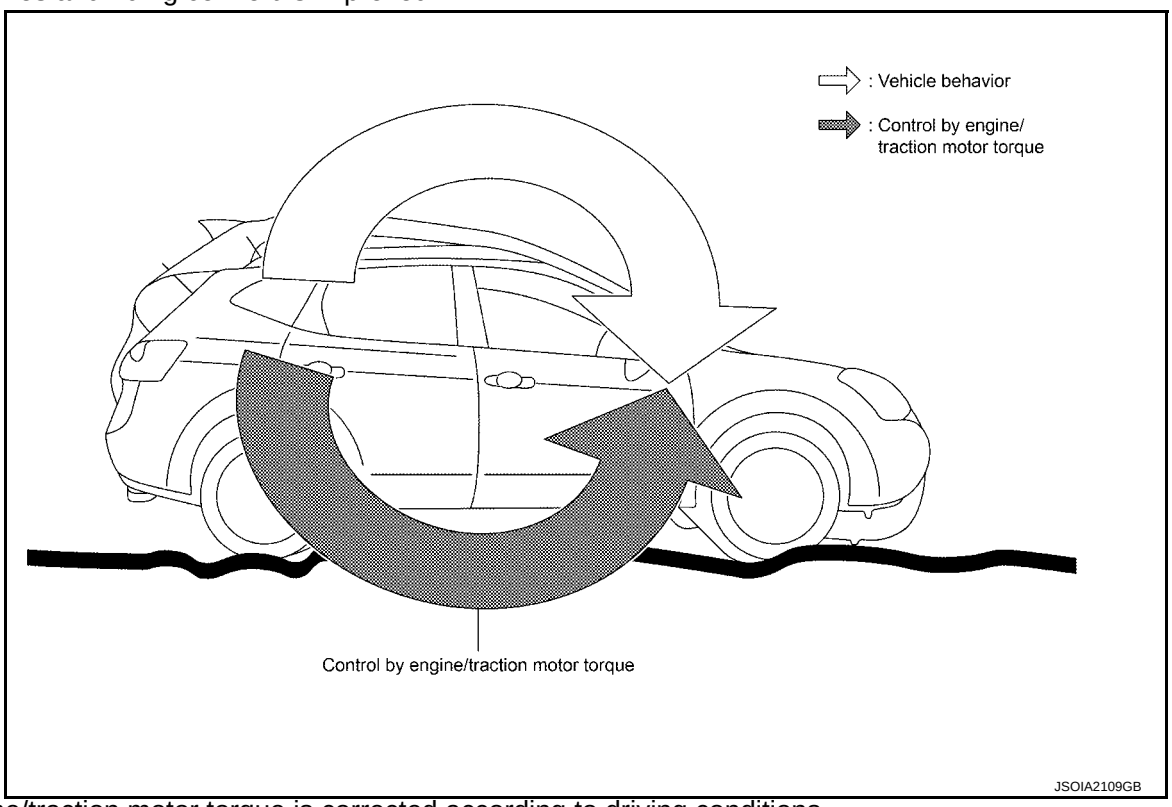
NOTE:
Active ride control function may not be effective in all driving environments (traction conditions, etc.).

ENGINE/TRACTION MOTOR CONTROL

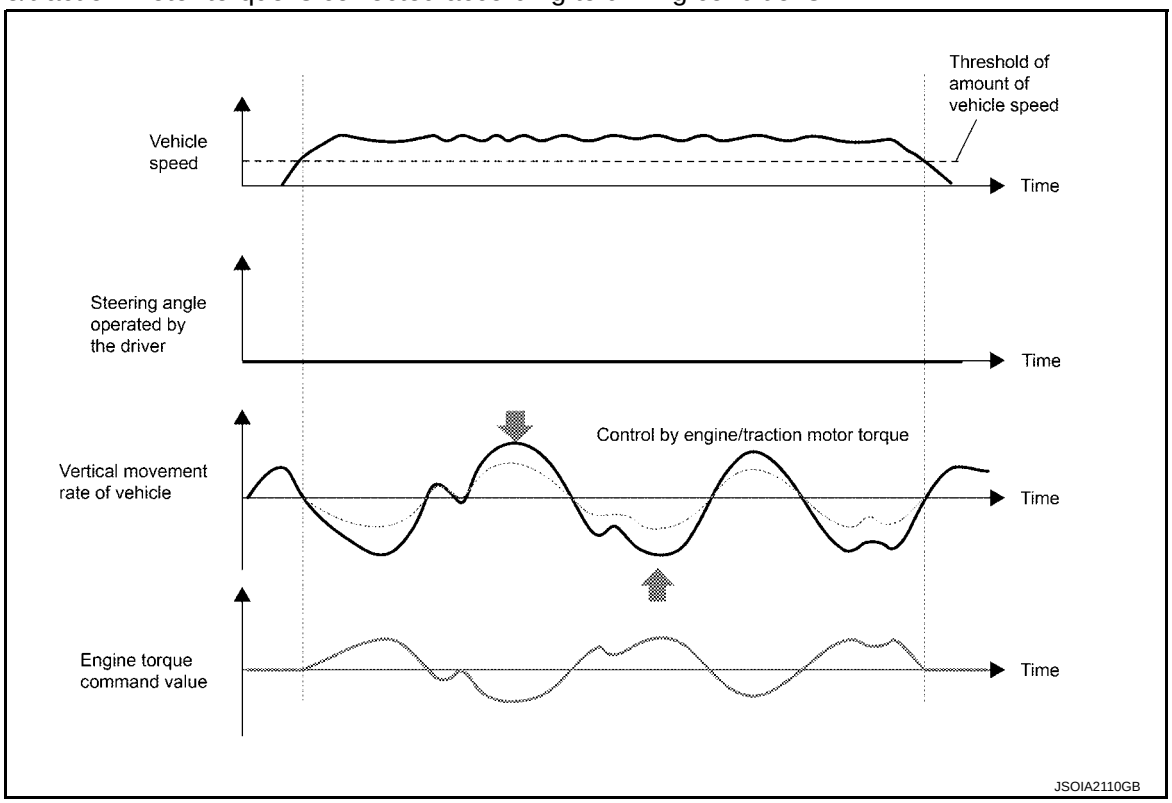
Riding Comfort Improvement

- 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 HPCM.
- Based on the command from the chassis control module, HPCM corrects the engine/traction motor torque that is output.

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



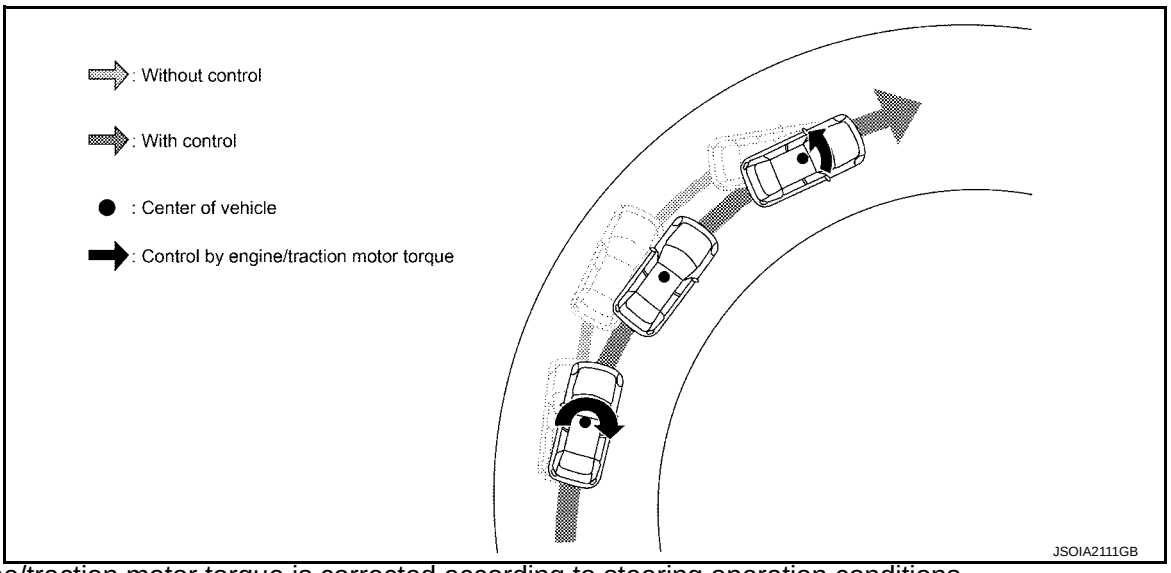
- Engine/traction motor torque is corrected according to driving conditions.



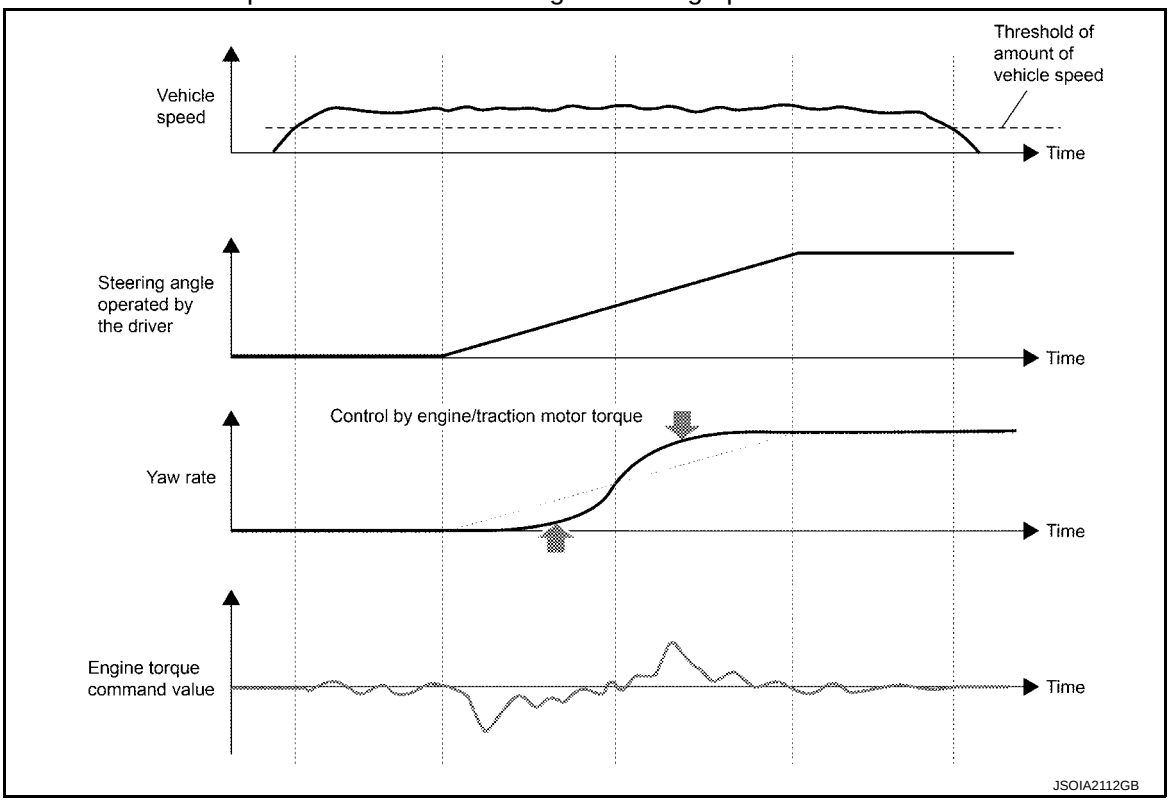
Steering Stability

- 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 HPCM.
- Based on the command from the chassis control module, HPCM corrects the engine/traction motor torque that is output.

• By correcting the engine/traction motor torque that is output, vehicle behavior during cornering is smoothened.



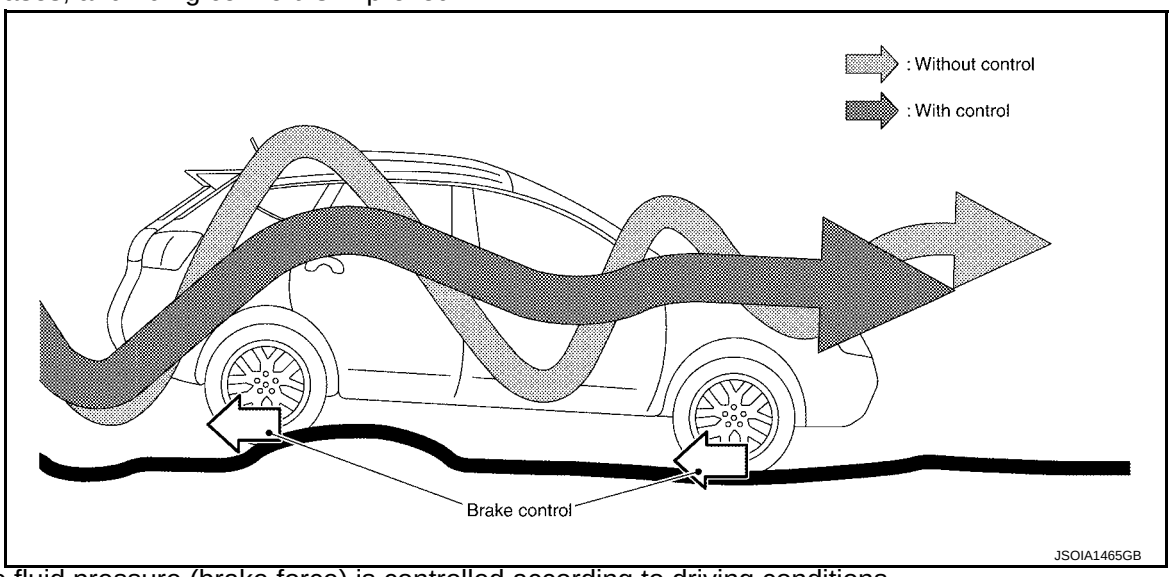
- Engine/traction motor torque is corrected according to steering operation conditions.



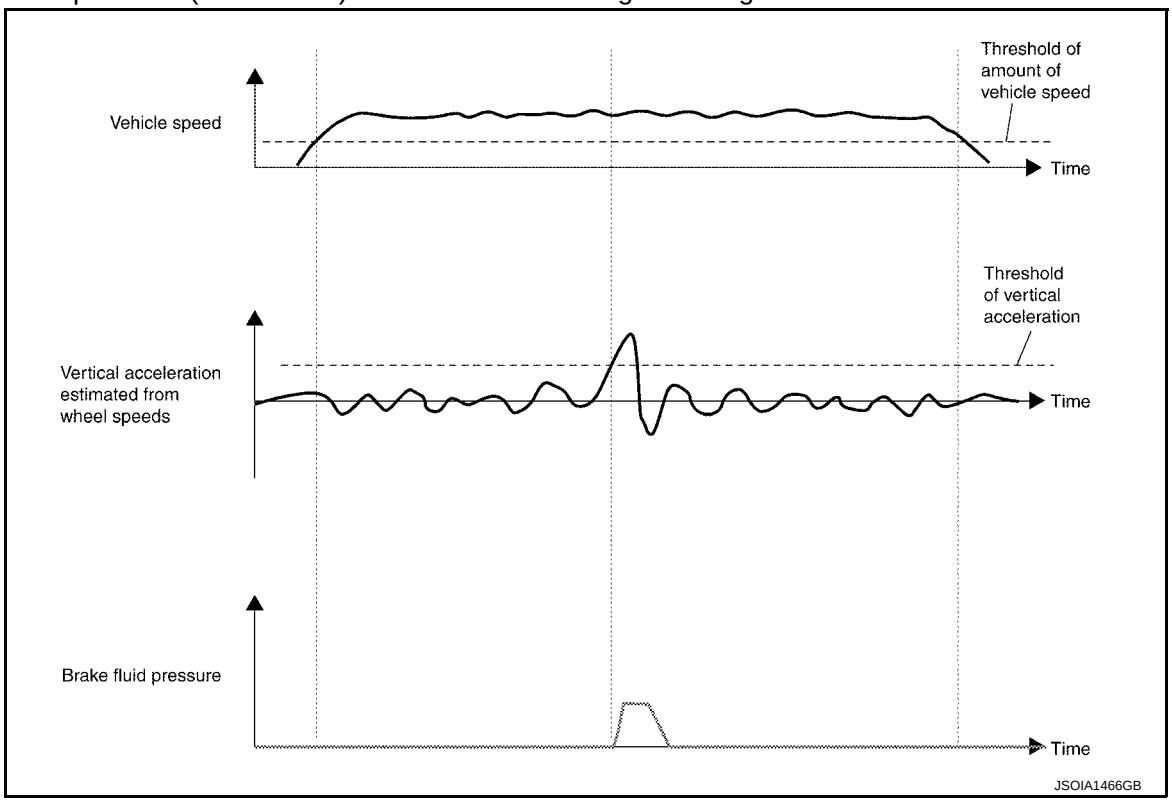
BRAKING CONTROL

• 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.

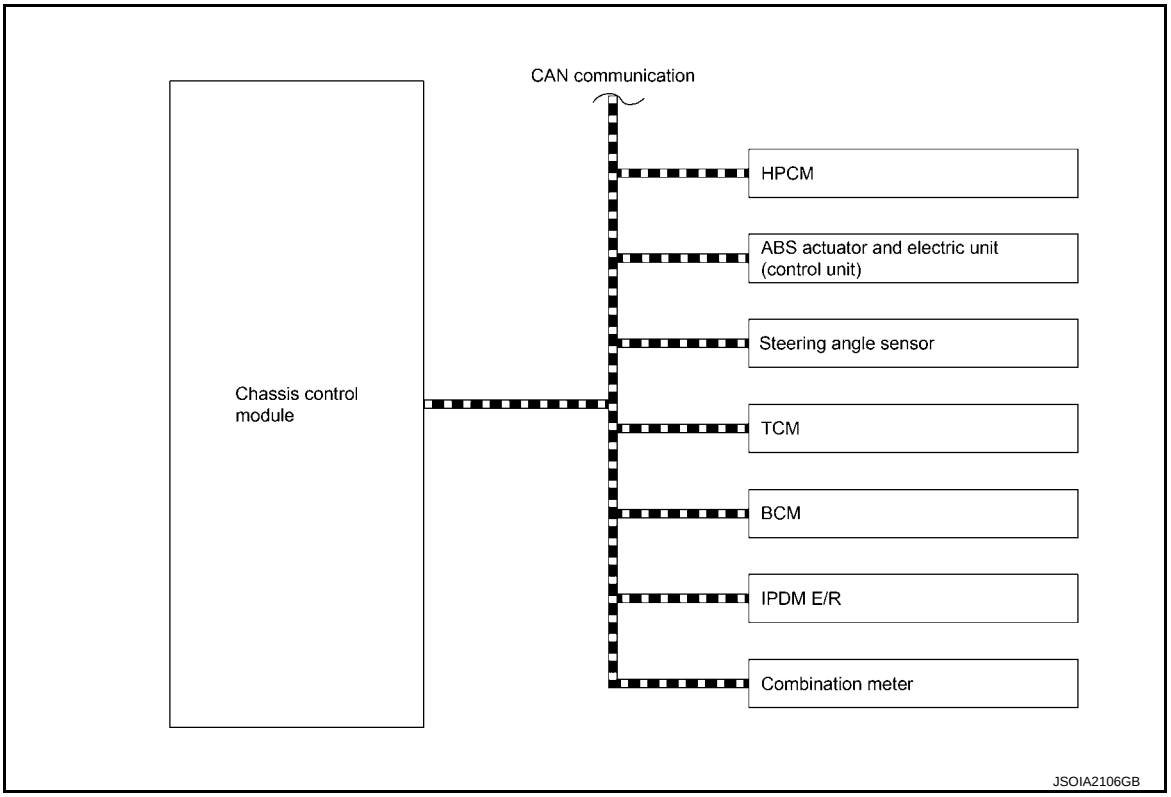
• By controlling the brake fluid pressure (brake force), behavior of the vehicle in the vertical direction decreases, and riding comfort is improved.



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



SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

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

Component parts	Signal description
HPCM	Mainly transmits the following signals to chassis control module via CAN communication. • Accelerator pedal position signal • Request drive torque signal • Request drive torque status signal • Engine speed signal
ABS actuator and electric unit (control unit)	Mainly transmits the following signals to chassis control module via CAN communication. • 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 Mainly receives the following signals from chassis control module via CAN communication. • Active ride control signal
BCM	Mainly transmits the following signals to chassis control module via CAN communication. • Stop lamp switch signal
IPDM E/R	Mainly transmits the following signals to chassis control module via CAN communication. • Ignition switch ON signal
TCM	Mainly transmits the following signals to chassis control module via CAN communication. • Current gear position signal • Input speed signal

Component parts	Signal description
Combination meter	Mainly receives the following signals from chassis control module via CAN communication. • 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. • Steering angle sensor signal

INFORMATION DISPLAY (COMBINATION METER)

INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display

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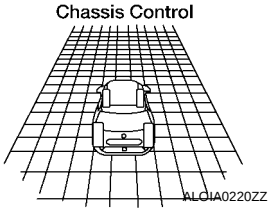
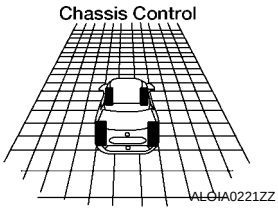
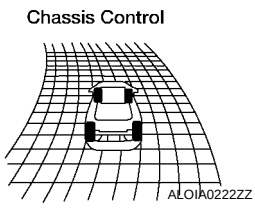
DESIGN/PURPOSE

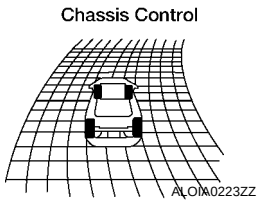
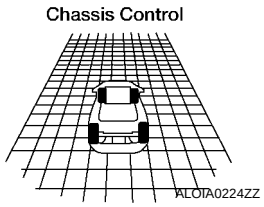
- The warning message is displayed on the vehicle information display when chassis control module detects an error in the chassis control system architecture. Please check the DTCs and investigate the cause of error.
- Each chassis control system information is displayed on the vehicle information display.

Warning Message

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

System Information

Design	Description
 ALOIA0220ZZ	Active Engine Brake inactive. Active Ride Control inactive. Active Trace Control inactive.
 ALOIA0221ZZ	Active Engine Brake (assist at corners). Active Trace Control is active. (Steering angle is less than the specified angle).
 ALOIA0222ZZ	Active Engine Brake (assist at corner). Active Trace Control assist is active. (Steering angle is the specified angle or more in the leftward direction).

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

Indicator operating

- Active Engine Brake: Refer to DAS-426, "ACTIVE ENGINE BRAKE FUNCTION : System Description".
- Active Ride Control: Refer to DAS-429, "ACTIVE RIDE CONTROL FUNCTION : System Description".
- Active Trace Control: Refer to DAS-420, "ACTIVE TRACE CONTROL FUNCTION : System Description".

HANDLING PRECAUTION

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

INFOID:0000000014903272

CHASSIS CONTROL

- Chassis Control will not provide all the necessary controls to replace driver intervention. It is not designed to prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- Chassis Control is primarily intended for use on well-developed freeways or highways. It may not perform satisfactorily in certain roads, weather or driving conditions.
- Using Chassis Control under some conditions of road, corner or severe weather could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- When Chassis Control is operating, avoid excessive or sudden steering maneuvers. Otherwise, you could lose control of the vehicle.
- Engine Brake Control is designed to enhance braking feel and traceability at corners.
- Active Ride Control is designed to enhance handling and drive comfort.
- Active Trace Control is designed to enhance traceability at corners and smooth vehicle movement for more confident driving.
- Chassis Control may not function properly under the following conditions:
- During bad weather (rain, fog, snow, wind, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original steering parts or suspension parts.
- The functions of Chassis Control may or may not operate properly under the following conditions:
- On roads covered with water, dirt or snow, etc.
- On roads where there are sharp curves.

DIAGNOSIS SYSTEM (CHASSIS CONTROL MODULE)

CONSULT Function

INFOID:0000000014903273

APPLICATION ITEM

CONSULT can display each diagnostic item using the diagnostic test modes as follows.

Mode	Function description
ECU identification	Parts number of chassis control module can be read.
Self Diagnostic Result	Self-diagnostic results and freeze frame data can be read and erased quickly.*1
Data Monitor	Input/Output data in chassis control module can be read.
Active Test	Send the drive signal from CONSULT to the actuator. The operation check can be performed.
Re/programming, Configuration	• Read and save the vehicle specification (TYPE ID). • Write the vehicle specification (TYPE ID) when replacing Chassis Control Module.

*1: The following diagnosis information is erased by erasing.
- DTC
- Freeze frame data (FFD)

ECU IDENTIFICATION

Chassis control module part number can be read.

SELF DIAGNOSTIC RESULT

Refer to DAS-448, "DTC Index".

When “CRNT” is displayed on “self-diagnosis result”
- The system is presently malfunctioning.

When “PAST” is displayed on “self-diagnosis result”
- System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)
When DTC is detected, a vehicle state shown below is recorded and displayed on CONSULT.

Item name	Indication/Unit	Display item
Odometer/Trip meter	km	Total mileage (Odometer value) of the moment a particular.
DTC LOCAL CODE	—	DTC code is displayed but not used.
CAN DIAG PERMIS CONDITION	Off / On	Displays CAN network diagnosis status.
BRAKE SWITCH 1	Off / On	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 2	Off / On	Displays brake switch operating status (Off: open / On: close).
ABS	NORMAL / ABNOR	Displays ABS function status.
TCS	NORMAL / ABNOR	Displays TCS function status.
VDC	NORMAL / ABNOR	Displays VDC function status.
VEHICLE SPEED	km	Displays the vehicle speed.
FR WHEEL SPEED	rpm	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	rpm	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	rpm	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	rpm	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	deg	Displays the steering angle from the steering angle sensor.
SIDE G SENSOR	G	Displays the side G.
DECEL G SENSOR	G	Displays the decel G.
YAW RATE SENSOR	deg/s	Displays the yaw rate.
THRTL OPENING	%	Displays the electric throttle position.
PRESS SENSOR	bar	Displays the brake fluid pressure.

DATA MONITOR

NOTE:

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

Item [Unit]		Description
IGN VOLT	[V]	Displays the ignition power supply voltage.
CONTROL MODULE MALF	[Off / On]	Displays chassis control module malfunction.
CAN DIAG STATUS	[Off / On]	Displays CAN network diagnosis status.
VEHICLE SPEED	[km/m]	Displays the vehicle speed.
FR WHEEL SPEED	[rpm]	Displays the rotational speed of front RH tire.
FL WHEEL SPEED	[rpm]	Displays the rotational speed of front LH tire.
RR WHEEL SPEED	[rpm]	Displays the rotational speed of rear RH tire.
RL WHEEL SPEED	[rpm]	Displays the rotational speed of rear LH tire.
STEERING ANG SENSOR	[deg]	Displays the steering angle from the steering angle sensor.
DECEL G SENSOR	[G]	Displays the decel G.
SIDE G SENSOR	[G]	Displays the side G.
YAW RATE SENSOR	[deg/s]	Displays the yaw rate.
ACCELE PEDAL POSITION	[%]	Displays the accelerator pedal position.
THROTTLE CONTROL	[NORMAL / INCORR / PREV / IN-POSSI]	Displays the electric throttle status.
BRAKE SWITCH 2	[Off / On]	Displays brake switch operating status (Off: close / On: open).
BRAKE SWITCH 1	[Off / On]	Displays brake switch operating status (Off: open / On: close).
STOP LAMP SW	[INACT / ACT]	Displays the stop lamp switch status.
PRESS SENSOR	[bar]	Displays the brake fluid pressure.
ABS	[NORMAL / ABNOR]	Displays ABS function status.
ABS MALF	[NORMAL / ABNOR]	Displays ABS function status.
EBD	[NORMAL / ABNOR]	Displays EBD function status.
TCS	[NORMAL / ABNOR]	Displays TCS function status.
TCS MALF	[NORMAL / ABNOR]	Displays TCS function status.
VDC	[NORMAL / ABNOR]	Displays VDC function status.
VDC MALF	[NORMAL / ABNOR]	Displays VDC function status.
VDC OFF SWITCH	[Off / On]	Displays VDC OFF switch status.
DRV TRQ CTRL MODE	[INITIAL / NORMAL / STOP 1 / STOP 2 / LIMIT 1 / PROHIBI]	Displays the status of correction to slightly increase/decrease the drive torque.
DRV TRQ CTRL PERMIS 1	[NO PER / PERMIS]	Displays the permission status (basic requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PERMIS 2	[NO PER / PERMIS]	Displays the permission status (system requirement) of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL STOP	[REQ / NO REQ]	Displays the stop request status of correction to slightly increase/decrease drive torque.
DRV TRQ CTRL PROHIBIT	[REQ / NO REQ]	Displays the prohibition request status of correction to slightly increase/decrease drive torque.
AEB	[Off / On]	Displays the Active Engine Brake (corner) function operating status
ATC 1	[Off / On]	Displays active trace control function operating status.
ATC 2	[Off / On]	Displays active trace control function operating status.
ATC 3	[Off / On]	Displays active trace control function operating status.

Item [Unit]		Description
ATC 4	[Off / On]	Displays active trace control function operating status.
ATC 5	[Off / On]	Displays active trace control function operating status.
BRAKE HOLD	[INACT / ACT / RELEA]	Displays the status of Hill Start Assist function.
FL TIRE DISP	[DEF / 1]	Displays tire status.
FR TIRE DISP	[DEF / 1]	Displays tire status.
RL TIRE DISP	[DEF / 1]	Displays tire status.
RR TIRE DISP	[DEF / 1]	Displays tire status.
VEHICLE DISP	[Off / On]	Displays Active Ride Control (brake) activation status.
INTERRUPT DISP	[NOREQ / HOLD1 / HOLD2 / HDC]	Displays the interruption status.
TURN DISP	[NSTEER / LEFT / RIGHT]	Displays the turn status.
BRAKE HOLD DISP	[INACT / ACT / RELEA]	Displays the brake hold status.
ATC DISP	[Off / On]	Displays Active Trace Control status.
ARC BRAKE DISP	[Off / On]	Displays the status of Active Ride Control (brake).
HDC DISP	[Off / On]	Displays the Hill Descent Control.
AEB CVT PERMIT	[Off / On]	Displays the CVT authorized state for Active Engine Brake.
AEB STATUS	[Off / On]	Displays the setting status of Active Engine Brake function.
AEB COMMAND 1	[0.0000]	Displays the relative command value of Active Engine Brake.
AEB SLIP RATE	[%]	Displays slip ratio of Active Engine Brake.
ATC SETTING	[Off / On]	Displays the setting status of Active Trace Control function by steering switch.
AEB SETTING	[Off / On]	Displays the setting status of Active Engine Brake function by steering switch.
ARC BRAKE	[Off / On]	Displays the Active Ride Control function status.

ACTIVE TEST

The active test is used to determine and identify details of a malfunction, based on self-diagnosis test results and data obtained in the DATA MONITOR. In response to instructions from CONSULT, instead of those from chassis control module on the vehicle, a drive signal is sent to the actuator to check its operation.

CAUTION:

- **Never perform ACTIVE TEST while driving the vehicle.**
- **Always bleed air from brake system before active test.**
- **Never perform active test when system is malfunctioning.**

NOTE:

- When active test is performed while depressing the brake pedal, the brake pedal depressing stroke may change. This is not a malfunction.
- During an active test, sometimes a chassis control warning is displayed and the master warning lamp illuminates on the information display in the combination meter; however, this is not a malfunction.

Test item	Operation	Description
BRAKE ACTUATOR 1 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 1 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 2 MODE 3	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 1	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 2	Start	Controls brake fluid pressure.
BRAKE ACTUATOR 3 MODE 3	Start	Controls brake fluid pressure.

Test item	Operation	Description
MASTER WARNING ACTIVE	On	If touching “On” with the master warning lamp not illuminated, the master warning lamp illuminates. Stops in approximately 1 minute.
	Off	The master warning lamp turns OFF. (vehicle in normal state)
FL TIRE DISP	On	Displays the front LH tire on the information display in the combination meter.
	Off	Does not display the front LH tire on the information display in the combination meter.
FR TIRE DISP	On	Displays the front RH tire on the information display in the combination meter.
	Off	Does not display the front RH tire on the information display in the combination meter.
RL TIRE DISP	On	Displays the rear LH tire on the information display in the combination meter.
	Off	Does not display the rear LH tire on the information display in the combination meter.
RR TIRE DISP	On	Displays the rear RH tire on the information display in the combination meter.
	Off	Does not display the rear RH tire on the information display in the combination meter.
TURN DISP	NO DISP	Does not display the turning status on the information display in the combination meter.
	LH	Displays the LH turning status on the information display in the combination meter.
	RH	Displays the RH turning status on the information display in the combination meter.
	ROUND	Displayed but not used.
ATC 1 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
ATC 2 DISP	On	Displays active trace control function active status on the information display in the combination meter.
	Off	Displays active trace control function inactive status on the information display in the combination meter.
HDC DISP	On	Displays Hill Descent Control active status on the information display on the combination meter.
	Off	Displays Hill Descent Control inactive status on the information display on the combination meter.
BRAKE HOLD DISP	INACT	Displays inactive status of controls on the information display on the combination meter.
	READY	Displays ready status of Hill Start Assist on the information display on the combination meter.
	ACTIVE	Displays active status of Hill Start Assist on the information display on the combination meter.
	ERROR	Displays inactive status of controls on the information display on the combination meter.
AEB DISP	On	Displays Active Engine Brake (corner) active status on the information display in the combination meter.
	Off	Displays Active Engine Brake (corner) inactive status on the information display in the combination meter.

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

RE/PROGRAMMING, CONFIGURATION

Configuration includes the following functions.

Function		Description
Read/Write Configuration	Before replacing ECU	Allows the reading of vehicle specification (Type ID) written in Chassis Control Module to store the specification in CONSULT.
	After replacing ECU	Allows the writing of vehicle information (Type ID) stored in CONSULT into the Chassis Control Module.
Manual Configuration		Allows the writing of vehicle specification (Type ID) into the Chassis Control Module by hand.

CAUTION:

Use “Manual Configuration” only when “TYPE ID” of Chassis Control Module cannot be read.

ECU DIAGNOSIS INFORMATION

CHASSIS CONTROL MODULE

Reference Value

INFOID:0000000014903274

CONSULT DATA MONITOR STANDARD VALUE

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

Monitor item	Condition	Reference values in normal operation
IGN VOLT	Ignition switch ON.	10 – 16 V
CONTROL MODULE MALF	When chassis control module is normal.	Off
	When chassis control module malfunction is detected.	On
CAN DIAG STATUS	When diagnosis of CAN communication malfunction is detected.	Off
	When diagnosis of CAN communication is normal.	On
VEHICLE SPEED	Vehicle Stopped.	0 km/h (0 MPH)
	Driving*	Almost same reading as speedometer (within ±10%).
FR WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
FL WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
RR WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
RL WHEEL SPEED	Vehicle stopped.	0 rpm
	Driving*	Increases according to vehicle speed.
STEERING ANG SENSOR	When driving straight.	0±3.5 deg.
	When steering wheel is steered to RH by 90°.	Approx. +90 deg.
	When steering wheel is steered to LH by 90°.	Approx. –90 deg.
DECEL G SENSOR	Vehicle stopped.	Approx. 0 G.
	When during acceleration.	Positive value.
	When during deceleration.	Negative value.
SIDE G SENSOR	Vehicle stopped.	Approx. 0 G.
	When right turn.	Negative value.
	When left turn.	Positive value.
YAW RATE SENSOR	Vehicle stopped.	Approx. 0 deg/s.
	When right turn.	Negative value.
	When left turn.	Positive value.
ACCELE PEDAL POSITION	When accelerator pedal is released.	0%
	When accelerator pedal is depressed.	0 – 100%

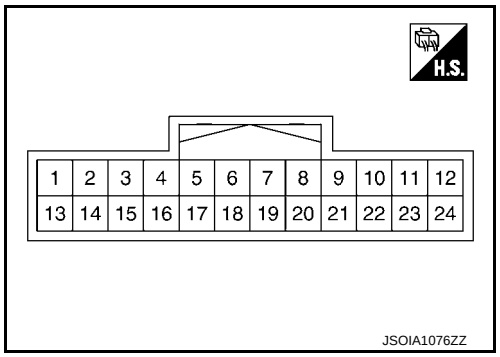
Monitor item	Condition	Reference values in normal operation
THROTTLE CONTROL	When electric throttle control actuator is normal.	NORMAL
	When the electric throttle control actuator does not achieve the requirement (measured value is inaccurate).	INCORR
	When the electric throttle control actuator does not achieve the requirement (temporary prevention).	PREV
	When the electric throttle control actuator does not achieve the requirement (impossible).	IMPOSSI
BRAKE SWITCH 2	When brake pedal is not depressed.	Off
	When brake pedal is depressed.	On
BRAKE SWITCH 1	When brake pedal is depressed.	Off
	When brake pedal is not depressed.	On
STOP LAMP SW	When brake pedal is not depressed.	INACT
	When brake pedal is depressed.	ACT
PRESS SENSOR	When brake pedal is not depressed.	Approx. 0 bar
	when brake pedal is depressed.	0 – 255 bar
ABS	When ABS function is normal.	NORMAL
	When ABS function malfunction is detected.	ABNOR
ABS MALF	When ABS function is normal.	NORMAL
	When ABS function malfunction is detected.	ABNOR
EBD	When EBD function is normal.	NORMAL
	When EBD function malfunction is detected.	ABNOR
TCS	When TCS function is normal.	NORMAL
	When TCS function malfunction is detected.	ABNOR
TCS MALF	When TCS function is normal.	NORMAL
	When TCS function malfunction is detected.	ABNOR
VDC	When VDC function is normal.	NORMAL
	When VDC function malfunction is detected.	ABNOR
VDC MALF	When VDC function is normal.	NORMAL
	When VDC function malfunction is detected.	ABNOR
VDC OFF SWITCH	When VDC OFF switch is OFF.	Off
	When VDC OFF switch is ON.	On
DRV TRQ CTRL MODE	When correction coefficients are initialized.	INITIAL
	When correction is executed.	NORMAL
	When correction is stopped (computing is impossible).	STOP 1
	When correction is stopped (computing is possible).	STOP 2
	When correction is limited.	LIMIT 1
	When correction is prohibited.	PROHIBI
DRV TRQ CTRL PERMIS 1	When correction is permitted (basic requirement).	PERMIS
	When correction is not permitted (basic requirement).	NO PER
DRV TRQ CTRL PERMIS 2	When correction is permitted (system requirement).	PERMIS
	When correction is not permitted (system requirement).	NO PER
DRV TRQ CTRL STOP	When correction is requested to stop.	REQ
	When correction is not requested to stop.	NO REQ
DRV TRQ CTRL PROHIBIT	When prohibition of correction is requested.	REQ
	When prohibition of correction is not requested.	NO REQ

Monitor item	Condition	Reference values in normal operation
AEB	When Active Engine Brake (corner) function is active.	On
	When Active Engine Brake (corner) function is inactive.	Off
ATC 1	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 2	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 3	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 4	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ATC 5	When active trace control function is inactive.	Off
	When active trace control function is active.	On
ARC BRAKE	When active ride control (brake control) function is inactive	Off
	When active ride control (brake control) function is active	On
BRAKE HOLD	When Hill Start Assist function is inactive.	INACT
	When Hill Start Assist function is ready.	ACT
	When Hill Start Assist function is active.	RELEA
FL TIRE DISP	When the front LH tire is not displayed on the information display in the combination meter.	DEF
	When the front LH tire is displayed on the information display in the combination meter.	1
FR TIRE DISP	When the front RH tire is not displayed on the information display in the combination meter.	DEF
	When the front RH tire is displayed on the information display in the combination meter.	1
RL TIRE DISP	When the rear LH tire is not displayed on the information display in the combination meter.	DEF
	When the rear LH tire is displayed on the information display in the combination meter.	1
RR TIRE DISP	When the rear RH tire is not displayed on the information display in the combination meter.	DEF
	When the rear RH tire is displayed on the information display in the combination meter.	1
VEHICLE DISP	When active ride control (brake) effect is not displayed on the information display in the combination meter.	Off
	When active ride control (brake) effect is displayed on the information display in the combination meter.	On
INTERRUPT DISP	When interrupt display is not displayed on the information display in the combination meter.	NOREQ
	When Hill Start Assist function (ready) is displayed on the information display in the combination meter.	HOLD1
	When Hill Start Assist function (active) is displayed on the information display in the combination meter.	HOLD2
	When Hill Descent Control function is displayed on the information display in the combination meter.	HDC

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

*: Check tire pressure under normal conditions.

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail-Safe (Chassis Control Module)

INFOID:0000000014903275

When a malfunction occurs in the chassis control module, the master warning lamp turns ON and an interrupt is displayed on the information display of the combination meter.

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

DTC	Vehicle condition
C1BB2-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB3-00	
C1BB4-00	
C1BB5-00	
C1BB6-00	Normal control
C1BB7-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BB8-00	
C1BB9-00	
C1BBA-00	
C1BBB-00	
C1BBC-00	Normal control
C1BBD-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
C1BC0-00	The following functions are suspended: • Active Trace Control • Active Ride Control
C1BC1-00	
C1BC2-00	
C1BC3-00	
C1BC4-00	The following functions are suspended: • Active Ride Control (brake)
C1BC5-00	The following functions are suspended: • Active Trace Control
C1BC6-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake)
U1000-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A34-00	
U1A35-00	
U1A36-00	
U1A39-00	Normal control
U1A3B-00	The following functions are suspended: • Active Trace Control • Active Ride Control (brake) • Active Engine Brake
U1A42-00	The following functions are suspended: • Active Trace Control • Active Ride Control (engine)
U1A43-00	
U1A48-00	The following functions are suspended: • Active Trace Control • Active Ride Control • Active Engine Brake
U1A4A-00	
U1A4B-00	
U1A4E-00	The following functions are suspended: • Active Ride Control

DTC Inspection Priority Chart

INFOID:0000000014903276

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

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

DTC Index

INFOID:0000000014903277

DTC	Display item	Refer to
C1B92-00	BRAKE CONTROL SYSTEM	DAS-458, "DTC Description"
C1B93-00	ENGINE/HEV SYSTEM	DAS-460, "DTC Description"
C1B94-00	TM SYSTEM	DAS-462, "DTC Description"
C1B95-00	CONTROL MODULE	DAS-464, "DTC Description"
C1B99-00	CONTROL NODULE	DAS-465, "DTC Description"
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS	DAS-466, "DTC Description"
C1BA2-00	STEERING ANGLE SENSOR	DAS-468, "DTC Description"
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS	DAS-470, "DTC Description"
C1BAB-00	STOP LAMP SW	DAS-472, "DTC Description"
C1BB2-00	CONTROL MODULE	DAS-474, "DTC Description"
C1BB3-00	CONTROL MODULE	DAS-475, "DTC Description"

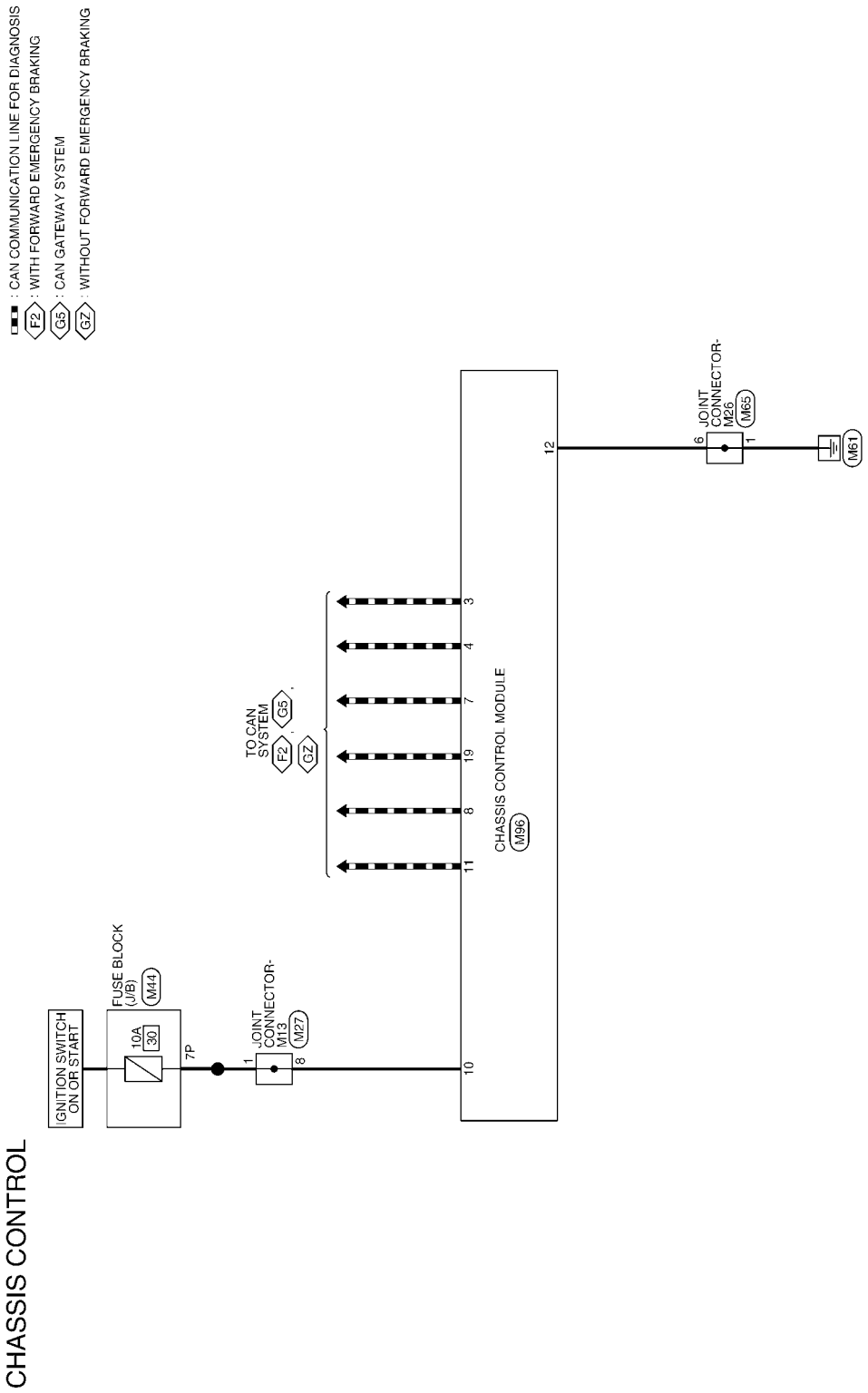
DTC	Display item	Refer to
C1BB4-00	CONTROL MODULE	DAS-476, "DTC Description"
C1BB5-00	IGN POWER SUPPLY	DAS-477, "DTC Description"
C1BB6-00	IGN POWER SUPPLY	DAS-479, "DTC Description"
C1BB7-00	CONTROL MODULE	DAS-481, "DTC Description"
C1BB8-00	CONTROL MODULE	DAS-482, "DTC Description"
C1BB9-00	CONTROL MODULE	DAS-483, "DTC Description"
C1BBA-00	CONTROL MODULE	DAS-484, "DTC Description"
C1BBB-00	CONTROL MODULE	DAS-485, "DTC Description"
C1BBC-00	CONTROL MODULE	DAS-486, "DTC Description"
C1BBD-00	VARIANT CODING	DAS-487, "DTC Description"
C1BC0-00	FR WHEEL SENSOR	DAS-488, "DTC Description"
C1BC1-00	FL WHEEL SENSOR	DAS-490, "DTC Description"
C1BC2-00	RR WHEEL SENSOR	DAS-492, "DTC Description"
C1BC3-00	RL WHEEL SENSOR	DAS-494, "DTC Description"
C1BC4-00	DECEL G SENSOR	DAS-496, "DTC Description"
C1BC5-00	SIDE G SENSOR	DAS-498, "DTC Description"
C1BC6-00	PRESSURE SENSOR	DAS-500, "DTC Description"
U1000-00	CAN COMMUNICATION	DAS-502, "DTC Description"
U1A34-00	BRAKE CONTROL COMM	DAS-503, "DTC Description"
U1A35-00	BRAKE CONTROL COMM	DAS-505, "DTC Description"
U1A36-00	BCM/IPDM COMM	DAS-507, "DTC Description"
U1A39-00	COMBINATION METER COMM	DAS-509, "DTC Description"
U1A3B-00	TCM COMM	DAS-511, "DTC Description"
U1A42-00	STEERING ANGLE SENSOR COMM	DAS-513, "DTC Description"
U1A43-00	STEERING ANGLE SENSOR COMM	DAS-515, "DTC Description"
U1A48-00	ECM/HPCM COMM	DAS-517, "DTC Description"
U1A4A-00	CONTROL MODULE (CAN)	DAS-519, "DTC Description"
U1A4B-00	CONTROL MODULE (CAN)	DAS-520, "DTC Description"
U1A4E-00	ECM/HPCM COMM	DAS-521, "DTC Description"

WIRING DIAGRAM

CHASSIS CONTROL

Wiring Diagram

INFOID:0000000014903278



CHASSIS CONTROL CONNECTORS

Connector No.	M27
Connector Name	JOINT CONNECTOR-M13
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	SB	IGNITION
2	SB	IGNITION
3	SB	IGNITION
4	Y	IGNITION
5	SB	IGNITION
6	SB	IGNITION
7	SB	IGNITION
8	SB	IGNITION

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	G	IGNITION
3P	Y	IGNITION RELAY-2 CONTROL
4P	LG	REAR WINDOW DEFOGGER RELAY OUTPUT
5P	GR	REAR WINDOW DEFOGGER RELAY OUTPUT
6P	LA/R	REAR WINDOW DEFOGGER RELAY CONTROL
7P	Y	IGNITION
8P	V	IGNITION
9P	L	BATTERY
10P	LG	IGNITION
11P	–	–
12P	–	–
13P	G	BATTERY
14P	–	–
15P	L	BATTERY
16P	LA/W	FRONT BLOWER MOTOR RELAY CONTROL

Connector No.	M65
Connector Name	JOINT CONNECTOR-M26
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	B	GROUND
6	B	GROUND
7	B	GROUND
8	B	GROUND

Connector No.	M96
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	P	CAN-L
4	L	CAN-H
5	–	–
6	–	–
7	W	IC-CAN L
8	W	IC-CAN L
9	–	–
10	SB	IGN
11	L	IC-CAN H
12	B	GND
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	L	IC-CAN H
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–

AAOIA0830GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000014903279

DETAILED FLOW

1.INTERVIEW THE CUSTOMER

Clarify customer complaints before inspection. First of all, perform an interview utilizing DAS-453, "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-446, "Fail-Safe (Chassis Control Module)".

CAUTION:

When the symptom is caused by normal operation, fully inspect each portion and obtain the understanding of customer that the symptom is not caused by a malfunction.

>> GO TO 3.

3.PERFORM SELF-DIAGNOSIS

CONSULT

Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC detected?

YES >> Record or print “Self Diagnostic Result” and Freeze Frame Data (FFD). GO TO 4.
NO >> Inspection End.

4.RECHECK THE SYMPTOM

CONSULT

Perform DTC confirmation procedure for the malfunctioning system.

NOTE:

If some DTCs are detected at the same time, determine the order for performing the diagnosis based on DAS-447, "DTC Inspection Priority Chart".

Is DTC detected?

YES >> GO TO 5.
NO >> Check harness and connectors based on the information obtained by the interview. Refer to DAS-414, "Precautions for Harness Repair".

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

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

>> GO TO 6.

6.FINAL CHECK

CONSULT

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

Is the symptom reproduced?

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

Diagnostic Work Sheet

INFOID:0000000014903280

Description

- In general, customers have their own criteria for a symptom. Therefore, it is important to understand the symptom and status well enough by interviewing the customer about the symptom carefully. To systemize all the information for the diagnosis, prepare the interview sheet referring to the interview points.
- In some cases, multiple conditions that appear simultaneously may cause a DTC to be detected.

INTERVIEW SHEET SAMPLE

Interview sheet					
Customer name	MR/MS	Registration number		Initial year registration	
		Vehicle type		VIN	
Storage date		Engine, Traction motor		Mileage	km (Mile)
Symptom		☐ Does not operate ( ) function			
		☐ Warning lamp for ( ) turns ON.			
		☐ Noise ☐ Vibration			
		☐ Other ( )			
First occurrence		☐ Recently ☐ Other ( )			
Frequency of occurrence		☐ Always ☐ Under a certain conditions of ☐ Sometimes (time(s)/day)			
Climate conditions		☐ Irrelevant			
	Weather	☐ Fine ☐ Cloud ☐ Rain ☐Snow ☐ Others ( )			
	Temperature	☐ Hot ☐Warm ☐ Cool ☐ Cold ☐ Temperature [Approx. °C (°F)]			
	Relative humidity	☐ High ☐ Moderate ☐ Low			
Road conditions		☐ Urban area ☐ Suburb area ☐ Highway ☐ Mountainous road (uphill or downhill) ☐ Rough road			
Operating condition, etc.		☐Irrelevant ☐When traction motor starts ☐ During idling ☐ During driving ☐ During acceleration ☐ At constant speed driving ☐ During deceleration ☐ During cornering (right curve or left curve) ☐ When steering wheel is steered (to right or to left)			
Other conditions					

Interview sheet

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

Vehicle equipment

Memo

ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MODULE

Description

INFOID:0000000014903281

Always perform the chassis control module configuration after replacing the chassis control module.

Work Procedure

INFOID:0000000015258711

1.ADAS CONTROL UNIT CONFIGURATION

CONSULT
Perform the Chassis control module configuration. Refer to DAS-456, "Description".

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.
3. Check DTC.

Is DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to DAS-448, "DTC Index".
NO >> Inspection End.

CONFIGURATION (CHASSIS CONTROL MODULE)

Description

INFOID:0000000015258712

- Since vehicle specifications are not included in the Chassis control module after replacement, it is required to write vehicle specifications with CONSULT. Refer to DAS-456, "Work Procedure".
- Configuration has three functions as follows.

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

Work Procedure

INFOID:0000000014903282

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-529, "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-529, "Removal and Installation".

>> GO TO 6.

6. WRITING (AUTOMATIC WRITING)

CONSULT Configuration
1. Select “After Replace ECU” of “Re/programming, Configuration” or that of “Read / Write Configuration”.
2. Select the “Type ID” agreeing with the one stored on CONSULT and the one searched by using FAST (service parts catalogue) to write the “Type ID” into the chassis control module.
   NOTE:
   For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 9.

7. REPLACING CHASSIS CONTROL MODULE (2)

Replace the chassis control module. Refer to DAS-529, "Removal and Installation".

>> GO TO 8.

8. WRITING (MANUAL WRITING)

CONSULT Configuration
1. Select “Manual Configuration”.
2. Select the “Type ID” searched by using FAST (service parts catalogue) to write the “Type ID” into the chassis control module.
   NOTE:
   For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 9.

9. VERIFYING TYPE ID (2)

Compare “Type ID” written into the chassis control module with the one searched by using FAST (service parts catalogue) to check that these “Type ID” agree with each other.
NOTE:
For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 10.

10. CHECKING CHASSIS CONTROL WARNING

1. Turn the ignition switch OFF.
2. Turn the ignition switch ON and check that the chassis control warning to information display of combination meter displays OFF after staying illuminated for approximately two seconds.
   CAUTION:
   Never start the engine.

Is the inspection result normal?

YES >> GO TO 11.
NO >> Perform the “Self Diagnostic Result” of “CHASSIS CONTROL”. Refer to DAS-437, "CONSULT Function".

11. PERFORMING SUPPLEMENTARY WORK

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

>> End of work.

DTC/CIRCUIT DIAGNOSIS

C1B92-00 BRAKE CONTROL SYSTEM

DTC Description

INFOID:0000000015216592

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B92-00	BRAKE CONTROL SYSTEM (Brake control system)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	ABS actuator and electric unit (control unit) system malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Ride Control function
- Active Trace Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1B92-00” detected?

YES >> Proceed to DAS-458, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216593

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

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

3. Turn the ignition switch ON.
4. Select “All DTC Reading” mode.

Is DTC “C1B92-00”, “U1000” or other DTC detected?

YES (“C1B92-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC) >> Check the DTC.
NO >> Inspection End.

C1B93-00 ENGINE SYSTEM

DTC Description

INFOID:0000000015216594

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B93-00	ENGINE SYSTEM (Engine system/HEV system)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	HPCM system malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

- Engine system
- HPCM
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- Active Trace Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1B93-00” detected?

YES >> Proceed to DAS-460, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216595

1.CHECK HPCM SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “EV/HEV”.

Is DTC detected?

YES >> Check the DTC. Refer to HBC-71, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

4. Select “All DTC Reading” mode.

Is DTC “C1B93-00”, “U1000” or other DTC detected?

YES (“C1B93-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "DTC Description".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1B94-00 TRANSMISSION SYSTEM

DTC Description

INFOID:0000000015216596

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B94-00	TM SYSTEM (Transmission system)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Transmission system malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

- Transmission system
- TCM
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- Active Trace Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1B94-00” detected?

YES >> Proceed to DAS-462, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216597

1.CHECK TRANSMISSION SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “TRANSMISSION”.

Is DTC detected?

YES >> Check the DTC. Refer to TM-70, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1B94-00”, “U1000-00” or other DTC detected?

YES (“C1B94-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1B95-00 CONTROL MODULE

DTC Description

INFOID:0000000015216598

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B95-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Chassis control module malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (brake) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1B95-00” detected?

YES >> Proceed to DAS-464, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216599

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1B95-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1B99-00 CONTROL MODULE

DTC Description

INFOID:0000000015216600

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1B99-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Chassis control module malfunction
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control function
- Active Trace Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1B99-00” detected?

YES >> Proceed to DAS-465, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216601

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1B99-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BA0-00 ADAS/CHASSIS CONTROL BRAKE SYSTEM

DTC Description

INFOID:0000000015216602

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BA0-00	ADAS/CHASSIS CTRL BRAKE SYS (ADAS/chassis control brake system)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	An invalid signal is received from ABS actuator and electric unit (control unit)
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (brake) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

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

YES (“C1BA0-00”)>> Proceed to DAS-466, "Diagnosis Procedure".
YES (“C1BA0-00” and “C1BA7-00”)>> Select “Self Diagnostic Result” mode of “ICC/ADAS”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216603

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

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BA0-00”, “U1000-00” or other DTC detected?

YES (“C1BA0-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BA2-00 STEERING ANGLE SENSOR

DTC Description

INFOID:0000000015216604

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BA2-00	STEERING ANGLE SENSOR (Steering angle sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in steering angle sensor
		Diagnosis delay time	–

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- Active Trace Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BA2-00” detected?

YES >> Proceed to DAS-468, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216605

1.CHECK STEERING ANGLE SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BA2-00”, “U1000-00” or other DTC detected?

YES (“C1BA2-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BA5-00 ADAS/CHASSIS CONTROL ENGINE SYSTEM

DTC Description

INFOID:0000000015216606

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BA5-00	ADAS/CHASSIS CTRL ENGINE SYS (ADAS/chassis control engine system)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When receiving from ECM that the value of the engine system signal transmitted from the chassis control module to ECM is malfunctioning
		Diagnosis delay time	–

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

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BA5-00” detected?

YES >> Proceed to DAS-470, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216607

1.CHECK ADAS CONTROL UNIT SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ECM”.

Is DTC detected?

YES >> Check the DTC. Refer to EC-109, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BA5-00”, “U1000-00” or other DTC detected?

YES (“C1BA5-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.

NO >> Inspection End.

C1BAB-00 STOP LAMP SWITCH

DTC Description

INFOID:0000000015216608

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BAB-00	STOP LAMP SW (Stop lamp switch)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in stop lamp switch system
		Diagnosis delay time	–

POSSIBLE CAUSE

- Stop lamp switch
- BCM
- Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Ride Control (engine) function
- Active Trace Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BAB-00” detected?

YES >> Proceed to DAS-472, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216609

1.CHECK STOP LAMP SWITCH SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “BCM”.

Is DTC detected?

YES >> Check the DTC. Refer to BCS-48, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BAB-00”, “U1000-00” or other DTC detected?

YES (“C1BAB-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BB2-00 CONTROL MODULE

DTC Description

INFOID:0000000015216610

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB2-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB2-00” detected?

YES >> Proceed to DAS-474, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216611

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BB2-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BB3-00 CONTROL MODULE

DTC Description

INFOID:0000000015216612

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB3-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB3-00” detected?

YES >> Proceed to DAS-475, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216613

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BB3-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BB4-00 CONTROL MODULE

DTC Description

INFOID:0000000015216614

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB4-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB4-00” detected?

YES >> Proceed to DAS-476, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216615

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BB4-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BB5-00 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000015216616

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB5-00	IGN POWER SUPPLY (Ignition power supply)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Ignition power supply voltage: 6.4 V ≥ ignition power supply voltage
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB5-00” detected?

YES >> Proceed to DAS-477, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216617

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
3. Check the connector for disconnection or looseness.
4. Check the 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 and securely lock the harness connector. GO TO 2.

2.PERFORM SELF-DIAGNOSIS (1)

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

Is DTC “C1BB5-00” detected?

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

3.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

4.CHECK POWER SUPPLY CIRCUIT

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

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M96	10	Ground	0 V

4. Turn the ignition switch ON.
CAUTION:
Never start the engine.
5. Check the voltage between chassis control module harness connector M96 terminal 10 and ground.

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M96	10	Ground	6.4–16 V

Is the inspection result normal?

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

5.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

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

Chassis control module		—	Continuity
Connector	Terminal		
M96	12	Ground	Yes

Is the inspection result normal?

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

C1BB6-00 IGNITION POWER SUPPLY

DTC Description

INFOID:0000000015216618

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB6-00	IGNITION POWER SUPPLY (Ignition power supply)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Ignition power supply voltage: 16 V ≤ ignition power supply voltage
		Diagnosis delay time	–

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

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB6-00” detected?

YES >> Proceed to DAS-479, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216619

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector M96.
3. Check the connector for disconnection or looseness.
4. Check the pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace error-detected parts and securely lock the harness connector. GO TO 2.

2.PERFORM SELF-DIAGNOSIS (1)

CONSULT

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

Is DTC “C1BB6-00” detected?

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

3.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

4.CHECK POWER SUPPLY CIRCUIT

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

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M96	10	Ground	0 V

4. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
5. Check the voltage between chassis control module harness connector M96 terminal 10 and ground.

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M96	10	Ground	6.4–16 V

Is the inspection result normal?

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

5.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

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

Chassis control module		—	Continuity
Connector	Terminal		
M96	12	Ground	Yes

Is the inspection result normal?

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

C1BB7-00 CONTROL MODULE

DTC Description

INFOID:0000000015216620

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB7-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB7-00” detected?

YES >> Proceed to DAS-481, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216621

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BB7-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BB8-00 CONTROL MODULE

DTC Description

INFOID:0000000015216622

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB8-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB8-00” detected?

YES >> Proceed to DAS-482, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216623

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BB8-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BB9-00 CONTROL MODULE

DTC Description

INFOID:0000000015216624

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BB9-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BB9-00” detected?

YES >> Proceed to DAS-483, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216625

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BB9-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BBA-00 CONTROL MODULE

DTC Description

INFOID:0000000015216626

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BBA-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BBA-00” detected?

YES >> Proceed to DAS-484, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216627

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BBA-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BBB-00 CONTROL MODULE

DTC Description

INFOID:0000000015216628

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BBB-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BBB-00” detected?

YES >> Proceed to DAS-485, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216629

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BBB-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BBC-00 CONTROL MODULE

DTC Description

INFOID:0000000015216630

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BBC-00	CONTROL MODULE (Control module)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

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

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BBC-00” detected?

YES >> Proceed to DAS-486, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216631

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BBC-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

C1BBD-00 VARIANT CODING

DTC Description

INFOID:0000000015216632

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BBD-00	VARIANT CODING (Variant coding)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When variant coding is incomplete
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BBD-00” detected?

YES >> Proceed to DAS-487, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216633

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BBD-00” detected?

YES >> Perform configuration. Refer to DAS-456, "Work Procedure".
NO >> Inspection End.

C1BC0-00 FRONT RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000015216634

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC0-00	FR WHEEL SENSOR (Front right wheel sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in front right wheel sensor system
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 19 mph (30 km/h) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
5. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC0-00” detected?

YES >> Proceed to DAS-488, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216635

1.CHECK FRONT RH WHEEL SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT
1. Erase “Self Diagnostic Result” mode of “CHASSIS CONTROL”.
2. Turn the ignition switch OFF and wait for 10 seconds or more.
3. Turn the ignition switch ON.
4. Select “All DTC Reading” mode.

Is DTC “C1BC0-00”, “U1000-00” or other DTC detected?

YES (“C1BC0-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BC1-00 FRONT LEFT WHEEL SENSOR

DTC Description

INFOID:0000000015216636

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC1-00	FL WHEEL SENSOR (Front left wheel sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in front left wheel sensor system
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 19 mph (30 km/h) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
5. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC1-00” detected?

YES >> Proceed to DAS-490, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216637

1.CHECK FRONT LH WHEEL SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BC1-00”, “U1000-00” or other DTC detected?

YES (“C1BC1-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BC2-00 REAR RIGHT WHEEL SENSOR

DTC Description

INFOID:0000000015216638

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC2-00	RR WHEEL SENSOR (Rear right wheel sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in rear right wheel sensor system
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 19 mph (30 km/h) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
5. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC2-00” detected?

YES >> Proceed to DAS-492, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216639

1.CHECK REAR RH WHEEL SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BC2-00”, “U1000-00” or other DTC detected?

YES (“C1BC2-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BC3-00 REAR LEFT WHEEL SENSOR

DTC Description

INFOID:0000000015216640

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC3-00	RL WHEEL SENSOR (Rear left wheel sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in rear left wheel sensor system
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Start the engine.
2. Drive the vehicle at approx. 19 mph (30 km/h) or more for approx. 1 minute.
3. Stop the vehicle.
4. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
5. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC3-00” detected?

YES >> Proceed to DAS-494, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216641

1.CHECK REAR LH WHEEL SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BC3-00”, “U1000-00” or other DTC detected?

YES (“C1BC3-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BC4-00 DECEL G SENSOR

DTC Description

INFOID:0000000015216642

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC4-00	DECEL G SENSOR (Decel G sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in decel G sensor system
		Diagnosis delay time	–

POSSIBLE CAUSE

- Yaw rate/side/decel G sensor [integrated in ABS actuator and electric unit (control unit)]
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following function is suspended:

- Active Ride Control (brake) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC4-00” detected?

YES >> Proceed to DAS-496, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216643

1.CHECK DECEL G SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BCS-48, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BC4-00”, “U1000-00” or other DTC detected?

YES (“C1BC4-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BC5-00 SIDE G SENSOR

DTC Description

INFOID:0000000015216644

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC5-00	SIDE G SENSOR (Side G sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in side G sensor system
		Diagnosis delay time	–

POSSIBLE CAUSE

- Yaw rate/side/decel G sensor [integrated in ABS actuator and electric unit (control unit)]
- ABS actuator and electric unit (control unit)
- Chassis control module

FAIL-SAFE

The following function is 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

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC5-00” detected?

YES >> Proceed to DAS-498, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216645

1.CHECK SIDE G SENSOR SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BC5-00”, “U1000-00” or other DTC detected?

YES (“C1BC5-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

C1BC6-00 PRESSURE SENSOR

DTC Description

INFOID:0000000015216646

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1BC6-00	PRESSURE SENSOR (Pressure sensor)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in brake fluid pressure system
		Diagnosis delay time	–

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (brake) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “C1BC6-00” detected?

YES >> Proceed to DAS-500, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216647

1.CHECK BRAKE FLUID PRESSURE SYSTEM

CONSULT

Select “Self Diagnostic Result” mode of “ABS”.

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “C1BC6-00”, “U1000-00” or other DTC detected?

YES (“C1BC6-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1000-00 CAN COMM CIRCUIT

DTC Description

INFOID:0000000015216648

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1000-00	CAN COMM CIRCUIT (CAN communication circuit)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	Chassis control module is not transmitting or receiving CAN communication signal
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result“ mode of “CHASSIS CONTROL”.

Is DTC “U1000-00” detected?

YES >> Proceed to DAS-502, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216649

Proceed to LAN-26, "Trouble Diagnosis Flow Chart".

U1A34-00 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000015216650

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A34-00	BRAKE CONTROL COMM (Brake control communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When chassis control module is not receiving CAN communication signal [between chassis control module and ABS actuator and electric unit (control unit)]
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A34-00” detected?

YES >> Proceed to DAS-503, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216651

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

Refer to>> LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".
"TRANSMIT DIAG" is other than "OK">> GO TO 2.
"ABS" other than "OK">>GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

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

1. Turn the ignition switch OFF.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Check ABS actuator and electric unit (control unit) harness connector terminals (CAN communication line) for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4. PERFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

CONSULT
1. Connect ABS actuator and electric unit (control unit) harness connector.
2. Erase "Self Diagnostic Result" mode of "ABS".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A34-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "Diagnosis Procedure".
YES ("U1A34-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A35-00 BRAKE CONTROL COMMUNICATION

DTC Description

INFOID:0000000015216652

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A35-00	BRAKE CONTROL COMM (Brake control communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	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
		Diagnosis delay time	–

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A35-00” detected?

YES >> Proceed to DAS-505, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216653

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".

"TRANSMIT DIAG" is other than "OK">> GO TO 2.

"ABS" other than "OK">> GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.

NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

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

1. Turn the ignition switch OFF.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Check ABS actuator and electric unit (control unit) harness connector terminals (CAN communication line) for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4. PERFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

CONSULT

1. Connect ABS actuator and electric unit (control unit) harness connector.
2. Erase "Self Diagnostic Result" mode of "ABS".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".

NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

CONSULT

1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A35-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "Diagnosis Procedure".

YES ("U1A35-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".

YES (other DTC)>> Check the DTC.

NO >> Inspection End.

U1A36-00 BCM/IPDM COMMUNICATION

DTC Description

INFOID:0000000015216654

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A36-00	BCM/IPDM COMM (BCM/IPDM communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When chassis control module is not receiving CAN communication signal (between chassis control module and BCM)
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

- BCM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A36-00” detected?

YES >> Proceed to DAS-507, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216655

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".

"TRANSMIT DIAG" is other than "OK">> GO TO 2.
"BCM" other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3.CHECK BCM

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check BCM harness connector terminals (CAN communication line) or damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4.PERFORM SELF-DIAGNOSIS (BCM)

CONSULT
1. Connect BCM harness connector.
2. Erase "Self Diagnostic Result" mode of "BCM".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "BCM".

Is DTC detected?

YES >> Check the DTC. Refer to BCS-48, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A36-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "Diagnosis Procedure".
YES ("U1A36-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A39-00 COMBINATION METER COMMUNICATION

DTC Description

INFOID:0000000015216656

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A39-00	COMBINATION METER COMM (Combination meter communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When chassis control module is not receiving CAN communication signal (between chassis control module and combination meter)
		Diagnosis delay time	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

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A39-00” detected?

YES >> Proceed to DAS-509, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216657

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".
“TRANSMIT DIAG” is other than “OK”>> GO TO 2.
“METER/M&A” other than “OK”>> GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.

2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3. CHECK COMBINATION METER

1. Turn the ignition switch OFF.
2. Disconnect combination meter harness connector.
3. Check combination meter harness connector terminals (CAN communication line) or damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4. PERFORM SELF-DIAGNOSIS (COMBINATION METER)

CONSULT
1. Connect combination meter harness connector.
2. Erase “Self Diagnostic Result” mode of “METER/M&A”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select “Self Diagnostic Result” mode of “METER/M&A”.

Is DTC detected?

YES >> Check the DTC. Refer to MWI-32, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase “Self Diagnostic Result” mode of “CHASSIS CONTROL”.
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select “All DTC Reading” mode.

Is DTC “U1000-00”, “U1A39-00” or other DTC detected?

YES (“U1000-00”)>> Refer to DAS-502, "Diagnosis Procedure".
YES (“U1A39-00”)>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A3B-00 TCM COMMUNICATION

DTC Description

INFOID:0000000015216658

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A3B-00	TCM COMM (TCM communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When chassis control module is not receiving CAN communication signal (between chassis control module and TCM)
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

- TCM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (engine) function
- Active Engine Brake

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A3B-00” detected?

YES >> Proceed to DAS-511, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216659

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to DAS-448, "DTC Index".

"TRANSMIT DIAG" is other than "OK">> GO TO 2.
"TRANSMISSION" other than "OK">> GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3.CHECK TCM

1. Turn the ignition switch OFF.
2. Disconnect TCM harness connector.
3. Check TCM harness connector terminals (CAN communication line) for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4.PERFORM SELF-DIAGNOSIS (TCM)

CONSULT
1. Connect TCM harness connector.
2. Erase "Self Diagnostic Result" mode of "TRANSMISSION".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "TRANSMISSION".

Is DTC detected?

YES >> Check the DTC. Refer to TM-70, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A3B-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "Diagnosis Procedure".
YES ("U1A3B-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A42-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000015216660

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A42-00	STEERING ANGLE SENSOR COMM (Steering angle sensor communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When chassis control module is not receiving CAN communication signal (between chassis control module and steering angle sensor)
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (engine) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A42-00” detected?

YES >> Proceed to DAS-513, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216661

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".

"TRANSMIT DIAG" is other than "OK">> GO TO 2.
"STRG" other than "OK">> GO TO 3.

2. CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3. CHECK STEERING ANGLE SENSOR

1. Turn the ignition switch OFF.
2. Disconnect steering angle sensor harness connector.
3. Check steering angle sensor harness connector terminals (CAN communication line) or damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4. PERFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

CONSULT
1. Connect steering angle sensor harness connector.
2. Erase "Self Diagnostic Result" mode of "ABS".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 5.

5. PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A42-00" other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "Diagnosis Procedure".
YES ("U1A42-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A43-00 STEERING ANGLE SENSOR COMMUNICATION

DTC Description

INFOID:0000000015216662

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A43-00	STEERING ANGLE SENSOR COMM (Steering angle sensor communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	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
		Diagnosis delay time	–

POSSIBLE CAUSE

- Steering angle sensor
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control (engine) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A43-00” detected?

YES >> Proceed to DAS-515, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216663

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".

"TRANSMIT DIAG" is other than "OK">> GO TO 2.
"STRG" other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3.CHECK STEERING ANGLE SENSOR

1. Turn the ignition switch OFF.
2. Disconnect steering angle sensor harness connector.
3. Check steering angle sensor harness connector terminals (CAN communication line) for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4.PERFORM SELF-DIAGNOSIS [ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)]

CONSULT
1. Connect steering angle sensor harness connector.
2. Erase "Self Diagnostic Result" mode of "ABS".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "ABS".

Is DTC detected?

YES >> Check the DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A43-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "Diagnosis Procedure".
YES ("U1A43-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A48-00 ECM/HPCM COMMUNICATION

DTC Description

INFOID:0000000015216664

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A48-00	HPCM COMM (HPCM communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When chassis control module is not receiving CAN communication signal (between chassis control module and HPCM)
		Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

- HPCM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A48-00” detected?

YES >> Proceed to DAS-517, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216665

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction between each control unit connected to chassis control module.

Check the result of “PRESENT”?

>> Refer to LAN-41, "CAN COMMUNICATION SYSTEM : CAN Communication Control Circuit".

"TRANSMIT DIAG" is other than "OK">>GO TO 2.
"EV/HEV" other than "OK">> GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3.CHECK HPCM

1. Turn the ignition switch OFF.
2. Disconnect HPCM harness connector.
3. Check HPCM harness connector terminals (CAN communication line) for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4.PERFORM SELF-DIAGNOSIS (HPCM)

CONSULT
1. Connect HPCM harness connector.
2. Erase "Self Diagnostic Result" mode of "EV/HEV".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "EV/HEV".

Is DTC detected?

YES >> Check the DTC. Refer to HBC-71, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A48-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "DTC Description".
YES ("U1A48-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

U1A4A-00 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000015216666

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A4A-00	CONTROL MODULE (CAN) [Control module (CAN)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module (Transmission via CAN communication is impossible)
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A4A-00” detected?

YES >> Proceed to DAS-519, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216667

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “U1A4A-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

U1A4B-00 CONTROL MODULE (CAN)

DTC Description

INFOID:0000000015216668

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A4B-00	CONTROL MODULE (CAN) [Control module (CAN)]	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	When a malfunction is detected in chassis control module
		Diagnosis delay time	–

POSSIBLE CAUSE

Chassis control module

FAIL-SAFE

The following functions are suspended:

- Active Trace Control function
- Active Ride Control function
- Active Engine Brake function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A4B-00” detected?

YES >> Proceed to DAS-520, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216669

1.PERFORM SELF-DIAGNOSIS

CONSULT

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

Is DTC “U1A4B-00” detected?

YES >> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
NO >> Inspection End.

U1A4E-00 ECM/HPCM COMMUNICATION

DTC Description

INFOID:0000000015216670

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U1A4E-00	HPCM COMM (HPCM communication)	Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	–
		Threshold	A calculated signal value differs between a signal transmitted from the HPCM and a signal received from chassis control module via CAN communication
		Diagnosis delay time	–

POSSIBLE CAUSE

- HPCM
- Chassis control module
- CAN communication line

FAIL-SAFE

The following function is suspended:

- Active Ride Control (engine) function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

CONSULT

1. Turn the ignition switch OFF to ON.
   CAUTION:
   Be sure to wait 10 seconds after turning ignition switch OFF or ON.
2. Select “Self Diagnostic Result” mode of “CHASSIS CONTROL”.

Is DTC “U1A4E-00” detected?

YES >> Proceed to DAS-521, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015216671

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

CONSULT

1. Select “CAN Diagnosis Support Monitor” mode of “CHASSIS CONTROL”.
2. Check for malfunction history between each control unit connected to chassis control module.

Check the result of “PAST”?

All items are “OK”>>Refer to GI-54, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>> GO TO 2.

"EV/HEV" other than "OK">>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

1. Turn the ignition switch OFF.
2. Disconnect chassis control module harness connector.
3. Check the chassis control module harness connector terminals 3 and 4 for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 5.

3.CHECK HPCM

1. Turn the ignition switch OFF.
2. Disconnect HPCM harness connector.
3. Check HPCM harness connector terminals (CAN communication line) for damage or loose connection.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Recheck terminals for damage or loose connection. Refer to DAS-414, "Precautions for Harness Repair". GO TO 4.

4.PERFORM SELF-DIAGNOSIS (HPCM)

CONSULT
1. Connect HPCM harness connector.
2. Erase "Self Diagnostic Result" mode of "EV/HEV".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "Self Diagnostic Result" mode of "EV/HEV".

Is DTC detected?

YES >> Check the DTC. Refer to HBC-71, "DTC Index".
NO >> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

CONSULT
1. Connect chassis control module harness connector.
2. Erase "Self Diagnostic Result" mode of "CHASSIS CONTROL".
3. Turn the ignition switch OFF and wait for 10 seconds or more.
4. Turn the ignition switch ON.
5. Select "All DTC Reading" mode.

Is DTC "U1000-00", "U1A4E-00" or other DTC detected?

YES ("U1000-00")>> Refer to DAS-502, "DTC Description".
YES ("U1A4E-00")>> Replace the chassis control module. Refer to DAS-529, "Removal and Installation".
YES (other DTC)>> Check the DTC.
NO >> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000015216672

Regarding Wiring Diagram information, refer to DAS-450, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

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

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M96	10	Ground	0 V

4. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
5. Check the voltage between chassis control module harness connector M96 terminal 10 and ground.

Chassis control module		—	Voltage (Approx.)
Connector	Terminal		
M96	10	Ground	6.4–16 V

Is the inspection result normal?

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

3.CHECK CHASSIS CONTROL MODULE GROUND CIRCUIT

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

Chassis control module		—	Continuity
Connector	Terminal		
M96	12	Ground	Yes

Is the inspection result normal?

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

SYMPTOM DIAGNOSIS

CHASSIS CONTROL

Active Engine Brake

INFOID:0000000014903364

NOTE:
- For the operational conditions of Active Engine Brake, refer to DAS-426, "ACTIVE ENGINE BRAKE FUNCTION : System Description".
- Perform the “Self Diagnostic Result” using CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
Active Engine Brake inoperative/ineffective.	No CVT gear ratio assist.		Active Engine Brake selected OFF in the vehicle information display.	Change Active Engine Brake selection in the vehicle information display to ON.
			Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-436, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".
			• Road wheel tire condition is abnormal • Road wheel tire size is abnormal.	Check the road wheel tire.
	Lower CVT gear ratio not achieved.	Continuously	Active Engine Brake selected OFF in the vehicle information display.	Change Active Engine Brake selection in the vehicle information display to ON.
		At cornering.	• Wheel alignment • Steering malfunction	Refer to “STEERING WHEEL TURNING FORCE IS HEAVY OR LIGHT”DAS-426, "ACTIVE ENGINE BRAKE FUNCTION : System Description".
		While coming to a complete stop.	Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-436, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".

Active Ride Control

INFOID:0000000014903365

NOTE:
- For the operational conditions of Active Ride Control, refer to DAS-429, "ACTIVE RIDE CONTROL FUNCTION : System Description".
- Perform the “Self Diagnostic Result” using CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
Active Ride Control inoperative/ineffective.	No Active Ride Control assist.		VDC OFF switch is engaged.	Turn VDC OFF switch to the OFF position.
			Engine or transmission DTCs present.	Refer to EC DTCs EC-109, "DTC Index", or TM DTCs TM-70, "DTC Index" as necessary.
	Bumpy ride on bumpy road.		Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-436, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".
			• Road wheel tire condition is abnormal. • Road wheel tire size is abnormal.	Check the road wheel tire.
	High vehicle pitch on bumps.	Ineffective pitch control.	• Wheel alignment. • Steering malfunction.	Change Active Engine Brake selection in the vehicle information display to ON.
		No pitch control.	Brake system malfunction.	Refer to DAS-447, "DTC Inspection Priority Chart".
		No engine torque control on curves.	Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-436, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".

Active Trace Control

INFOID:0000000014903366

NOTE:
- For the operational conditions of Active Trace Control, refer to DAS-420, "ACTIVE TRACE CONTROL FUNCTION : System Description".
- Perform the “Self Diagnostic Result” using CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom			Possible cause	Inspection item
Active Trace Control inoperative/ineffective.	No Active Trace Control assist.		Active Trace Control selected OFF in the vehicle information display.	Change Active Trace Control selection in the vehicle information display to ON.
			VDC OFF switch is engaged.	Turn VDC OFF switch to the OFF position.
			Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-436, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".
			• Road wheel tire condition is abnormal. • Road wheel tire size is abnormal.	Check the road wheel tire.
	Excessive lag on turns.	On turns	Wheel alignment	Repair alignment malfunction.
		While zigzagging.	Steering malfunction.	“STEERING WHEEL TURNING FORCE IS HEAVY OR LIGHT” DAS-420, "ACTIVE TRACE CONTROL FUNCTION : System Description".
		With quick lane change.	Certain roads, inclement weather or driving conditions.	System is functioning normally. Confirm the condition with the customer. Refer to DAS-436, "Precautions for Chassis Control (Engine Brake, Active Ride, and Active Trace)".

NORMAL OPERATING CONDITION

Description

INFOID:0000000014903367

CHASSIS CONTROL

- Chassis Control will not provide all the necessary controls to replace driver intervention. It is not designed to prevent loss of control. It is the driver’s responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- Chassis Control is primarily intended for use on well-developed freeways or highways. It may not perform satisfactorily in certain roads, weather or driving conditions.
- Using Chassis Control under some conditions of road, corner or severe weather could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- When Chassis Control is operating, avoid excessive or sudden steering maneuvers. Otherwise, you could lose control of the vehicle.
- Engine Brake Control is designed to enhance braking feel and traceability at corners.
- Active Ride Control is designed to enhance handling and drive comfort.
- Active Trace Control is designed to enhance traceability at corners and smooth vehicle movement for more confident driving.
- Chassis Control may not function properly under the following conditions:
- During bad weather (rain, fog, snow, wind, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original steering parts or suspension parts.
- The functions of Chassis Control may or may not operate properly under the following conditions:
- On roads covered with water, dirt or snow, etc.
- On roads where there are sharp curves.

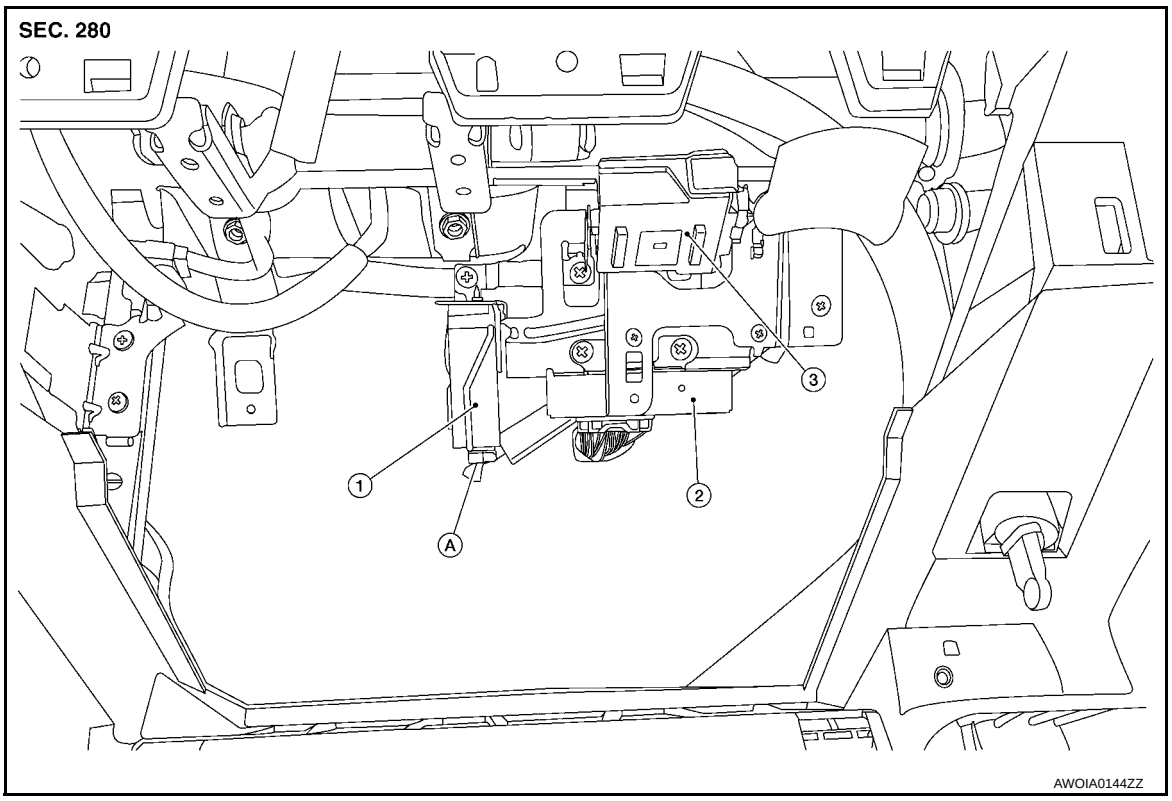
REMOVAL AND INSTALLATION

CHASSIS CONTROL MODULE

Exploded View

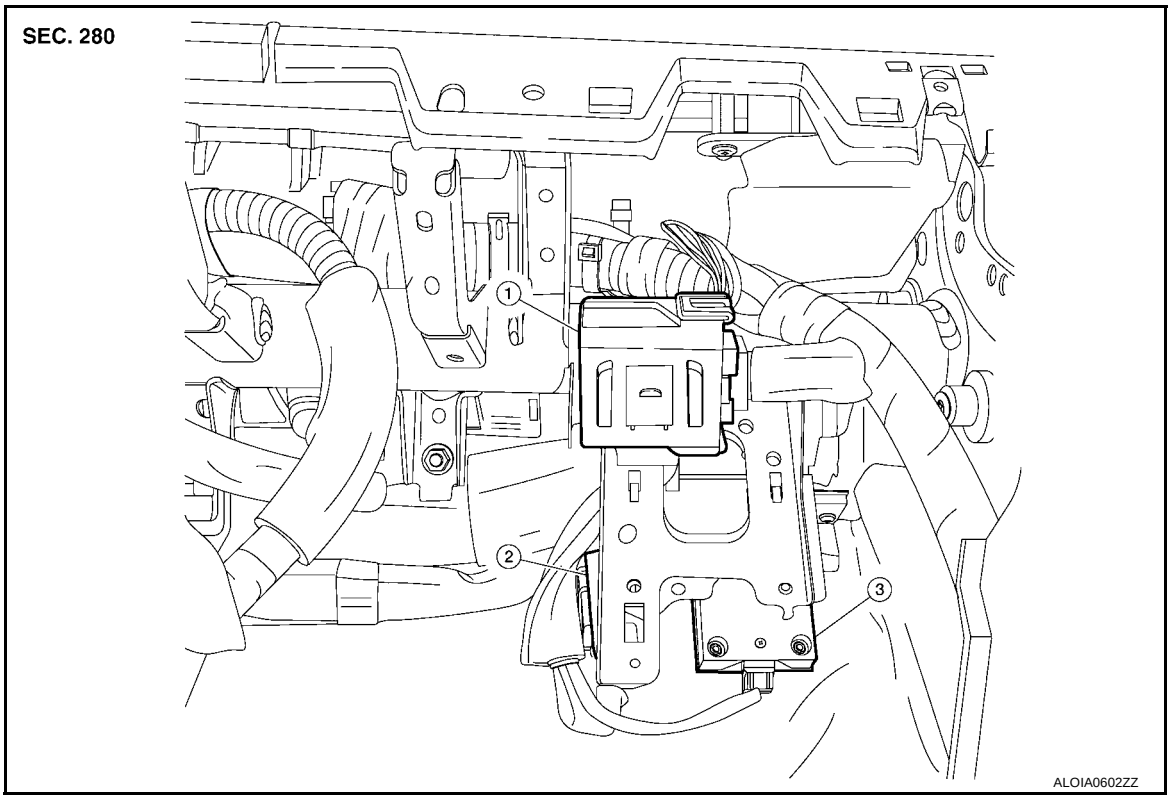
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With Around View Monitor



1. Warning systems buzzer
2. Around view monitor control unit
3. Chassis control module
A. Harness connector

Without Around View Monitor



1. Chassis control module
2. ADAS control unit 2
3. Warning systems buzzer

Removal and Installation

INFOID:0000000014903369

REMOVAL

NOTE:
If the chassis control module is replaced, user registration information is erased, and all setting items for Nissan InTuition related parts are erased.

1. Remove glove box assembly. Refer to IP-23, "Removal and Installation".
2. Disconnect harness connector from chassis control module.
3. Release pawl and remove chassis control module.
   CAUTION:
   Do not drop the chassis control module.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:
Perform "ADDITIONAL SERVICE WHEN REPLACING CHASSIS CONTROL MODULE" if replacing chassis control module. Refer to DAS-455, "Description".