

DAS

SECTION

DRIVER ASSISTANCE SYSTEM

CONTENTS

ADAS CONTROL UNIT	Work Procedure	65
PRECAUTION	CONFIGURATION (ADAS CONTROL UNIT) ...	66
PRECAUTIONS	Description	66
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	Work Procedure	66
Precautions For Harness Repair	DTC/CIRCUIT DIAGNOSIS	68
SYSTEM DESCRIPTION	C1A0A CONFIG UNFINISHED	68
COMPONENT PARTS	DTC Logic	68
Component Parts Location	Diagnosis Procedure	68
ADAS Control Unit	C1A00 CONTROL UNIT	69
SYSTEM	DTC Logic	69
System Description	Diagnosis Procedure	69
Fail-safe (ADAS Control Unit)	C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2	70
DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)	DTC Logic	70
On Board Diagnosis Function	Diagnosis Procedure	70
CONSULT Function (ICC/ADAS)	C1A03 VEHICLE SPEED SENSOR	71
ECU DIAGNOSIS INFORMATION	DTC Logic	71
ADAS CONTROL UNIT	Diagnosis Procedure	72
Reference Value	C1A04 ABS/TCS/VDC SYSTEM	73
Fail-safe (ADAS Control Unit)	DTC Logic	73
DTC Inspection Priority Chart	Diagnosis Procedure	73
DTC Index	C1A05 BRAKE SW/STOP LAMP SW	75
WIRING DIAGRAM	DTC Logic	75
DRIVER ASSISTANCE SYSTEMS	Diagnosis Procedure	75
Wiring Diagram	Component Inspection (Brake Pedal Position Switch)	79
BASIC INSPECTION	Component Inspection (Stop Lamp Switch)	79
ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT	C1A06 OPERATION SW	80
Description	DTC Logic	80
	Diagnosis Procedure	80
	Component Inspection	81
	C1A13 STOP LAMP RELAY	82
	DTC Logic	82

Diagnosis Procedure	83	C1B00 CAMERA UNIT MALF	108
Component Inspection	87	DTC Logic	108
C1A14 ECM	89	Diagnosis Procedure	108
DTC Logic	89	C1B01 CAM AIMING INCMP	109
Diagnosis Procedure	89	DTC Logic	109
C1A15 GEAR POSITION	91	Diagnosis Procedure	109
Description	91	C1B03 ABNRML TEMP DETECT	110
DTC Logic	91	DTC Logic	110
Diagnosis Procedure	92	Diagnosis Procedure	110
C1A24 NP RANGE	93	C1B53 SIDE RADAR RIGHT MALFUNCTION..	111
DTC Logic	93	DTC Logic	111
Diagnosis Procedure	93	Diagnosis Procedure	111
C1A26 ECD MODE MALFUNCTION	95	C1B54 SIDE RADAR LEFT MALFUNCTION ..	112
DTC Logic	95	DTC Logic	112
Diagnosis Procedure	95	Diagnosis Procedure	112
C1A27 ECD POWER SUPPLY CIRCUIT	97	C1B56 SONAR CIRCUIT	113
DTC Logic	97	DTC Logic	113
Diagnosis Procedure	97	Diagnosis Procedure	113
C1A33 CAN TRANSMISSION ERROR	99	C1B57 AVM CIRCUIT	114
DTC Logic	99	DTC Logic	114
Diagnosis Procedure	99	Diagnosis Procedure	114
C1A34 COMMAND ERROR	100	C1B58 DRIVER ASSISTANCE BUZZER	115
DTC Logic	100	DTC Logic	115
Diagnosis Procedure	100	Diagnosis Procedure	115
C1A35 ACCELERATOR PEDAL ACTUATOR	101	C1B82 DISTANCE SENSOR OFF-CENTER ..	116
DTC Logic	101	DTC Logic	116
Diagnosis Procedure	101	Diagnosis Procedure	116
C1A36 ACCELERATOR PEDAL ACTUATOR		C1B83 DISTANCE SENSOR BLOCKED	117
CAN COMM	102	DTC Logic	117
DTC Logic	102	Diagnosis Procedure	117
Diagnosis Procedure	102	C1B84 DISTANCE SENSOR	118
C1A37 ACCELERATOR PEDAL ACTUATOR		DTC Logic	118
CAN 2	103	Diagnosis Procedure	118
DTC Logic	103	C1B85 DISTANCE SENSOR ABNORMAL	
Diagnosis Procedure	103	TEMP	119
C1A38 ACCELERATOR PEDAL ACTUATOR		DTC Logic	119
CAN 1	104	Diagnosis Procedure	119
DTC Logic	104	C1B86 DISTANCE SENSOR POWER SUP-	
Diagnosis Procedure	104	PLY CIRCUIT	120
C1A39 STEERING ANGLE SENSOR	105	DTC Logic	120
DTC Logic	105	Diagnosis Procedure	120
Diagnosis Procedure	105	C1F01 ACCELERATOR PEDAL ACTUATOR..	122
C1A40 SYSTEM SWITCH CIRCUIT	106	DTC Logic	122
DTC Logic	106	Diagnosis Procedure	122
Diagnosis Procedure	106	C1F02 ACCELERATOR PEDAL ACTUATOR..	123
Component Inspection Meter Control Switch (BCI		DTC Logic	123
OFF Switch)	107	Diagnosis Procedure	123

C1F05 ACCELERATOR PEDAL ACTUATOR	Diagnosis Procedure	144	
POWER SUPPLY CIRCUIT	U1500 CAM CAN 2	145	A
DTC Logic	DTC Logic	145	
Diagnosis Procedure	Diagnosis Procedure	145	B
U0121 VDC CAN 2	U1501 CAM CAN 1	146	
DTC Logic	DTC Logic	146	C
Diagnosis Procedure	Diagnosis Procedure	146	
U0126 STRG SEN CAN 1	U1502 ICC SENSOR CAN COMM CIRC	147	
DTC Logic	DTC Logic	147	D
Diagnosis Procedure	Diagnosis Procedure	147	
U0235 ICC SENSOR CAN 1	U1503 SIDE RDR L CAN 2	148	
DTC Logic	DTC Logic	148	E
Diagnosis Procedure	Diagnosis Procedure	148	
U0401 ECM CAN 1	U1504 SIDE RDR L CAN 1	149	
DTC Logic	DTC Logic	149	F
Diagnosis Procedure	Diagnosis Procedure	149	
U0402 TCM CAN 1	U1505 SIDE RDR R CAN 2	150	
DTC Logic	DTC Logic	150	G
Diagnosis Procedure	Diagnosis Procedure	150	
U0415 VDC CAN 1	U1506 SIDE RDR R CAN 1	151	
DTC Logic	DTC Logic	151	H
Diagnosis Procedure	Diagnosis Procedure	151	
U0424 HVAC CAN CIRCUIT 1	U1507 LOST COMM(SIDE RDR R)	152	
Description	DTC Logic	152	I
DTC Logic	Diagnosis Procedure	152	J
Diagnosis Procedure	U1508 LOST COMM(SIDE RDR L)	153	
U0428 STRG SEN CAN 2	DTC Logic	153	
DTC Logic	Diagnosis Procedure	153	K
Diagnosis Procedure	U1512 HVAC CAN 3	154	
U1000 CAN COMM CIRCUIT	DTC Logic	154	
Description	Diagnosis Procedure	154	L
DTC Logic	U1513 METER CAN 3	155	
Diagnosis Procedure	DTC Logic	155	
U1010 CONTROL UNIT (CAN)	Diagnosis Procedure	155	M
Description	U1514 STRG SEN CAN 3	156	
DTC Logic	DTC Logic	156	
Diagnosis Procedure	Diagnosis Procedure	156	N
U150B ECM CAN 3	U1515 ICC SENSOR CAN 3	157	
DTC Logic	DTC Logic	157	
Diagnosis Procedure	Diagnosis Procedure	157	DAS
U150C VDC CAN 3	U1516 CAM CAN 3	158	
DTC Logic	DTC Logic	158	
Diagnosis Procedure	Diagnosis Procedure	158	P
U150D TCM CAN 3	U1517 ACCELERATOR PEDAL ACTUATOR		
DTC Logic	CAN 3	159	
Diagnosis Procedure	DTC Logic	159	
U150E BCM CAN 3	Diagnosis Procedure	159	
DTC Logic			

U1518 SIDE RDR L CAN 3	160
DTC Logic	160
Diagnosis Procedure	160
U1519 SIDE RDR R CAN 3	161
DTC Logic	161
Diagnosis Procedure	161
U1521 SONAR CAN 2	163
DTC Logic	163
Diagnosis Procedure	163
U1522 SONAR CAN 1	164
DTC Logic	164
Diagnosis Procedure	164
U1523 SONAR CAN 3	165
DTC Logic	165
Diagnosis Procedure	165
U1524 AVM CAN 1	166
DTC Logic	166
Diagnosis Procedure	166
U1525 AVM CAN 3	167
DTC Logic	167
Diagnosis Procedure	167
U1530 DR ASSIST BUZZER CAN 1	168
DTC Logic	168
Diagnosis Procedure	168
POWER SUPPLY AND GROUND CIRCUIT ..	169
Diagnosis Procedure	169
REMOVAL AND INSTALLATION	170
ADAS CONTROL UNIT	170
Removal and Installation	170
DRIVER ASSISTANCE SYSTEM	
PRECAUTION	171
PRECAUTIONS	171
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	171
Precaution for DCA System Service	171
Precaution for PFCW System Service	171
Precaution for LDW/LDP System Service	171
Precaution for Blind Spot Warning/Blind Spot Intervention System Service	172
Precaution for Backup Collision Intervention	172
Precaution for FEB System Service	173
Precaution for ICC System Service	173
Precaution for Work	174
Precautions For Harness Repair	174
PREPARATION	175
PREPARATION	175
Special Service Tool	175

SYSTEM DESCRIPTION	176
COMPONENT PARTS	176
Component Parts Location	176
ICC Sensor	178
ICC Steering Switch	178
Brake Pedal Position Switch / Stop Lamp Switch ..	178
ICC Brake Hold Relay	179
Combination Meter	179
Accelerator Pedal Actuator	179
Lane Camera Unit	179
Driver Assistance Buzzer Control Module	180
Warning Buzzer	180
Side Radar LH/RH	180
Blind Spot Warning/Blind Spot Intervention Indicator LH/RH	180
Dynamic Driver Assistance Switch	180
Warning Systems Switch / Warning Systems ON indicator	181
BCI Switch	181
SYSTEM	182
DCA	182
DCA : System Description	182
PFCW	186
PFCW : System Description	186
LDW	187
LDW : System Description	187
LDP	189
LDP : System Description	190
BSW	193
BSW : System Description	193
RCTA	196
RCTA : System Description	196
BLIND SPOT INTERVENTION	198
BLIND SPOT INTERVENTION : System Description	199
BCI	203
BCI : System Description	203
Fail-safe (ADAS Control Unit)	207
Fail-safe (ICC Sensor)	208
Fail-safe (Side Radar)	208
Fail-safe (Lane Camera Unit)	208
OPERATION	210
DCA	210
DCA : Switch Name and Function	210
DCA : Menu Displayed by Pressing Each Switch ..	210
PFCW	212
PFCW : Switch Name and Function	212
PFCW : Menu Displayed by Pressing Each Switch ..	213

LDP	213	ADAS CONTROL UNIT	253	
LDP : Switch Name and Function	213	Reference Value	253	A
LDP : Menu Displayed by Pressing Each Switch..	214	Fail-safe (ADAS Control Unit)	259	
LDW	215	DTC Inspection Priority Chart	260	B
LDW : Switch Name and Function	215	DTC Index	261	
LDW : Menu Displayed by Pressing Each Switch.	216	ICC SENSOR	264	C
BSW/RCTA	216	Reference Value	264	
BSW/RCTA : Switch Name and Function	216	Fail-safe (ICC Sensor)	265	
BSW/RCTA : System Display and Warning	217	DTC Inspection Priority Chart	265	
BLIND SPOT INTERVENTION (BSI) SYSTEM	218	DTC Index	266	D
BLIND SPOT INTERVENTION (BSI) SYSTEM :		ACCELERATOR PEDAL ACTUATOR	270	
Switch Name and Function	218	Reference Value	270	
BLIND SPOT INTERVENTION (BSI) SYSTEM :		DTC Inspection Priority Chart	271	E
System Display and Warning	218	DTC Index	271	
BCI	219	SIDE RADAR LH	272	
BCI : Switch Name and Function	219	Reference Value	272	F
BCI : System Display and Warning	219	Fail-safe (Side Radar)	272	
HANDLING PRECAUTION	221	DTC Inspection Priority Chart	273	
Precautions for Distance Control Assist	221	DTC Index	273	G
Precautions for Predictive Forward Collision		SIDE RADAR RH	275	
Warning	223	Reference Value	275	
Precautions for Lane Departure Warning/Lane		Fail-safe (Side Radar)	275	H
Departure Prevention	223	DTC Inspection Priority Chart	276	
Precautions for Blind Spot Warning/Blind Spot In-		DTC Index	276	
tervention	224	DRIVER ASSISTANCE BUZZER CONTROL		I
Precautions for Rear Cross Traffic Alert	226	MODULE	278	
Precautions for Back-up Collision Intervention	226	Reference Value	278	
DIAGNOSIS SYSTEM (ADAS CONTROL		DTC Inspection Priority Chart	280	J
UNIT)	228	DTC Index	280	
On Board Diagnosis Function	228	LANE CAMERA UNIT	281	K
CONSULT Function (ICC/ADAS)	229	Reference Value	281	
DIAGNOSIS SYSTEM (ICC SENSOR)	242	Fail-safe (Lane Camera Unit)	282	
CONSULT Function (LASER/RADAR)	242	DTC Inspection Priority Chart	283	
DIAGNOSIS SYSTEM (ACCELERATOR		DTC Index	283	L
PEDAL ACTUATOR)	244	WIRING DIAGRAM	284	
CONSULT Function (ACCELERATOR PEDAL		DRIVER ASSISTANCE SYSTEMS	284	M
ACT)	244	Wiring Diagram	284	
DIAGNOSIS SYSTEM (SIDE RADAR LH)	246	BASIC INSPECTION	306	N
CONSULT Function (SIDE RADAR LEFT)	246	DIAGNOSIS AND REPAIR WORK FLOW	306	
DIAGNOSIS SYSTEM (SIDE RADAR RH)	247	Work Flow	306	DAS
CONSULT Function (SIDE RADAR RIGHT)	247	ADDITIONAL SERVICE WHEN REPLACING		
DIAGNOSIS SYSTEM (DRIVER ASSIS-		ICC SENSOR	309	
TANCE BUZZER CONTROL MODULE)	248	Description	309	P
CONSULT Function (BSW/BUZZER)	248	Work Procedure	309	
DIAGNOSIS SYSTEM (LANE CAMERA		ADDITIONAL SERVICE WHEN REPLACING		
UNIT)	251	ACCELERATOR PEDAL ASSEMBLY	310	
CONSULT Function (LANE CAMERA)	251	Description	310	
ECU DIAGNOSIS INFORMATION	253	Work Procedure	310	

ADDITIONAL SERVICE WHEN REPLACING	
LANE CAMERA UNIT	311
Description	311
Work Procedure	311
PRE-INSPECTION FOR DIAGNOSIS	312
LANE CAMERA UNIT	312
LANE CAMERA UNIT : Inspection Procedure	312
CAMERA AIMING ADJUSTMENT	313
Description	313
Work Procedure (Preparation)	313
Work Procedure (Target Setting)	314
Work Procedure (Camera Aiming Adjustment)	315
Work Procedure (Target Mark Sample)	316
ACTION TEST	318
DCA	318
DCA : Description	318
DCA : Work Procedure	318
LDW/LDP	318
LDW/LDP : Description	319
LDW/LDP : Inspection Procedure	319
BSW/RCTA	321
BSW/RCTA : Description	321
BSW/RCTA : Work Procedure	322
BCI	324
BCI : Description	324
BCI : Work Procedure	324
DTC/CIRCUIT DIAGNOSIS	327
C1A07 CVT	327
DTC Logic	327
Diagnosis Procedure	327
C1B00 CAMERA UNIT MALF	328
LANE CAMERA UNIT	328
LANE CAMERA UNIT : DTC Logic	328
LANE CAMERA UNIT : Diagnosis Procedure	328
C1B01 CAM AIMING INCOMP	329
LANE CAMERA UNIT	329
LANE CAMERA UNIT : DTC Logic	329
LANE CAMERA UNIT : Diagnosis Procedure	329
C1B03 ABRML TEMP DETECT	330
LANE CAMERA UNIT	330
LANE CAMERA UNIT : DTC Logic	330
LANE CAMERA UNIT : Diagnosis Procedure	330
C1B09 POWER SUPPLY CIRCUIT	331
DTC Logic	331
Diagnosis Procedure	331
C1B20 CONTROL MODULE	332

DRIVER ASSISTANCE BUZZER CONTROL MOD- ULE	332
DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic	332
DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure	332
DRIVER ASSISTANCE BUZZER CONTROL MODULE : Component Inspection	333
C1B50 SIDE RADAR MALFUNCTION	334
SIDE RADAR	334
SIDE RADAR : DTC LOGIC	334
SIDE RADAR : Diagnosis Procedure	334
C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT	335
SIDE RADAR	335
SIDE RADAR : DTC Logic	335
SIDE RADAR : Diagnosis Procedure	335
C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT	337
SIDE RADAR	337
SIDE RADAR : DTC Logic	337
SIDE RADAR : Diagnosis Procedure	337
C1B55 RADAR BLOCKAGE	339
SIDE RADAR	339
SIDE RADAR : DTC Logic	339
SIDE RADAR : Diagnosis Procedure	339
C1F01 ACCELERATOR PEDAL ACTUATOR.	341
ACCELERATOR PEDAL ACTUATOR	341
ACCELERATOR PEDAL ACTUATOR : DTC Log- ic	341
ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure	341
C1F02 ACCELERATOR PEDAL ACTUATOR.	342
ACCELERATOR PEDAL ACTUATOR	342
ACCELERATOR PEDAL ACTUATOR : DTC Log- ic	342
ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure	342
C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT	343
ACCELERATOR PEDAL ACTUATOR	343
ACCELERATOR PEDAL ACTUATOR : DTC Log- ic	343
ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure	343
U0104 ADAS CAN 1	344

SIDE RADAR	344	U1010 CONTROL UNIT (CAN)	354	
SIDE RADAR : DTC Logic	344	ACCELERATOR PEDAL ACTUATOR	354	A
SIDE RADAR : Diagnosis Procedure	344	ACCELERATOR PEDAL ACTUATOR : Description	354	B
DRIVER ASSISTANCE BUZZER CONTROL MODULE	344	ACCELERATOR PEDAL ACTUATOR : DTC Logic	354	C
DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic	345	ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure	354	
DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure	345	LANE CAMERA UNIT	354	D
U0126 STRG SEN CAN 1	346	LANE CAMERA UNIT : Description	354	
LANE CAMERA UNIT	346	LANE CAMERA UNIT : DTC Logic	354	E
LANE CAMERA UNIT : DTC Logic	346	LANE CAMERA UNIT : Diagnosis Procedure	355	
LANE CAMERA UNIT : Diagnosis Procedure	346	SIDE RADAR LH	355	F
U0405 ADAS CAN 2	347	SIDE RADAR LH : Description	355	
SIDE RADAR	347	SIDE RADAR LH : DTC Logic	355	G
SIDE RADAR : DTC Logic	347	SIDE RADAR LH : Diagnosis Procedure	356	
SIDE RADAR : Diagnosis Procedure	347	SIDE RADAR RH	356	H
U0428 STRG SEN CAN 2	348	SIDE RADAR RH : Description	356	
LANE CAMERA UNIT	348	SIDE RADAR RH : DTC Logic	356	I
LANE CAMERA UNIT : DTC Logic	348	SIDE RADAR RH : Diagnosis Procedure	357	
LANE CAMERA UNIT : Diagnosis Procedure	348	DRIVER ASSISTANCE BUZZER CONTROL MODULE	357	J
U1000 CAN COMM CIRCUIT	349	DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description	357	
ACCELERATOR PEDAL ACTUATOR	349	DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic	357	
ACCELERATOR PEDAL ACTUATOR : Description	349	DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure	357	
ACCELERATOR PEDAL ACTUATOR : DTC Logic	349	POWER SUPPLY AND GROUND CIRCUIT ..	358	
ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure	349	ACCELERATOR PEDAL ACTUATOR	358	K
LANE CAMERA UNIT	349	ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure	358	
LANE CAMERA UNIT : Description	349	SIDE RADAR LH	358	L
LANE CAMERA UNIT : DTC Logic	350	SIDE RADAR LH : Diagnosis Procedure	358	
LANE CAMERA UNIT : Diagnosis Procedure	350	SIDE RADAR RH	359	M
SIDE RADAR LH	350	SIDE RADAR RH : Diagnosis Procedure	359	
SIDE RADAR LH : Description	350	LANE CAMERA UNIT	360	N
SIDE RADAR LH : DTC Logic	351	LANE CAMERA UNIT : Diagnosis Procedure	360	
SIDE RADAR LH : Diagnosis Procedure	351	DRIVER ASSISTANCE BUZZER CONTROL MODULE	361	
SIDE RADAR RH	351	DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure	361	DAS
SIDE RADAR RH : Description	351	RIGHT/LEFT SWITCHING SIGNAL CIRCUIT ..	362	
SIDE RADAR RH : DTC Logic	352	Diagnosis Procedure	362	P
SIDE RADAR RH : Diagnosis Procedure	352	WARNING BUZZER CIRCUIT	363	
DRIVER ASSISTANCE BUZZER CONTROL MODULE	352	Component Function Check	363	
DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description	352	Diagnosis Procedure	363	
DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic	352	BCI SWITCH CIRCUIT	365	
DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure	353	Component Function Check	365	

Diagnosis Procedure	365
Component Inspection	366
WARNING SYSTEMS SWITCH CIRCUIT	367
Component Function Check	367
Diagnosis Procedure	367
Component Inspection	368
WARNING SYSTEMS ON INDICATOR CIRCUIT	369
Component Function Check	369
Diagnosis Procedure	369
Component Inspection	370
SYMPTOM DIAGNOSIS	371
DRIVER ASSISTANCE SYSTEM SYMPTOMS	371
Symptom Table	371
SYSTEM SETTINGS CANNOT BE TURNED ON/OFF IN VEHICLE INFORMATION DISPLAY	375
DCA	375
DCA : Description	375
DCA : Diagnosis Procedure	375
LDW/LDP	376
LDW/LDP : Description	376
LDW/LDP : Diagnosis Procedure	376
BLIND SPOT WARNING/BLIND SPOT INTERVENTION	376
BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description	376
BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Diagnosis Procedure	376
BCI	377
BCI : Description	377
BCI : Diagnosis Procedure	377
SYSTEM NOT ACTIVATED	378
DCA	378
DCA : Description	378
DCA : Diagnosis Procedure	378
BCI	379
BCI : Description	379
BCI : Diagnosis Procedure	379
CHIME DOES NOT SOUND	381
Description	381
Diagnosis Procedure	381
SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF	383
DCA	383
DCA : Description	383
DCA : Diagnosis Procedure	383

BLIND SPOT WARNING/BLIND SPOT INTERVENTION	384
BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description	384
BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Diagnosis Procedure	384
NO FORCE GENERATED FOR PUTTING BACK THE ACCELERATOR PEDAL	386
Description	386
Diagnosis Procedure	386
FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT..	387
Description	387
Diagnosis Procedure	387
THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL	389
Description	389
Diagnosis Procedure	389
THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL	391
Description	391
Diagnosis Procedure	391
LANE DEPARTURE WARNING LAMP DOES NOT TURN ON	392
Description	392
Diagnosis Procedure	392
LDP ON INDICATOR LAMP DOES NOT TURNED ON	393
Description	393
Diagnosis Procedure	393
NORMAL OPERATING CONDITION	394
Description	394
REMOVAL AND INSTALLATION	400
ACCELERATOR PEDAL ASSEMBLY	400
Removal and Installation	400
DYNAMIC DRIVER ASSISTANCE SWITCH ..	401
Removal and Installation	401
SIDE RADAR	402
Exploded View	402
Removal and Installation	402
BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR	403
Exploded View	403
Removal and Installation	403
DRIVER ASSISTANCE BUZZER CONTROL MODULE	404
Removal and Installation	404

WARNING BUZZER	405	SONAR SENSOR	411	
Removal and Installation	405	Removal and Installation	411	A
ICC SENSOR	406	SONAR BUZZER	413	
Exploded View	406	Removal and Installation	413	B
Removal and Installation	406	BCI SWITCH	414	
WARNING SYSTEMS SWITCH	408	Removal and Installation	414	C
Removal and Installation	408	REAR VIEW CAMERA	415	
LANE CAMERA UNIT	409	Removal and Installation	415	D
Exploded View	409			
Removal and Installation	409			E

PRECAUTION

PRECAUTIONS

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

INFOID:0000000014222106

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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

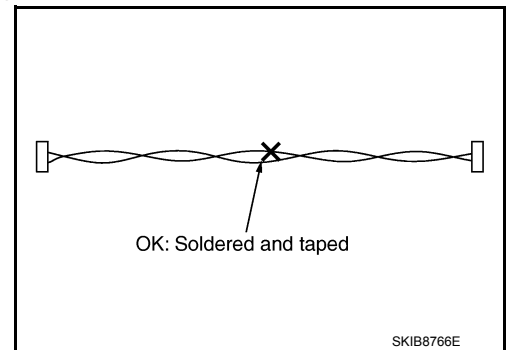
INFOID:0000000014222108

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

- Solder the repaired area and wrap tape around the soldered area.

NOTE:

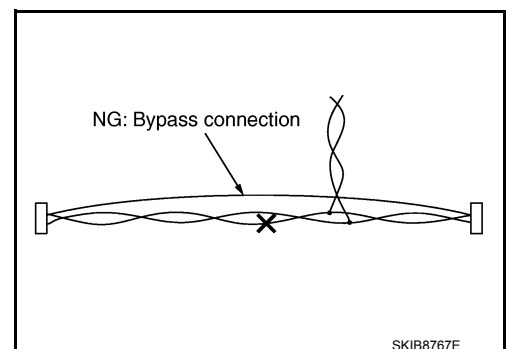
A fray of twisted lines must be within 110 mm (4.33 in).



- 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.

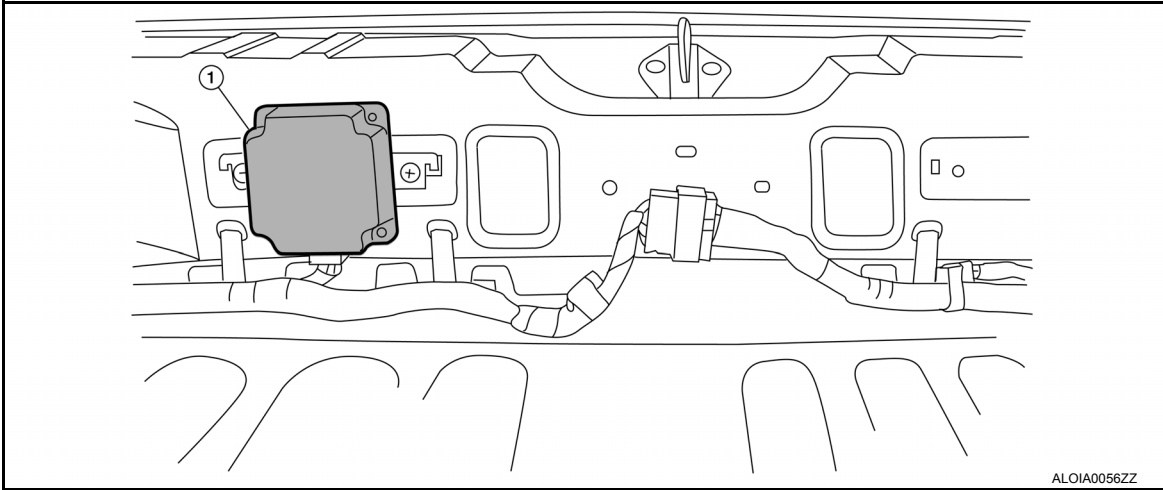


SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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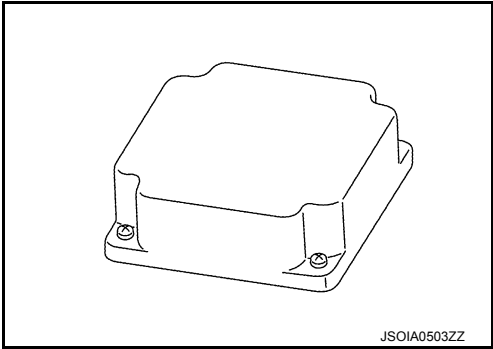
1. ADAS control unit (view of rear luggage room area with storage box removed)

Component	Description
ADAS control unit	- Controls each system, based on CAN communication, ITS communication and chassis communication signals received from each control unit - Transmits signals necessary for control between CAN communication, ITS communication and Chassis communication

ADAS Control Unit

INFOID:0000000014222110

- ADAS control unit is installed behind the storage box.
- 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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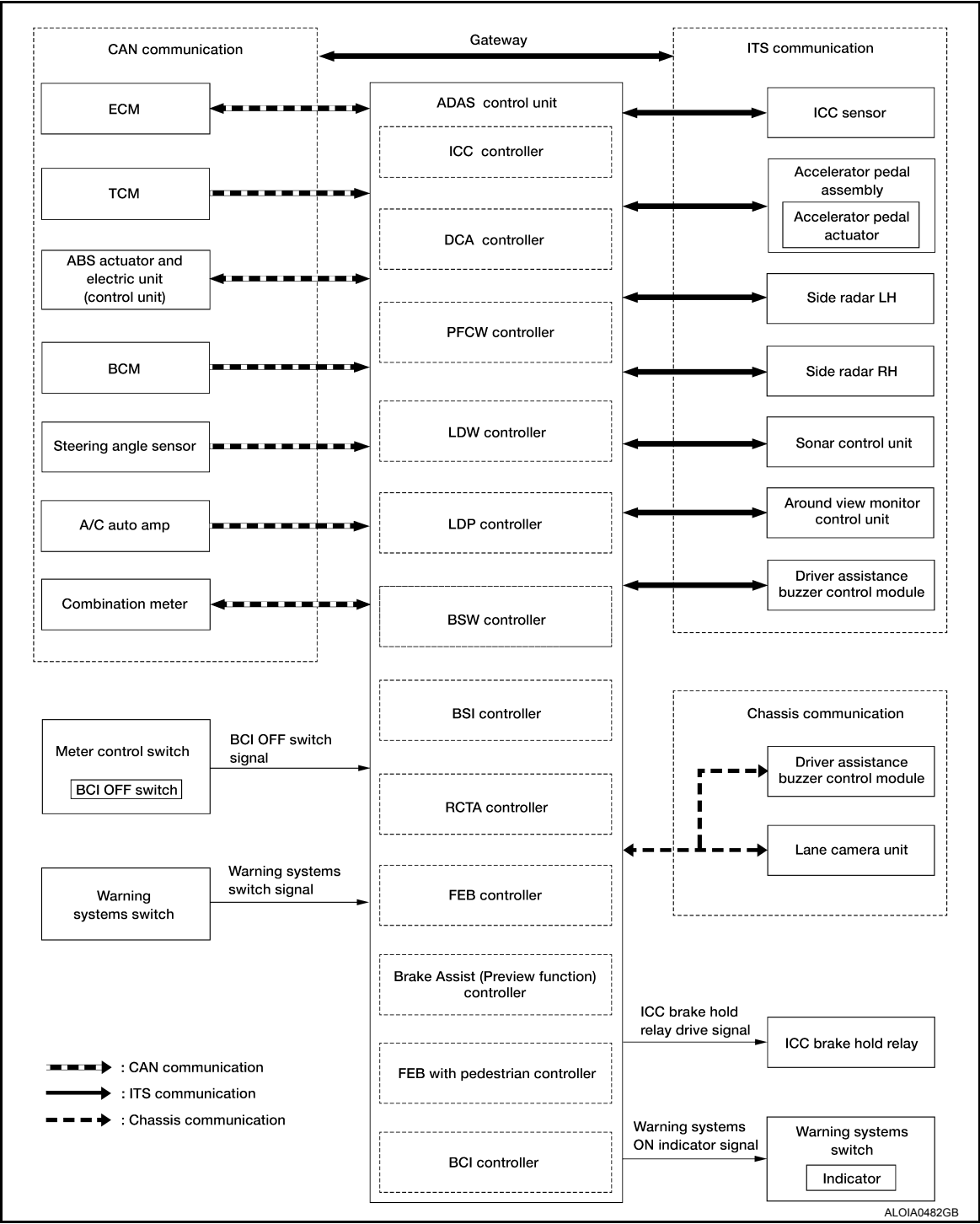
DAS

SYSTEM

System Description

INFOID:0000000014222111

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Transmit unit	Signal name		Description
ECM	CAN communication	Closed throttle position signal	Receives idle position state (ON/OFF)
		Accelerator pedal position signal	Receives accelerator pedal position (angle)
		ICC prohibition signal	Receives an operable/inoperable state of the ICC system
		ICC steering switch signal	Main switch signal
			SET/COAST switch signal
			CANCEL switch signal
			RESUME/ACCELERATE switch signal
			DISTANCE switch signal
			Dynamic driver assistance 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
		Snow mode switch signal	Receives an operational state of the snow mode
TCM	CAN communication	Input speed signal	Receives the number of revolutions of input shaft
		Current gear position signal	Receives a current gear position
		Shift position signal	Receives a selector lever position
		Output shaft revolution signal	Receives the number of revolutions of output shaft
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		ABS operation signal	Receives an operational state of ABS
		ABS warning lamp signal	Receives an ON/OFF state of ABS warning lamp
		TCS malfunction signal	Receives a malfunction state of TCS
		TCS operation signal	Receives an operational state of TCS
		VDC OFF switch signal	Receives an ON/OFF state of VDC
		VDC malfunction signal	Receives a malfunction state of VDC
		VDC operation signal	Receives an operational state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
		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
Combination meter	CAN communication	Parking brake switch signal	Receives an operational state of the parking brake
BCM	CAN communication	Front wiper request signal	Receives an operational state of front wiper(s)
		Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
		Dimmer signal	Receives ON/OFF state of dimmer signal
Steering angle sensor	CAN communication	Steering angle sensor malfunction signal	Receives a malfunction state of steering angle sensor
		Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
		Steering angle speed signal	Receives the turning angle speed of the steering wheel

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DAS

P

SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Transmit unit	Signal name		Description
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in "Driving Aids" selected with the vehicle information display
A/C auto amp.	CAN communication	Ambient temperature signal	Receives ambient temperature signal
ICC sensor	ITS communication	ICC sensor signal	Receives detection results, such as the presence or absence of a vehicle ahead and distance from the vehicle
Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker
Accelerator pedal actuator	ITS communication	Accelerator pedal actuator operation status signal	Receives an operational state of accelerator pedal actuator
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone
BCI OFF Switch	Hard wire	BCI OFF switch signal	Receives the state of the BCI OFF switch request
Sonar control unit	ITS communication	Rear object detection signal	Receives objects detection result of rear area behind vehicle
Warning systems switch	Warning systems switch signal		Receives an ON/OFF state of the warning systems switch

Output Signal Item

Reception unit	Signal name		Description
ECM	CAN communication	ICC operation signal	Transmits an ICC operation signal necessary for intelligent cruise control
TCM	CAN communication	ICC operation signal	Transmits an ICC operation signal necessary for intelligent cruise control via ECM
ABS actuator and electric unit (control unit)	CAN communication	Brake fluid pressure control signal	Transmits a brake fluid pressure control signal to activate the brake
		Target yaw moment signal	Transmits a target yaw moment signal to generate yaw moment to the vehicle

SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Reception unit	Signal name			Description
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	
			DCA system switch indicator signal	
		Blind Spot Warning/Blind Spot Intervention warning lamp signal		Transmits a Blind Spot Warning/Blind Spot Intervention warning lamp signal to turn ON the Blind Spot Warning/Blind Spot Intervention warning lamp
		Blind Spot Intervention ON indicator lamp signal		Transmits a Blind Spot Intervention ON indicator lamp signal to turn ON the Blind Spot Intervention ON indicator 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	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
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
Accelerator pedal actuator	ITS communication	Accelerator pedal position signal		Transmits an accelerator pedal angle calculated by the ADAS control unit
		Accelerator pedal feedback force control signal		Transmits a target reaction force value calculated by the ADAS control unit
Side radar LH, RH	ITS communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
		Blind Spot Warning/Blind Spot Intervention indicator signal		Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer signal		Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator
ICC brake hold relay	ICC brake hold relay drive signal			Activates the brake hold relay and turns ON the stop lamp
Warning systems ON indicator	Warning systems ON indicator signal			Turns ON the warning systems ON indicator

A

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C

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G

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DAS

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SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Reception unit	Signal name		Description
Sonar control unit	ITS communication	Warning buzzer signal	While the shifter is in reverse and backing up, transmits a request for a variable warning buzzer signal related to distance whenever an obstacle exists
Around view monitor control unit	ITS communication	Visual signal request	Transmits a visual signal request by the ADAS control unit to center display to override other signals and display rear view while the shift lever is in reverse
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a warning buzzer signal to activate the 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)
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention (BSI)
- Back-up Collision Intervention (BCI)

System	Reference
Intelligent Cruise Control (ICC)	CCS-13, "System Description"
Distance Control Assist (DCA)	DAS-182, "DCA : System Description"
Forward Emergency Braking (FEB)	BRC-190, "System Description"
Predictive Forward Collision Warning (PFCW)	DAS-186, "PFCW : System Description"
Lane Departure Warning (LDW)	DAS-187, "LDW : System Description"
Lane Departure Prevention (LDP)	DAS-190, "LDP : System Description"
Blind Spot Warning (BSW)	DAS-193, "BSW : System Description"
Rear Cross Traffic Alert (RCTA)	DAS-196, "RCTA : System Description"
Blind Spot Intervention (BSI)	DAS-199, "BLIND SPOT INTERVENTION : System Description"
Back-up Collision Intervention (BCI)	DAS-203, "BCI : System Description"

Fail-safe (ADAS Control Unit)

INFOID:0000000014235999

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

SYSTEM

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

System	Buzzer	Warning lamp/Warning display	Description
Predictive Forward Collision Warning (PFCW)	High-pitched tone	Warning message	Cancel
Distance Control Assist (DCA)	High-pitched tone	DCA system warning	Cancel
Lane Departure Warning (LDW)	—	Lane departure warning lamp	Cancel
Lane Departure Prevention (LDP)	Low-pitched tone	Lane departure warning lamp	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Blind Spot Intervention	Low-pitched tone	Blind Spot Intervention warning lamp	Cancel
Backup Collision Intervention (BCI)	High-pitched tone	Backup Collision Intervention warning indicator	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

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DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

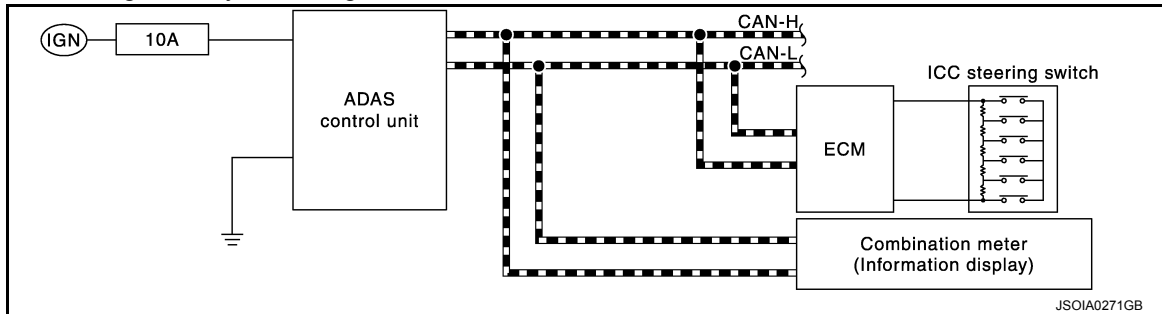
On Board Diagnosis Function

INFOID:000000014222113

DESCRIPTION

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

On Board Self-diagnosis System Diagram



METHOD OF STARTING

CAUTION:

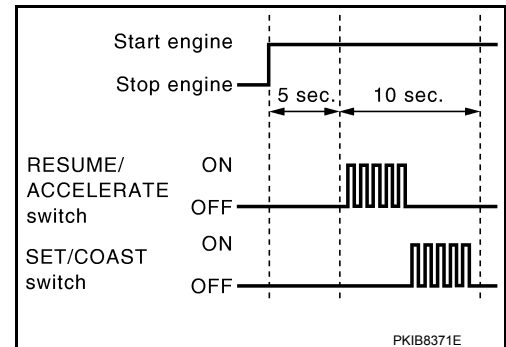
Start condition of on board self-diagnosis

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

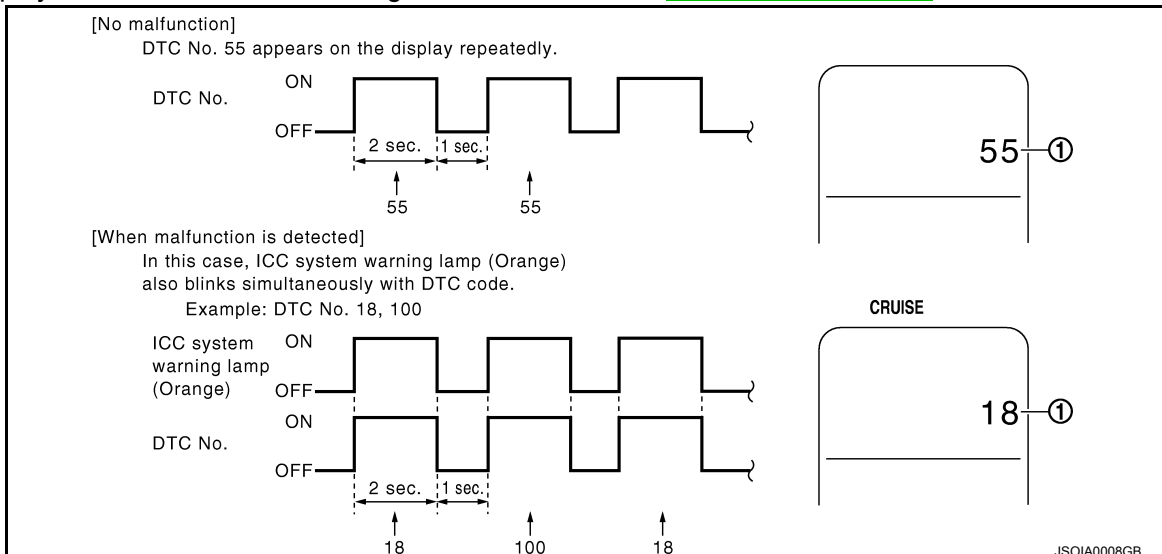
1. Turn the ignition switch OFF.
2. Start the engine.
3. Wait for 5 seconds after starting the engine. Push up the RESUME/ACCELERATE switch 5 times and push down the SET/COAST switch 5 times within 10 seconds.

NOTE:

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



4. The DTC is displayed on the set vehicle speed indicator (1) on the ICC system display on the information display when the on board self-diagnosis starts. Refer to [DAS-40, "DTC Index"](#).



NOTE:

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

WHEN THE ON BOARD SELF-DIAGNOSIS DOES NOT START

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

Assumed abnormal part		Inspection item
Information display	Combination meter malfunction	Check that the self-diagnosis function of the combination meter operates. Refer to MWI-17, "Description" .
ICC steering switch malfunction		Perform the inspection for DTC “C1A06”. Refer to DAS-80, "DTC Logic" .
Harness malfunction between ICC steering switch and ECM		
ECM malfunction		
ADAS control unit malfunction		• Check power supply and ground circuit of ADAS control unit. Refer to DAS-169, "Diagnosis Procedure". • Perform SELF-DIAGNOSIS for “ICC/ADAS”with CONSULT, and then check the malfunctioning parts. Refer to DAS-40, "DTC Index".

HOW TO ERASE ON BOARD SELF-DIAGNOSIS

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

NOTE:

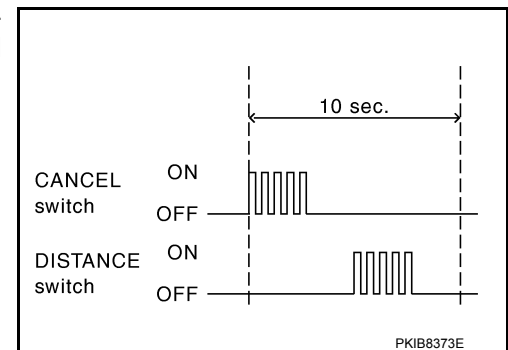
- Complete the operation within 10 seconds after pressing the CANCEL switch first.
- If the operation is not completed within 10 seconds, repeat the procedure from step 1.

4. DTC 55 is displayed after erasing.

NOTE:

DTCs for existing malfunction can not be erased.

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



CONSULT Function (ICC/ADAS)

INFOID:0000000014222114

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.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

WORK SUPPORT

Work support items	Description
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems - Vehicle-to-vehicle control mode - Conventional (fixed speed) control mode - Distance Control Assist (DCA) - Forward Emergency Braking (FEB)
CAUSE OF AUTO-CANCEL 2	Displays causes of automatic system cancellation occurred during control of the following systems - Lane Departure Prevention (LDP) - Blind Spot Intervention
CAUSE OF AUTO-CANCEL 3	Displays causes of automatic system cancellation occurred during control of the Back-up Collision Intervention (BCI)

NOTE:

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

Display Items for The Cause of Automatic Cancellation 1

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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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)	A
WHL SPD ELEC NOISE	×	×	×		Wheel speed sensor signal caught electromagnetic noise	B
VDC/TCS OFF SW	×		×	×	VDC OFF switch was pressed	
VHCL SPD UNMATCH	×	×	×		Wheel speed became different from A/T vehicle speed	C
TIRE SLIP	×	×			Wheel slipped	
IGN LOW VOLT	×	×	×	×	Decrease in ADAS control unit ignition voltage	
PARKING BRAKE ON	×	×			The parking brake is operating	D
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	E
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	F
ECD CIRCUIT	×	×	×	×	An abnormal condition occurs in ECD system	
ENG SPEED DOWN	×	×			Engine speed became extremely low while controlling ICC system	G
ASCD VHCL SPD DTAC		×			Vehicle speed is detached from set vehicle speed	
ASCD DOUBLE COMD		×			Cancel switch and operation switch are detected simultaneously	
APA HI TEMP			×		The accelerator pedal actuator integrated motor temperature is high	H
ICC SENSOR CAN COMM ERR	×		×	×	Communication error between ADAS control unit and the ICC sensor	I
ABS WARNING LAMP	×		×		ABS warning lamp ON	
FR RADAR BLOCKED	×		×	×	Inclusion of dirt or stains on the ICC sensor area of the front bumper	J
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	K
RADAR INTERFERENCE	×		×	×	ICC sensor receives electromagnetic interference	L
NO RECORD	×	×	×		—	

Display Items for The Cause of Automatic Cancellation 3

Cause of cancellation	Back-up Collision Intervention	Description
CAN COMM ERROR (CAN)	×	ADAS control unit received an abnormal signal with CAN communication
CAN COMM ERROR (ECD)	×	ADAS control unit received an abnormal signal with CAN communication
IGN LOW VOLT	×	Decrease in ADAS control unit ignition voltage
VEHICLE SPEED UP	×	Vehicle speed higher than 8 km/h (5 MPH)
ACCEL IS OPERATED	×	Accelerator pedal was depressed

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Cause of cancellation	Back-up Collision Intervention	Description
BRAKE IS OPERATED	×	Brake pedal was operated
APA HI TEMP	×	The accelerator pedal actuator integrated motor temperature is high
APA POWER	×	Decrease in accelerator pedal actuator ignition or battery voltage
NO RECORD	×	—

SELF DIAGNOSTIC RESULT

Refer to [DAS-40, "DTC Index"](#).

NOTE:

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

DATA MONITOR

NOTE:

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

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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

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DAS

P

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
GEAR [1, 2, 3, 4, 5, 6, 7]	×					Indicates A/T gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)
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
DYNA ASIST SW [On/Off]	×	×		×		Indicates [On/Off] status as judged from ICC steering switch signal (ECM transmits ICC steering switch signal through CAN communication)
DCA ON IND [On/Off]	×					The status [ON/OFF] of DCA system switch indicator output is displayed
DCA VHL AHED [On/Off]	×					The status [ON/OFF] of vehicle ahead detection indicator output in DCA system is displayed
APA TEMP [°C]	×				×	Accelerator pedal actuator integrated motor temperature that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the integrated motor temperature via ITS communication)
APA PWR [V]	×				×	Accelerator pedal actuator power supply voltage that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the power supply voltage via ITS communication)
NAVI ICC DISP [On/Off]						NOTE: The item is displayed, but it is not monitored
LDW SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]			×			Indicates [On/Off] status of LDW system display output
LDP ON IND [On/Off]			×			Indicates [On/Off] status of LDP system display output
LANE DPRT W/L [On/Off]			×			Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
LDW BUZER OUT- PUT [On/Off]			×			Indicates [On/Off] status of warning buzzer output
LDP SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDP system
WARN REQ [On/Off]			×			Indicates an ADAS control unit judged warning state (ON/OFF) of LDP system
READY signal [On/Off]			×			Indicates LDP system settings
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)
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)

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description	
STATUS signal [Stnby/Warn/Cancel/ Off]			×			Indicates a control state of LDP system	A
Shift position [Off, P, R, N, D, M/T1 - 7]			×	×	×	Indicates shift position read from ADAS control unit through CAN commu- nication (TCM transmits shift position signal through CAN communication)	B
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)	C
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)	D
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	E
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	F
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	G
DCA SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the DCA system. The DCA system can be set to ON/OFF by selecting "Driving Aids"⇒"Front assist" of the integral switch	H
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	I
BSI SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of Blind Spot Intervention system. Blind Spot Intervention system can be set to ON/OFF by selecting "Driving Aids"⇒ "Blind Spot" of the integral switch	J
FCW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the PFCW system. The PFCW system can be set to ON/OFF by selecting "Driving Aids"⇒"Emergency Assist" of the integral switch	K
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	L
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	M
DRIVE MODE STATS [STD/SPT/ECO/SNO]	×	×	×	×		Indicates a drive mode selector select position judged from a drive mode select switch position signal read by the ADAS control unit via CAN com- munication	N
WARN SYS SW [On/Off]	×	×	×	×		Indicates [On/Off] status of warning systems switch	DAS
BSW/BSI WARN LMP [On/Off]				×		Indicates [On/Off] status of Blind Spot warning malfunction	
BSI ON IND [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system display	P
BSW SYSTEM ON [On/Off]				×		Indicates [On/Off] status of BSW system	
BSI SYSTEM ON [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system	
FCW SYSTEM ON [On/Off]	×	×				Indicates [On/Off] status of PFCW system	

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
BCI SYSTEM ON [On/Off]					×	Indicates [On/Off] status of BCI system
BCI SWITCH [On/Off]					×	Indicates [On/Off] status of Backup Collision Intervention system switch
BATTERY CIRCUIT OFF [On/Off]	×					NOTE: The item is displayed, but it is not used
LDP WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDP warning display (Yellow) output
LDW ON INDICATOR [On/Off]			×			Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/ SNOW/VDC OFF]	×	×	×	×		Indicates status of system cancel display output
CAMERA HI TEMP MSG [On/Off]			×	×		Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(DCA) [On/Off]	×	×	×	×		Indicates the presence or absence of DCA system.
ITS SETTING ITEM(LDP) [On/Off]	×	×	×	×		Indicates the presence or absence of LDP system.
ITS SETTING ITEM(BSI) [On/Off]	×	×	×	×		Indicates the presence or absence of Blind Spot Intervention system.
BSI WARNING INDI- CATOR [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention warning display output
BSW ON INDICATOR [On/Off]				×		Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]				×		Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]			×			NOTE: The item is displayed, but it is not monitored
BSW IND BRIGHT- NESS [Nothing/Bright/Nor- mal/Dark]				×		Indicates status of brightness of Blind Spot Warning/Blind Spot Intervention indicator

ACTIVE TEST

CAUTION:

- **Never perform “Active Test” while driving the vehicle.**
- **The “Active Test” cannot be performed when the following systems malfunction is displayed.**
- ICC system
- DCA
- LDW

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

- LDP
- Blind Spot Warning
- Blind Spot Intervention
- BCI
- The “Active Test” cannot be performed when the FEB warning lamp is illuminated.
- Shift the selector lever to “P” position, and then perform the test.

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

METER LAMP

NOTE:

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

Test item	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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

ICC BUZZER

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

BRAKE ACTUATOR

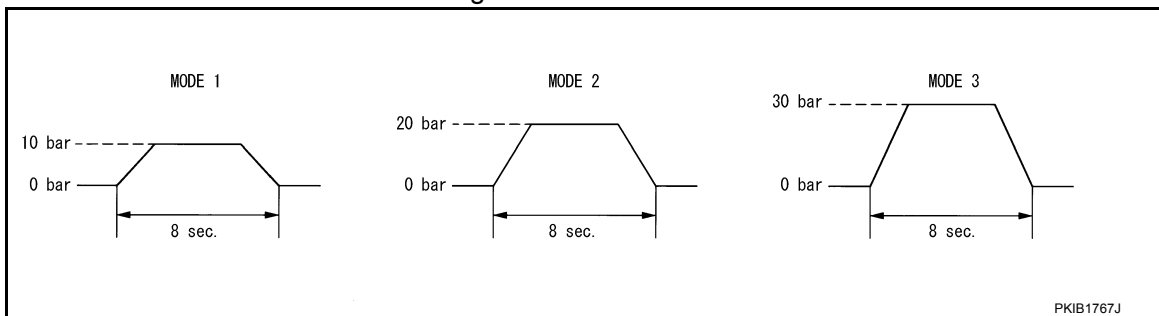
NOTE:

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

Test item	Operation	Description	"PRESS SENS" value
BRAKE ACTUATOR	MODE1	Transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via 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



Active Pedal

CAUTION:

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

NOTE:

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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

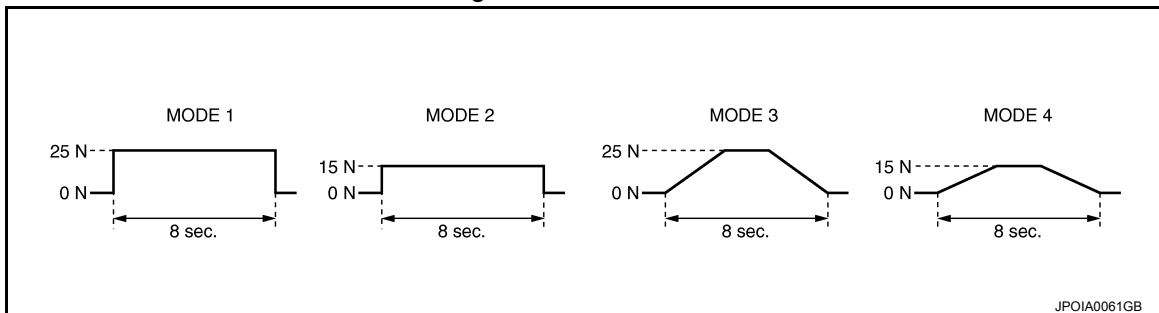
< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

NOTE:

The test is finished in 10 seconds after starting



DCA INDICATOR

NOTE:

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

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

LDP BUZZER

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

WARNING SYSTEM IND

Test item	Operation	Description	Warning systems ON indicator
WARNING SYSTEM IND	Off	Stops transmitting the warning systems ON indicator signal below to end the test	—
	On	Transmits the warning systems ON indicator signal to the warning systems ON indicator	ON

LDP ON IND

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

LANE DEPARTURE W/L

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

BSW/BSI WARNING LAMP

Test item	Operation	Description	Blind Spot Warning/Blind Spot Intervention warning lamp (Yellow)
BSW/BSI WARNING LAMP	Off	Stops transmitting the Blind Spot Warning/Blind Spot Intervention warning lamp signal below to end the test	—
	On	Transmits the Blind Spot Warning/Blind Spot Intervention warning lamp signal to the combination meter via CAN communication	ON

BSW ON INDICATOR

Test item	Operation	Description	Blind Spot Warning system display (Yellow)
BSW ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

BSI ON INDICATOR

Test item	Operation	Description	Blind Spot Intervention system display (Green)
BSI ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDW ON INDICATOR

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

LDP WARNING INDICATOR

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[ADAS CONTROL UNIT]

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

LDW WARNING INDICATOR

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

BSW WARNING INDICATOR

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

BSI WARNING INDICATOR

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

ECU IDENTIFICATION

Displays ADAS control unit parts number.

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ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000014222115

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

Monitor item	Condition		Value/Status
MAIN SW	Ignition switch ON	When MAIN switch is pressed	On
		When MAIN switch is not pressed	Off
SET/COAST SW	Ignition switch ON	When SET/COAST switch is pressed	On
		When SET/COAST switch is not pressed	Off
CANCEL SW	Ignition switch ON	When CANCEL switch is pressed	On
		When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
		When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition switch ON	When DISTANCE switch is pressed	On
		When DISTANCE switch is not pressed	Off
CRUISE OPE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC system is controlling	On
		When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed	Off
		When brake or clutch pedal is not depressed	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed	On
		When brake pedal is not depressed	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
SET DISTANCE	- Start the engine and turn the ICC system ON - Press the DISTANCE switch to change the vehicle-to-vehicle distance setting	When set to "long"	Long
		When set to "middle"	Mid
		When set to "short"	Short
CRUISE LAMP	Start the engine and press MAIN switch	ICC system ON (MAIN switch indicator ON)	On
		ICC system OFF (MAIN switch indicator OFF)	Off
OWN VHCL	NOTE: The item is indicated, but not monitored		Off
VHCL AHEAD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
		When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
ICC WARNING	Start the engine and press MAIN switch	When ICC system is malfunctioning (ICC system malfunction ON)	On
		When ICC system is normal (ICC system malfunction OFF)	Off

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Monitor item	Condition		Value/Status
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
SET VHCL SPD	While driving	When vehicle speed is set	Displays the set vehicle speed
BUZZER O/P	Engine running	When the buzzer of the following system operates • Vehicle-to-vehicle distance control mode • DCA system • PFCW system • FEB system	On
		When the buzzer of the following system not operates • Vehicle-to-vehicle distance control mode • DCA system • PFCW system • FEB system	Off
THRTL SENSOR	NOTE: The item is indicated, but not monitored		0.0
ENGINE RPM	Engine running		Equivalent to tachometer reading
WIPER SW	Ignition switch ON	Wiper not operating	Off
		Wiper LO operation	Low
		Wiper HI operation	High
YAW RATE	NOTE: The item is indicated, but not monitored		0.0
BA WARNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
STP LMP DRIVE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC brake hold relay is activated	On
		When ICC brake hold relay is not activated	Off
D RANGE SW	Engine running	When the selector lever is in "D" position or manual mode	On
		When the selector lever is in any position other than "D" or manual mode	Off
NP RANGE SW	Engine running	When the selector lever is in "N", "P" position	On
		When the selector lever is in any position other than "N", "P"	Off
PKB SW	Ignition switch ON	When the parking brake is applied	On
		When the parking brake is released	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit
VHCL SPD AT	While driving		Value of A/T vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position

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ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Monitor item	Condition		Value/Status
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 switch indicator ON	On
		SET switch indicator OFF	Off
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the relative speed.
		When a vehicle ahead is not detected	0.0
DYNA ASIST SW	Ignition switch ON	When dynamic driver assistance switch is pressed	On
		When dynamic driver assistance switch is not pressed	Off
DCA ON IND	Start the engine and press dynamic driver assistance switch (When DCA setting is ON)	DCA system OFF	Off
		DCA system ON	On
DCA VHL AHED	Drive the vehicle and activate the DCA system	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
		When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
FCW SYSTEM ON	Ignition switch ON	When the PFCW system is ON	On
		When the PFCW system is OFF	Off
APA TEMP	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA PWR	Ignition switch ON		Power supply voltage value of accelerator pedal actuator
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDP ON IND	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	LDP ON indicator lamp ON	On
		LDP ON indicator lamp OFF	Off
LANE DPRT W/L	Drive the vehicle and activate the LDW system or LDP system	Lane departure warning lamp ON	On
		Lane departure warning lamp OFF	Off

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Monitor item	Condition		Value/Status
LDW BUZER OUTPUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning/Blind Spot Intervention system	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	On
		When the buzzer of the following system does not operate • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	Off
LDP SYSTEM ON	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
		Lane departure warning is not operating	Off
READY signal	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
Camera lost	Drive the vehicle and activate the LDW system, LDP system or Blind Spot Intervention system	Both side lane markers are detected	Detect
		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both
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	Ignition switch ON		FUNC3
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (LDW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
DCA SELECT	Ignition switch ON	"Distance Control Assist" set with the integral switch is ON	On
		"Distance Control Assist" set with the integral switch is OFF	Off
LDP SELECT	Ignition switch ON	"Lane Departure Intervention" set with the integral switch is ON	On
		"Lane Departure Intervention" set with the integral switch is OFF	Off
BSI SELECT	Ignition switch ON	"Blind Spot Intervention" set with the integral switch is ON	On
		"Blind Spot Intervention" set with the integral switch is OFF	Off

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ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Monitor item	Condition		Value/Status
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
DRIVE MODE STATS	Ignition switch ON	When drive mode select switch position is STANDARD	STD
		When drive mode select switch position is in SPORT	SPORT
		When drive mode select switch position is in ECO	ECO
		When drive mode select switch position is in SNOW	SNOW
		When drive mode select switch position is in PERSONAL	STD
		A signal other than those above is input	ERROR
WARN SYS SW	Ignition switch ON	When warning systems switch is pressed	On
		When warning systems switch is not pressed	Off
BSW/BSI WARN LMP	Engine running	When the BSW system is malfunctioning	On
		When the BSW system is normal	Off
BSI ON IND	Engine running	Blind Spot Intervention warning ON	On
		Blind Spot Intervention warning OFF	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On
		When the BSW system is OFF	Off
BSI SYSTEM ON	Start the engine and press dynamic driver assistance switch (When Blind Spot Intervention system setting is ON)	When the Blind Spot Intervention system is ON	On
		When the Blind Spot Intervention system is OFF	Off
FCW SYSTEM ON	Engine running	When the FEB/PFCW system is ON	On
		When the FEB/PFCW system is OFF	Off
BCI SYSTEM ON	Engine running	When the BCI system is ON	On
		When the BCI system is OFF	Off
BCI SWITCH	NOTE: The item is indicated, but not monitored		Off
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
SYSTEM CANCEL MESSAGE	Engine running	When the vehicle is normal	NOREQ
		When the wheel is slipping	SLIP
		When the drive mode selector is SNOW mode	SNOW
		When the VDC is OFF	VDC OFF

ADAS CONTROL UNIT

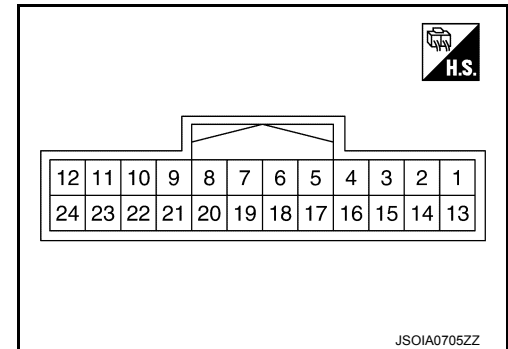
< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Monitor item	Condition		Value/Status
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(DCA)	Ignition switch ON		On
ITS SETTING ITEM(LDP)	Ignition switch ON		On
ITS SETTING ITEM(BSI)	Ignition switch ON		On
BSI WARNING INDICATOR	Engine running	When the Blind Spot Intervention is malfunctioning	On
		When the Blind Spot Intervention is normal	Off
BSW ON INDICATOR	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 BRIGHTNESS	Ignition switch ON	BSW system OFF	Nothing
		Blind Spot Warning/Blind Spot Intervention indicator brightness bright	Bright
		Blind Spot Warning/Blind Spot Intervention indicator brightness normal	Normal
		Blind Spot Warning/Blind Spot Intervention indicator brightness dark	Dark

TERMINAL LAYOUT

PHYSICAL VALUES



A
B
C
D
E
F
G
H
I
J
K
L
M
N
P

DAS

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (B)	Ground	CAN high	—	—	—	—
2 (W)		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 (Y)		Chassis communication low	—	—	—	—
12 (R)		Ignition power supply	Input	Ignition switch ON		Battery voltage
17 (G)		ICC brake hold relay drive signal	Output	Ignition switch ON	— At “STOP LAMP” test of “Active test”	Battery voltage 0 V
18 (BR)		Warning systems switch	Input	Ignition switch ON	When warning systems switch is not pressed When warning systems switch is pressed	Battery voltage 0 V
19 (W)		Warning systems ON indicator	Output	Ignition switch ON	Warning systems ON indicator ON Warning systems ON indicator OFF	0 V Battery voltage
22 (BG)		BCI OFF switch	Input	Ignition switch ON	When BCI OFF switch is not pressed When BCI OFF switch is pressed	Battery voltage 0 V

Fail-safe (ADAS Control Unit)

INFOID:0000000014222116

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
Predictive Forward Collision Warning (PFCW)	High-pitched tone	Warning message	Cancel
Distance Control Assist (DCA)	High-pitched tone	DCA system warning	Cancel
Lane Departure Warning (LDW)	—	Lane departure warning lamp	Cancel

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

System	Buzzer	Warning lamp/Warning display	Description
Lane Departure Prevention (LDP)	Low-pitched tone	Lane departure warning lamp	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Blind Spot Intervention	Low-pitched tone	Blind Spot Intervention warning lamp	Cancel
Backup Collision Intervention (BCI)	High-pitched tone	Backup Collision Intervention warning indicator	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000014222117

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

Priority	Detected items (DTC)	
1	- U1507: LOST COMM (SIDE RDR R) - U1508: LOST COMM (SIDE RDR L)	
2	1CA0A: CONFIG UNFINISHED - U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)	
3	- C1B00: CAMERA UNIT MALF - C1F02: APA C/U MALF - C1B53: SIDE RDR R MALF - C1B54: SIDE RDR L MALF - C1B84: DIST SEN MALFUNCTION	
4	- C1A01: POWER SUPPLY CIR - C1A02: POWER SUPPLY CIR 2 - C1A04: ABS/TCS/VDC CIRC - C1A05: BRAKE SW/STOP L SW - C1A06: OPERATION SW CIRC - C1A13: STOP LAMP RLY FIX - C1A14: ECM CIRCUIT - C1A24: NP RANGE - C1A26: ECD MODE MALF - C1A27: ECD PWR SUPPLY CIR - C1A33: CAN TRANSMISSION ERR - C1A34: COMMAND ERROR - C1A35: APA CIR - C1A36: APA CAN COMM CIR - C1A37: APA CAN CIR 2 - C1A38: APA CAN CIR 1 - C1A39: STRG SEN CIR - C1A40: SYSTEM SW CIR - C1B01: CAM AIMING INCOMP - C1B03: CAM ABNORMAL TMP DETCT - C1B56: SONAR CIRCUIT - C1B57: AVM CIRCUIT - C1B58: DR ASSIST BUZZER CIRCUIT - C1B82: DIST SEN OFF-CENTER - C1B85: DIST SEN ABNORMAL TEMP - C1B86: DIST SEN PWR SUP CIR - C1F01: APA MOTOR MALF - C1F05: APA PWR SUPPLY CIR	- U0121: VDC CAN CIR 2 - U0126: STRG SEN CAN CIR 1 - U0235: ICC SENSOR CAN CIRC 1 - U0401: ECM CAN CIR 1 - U0402: TCM CAN CIR 1 - U0415: VDC CAN CIR 1 - U0424: HVAC CAN CIR 1 - U0428: STRG SEN CAN CIR 2 - 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 - U150B: ECM CAN CIRC 3 - U150C: VDC CAN CIRC 3 - U150D: TCM CAN CIRC 3 - U150E: BCM CAN CIRC 3 - U1512: HVAC CAN CIRC3 - U1513: METER CAN CIRC 3 - U1514: STRG SEN CAN CIRC 3 - U1515: ICC SENSOR CAN CIRC 3 - U1516: CAM CAN CIR 3 - U1517: APA CAN CIRC 3 - U1518: SIDE RDR L CAN CIR 3 - U1519: SIDE RDR R CAN CIR 3 - U1521: SONAR CAN COMMUNICATION 2 - U1522: SONAR CAN COMMUNICATION 1 - U1523: SONAR CAN COMMUNICATION 3 - U1524: AVM CAN COMMUNICATION 1 - U1525: AVM CAN COMMUNICATION 3 - U1530: DR ASSIST BUZZER CAN CIR 1

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Priority	Detected items (DTC)
5	• C1A03: VHCL SPEED SE CIRC
6	• C1A15: GEAR POSITION
7	• C1A00: CONTROL UNIT

DTC Index

INFOID:0000000014222118

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)/Blind Spot Intervention (BSI)/Rear Cross Traffic Alert (RCTA)
- G: Back-up Collision Intervention (BCI)
- H: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	55	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	—	—
C1A0A	41	CONFIG UNFINISHED	A, B, C, D, E, F, G, H	DAS-68
C1A00	0	CONTROL UNIT	A, B, C, D, E, F, G, H	DAS-69
C1A01	1	POWER SUPPLY CIR	A, B, C, D, E, F, G, H	DAS-70
C1A02	2	POWER SUPPLY CIR 2	A, B, C, D, E, F, G, H	DAS-70
C1A03	3	VHCL SPEED SE CIRC	A, B, C, D, E, F, G, H	DAS-71
C1A04	4	ABS/TCS/VDC CIRC	A, B, C, D, E, F, G, H	DAS-73
C1A05	5	BRAKE SW/STOP L SW	A, B, C, D, G, H	DAS-75
C1A06	6	OPERATION SW CIRC	A, B, C, D, E, H	DAS-80
C1A13	13	STOP LAMP RLY FIX	A, B, C, D, E, G	DAS-82
C1A14	14	ECM CIRCUIT	A, B, C, D, E	DAS-89
C1A15	15	GEAR POSITION	A, B, C, D, E	DAS-91
C1A24	24	NP RANGE	A, B, C, D, E, F, G	DAS-93
C1A26	26	ECD MODE MALF	A, B, C, D, G	DAS-95
C1A27	27	ECD PWR SUPPLY CIR	A, B, C, D, G	DAS-97
C1A33	33	CAN TRANSMISSION ERR	A, B, C, D, E	DAS-99
C1A34	34	COMMAND ERROR	A, B, C, D, E	DAS-100
C1A35	35	APA CIR	A, C, D, E	DAS-101
C1A36	36	APA CAN COMM CIR	A, C, D, E	DAS-102
C1A37	133	APA CAN CIR 2	A, C, D, E	DAS-103
C1A38	132	APA CAN CIR 1	A, C, D, E	DAS-104
C1A39	39	STRG SEN CIR	A, B, C, D, E, F, G	DAS-105
C1A40	40	SYSTEM SW CIR	G	DAS-105
C1B00	81	CAMERA UNIT MALF	F, H	DAS-108
C1B01	82	CAM AIMING INCMP	F, H	DAS-109
C1B03	83	ABNRML TMP DETCT	F, H	DAS-110
C1B53	84	SIDE RDR R MALF	F, G	DAS-111

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
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- G: Back-up Collision Intervention (BCI)
- H: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
C1B54	85	SIDE RDR L MALF	F, G	DAS-112
C1B56	86	SONAR CIRCUIT	G	DAS-113
C1B57	87	AVM CIRCUIT	G	DAS-114
C1A58	182	DR ASSIST BUZZER CIRCUIT		DAS-115
C1B82	12	DIST SEN OFF-CENTER	A, C, D, E	DAS-116
C1B83	16	DIST SEN BLOCKED	A, C, D, E	DAS-117
C1B84	17	DIST SEN MALFUNCTION	A, C, D, E	DAS-118
C1B85	21	DIST SEN ABNORMAL TEMP	A, C, D, E	DAS-119
C1B86	80	DIST SEN PWR SUP CIR	A, C, D, E	DAS-120
C1F01	91	APA MOTOR MALF	A, C, D, E	DAS-122
C1F02	92	APA C/U MALF	A, C, D, E	DAS-123
C1F05	95	APA PWR SUPPLY CIR	A, C, D, E	DAS-124
U0121	127	VDC CAN CIR 2	A, B, C, D, E, F, G, H	DAS-125
U0126	130	STRG SEN CAN CIR 1	A, B, C, D, E, F, G	DAS-126
U0235	144	ICC SENSOR CAN CIRC 1	A, C, D, E	DAS-127
U0401	120	ECM CAN CIR 1	A, B, C, D, E, F, G	DAS-128
U0402	122	TCM CAN CIR 1	A, B, C, D, E, F, G, H	DAS-129
U0415	126	VDC CAN CIR 1	A, B, C, D, E, F, G, H	DAS-131
U0424	156	HVAC CAN CIR 1		DAS-133
U0428	131	STRG SEN CAN CIR 2	A, B, C, D, E, F, G	DAS-134
U1000 ^{NOTE}	100	CAN COMM CIRCUIT	A, B, C, D, E, F, G, H	DAS-135
U1010	110	CONTROL UNIT (CAN)	A, B, C, D, E, F, G, H	DAS-137
U150B	157	ECM CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-138
U150C	158	VDC CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-140
U150D	159	TCM CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-142
U150E	160	BCM CAN CIRC 3	A, B, C, D, F, G, H	DAS-144
U1500	145	CAM CAN CIR2	F, H	DAS-145
U1501	146	CAM CAN CIR 1	F, H	DAS-146
U1502	147	ICC SEN CAN COMM CIR	A, C, D, E	DAS-147
U1503	150	SIDE RDR L CAN CIR 2	F, G	DAS-148
U1504	151	SIDE RDR L CAN CIR 1	F, G	DAS-149
U1505	152	SIDE RDR R CAN CIR 2	F, G	DAS-150
U1506	153	SIDE RDR R CAN CIR 1	F, G	DAS-151
U1507	154	LOST COMM (SIDE RDR R)	F, G	DAS-152
U1508	155	LOST COMM (SIDE RDR L)	F, G	DAS-153
U1512	162	HVAC CAN CIRC3		DAS-154

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[ADAS CONTROL UNIT]

Systems for fail-safe

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- G: Back-up Collision Intervention (BCI)
- H: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
U1513	163	METER CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-155
U1514	164	STRG SEN CAN CIRC 3	A, B, C, D, E, F, G	DAS-156
U1515	165	ICC SENSOR CAN CIRC 3	A, C, D, E	DAS-157
U1516	166	CAM CAN CIRC 3	F, H	DAS-158
U1517	167	APA CAN CIRC 3	A, C, D, E	DAS-159
U1518	168	SIDE RDR L CAN CIRC 3	F, G	DAS-160
U1519	169	SIDE RDR R CAN CIRC 3	F, G	DAS-161
U1521	177	SONAR CAN COMMUNICATION 2	G	DAS-163
U1522	178	SONAR CAN COMMUNICATION 1	G	DAS-164
U1523	179	SONAR CAN COMMUNICATION 3	G	DAS-165
U1524	180	AVM CAN COMMUNICATION 1	G	DAS-166
U1525	181	AVM CAN COMMUNICATION 3	G	DAS-167
U1530	183	DR ASSIST BUZZER CAN CIR1		DAS-168

NOTE:

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

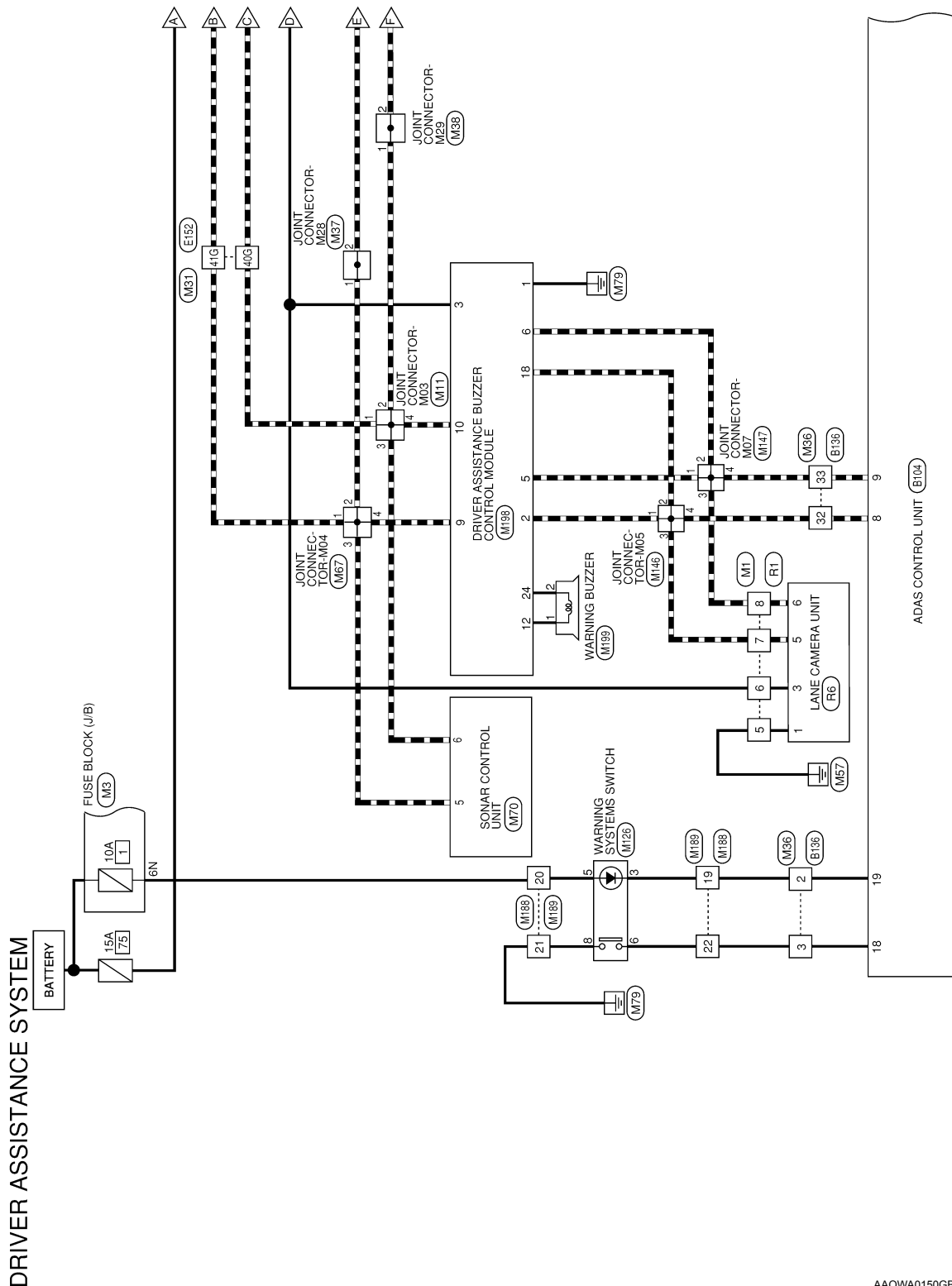
A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the ADAS control unit becomes inoperable.

WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

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[ADAS CONTROL UNIT]

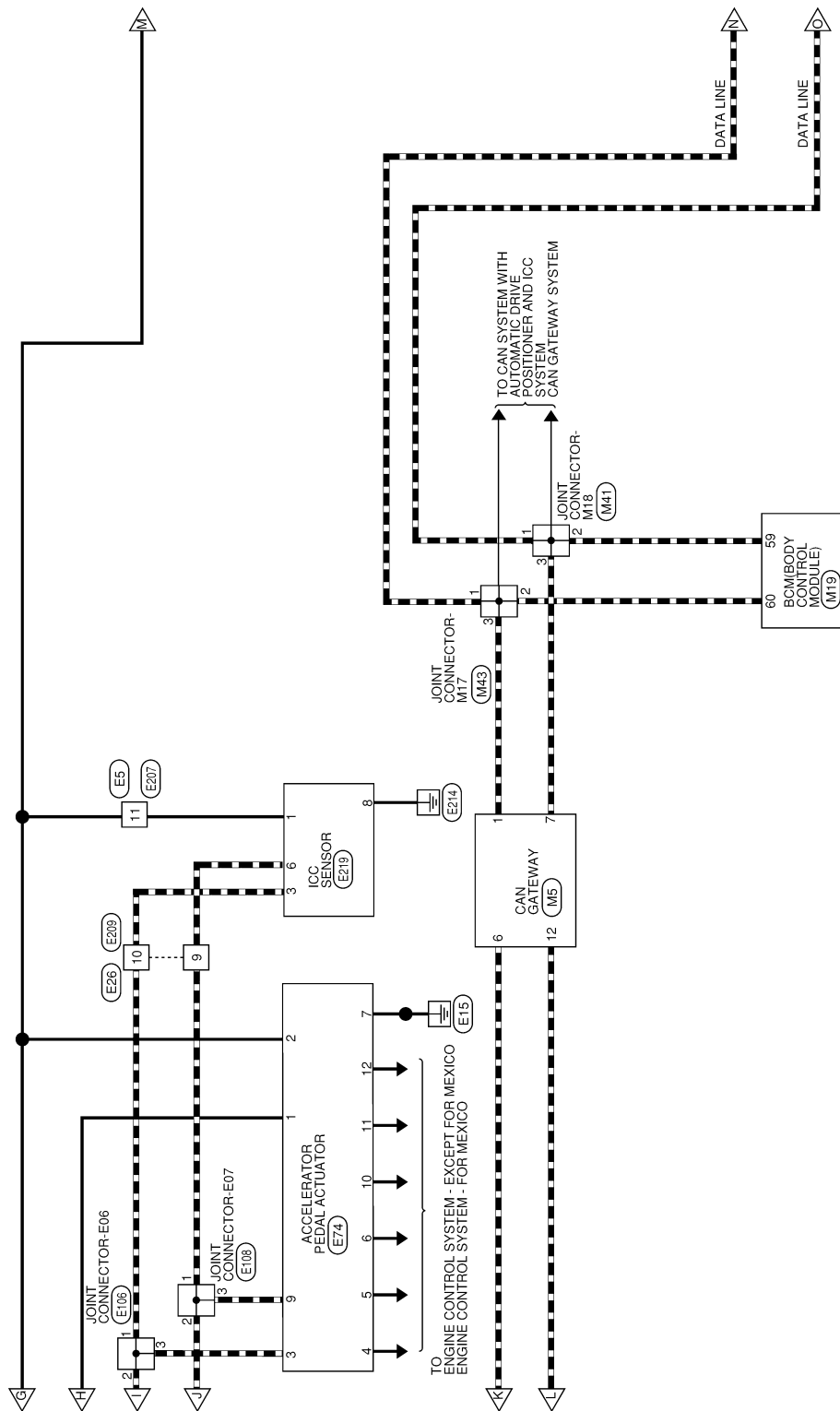
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2016 QX60

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[ADAS CONTROL UNIT]



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A
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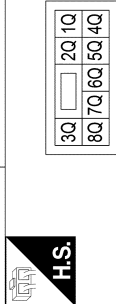
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[ADAS CONTROL UNIT]



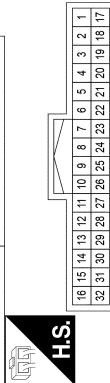
DRIVER ASSISTANCE SYSTEM CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1Q	-	-
2Q	-	-
3Q	-	-
4Q	-	-
5Q	G	BRAKE PEDAL POSITION SWITCH
6Q	P	BATTERY
7Q	-	-
8Q	-	-

Connector No.	B32
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

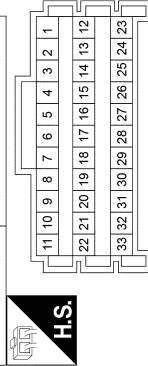


Terminal No.	Color of Wire	Signal Name
1	-	TO BODY HARNESS RH
2	-	TO BODY HARNESS RH
3	-	TO BODY HARNESS RH
4	-	TO BODY HARNESS RH
5	G	TO BODY HARNESS RH
6	R	TO BODY HARNESS RH
7	B	TO BODY HARNESS RH
8	R	TO BODY HARNESS RH
9	W	TO BODY HARNESS RH
10	SHIELD	TO BODY HARNESS RH
11	B	TO BODY HARNESS RH
12	L	TO BODY HARNESS RH
13	B	TO BODY HARNESS RH
14	R	TO BODY HARNESS RH
15	W	TO BODY HARNESS RH

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16	SHIELD	TO BODY HARNESS RH
17	L	TO BODY HARNESS RH
18	L	TO BODY HARNESS RH
19	P	TO BODY HARNESS RH
20	Y	TO BODY HARNESS RH
21	L	TO BODY HARNESS RH
22	B	TO BODY HARNESS RH
23	W	TO BODY HARNESS RH
24	SHIELD	TO BODY HARNESS RH
25	BR	TO BODY HARNESS RH
26	V	TO BODY HARNESS RH
27	-	TO BODY HARNESS RH
28	-	TO BODY HARNESS RH
29	-	TO BODY HARNESS RH
30	-	TO BODY HARNESS RH
31	-	TO BODY HARNESS RH
32	-	TO BODY HARNESS RH

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Type	BJ30FW
Connector Color	WHITE

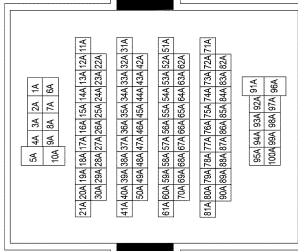


Terminal No.	Color of Wire	Signal Name
1	L	ITS CAN-H
2	L	ITS CAN-H
3	L	ITS CAN-H
4	Y	ITS CAN-L
5	Y	ITS CAN-L
6	Y	ITS CAN-L
7	-	-
8	SHIELD	GND
9	B	GND
10	B	GND
11	B	GND
12	LG	ILLUMI CONT OUT
13	LG	ILLUMI CONT OUT
14	LG	ILLUMI CONT OUT
15	-	-
16	W	ALERT SIGNAL
17	W	ALERT SIGNAL
18	-	-
19	B	GND
20	B	GND
21	SHIELD	SHIELD

22	B	GND
23	-	-
24	-	-
25	SHIELD	SHIELD
26	B	GND
27	B	GND
28	B	GND
29	W	TAIL
30	W	TAIL
31	W	TAIL
32	W	TAIL
33	W	TAIL

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Type	TH80MDGY-CS16-TM4
Connector Color	GRAY



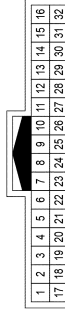
25A	SHIELD	TO MAIN HARNESS
26A	B	TO MAIN HARNESS
27A	B	TO MAIN HARNESS
28A	SHIELD	TO MAIN HARNESS
29A	R	TO MAIN HARNESS
30A	B	TO MAIN HARNESS
31A	BR	TO MAIN HARNESS
32A	-	TO MAIN HARNESS
33A	W	TO MAIN HARNESS
34A	B	TO MAIN HARNESS
35A	SHIELD	TO MAIN HARNESS
36A	-	TO MAIN HARNESS
37A	LG	TO MAIN HARNESS
38A	V	TO MAIN HARNESS
39A	SB	TO MAIN HARNESS
40A	BR	TO MAIN HARNESS
41A	Y	TO MAIN HARNESS
42A	-	TO MAIN HARNESS
43A	-	TO MAIN HARNESS
44A	V	TO MAIN HARNESS
45A	G	TO MAIN HARNESS
46A	V	TO MAIN HARNESS
47A	L	TO MAIN HARNESS
48A	SB	TO MAIN HARNESS
49A	G	TO MAIN HARNESS
50A	W	TO MAIN HARNESS
51A	-	TO MAIN HARNESS
52A	-	TO MAIN HARNESS
53A	R	TO MAIN HARNESS
54A	SB	TO MAIN HARNESS
55A	LG	TO MAIN HARNESS
56A	Y	TO MAIN HARNESS
57A	SB	TO MAIN HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
57A	V	TO MAIN HARNESS - (WITH CLIMATE CONTROLLED SEAT)
58A	BR	TO MAIN HARNESS
59A	BR	TO MAIN HARNESS
60A	L	TO MAIN HARNESS
61A	Y	TO MAIN HARNESS
62A	-	TO MAIN HARNESS
63A	P	TO MAIN HARNESS
64A	R	TO MAIN HARNESS
65A	SB	TO MAIN HARNESS
66A	L	TO MAIN HARNESS
67A	LG	TO MAIN HARNESS
68A	P	TO MAIN HARNESS
69A	W	TO MAIN HARNESS
70A	G	TO MAIN HARNESS
71A	BR	TO MAIN HARNESS
72A	-	TO MAIN HARNESS
73A	Y	TO MAIN HARNESS
74A	P	TO MAIN HARNESS
75A	V	TO MAIN HARNESS

Terminal No.	Color of Wire	Signal Name
1A	-	TO MAIN HARNESS
2A	Y	TO MAIN HARNESS
3A	Y	TO MAIN HARNESS
4A	G	TO MAIN HARNESS
5A	-	TO MAIN HARNESS
6A	LG	TO MAIN HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
6A	R	TO MAIN HARNESS - (WITH CLIMATE CONTROLLED SEAT)
7A	BR	TO MAIN HARNESS
8A	G	TO MAIN HARNESS
9A	P	TO MAIN HARNESS
10A	-	TO MAIN HARNESS
11A	W	TO MAIN HARNESS
12A	G	TO MAIN HARNESS
13A	-	TO MAIN HARNESS
14A	R	TO MAIN HARNESS
15A	G	TO MAIN HARNESS
16A	W	TO MAIN HARNESS
17A	B	TO MAIN HARNESS
18A	B	TO MAIN HARNESS
19A	SHIELD	TO MAIN HARNESS
20A	W	TO MAIN HARNESS
21A	SHIELD	TO MAIN HARNESS
22A	-	TO MAIN HARNESS
23A	W	TO MAIN HARNESS
24A	B	TO MAIN HARNESS

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76A	R	TO MAIN HARNESS
77A	Y	TO MAIN HARNESS
78A	LG	TO MAIN HARNESS
79A	BR	TO MAIN HARNESS
80A	Y	TO MAIN HARNESS
81A	L	TO MAIN HARNESS
82A	BG	TO MAIN HARNESS
83A	Y	TO MAIN HARNESS
84A	LG	TO MAIN HARNESS
85A	SHIELD	TO MAIN HARNESS
86A	LG	TO MAIN HARNESS
87A	SB	TO MAIN HARNESS
88A	BG	TO MAIN HARNESS
89A	L	TO MAIN HARNESS
90A	P	TO MAIN HARNESS
91A	L	TO MAIN HARNESS
92A	LG	TO MAIN HARNESS
93A	B	TO MAIN HARNESS
94A	-	TO MAIN HARNESS
95A	-	TO MAIN HARNESS
96A	-	TO MAIN HARNESS
97A	BR	TO MAIN HARNESS
98A	L	TO MAIN HARNESS
99A	-	TO MAIN HARNESS
100A	-	TO MAIN HARNESS

Connector No.	B77
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	TO BODY NO. 3 HARNESS
2	-	TO BODY NO. 3 HARNESS
3	-	TO BODY NO. 3 HARNESS
4	G	TO BODY NO. 3 HARNESS
5	W	TO BODY NO. 3 HARNESS
6	R	TO BODY NO. 3 HARNESS
7	W	TO BODY NO. 3 HARNESS
8	B	TO BODY NO. 3 HARNESS
9	W	TO BODY NO. 3 HARNESS
10	G	TO BODY NO. 3 HARNESS
11	-	TO BODY NO. 3 HARNESS
12	L	TO BODY NO. 3 HARNESS
13	Y	TO BODY NO. 3 HARNESS

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE



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

28	Y	TO MAIN HARNESS
29	SB	TO MAIN HARNESS
30	LG	TO MAIN HARNESS
31	G	TO MAIN HARNESS
32	-	TO MAIN HARNESS

Connector No.	B102
Connector Name	JOINT CONNECTOR-B14
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	SHIELD	TO MAIN HARNESS
4	R	TO MAIN HARNESS
5	V	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	Y	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
6	W	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
7	R	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
8	B	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	TO MAIN HARNESS
10	G	TO MAIN HARNESS
11	SB	TO MAIN HARNESS
12	P	TO MAIN HARNESS
13	W	TO MAIN HARNESS
14	-	TO MAIN HARNESS
15	-	TO MAIN HARNESS
16	-	TO MAIN HARNESS
17	L	TO MAIN HARNESS
18	P	TO MAIN HARNESS
19	LG	TO MAIN HARNESS
20	BR	TO MAIN HARNESS
21	LG	TO MAIN HARNESS
22	LG	TO MAIN HARNESS
23	W	TO MAIN HARNESS
24	V	TO MAIN HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
24	BR	TO MAIN HARNESS - (WITH CLIMATE CONTROLLED SEAT)
25	SB	TO MAIN HARNESS
26	LG	TO MAIN HARNESS
27	Y	TO MAIN HARNESS

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Connector No.	B104
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH
Connector Color	WHITE



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

Connector No.	B109
Connector Name	SIDE RADAR RH
Connector Type	AAC06FB-WP
Connector Color	BLACK



1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	B	ADDRESS
2	B	GND
3	Y	ITS CAN-L
4	L	ITS CAN-H
5	R	POWER (IGN)
6	W	ALERT SIGNAL

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

Connector No.	B103
Connector Name	JOINT CONNECTOR-B15
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	P	CAN-L
3	W	CAN-L
4	-	-

A
B
C
D
E
F
G
H
I
J
K
L
M
N
P

DAS

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B115
Connector Name	JOINT CONNECTOR-B08
Connector Type	BJ30FW
Connector Color	WHITE



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



Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE



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

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B400
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE



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

Connector No.	B416
Connector Name	SIDE RADAR LH
Connector Type	AAC06FB-WP-5P
Connector Color	BLACK



1	2	3	4	5	6

Connector No.	D21
Connector Name	BLIND SPOT WARNING LH
Connector Type	TH04MW-NH
Connector Color	WHITE



4	3	2	1

Connector No.	D111
Connector Name	BLIND SPOT WARNING RH
Connector Type	TH04MW-NH
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	-	TO BODY HARNESS
2	-	TO BODY HARNESS
3	-	TO BODY HARNESS
4	G	TO BODY HARNESS
5	W	TO BODY HARNESS
6	R	TO BODY HARNESS
7	W	TO BODY HARNESS
8	B	TO BODY HARNESS
9	W	TO BODY HARNESS
10	G	TO BODY HARNESS
11	-	TO BODY HARNESS
12	L	TO BODY HARNESS
13	Y	TO BODY HARNESS
14	-	TO BODY HARNESS
15	G	TO BODY HARNESS
16	B	TO BODY HARNESS
17	B	TO BODY HARNESS
18	B	TO BODY HARNESS
19	SHIELD	TO BODY HARNESS
20	R	TO BODY HARNESS
21	B	TO BODY HARNESS
22	W	TO BODY HARNESS
23	SHIELD	TO BODY HARNESS
24	W	TO BODY HARNESS
25	B	TO BODY HARNESS
26	SHIELD	TO BODY HARNESS
27	B	TO BODY HARNESS
28	B	TO BODY HARNESS
29	SHIELD	TO BODY HARNESS
30	LG	TO BODY HARNESS
31	W	TO BODY HARNESS
32	-	TO BODY HARNESS

Terminal No.	Color of Wire	Signal Name
1	-	-
2	B	GND
3	Y	ITS CAN-L
4	L	ITS CAN-H
5	R	POWER (IGN)
6	W	ALERT SIGNAL

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



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

Terminal No.	Color of Wire	Signal Name
1	W	SIGNAL
2	-	-
3	-	-
4	B	GND

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS
Connector Color	WHITE



4	3		2	1	
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	W	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	SHIELD	TO MAIN HARNESS
4	L	TO MAIN HARNESS
5	BR	TO MAIN HARNESS
6	Y	TO MAIN HARNESS
7	LG	TO MAIN HARNESS
8	B	TO MAIN HARNESS
9	G	TO MAIN HARNESS
10	W	TO MAIN HARNESS

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

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DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE



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

Connector No.	E16
Connector Name	ECM (FOR MEXICO)
Connector Type	RH24FGY-RZ8-R-RH
Connector Color	GRAY



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	Y	TO FRONT END MODULE HARNESS
2	SB	TO FRONT END MODULE HARNESS
3	BR	TO FRONT END MODULE HARNESS
4	B	TO FRONT END MODULE HARNESS
5	B	TO FRONT END MODULE HARNESS
6	P	TO FRONT END MODULE HARNESS
7	W/G	TO FRONT END MODULE HARNESS
8	G	TO FRONT END MODULE HARNESS
9	L	TO FRONT END MODULE HARNESS
10	G	TO FRONT END MODULE HARNESS
11	R	TO FRONT END MODULE HARNESS
12	P	TO FRONT END MODULE HARNESS
13	SHIELD	TO FRONT END MODULE HARNESS
14	SHIELD	TO FRONT END MODULE HARNESS
15	P	TO FRONT END MODULE HARNESS
16	B	TO FRONT END MODULE HARNESS

Terminal No.	Color of Wire	Signal Name
97	W	ACCELERATOR PEDAL POSITION SENSOR 1 (WITHOUT ICC SYSTEM)
97	R	ACCELERATOR PEDAL POSITION SENSOR 1 (WITH ICC SYSTEM)
98	P	ACCELERATOR PEDAL POSITION SENSOR 2 (WITHOUT ICC SYSTEM)
98	B	ACCELERATOR PEDAL POSITION SENSOR 2 (WITH ICC SYSTEM)
99	R	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)
99	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)
100	R	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)
100	W	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)
101	G	ASCOD STEERING SWITCH/ICC STEERING SWITCH
102	O	EVAP CONTROL SYSTEM PRESSURE SENSOR
103	W	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)
103	Y	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)
104	P	DATA LINK CONNECTOR
105	-	-
106	Y	EVAP CANISTER VENT CONTROL VALVE
107	W	SENSOR POWER SUPPLY (EVAP CONTROL SYSTEM PRESSURE SENSOR, ENGINE OIL PRESSURE SENSOR)
108	R	SENSOR GROUND (ASCOD STEERING SWITCH)
109	SB	IGNITION SWITCH
110	-	-

111	BR	FUEL TANK TEMPERATURE SENSOR
112	G	SENSOR GROUND (EVAP CONTROL SYSTEM PRESSURE SENSOR, ENGINE OIL PRESSURE SENSOR)
113	P	CAN-L
114	L	CAN-H
115	-	-
116	G	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)
116	L	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)
117	-	-
118	W	PNP SIGNAL
119	-	-
120	LG	SENSOR GROUND (FUEL TANK TEMPERATURE SENSOR)
121	LG	POWER SUPPLY FOR ECM
122	R	STOP LAMP SWITCH
123	B	ECM GND
124	B	ECM GND
125	-	-
126	LG	BRAKE PEDAL POSITION SWITCH
127	B	ECM GND
128	B	ECM GND

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE



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	R	TO FRONT END MODULE HARNESS
2	W	TO FRONT END MODULE HARNESS
3	B	TO FRONT END MODULE HARNESS
4	SHIELD	TO FRONT END MODULE HARNESS
5	B	TO FRONT END MODULE HARNESS
6	R	TO FRONT END MODULE HARNESS
7	W	TO FRONT END MODULE HARNESS

DRIVER ASSISTANCE SYSTEM CONNECTORS

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



4M	3M	2M	1M
10M	9M	8M	7M
6M	5M	4M	3M

Terminal No.	Color of Wire	Signal Name
1M	R	IGNITION
2M	-	-
3M	-	-
4M	-	-
5M	Y	BATTERY
6M	L	TAIL LH
7M	P	BRAKE PEDAL POSITION SWITCH
8M	R	BRAKE PEDAL POSITION SWITCH
9M	-	-
10M	-	-

Connector No.	E32
Connector Name	ECM (EXCEPT FOR MEXICO)
Connector Type	RH24FB-RZ8-L-LH
Connector Color	BLACK



12	125	25	33	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	W	EVAP CONTROL SYSTEM PRESSURE SENSOR
122	-	-
123	P	CAN-L
124	L	CAN-H
125	R	POWER SUPPLY (EVAP CONTROL SYSTEM PRESSURE SENSOR)
126	-	-
127	-	-
128	BR	FUEL TANK TEMPERATURE SENSOR
129	-	-
130	-	-

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131	-	-	-
132	-	-	-
133	SB	POWER SUPPLY	-
134	G	ASCD STEERING SWITCH/ICC STEERING SWITCH	-
135	R	SENSOR GROUND	-
136	-	-	-
137	-	-	-
138	-	-	-
139	R	STOP LAMP SWITCH	-
140	LG	BRAKE PEDAL POSITION SWITCH	-
141	Y	EVAP CANISTER VENT CONTROL VALVE	-
142	Y	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)	-
142	W	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)	-
143	B	ACCELE PEDAL POSITION SENSOR 2 (WITH ICC SYSTEM)	-
143	P	ACCELE PEDAL POSITION SENSOR 2 (WITHOUT ICC SYSTEM)	-
144	L	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)	-
144	G	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)	-
145	LG	POWER SUPPLY FOR ECM (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)	-
146	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)	-
146	R	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)	-
147	B	SENSOR GROUND	-
148	LG	SENSOR GROUND	-
149	B	SENSOR GROUND	-
150	R	ACCELE PEDAL POSITION SENSOR 1 (WITH ICC SYSTEM)	-
150	W	ACCELE PEDAL POSITION SENSOR 1 (WITHOUT ICC SYSTEM)	-
151	W	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)	-
151	R	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)	-
152	B	SENSOR GROUND	-

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



3	4
1	2

Terminal No.	Color of Wire	Signal Name
1	Y	BATT
2	P	BRAKE PEDAL POSITION SWITCH
3	Y	BATT
4	G	STP

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Type	BJ30FW
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	W	SENSOR POWER SUPPLY
2	W	SENSOR POWER SUPPLY
3	W	SENSOR POWER SUPPLY
4	R	BATTERY
5	R	BATTERY
6	R	BATTERY
7	-	-
8	LG	BATTERY
9	LG	BATTERY
10	LG	BATTERY
11	LG	BATTERY
12	P	BATTERY
13	P	BATTERY
14	P	BATTERY
15	GR	GND
16	B	GND
17	B	GND
18	-	-
19	Y	BATTERY

20	Y	BATTERY
21	Y	BATTERY
22	Y	BATTERY
23	BG	EVAP CONTROL SYSTEM PRESSURE SENSOR
24	O	EVAP CONTROL SYSTEM PRESSURE SENSOR
25	-	-
26	G	GND
27	G	GND
28	G	GND
29	-	-
30	V	BATTERY
31	LG	BATTERY
32	V	BATTERY
33	V	BATTERY

Connector No.	E45
Connector Name	JOINT CONNECTOR-E12
Connector Type	A12FL
Connector Color	BLUE

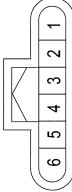


12	11	10	9	8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	L	CAN-H
4	L	CAN-H
5	-	-
6	-	-
7	P	CAN-L
8	P	CAN-L
9	P	CAN-L
10	P	CAN-L
11	-	-
12	-	-

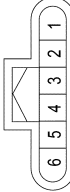
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E70
Connector Name	JOINT CONNECTOR-E14
Connector Type	RH06FB
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	P	CAN-L
3	P	CAN-L
4	P	CAN-L
5	-	-
6	-	-

Connector No.	E71
Connector Name	JOINT CONNECTOR-E15
Connector Type	RH06FB
Connector Color	BLACK

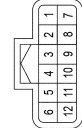
Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	L	CAN-H
4	L	CAN-H
5	-	-
6	-	-

Connector No.	E72
Connector Name	BRAKE PEDAL POSITION SWITCH (WITH INTELLIGENT CRUISE CONTROL)
Connector Type	M02FBR-LC
Connector Color	BROWN




Terminal No.	Color of Wire	Signal Name
1	R	IGN
2	LG	BRAKE PEDAL POSITION SWITCH

Connector No.	E74
Connector Name	ACCELERATOR PEDAL ACTUATOR (WITH INTELLIGENT CRUISE CONTROL)
Connector Type	RH12FB
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	BG	+VB
2	R	IGN SW
3	BG	CAN-H
4	L/G	AFS1 VDD
5	W	AFS1 GND
6	W/L	AFS1 OUT
7	GR	GND
8	-	-
9	Y	CAN-L
10	L/Y	AFS2 VDD
11	O	AFS2 GND
12	O/L	AFS2 OUT

Connector No.	E75
Connector Name	ICC BRAKE HOLD RELAY
Connector Type	MS02FL-M2-LC
Connector Color	BLUE



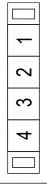

Terminal No.	Color of Wire	Signal Name
1	W	BRAKE HOLD RLY DRIVE SIGNAL
2	R	IGN
3	P	BRAKE PEDAL POSITION SWITCH
5	Y	BATT

Connector No.	E106
Connector Name	JOINT CONNECTOR-E06
Connector Type	TK04FW-J
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
1	BG	CAN-H
2	BG	CAN-H
3	BG	CAN-H
4	-	-

Connector No.	E108
Connector Name	JOINT CONNECTOR-E07
Connector Type	TK04FW-J
Connector Color	WHITE

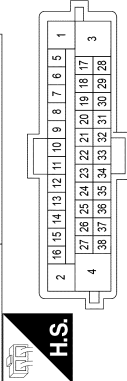



Terminal No.	Color of Wire	Signal Name
1	Y	CAN-L
2	Y	CAN-L
3	Y	CAN-L
4	-	-

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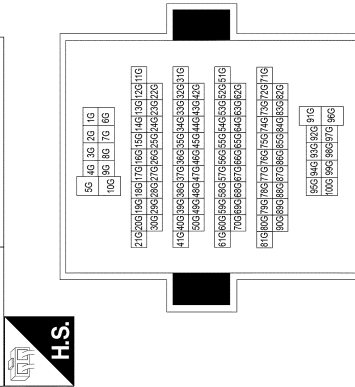
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	SAZ34FB-HS2-SJS22-UH
Connector Color	BLACK



36	-	-
37	-	-
38	-	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	SOLENOID (POWER)
2	B	ECU (GND)
3	W	MOTOR (POWER)
4	B/W	MOTOR (GND)
5	-	-
6	-	-
7	P	STOP LAMP SW (WITHOUT CC)
7	G	STOP LAMP SW (WITH INTELLIGENT CRUISE CONTROL)
8	-	-
9	R	VDC OFF SW
10	-	-
11	G	FR RH SEN (POWER)
12	W	FR RH SEN (SIGNAL)
13	R	RR LH SEN (POWER)
14	G	RR LH SEN (SIGNAL)
15	-	-
16	-	-
17	-	-
18	-	-
19	L	CAN-H
20	SHIELD	VAC SEN (GND)
21	B	VAC SEN (POWER)
22	W	VAC SEN (SIGNAL)
23	G	FR LH SEN (POWER)
24	W	FR LH SEN (SIGNAL)
25	B/G	RR RH SEN (POWER)
26	P	RR RH SEN (SIGNAL)
27	-	-
28	BR	IGN (POWER)
29	-	-
30	P	CAN-L
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-

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76G	Y	TO MAIN HARNESS
77G	BR	TO MAIN HARNESS
78G	-	TO MAIN HARNESS
79G	P	TO MAIN HARNESS
80G	G	TO MAIN HARNESS
81G	R	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	R	TO MAIN HARNESS
90G	L	TO MAIN HARNESS
91G	L	TO MAIN HARNESS
92G	-	TO MAIN HARNESS
93G	-	TO MAIN HARNESS
94G	Y	TO MAIN HARNESS
95G	W	TO MAIN HARNESS
96G	-	TO MAIN HARNESS
97G	-	TO MAIN HARNESS
98G	-	TO MAIN HARNESS
99G	-	TO MAIN HARNESS
100G	SHIELD	TO MAIN HARNESS

23G	SHIELD	TO MAIN HARNESS
24G	R	TO MAIN HARNESS
25G	W	TO MAIN HARNESS
26G	SHIELD	TO MAIN HARNESS
27G	W	TO MAIN HARNESS
28G	R	TO MAIN HARNESS
29G	B	TO MAIN HARNESS
30G	G	TO MAIN HARNESS
31G	L	TO MAIN HARNESS
32G	LG	TO MAIN HARNESS
33G	LG	TO MAIN HARNESS
34G	W	TO MAIN HARNESS
35G	P	TO MAIN HARNESS
36G	L	TO MAIN HARNESS
37G	B/G	TO MAIN HARNESS
38G	W	TO MAIN HARNESS
39G	W	TO MAIN HARNESS
40G	Y	TO MAIN HARNESS
41G	B/G	TO MAIN HARNESS
42G	P	TO MAIN HARNESS
43G	R	TO MAIN HARNESS
44G	W	TO MAIN HARNESS
45G	Y	TO MAIN HARNESS
46G	SB	TO MAIN HARNESS
47G	V	TO MAIN HARNESS
48G	BR	TO MAIN HARNESS
49G	W	TO MAIN HARNESS
50G	G	TO MAIN HARNESS
51G	B/W	TO MAIN HARNESS
52G	BR	TO MAIN HARNESS
53G	L	TO MAIN HARNESS
54G	P	TO MAIN HARNESS
55G	BR	TO MAIN HARNESS
56G	R	TO MAIN HARNESS
57G	P	TO MAIN HARNESS
58G	B/G	TO MAIN HARNESS
59G	W	TO MAIN HARNESS
60G	B	TO MAIN HARNESS
61G	SHIELD	TO MAIN HARNESS
62G	P	TO MAIN HARNESS
63G	L	TO MAIN HARNESS
64G	R	TO MAIN HARNESS
65G	G/R	TO MAIN HARNESS
66G	R	TO MAIN HARNESS
67G	B/G	TO MAIN HARNESS
68G	LG/R	TO MAIN HARNESS
69G	W	TO MAIN HARNESS
70G	G	TO MAIN HARNESS
71G	GR	TO MAIN HARNESS
72G	-	TO MAIN HARNESS
73G	-	TO MAIN HARNESS
74G	-	TO MAIN HARNESS
75G	G	TO MAIN HARNESS

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

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E207
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
1	P	TO ENGINE ROOM HARNESS
2	P	TO ENGINE ROOM HARNESS
3	P	TO ENGINE ROOM HARNESS
4	B	TO ENGINE ROOM HARNESS
5	G	TO ENGINE ROOM HARNESS
6	-	TO ENGINE ROOM HARNESS
7	-	TO ENGINE ROOM HARNESS
8	G	TO ENGINE ROOM HARNESS
9	R	TO ENGINE ROOM HARNESS
10	G	TO ENGINE ROOM HARNESS
11	P	TO ENGINE ROOM HARNESS
12	R	TO ENGINE ROOM HARNESS
13	SHIELD	TO ENGINE ROOM HARNESS
14	SHIELD	TO ENGINE ROOM HARNESS
15	-	TO ENGINE ROOM HARNESS
16	-	TO ENGINE ROOM HARNESS

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE

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	Y	TO ENGINE ROOM HARNESS
2	L	TO ENGINE ROOM HARNESS
3	B	TO ENGINE ROOM HARNESS
4	SHIELD	TO ENGINE ROOM HARNESS
5	B	TO ENGINE ROOM HARNESS
6	R	TO ENGINE ROOM HARNESS
7	W	TO ENGINE ROOM HARNESS

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8	SHIELD	TO ENGINE ROOM HARNESS
9	Y	TO ENGINE ROOM HARNESS
10	L	TO ENGINE ROOM HARNESS
11	SB	TO ENGINE ROOM HARNESS
12	Y	TO ENGINE ROOM HARNESS
13	R	TO ENGINE ROOM HARNESS
14	B	TO ENGINE ROOM HARNESS
15	G	TO ENGINE ROOM HARNESS
16	SHIELD	TO ENGINE ROOM HARNESS
17	W	TO ENGINE ROOM HARNESS
18	L	TO ENGINE ROOM HARNESS
19	Y	TO ENGINE ROOM HARNESS
20	V	TO ENGINE ROOM HARNESS
21	G	TO ENGINE ROOM HARNESS
22	L	TO ENGINE ROOM HARNESS
23	G	TO ENGINE ROOM HARNESS
24	R	TO ENGINE ROOM HARNESS

Connector No.	E219
Connector Name	ICC SENSOR
Connector Type	AAZ08FB
Connector Color	BLACK

4	3	2	1
8	7	6	5



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

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

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	SB	TO ROOM LAMP HARNESS
2	LG	TO ROOM LAMP HARNESS
3	R	TO ROOM LAMP HARNESS
4	-	TO ROOM LAMP HARNESS
5	GR	TO ROOM LAMP HARNESS
6	LG	TO ROOM LAMP HARNESS
7	L	TO ROOM LAMP HARNESS
8	Y	TO ROOM LAMP HARNESS
9	W	TO ROOM LAMP HARNESS
10	LG	TO ROOM LAMP HARNESS
11	BR	TO ROOM LAMP HARNESS
12	R/G	TO ROOM LAMP HARNESS
13	W	TO ROOM LAMP HARNESS
14	B	TO ROOM LAMP HARNESS
15	SHIELD	TO ROOM LAMP HARNESS
16	R	TO ROOM LAMP HARNESS
17	W	TO ROOM LAMP HARNESS
18	-	TO ROOM LAMP HARNESS
19	G	TO ROOM LAMP HARNESS
20	BR	TO ROOM LAMP HARNESS
21	LG	TO ROOM LAMP HARNESS
22	Y	TO ROOM LAMP HARNESS
23	P	TO ROOM LAMP HARNESS
24	B	TO ROOM LAMP HARNESS

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	CS06FW-M2
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
1N	LG	IGNITION
2N	BG	BATTERY
3N	L	IGNITION
4N	V	BATTERY
5N	Y	BATTERY
6N	W	BATTERY
7N	L	BATTERY
8N	L	IGNITION

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M4	8	-	53	-	51	-
Connector Name	FUSE BLOCK (J/B)	9	BG	54	W	52	-
Connector Type	NS16FW-CS	10	P	55	BR		
Connector Color	WHITE	11	B	56	-		
		12	P	57	-		
				58	-		
				59	P		
				60	L		
				61	BG		
				62	W		
				63	BG		
				64	P		
				65	P		
				66	W		
				67	G		
				68	P		
				69	G		
				70	P		
				71	R		
				72	G		
				73	-		
				74	-		
				75	BG		
				76	P		
				77	P		
				78	W		
				79	W		
				80	R		

Connector No.	M23	46	45	44	43	42	41
Connector Name	COMBINATION METER	52	51	50	49	48	47
Connector Type	TH12FW-NH						
Connector Color	WHITE						

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Connector No.	M11	7P	6P	5P	4P	3P	2P	1P
Connector Name	JOINT CONNECTOR-M03	16P	15P	14P	13P	12P	11P	10P
Connector Type	TK04FW-J							
Connector Color	WHITE							

Terminal No.	Color of Wire	Signal Name
1	Y	CAN-L
2	Y	CAN-L
3	W	CAN-L
4	Y	CAN-L

Connector No.	M19	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
Connector Name	BCM (BODY CONTROL MODULE)	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
Connector Type	TH40FB-NH																				
Connector Color	BLACK																				

Terminal No.	Color of Wire	Signal Name
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	R	HIGH SIDE START SW LED
49	-	-
50	-	-
51	-	-
52	W	AUDIO DONGLE

Connector No.	M5	1	2	3	4	5	6
Connector Name	CAN GATEWAY	7	8	9	10	11	12
Connector Type	TH12FW-NH						
Connector Color	WHITE						

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFOGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

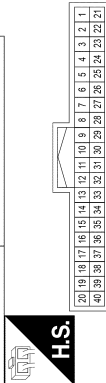
Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P		

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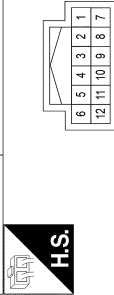
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M24
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE



39	L	CAN-H
40	-	-

Connector No.	M27
Connector Name	METER CONTROL SWITCH
Connector Type	TH12FW-NH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
5	P	ACC
6	V	SECURITY
7	R	AIR BAG
8	G	AS BELT
9	Y	DR BUCKLE SW
10	-	-
11	BG	ALTERNATOR (CHARGE)
12	G	PKB
13	-	-
14	G	STRG SW OUTPUT 1
15	W	STRG SW OUTPUT 2
16	B	STRG SW OUTPUT GND
17	-	-
18	-	-
19	-	-
20	-	-
21	BG	IGN
22	W	BAT
23	B	ILLUMI CONT OUT
24	R	STRG SW GND
25	G	BRAKE OIL SW
26	R	FUEL SENSOR GND
27	W	FUEL SENSOR
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	BR	SPEED 2 P/R
34	BG	SPEED 8 P/R
35	-	-
36	-	-
37	-	-
38	P	CAN-L

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Terminal No.	Color of Wire	Signal Name
1	Y	ILLUMI DOWN SW
2	G	SW GND
3	LG	TRIP/RESET
4	R	ILL PWR
5	B	ILLUMI CONT OUT
6	BG	BCI OFF SWITCH
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	BR	ILLUMI UP SW

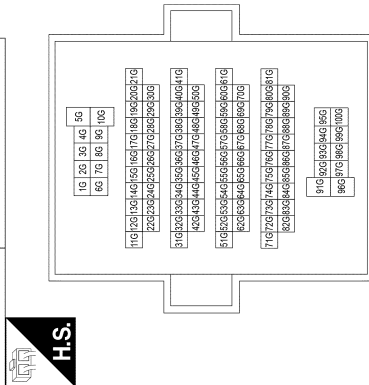
Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	AUDIO STRG SW REMOTE A
25	W	ASCD
31	BG	AUDIO STRG SW REMOTE B
32	G	ASCDG
33	R	AUDIO STRG SW GND

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1G	SB	TO ENGINE ROOM HARNESS - (WITH CLIMATE CONTROLLED SEAT)
1G	P	TO ENGINE ROOM HARNESS - (WITH CLIMATE CONTROLLED SEAT)
2G	W	TO ENGINE ROOM HARNESS
3G	P	TO ENGINE ROOM HARNESS
4G	G	TO ENGINE ROOM HARNESS
5G	P	TO ENGINE ROOM HARNESS
6G	SB	TO ENGINE ROOM HARNESS - (WITH CLIMATE CONTROLLED SEAT)
6G	R	TO ENGINE ROOM HARNESS - (WITH CLIMATE CONTROLLED SEAT)
7G	SHIELD	TO ENGINE ROOM HARNESS
8G	G	TO ENGINE ROOM HARNESS
9G	BG	TO ENGINE ROOM HARNESS
10G	W	TO ENGINE ROOM HARNESS
11G	R	TO ENGINE ROOM HARNESS
12G	G	TO ENGINE ROOM HARNESS
13G	G	TO ENGINE ROOM HARNESS
14G	V	TO ENGINE ROOM HARNESS
15G	W	TO ENGINE ROOM HARNESS
16G	R	TO ENGINE ROOM HARNESS
17G	B	TO ENGINE ROOM HARNESS
18G	SHIELD	TO ENGINE ROOM HARNESS
19G	SB	TO ENGINE ROOM HARNESS

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73G	-	TO ENGINE ROOM HARNESS
74G	-	TO ENGINE ROOM HARNESS
75G	G	TO ENGINE ROOM HARNESS
76G	Y	TO ENGINE ROOM HARNESS
77G	BR	TO ENGINE ROOM HARNESS
78G	-	TO ENGINE ROOM HARNESS
79G	R	TO ENGINE ROOM HARNESS
80G	W	TO ENGINE ROOM HARNESS
81G	G	TO ENGINE ROOM HARNESS
82G	P	TO ENGINE ROOM HARNESS
83G	P	TO ENGINE ROOM HARNESS
84G	P	TO ENGINE ROOM HARNESS
85G	P	TO ENGINE ROOM HARNESS
86G	P	TO ENGINE ROOM HARNESS
87G	P	TO ENGINE ROOM HARNESS
88G	P	TO ENGINE ROOM HARNESS
89G	R	TO ENGINE ROOM HARNESS
90G	P	TO ENGINE ROOM HARNESS
91G	L	TO ENGINE ROOM HARNESS
92G	P	TO ENGINE ROOM HARNESS
93G	P	TO ENGINE ROOM HARNESS
94G	O	TO ENGINE ROOM HARNESS
95G	B	TO ENGINE ROOM HARNESS
96G	P	TO ENGINE ROOM HARNESS
97G	P	TO ENGINE ROOM HARNESS
98G	P	TO ENGINE ROOM HARNESS
99G	P	TO ENGINE ROOM HARNESS
100G	SHIELD	TO ENGINE ROOM HARNESS

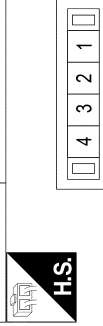
Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-NH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	V	TO BODY HARNESS RH
2	G	TO BODY HARNESS RH
3	Y	TO BODY HARNESS RH
4	R	TO BODY HARNESS RH
5	BG	TO BODY HARNESS RH
6	LG	TO BODY HARNESS RH
7	SB	TO BODY HARNESS RH
8	G	TO BODY HARNESS RH
9	B	TO BODY HARNESS RH
10	W	TO BODY HARNESS RH

11	SHIELD	TO BODY HARNESS RH
12	W	TO BODY HARNESS RH
13	B	TO BODY HARNESS RH
14	SHIELD	TO BODY HARNESS RH
15	B	TO BODY HARNESS RH
16	W	TO BODY HARNESS RH
17	SHIELD	TO BODY HARNESS RH
18	SB	TO BODY HARNESS RH
19	LG	TO BODY HARNESS RH
20	SB	TO BODY HARNESS RH
21	B	TO BODY HARNESS RH
22	W	TO BODY HARNESS RH
23	SHIELD	TO BODY HARNESS RH
24	W	TO BODY HARNESS RH
25	B	TO BODY HARNESS RH
26	SHIELD	TO BODY HARNESS RH
27	B	TO BODY HARNESS RH
28	W	TO BODY HARNESS RH
29	SHIELD	TO BODY HARNESS RH
30	B	TO BODY HARNESS RH
31	W	TO BODY HARNESS RH
32	L	TO BODY HARNESS RH
33	Y	TO BODY HARNESS RH
34	-	TO BODY HARNESS RH
35	-	TO BODY HARNESS RH
36	-	TO BODY HARNESS RH
37	BR	TO BODY HARNESS RH
38	-	TO BODY HARNESS RH
39	-	TO BODY HARNESS RH
40	-	TO BODY HARNESS RH

Connector No.	M37
Connector Name	JOINT CONNECTOR-M28
Connector Type	TK04FW-J
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	B	CAN-H
4	-	-

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[ADAS CONTROL UNIT]

DRIVER ASSISTANCE SYSTEM CONNECTORS

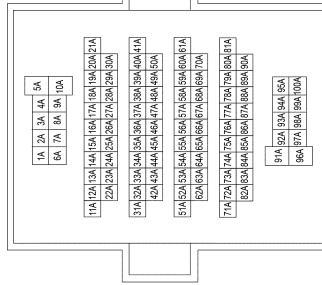
Connector No.	M38
Connector Name	JOINT CONNECTOR-M29
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	Y	CAN-L
2	Y	CAN-H
3	W	CAN-L
4	-	-

Connector No.	M40
Connector Name	WIRE TO WIPE
Connector Type	TH80FDGY-CS16-TM4
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1A	GR	TO BODY HARNESS
2A	BR	TO BODY HARNESS
3A	Y	TO BODY HARNESS
4A	V	TO BODY HARNESS
5A	L/B	TO BODY HARNESS

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57A	P	TO BODY HARNESS - (WITH CLIMATE CONTROLLED SEAT)
57A	L	TO BODY HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
58A	G	TO BODY HARNESS
59A	SB	TO BODY HARNESS
60A	L	TO BODY HARNESS
61A	G	TO BODY HARNESS
62A	BR	TO BODY HARNESS
63A	BR	TO BODY HARNESS
64A	Y	TO BODY HARNESS
65A	W	TO BODY HARNESS
66A	BG	TO BODY HARNESS
67A	Y	TO BODY HARNESS
68A	LG	TO BODY HARNESS
69A	R	TO BODY HARNESS
70A	P	TO BODY HARNESS
71A	BR	TO BODY HARNESS
72A	SB	TO BODY HARNESS
73A	BG	TO BODY HARNESS
74A	BR	TO BODY HARNESS
75A	LG	TO BODY HARNESS
76A	W	TO BODY HARNESS
77A	L	TO BODY HARNESS
78A	V	TO BODY HARNESS
79A	LG	TO BODY HARNESS
80A	Y	TO BODY HARNESS
81A	L	TO BODY HARNESS
82A	BG	TO BODY HARNESS
83A	Y	TO BODY HARNESS
84A	LG	TO BODY HARNESS
85A	SHIELD	TO BODY HARNESS
86A	Y	TO BODY HARNESS
87A	LG	TO BODY HARNESS
88A	BR	TO BODY HARNESS
89A	L	TO BODY HARNESS
90A	P	TO BODY HARNESS
91A	L	TO BODY HARNESS
92A	L	TO BODY HARNESS
93A	B	TO BODY HARNESS
94A	W	TO BODY HARNESS
95A	W	TO BODY HARNESS
96A	-	TO BODY HARNESS
97A	SB	TO BODY HARNESS
98A	Y	TO BODY HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
99A	L	TO BODY HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
100A	-	TO BODY HARNESS

6A	L	TO BODY HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
6A	G	TO BODY HARNESS - (WITH CLIMATE CONTROLLED SEAT)
7A	Y	TO BODY HARNESS
8A	W	TO BODY HARNESS
9A	L	TO BODY HARNESS
10A	R	TO BODY HARNESS
11A	R	TO BODY HARNESS
12A	BG	TO BODY HARNESS
13A	O	TO BODY HARNESS
14A	LG	TO BODY HARNESS
15A	R	TO BODY HARNESS
16A	G	TO BODY HARNESS
17A	B	TO BODY HARNESS
18A	B	TO BODY HARNESS
19A	SHIELD	TO BODY HARNESS
20A	B	TO BODY HARNESS
21A	SHIELD	TO BODY HARNESS
22A	-	TO BODY HARNESS
23A	W	TO BODY HARNESS
24A	B	TO BODY HARNESS
25A	SHIELD	TO BODY HARNESS
26A	B	TO BODY HARNESS
27A	B	TO BODY HARNESS
28A	SHIELD	TO BODY HARNESS
29A	R	TO BODY HARNESS
30A	B	TO BODY HARNESS
31A	R	TO BODY HARNESS
32A	Y/R	TO BODY HARNESS
33A	W	TO BODY HARNESS
34A	B	TO BODY HARNESS
35A	SHIELD	TO BODY HARNESS
36A	L/Y	TO BODY HARNESS
37A	LG	TO BODY HARNESS
38A	V	TO BODY HARNESS
39A	SB	TO BODY HARNESS
40A	BR	TO BODY HARNESS
41A	Y	TO BODY HARNESS
42A	G	TO BODY HARNESS
43A	-	TO BODY HARNESS
44A	W	TO BODY HARNESS
45A	R	TO BODY HARNESS
46A	BG	TO BODY HARNESS
47A	LG	TO BODY HARNESS
48A	R	TO BODY HARNESS
49A	P	TO BODY HARNESS
50A	W	TO BODY HARNESS
51A	L	TO BODY HARNESS
52A	P	TO BODY HARNESS
53A	G	TO BODY HARNESS
54A	W	TO BODY HARNESS
55A	BG	TO BODY HARNESS
56A	BR	TO BODY HARNESS

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	P	CAN-H
3	P	CAN-L
4	-	-

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	CAN-L
2	L	CAN-H
3	L	CAN-H
4	-	-

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M50
Connector Name	A/C AUTO AMP.
Connector Type	TH40FW-NH
Connector Color	WHITE



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

39	L	PTC 2
40	Y	WATER VALVE CLOSE A

Connector No.	M54
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH
Connector Color	WHITE



1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	GR	GND
3	G	BATT
4	-	-
5	G	TX RR
6	-	-
7	G	AMB SENS
8	G	STRG HTR SW
9	W	SUN SENS
10	SB	MODE 1
11	G	MODE 3
12	G	FAN OUT (COOLER)
13	W	IGN 2
14	W	FAN OUT (BOOSTER)
15	-	-
16	Y	ACTR (LIN)
17	LG	VACTR
18	W	FR FAN PWM
19	W	PTC 1
20	BR	STRG HTR RLY
21	P	CAN-L
22	GR	GND (POWER)
23	LG	IGN
24	-	-
25	W	RX RR
26	G	SENS GND
27	W	INC SENS
28	W	INT SENS
29	P	MODE 2
30	R	GAS SENS
31	BQ	MODE 4
32	L	FAN F/B (COOLER)
33	-	-
34	L	FAN F/B (BOOSTER)
35	-	-
36	BR	WATER VALVE OPEN B
37	BR	ACTR GND
38	P	IGN ON/OFF

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Connector No.	M70
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH
Connector Color	WHITE



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	FR SENSOR SIGNAL
2	B	FL SENSOR SIGNAL
3	R	FOL SENSOR SIGNAL
4	R	FOR SENSOR SIGNAL
5	B	Y CAN-H
6	W	Y CAN-L
7	-	-
8	-	-
9	B	RR SENSOR SIGNAL
10	B	ROR SENSOR SIGNAL
11	-	-
12	LG	IGN
13	B	FR SENSOR GND
14	B	RR SENSOR GND
15	GR	GND
16	LG	DISABLE SW
17	GR	LED OUTPUT
18	-	-
19	BR	SPEAKER PWR
20	LG	SPEAKER RR SIGNAL
21	B	RIL SENSOR SIGNAL
22	W	ROL SENSOR SIGNAL
23	-	-
24	-	-

Connector No.	M67
Connector Name	JOINT CONNECTOR-M04
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	B	CAN-H
4	L	CAN-H

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	TO BODY HARNESS RH
2	W	TO BODY HARNESS RH
3	SHIELD	TO BODY HARNESS RH
4	LG	TO BODY HARNESS RH
5	P	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	Y	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
6	W	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
7	R	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
8	B	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	TO BODY HARNESS RH
10	G	TO BODY HARNESS RH
11	L	TO BODY HARNESS RH
12	G	TO BODY HARNESS RH
13	G	TO BODY HARNESS RH
14	P	TO BODY HARNESS RH
15	O	TO BODY HARNESS RH
16	SB	TO BODY HARNESS RH
17	L	TO BODY HARNESS RH
18	P	TO BODY HARNESS RH
19	R	TO BODY HARNESS RH
20	-	TO BODY HARNESS RH
21	G	TO BODY HARNESS RH
22	R	TO BODY HARNESS RH
23	G	TO BODY HARNESS RH
24	R	TO BODY HARNESS RH - (WITH CLIMATE CONTROLLED SEAT)
24	V	TO BODY HARNESS RH - (WITHOUT CLIMATE CONTROLLED SEAT)

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25	W	TO BODY HARNESS RH
26	W	TO BODY HARNESS RH
27	BG	TO BODY HARNESS RH
28	V	TO BODY HARNESS RH
29	SB	TO BODY HARNESS RH
30	L	TO BODY HARNESS RH
31	W	TO BODY HARNESS RH
32	-	TO BODY HARNESS RH

Connector No.	M124
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM- WITH NAVI WITHOUT SURROUND SOUND SYSTEM)
Connector Type	TH32FW-NH
Connector Color	WHITE

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

H.S.

Terminal No.	Color of Wire	Signal Name
49	-	-
50	-	-
51	-	-
52	-	-
53	G	PKB SIG
54	-	-
55	W	NAVI COMP 1-
56	B	NAVI COMP 1+
57	BG	I-KEY MEMORY
58	G	AV ACC (DCM)
59	SHIELD	PKB SIGMIC GND
60	W	MIC VCC
61	W	IT DISP
62	P	CAN-L
63	LG	M CAN-L
64	LG	M CAN-L TRM
65	-	-
66	-	-
67	P	MP OUTPUT
68	LG	IGN
69	R	REVERSE SIG
70	BG	SPEED
71	SHIELD	NAVI COMP 1 SHIELD
72	R	NAVI COMP 1 SYNC
73	-	-
74	-	-

75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP IT
78	L	CAN-H
79	SB	M CAN-H
80	SB	M CAN-H TRM

Connector No.	M126
Connector Name	WARNING SYSTEM SWITCH
Connector Type	TH08FB-NH
Connector Color	BLACK

4	3	2	1
8	7	6	5

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	ILL
2	-	-
3	G	WARNING SYSTEM ON IND
4	B	ILL CONT
5	W	BATT
6	Y	WARNING SYSTEM SW
7	-	-
8	B	GND

Connector No.	M146
Connector Name	JOINT CONNECTOR-M05
Connector Type	TK04FW-J
Connector Color	WHITE

4	3	2	1

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	ITS CAN-H
2	L	ITS CAN-H
3	L	ITS CAN-H
4	L	ITS CAN-H

Connector No.	M147
Connector Name	JOINT CONNECTOR-M07
Connector Type	TK04FW-J
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	Y	ITS CAN-L
2	Y	ITS CAN-L
3	Y	ITS CAN-L
4	Y	ITS CAN-L

Connector No.	M149
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY
Connector Color	GRAY

H.S.

20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
13	R	ASCD
14	B	AUDIO STRG SW REMOTE A
15	GR	AUDIO STRG SW REMOTE B
16	L	ASCDG
17	BR	AUDIO STRG SW GND
18	G	HORN SWITCH
19	Y	ILL CONT
20	W	ILL

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS
Connector Color	WHITE



1	2	3	4
5	6	7	8
9	10		

Terminal No.	Color of Wire	Signal Name
1	W	TO FRONT DOOR RH HARNESS
2	B	TO FRONT DOOR RH HARNESS
3	SHIELD	TO FRONT DOOR RH HARNESS
4	BR	TO FRONT DOOR RH HARNESS
5	Y	TO FRONT DOOR RH HARNESS
6	L	TO FRONT DOOR RH HARNESS
7	LG	TO FRONT DOOR RH HARNESS
8	GR	TO FRONT DOOR RH HARNESS
9	BR	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)
9	G	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)
10	Y	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)
10	W	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)

Connector No.	M163
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM - WITH NAVI AND SURROUND SOUND SYSTEM)
Connector Type	TH32FW-NH
Connector Color	WHITE



48	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
49	-	-
50	-	-
51	-	-
52	-	-
53	G	PKB SIG

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54	-	-	NAVI COMPT+
55	W	NAVI COMPT+	
56	B	RESERVE I	
57	BG	RESERVE I	
58	G	RESERVE I	
59	SHIELD	MIC GND	
60	W	MIC VCC	
61	W	IT-DISP	
62	P	CAN-L	
63	LG	M-CAN L	
64	LG	M-CAN L TRM	
65	-	-	
66	-	-	
67	P	MIR OUTPUT	
68	LG	IGN	
69	R	REVERSE SIG	
70	BG	SPEED	
71	SHIELD	NAVI COMPT SHIELD	
72	R	GND	
73	-	-	
74	-	-	
75	B	MIC SIG	
76	SHIELD	DISP SHIELD	
77	B	DISP-IT	
78	L	CAN-H	
79	SB	M-CAN H	
80	SB	M-CAN H TRM	

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



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

Terminal No.	Color of Wire	Signal Name
1	B	TO FRONT DOOR LH HARNESS
2	V	TO FRONT DOOR LH HARNESS
3	GB	TO FRONT DOOR LH HARNESS
4	V	TO FRONT DOOR LH HARNESS
5	SB	TO FRONT DOOR LH HARNESS
6	BR	TO FRONT DOOR LH HARNESS
7	Y	TO FRONT DOOR LH HARNESS
8	W	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
8	V	TO FRONT DOOR LH HARNESS - (WITH BASE AUDIO SYSTEM)

9	P	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM AND SURROUND SOUND SYSTEM)
9	G	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM AND SURROUND SOUND SYSTEM)
9	SB	TO FRONT DOOR LH HARNESS - (WITH BASE AUDIO SYSTEM)
10	L	TO FRONT DOOR LH HARNESS
11	BR	TO FRONT DOOR LH HARNESS
12	Y	TO FRONT DOOR LH HARNESS
13	LG	TO FRONT DOOR LH HARNESS
14	SHIELD	TO FRONT DOOR LH HARNESS
15	B	TO FRONT DOOR LH HARNESS
16	W	TO FRONT DOOR LH HARNESS

Connector No.	M188
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE



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	-	TO MAIN HARNESS
2	-	TO MAIN HARNESS
3	-	TO MAIN HARNESS
4	-	TO MAIN HARNESS
5	-	TO MAIN HARNESS
6	-	TO MAIN HARNESS
7	B	TO MAIN HARNESS
8	W	TO MAIN HARNESS
9	LG	TO MAIN HARNESS
10	G	TO MAIN HARNESS
11	B	TO MAIN HARNESS
12	R	TO MAIN HARNESS
13	B	TO MAIN HARNESS
14	Y	TO MAIN HARNESS
15	GR	TO MAIN HARNESS
16	G	TO MAIN HARNESS
17	B	TO MAIN HARNESS
18	R	TO MAIN HARNESS
19	G	TO MAIN HARNESS
20	W	TO MAIN HARNESS
21	B	TO MAIN HARNESS
22	Y	TO MAIN HARNESS
23	B	TO MAIN HARNESS

24	R	TO MAIN HARNESS
Connector No.	M189	
Connector Name	WIRE TO WIRE	
Connector Type	TH24FW-NH	
Connector Color	WHITE	

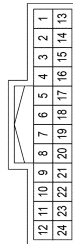


1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

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

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M198
Connector Name	DRIVER ASSISTANCE BUZZER CONTROL MODULE
Connector Type	TH24FW-NH
Connector Color	WHITE

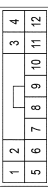



Connector No.	M199
Connector Name	WARNING SYSTEM BUZZER
Connector Type	NS02FW-CS
Connector Color	WHITE




21	SB	TO MAIN HARNESS
22	L	TO MAIN HARNESS
23	W	TO MAIN HARNESS
24	B	TO MAIN HARNESS

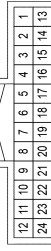
Connector No.	R6
Connector Name	LANE CAMERA UNIT
Connector Type	MUB12FB
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	L	ITS CAN-H
3	LG	IGN
4	-	-
5	Y	ITS CAN-L
6	Y	3RD CAN-L
7	-	-
8	-	-
9	L	V-CAN-H
10	Y	V-CAN-L
11	-	-
12	G	SPEAKER +
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	L	3RD CAN-H
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	W	SPEAKER -

Terminal No.	Color of Wire	Signal Name
1	G	SPEAKER DRIVE(+)
2	W	SPEAKER DRIVE(-)

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
1	G	TO MAIN HARNESS
2	R	TO MAIN HARNESS
3	W	TO MAIN HARNESS
4	Y/R	TO MAIN HARNESS
5	B	TO MAIN HARNESS
6	LG	TO MAIN HARNESS
7	BR	TO MAIN HARNESS
8	Y	TO MAIN HARNESS
9	G	TO MAIN HARNESS
10	W	TO MAIN HARNESS
11	SB	TO MAIN HARNESS
12	R/G	TO MAIN HARNESS
13	W	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	SHIELD	TO MAIN HARNESS
16	P	TO MAIN HARNESS
17	BG	TO MAIN HARNESS
18	-	TO MAIN HARNESS
19	V	TO MAIN HARNESS
20	W	TO MAIN HARNESS

AAOIA0638GB

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT

< BASIC INSPECTION >

[ADAS CONTROL UNIT]

BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING ADAS CONTROL UNIT

Description

INFOID:0000000014222120

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

Work Procedure

INFOID:0000000014222121

1. ADAS CONTROL UNIT CONFIGURATION

Perform the ADAS control unit configuration with CONSULT. Refer to [DAS-66. "Description"](#).

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

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

Is any DTC detected?

- YES >> Perform the trouble diagnosis for the detected DTC. Refer to [DAS-40. "DTC Index"](#).
NO >> INSPECTION END

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DAS

CONFIGURATION (ADAS CONTROL UNIT)

< BASIC INSPECTION >

[ADAS CONTROL UNIT]

CONFIGURATION (ADAS CONTROL UNIT)

Description

INFOID:0000000014222122

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

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

Work Procedure

INFOID:0000000014222123

1.SAVING VEHICLE SPECIFICATION

Ⓔ WITH CONSULT

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

Is vehicle specification saved normally?

YES >> GO TO 2.

NO >> GO TO 4.

2.REPLACE ADAS CONTROL UNIT

Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

Ⓔ WITH CONSULT

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

>> GO TO 6.

4.REPLACE ADAS CONTROL UNIT

Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

>> GO TO 5.

5.WRITING VEHICLE SPECIFICATION

Ⓔ WITH CONSULT

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

Setting item	
Items	Setting value
FWD/AWD	FWD
	AWD
LANE DEPARTURE PREVENTION	WITHOUT
	WITH

>> GO TO 6.

CONFIGURATION (ADAS CONTROL UNIT)

< BASIC INSPECTION >

[ADAS CONTROL UNIT]

6. OPERATION CHECK

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

>> WORK END.

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DTC/CIRCUIT DIAGNOSIS**C1A0A CONFIG UNFINISHED****DTC Logic**

INFOID:0000000014222124

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Vehicle specifications for ADAS control unit is incomplete.

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE**1.PERFORM DTC CONFIRMATION PROCEDURE**

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

Is "C1A01" detected as the current malfunction?

- YES >> Refer to [DAS-68, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222125

1.PERFORM CONFIGURATION OF ADAS CONTROL UNIT

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

>> Perform configuration of ADAS control unit. Refer to [DAS-66, "Description"](#).

C1A00 CONTROL UNIT

DTC Logic

INFOID:0000000014222126

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A00" detected as the current malfunction?YES >> Refer to [DAS-69, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222127

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-40, "DTC Index"](#).NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

DAS

C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A01 POWER SUPPLY CIRCUIT 1, C1A02 POWER SUPPLY CIRCUIT 2

DTC Logic

INFOID:0000000014222128

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Connector, harness, fuse
- ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

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

YES >> Refer to [DAS-70, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222129

1.CHECK ADAS CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of ADAS control unit. Refer to [DAS-169, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning parts.

C1A03 VEHICLE SPEED SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A03 VEHICLE SPEED SENSOR

DTC Logic

INFOID:0000000014222130

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - C1A04: Refer to [DAS-73, "DTC Logic"](#)

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

CAUTION:

Always drive safely.

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

Is "C1A03" detected as the current malfunction?

- YES >> Refer to [DAS-72, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222131

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-135, "DTC Logic"](#)
- C1A04: Refer to [DAS-73, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK DATA MONITOR

1. Start the engine.
2. Drive the vehicle.
3. Check that the value of "VHCL SPD AT" is almost the same as the value of "VHCL SPEED SE" in "DATA MONITOR" of "ICC/ADAS".

CAUTION:

Be careful of the vehicle speed.

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

NO >> GO TO 3.

3.CHECK TCM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [TM-64, "DTC Index"](#) (RE0F10E) or [TM-291, "DTC Index"](#) (RE0F10J).

NO >> GO TO 4.

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

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1A04 ABS/TCS/VDC SYSTEM

DTC Logic

INFOID:0000000014222132

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A04" detected as the current malfunction?

- YES >> Refer to [DAS-73, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222133

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).

C1A04 ABS/TCS/VDC SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

C1A05 BRAKE SW/STOP LAMP SW

DTC Logic

INFOID:0000000014222134

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A05" detected as the current malfunction?

- YES >> Refer to [DAS-75, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222135

Regarding Wiring Diagram information, refer to [DAS-43, "Wiring Diagram"](#).

1. CHECK SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "U1000" is detected other than "C1A05" in "Self Diagnostic Result" of "ICC/ADAS".

C1A05 BRAKE SW/STOP LAMP SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK STOP LAMP SWITCH AND BRAKE PEDAL POSITION SWITCH

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

Is the inspection result normal?

YES >> GO TO 3.

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

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

3.CHECK STOP LAMP SWITCH

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

Is the inspection result normal?

YES >> GO TO 14.

NO >> GO TO 9.

4.CHECK BRAKE PEDAL POSITION SWITCH INSTALLATION

1. Turn ignition switch OFF.

2. Check brake pedal position switch for correct installation. Refer to [BR-7, "Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Adjust brake pedal position switch installation. Refer to [BR-13, "Adjustment"](#).

5.BRAKE PEDAL POSITION SWITCH INSPECTION

1. Disconnect brake pedal position switch connector.

2. Check brake pedal position switch. Refer to [DAS-79, "Component Inspection \(Brake Pedal Position Switch\)"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace brake pedal position switch.

6.CHECK BRAKE PEDAL POSITION SWITCH POWER SUPPLY CIRCUIT

1. Turn the ignition switch ON.

2. Check voltage between brake pedal position switch harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(-)	
Brake pedal position switch			
Connector	Terminal	Ground	
E72	1		
			Battery voltage

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair the harnesses or connectors.

7.CHECK HARNESS BETWEEN BRAKE PEDAL POSITION SWITCH AND ECM

1. Turn ignition switch OFF

2. Disconnect ECM connector.

3. Check for continuity between brake pedal position switch harness connector and ECM harness connector.
For Mexico

Brake pedal position switch		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E72	2	E16	126	Yes

C1A05 BRAKE SW/STOP LAMP SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Except for Mexico

Brake pedal position switch		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E72	2	E32	140	Yes

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

Brake pedal position switch		Ground	Continuity
Connector	Terminal		
E72	2		No

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

8.PERFORM SELF-DIAGNOSIS OF ECM

1. Connect all connectors again if the connectors are disconnected.
2. Turn ignition switch ON.
3. Perform "All DTC Reading".
4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to [EC-112. "DTC Index"](#) (except for Mexico) or [EC-654. "DTC Index"](#) (for Mexico).

Is any DTC detected?

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

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

9.CHECK STOP LAMP SWITCH INSTALLATION

1. Turn ignition switch OFF.
2. Check stop lamp switch for correct installation. Refer to [BR-7. "Inspection"](#).

Is the inspection result normal?

YES >> GO TO 10.

NO >> Adjust stop lamp switch installation. Refer to [BR-13. "Adjustment"](#).

10.STOP LAMP SWITCH INSPECTION

1. Disconnect stop lamp switch connector.
2. Check stop lamp switch. Refer to [DAS-79. "Component Inspection \(Stop Lamp Switch\)"](#).

Is the inspection result normal?

YES >> GO TO 11.

NO >> Replace stop lamp switch.

11.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(-)	
Stop lamp switch		Ground	
Connector	Terminal		
E38	1		
	3		
			Battery voltage

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair the harnesses or connectors.

12.CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ECM

C1A05 BRAKE SW/STOP LAMP SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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

Stop lamp switch		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E38	2	E16	122	Yes

Except for Mexico

Stop lamp switch		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E38	2	E32	139	Yes

4. 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 >> GO TO 13.

NO >> Repair the harnesses or connectors.

13.CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

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

Stop lamp switch		ABS actuator and electric unit (control unit)		Continuity
Connector	Terminal	Connector	Terminal	
E38	4	E125	7	Yes

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E38	4		No

Is the inspection result normal?

YES >> GO TO 14.

NO >> Repair the harnesses or connectors.

14.PERFORM SELF-DIAGNOSIS OF ECM

1. Connect all connectors again if the connectors are disconnected.
2. Turn ignition switch ON.
3. Perform "All DTC Reading".
4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to [EC-112, "DTC Index"](#) (except for Mexico) or [EC-654, "DTC Index"](#) (for Mexico).

Is any DTC detected?

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

NO >> GO TO 15.

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

Check if any DTC is detected in "Self Diagnostic Result" of "ABS". Refer to [BRC-47, "DTC Index"](#).

C1A05 BRAKE SW/STOP LAMP SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Is any DTC detected?

- YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.
NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

Component Inspection (Brake Pedal Position Switch)

INFOID:0000000014222136

1.CHECK BRAKE PEDAL POSITION SWITCH

Check for continuity between brake pedal position switch terminals.

Terminal		Condition	Continuity
1	2	When brake pedal is depressed	No
		When brake pedal is released	Yes

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace brake pedal position switch. Refer to [BR-20. "Exploded View"](#).

Component Inspection (Stop Lamp Switch)

INFOID:0000000014222137

1.CHECK STOP LAMP SWITCH

Check for continuity between stop lamp switch terminals.

Terminal		Condition	Continuity
1	2	When brake pedal is depressed	Yes
		When brake pedal is released	No
3	4	When brake pedal is depressed	Yes
		When brake pedal is released	No

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace stop lamp switch. Refer to [BR-20. "Exploded View"](#).

DAS

C1A06 OPERATION SW

DTC Logic

INFOID:0000000014236087

DTC DETECTION LOGIC

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

NOTE:

If DTC "C1A06" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to [CCS-155, "ICC SENSOR : DTC Logic"](#).

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A06" detected as the current malfunction?

- YES >> Refer to [DAS-80, "Diagnosis Procedure"](#).
 NO >> Refer to [GI-50, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000014236088

Regarding Wiring Diagram information, refer to [CCS-64, "Wiring Diagram"](#).

1. CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1A06" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
 Refer to [CCS-155, "ICC SENSOR : DTC Logic"](#).
 NO >> GO TO 2.

2. CHECK ICC STEERING SWITCH

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

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Replace the ICC steering switch.

3. CHECK HARNESS BETWEEN SPIRAL CABLE AND ECM

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

Spiral cable		ECM		Continuity
Connector	Terminal	Connector	Terminal	

C1A06 OPERATION SW

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

M30	25	E16 (for Mexico)	101	Yes
	32		108	
	25	E32 (except for Mexico)	134	
	32		135	

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

Spiral cable		Ground	Continuity
Connector	Terminal		
M30	25		No
	32		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK SPIRAL CABLE

Check for continuity between spiral cable terminals.

Spiral cable		Continuity
Terminal		
13	25	Yes
16	32	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace the spiral cable.

5.PERFORM SELF-DIAGNOSIS OF ECM

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

Is any DTC detected?

YES >> Perform self-diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [EC-112, "DTC Index"](#) (except for Mexico) or [EC-654, "DTC Index"](#) (for Mexico).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

Component Inspection

INFOID:0000000014236089

1.CHECK ICC STEERING SWITCH

Check resistance between ICC steering switch terminals.

Terminal		Switch operation	Resistance [Ω]
13	16	When pressing MAIN switch	Approx. 1
		When pressing dynamic driver assistance switch	Approx. 267
		When pressing CANCEL switch	Approx. 615
		When pressing DISTANCE switch	Approx. 1090
		When pressing SET/COAST switch	Approx. 1805
		When pressing RESUME/ACCELERATE switch	Approx. 2985
		When all switches are not pressed	Approx. 5415

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace the ICC steering switch. Refer to [CCS-190, "Removal and Installation"](#).

C1A13 STOP LAMP RELAY

DTC Logic

INFOID:0000000014222141

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE (1)

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

Is "C1A13" detected as the current malfunction?

- YES >> Refer to [DAS-83. "Diagnosis Procedure"](#).
NO >> GO TO 3.

3. PERFORM DTC CONFIRMATION PROCEDURE (2)

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

CAUTION:

Always drive safely.

C1A13 STOP LAMP RELAY

[ADAS CONTROL UNIT]

< DTC/CIRCUIT DIAGNOSIS >

NOTE:

- If it is outside the above condition, repeat step 1.
 - 2. Perform "All DTC Reading".
 - 3. Check if the "C1A13" is detected as the current malfunction in the "Self Diagnostic Result" of "ICC/ADAS".
- Is "C1A13" detected as the current malfunction?
- YES >> Refer to [DAS-83, "Diagnosis Procedure"](#).
 - NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 - NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222142

Regarding Wiring Diagram information, refer to [DAS-43, "Wiring Diagram"](#).

1.CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "C1A13" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK STOP LAMP SWITCH

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

Is the inspection result normal?

- YES >> GO TO 10.
- NO >> GO TO 3.

3.CHECK STOP LAMP SWITCH INSTALLATION

- 1. Turn ignition switch OFF.
- 2. Check stop lamp switch for correct installation. Refer to [BR-7, "Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Adjust stop lamp switch installation. Refer to [BR-13, "Adjustment"](#).

4.CHECK STOP LAMP SWITCH

- 1. Disconnect stop lamp switch connector.
- 2. Check stop lamp switch. Refer to [DAS-87, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Replace stop lamp switch.

5.CHECK STOP LAMP FOR ILLUMINATION

- 1. Turn the ignition switch OFF.
- 2. Remove ICC brake hold relay.
- 3. Check that the stop lamp is illuminated by depressing the brake pedal to turn the stop lamp ON.

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Check the stop lamp circuit, and repair or replace the malfunctioning parts.

6.CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ECM

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

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Stop lamp switch		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E38	2	E16	122	Yes

Except for Mexico

Stop lamp switch		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E38	2	E32	139	Yes

4. 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 >> GO TO 7.

NO >> Repair the harnesses or connectors.

7.CHECK ICC BRAKE HOLD RELAY CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8.CHECK ICC BRAKE HOLD RELAY

1. Remove ICC brake hold relay
2. Check ICC brake hold relay. Refer to [DAS-87, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace ICC brake hold relay.

9.PERFORM SELF-DIAGNOSIS OF ECM

1. Connect all connectors again if the connectors are disconnected.
2. Turn ignition switch ON.
3. Perform "All DTC Reading".
4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to [EC-112, "DTC Index"](#) (except for Mexico) or [EC-654, "DTC Index"](#) (for Mexico).

Is any DTC detected?

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

NO >> Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

10.CHECK ICC BRAKE HOLD RELAY POWER SUPPLY CIRCUIT

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

Terminal			Voltage (Approx.)
(+)		(-)	
ICC brake hold relay		Ground	
Connector	Terminal		
E75	2		Battery voltage

Is the inspection result normal?

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

YES >> GO TO 11.

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

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

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

ICC brake hold relay		ADAS control unit		Continuity
Connector	Terminal	Connector	Terminal	
E75	1	B104	17	Yes

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

ICC brake hold relay		Ground	Continuity
Connector	Terminal		
E75	1		No

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair the harnesses or connectors.

12. CHECK ADAS CONTROL UNIT STANDARD VOLTAGE

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

Terminal		Condition	Voltage (Approx.)
(+)	(-)		
ADAS control unit		Active Test item “STOP LAMP”	Battery voltage
Connector	Terminal		
B104	17		
		Off	0 V
		On	

Is the inspection result normal?

YES >> GO TO 13.

NO >> Replace ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

13. CHECK ICC BRAKE HOLD RELAY POWER SUPPLY CIRCUIT

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

Terminal		Voltage (Approx.)
(+)	(-)	
ICC brake hold relay		Ground
Connector	Terminal	
E75	5	
		Battery voltage

Is the inspection result normal?

YES >> GO TO 14.

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

14. CHECK HARNESS BETWEEN ICC BRAKE HOLD RELAY AND ECM

1. Disconnect ECM, rear combination lamp, and high-mounted stop lamp connectors and remove ICC brake hold relay.

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

2. Check for continuity between ICC brake hold relay harness connector and ECM harness connector.
For Mexico

ICC brake hold relay		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E75	2	E16	122	Yes

Except for Mexico

ICC brake hold relay		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E75	2	M32	139	Yes

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

ICC brake hold relay		Ground	Continuity
Connector	Terminal		
E75	2		No

Is the inspection result normal?

YES >> GO TO 15.

NO >> Repair the harnesses or connectors.

15.CHECK ICC BRAKE HOLD RELAY

1. Remove ICC brake hold relay.
2. Check ICC brake hold relay. Refer to [DAS-87, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 16.

NO >> Replace ICC brake hold relay.

16.CHECK STOP LAMP SWITCH

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

Is the inspection result normal?

YES >> GO TO 21.

NO >> GO TO 17.

17.CHECK STOP LAMP SWITCH INSTALLATION

1. Turn ignition switch OFF.
2. Check stop lamp switch for correct installation. Refer to [BR-7, "Inspection"](#).

Is the inspection result normal?

YES >> GO TO 18.

NO >> Adjust stop lamp switch installation. Refer to [BR-13, "Adjustment"](#).

18.CHECK STOP LAMP SWITCH

1. Disconnect stop lamp switch connector.
2. Check stop lamp switch. Refer to [DAS-87, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 19.

NO >> Replace stop lamp switch. Refer to [BR-20, "Exploded View"](#).

19.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Terminal			Voltage (Approx.)
(+)		(-)	
Stop lamp switch		Ground	
Connector	Terminal		
E38	3		Battery voltage

Is the inspection result normal?

YES >> GO TO 20.

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

20.CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

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

Stop lamp switch		ABS actuator and electric unit (control unit)		Continuity
Connector	Terminal	Connector	Terminal	
E38	4	E125	7	Yes

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E38	4		No

Is the inspection result normal?

YES >> GO TO 21.

NO >> Repair the harnesses or connectors.

21.PERFORM SELF-DIAGNOSIS OF ECM

1. Connect all connectors again if the connectors are disconnected.
2. Turn ignition switch ON.
3. Perform "All DTC Reading".
4. Check if any DTC is detected in "Self Diagnostic Result" of "ENGINE". Refer to [EC-112, "DTC Index"](#) (except for Mexico) or [EC-654, "DTC Index"](#) (for Mexico).

Is any DTC detected?

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

NO >> GO TO 22.

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

1. Connect all connectors again if the connectors are disconnected.
2. Turn ignition switch ON.
3. Perform "All DTC Reading".
4. Check if any DTC is detected in "Self Diagnostic Result" of "ABS". Refer to [BRC-47, "DTC Index"](#).

Is any DTC detected?

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

NO >> Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

Component Inspection

INFOID:0000000014222143

1.CHECK ICC BRAKE HOLD RELAY

C1A13 STOP LAMP RELAY

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

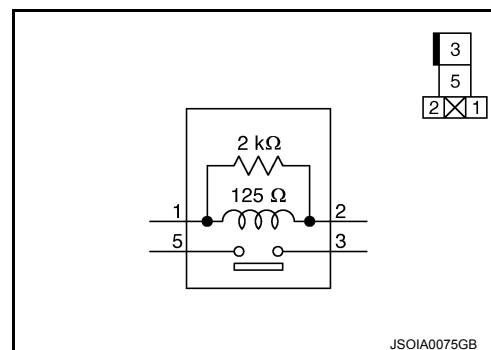
Apply battery voltage to ICC brake hold relay terminals 1 and 2, and then check for continuity under the following conditions.

Terminal		Condition	Continuity
3	5	When the battery voltage is applied	Yes
		When the battery voltage is not applied	No

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace ICC brake hold relay.



C1A14 ECM

DTC Logic

INFOID:0000000014222144

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Accelerator pedal position sensor
- ECM
- ADAS control unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Operate the ICC system and drive.
CAUTION:
Always drive safely.
3. Stop the vehicle.
4. Perform "All DTC Reading" with CONSULT.
5. Check if the "C1A14" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1A14" detected as the current malfunction?

- YES >> Refer to [DAS-89. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222145

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-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
 Refer to [DAS-135. "DTC Logic"](#).

NO >> GO TO 3.

3.PERFORM SELF-DIAGNOSIS OF ECM

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [EC-112, "DTC Index"](#) (except for Mexico) or [EC-654, "DTC Index"](#) (for Mexico).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1A15 GEAR POSITION

Description

INFOID:0000000014222146

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

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

DTC Logic

INFOID:0000000014222147

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Input speed sensor
- Vehicle speed sensor CVT (output speed sensor)
- TCM

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - C1A03: Refer to [DAS-71, "DTC Logic"](#)
 - C1A04: Refer to [DAS-73, "DTC Logic"](#)

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

CAUTION:

Always drive safely.

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

Is "C1A15" detected as the current malfunction?

- YES >> Refer to [DAS-92, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

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Diagnosis Procedure

INFOID:0000000014222148

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to [DAS-135, "DTC Logic"](#)
- C1A03: Refer to [DAS-71, "DTC Logic"](#)
- C1A04: Refer to [DAS-73, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK VEHICLE SPEED SIGNAL

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

CAUTION:

Be careful of the vehicle speed.

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 7.

3.CHECK GEAR POSITION

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

CAUTION:

Be careful of the vehicle speed.

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK GEAR POSITION SIGNAL

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

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 6.

5.CHECK INPUT SPEED SENSOR SIGNAL

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

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

NO >> GO TO 6.

6.CHECK TCM SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading".

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [TM-64, "DTC Index"](#) (RE0F10E) or [TM-291, "DTC Index"](#) (RE0F10J).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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

1. Perform "All DTC Reading".

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1A24 NP RANGE

DTC Logic

INFOID:0000000014222149

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- TCM
- Transmission range switch

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK DTC REPRODUCE (1)

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

Is "C1A24" detected as the current malfunction?

- YES >> Refer to [DAS-93, "Diagnosis Procedure"](#).
 NO >> GO TO 3.

3.CHECK DTC REPRODUCE (2)

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

Is "C1A24" detected as the current malfunction?

- YES >> Refer to [DAS-93, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222150

1.CHECK DTC PRIORITY

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

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< DTC/CIRCUIT DIAGNOSIS >

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK TCM DATA MONITOR

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

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Perform diagnosis for transmission range switch circuit and repair or replace the malfunctioning parts. Refer to [DAS-93, "Diagnosis Procedure"](#).

3.PERFORM TCM SELF-DIAGNOSIS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [TM-64, "DTC Index"](#) (RE0F10E) or [TM-291, "DTC Index"](#) (RE0F10J).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1A26 ECD MODE MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A26 ECD MODE MALFUNCTION

DTC Logic

INFOID:0000000014222151

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135. "DTC Logic"](#)
 - U0415: Refer to [DAS-131. "DTC Logic"](#)
 - U0121: Refer to [DAS-125. "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A26" detected as the current malfunction?

- YES >> Refer to [DAS-95. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222152

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-135. "DTC Logic"](#)
 - U0415: Refer to [DAS-131. "DTC Logic"](#)
 - U0121: Refer to [DAS-125. "DTC Logic"](#)

NO >> GO TO 2.

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

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

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C1A26 ECD MODE MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47. "DTC Index"](#).
- NO >> Replace ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

C1A27 ECD POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A27 ECD POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000014222153

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A27 (27)	ECD PWR SUPPLY CIR (ECD power supply circuit)	ECD system power supply voltage is excessively low

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - U0415: Refer to [DAS-131, "DTC Logic"](#)
 - U0121: Refer to [DAS-125, "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A27" detected as the current malfunction?

- YES >> Refer to [DAS-97, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222154

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - U0415: Refer to [DAS-131, "DTC Logic"](#)
 - U0121: Refer to [DAS-125, "DTC Logic"](#)

NO >> GO TO 2.

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

C1A27 ECD POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

Check power supply circuit of ABS actuator and electric unit (control unit). Refer to [BRC-157, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Perform self-diagnosis of ABS actuator and electric unit (control unit). Refer to [BRC-47, "DTC Index"](#).

NO >> Repair the harnesses or connectors.

C1A33 CAN TRANSMISSION ERROR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A33 CAN TRANSMISSION ERROR

DTC Logic

INFOID:0000000014222155

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A33" detected as the current malfunction?

- YES >> Refer to [DAS-99, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222156

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-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-40, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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DAS

C1A34 COMMAND ERROR

DTC Logic

INFOID:0000000014222157

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
 NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A34" detected as the current malfunction?

- YES >> Refer to [DAS-100. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222158

1. CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
 Refer to [DAS-135. "DTC Logic"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

C1A35 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A35 ACCELERATOR PEDAL ACTUATOR

DTC Logic

INFOID:0000000014222159

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A35" detected as the current malfunction?

YES >> Refer to [DAS-101, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222160

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-271, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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C1A36 ACCELERATOR PEDAL ACTUATOR CAN COMM

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A36 ACCELERATOR PEDAL ACTUATOR CAN COMM

DTC Logic

INFOID:0000000014222161

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A36" detected as the current malfunction?

- YES >> Refer to [DAS-102, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222162

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-271, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1A37 ACCELERATOR PEDAL ACTUATOR CAN 2

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A37 ACCELERATOR PEDAL ACTUATOR CAN 2

DTC Logic

INFOID:0000000014222163

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Accelerator pedal actuator malfunction

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A37" detected as the current malfunction?

- YES >> Refer to [DAS-103, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222164

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.REPLACE ACCELERATOR PEDAL ASSEMBLY

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

Is "C1A37" detected?

- YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).
NO >> INSPECTION END

C1A38 ACCELERATOR PEDAL ACTUATOR CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A38 ACCELERATOR PEDAL ACTUATOR CAN 1

DTC Logic

INFOID:0000000014222165

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Accelerator pedal actuator malfunction

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A38" detected as the current malfunction?

- YES >> Refer to [DAS-104, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222166

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.REPLACE ACCELERATOR PEDAL ASSEMBLY

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

Is "C1A38" detected?

- YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).
NO >> INSPECTION END

C1A39 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A39 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000014222167

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A39" detected as the current malfunction?

- YES >> Refer to [DAS-105. "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222168

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-135. "DTC Logic"](#).
NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47. "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

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C1A40 SYSTEM SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1A40 SYSTEM SWITCH CIRCUIT

DTC Logic

INFOID:0000000014222169

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition	Possible causes
C1A40 (40)	SYSTEM SW CIRC	BCI OFF switch remains "ON" (short circuit) for 10 minutes or more	• BCI OFF switch circuit • BCI OFF switch • ADAS control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A40" detected as the current malfunction?

- YES >> Refer to [DAS-106, "Diagnosis Procedure"](#).
NO >> Refer to [GI-50, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000014222170

Regarding Wiring Diagram information, refer to [DAS-43, "Wiring Diagram"](#).

1.CHECK METER CONTROL SWITCH (BCI OFF SWITCH) SIGNAL INPUT

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

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
ADAS control unit		BCI OFF switch	
Connector	Terminal		
B104	22	Pressed	0 V
		Released	Battery voltage

Is the inspection result normal?

- YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK METER CONTROL SWITCH (BCI OFF SWITCH)

1. Turn ignition switch OFF.
2. Remove meter control switch (BCI OFF switch).
3. Check meter control switch (BCI OFF switch). Refer to [DAS-107, "Component Inspection Meter Control Switch \(BCI OFF Switch\)"](#).

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace the meter control switch (BCI OFF switch). Refer to [DAS-414, "Removal and Installation"](#).

3.CHECK METER CONTROL SWITCH (BCI OFF SWITCH) CIRCUIT FOR OPEN

1. Disconnect the ADAS control unit connector.

C1A40 SYSTEM SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

2. Check continuity between the ADAS control unit harness connector and meter control switch (BCI OFF switch) harness connector.

ADAS control unit		Meter control switch (BCI OFF switch)		Continuity
Connector	Terminal	Connector	Terminal	
B104	22	M27	6	Yes

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK METER CONTROL SWITCH (BCI OFF SWITCH) CIRCUIT FOR SHORT

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

ADAS control unit		Ground	Continuity
Connector	Terminal		
B104	22		No

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.

Component Inspection Meter Control Switch (BCI OFF Switch)

INFOID:0000000014222171

1.CHECK METER CONTROL SWITCH (BCI OFF SWITCH)

Check continuity of meter control switch (BCI OFF switch) terminals.

Terminal		Condition	Continuity
1	2	When the meter control switch (BCI OFF switch) is pressed	Yes
		When the meter control switch (BCI OFF switch) is released	No

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the meter control switch (BCI OFF switch). Refer to [DAS-414. "Removal and Installation"](#).

DAS

C1B00 CAMERA UNIT MALF**DTC Logic**

INFOID:0000000014222172

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B00 (81)	CAMERA UNIT MALF (Camera unit malfunction)	If lane camera unit is malfunctioning

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE**1.PERFORM DTC CONFIRMATION PROCEDURE**

1. Start the engine.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B00" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B00" detected as the current malfunction?

- YES >> Refer to [DAS-108, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#)
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222173

1.CHECK SELF-DIAGNOSIS RESULTS

Check if "C1B00" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B00" detected?

- YES >> Refer to [DAS-108, "DTC Logic"](#)
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1B01 CAM AIMING INCMP

DTC Logic

INFOID:000000014222174

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B01 (82)	CAM AIMING INCMP (Camera aiming incomplete)	Camera aiming is not completed

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)/Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

CAUTION:

Always drive safely.

3. Perform "All DTC Reading" with CONSULT.
4. Check if the "C1B01" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B01" detected as the current malfunction?

YES >> Refer to [DAS-109, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000014222175

1.CHECK SELF-DIAGNOSIS RESULTS

Check if "C1B01" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B01" detected?

YES >> Refer to [DAS-283, "DTC Index"](#)

NO >> GO TO 2.

2.CHECK DATA MONITOR

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-170, "Removal and Installation"](#).

NO >> Replace the lane camera unit. Refer to [DAS-409, "Removal and Installation"](#).

C1B03 ABNRML TEMP DETECT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B03 ABNRML TEMP DETECT

DTC Logic

INFOID:0000000014222176

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B03 (83)	CAM ABNRML TMP DETCT (Camera abnormal temperature detect)	Temperature around lane camera unit is excessively high

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)/Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDP system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "C1B03" is detected as the current malfunction in self-diagnosis results of "ICC/ADAS".

Is "C1A39" detected as the current malfunction?

- YES >> Refer to [DAS-110, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222177

1.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "C1B03" is detected in "Self Diagnostic Result" of "LANE CAMERA"

Is "C1B03" detected?

- YES >> Refer to [DAS-40, "DTC Index"](#)
NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

1. Erase all self-diagnosis results with CONSULT.
2. Perform "All DTC Reading".
3. Check if the "C1B03" is detected in "Self Diagnostic Result" of "ICC/ADAS"

Is "C1B03" detected?

- YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).
NO >> INSPECTION END

C1B53 SIDE RADAR RIGHT MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B53 SIDE RADAR RIGHT MALFUNCTION

DTC Logic

INFOID:0000000014222178

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B53" detected as the current malfunction?

- YES >> Refer to [DAS-111, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222179

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-273, "DTC Index"](#) (SIDE RADAR LH), [DAS-276, "DTC Index"](#) (SIDE RADAR RH).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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DAS

C1B54 SIDE RADAR LEFT MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B54 SIDE RADAR LEFT MALFUNCTION

DTC Logic

INFOID:0000000014222180

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B54" detected as the current malfunction?

- YES >> Refer to [DAS-111, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222181

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-273, "DTC Index"](#) (SIDE RADAR LH), [DAS-276, "DTC Index"](#) (SIDE RADAR RH).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1B56 SONAR CIRCUIT

DTC Logic

INFOID:0000000014222182

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B56" detected as the current malfunction?

- YES >> Refer to [DAS-113. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222183

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135. "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-200. "DTC Index"](#).
- NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

DAS

C1B57 AVM CIRCUIT

DTC Logic

INFOID:0000000014222184

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B57" detected as the current malfunction?

- YES >> Refer to [DAS-114, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222185

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-424, "DTC Index"](#).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1B58 DRIVER ASSISTANCE BUZZER

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B58 DRIVER ASSISTANCE BUZZER

DTC Logic

INFOID:0000000014222186

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B58 (14)	DR ASSIST BUZZER CIRCUIT (Driver assistance buzzer circuit)	ADAS control unit detects that driver assistance buzzer has a malfunction.

POSSIBLE CAUSE

- Driver assistance buzzer
- Driver assistance buzzer control module
- ADAS control unit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Operate the ICC system and drive.
CAUTION:
Always drive safely.
3. Stop the vehicle.
4. Perform "All DTC Reading" with CONSULT.
5. Check if the "C1B58" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "C1B58" detected as the current malfunction?

- YES >> Refer to [DAS-115, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222187

1.CHECK DTC PRIORITY

If DTC "C1B58" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-352, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic"](#).
NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "BSW/BUZZER".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-280, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1B82 DISTANCE SENSOR OFF-CENTER

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B82 DISTANCE SENSOR OFF-CENTER

DTC Logic

INFOID:0000000014222188

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Radar alignment is off the aiming point

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B82" detected as the current malfunction?

- YES >> Refer to [DAS-116, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222189

1.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "C1B82" is detected as the current malfunction in "Self Diagnostic Result" of "LASER/RADAR".

Is "C1B82" detected?

- YES >> Refer to [DAS-116, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is "C1B82" detected?

- YES >> Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).
NO >> INSPECTION END

C1B83 DISTANCE SENSOR BLOCKED

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B83 DISTANCE SENSOR BLOCKED

DTC Logic

INFOID:0000000014222190

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1B83 (16)	DIST SEN BLOCKED (Distance sensor blocked)	If ICC sensor is malfunctioning

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B84" detected as the current malfunction?

- YES >> Refer to [DAS-117, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222191

1.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading" with CONSULT.
2. Check if "U1000" is detected other than "C1B84" in "Self Diagnostic Result" of "LASER/RADAR".

Is "" detected?

- YES >> Perform the CAN communication system inspection. Refer to [DAS-266, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result""ICC/ADAS "

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-40, "DTC Index"](#).
NO >> Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

DAS

C1B84 DISTANCE SENSOR

DTC Logic

INFOID:0000000014222192

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B84" detected as the current malfunction?

- YES >> Refer to [DAS-118, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222193

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Refer to [DAS-135, "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [CCS-60, "DTC Index"](#).
- NO >> Replace ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1B85 DISTANCE SENSOR ABNORMAL TEMP

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B85 DISTANCE SENSOR ABNORMAL TEMP

DTC Logic

INFOID:0000000014222194

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Temperature around the ICC sensor becomes high

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B85" detected as the current malfunction?

YES >> Refer to [DAS-119, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222195

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is "C1B85" detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-119, "DTC Logic"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

DAS

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000014222196

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Harness, connector, fuse
- ICC sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1A86" detected as the current malfunction?

- YES >> Refer to [DAS-120, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222197

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-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

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

Is "C1B86" detected?

- YES >> Refer to [DAS-120, "DTC Logic"](#).
NO >> GO TO 3.

3.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

C1B86 DISTANCE SENSOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

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

Is "C1B86" detected?

YES >> Replace ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).
NO >> INSPECTION END

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C1F01 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1F01 ACCELERATOR PEDAL ACTUATOR

DTC Logic

INFOID:0000000014222198

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Accelerator pedal actuator integrated motor malfunction

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1F01" detected as the current malfunction?

- YES >> Refer to [DAS-122, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222199

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

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

Is "C1F01" detected?

- YES >> Refer to [DAS-271, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1F02 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1F02 ACCELERATOR PEDAL ACTUATOR

DTC Logic

INFOID:0000000014222200

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Accelerator pedal actuator integrated control unit malfunction

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1F02" detected as the current malfunction?

YES >> Refer to [DAS-123, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222201

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.

Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

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

Is "C1F02" detected?

YES >> Refer to [DAS-271, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000014222202

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Harness, connector, or fuse
- Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1F05" detected as the current malfunction?

- YES >> Refer to [DAS-124, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222203

1.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
- NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

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

Is "C1F05" detected?

- YES >> Refer to [DAS-271, "DTC Index"](#).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U0121 VDC CAN 2

DTC Logic

INFOID:0000000014222204

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0121" detected as the current malfunction?

- YES >> Refer to [DAS-125. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222205

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-135. "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47. "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

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U0126 STRG SEN CAN 1

DTC Logic

INFOID:0000000014222206

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0126" detected as the current malfunction?

- YES >> Refer to [DAS-126, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222207

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U0235 ICC SENSOR CAN 1

DTC Logic

INFOID:0000000014236137

DTC DETECTION LOGIC

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

NOTE:

If DTC "U0235" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to [CCS-155, "ICC SENSOR : DTC Logic"](#).

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0235" detected as the current malfunction?

- YES >> Refer to [DAS-127, "Diagnosis Procedure"](#).
 NO >> Refer to [GI-50, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000014236138

1. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "U0235" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
 Refer to [CCS-155, "ICC SENSOR : DTC Logic"](#).
 NO >> GO TO 2.

2. CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [CCS-60, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U0401 ECM CAN 1

DTC Logic

INFOID:0000000014222210

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0401" detected as the current malfunction?

- YES >> Refer to [DAS-128, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222211

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2. CHECK ECM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [EC-654, "DTC Index"](#) (for Mexico) or [EC-112, "DTC Index"](#) (except for Mexico).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U0402 TCM CAN 1

DTC Logic

INFOID:000000001422212

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0402" detected as the current malfunction?

- YES >> Refer to [DAS-129. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000001422213

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-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [TM-64. "DTC Index"](#) (RE0F10E) or [TM-291. "DTC Index"](#) (RE0F10J).

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U0402 TCM CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

U0415 VDC CAN 1

DTC Logic

INFOID:0000000014222214

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0415" detected as the current malfunction?

- YES >> Refer to [DAS-131. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222215

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-135. "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47. "DTC Index"](#).

U0415 VDC CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

U0424 HVAC CAN CIRCUIT 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U0424 HVAC CAN CIRCUIT 1

Description

INFOID:0000000014222216

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

DTC Logic

INFOID:0000000014222217

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

A/C auto amp.

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0424" detected as the current malfunction?

YES >> Refer to [DAS-133, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222218

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

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

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [HAC-48, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U0428 STRG SEN CAN 2

DTC Logic

INFOID:0000000014222219

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U0428" detected as the current malfunction?

- YES >> Refer to [DAS-134, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222220

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000014222221

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-49. "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

ITS COMMUNICATION

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

CHASSIS COMMUNICATION

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

DTC Logic

INFOID:0000000014222222

DTC DETECTION LOGIC

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

NOTE:

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

NOTE:

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-128, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222223

1.PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON.
2. Turn the MAIN switch of ICC system ON, and then wait for 30 seconds or more.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [LAN-28, "Trouble Diagnosis Flow Chart"](#).
- NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000014222224

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

DTC Logic

INFOID:0000000014222225

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-137, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222226

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1010" detected as the current malfunction?

- YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

U150B ECM CAN 3

DTC Logic

INFOID:0000000014222227

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U150B" detected as the current malfunction?

YES >> Refer to [DAS-138, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222228

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-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK ECM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [EC-654, "DTC Index"](#) (for Mexico) or [EC-112, "DTC Index"](#) (except for Mexico).

U150B ECM CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U150C VDC CAN 3

DTC Logic

INFOID:0000000014222229

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U150C" detected as the current malfunction?

- YES >> Refer to [DAS-140, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222230

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).

U150C VDC CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

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U150D TCM CAN 3

DTC Logic

INFOID:000000001422231

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U150D" detected as the current malfunction?

- YES >> Refer to [DAS-142, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000001422232

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK TCM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [TM-64, "DTC Index"](#) (RE0F10E) or [TM-291, "DTC Index"](#) (RE0F10J).

U150D TCM CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

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U150E BCM CAN 3

DTC Logic

INFOID:000000001422233

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

BCM

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Conventional (fixed speed) cruise control mode
- Distance Control Assist (DCA)
- Forward Emergency Braking (FEB)
- Lane Departure Warning (LDW)
- Lane Departure Prevention (LDP)
- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U150E" detected as the current malfunction?

- YES >> Refer to [DAS-144, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000001422234

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK BCM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BCS-51, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1500 CAM CAN 2

DTC Logic

INFOID:00000001422235

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1500 (145)	CAM CAN CIRC 2 (Camera can circuit 2)	ADAS control unit detects an error signal that is received from lane camera via ITS communication

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled.

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

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1500" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1500" detected as the current malfunction?

- YES >> Refer to [DAS-145, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422236

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-283, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U1501 CAM CAN 1

DTC Logic

INFOID:00000001422237

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1501 (145)	CAM CAN CIRC 1 (Camera can circuit 1)	ADAS control unit detects an error signal that is received from lane camera via ITS communication

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled.

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

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1501" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1501" detected as the current malfunction?

- YES >> Refer to [DAS-146, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422238

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-283, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1502 ICC SENSOR CAN COMM CIRC

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1502 ICC SENSOR CAN COMM CIRC

DTC Logic

INFOID:0000000014222239

DTC DETECTION LOGIC

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

NOTE:

If DTC "U1502" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to [DAS-135, "DTC Logic"](#).

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1502" detected as the current malfunction?

- YES >> Refer to [DAS-147, "Diagnosis Procedure"](#).
NO >> Refer to [GI-50, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000014222240

1.CHECK SELF-DIAGNOSIS RESULTS

Check if "U1000" is detected other than "U1502" in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [CCS-60, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

DAS

U1503 SIDE RDR L CAN 2

DTC Logic

INFOID:00000001422241

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to [DAS-135, "DTC Logic"](#)
- U1508: Refer to [DAS-153, "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1503" detected as the current malfunction?

YES >> Refer to [DAS-148, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422242

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-135, "DTC Logic"](#)
- U1508: Refer to [DAS-153, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

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

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1504 SIDE RDR L CAN 1

DTC Logic

INFOID:00000001422243

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - U1508: Refer to [DAS-153, "DTC Logic"](#)
- NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1504" detected as the current malfunction?

- YES >> Refer to [DAS-149, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422244

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-135, "DTC Logic"](#)
 - U1508: Refer to [DAS-153, "DTC Logic"](#)
- NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-273, "DTC Index"](#).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U1505 SIDE RDR R CAN 2

DTC Logic

INFOID:000000001422245

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Side radar RH

FAIL- SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to [DAS-135, "DTC Logic"](#)
- U1507: Refer to [DAS-152, "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1505" detected as the current malfunction?

YES >> Refer to [DAS-150, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000001422246

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-135, "DTC Logic"](#)
- U1507: Refer to [DAS-152, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-276, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1506 SIDE RDR R CAN 1

DTC Logic

INFOID:00000001422247

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - U1507: Refer to [DAS-152, "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1506" detected as the current malfunction?

- YES >> Refer to [DAS-149, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422248

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-135, "DTC Logic"](#)
 - U1507: Refer to [DAS-152, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-276, "DTC Index"](#).
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U1507 LOST COMM(SIDE RDR R)

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1507 LOST COMM(SIDE RDR R)

DTC Logic

INFOID:0000000014222249

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1507" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1507" detected as the current malfunction?

- YES >> Refer to [DAS-152, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222250

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-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Check right/left switching signal circuit. Refer to [DAS-362, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [LAN-28, "Trouble Diagnosis Flow Chart"](#).
NO >> Repair right/left switching signal circuit.

U1508 LOST COMM(SIDE RDR L)

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1508 LOST COMM(SIDE RDR L)

DTC Logic

INFOID:000000014222251

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1508 (155)	LOST COMM(SIDE RDR L) [Lost communication (Side radar left)]	ADAS control unit cannot receive ITS communication signal from side radar LH for 2 seconds or more

POSSIBLE CAUSE

- Side radar LH harness connector
- ITS communication system
- Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1508" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1508" detected as the current malfunction?

- YES >> Refer to [DAS-153. "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000014222252

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-135. "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK SIDE RADAR HARNESS CONNECTOR

1. Turn the ignition switch OFF.
2. Check the terminals and connectors of the side radar LH for damage, bend and short (unit side and connector side).

Is the inspection result normal?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.
Refer to [LAN-28. "Trouble Diagnosis Flow Chart"](#).
NO >> Repair the terminal or connector.

U1512 HVAC CAN 3

DTC Logic

INFOID:0000000014222253

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1512 (162)	HVAC CAN CIRC 3 (HVAC CAN circuit 3)	ADAS control unit detects an error signal that is received from A/C auto amp. via CAN communication

POSSIBLE CAUSE

A/C auto amp.

FAIL- SAFE

None

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1512" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1512" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1512" detected as the current malfunction?

YES >> Refer to [DAS-154, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222254

1.CHECK DTC PRIORITY

If DTC "U1512" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

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

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [HAC-48, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1513 METER CAN 3

DTC Logic

INFOID:0000000014222255

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1513 (163)	METER CAN CIRC 3 (Meter CAN circuit 3)	ADAS control unit detects an error signal that is received from combination meter via CAN communication

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1513" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1513" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1513" detected as the current malfunction?

- YES >> Refer to [DAS-155. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222256

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-135. "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK COMBINATION METER SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [MWI-26. "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

U1514 STRG SEN CAN 3

DTC Logic

INFOID:0000000014222257

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1514 (164)	STRG SEN CAN CIRC 3 (Steering sensor CAN circuit 3)	ADAS control unit detects an error signal that is received from steering angle sensor via CAN communication

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC "U1514" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
 NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1514" detected as the current malfunction?

- YES >> Refer to [DAS-156, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222258

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

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

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BRC-47, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1515 ICC SENSOR CAN 3

DTC Logic

INFOID:00000001422259

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1515 (165)	ICC SENSOR CAN CIRC 3 (ICC sensor CAN circuit 3)	ADAS control unit detects an error signal that is received from ICC sensor via ITS communication

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1515" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1515" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1515" detected as the current malfunction?YES >> Refer to [DAS-157, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422260

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-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [CCS-60, "DTC Index"](#).NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U1516 CAM CAN 3

DTC Logic

INFOID:00000001422261

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1516 (166)	CAM CAN CIRC 3 (Camera CAN circuit 3)	ADAS control unit detects an error signal that is received from lane camera unit via CAN communication

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled.

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

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1516" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1516" detected as the current malfunction?

- YES >> Refer to [DAS-158, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422262

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-135, "DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK LANE CAMERA UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-283, "DTC Index"](#).
 NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1517 ACCELERATOR PEDAL ACTUATOR CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1517 ACCELERATOR PEDAL ACTUATOR CAN 3

DTC Logic

INFOID:000000014222263

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1517 (167)	APA CAN CIRC 3 (Accelerator pedal actuator CAN circuit 3)	ADAS control unit detects an error signal that is received from accelerator pedal actuator via CAN communication

POSSIBLE CAUSE

Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1517" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1517" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1517" detected as the current malfunction?

- YES >> Refer to [DAS-159, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000014222264

1.CHECK DTC PRIORITY

If DTC "U1517" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK ACCELERATOR PEDAL ACTUATOR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-271, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1518 SIDE RDR L CAN 3

DTC Logic

INFOID:000000014222265

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1518 (168)	SIDE RDR L CAN CIRC 3 (Side radar left CAN circuit 3)	ADAS control unit detects an error signal that is received from side radar LH via ITS communication

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1518" is displayed with DTC "U1000" or "U1508", first diagnose the DTC "U1000" or "U1508".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.

- U1000: Refer to [DAS-135, "DTC Logic"](#)
- U1508: Refer to [DAS-153, "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1518" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1518" detected as the current malfunction?

YES >> Refer to [DAS-160, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000014222266

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-135, "DTC Logic"](#)
- U1508: Refer to [DAS-153, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK SIDE RADAR LH SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

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

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1519 SIDE RDR R CAN 3

DTC Logic

INFOID:00000001422267

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1519 (169)	SIDE RDR R CAN CIRC 3 (Side radar right CAN circuit 3)	ADAS control unit detects an error signal that is received from side radar RH via ITS communication

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

If DTC "U1519" is detected along with DTC "U1000", or "U1507", first diagnose the DTC "U1000" or "U1507".

- Refer to [DAS-135, "DTC Logic"](#) for DTC "U1000".
- Check if "U1000" or "U1507" is detected other than "U1519" in "Self Diagnostic Result" of "ICC/ADAS".

1.CHECK DTC PRIORITY

If DTC "U1519" is displayed with DTC "U1000" or "U1507", first diagnose the DTC "U1000" or "U1507".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [DAS-135, "DTC Logic"](#)
 - U1507: Refer to [DAS-152, "DTC Logic"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1519" detected as the current malfunction?

- YES >> Refer to [DAS-161, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422268

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-135, "DTC Logic"](#)
 - U1507: Refer to [DAS-152, "DTC Logic"](#)

NO >> GO TO 2.

2.CHECK SIDE RADAR RH SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-276, "DTC Index"](#).

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U1519 SIDE RDR R CAN 3

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

U1521 SONAR CAN 2

DTC Logic

INFOID:00000001422269

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1521 (177)	SONAR CAN COMMUNICATION 2 (Sonar CAN communication 2)	ADAS control unit detects an error signal that is received from sonar control unit via ITS communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

If DTC "U1521" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to [DAS-135, "DTC Logic"](#).

1.CHECK DTC PRIORITY

If DTC "U1521" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Backup Collision Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1521" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1521" detected as the current malfunction?

YES >> Refer to [DAS-163, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:00000001422270

1.CHECK DTC PRIORITY

If DTC "U1521" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK SONAR SYSTEM SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-200, "DTC Index"](#).

NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U1522 SONAR CAN 1

DTC Logic

INFOID:0000000014222271

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1522 (178)	SONAR CAN COMMUNICATION 1 (Sonar CAN communication 1)	ADAS control unit detects an error signal that is received from sonar control unit via ITS communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1522" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1522" detected as the current malfunction?YES >> Refer to [DAS-164, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222272

1.CHECK DTC PRIORITY

If DTC "U1522" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK SONAR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-200, "DTC Index"](#).NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1523 SONAR CAN 3

DTC Logic

INFOID:0000000014222273

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1523 (179)	SONAR CAN COMMUNICATION 3 (Sonar CAN communication 3)	ADAS control unit detects an error signal that is received from sonar control unit via ITS communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1523" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Backup Collision Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1523" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1523" detected as the current malfunction?YES >> Refer to [DAS-165. "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222274

1.CHECK DTC PRIORITY

If DTC "U1523" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135. "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK SONAR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-200. "DTC Index"](#).NO >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

U1524 AVM CAN 1

DTC Logic

INFOID:0000000014222275

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1524 (180)	AVM CAN COMMUNICATION 1 (Around view monitor CAN communication 1)	ADAS control unit detects an error signal that is received from around view monitor control unit via ITS communication

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1524" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1524" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1524" detected as the current malfunction?YES >> Refer to [DAS-166, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222276

1.CHECK DTC PRIORITY

If DTC "U1524" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK SONAR SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-718, "DTC Index"](#).NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

U1525 AVM CAN 3

DTC Logic

INFOID:000000014222277

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1525 (181)	AVM CAN COMMUNICATION 3 (Around view monitor CAN communication 3)	ADAS control unit detects an error signal that is received from around view monitor control unit via ITS communication

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1525" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Back-up Collision Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1525" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1525" detected as the current malfunction?YES >> Refer to [DAS-167, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000014222278

1.CHECK DTC PRIORITY

If DTC "U1525" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-718, "DTC Index"](#).NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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U1530 DR ASSIST BUZZER CAN 1

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

U1530 DR ASSIST BUZZER CAN 1

DTC Logic

INFOID:0000000014222279

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
U1530 (183)	DR ASSIST BUZZER CAN CIR 1 (Driver assistance buzzer CAN circuit 1)	ADAS control unit detects an error signal that is received from driver assistance buzzer control module via ITS communication

POSSIBLE CAUSE

Driver assistance buzzer control module

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U1530" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U1530" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1530" detected as the current malfunction?

- YES >> Refer to [DAS-168, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222280

If DTC "U1530" is detected along with DTC "U1000", first diagnose the DTC "U1000". Refer to [DAS-135, "DTC Logic"](#).

1.CHECK DTC PRIORITY

If DTC "U1530" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-135, "DTC Logic"](#).
NO >> GO TO 2.

2.CHECK DRIVER ASSISTANCE BUZZER CONTROL MODULE SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "BSW/BUZZER".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-280, "DTC Index"](#).
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[ADAS CONTROL UNIT]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000014222281

Regarding Wiring Diagram information, refer to [DAS-43. "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following fuse is not blown.

Signal name	Fuse No.
Ignition power supply	30 (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		Ignition switch	0 V
Connector	Terminal		
B104	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		
B104	5		Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair the ADAS control unit ground circuit.

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REMOVAL AND INSTALLATION

ADAS CONTROL UNIT

Removal and Installation

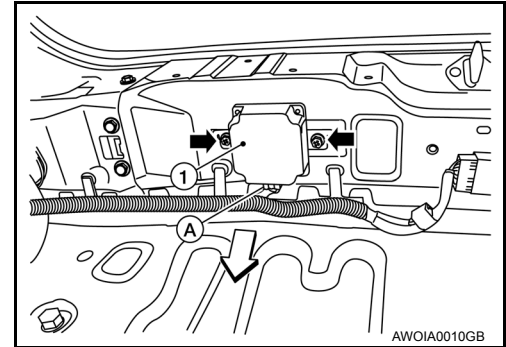
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REMOVAL

CAUTION:

Before replacing ADAS control unit, perform “Read/Write Configuration” to save or print current vehicle specification. For details, refer to [DAS-66, "Description"](#).

1. Remove the storage box. Refer to [INT-33, "STORAGE BOX : Removal and Installation"](#).
2. Disconnect the harness connector (A) from the ADAS control unit (1).
 ⇐: Front
3. Remove the bolts (⇐).
4. Lift upward to remove ADAS control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Be sure to perform “ADDITION SERVICE WHEN REPLACING ADAS CONTROL UNIT” when replacing ADAS control unit. For details, refer to [DAS-65, "Description"](#).

- Tighten ADAS control unit bolts to specification.

ADAS control unit bolts : 8.3 N·m (0.85 kg-m, 73 in-lb)

PRECAUTION

PRECAUTIONS

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

INFOID:0000000014225328

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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 DCA System Service

INFOID:0000000014222285

CAUTION:

- Turn the MAIN switch OFF in conditions similar to driving, such as free rollers or a chassis dynamometer.
- Do not use or disassemble the ICC sensor removed from the vehicle.
- Erase DTC when replacing parts of DCA system, then check the operation of DCA system after performing radar beam alignment, if necessary.

Precaution for PFCW System Service

INFOID:0000000014222286

CAUTION:

- Turn the PFCW system OFF in conditions similar to driving, such as free rollers or a chassis dynamometer.
- Do not use or disassemble the ICC sensor removed from the vehicle.
- Erase DTC when replacing parts of PFCW system, then check the operation of PFCW system after performing radar beam alignment, if necessary.
- Never change PFCW initial state ON ⇒ OFF without the consent of the customer.

Precaution for LDW/LDP System Service

INFOID:0000000014222287

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.

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PRECAUTIONS

< PRECAUTION >

[DRIVER ASSISTANCE SYSTEM]

- Do not change LDW initial state ON ⇒ OFF without the consent of the customer.

Precaution for Blind Spot Warning/Blind Spot Intervention System Service INFOID:0000000014222288

WARNING:

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

CAUTION:

- Do not use the Blind Spot Intervention 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/BLIND SPOT INTERVENTION SYSTEM OPERATING PROPERLY, BE SURE TO OBSERVE THE FOLLOWING ITEMS:

Lane Camera Unit Maintenance

The lane camera unit for the LDW/LDP system is located above the inside mirror. To keep the proper operation of the LDW/LDP systems and prevent a system malfunction, be sure to observe the following:

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

System Maintenance

The two side radar for the Blind Spot Warning and Blind Spot Intervention systems are located near the rear bumper.

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

Precaution for Backup Collision Intervention

INFOID:0000000014222289

WARNING:

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

CAUTION:

- Do not use the Backup Collision Intervention system when driving with free rollers or a chassis dynamometer.
- Do not perform the active test while driving.
- Do not change BCI initial state ON ⇒ OFF without the consent of the customer.

TO KEEP THE BACKUP COLLISION INTERVENTION SYSTEM OPERATING PROPERLY, BE SURE TO OBSERVE THE FOLLOWING ITEMS:

System Maintenance

The two side radars for the Backup Collision Intervention system are located near the rear bumper.

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

System Maintenance

The four rear sonars for the Backup Collision Intervention system are located in the rear bumper.

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

Precaution for FEB System Service

INFOID:0000000014222290

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 drivers 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 call 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.
- For pedestrians, the FEB with pedestrian detection system will not issue the first warning and will not push the accelerator pedal up
- The vehicles 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.
- The PFCW system (if equipped) is integrated into the FEB with pedestrian detection system. There is not a separate selection in the vehicle information display for the PFCW system. When the FEB with pedestrian detection is turned off, the PFCW system is also turned off.

Precaution for ICC System Service

INFOID:0000000014222291

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.

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PRECAUTIONS

< PRECAUTION >

[DRIVER ASSISTANCE SYSTEM]

Precaution for Work

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- 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

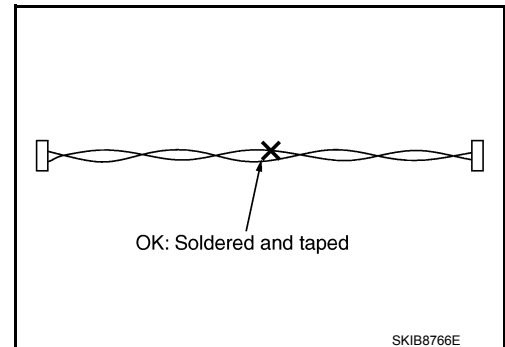
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ITS communication uses a twisted pair line. Be careful when repairing it.

- Solder the repaired area and wrap tape around the soldered area.

NOTE:

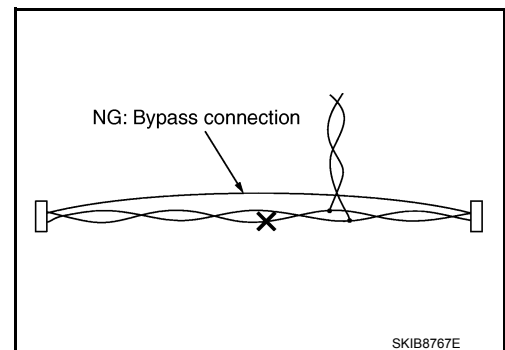
A fray of twisted lines must be within 110 mm (4.33 in).



- 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.



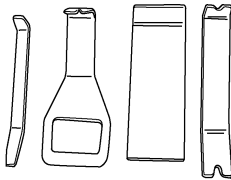
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000014227411

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

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

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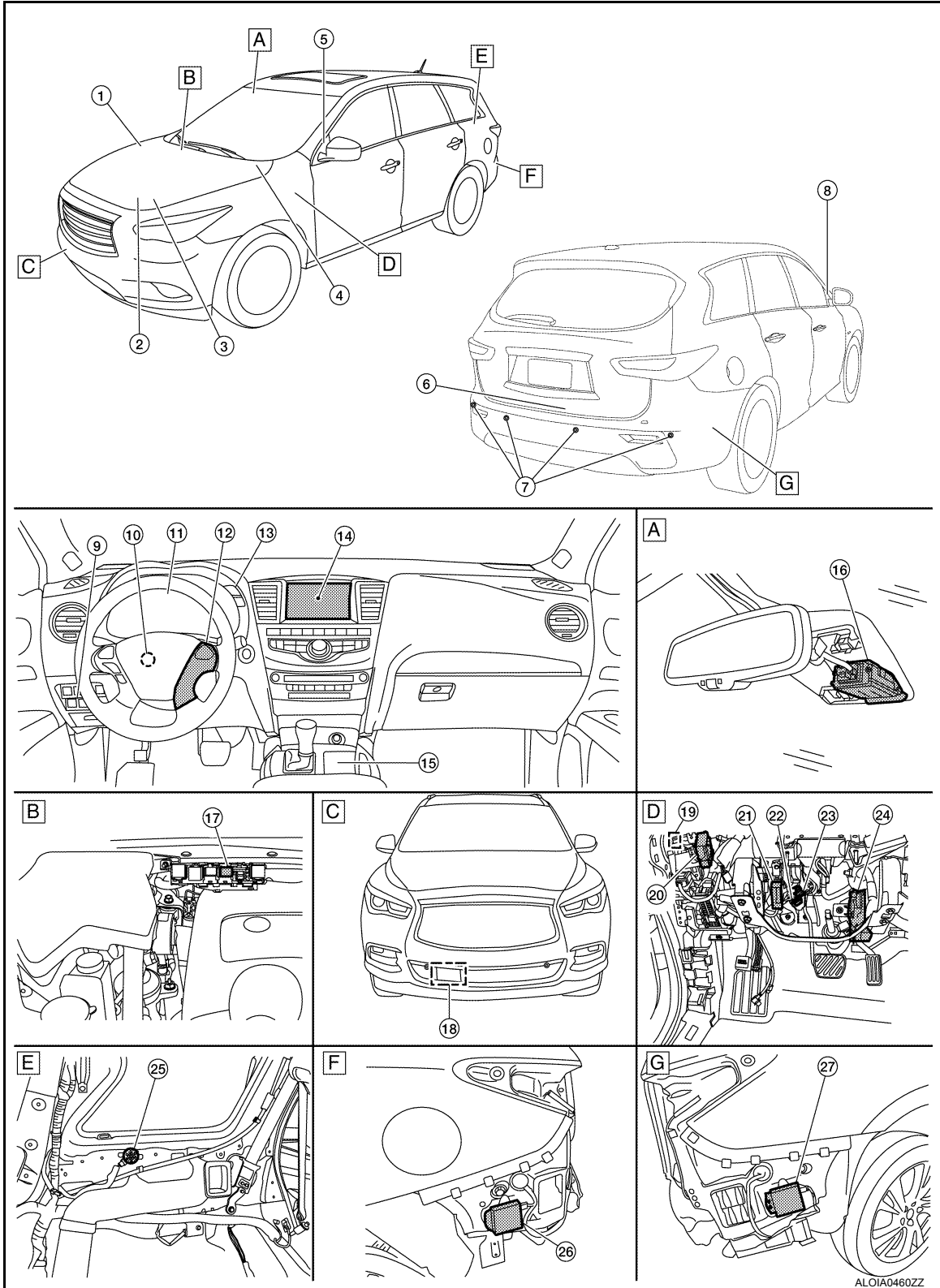
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000014222293



COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

A. Inside mirror area	B. Engine room (RH rear)	C. Front bumper (RH)
D. Instrument lower panel (LH)	E. Luggage area (LH rear)	F. Rear bumper (LH)
G. Rear bumper (RH)		

No.	Component	Description
1.	ABS actuator and electric unit (control unit)	- ABS actuator and electric unit (control unit) transmits the vehicle speed signal (wheel speed), stop lamp signal and VDC/TCS/ABS system operation condition to ADAS control unit via CAN communication - ABS actuator and electric unit (control unit) controls the brake, based on a brake fluid pressure control signal received from ADAS control unit via CAN communication - Refer to BRC-9, "Component Parts Location" for detailed installation location.
2.	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.
3.	ECM	- ECM transmits the accelerator pedal position signal, ICC brake switch signal, stop lamp switch signal, ICC steering switch signal, etc. to ADAS control unit via CAN communication - Refer to EC-22, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location.
4.	BCM	- Transmits the turn indicator signal and position light request signal to ADAS control unit via CAN communication - Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
5.	Blind Spot Warning/Blind Spot Intervention indicator LH	Refer to DAS-180, "Blind Spot Warning/Blind Spot Intervention Indicator LH/RH"
6.	ADAS control unit	- ADAS control unit calculates a target distance between vehicles and a target speed, based on signals received from each sensor and switch to transmit a brake fluid pressure control signal to ABS actuator and electric unit (control unit) via CAN communication - ADAS control unit transmits the buzzer output signal to the driver assistance buzzer control module via ITS communication - ADAS control unit transmits an accelerator pedal feedback force control signal to the accelerator pedal actuator via ITS communication - Refer to DAS-11, "Component Parts Location" for detailed installation location.
7.	Rear sonar sensors	- Detects rear obstacle distance and transmits signal to sonar control unit. - Refer to AV-155, "Component Parts Location" for detailed installation location.
8.	Blind Spot Warning/Blind Spot Intervention indicator RH	Refer to DAS-180, "Blind Spot Warning/Blind Spot Intervention Indicator LH/RH"
9.	Warning system switch	Refer to DAS-181, "Warning Systems Switch / Warning Systems ON indicator"
10.	Steering angle sensor	- Measures the rotation amount, rotation speed, and rotation direction of steering wheel, and then transmits them to ADAS control unit via CAN communication - Refer to BRC-9, "Component Parts Location" for detailed installation location.
11.	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-6, "METER SYSTEM : Component Parts Location" for detailed installation location.
12.	ICC steering switch	ECM receives an ICC steering switch (dynamic driver assistance switch) signal and transmits the signal to ADAS control unit via CAN communication
13.	BCI OFF switch	Refer to DAS-181, "BCI Switch"
14.	Display unit	- Receives camera image signal from AVM control unit. - Refer to AV-21, "Component Parts Location" for detailed installation location.
15.	AVM control unit	- Receives the various systems and camera signals and routes them to the display unit via CAN communication - Refer to AV-655, "Component Parts Location" for detailed installation location.
16.	Lane camera unit	Refer to DAS-179, "Lane Camera Unit"

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

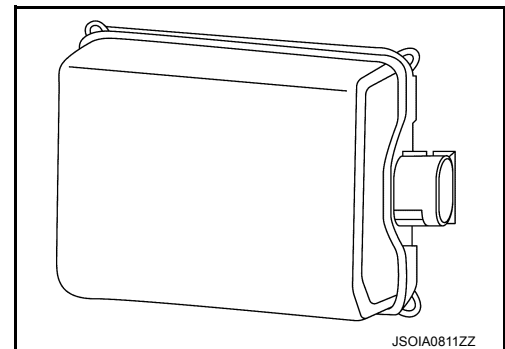
[DRIVER ASSISTANCE SYSTEM]

No.	Component	Description
17.	ICC brake hold relay	Refer to DAS-179, "ICC Brake Hold Relay"
18.	ICC sensor	Refer to DAS-178, "ICC Sensor"
19.	Warning buzzer	Refer to DAS-180, "Warning Buzzer"
20.	Driver assistance buzzer control module	Refer to DAS-180, "Driver Assistance Buzzer Control Module"
21.	Sonar control unit	- Transmits sonar buzzer signal to sound sonar buzzer. - Refer to AV-155, "Component Parts Location" for detailed installation location.
22.	Brake pedal position switch	Refer to DAS-178, "Brake Pedal Position Switch / Stop Lamp Switch"
23.	Stop lamp switch	
24.	Accelerator pedal actuator	Refer to DAS-179, "Accelerator Pedal Actuator"
25.	Sonar buzzer	- Receives sonar buzzer signal from sonar control unit and buzzer sounds. - Refer to AV-155, "Component Parts Location" for detailed installation location.
26.	Side radar LH	Refer to DAS-180, "Side Radar LH/RH"
27.	Side radar RH	

ICC Sensor

INFOID:0000000014222294

- ICC sensor is installed on the back of the front bumper and detects a vehicle ahead by using millimeter waves.
- ICC sensor detects radar reflected from a vehicle ahead by irradiating radar forward and calculates a distance from the vehicle ahead and relative speed, based on the detected signal.
- ICC sensor transmits the presence/absence of vehicle ahead and the distance from the vehicle to ADAS control unit via ITS communication.



ICC Steering Switch

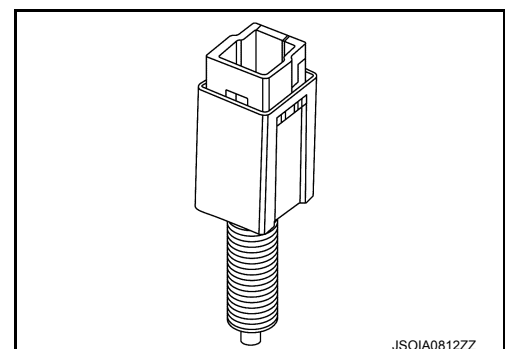
INFOID:0000000014222295

- ICC steering switch is installed to the steering wheel and allows the driver to operate the ICC system by using this switch.
- ICC steering switch allows the ON/OFF of the Intelligent Cruise Control and the settings of a vehicle speed and distance between vehicles.
- ICC steering switch signal is transmitted to ECM. ECM transmits the signal to the ADAS control unit via CAN communication.

Brake Pedal Position Switch / Stop Lamp Switch

INFOID:0000000014222296

- Brake pedal position switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.



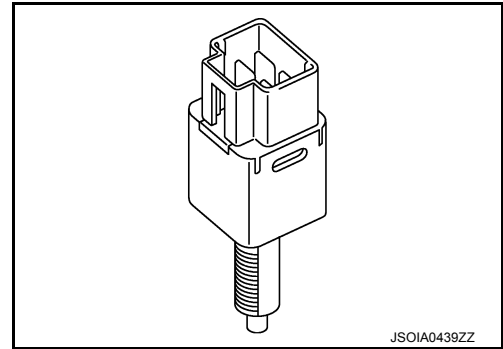
- Brake pedal position switch is turned OFF when depressing the brake pedal.
- Brake pedal position switch signal is input to ECM. Brake pedal position switch signal is transmitted from ECM to ADAS control unit via CAN communication.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

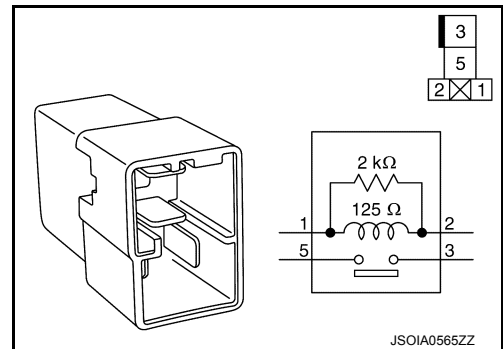
- Stop lamp switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.
- Stop lamp switch is turned ON, when depressing the brake pedal.
- Stop lamp switch signal is input to ECM and ABS actuator and electric unit (control unit). Stop lamp switch signals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



ICC Brake Hold Relay

INFOID:000000001422297

- ICC brake hold relay is installed in the engine room (right side).
- When the brake is activated by the system, the ICC brake hold relay turns ON the stop lamp by bypassing the circuit of the stop lamp, according to a signal transmitted from the ADAS control unit.



Combination Meter

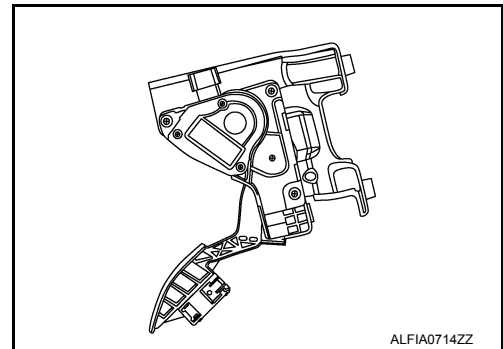
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- Transmits driver assistance system selection signal to ADAS control unit via CAN communication.
- Receives meter display signal from ADAS control unit via CAN communication.
- Displays the system status according to a signal received from the ADAS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

Accelerator Pedal Actuator

INFOID:000000001422299

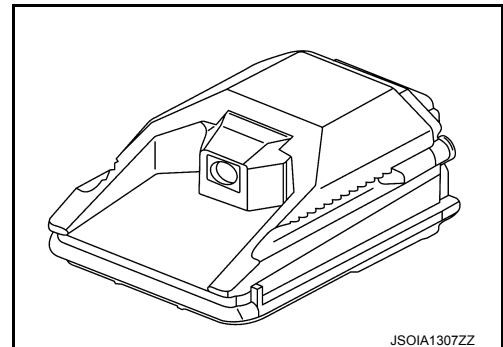
- Installed to the upper portion of the accelerator pedal, this consists of the accelerator pedal actuator together with the accelerator pedal position sensor, and is linked with the accelerator pedal.
- If accelerator pedal feedback force control signal is received from ADAS control unit via ITS communication,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



Lane Camera Unit

INFOID:000000001422300

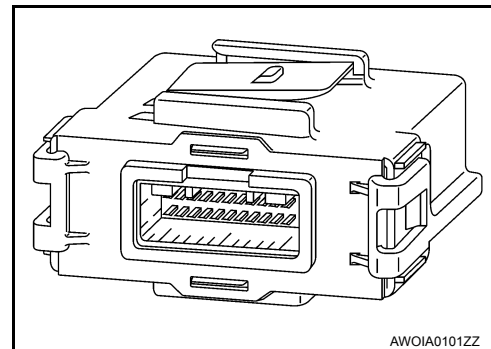
- Lane camera unit is installed to the windshield and detects the lane marker in travel lane.
- Transmits lane marker signal to ADAS control unit via chassis communication.



Driver Assistance Buzzer Control Module

INFOID:0000000014222301

- Driver assistance buzzer control module is installed behind the instrument lower panel LH.
- When the warning buzzer signal is received from the ADAS control unit, the driver assistance buzzer control module transmits the warning buzzer signal to warning buzzer.

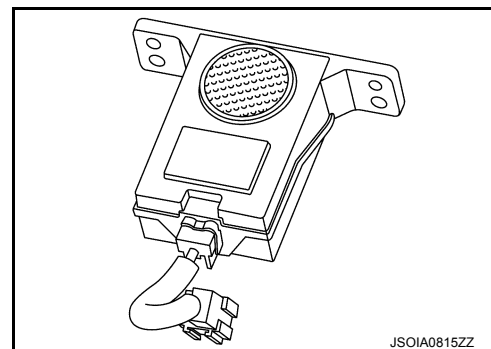


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Warning Buzzer

INFOID:0000000014222302

- Warning buzzer is installed behind the instrument panel assembly.
- When a warning buzzer signal is received from the driver assistance buzzer control module, the warning buzzer sounds.

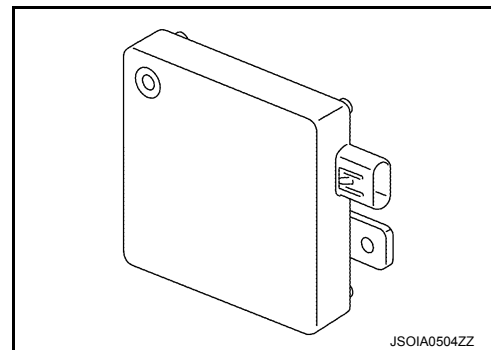


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Side Radar LH/RH

INFOID:0000000014222303

- Installed near the rear bumper, the side radar detects other vehicles beside own vehicle in an adjacent lane.
- Connected with the ADAS control unit via ITS communication, the side radar transmits a vehicle detection signal.
- Receives a Blind Spot Warning/Blind Spot Intervention indicator signal and a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal from the ADAS control unit and transmits an indicator operation signal to the Blind Spot Warning/Blind Spot Intervention indicator LH/RH.
- Since side radar RH and side radar LH have the same specifications, side radar RH has the right/left switching signal circuit for identification.



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Blind Spot Warning/Blind Spot Intervention Indicator LH/RH

INFOID:0000000014222304

- Installed on the door mirror corner finisher, the Blind Spot Warning/Blind Spot Intervention indicator warns the driver by lighting/blinking.
- Receives a Blind Spot Warning/Blind Spot Intervention indicator operation signal from the side radar LH/RH and blinks or turns ON/OFF the Blind Spot Warning/Blind Spot Intervention indicator.

Dynamic Driver Assistance Switch

INFOID:0000000014222305

- Dynamic driver assistance switch is integrated in ICC steering switch.
- ICC steering switch is input to ADAS control unit.

NOTE:

Dynamic driver assistance switch is shared with following systems.

- Distance Control Assist (DCA)
- Lane Departure Prevention (LDP)
- Blind Spot Intervention

Warning Systems Switch / Warning Systems ON indicator

INFOID:0000000014222306

- Warning system switch and warning system ON indicator are integrated at the instrument lower panel (LH).
- Warning system switch (ON/OFF) input to ADAS control unit.
- Warning system ON indicator turn ON when PFCW system, LDW system and/or BSW system are ON.
- Warning system ON indicator blinks when PFCW system, LDW system and/or BSW system are OFF and the warning system switch is pressed.

NOTE:

Warning system switch is shared with following systems (ON/OFF).

- Predictive Forward Collision Warning (PFCW)
- Lane departure Warning (LDW)
- Blind Spot Warning (BSW)

BCI Switch

INFOID:0000000014222307

- BCI OFF switch is integrated with the meter control switch.
- BCI switch (ON/OFF) input to ADAS control unit.

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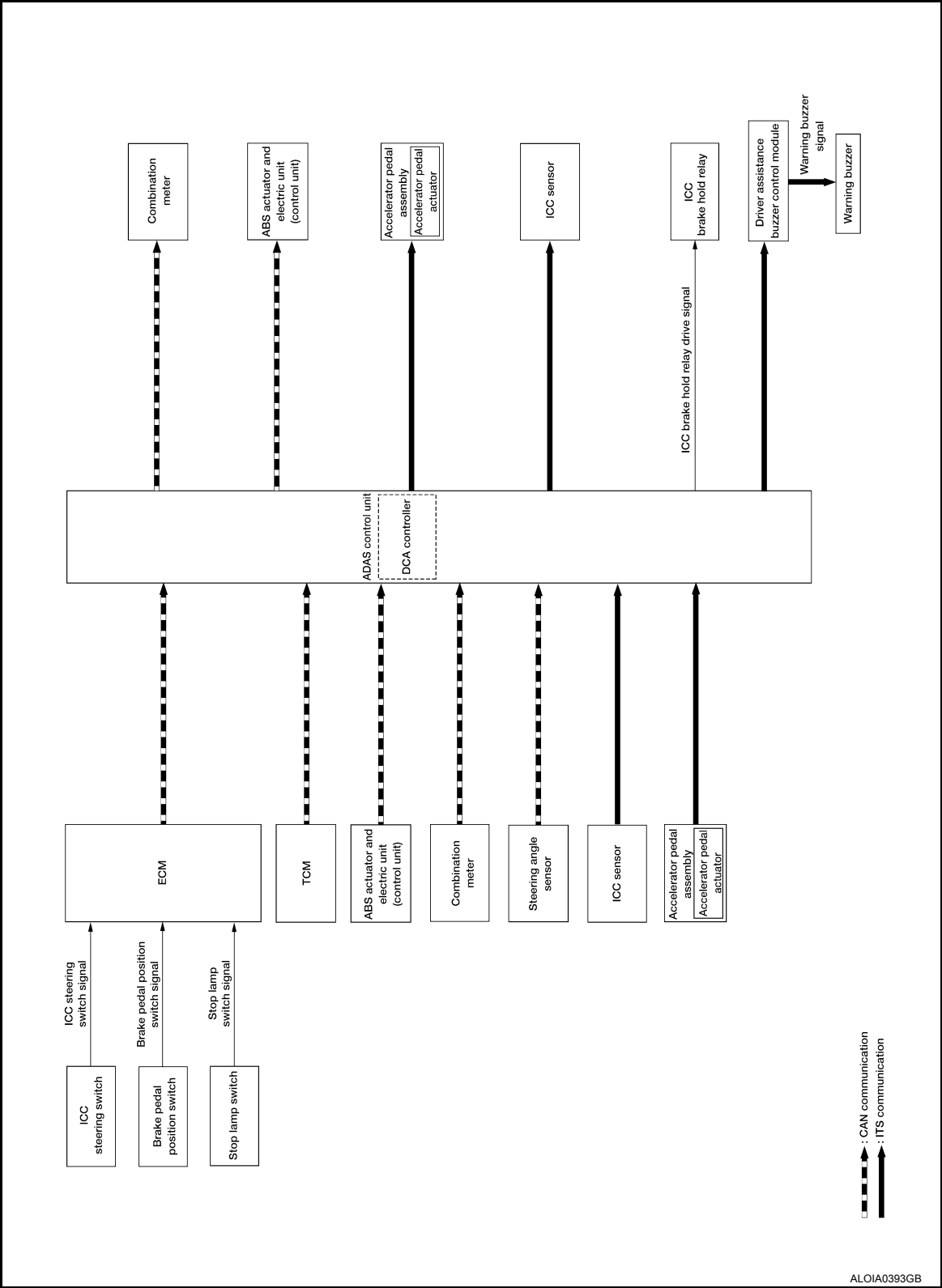
SYSTEM

DCA

DCA : System Description

INFOID:0000000014222308

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Input Signal Item

Transmit unit	Signal name		Description
ECM	CAN communication	Closed throttle position signal	Receives idle position state (ON/OFF)
		Accelerator pedal position signal	Receives accelerator pedal position (angle)
		Engine speed signal	Receives engine speed
		Stop lamp switch signal	Receives an operational state of the brake pedal
		Brake pedal position switch signal	Receives an operational state of the brake pedal
		ICC steering switch signal	Dynamic driver assistance switch signal Receives the operational state of the dynamic driver assistance switch
TCM	CAN communication	Input speed signal	Receives the number of revolutions of input shaft
		Current gear position signal	Receives a current gear position
		Shift position signal	Receives a selector lever position
		Output shaft revolution signal	Receives the number of revolutions of output shaft
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		ABS operation signal	Receives an operational state of ABS
		ABS warning lamp signal	Receives an ON/OFF state of ABS warning lamp
		TCS malfunction signal	Receives a malfunction state of TCS
		TCS operation signal	Receives an operational state of TCS
		VDC OFF switch signal	Receives an ON/OFF state of VDC
		VDC malfunction signal	Receives a malfunction state of VDC
		VDC operation signal	Receives an operational state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
		Yaw rate signal	Receives yaw rate acting on the vehicle
		Stop lamp switch signal	Receives an operational state of the brake pedal
Steering angle sensor	CAN communication	Steering angle sensor malfunction signal	Receives a malfunction state of steering angle sensor
		Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
		Steering angle speed signal	Receives the turning angle speed of the steering wheel
ICC sensor	ITS communication	ICC sensor signal	Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle
Accelerator pedal actuator	ITS communication	Accelerator pedal actuator operation status signal	Receives an operational state of accelerator pedal actuator

Output Signal Item

Reception unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Brake fluid pressure control signal	Transmits a brake fluid pressure control signal to activate the brake
Combination meter	CAN communication	Meter display signal	Transmits a signal to display a state of the system on the information display
		Vehicle ahead detection indicator signal DCA system display signal	

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SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Reception unit	Signal name		Description
ICC sensor	ITS communication	Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
		Steering angle sensor signal	Transmits a steering angle sensor signal received from the steering angle sensor
Accelerator pedal actuator	ITS communication	Accelerator pedal position signal	Transmits an accelerator pedal angle calculated by the ADAS control unit
		Accelerator pedal feedback force control signal	Transmits a target actuation force value calculated by the ADAS control unit
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a driver assistance buzzer signal to active the buzzer
ICC brake hold relay	ICC brake hold relay drive signal		Activates the brake hold relay and turns ON the stop lamp

FUNCTION DESCRIPTION

When a vehicle is detected ahead

- The vehicle ahead detection indicator comes ON.

When vehicle approaches a vehicle ahead

- If the driver is not depressing the accelerator pedal, the system activates the brakes to decelerate smoothly as necessary. If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system.
- If the driver is depressing the accelerator pedal, the system moves the accelerator pedal upward to assist the driver to release the accelerator pedal.

When brake operation by driver is required

- The system alerts the driver by a warning chime and blinking the vehicle ahead detection indicator. If the driver is depressing the accelerator pedal after the warning, the system moves the accelerator pedal upward to assist the driver to switch to the brake pedal.

CAUTION:

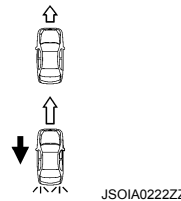
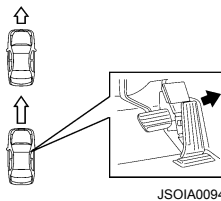
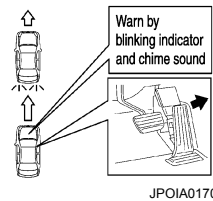
If the vehicle ahead comes to a standstill, the vehicle decelerates to a standstill within the limitations of the system. The system will release brake control with a warning chime once it judges the vehicle is at a standstill. To prevent the vehicle from moving, the driver must depress the brake pedal. [The system will resume control automatically once the system reaches 5 km/h (3 MPH)].

NOTE:

- Depending on the position of the accelerator pedal, the system may not be able to assist the driver to release the accelerator pedal appropriately.
- When the driver depresses the accelerator pedal even further while the system is moving the accelerator pedal upward, the accelerator pedal control will be canceled.
- When the driver is depressing the accelerator pedal, the brake control by the system is not operated.
- When the driver is depressing the brake pedal, neither the brake control nor the alert by the system operates.
- When the ICC system is set, the DCA system will be canceled.

OPERATION DESCRIPTION

ICC sensor calculates a distance from a vehicle ahead and a relative speed to transmit the ICC sensor signal to the ADAS control unit via ITS communication. Based on the received signal, the ADAS control unit transmits a control signal to the accelerator pedal actuator via ITS communication and to the ABS actuator control unit (control unit) via CAN communication.

When vehicle approaches a vehicle ahead	If the driver is not depressing the accelerator pedal, the system activates the brakes to decelerate smoothly as necessary	
	If the driver is depressing the accelerator pedal, the system moves the accelerator pedal upward to assist the driver to release the accelerator pedal	
When brake operation by driver is required	The system alerts the driver by a warning chime and blinking the vehicle ahead detection indicator. If the driver is depressing the accelerator pedal after the warning, the system moves the accelerator pedal upward to assist the driver to switch to the brake pedal	
Deceleration control	It transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via CAN communication and performs the brake control	
Accelerator pedal actuation control	It transmits the accelerator pedal feedback force control signal to the accelerator pedal actuator via ITS communication and controls the accelerator pedal in the upward direction	

Operation Condition

ADAS control unit performs the control when the following conditions are satisfied.

- When the dynamic driver assistance switch is turned to ON.
- When the DCA system display is ON (green). (Dynamic driver assistance icon ON in "Forward" position)
- When the brake pedal is not depressed.
- When the vehicle speed is above approximately 5 km/h (3 MPH).
- When the vehicle ahead is detected.
- When the ICC system is not set.

No Operation Condition

The ADAS control unit is not operate when the system is under any conditions of the no operation condition.

- When the brake pedal depressed.
- When the ICC system is set.
- When the system judges that the vehicle comes to a standstill by the system control.
- When the vehicle ahead is not detected.

Operation Cancellation Condition

The ADAS control unit cancels the operation when the system is under any conditions of the operation cancellation condition.

- When the dynamic driver assistance switch is turned to OFF.
- When the system malfunction occurs.
- When ABS or VDC (including the TCS) operates.
- When the VDC is turned OFF.
- When the drive mode select switch is in SNOW position.
- When the front bumper grille near the ICC sensor is dirty and the measurement of the distance between the vehicles becomes difficult.

Operation At The Driver Operation

Give priority to the driver operation in the following situation.

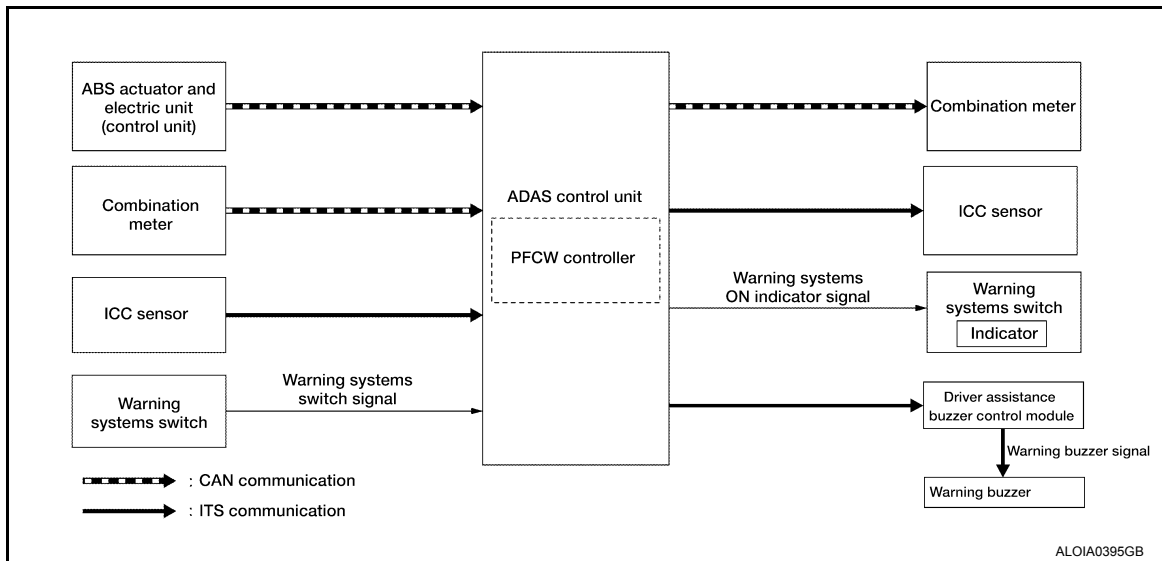
- When the accelerator pedal is depressed again.
- When the brake pedal is depressed.

PFCW

PFCW : System Description

INFOID:000000014222309

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Combination meter	CAN communication	System selection signal	Receives a selection state each item in "Driver Aids" selected with the integral switch
ICC sensor	ITS communication	ICC sensor signal	Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle

Output Signal Item

Reception unit	Signal name			Description
Combination meter	CAN communication	Meter display signal	Vehicle ahead detection indicator signal	Transmits a signal to display a state of the system on the information display
			PFCW/FEB system indicator signal	Transmits a signal to turn ON the PFCW/FEB system indicator
ICC sensor	ITS communication	Vehicle speed signal		Transmits a vehicle speed calculated by the ADAS control unit
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal		Transmits a driver assistance buzzer signal to activate the buzzer

DESCRIPTION

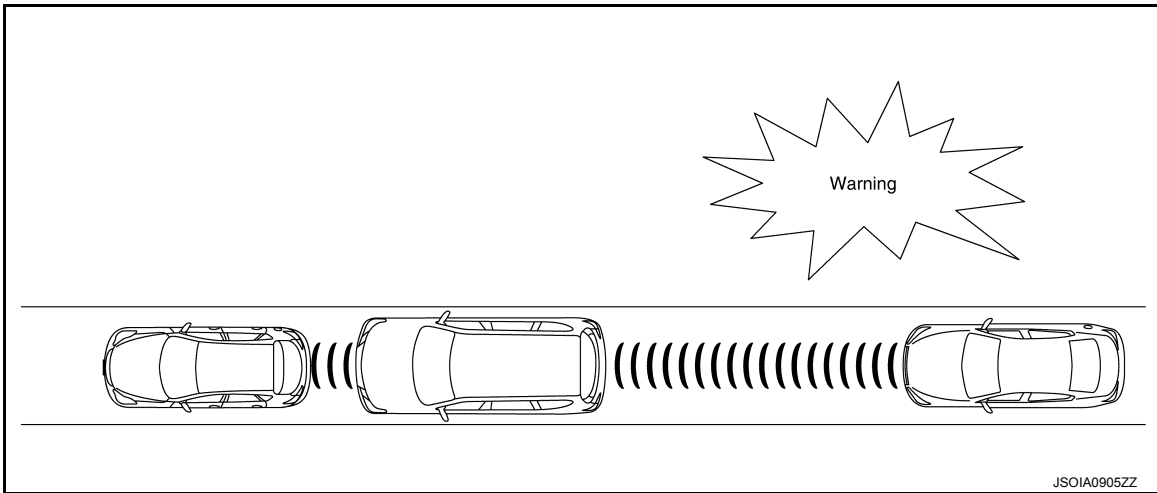
- The PFCW system will function when own vehicle is driven at speeds of approximately 5 km/h (3 MPH) and above.

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- The Predictive Forward Collision Warning (PFCW) System alerts the driver by the vehicle ahead detection indicator and chime when the distance between own vehicle and a vehicle in front of the vehicle ahead becomes closer.



NOTE:

The PFCW/FEB system shares the diagnosis function with ICC/DCA system.

FUNCTION DESCRIPTION

The distance from the vehicle in front of the vehicle ahead and a relative speed are calculated by using the ICC sensor and an ICC sensor signal is transmitted to the ADAS control unit via ITS communication. When judging the necessity of warning according to the received ICC sensor signal, the ADAS control unit transmits a driver assistance buzzer signal to the driver assistance buzzer control module via ITS communication and meter display signal to the combination meter via CAN communication.

PFCW Operating Condition

- PFCW/FEB system display (white) : ON
- Vehicle speed: Approximately 5 km/h (3 MPH) and above.
- Vehicle in front of the vehicle ahead: Detected.

NOTE:

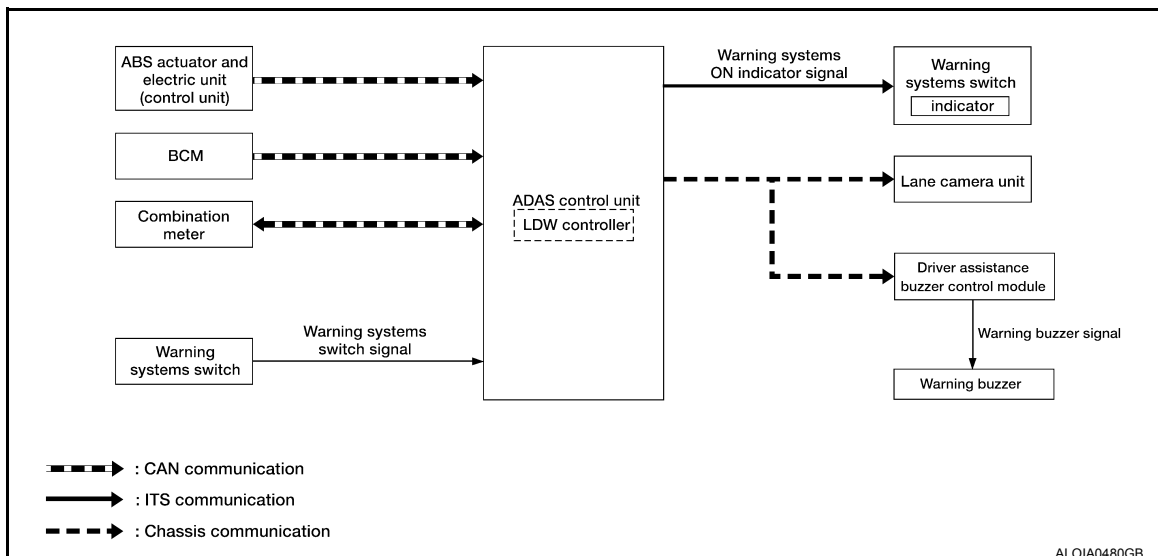
- ON/OFF of PFCW/FEB system is performed in the combination meter information display.

LDW

LDW : System Description

INFOID:0000000014222310

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
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
Warning system switch	Warning system switch signal		Receives an ON/OFF state of the warning system switch

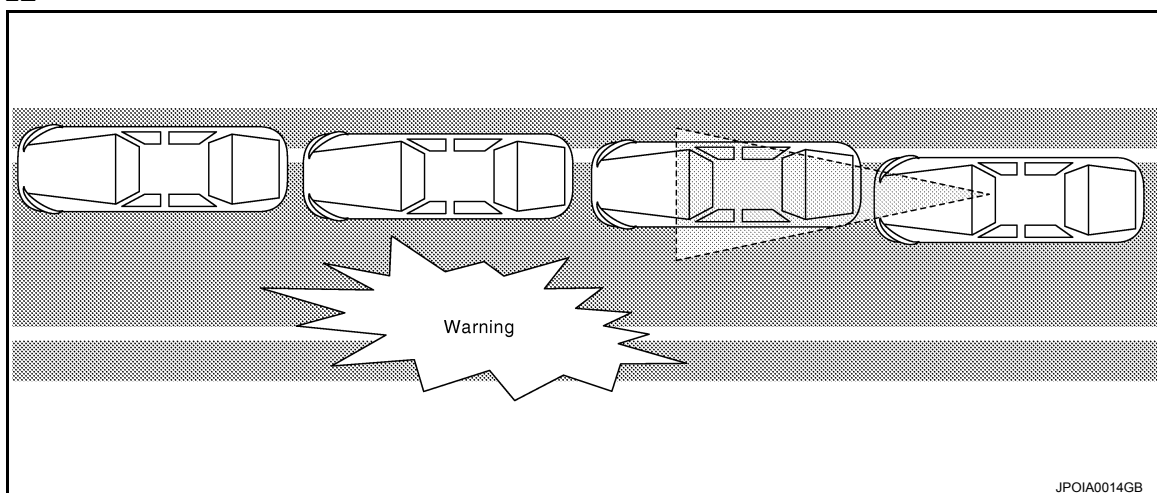
Output Signal Item

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
Warning systems ON indicator	Warning systems ON indicator signal		Turns ON the warning systems ON indicator
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a warning buzzer signal to activate the buzzer

FUNCTION DESCRIPTION

- Lane Departure Warning (LDW) system provides a lane departure warning function when the vehicle is driven at speeds of approximately 70 km/h (45 MPH) or more.
- When the vehicle approaches either the left or the right side of the traveling lane, a warning will sound and 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.

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- 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).

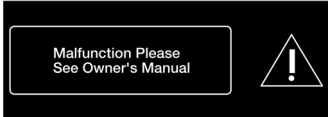
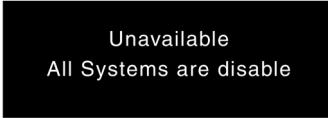
OPERATING CONDITION

- Warning systems ON indicator: ON
- Vehicle speed: approximately 70 km/h (45 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 60 km/h (40 MPH)
- LDP ON indicator lamp is OFF
- The LDW system may not function properly, depending on the situation. Refer to [DAS-223. "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	 ALOIA0133GB
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	 ALOIA0099GB
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

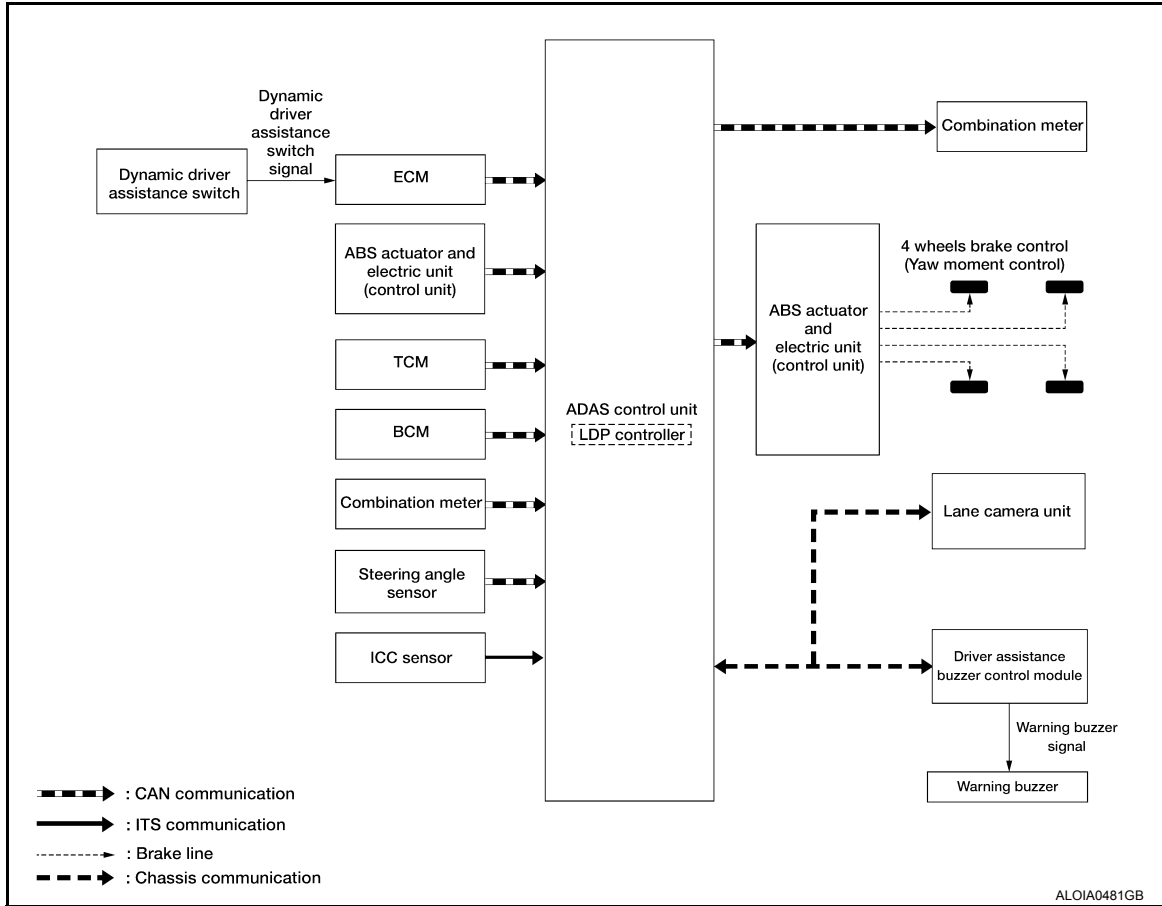
LDP

DAS

LDP : System Description

INFOID:000000014222311

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ECM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
		ICC steering switch signal	Receives the operational state of the ICC steering switch
		Engine speed signal	Receives engine speed
		Snow mode switch signal	Receives an operational state of the snow mode
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

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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
		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
ICC sensor	ITS communication	ICC sensor signal	Receives detection results, such as the presence or absence of a vehicle ahead and distance from the vehicle
Lane camera unit	Chassis communication	Detected lane condition signal	Receives detection results of lane marker

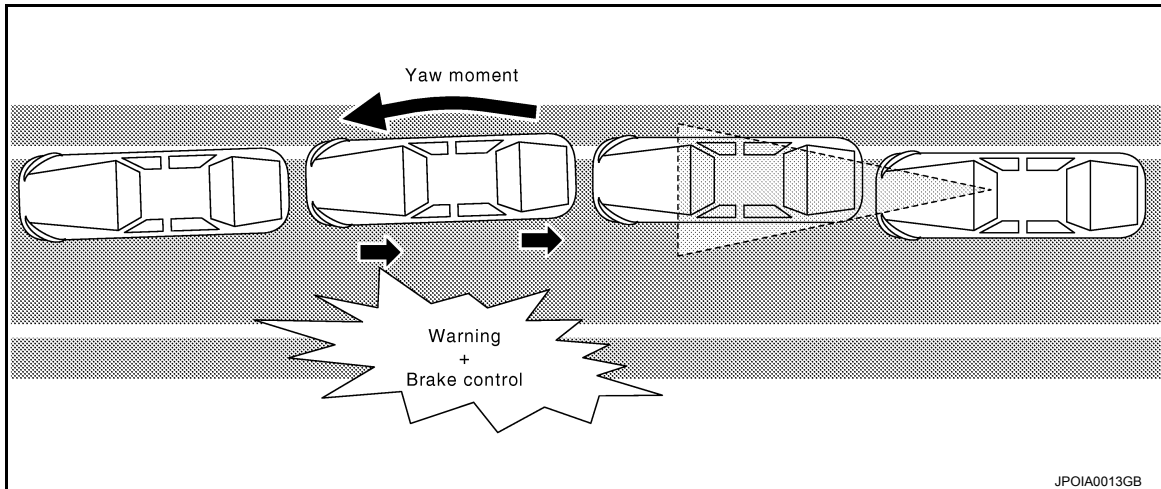
Output Signal Item

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
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a warning buzzer signal 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 70 km/h (45 MPH) or more.
- When the vehicle approaches either the left or the right side of the traveling lane, a warning sounds and the 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 by dynamic driver assistance switch, 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 ADAS control unit via Chassis communication.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, ADAS control unit controls the following items.
 - Transmits a warning buzzer request signal to the driver assistance buzzer control module via ITS 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 70 km/h (45 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 60 km/h (40 MPH).
- The LDP system may not function properly, depending on the situation. Refer to [DAS-223, "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")	 ALOIA0133GB	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

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

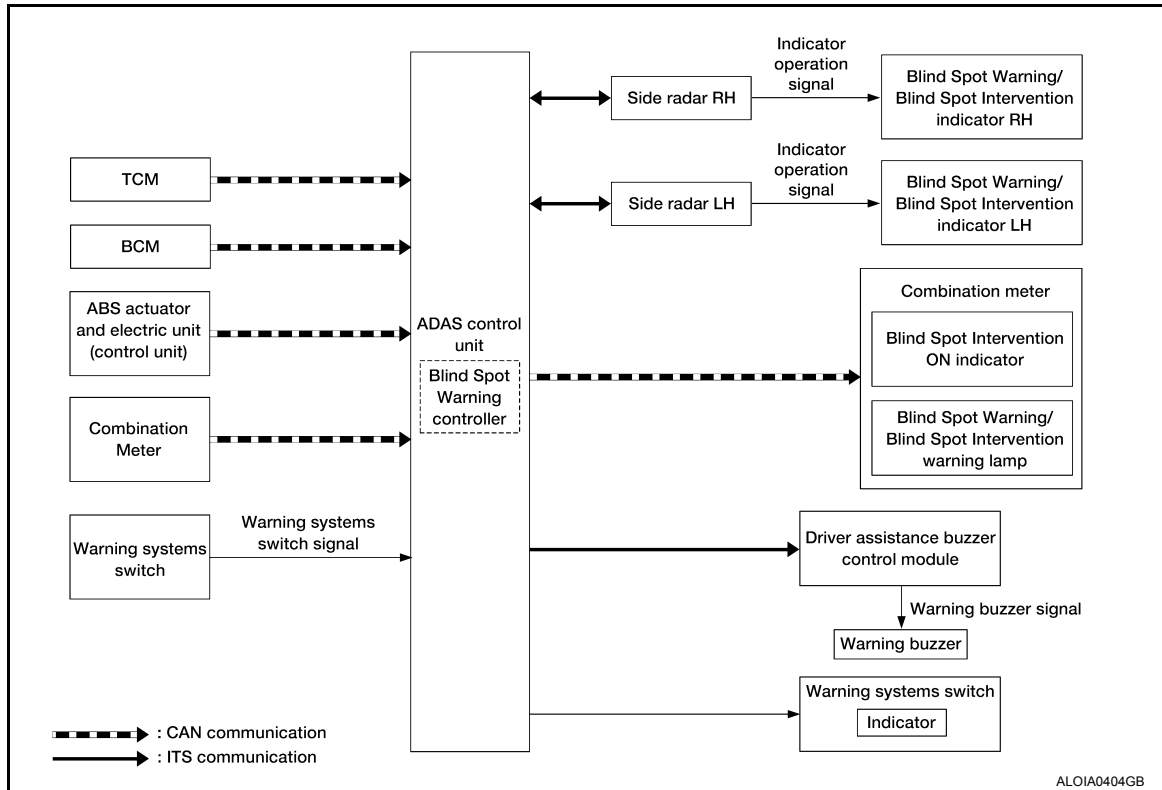
Vehicle condition/ Driver's operation	Indication on the combination meter	Buzzer
Temporary disabled status during rain	Unavailable Road is slippery	Beep
Temporary disabled status when the VDC system is turned OFF	Unavailable VDC OFF	Beep
Temporary disabled status when drive mode select switch is in SNOW mode	Unavailable Snow mode active	Beep
When the dynamic driver assistance switch is pressed (When the settings of LDP system, DCA system and Blind Spot Intervention system in the vehicle information display are "OFF")	LDP OFF (green) Unavailable All Systems are disable ALOIA0132GB	—

BSW

BSW : System Description

INFOID:0000000014222312

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

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

Input Signal Item

Transmit unit	Signal name		Description
TCM	CAN communication	Shift position signal	Receives a selector lever position
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
		Dimmer signal	Receives ON/OFF state of dimmer signal

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

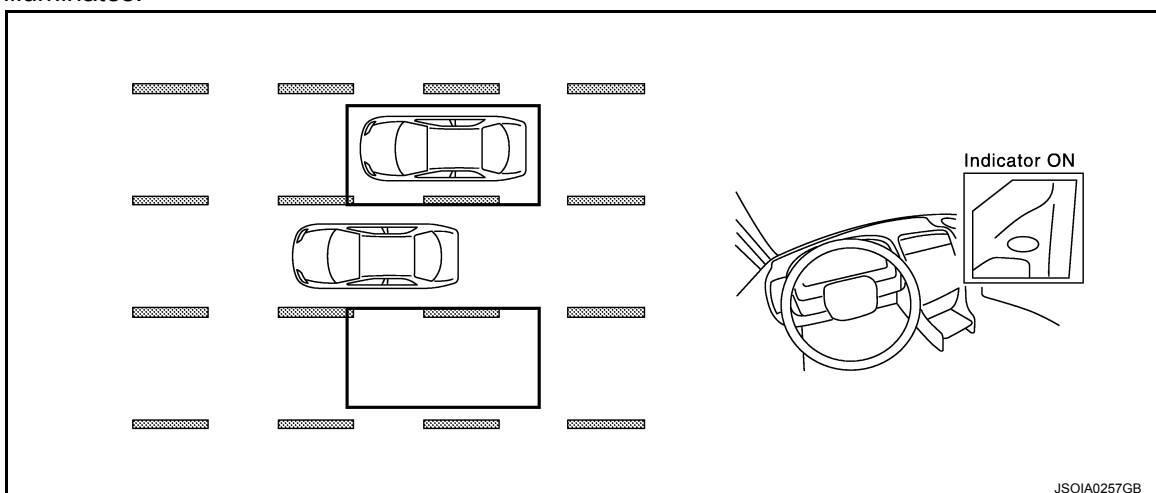
Transmit unit	Signal name		Description
Combination meter	CAN communication	System selection signal	Receives a selection state of each item in "Driving Aids" selected with the vehicle information display
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.
Warning systems switch	Warning systems switch signal		Receives an ON/OFF state of the warning systems switch

Output Signal Item

Reception unit	Signal name		Description
Combination meter	CAN communication	Blind Spot Warning/Blind Spot Intervention warning lamp signal	Transmits a Blind Spot Warning/Blind Spot Intervention warning lamp signal to turn ON the Blind Spot Warning/Blind Spot Intervention warning lamp
		Blind Spot Intervention ON indicator signal	Transmits a Blind Spot Intervention ON indicator lamp signal to turn ON the Blind Spot Intervention ON indicator lamp
Side radar LH, RH	ITS communication	Blind Spot Warning/Blind Spot Intervention indicator signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator
		Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
Warning systems ON indicator	Warning systems ON indicator signal		Turns ON the warning systems ON indicator
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a warning buzzer signal to activate the warning buzzer

FUNCTION DESCRIPTION

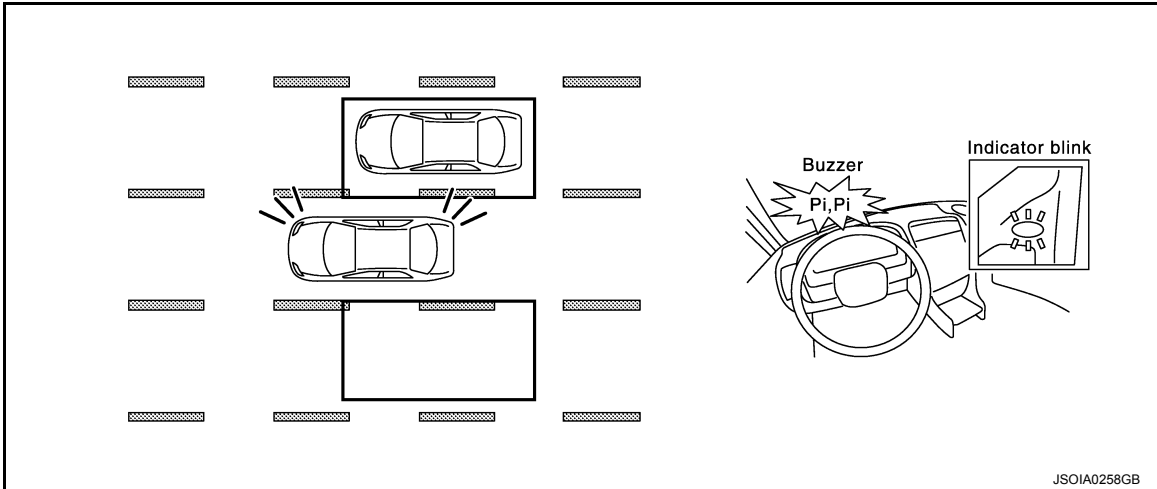
- The BSW system can help alert the driver of other vehicles in adjacent lanes when changing lanes.
- The BSW system uses side radar installed near the rear bumper to detect vehicles in an adjacent lane.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as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



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

NOTE:

A buzzer sounds if the side radar have already detected vehicles when the driver activates the turn signal. If a vehicle comes into the detection zone after the driver activates the turn signal, then only the Blind Spot Warning/Blind Spot Intervention indicator blinks and no buzzer sounds.



BSW SYSTEM OPERATION DESCRIPTION

- ADAS control unit enables BSW system.
- The ADAS control unit turns on the BSW system when the warning systems switch is turned ON.
- Side radar detects a vehicle in the adjacent lane, and transmits the vehicle detection signal to ADAS control unit via ITS communication.
- ADAS control unit starts the control as follows, based on a vehicle detection signal, turn signal and dimmer signal transmitted from BCM via CAN communication:
 - Blind Spot Warning/Blind Spot Intervention indicator signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal transmission to side radar.
 - Transmits a warning buzzer request signal to the driver assistance buzzer control module via ITS communication to activate the warning buzzer.
- Side radar transmits an indicator operation signal to the Blind Spot Warning/Blind Spot Intervention indicator according to Blind Spot Warning/Blind Spot Intervention indicator signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal.

Operation Condition of BSW System

ADAS control unit performs the control when the following conditions are satisfied.

- When the warning systems switch is turned ON* or Blind Spot Intervention system turned ON.
- When the vehicle drives at 32 km/h (20 MPH) or more to the forward direction.

NOTE:

- *: When the BSW system setting in the vehicle information display is ON.
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed is reduced below approximately 29 km/h (18 MPH)
- The BSW system may not function properly, depending on the situation. Refer to [DAS-224, "Precautions for Blind Spot Warning/Blind Spot Intervention"](#).

BULB CHECK ACTION AND FAIL-SAFE INDICATION

Vehicle condition/Driver's operation	Blind Spot Warning/Blind Spot Intervention indicator	Warning systems ON indicator	Indication on the combination meter
When DTC is detected	OFF	ON	OFF → Orange

AL0IA0099GB

SYSTEM

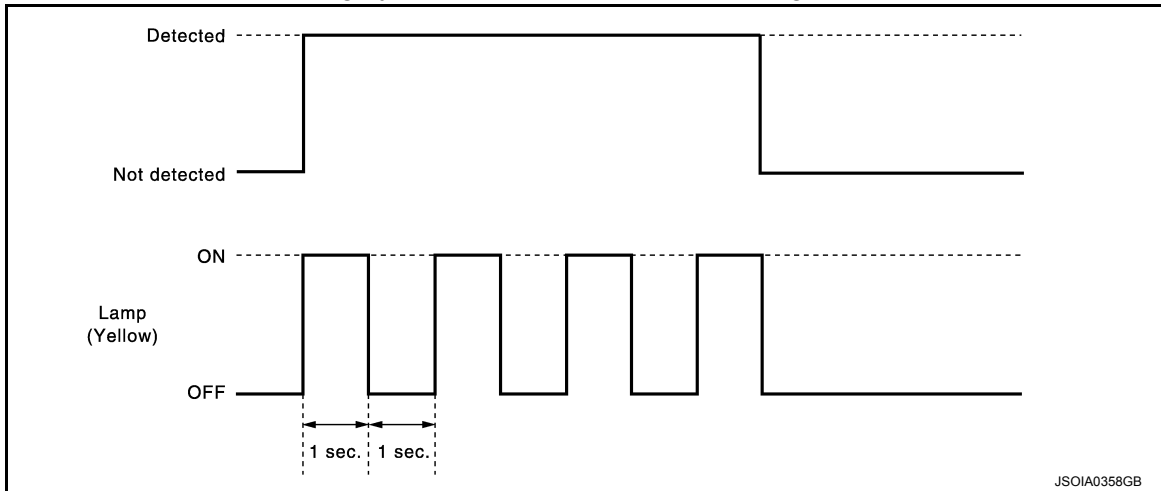
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/Driver's operation	Blind Spot Warning/ Blind Spot Intervention indicator	Warning systems ON indicator	Indication on the combination meter
When radar blockage is detected	OFF	ON	Unavailable: Side Radar Obstruction
When the warning systems switch is pressed (When the settings of LDW system, PFCW system, and BSW system in the vehicle information display are "OFF")	OFF	Blink	Unavailable All Systems are disable

ALOIA0132GB

*: Blinking cycle when the side radar blockage condition



JSOIA0358GB

NOTE:

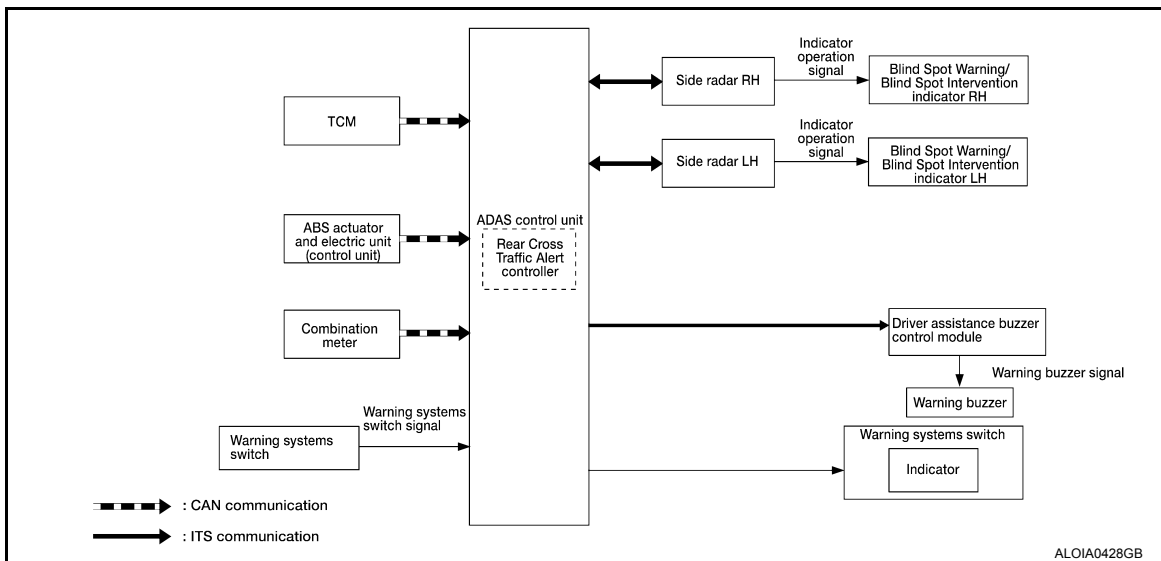
Time shown in the figure is approximate time.

RCTA

RCTA : System Description

INFOID:0000000014222313

SYSTEM DIAGRAM



ALOIA0428GB

ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

ADAS control unit receives signals via CAN communication. It also detects vehicle conditions that are necessary for Blind Spot Warning control.

Input Signal Item

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

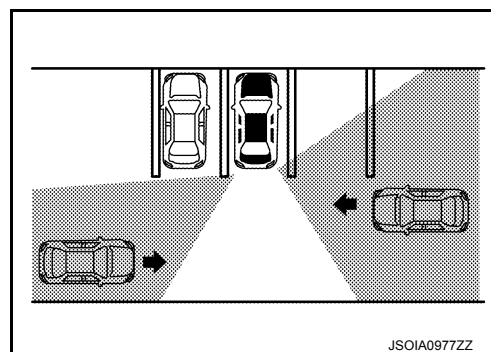
Transmit unit	Signal name		Description
TCM	CAN communication	Shift position signal	Receives a selector lever position
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
Combination meter	CAN communication	System selection signal	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.

Output Signal Item

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

FUNCTION DESCRIPTION

- The 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.



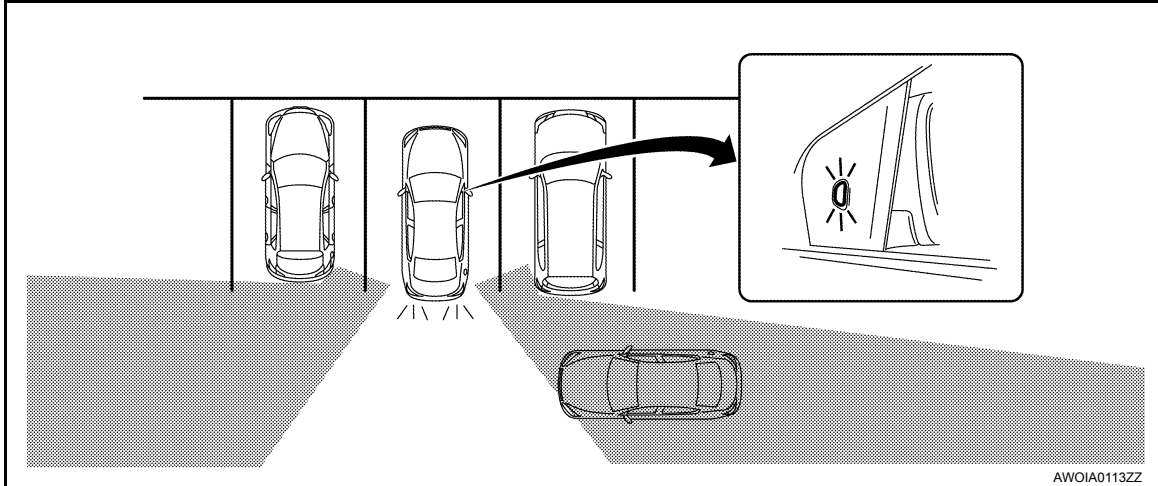
DAS

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- If the radar detects a vehicle approaching from the side, the system gives visual and audible warning.



- If the side radar detects an approaching vehicle from the side, the RCTA system sounds a beep (single beep), the Blind Spot Warning/Blind Spot Intervention 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:

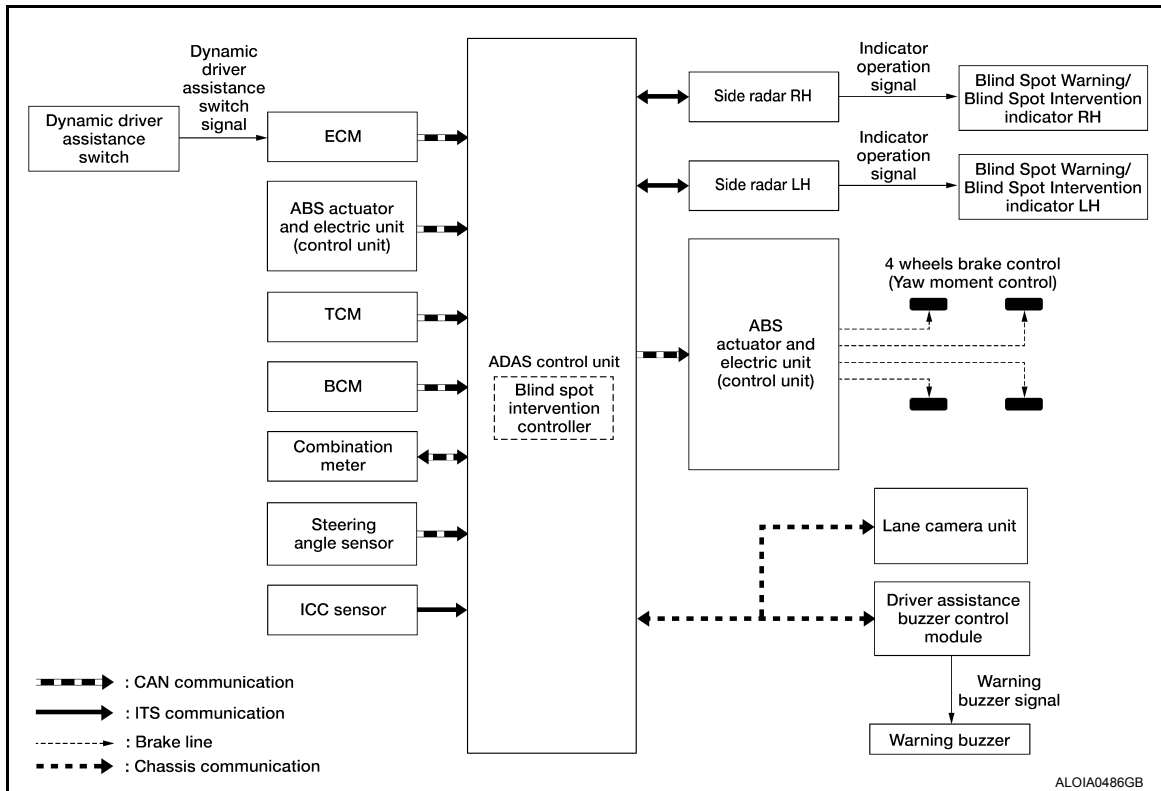
- BSW system: ON (Selected by integral switch)
- When the vehicle is moving in reverse at 5 MPH (8 km/h) or less.

BLIND SPOT INTERVENTION

BLIND SPOT INTERVENTION : System Description

INFOID:000000014222314

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ECM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
		ICC steering switch signal	Receives the operational state of the ICC steering switch
		Dynamic driver assistance switch signal	
TCM	CAN communication	Engine speed signal	Receives engine speed
		Input speed signal	Receives the number of revolutions of input shaft
		Current gear position signal	Receives a current gear position
		Shift position signal	Receives a select lever position
		Output shaft revolution signal	Receives the number of revolutions of output shaft
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		ABS operation signal	Receives an operational state of ABS
		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

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Transmit unit	Signal name		Description
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 "Driving Aids" selected with the vehicle information display
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
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
ICC sensor	ITS communication	ICC sensor signal	Receives detection results, such as the presence or absence of a leading vehicle and distance from the vehicle
Lane camera unit	Chassis communication	Detection lane condition signal	Receives detection results of lane marker
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.

Output Signal Item

Reception unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Target yaw moment signal	Transmits a target yaw moment signal to generate yaw moment to the vehicle
Combination meter	CAN communication	Blind Spot Warning/Blind Spot Intervention warning lamp signal	Transmits a Blind Spot Warning/Blind Spot Intervention warning lamp signal to turn ON the Blind Spot Warning/Blind Spot Intervention warning lamp
		Blind Spot Intervention ON indicator lamp signal	Transmits a Blind Spot Intervention ON indicator lamp signal to turn ON the Blind Spot Intervention ON indicator 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
Side radar LH, RH	ITS communication	Blind Spot Warning/Blind Spot Intervention indicator signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator
		Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a warning buzzer signal to activate the warning buzzer

FUNCTION DESCRIPTION

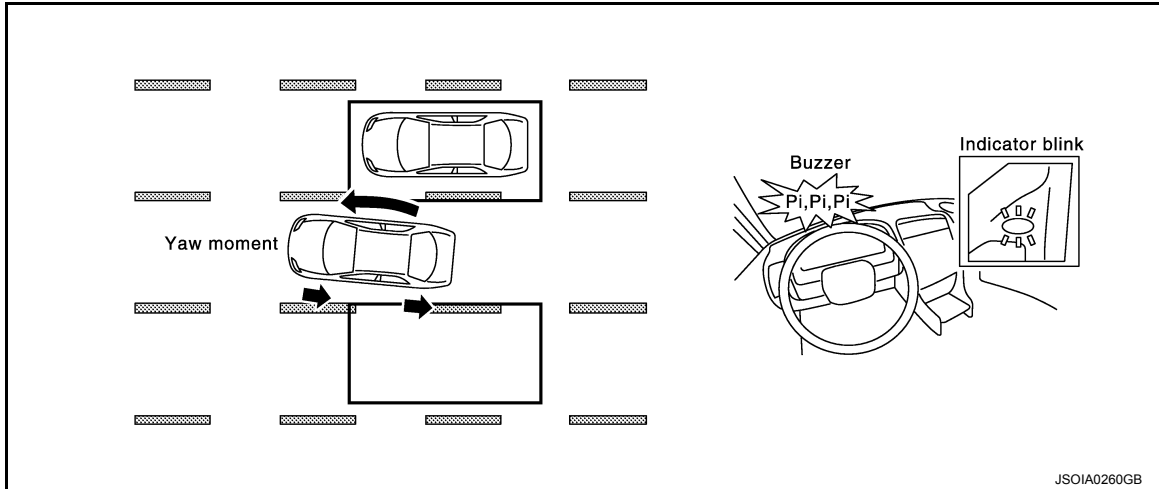
- The Blind Spot Intervention system can help alert the driver of other vehicles in adjacent lanes when changing lanes. Blind Spot Intervention always operates together with BSW.
- The Blind Spot Intervention system operates above approximately 60 km/h (37 MPH).
- The Blind Spot Intervention system uses side radar installed near the rear bumper to detect other vehicles beside vehicle in an adjacent lane.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- This detection zone starts from the outside mirror of vehicle and extends approximately 10 ft (3.0 m) behind the rear bumper, and approximately 10 ft (3.0 m) sideways.

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- If the Blind Spot Warning/Blind Spot Intervention indicator is illuminated while vehicle is approaching a lane marker, the Blind Spot Warning/Blind Spot Intervention indicator blinks and an audible warning will sound three times. Then the system applies the brakes on one side of the vehicle for a short period of time to help return the vehicle back to the center of the lane.



- Blind Spot Intervention operates regardless of turn signal usage.
- The brightness of Blind Spot Warning/Blind Spot Intervention indicator lights is adjusted automatically depending on the brightness of the ambient light.

NOTE:

- Blind Spot Intervention is typically activated earlier than LDP when getting closer to the lane marker.
- Warning and brake control will only be activated if the Blind Spot Warning/Blind Spot Intervention indicator is already illuminated when vehicle approaches a lane marker.
- If another vehicle comes into the detection zone after vehicle has crossed a lane marker, no warning or brake control will be activated.

BLIND SPOT INTERVENTION SYSTEM OPERATION DESCRIPTION

- ADAS control unit enables Blind Spot Intervention system.
- Turn ON the dynamic driver assistance switch, and Blind Spot Intervention system setting in the vehicle information display. Then Blind Spot Intervention ON indicator comes on.
- Combination meter turns Blind Spot Intervention ON indicator lamp ON/OFF according to the signals from ADAS control unit via CAN communication.
- Side radar detects a vehicle in the adjacent lane, and transmits the vehicle detection signal to ADAS control unit via ITS communication.
- Side radar receives vehicle speed signal from ADAS control unit and changes its detecting function.
- Lane camera unit monitors lane markers of the traveling lane and transmits the detected lane condition signal to ADAS control unit via chassis communication.
- ADAS control unit starts the control as follows, based on a vehicle detection signal, lane condition signal, turn signal and dimmer signal transmitted from BCM via CAN communication:
 - Blind Spot Warning/Blind Spot Intervention indicator signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal transmission to side radar.
 - Transmits a warning buzzer request signal to the driver assistance buzzer control module via ITS communication to activate the warning buzzer.
 - Calculation of necessary yaw moment and transmission of the target yaw moment signal to ABS actuator and electric unit (control unit).
- Side radar transmits an indicator operation signal to the Blind Spot Warning/Blind Spot Intervention indicator according to Blind Spot Warning/Blind Spot Intervention indicator operation signal and Blind Spot Warning/Blind Spot Intervention indicator dimmer signal.
- ABS actuator and electric unit (control unit) controls brake pressure of four wheels respectively according to the target yaw moment signal.

Operation Condition of Blind Spot Intervention System

ADAS control unit performs the control when the following conditions are satisfied.

- Blind Spot Intervention ON indicator: ON
- When the vehicle drives at 60 km/h (37 MPH) or more to the forward direction.

NOTE:

- When the Blind Spot Intervention system setting in the vehicle information display is ON.

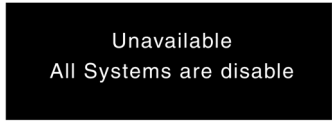
SYSTEM

< SYSTEM DESCRIPTION >

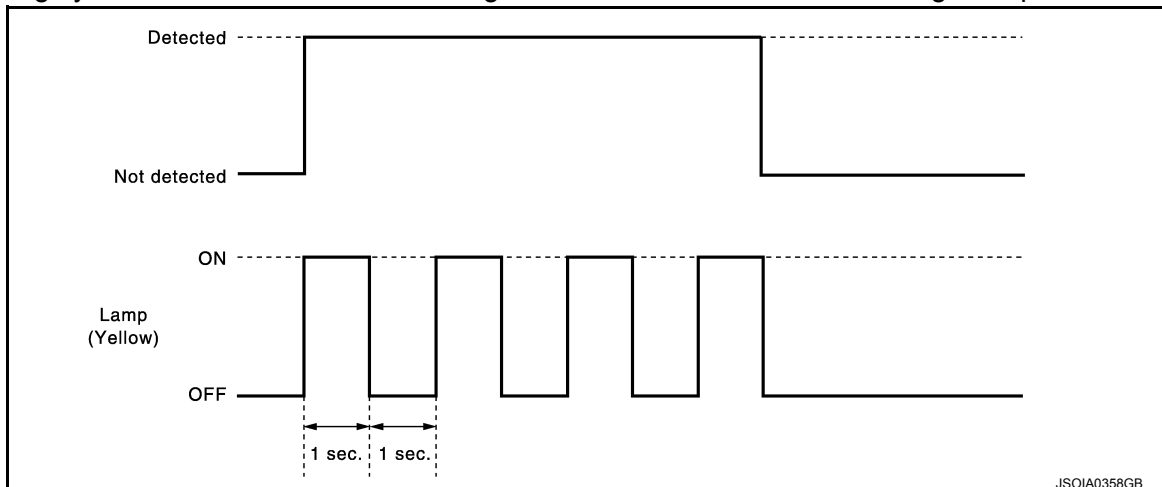
[DRIVER ASSISTANCE SYSTEM]

- The Blind Spot Intervention system may not function properly, depending on the situation. Refer to [DAS-224. "Precautions for Blind Spot Warning/Blind Spot Intervention"](#).
- Blind Spot Intervention braking will not operate or will stop operating and only a warning chime will sound under the following conditions.
 - When the brake pedal is depressed.
 - When the accelerator pedal is depressed while brake control assist is provided.
 - When steering quickly.
 - When the ICC, DCA, PFCW or FEB warnings sound.
 - When the hazard warning flashers are operated.
 - When driving on a curve at a high speed.
- Under the following conditions, the Blind Spot Intervention system will be turned off automatically, a beep will sound and the Blind Spot Intervention ON indicator will blink. The BSW system is still available, but the Blind Spot Intervention system will not be available until the conditions no longer exist.
 - When the VDC system (except TCS function) or ABS operates.
 - When the VDC system is turned OFF.
 - When the SNOW mode switch is turned ON.

BULB CHECK ACTION AND FAIL-SAFE INDICATION.

Vehicle condition/Driver's operation	Blind Spot Warning/Blind Spot Intervention indicator	Warning buzzer	Indication on the combination meter
When DTC is detected	OFF	Beep	 ALOIA0137GB
When radar blockage is detected	OFF	Beep	Unavailable: Side Radar Obstruction
When the camera detects that the interior temperature is high	OFF	Beep	Unavailable: High Cabin Temp.
When the dynamic driver assistance switch is turned ON with settings of DCA system, LDP system and Blind Spot Intervention system OFF	OFF	—	Blink (Approx. 3 sec.)  ALOIA0132GB

*: Blinking cycle when the side radar blockage condition or lane camera unit high temperature condition



SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

NOTE:

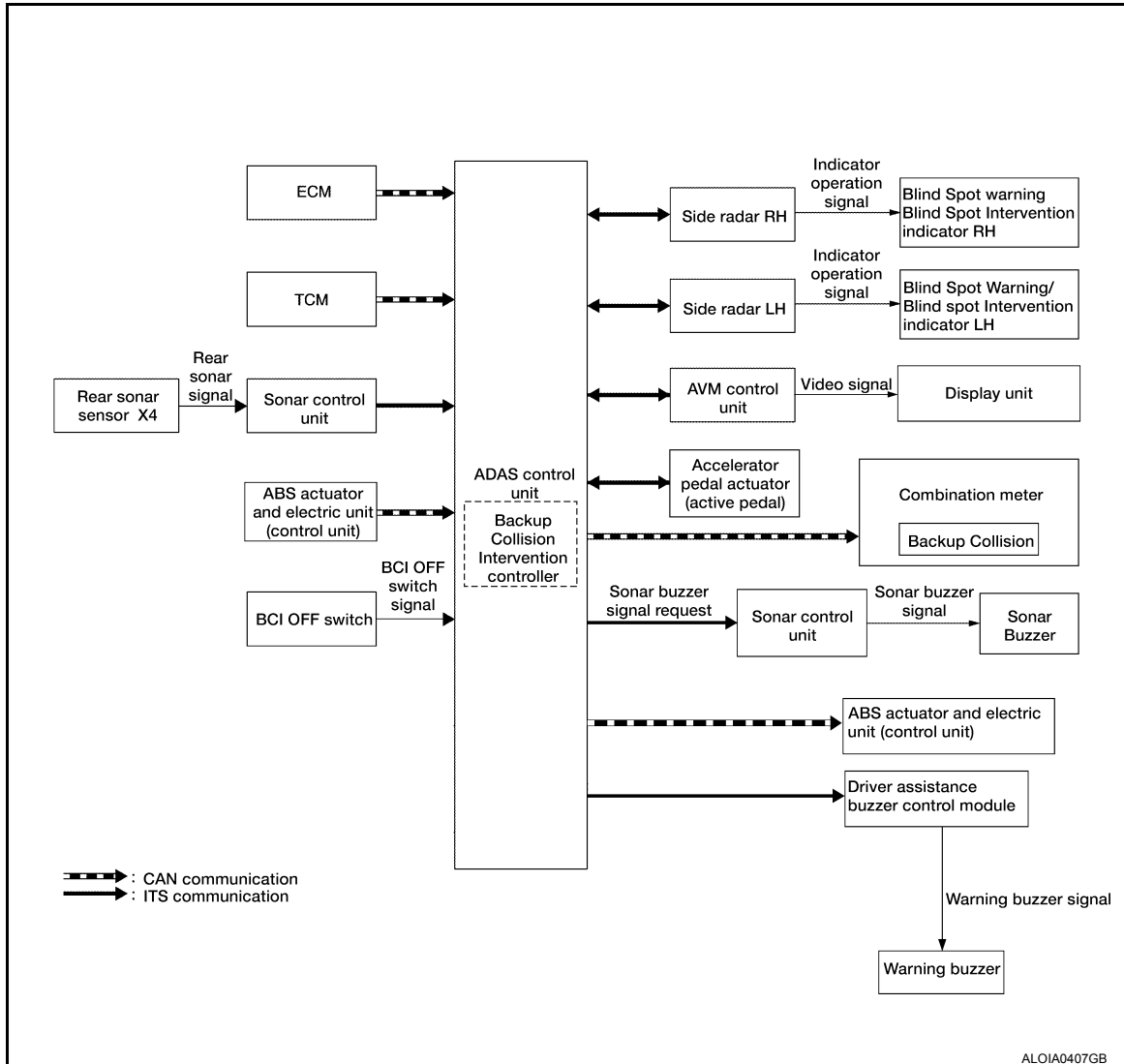
Time shown in the figure is approximate time.

BCI

BCI : System Description

INFOID:00000001422315

SYSTEM DIAGRAM



ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item

Transmit unit	Signal name		Description
ECM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)
		Engine speed signal	Receives engine speed
TCM	CAN communication	Current gear position signal	Receives a current gear position
		Shift position signal	Receives a select lever position
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		VDC malfunction signal	Receives a malfunction state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
BCI OFF switch	Hard wire	BCI OFF switch signal	Receives the state of the BCI OFF switch request

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

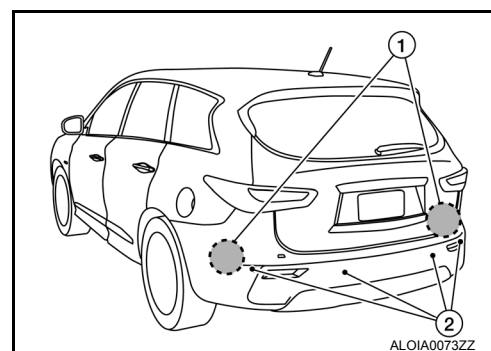
Transmit unit	Signal name		Description
Sonar control unit	ITS communication	Rear object detection signal	Receives objects detection result of rear area behind vehicle
Side radar LH, RH	ITS communication	Vehicle detection signal	Receives vehicle detection condition of detection zone.

Output Signal Item

Reception unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Brake fluid pressure control signal.	Transmits a brake fluid pressure control signal to activate the brake.
Combination meter	CAN communication	Turns the BCI ON/OFF display and BCI system warning lamp.	Turns the BCI ON/OFF display and BCI system warning lamp to display a state of the system on the information display.
Sonar control unit	ITS communication	Sonar buzzer signal	While the shifter is in reverse and backing up, transmits a request for a sonar buzzer signal to alert the driver.
Around view monitor control unit	ITS communication	Visual signal request	Transmits a visual signal request by the ADAS control unit to center display to override other signals and display rear view while the shift lever is in reverse.
Accelerator pedal actuator	ITS communication	Push up accelerator signal	While backing up and obstacle appears, transmits a signal to push up the accelerator pedal
Side radar LH, RH	ITS communication	Blind Spot Warning/Blind Spot Intervention indicator signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator signal to turn ON the Blind Spot Warning/Blind Spot Intervention indicator
		Blind Spot Warning/Blind Spot Intervention indicator dimmer signal	Transmits a Blind Spot Warning/Blind Spot Intervention indicator dimmer signal to dimmer Blind Spot Warning/Blind Spot Intervention indicator
		Vehicle speed signal	Transmits a vehicle speed calculated by the ADAS control unit
Driver assistance buzzer control module	ITS communication	Driver assistance buzzer signal	Transmits a warning buzzer signal to activate the warning buzzer

FUNCTION DESCRIPTION

- The Backup Collision Intervention system can help alert the driver of approaching vehicles or rear objects when the driver is backing out of a parking space.
- The BCI system comprise of to main detection systems. The side radars (1), and the four sonar sensors (2) mounted on the rear bumper cover as illustrated.
- The BCI system operates at speeds below 5 MPH (8 km/h) whenever the vehicle is in reverse.

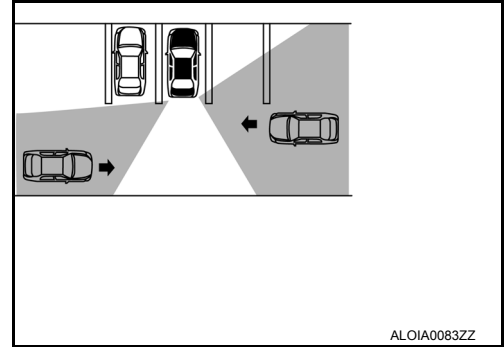


SYSTEM

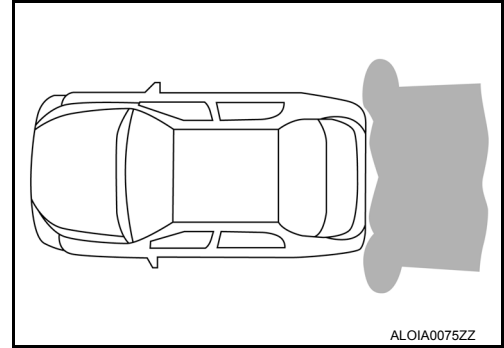
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- The BCI system uses the two side radars installed near the rear bumper to detect approaching vehicles and rear obstacles.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- The radar sensors detect the approaching vehicle from up to approximately 49 feet (15 m) away.



- The sonar sensors can detect rear obstacles of up to approximately 4.9 feet (1.5 m).
- If the radar detects a vehicle approaching from the side or the sonar detects close objects in the rear, the system gives visual and audible warnings, and applies the brake for a moment when the vehicle is moving backwards. If the driver's foot is on the accelerator pedal, the system pushes the accelerator upward before applying the brake. If the driver continues to press the accelerator, the system will not engage the brake.



The radar sensors may not be able to detect certain objects such as:

- Pedestrians, bicycles, animals
- A vehicle that is passing at a speed greater than approximately 15 MPH (24 km/h)
- The radar sensors may not detect approaching vehicles in certain situations:

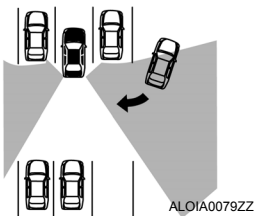
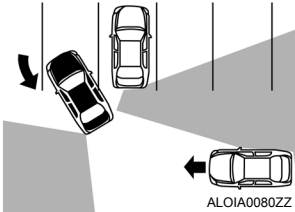
Examples of certain situations	Illustration of certain situations
When the vehicle parked aside obstruct the beam of the radar sensor	ALOIA0076ZZ
When the vehicle is parked in an angled parking space	ALOIA0077ZZ
When the vehicle is parked on an inclined ground	ALOIA0078ZZ

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SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Examples of certain situations	Illustration of certain situations
When the vehicle turns around into your vehicle's aisle	 AL0IA0079ZZ
When the angle formed by your vehicle and approaching vehicle is small	 AL0IA0080ZZ

BACKUP COLLISION INTERVENTION SYSTEM OPERATION DESCRIPTION

- ADAS control unit enables Backup Collision Intervention system.
- The BCI system is automatically turned ON every time the engine is started. Then BCI ON indicator comes on.
- Combination meter turns Backup Collision Intervention ON indicator lamp ON/OFF according to the signals from ADAS control unit via CAN communication.
- Side radar detects a vehicle approaching, and transmits the vehicle detection signal to ADAS control unit via ITS communication.
- Side radar receives vehicle speed signal from ADAS control unit and changes its detecting function.
- ADAS control unit starts the control as follows, based on a vehicle detection signal.

Operation Condition of Backup Collision Intervention System

ADAS control unit performs the control when the following conditions are satisfied.

- Backup Collision Intervention ON indicator: ON
- When the vehicle is moving in reverse at 5 MPH (8 km/h) or less.

NOTE:

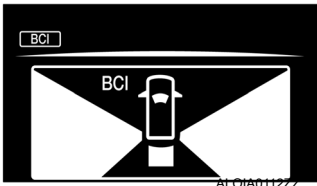
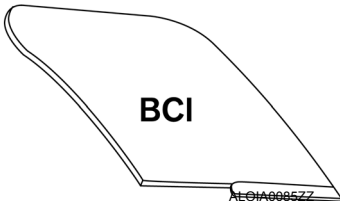
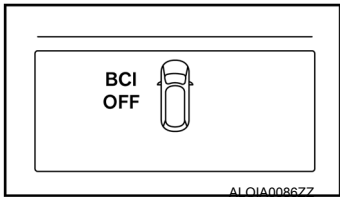
- When the Backup Collision Intervention system setting is ON in the meter display.
- Backup Collision Intervention braking will not function properly under the following conditions:
 - When driving with a tire that is not within normal tire conditions (pressure, wear, chain, spare, etc...)
 - When the vehicle is equipped with non-original brake parts or suspension parts.
- Do not use the BCI system when towing a trailer.
- Excessive noise such as the audio system will interfere with the chime sound, and it may not be heard.

BULB CHECK ACTION AND FAIL-SAFE INDICATION.

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/Driver's operation	Backup Collision Intervention indicator	Warning buzzer	Indication on the combination meter
Engine running and shift lever in reverse	ON	OFF	
When DTC is detected	OFF	OFF	OFF (orange) 
When radar blockage is detected	ON	Beep	Unavailable: Side Radar Obstruction
When the accelerator pedal actuator detects that the internal motor temperature is high.	ON	Beep	Unavailable: High Accelerator Temp.
Unless the driver overrides it and turns it off, the BCI system is always set to ON every time the engine is started and the shifter placed in reverse.	OFF	—	
The BCI system is turned off temporarily by pushing the BCI switch. The BCI OFF display appears on the meter display. When the selector lever is shifted into R again the BCI system is turned ON.	OFF	—	

Fail-safe (ADAS Control Unit)

INFOID:0000000014237521

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
Predictive Forward Collision Warning (PFCW)	High-pitched tone	Warning message	Cancel

SYSTEM

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

System	Buzzer	Warning lamp/Warning display	Description
Distance Control Assist (DCA)	High-pitched tone	DCA system warning	Cancel
Lane Departure Warning (LDW)	—	Lane departure warning lamp	Cancel
Lane Departure Prevention (LDP)	Low-pitched tone	Lane departure warning lamp	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Blind Spot Intervention	Low-pitched tone	Blind Spot Intervention warning lamp	Cancel
Backup Collision Intervention (BCI)	High-pitched tone	Backup Collision Intervention warning indicator	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

Fail-safe (ICC Sensor)

INFOID:0000000014237524

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.

Fail-safe (Side Radar)

INFOID:0000000014237522

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning/Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Blind Spot Intervention

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds and then the Blind Spot Intervention malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Back-up Collision Intervention (BCI)

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

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:0000000014237523

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.

A

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.

B

TEMPORARY DISABLED STATUS AT HIGH TEMPERATURE

Lane Departure Warning (LDW)

C

- 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 blink.
- 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.

D

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 blink.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned OFF and turned ON and the lane departure warning lamp (yellow) in the combination meter will stop blinking.

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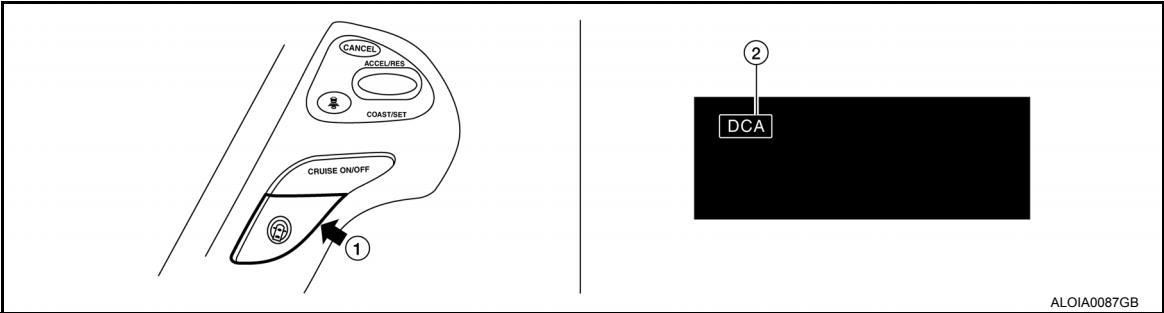
P

OPERATION

DCA

DCA : Switch Name and Function

INFOID:0000000014222320

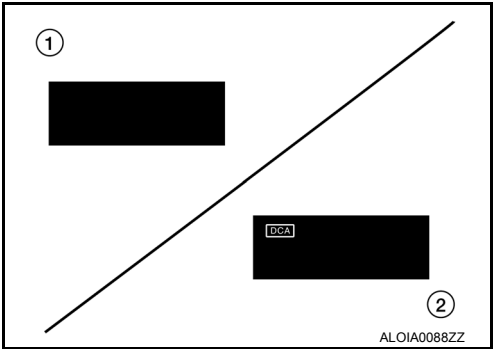


No.	Switch name	Description
1	Dynamic driver assistance switch	Turns the DCA system ON/OFF (When the setting of the DCA system in the vehicle information display is ON)
2	DCA system setting screen (in the vehicle information display)	DCA system settings can be switched between ON and OFF

DCA : Menu Displayed by Pressing Each Switch

INFOID:0000000014222321

SYSTEM DISPLAY



No.	Switch name	Description
1	Dynamic driver assistance switch OFF	Indicates that DCA system is OFF.
2	Dynamic driver assistance switch ON (DCA set)	Indicates that DCA system is ON with no vehicle ahead

DISPLAY AND WARNING LAMP

System Control Condition Display

The DCA system indicator on the vehicle information display illuminates when the system is turned ON by pressing the dynamic driver assistance switch.

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Condition		Display on combination meter
Operation status	System set display with vehicle ahead	 ALOIA0089ZZ
	System set display with out vehicle ahead	 ALOIA0090ZZ

Approach Warning Display

- If own vehicle comes closer to the vehicle ahead due to rapid deceleration of that vehicle or if another vehicle cuts in, the system warns the driver with the chime and DCA system display. Decelerate by depressing the brake pedal to maintain a safe vehicle distance if:
 - The chime sounds.
 - The vehicle ahead detection indicator blinks.
- 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.

Warning Lamp Display

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

	Condition	Description	Display on combination meter
Warning display	When the dynamic driver assistance switch is turned ON with settings of DCA system, LDP system and Blind Spot Intervention system OFF	The DCA system is not activated. The DCA system switch indicator blinks.	 Unavailable: Road is slippery  Unavailable: Snow Mode Active  Unavailable: VCD OFF ALOIA0091ZZ
	- When the road is slippery and VDC or ABS (including the TCS) operates - When the VDC is turned OFF - When the SNOW mode switch is turned ON	The DCA system is automatically canceled. The chime will sound and the DCA system switch indicator will blink. NOTE: The system operates if the dynamic driver assistance switch is turned OFF⇒ON after the condition improves.	
	When the sensor window is dirty, making it impossible to detect a vehicle ahead	The DCA system is automatically canceled. The chime sounds and the ICC system warning lamp will come on and the "Sensor Blocked" indicator will appear. NOTE: Stop the vehicle in a safe location and turn the ignition switch OFF. Clean the dirty area. The system returns to normal condition when turning the ignition switch ON again.	SENSOR BLOCKED ALOIA0092ZZ
	When the DCA system is not operating properly	The chime sounds and the DCA system warning indicator (orange) will come on. NOTE: Turn the ignition switch OFF, and then turn the ignition switch ON again. If there is no malfunction, the system returns to the normal condition.	DCA ALOIA0093ZZ

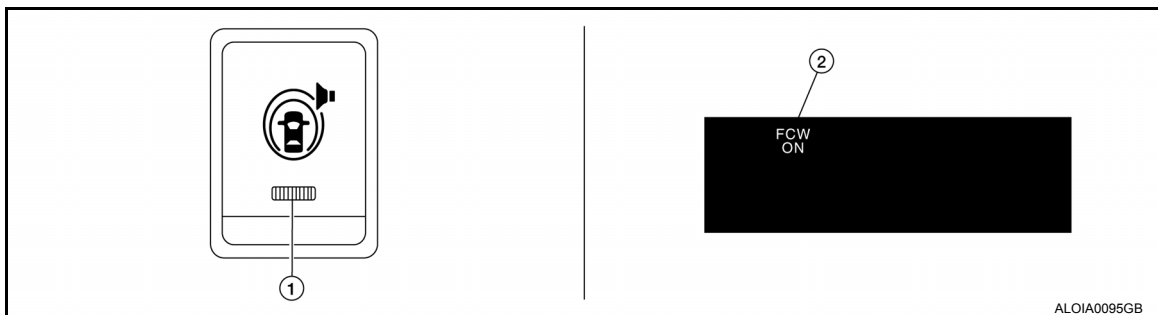
NOTE:

When the DCA system is automatically canceled, the cancellation condition can be displayed on "WORK SUPPORT" of CONSULT (ICC/ADAS).

PFCW

PFCW : Switch Name and Function

INFOID:000000001422322

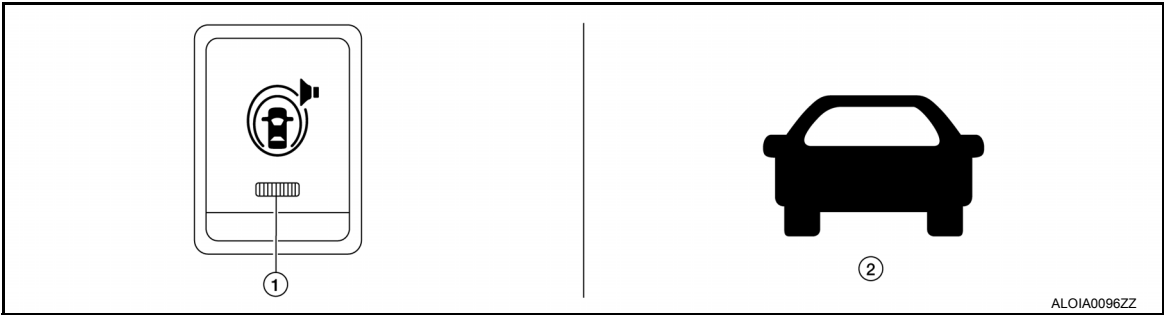


No.	Switch name	Description
1	Warning system switch	Turns PFCW/FEB system ON/OFF (When the setting of PFCW/FEB system in the vehicle information display is ON)
2	PFCW/FEB system setting screen (the vehicle information display)	The setting of PFCW/FEB system can be switched between ON and OFF

PFCW : Menu Displayed by Pressing Each Switch

INFOID:000000014222323

DISPLAY AND WARNING LAMP



No.	Display item	Description
1	Warning system ON indicator	- Indicates that the PFCW/FEB system, LDW system, and/or BSW system is ON. - Blinks when the setting of LDW, PFCW/FEB, and BSW are "OFF" and the warning system switch is pressed.
2	Vehicle ahead detection indicator	Vehicle ahead detection indicator blinks when the PFCW system is activated

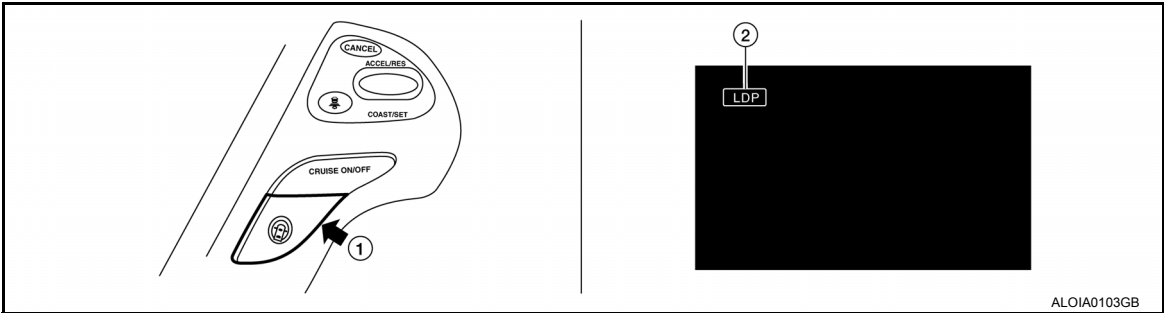
SYSTEM CONTROL CONDITION DISPLAY

Condition	Warning systems ON indicator	Vehicle ahead detection indicator (In the combination meter)	Buzzer
Set condition	ON	OFF	—
When the warning system switch is turned ON with settings of PFCW system, LDW system and BSW system OFF	Blink	OFF	—
When own vehicle comes close to the vehicle ahead and it is judged that the distance between the vehicles is not sufficient	ON	ALOIA0126ZZ	Beep

LDP

LDP : Switch Name and Function

INFOID:000000014222324



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OPERATION

< SYSTEM DESCRIPTION >

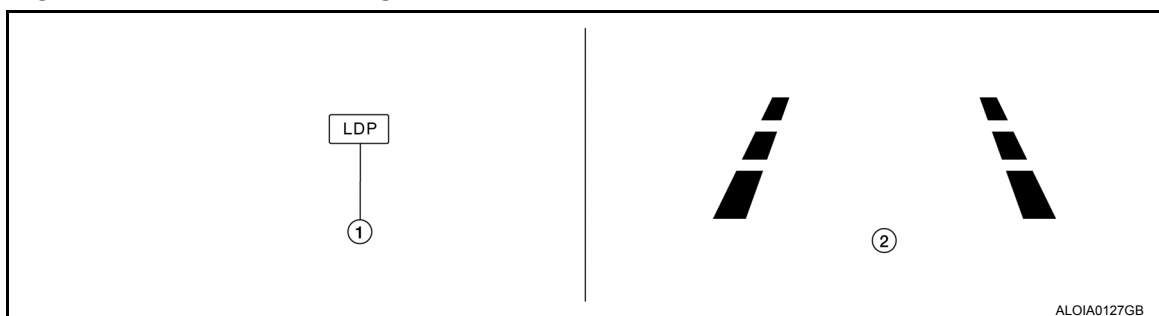
[DRIVER ASSISTANCE SYSTEM]

No.	Switch name	Description
1	Dynamic driver assistance switch	Turns LDP system ON/OFF (When the setting of LDP system in the vehicle information display)
2	LDP system settings screen (the vehicle information display)	The setting of LDP system can be switched between ON and OFF

LDP : Menu Displayed by Pressing Each Switch

INFOID:0000000014222325

INDICATOR LAMP AND WARNING LAMP



No.	Display item	Description
1	LDP ON indicator (green)	Indicates that LDP system is ON
	Lane departure warning lamp (yellow)	Turns ON when LDP system has a malfunction
2	Lane departure warning indicator light (yellow)	Blinks when the warning of LDP system occurs

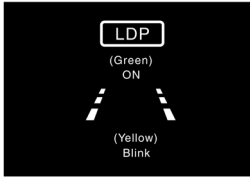
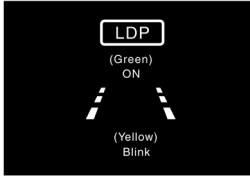
DISPLAY AND WARNING

Vehicle condition/ Driver's operation		Action	Indication on the combination meter	Buzzer
Less than Approx. 60 km/h (40 MPH)	Close to lane marker	No action	ON (green)	—
			The diagram shows a black rectangular area with a box labeled 'LDP' inside. The text 'ALOIA0134GB' is visible in the bottom right corner of the diagram area.	

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/ Driver's operation	Action	Indication on the combination meter	Buzzer
Approx. 70 km/h (45 MPH) or more	Close to lane marker	Green →→  ALOIA0135GB	Short continuous beeps
	- Close to lane marker - Turn signal ON (Deviate side)	 ALOIA0134GB	—
	Close to lane with soft braking	Green (ON)  ALOIA0135GB	Short continuous beeps
	- VDC OFF Switch OFF ⇒ ON (VDC system ON ⇒ OFF) - SNOW mode switch OFF ⇒ ON - Road is slippery - Camera temperature high	Cancellation - Buzzer sounds - Each message is displayed NOTE: When dynamic driver assistance switch is ON ⇒ OFF, message is turned OFF	Beep

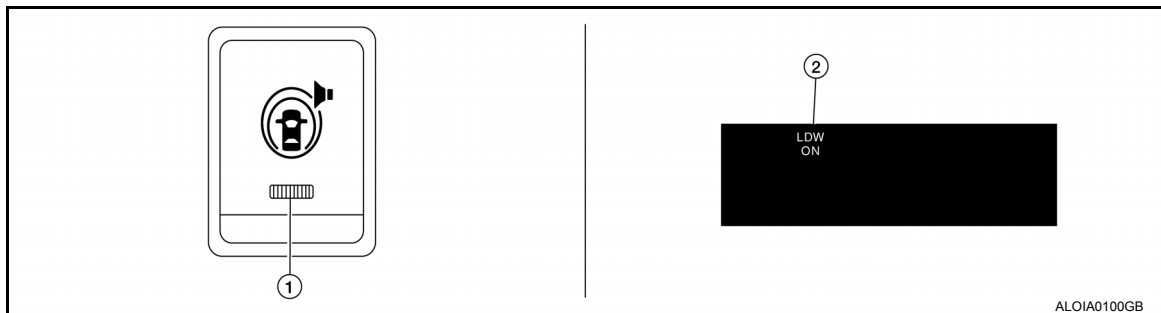
NOTE:

After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to [DAS-190, "LDP : System Description"](#).

LDW

LDW : Switch Name and Function

INFOID:0000000014222326



No.	Switch name	Description
1	Warning systems switch	Turns LDW system ON/OFF (When the setting of LDW system in the vehicle information display is ON)
2	LDW system setting screen (The vehicle information display)	Turns setting of LDW system can be switched between ON and OFF

OPERATION

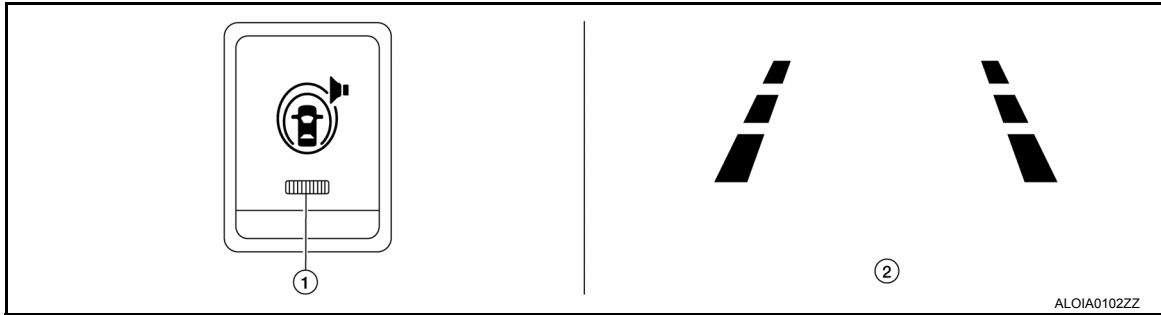
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

LDW : Menu Displayed by Pressing Each Switch

INFOID:00000001422327

INDICATOR LAMP AND WARNING LAMP



No.	Display item	Description
1	Warning systems ON indicator	- Indicates that the LDW, FCW, and/or BSW system is ON - Blinks when the setting of LDW, FCW, and BSW are "OFF" and the warning systems switch is pressed - Blinks when the temperature of the lane camera unit becomes high
2	Lane departure warning indicator light	Blinks when LDW system is activated

DISPLAY AND WARNING

Vehicle condition/ Driver's operation		Action	Warning systems ON indicator	Indication on the combination meter	Buzzer
Less than Approx. 60 km/h (40 MPH)	Close to lane marker	No action	ON	OFF	—
Approx. 70 km/h (45 MPH) or more	Close to lane marker	Warning • Buzzer sounds • Warning lamp blinks (orange)	ON	OFF (orange) Blink  ALOIA0104ZZ	Short continuous beeps
	• Close to lane marker • Turn signal ON (Deviate side)	No action	ON	OFF	—

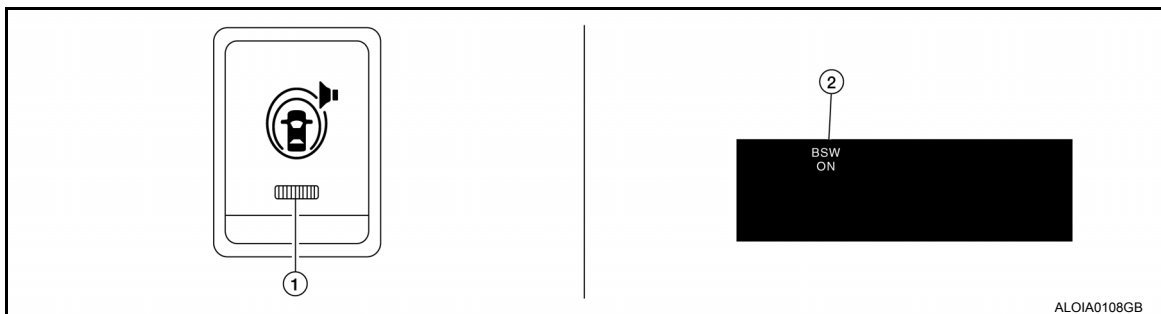
NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to [DAS-187, "LDW : System Description"](#).

BSW/RCTA

BSW/RCTA : Switch Name and Function

INFOID:00000001422328



OPERATION

< SYSTEM DESCRIPTION >

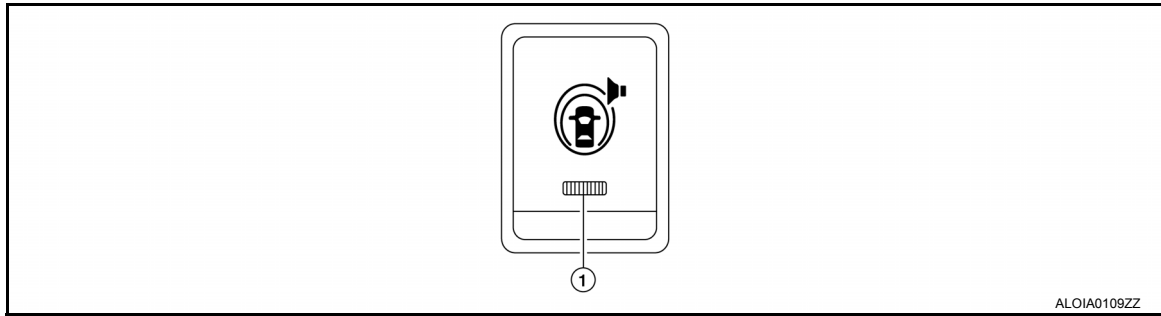
[DRIVER ASSISTANCE SYSTEM]

No.	Name	Function
1	Warning systems switch	Turns BSW system ON/OFF (When the setting of BSW system in the vehicle information display is ON)
2	BSW setting screen (the vehicle information display)	Changes setting of BSW system (ON/OFF)

BSW/RCTA : System Display and Warning

INFOID:000000001422329

INDICATOR AND WARNING LAMP



No.	Name	Description
1	Warning systems ON indicator	- Indicates that the FCW system, LDW system, and/or BSW system is ON - Blinks when the setting of LDW, FCW, and BSW are "OFF" and the warning systems switch is pressed

DISPLAY AND WARNING OPERATION

Vehicle condition/ Driver's operation				Action	
Warning systems ON indicator	Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle detection within detection area	Indication on the Blind Spot Warning/Blind Spot Intervention indicator	Buzzer
OFF	—	—	—	OFF	OFF
ON	Less than approx. 29 (18)	—	—	OFF	OFF
	Approx. 32 (20) or more	—	Vehicle is absent	OFF	OFF
		OFF	Vehicle is detected	ON	OFF
		ON (vehicle detected direction)	Before turn signal operates Vehicle is detected	Blink Indicator ON Indicator OFF JSOIA0251GB	Short continuous beep Buzzer ON Buzzer OFF JSOIA0252GB
			Vehicle is detected after turn signal operates	Blink Indicator ON Indicator OFF JSOIA0251GB	OFF

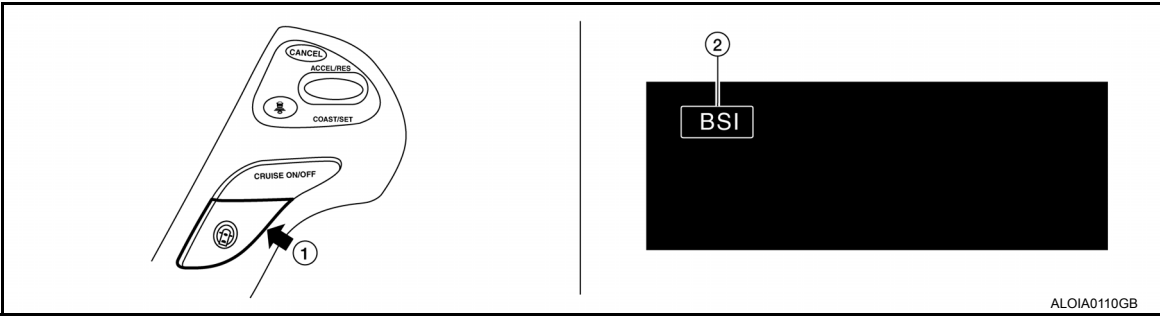
NOTE:

- If vehicle speed exceeds approximately 32 km/h (20MPH), BSW function operates until the vehicle speed becomes lower than approximately 29km/h (18MPH).
- Time shown in the figure is approximate time.
- Always Blind Spot Intervention system operates together with BSW system. Whenever Blind Spot Intervention system is turned on by pushing the dynamic driver assistance switch, BSW system also be turned on even if the BSW system is turned off. However, at this time the warning systems ON indicator remains OFF.

BLIND SPOT INTERVENTION (BSI) SYSTEM

BLIND SPOT INTERVENTION (BSI) SYSTEM : Switch Name and Function

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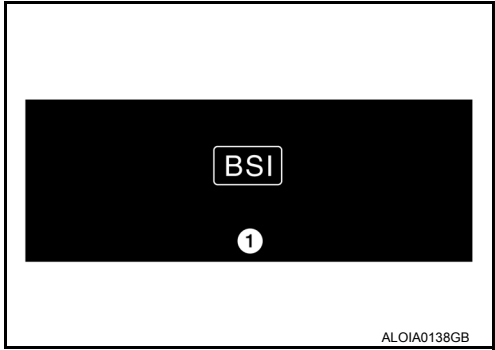


No.	Name	Function
1	Dynamic driver assistance switch	Turns Blind Spot Intervention, LDP, and DCA systems ON/OFF
2	Blind Spot Intervention setting screen (The vehicle information display)	Changes setting of Blind Spot Intervention system (ON/OFF)

BLIND SPOT INTERVENTION (BSI) SYSTEM : System Display and Warning

INFOID:0000000014222331

INDICATOR AND WARNING LAMP



No.	Name	Description
1	Blind Spot Intervention ON indicator (green)	• Turns ON when Blind Spot Warning/Blind Spot Intervention system is malfunctioning

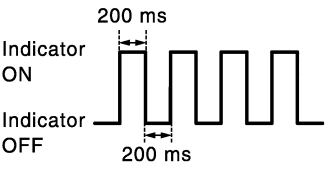
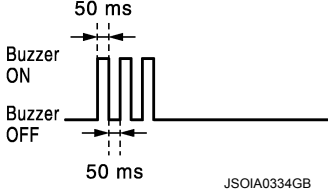
DISPLAY AND WARNING OPERATION

Whenever the Blind Spot Intervention system is turned on, the BSW system will also be on.

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

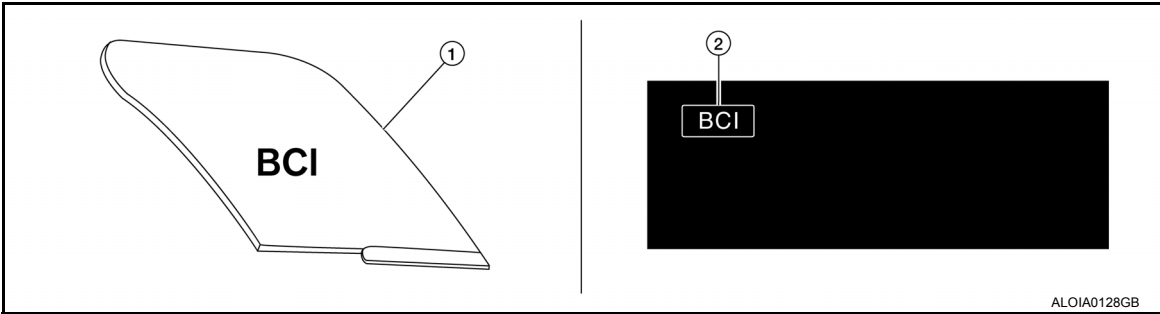
Vehicle condition/Driver's operation				Action		
Blind Spot Intervention ON indicator	Vehicle speed (Approx.) [km/h (MPH)]	Status of vehicle detection within detection area	Status of approach to adjacent lane	Indication on the Blind Spot Warning/Blind Spot Intervention indicator	Brake control	Buzzer
OFF	—	—	—	OFF	OFF	OFF
Green	Less than approx. 60 (37)	—	—	OFF	OFF	OFF
	Approx. 60 (37) or more	Vehicle is absent	—	OFF	OFF	OFF
		Vehicle is detected	Not approaching	ON	OFF	OFF
		Vehicle is detected	Approaching	Blink  J50IA0251GB Time shown in the figure is approximate time.	ON	Short continuous beeps  J50IA0334GB Time shown in the figure is approximate time.

BSI system warning light (orange)

BCI

BCI : Switch Name and Function

INFOID:0000000014222332



No.	Name	Function
1	BCI switch	Turns Backup Collision Intervention system ON/OFF

BCI : System Display and Warning

INFOID:0000000014222333

INDICATOR AND WARNING LAMP

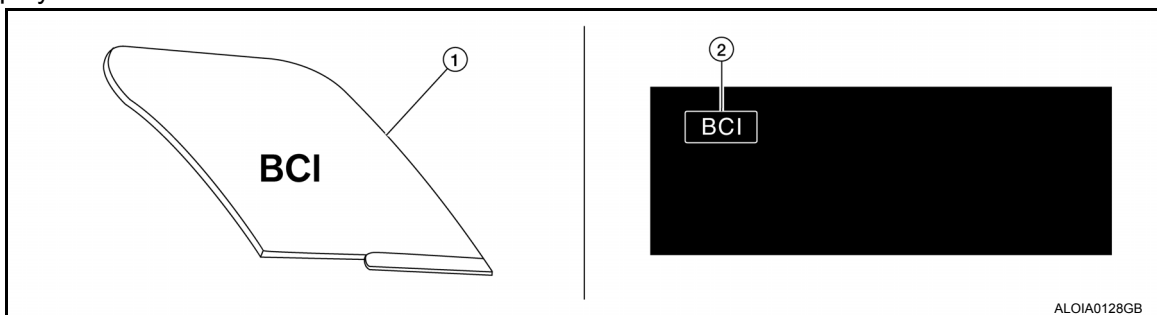
DAS

OPERATION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Press the BCI switch to toggle between ON and OFF. "BCI" will appear on the left side of the vehicle information display screen.



No.	Name	Description
2	BCI indicator	Turns ON while Backup Collision Intervention system is ON
	Backup Collision Intervention warning lamp (orange)	Turns ON when Backup Collision Intervention system is malfunctioning

DISPLAY AND WARNING OPERATION

Vehicle condition/Driver's operation			Action		
Backup Collision Intervention ON indicator	Vehicle speed (Approx.) [km/h (MPH)]	Status of vehicle detection within detection area	Indication on the Backup Collision Intervention indicator	Brake control	Buzzer
OFF	—	—	OFF	OFF	OFF
ON	Less than approx. 5 MPH (8 km/h)	Vehicle is detected	ON	ON	ON
		Vehicle is absent	ON	OFF	OFF
	Approx. 5 MPH (8 km/h) or more	Vehicle is detected	ON	ON	ON
		Vehicle is not detected	ON	OFF	OFF

Under the following conditions, the Backup Collision Intervention system will be turned off automatically, a beep will sound. The Backup Collision Intervention system will not be available until the conditions no longer exist.

- When the accelerator pedal actuator detects that the internal motor temperature is high.
- When side radar blockage is detected.

HANDLING PRECAUTION

Precautions for Distance Control Assist

INFOID:0000000014222334

- If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill with a warning chime. To prevent the vehicle from moving, the driver must depress the brake pedal.
- The DCA system will not apply brake control while the driver's foot is on the accelerator pedal.
- This system is only an aid to assist the driver and is not a collision warning or avoidance device. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- This system will not adapt automatically to road conditions. Do not use the system on roads with sharp curves, or on icy roads, in heavy rain or in fog.
- The distance sensor will not detect the following object.
 - Stationary and slow moving vehicles
 - Pedestrians or objects in the roadway
 - Oncoming vehicles in the same lane
 - Motorcycles traveling offset in the travel lane
- As there is a performance limit to the distance control function, never rely solely on the DCA system. This system does not correct careless, inattentive or absent-minded driving, or overcome poor visibility in rain, fog, or other bad weather. Decelerate the vehicle speed by depressing the brake pedal, depending on the distance to the vehicle ahead and the surrounding circumstances in order to maintain a safe distance between vehicles.
- The system may not detect the vehicle in front of own vehicle in certain road or weather conditions. To avoid accidents, never use the DCA system under the following conditions.
 - On roads with sharp curves
 - On slippery road surfaces such as on ice or snow, etc.
 - During bad weather (rain, fog, snow, etc.)
 - When rain, snow or dirt adhere to the system sensor
 - On steep downhill roads (frequent braking may result in overheating the brakes)
 - On repeated uphill and downhill roads
- In some road or traffic conditions, a vehicle or object can unexpectedly come into the sensor detection zone and cause automatic braking. Driver may need to control the distance from other vehicles using the accelerator pedal. Always stay alert and avoid using the DCA system when it is not recommended in this section.
- The following are some conditions in which the sensor cannot detect the signals.
 - When the snow or road spray from traveling vehicles reduces the sensor's visibility
 - When excessively heavy baggage is loaded in the rear seat or the luggage room of own vehicle
- The DCA system is designed to automatically check the sensor's operation. When the sensor area of front bumper is covered with dirt or is obstructed, the system will automatically be canceled. If the sensor is covered with ice, a transparent or translucent vinyl bag, etc., the DCA system may not detect them. In these instances, the DCA system may not be able to decelerate the vehicle properly. Be sure to check and clean the sensor regularly.
- The DCA system is designed to help assist the driver to maintain a following distance from the vehicle ahead. The system will decelerate as necessary and if the vehicle ahead comes to a stop, the vehicle decelerates to standstill. However, the DCA system can only apply up to approximately 40% of the vehicles total braking power. If a vehicle moves into the traveling lane ahead or if a vehicle traveling ahead rapidly decelerates, the distance between vehicles may become closer because the DCA system cannot decelerate the vehicle quickly enough. If this occurs, the DCA system will sound a warning chime and blink the system display to notify the driver to take necessary action.
- The DCA system does not control vehicle speed or warn when driver approach stationary and slow moving vehicles. Driver must pay attention to vehicle operation to maintain proper distance from vehicles ahead.

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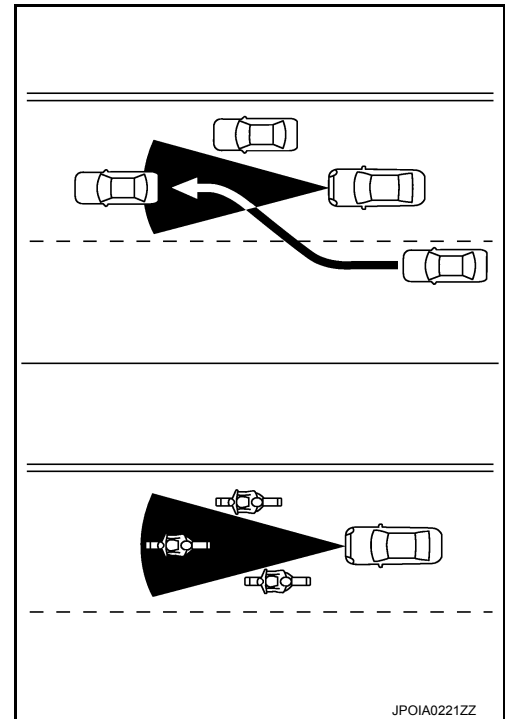
P

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

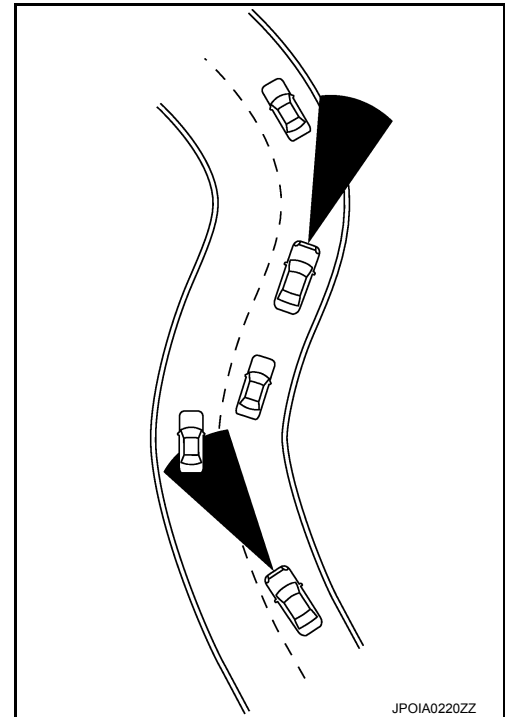
[DRIVER ASSISTANCE SYSTEM]

- The detection zone of the sensor is limited. A vehicle ahead must be in the detection zone for the system to operate.
- A vehicle ahead may move outside of the detection zone due to its position within the same lane of travel. Motorcycles may not be detected in the same lane ahead if they are traveling offset from the center line of the lane. A vehicle that is entering the lane ahead may not be detected until the vehicle has completely moved into the lane. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime. The driver may have to manually control the proper distance away from vehicle traveling ahead.



JPOIA0221ZZ

- When driving on some roads, such as winding, hilly, curved, narrow roads, or roads which are under construction, the sensor may detect vehicles in a different lane, or may temporarily not detect a vehicle traveling ahead. This may cause the system to work inappropriately. The detection of vehicles may also be affected by vehicle operation (steering maneuver or traveling position in the lane, etc.) or vehicle condition. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime unexpectedly. The driver will have to manually control the proper distance away from the vehicle traveling ahead.
- The approach warning chime may sound and the driver assist system forward indicator (orange) may blink when the radar sensor detects objects on the side of the vehicle or on the side of the road. This may cause the DCA system to decelerate or accelerate the vehicle. The radar sensor may detect these objects when the vehicle is driven on winding roads, narrow roads, hilly roads or when entering or exiting a curve. In these cases driver will have to manually control the proper distance ahead of own vehicle. Also, the sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle condition (for example, if a vehicle is being driven with some damage).
- The DCA system automatically decelerates own vehicle to help assist the driver to maintain a following distance from the vehicle ahead. Manually brake when deceleration is required to maintain a safe distance upon sudden braking by the vehicle ahead or when a vehicle suddenly appears in front of own vehicle. Always stay alert when using the DCA system.
- When the vehicle ahead detection indicator lamp is not illuminated, system will not control or warn the driver.
- Never place a foot under the brake pedal. A foot may be caught when the system controls the brake.
- Depending on the position of the accelerator pedal, the system may not be able to assist the driver to release the accelerator pedal appropriately.
- If the vehicle ahead comes to a standstill, the vehicle decelerates to a standstill within the limitations of the system. The system will release brake control with a warning chime once it judges the vehicle is at a standstill. To prevent the vehicle from moving, the driver must depress the brake pedal. [The system will resume control automatically once the system reaches 5 km/h (3 MPH)].
- When the brake operates, a noise may be heard. This is not a malfunction.



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Precautions for Predictive Forward Collision Warning

INFOID:0000000014222335

- The predictive forward collision warning system is designed to warn driver before a collision but will not avoid a collision. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- The radar sensor does not detect the following objects.
 - Pedestrians, animals, or obstacles in the roadway.
 - Oncoming vehicles
 - Crossing vehicles
- The predictive forward collision warning system does not function when a vehicle ahead is a narrow vehicle, such as a motorcycle.
- The radar sensor may not detect a second vehicle ahead in the following conditions:
 - Snow or heavy rain
 - Dirt, ice, snow or other material covering the radar sensor
 - Interference by other radar sources
 - Snow or road spray from traveling vehicles is splashed
 - Driving in a tunnel
- The radar sensor may not detect a second vehicle when the vehicle ahead is being towed.
- When the distance to the vehicle ahead is too close, the beam of the radar sensor is obstructed.
- The radar sensor may not detect a second vehicle when driving on a steep downhill slope or on roads with sharp curves.
- Excessive noise will interfere with the warning tone sound, and it may not be heard.

Precautions for Lane Departure Warning/Lane Departure Prevention

INFOID:0000000014222336

LANE CAMERA UNIT HANDLING

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

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

LANE DEPARTURE WARNING (LDW)

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

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

LANE DEPARTURE PREVENTION (LDP)

- If the LDP system malfunctions, it will cancel automatically, and the LDP malfunction message will appear in the vehicle information display.
- The LDP system will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- LDP system is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers in certain roads, weather or driving conditions.
- Using the LDP system under some conditions of road, lane marker or weather, or when driver change lanes without using the turn signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- The LDP system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Do not use the LDP system under the following conditions as it may not function properly:
 - During bad weather (rain, fog, snow, etc.).
 - When driving on slippery roads, such as on ice or snow, etc.
 - When driving on winding or uneven roads.
 - When there is a lane closure due to road repairs.
 - When driving in a makeshift or temporary lane.
 - When driving on roads where the lane width is too narrow.
 - When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
 - When the vehicle is equipped with non-original brake or steering parts or suspension parts.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- The functions of the LDP system (warning and, system application of the steering or brakes) may or may not operate properly under the following conditions:
 - On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
 - On roads where discontinued lane markers are still detectable.
 - On roads where there are sharp curves.
 - On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (The LDP system could detect these items as lane markers.).
 - On roads where the traveling lane merges or separates.
 - When the vehicle's traveling direction does not align with the lane marker.
 - When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
 - When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
 - When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
 - When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
 - When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)

Precautions for Blind Spot Warning/Blind Spot Intervention

INFOID:0000000014222337

LANE CAMERA UNIT HANDLING

Refer to [DAS-223. "Precautions for Lane Departure Warning/Lane Departure Prevention"](#).

SIDE RADAR HANDLING

- Side radar for Blind Spot Warning/Blind Spot Intervention system is located inside the rear bumper.
- Always keep the rear bumper near the side radar clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work near the side radar.
- Do not strike or damage the areas around the side radar.
- Do not strike, damage, and scratch the side radar, especially the vent seal (gray circular) area, under repair.

BLIND SPOT WARNING & BLIND SPOT INTERVENTION

- The Blind Spot Warning and Blind Spot Intervention systems are not a replacement for proper driving procedure and are not designed to prevent contact with vehicles or objects. When changing lanes, always use the side and rear mirrors and turn and look in the direction driver will move to ensure it is safe to change lanes. Never rely solely on the Blind Spot Warning or Blind Spot Intervention system.

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- Using the Blind Spot Intervention system under some road, lane marker or weather conditions could lead to improper system operation. Always rely on driver's own steering and braking operation to avoid accidents. A
- The Blind Spot Warning and Blind Spot Intervention systems may not provide the warning or the control for vehicles that pass through the detection zone quickly. B
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard. B
- The side radar may not be able to detect and activate Blind Spot Warning/Blind Spot Intervention when certain objects are present such as:
 - Pedestrians, bicycles, animals. C
 - Several types of vehicles such as motorcycles. C
 - Oncoming vehicles. C
 - Vehicles remaining in the detection zone when driver accelerate from a stop. D
 - A vehicle merging into an adjacent lane at a speed approximately the same as vehicle. D
 - A vehicle approaching rapidly from behind. D
 - A vehicle which vehicle overtakes rapidly. D
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles. E
- 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. F
- 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. F

BLIND SPOT INTERVENTION G

- Do not use the Blind Spot Intervention system under the following conditions because the system may not function properly.
 - During bad weather (for example. rain, fog, snow, etc.) H
 - When driving on slippery roads, such as on ice or snow, etc. H
 - When driving on winding or uneven roads. I
 - When there is a lane closure due to road repairs. I
 - When driving in a makeshift or temporary lane. I
 - When driving on roads where the lane width is too narrow. I
 - 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). J
 - When the vehicle is equipped with non-original steering parts, brake parts or suspension parts. J
- The camera may not detect lane markers in the following situations and the Blind Spot Intervention system may not operate properly.
 - On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; nonstandard lane markers; lane markers covered with water, dirt, snow, etc. K
 - On roads where discontinued lane markers are still detectable. K
 - On roads where there are sharp curves. L
 - On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs. L
 - On roads where the traveling lane merges or separates. M
 - When the vehicle is traveling direction does not align with the lane markers. M
 - When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range. N
 - When rain, snow or dirt adheres to the windshield in front of a lane camera unit. N
 - When the headlights are not bright due to dirt on the lens or if aiming is not adjusted properly. N
 - When strong light enters a lane camera unit. (for example, light directly shines on the front of the vehicle at sunrise or sunset.) N
 - When a sudden change in brightness occurs. (for example, when the vehicle enters or exits a tunnel or under a bridge.) N
- The Blind Spot Intervention system will not operate if own vehicle is on a lane marker when another vehicle enters the detection zone. In this case only the BSW system operates.
- Blind Spot Intervention assist will not operate or will stop operating and only a warning chime will sound under the following conditions. P
 - When the accelerator pedal is depressed while the assist is provided.
 - When steering quickly.
 - When the ICC, DCA, predictive forward collision warning or forward emergency braking warnings sound.
 - When the hazard warning flashers are operated.
 - When driving on a curve at a high speed.

DAS

Precautions for Rear Cross Traffic Alert

INFOID:0000000014222338

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.

Precautions for Back-up Collision Intervention

INFOID:0000000014222339

SONAR HANDLING

- Always keep the sonar sensors clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work over any of the sonar sensors.
- Do not strike or scratch any of the sonar sensors causing physical damage. to a sensor or the surrounding area

SIDE RADAR HANDLING

- Always keep the rear bumper near the side radar clean.
- Do not attach a sticker (including transparent material), install an accessory or paint work near the side radar.
- Do not strike or damage the areas around the side radar.

BACK-UP COLLISION INTERVENTION

- The Back-up Collision Intervention system is not a replacement for proper driving procedure and is not designed to prevent contact with vehicles or objects. When backing out of parking space, always use the inside and outside rear view mirrors and turn and look in the direction own vehicle will move. Never rely solely on the Back-up Collision Intervention system.
- There is a limitation to the detection capability of the radar and the sonar. Using the BCI system under some road, ground, lane marker, traffic or weather conditions could lead to improper system operation. Always rely on driver operation to avoid accidents.
- In the case of several vehicles approaching in a row or in the opposite direction, a chime may not be issued to the BCI system after the first vehicle passes the sensors.
- When the sonar sounds a tone, the BCI system does not chime a sound (single beep).
- The BCI system does not operate if the object is very close to the bumper.

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- The radar sensor may not be able to detect certain objects are present such as:
 - Pedestrians, bicycles or animals.
 - A vehicle that is passing at a speed greater than approximately 24 km/h (15 MPH).
- The radar sensor may not detect approaching vehicles in certain situations:
 - When the vehicle parked next to own vehicle obstructs the beam of the radar sensor.
 - When the vehicle is parked in an angled parking space.
 - When the vehicle is parked on inclined ground.
 - When the vehicle turns around into own vehicle's aisle.
 - When the angle formed by own vehicle and approaching vehicle is small.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The sonar sensor system may not detect:
 - Small or moving object.
 - Wedge-shaped objects.
 - Object closer to the bumper [less than approximately 30 cm (10 in)].
 - Thin objects such as rope, wire, chain, etc...
- The brakes engaged by the BCI system is not as effective on a slope as it is on flat ground. When on a steep slope, the system may not function properly.
- Do not use the BCI system under the following conditions because the system may not function properly:
 - When driving with a tire that is not the within normal tire condition (example: tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
 - When the vehicle is equipped with non-original brake parts or suspension parts.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.

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DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

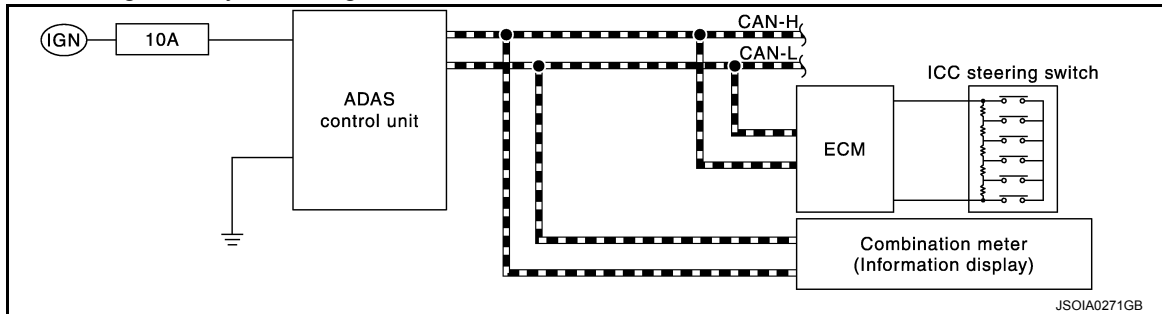
On Board Diagnosis Function

INFOID:000000014224829

DESCRIPTION

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

On Board Self-diagnosis System Diagram



METHOD OF STARTING

CAUTION:

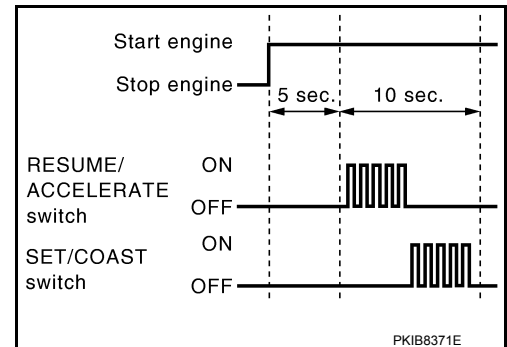
Start condition of on board self-diagnosis

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

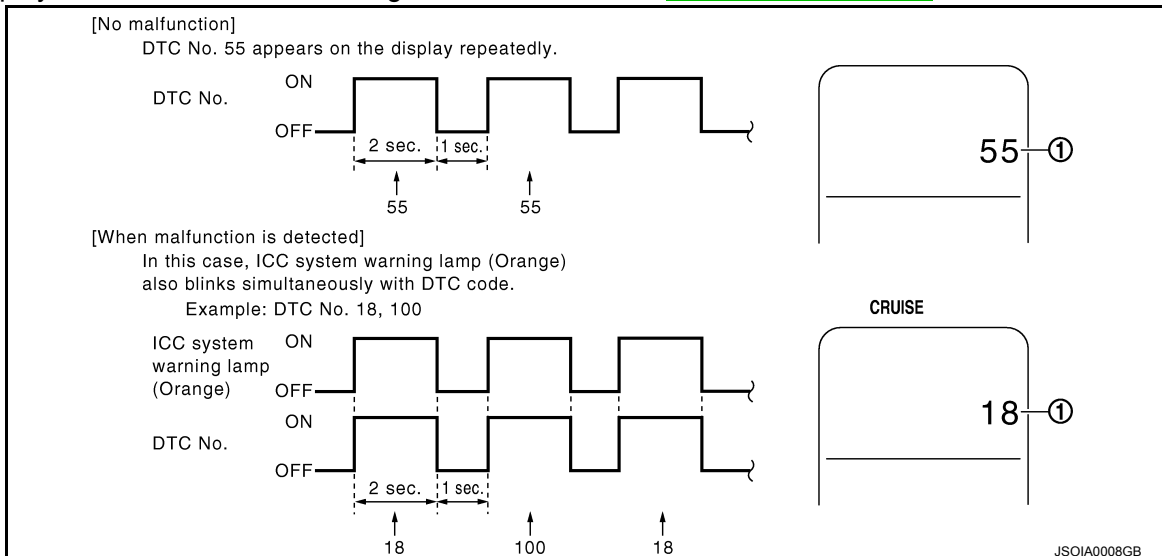
1. Turn the ignition switch OFF.
2. Start the engine.
3. Wait for 5 seconds after starting the engine. Push up the RESUME/ACCELERATE switch 5 times and push down the SET/COAST switch 5 times within 10 seconds.

NOTE:

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



4. The DTC is displayed on the set vehicle speed indicator (1) on the ICC system display on the information display when the on board self-diagnosis starts. Refer to [DAS-40, "DTC Index"](#).



NOTE:

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

WHEN THE ON BOARD SELF-DIAGNOSIS DOES NOT START

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

Assumed abnormal part		Inspection item
Information display	Combination meter malfunction	Check that the self-diagnosis function of the combination meter operates. Refer to MWI-17, "Description" .
ICC steering switch malfunction		Perform the inspection for DTC “C1A06”. Refer to DAS-80, "DTC Logic" .
Harness malfunction between ICC steering switch and ECM		
ECM malfunction		
ADAS control unit malfunction		• Check power supply and ground circuit of ADAS control unit. Refer to DAS-169, "Diagnosis Procedure". • Perform SELF-DIAGNOSIS for “ICC/ADAS”with CONSULT, and then check the malfunctioning parts. Refer to DAS-40, "DTC Index".

HOW TO ERASE ON BOARD SELF-DIAGNOSIS

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

NOTE:

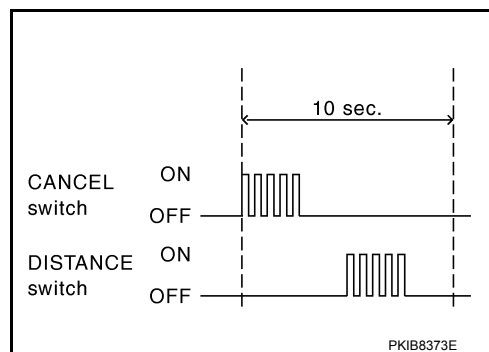
- Complete the operation within 10 seconds after pressing the CANCEL switch first.
- If the operation is not completed within 10 seconds, repeat the procedure from step 1.

4. DTC 55 is displayed after erasing.

NOTE:

DTCs for existing malfunction can not be erased.

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



CONSULT Function (ICC/ADAS)

INFOID:0000000014224830

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.

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

WORK SUPPORT

Work support items	Description
CAUSE OF AUTO-CANCEL 1	Displays causes of automatic system cancellation occurred during control of the following systems - Vehicle-to-vehicle control mode - Conventional (fixed speed) control mode - Distance Control Assist (DCA) - Forward Emergency Braking (FEB)
CAUSE OF AUTO-CANCEL 2	Displays causes of automatic system cancellation occurred during control of the following systems - Lane Departure Prevention (LDP) - Blind Spot Intervention
CAUSE OF AUTO-CANCEL 3	Displays causes of automatic system cancellation occurred during control of the Back-up Collision Intervention (BCI)

NOTE:

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

Display Items for The Cause of Automatic Cancellation 1

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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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)	A
WHL SPD ELEC NOISE	×	×	×		Wheel speed sensor signal caught electromagnetic noise	B
VDC/TCS OFF SW	×		×	×	VDC OFF switch was pressed	
VHCL SPD UNMATCH	×	×	×		Wheel speed became different from A/T vehicle speed	C
TIRE SLIP	×	×			Wheel slipped	
IGN LOW VOLT	×	×	×	×	Decrease in ADAS control unit ignition voltage	
PARKING BRAKE ON	×	×			The parking brake is operating	D
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	E
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	F
ECD CIRCUIT	×	×	×	×	An abnormal condition occurs in ECD system	
ENG SPEED DOWN	×	×			Engine speed became extremely low while controlling ICC system	G
ASCD VHCL SPD DTAC		×			Vehicle speed is detached from set vehicle speed	
ASCD DOUBLE COMD		×			Cancel switch and operation switch are detected simultaneously	
APA HI TEMP			×		The accelerator pedal actuator integrated motor temperature is high	H
ICC SENSOR CAN COMM ERR	×		×	×	Communication error between ADAS control unit and the ICC sensor	I
ABS WARNING LAMP	×		×		ABS warning lamp ON	
FR RADAR BLOCKED	×		×	×	Inclusion of dirt or stains on the ICC sensor area of the front bumper	J
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	K
RADAR INTERFERENCE	×		×	×	ICC sensor receives electromagnetic interference	L
NO RECORD	×	×	×		—	

Display Items for The Cause of Automatic Cancellation 3

Cause of cancellation	Back-up Collision Intervention	Description	
CAN COMM ERROR (CAN)	×	ADAS control unit received an abnormal signal with CAN communication	
CAN COMM ERROR (ECD)	×	ADAS control unit received an abnormal signal with CAN communication	
IGN LOW VOLT	×	Decrease in ADAS control unit ignition voltage	
VEHICLE SPEED UP	×	Vehicle speed higher than 8 km/h (5 MPH)	
ACCEL IS OPERATED	×	Accelerator pedal was depressed	

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Cause of cancellation	Back-up Collision Intervention	Description
BRAKE IS OPERATED	×	Brake pedal was operated
APA HI TEMP	×	The accelerator pedal actuator integrated motor temperature is high
APA POWER	×	Decrease in accelerator pedal actuator ignition or battery voltage
NO RECORD	×	—

SELF DIAGNOSTIC RESULT

Refer to [DAS-261, "DTC Index"](#).

NOTE:

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

DATA MONITOR

NOTE:

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

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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

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DAS

P

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
GEAR [1, 2, 3, 4, 5, 6, 7]	×					Indicates A/T gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication)
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
DYNA ASIST SW [On/Off]	×	×		×		Indicates [On/Off] status as judged from ICC steering switch signal (ECM transmits ICC steering switch signal through CAN communication)
DCA ON IND [On/Off]	×					The status [ON/OFF] of DCA system switch indicator output is displayed
DCA VHL AHED [On/Off]	×					The status [ON/OFF] of vehicle ahead detection indicator output in DCA system is displayed
APA TEMP [°C]	×				×	Accelerator pedal actuator integrated motor temperature that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the integrated motor temperature via ITS communication)
APA PWR [V]	×				×	Accelerator pedal actuator power supply voltage that the ADAS control unit readout via ITS communication is displayed (Accelerator pedal actuator transmits the power supply voltage via ITS communication)
NAVI ICC DISP [On/Off]						NOTE: The item is displayed, but it is not monitored
LDW SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDW system
LDW ON LAMP [On/Off]			×			Indicates [On/Off] status of LDW system display output
LDP ON IND [On/Off]			×			Indicates [On/Off] status of LDP system display output
LANE DPRT W/L [On/Off]			×			Indicates [On/Off] status of LDW/LDP warning display (Yellow) output
LDW BUZER OUT- PUT [On/Off]			×			Indicates [On/Off] status of warning buzzer output
LDP SYSTEM ON [On/Off]			×			Indicates [On/Off] status of LDP system
WARN REQ [On/Off]			×			Indicates an ADAS control unit judged warning state (ON/OFF) of LDP system
READY signal [On/Off]			×			Indicates LDP system settings
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)
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)

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
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 commu- nication (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
DCA SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the DCA system. The DCA system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Front assist" of the integral switch
LDP SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of LDP system. LDP system can be set to ON/ OFF by selecting "Driving Aids" ⇒ "Lane" of the integral switch
BSI SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of Blind Spot Intervention system. Blind Spot Intervention system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Blind Spot" of the integral switch
FCW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the PFCW system. The PFCW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Emergency Assist" of the integral switch
LDW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the LDW system. The LDW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Lane" of the integral switch
BSW SELECT [On/Off]	×	×	×	×		Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting "Driving Aids" ⇒ "Blind spot" of the integral switch
DRIVE MODE STATS [STD/SPT/ECO/SNO]	×	×	×	×		Indicates a drive mode selector select position judged from a drive mode select switch position signal read by the ADAS control unit via CAN com- munication
WARN SYS SW [On/Off]	×	×	×	×		Indicates [On/Off] status of warning systems switch
BSW/BSI WARN LMP [On/Off]				×		Indicates [On/Off] status of Blind Spot warning malfunction
BSI ON IND [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system display
BSW SYSTEM ON [On/Off]				×		Indicates [On/Off] status of BSW system
BSI SYSTEM ON [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention system
FCW SYSTEM ON [On/Off]	×	×				Indicates [On/Off] status of PFCW system

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item [Unit]	ALL SIG (ICC)	MAIN SIG (ICC)	MAIN SIG (LDW/LDP)	MAIN SIG (BSW/BSI)	MAIN SIG (BCI)	Description
BCI SYSTEM ON [On/Off]					×	Indicates [On/Off] status of BCI system
BCI SWITCH [On/Off]					×	Indicates [On/Off] status of Backup Collision Intervention system switch
BATTERY CIRCUIT OFF [On/Off]	×					NOTE: The item is displayed, but it is not used
LDP WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDP warning display (Yellow) output
LDW ON INDICATOR [On/Off]			×			Indicates [On/Off] status of LDW system ON display output
LDW WARNING INDI- CATOR [On/Off]			×			Indicates [On/Off] status of LDW system warning display output
SYSTEM CANCEL MESSAGE [NOREQ/SLIP/ SNOW/VDC OFF]	×	×	×	×		Indicates status of system cancel display output
CAMERA HI TEMP MSG [On/Off]			×	×		Indicates [On/Off] status of lane camera unit high temperature warning display output
ITS SETTING ITEM(DCA) [On/Off]	×	×	×	×		Indicates the presence or absence of DCA system.
ITS SETTING ITEM(LDP) [On/Off]	×	×	×	×		Indicates the presence or absence of LDP system.
ITS SETTING ITEM(BSI) [On/Off]	×	×	×	×		Indicates the presence or absence of Blind Spot Intervention system.
BSI WARNING INDI- CATOR [On/Off]				×		Indicates [On/Off] status of Blind Spot Intervention warning display output
BSW ON INDICATOR [On/Off]				×		Indicates [On/Off] status of BSW system ON display output
SIDE RADAR BLOCK COND [On/Off]				×		Indicates [On/Off] status of side radar with dirt or foreign materials
LDW WARNING ALERT TIMING [Nothing/Early/Late]			×			NOTE: The item is displayed, but it is not monitored
BSW IND BRIGHT- NESS [Nothing/Bright/Nor- mal/Dark]				×		Indicates status of brightness of Blind Spot Warning/Blind Spot Intervention indicator

ACTIVE TEST

CAUTION:

- Never perform “Active Test” while driving the vehicle.
- The “Active Test” cannot be performed when the following systems malfunction is displayed.
- ICC system
- DCA
- LDW

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

- LDP
- Blind Spot Warning
- Blind Spot Intervention
- BCI
- The “Active Test” cannot be performed when the FEB warning lamp is illuminated.
- Shift the selector lever to “P” position, and then perform the test.

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

METER LAMP

NOTE:

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

Test item	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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

ICC BUZZER

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

BRAKE ACTUATOR

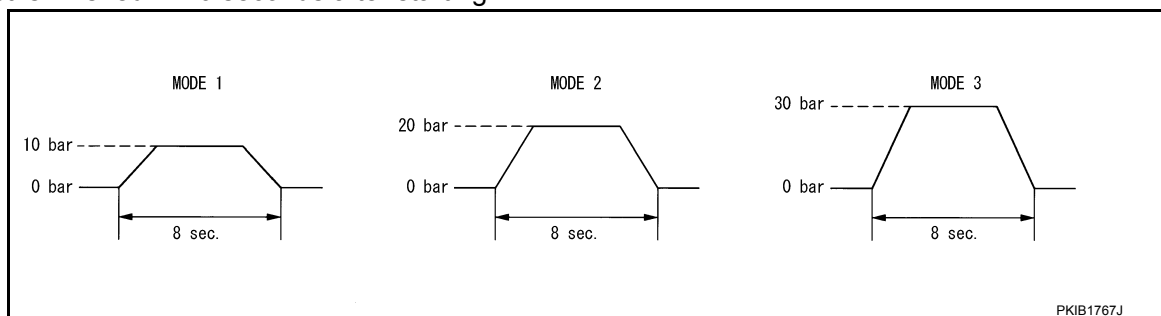
NOTE:

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

Test item	Operation	Description	"PRESS SENS" value
BRAKE ACTUATOR	MODE1	Transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via 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



Active Pedal

CAUTION:

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

NOTE:

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

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

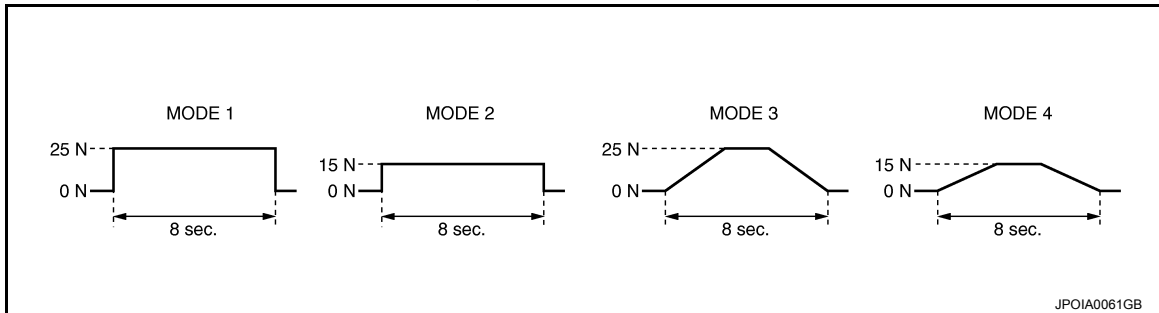
< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

NOTE:

The test is finished in 10 seconds after starting



DCA INDICATOR

NOTE:

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

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

LDP BUZZER

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

WARNING SYSTEM IND

Test item	Operation	Description	Warning systems ON indicator
WARNING SYSTEM IND	Off	Stops transmitting the warning systems ON indicator signal below to end the test	—
	On	Transmits the warning systems ON indicator signal to the warning systems ON indicator	ON

LDP ON IND

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

LANE DEPARTURE W/L

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

BSW/BSI WARNING LAMP

Test item	Operation	Description	Blind Spot Warning/Blind Spot Intervention warning lamp (Yellow)
BSW/BSI WARNING LAMP	Off	Stops transmitting the Blind Spot Warning/Blind Spot Intervention warning lamp signal below to end the test	—
	On	Transmits the Blind Spot Warning/Blind Spot Intervention warning lamp signal to the combination meter via CAN communication	ON

BSW ON INDICATOR

Test item	Operation	Description	Blind Spot Warning system display (Yellow)
BSW ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

BSI ON INDICATOR

Test item	Operation	Description	Blind Spot Intervention system display (Green)
BSI ON INDICATOR	Off	Stops transmitting the meter display signal below to end the test	—
	On	Transmits the meter display signal to the combination meter via CAN communication	ON

LDW ON INDICATOR

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

LDP WARNING INDICATOR

DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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

LDW WARNING INDICATOR

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

BSW WARNING INDICATOR

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

BSI WARNING INDICATOR

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

ECU IDENTIFICATION

Displays ADAS control unit parts number.

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DAS

DIAGNOSIS SYSTEM (ICC SENSOR)

CONSULT Function (LASER/RADAR)

INFOID:0000000014224835

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 [CCS-60, "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
RADAR OFFSET [m]	NOTE: The item is indicated, but not used
RADAR HEIGHT [m]	NOTE: The item is indicated, but not used
STEERING ANGLE [deg]	The steering angle is displayed
STRG ANGLE SPEED [deg/s]	The steering angle speed is displayed
L/R ADJUST [deg]	Indicates a horizontal correction value of the radar
U/D ADJUST [deg]	Indicates a vertical correction value of the radar

DIAGNOSIS SYSTEM (ICC SENSOR)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

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.

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DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR)

CONSULT Function (ACCELERATOR PEDAL ACT)

INFOID:0000000014222343

DESCRIPTION

CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with accelerator pedal actuator.

Test mode	Function
Self Diagnostic Result	- Displays malfunctioning system memorized in accelerator pedal actuator - Displays the Freeze Frame Data when the malfunction is detected
DATA MONITOR	Displays real-time input/output data of accelerator pedal actuator
ACTIVE TEST	Enables operation check of electrical loads by sending driving signal to them
ECU Identification	Displays accelerator pedal actuator parts number
CAN Diag Support Monitor	The results of transmit/receive diagnosis of ITS communication can be read

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Refer to [DAS-271, "DTC Index"](#).

FFD (Freeze Frame Data)

The accelerator pedal actuator records the following data when the malfunction is detected.

Freeze Frame Data item [Unit]	Description
TGT FBK FRC [N]	It displays the target accelerator pedal actuation force that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication at the time when the malfunction is detected
TGT MOT POSI [%]	It displays the target motor position that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication at the time when the malfunction is detected
ACT MOT POSI [%]	It displays the integrated motor position that the accelerator pedal actuator read out at the time when the malfunction is detected
AP OPEN [%]	It displays the accelerator pedal position signal that the accelerator pedal actuator read out via ITS communication at the time when the malfunction is detected
APA TEMP [°C]	It displays the integrated motor temperature that the accelerator pedal actuator read out at the time when the malfunction is detected
APA CURRENT [A]	It displays the integrated motor consumption current that the accelerator pedal actuator read out at the time when the malfunction is detected
APA PWR [V]	It displays the power supply voltage that the accelerator pedal actuator read out at the time when the malfunction is detected
APA OPE STATS [On/Off]	It displays the activation permission status of accelerator pedal actuator at the time when the malfunction is detected
APA STATS [READY/NG/TP NG/INIT]	It displays the condition of accelerator pedal actuator at the time when the malfunction is detected
ODO/TRIP METER	Total mileage (Odometer value) of the moment a particular.

DATA MONITOR

NOTE:

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

DIAGNOSIS SYSTEM (ACCELERATOR PEDAL ACTUATOR)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item [Unit]	FUNCTION DESCRIPTION
TGT FBK FRC [N]	It displays the target accelerator pedal actuation force that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication (The ADAS control unit transmits the accelerator pedal feedback force control signal via ITS communication)
TGT MOT POSI [%]	It displays the target motor position that the accelerator pedal actuator read out from the accelerator pedal feedback force control signal received via ITS communication (The ADAS control unit transmits the accelerator pedal feedback force control signal via ITS communication)
ACT MOT POSI [%]	It displays the integrated motor position that the accelerator pedal actuator read out
AP OPEN [%]	It displays the accelerator pedal position signal that the accelerator pedal actuator read out via ITS communication (The ADAS control unit transmits with ITS communication the accelerator pedal position signal that is received from ECM via CAN communication)
APA TEMP [°C]	It displays the accelerator pedal actuator integrated motor temperature
APA CURRENT [A]	It displays the accelerator pedal actuator integrated motor consumption current
APA PWR [V]	It displays the power supply voltage that the accelerator pedal actuator read out
APA OPE STATS [On/Off]	It displays the activation permission status of accelerator pedal actuator
APA STATS [READY/NG/TP NG/INIT]	It displays the condition of accelerator pedal actuator

ACTIVE TEST

CAUTION:

Never perform ACTIVE TEST while driving the vehicle.

NOTE:

The active test cannot be performed when the ICC system warning lamp is illuminated.

Item list

Active test item	Description
ACCELERATOR PEDAL ACTUATOR TEST1	Drive the accelerator pedal actuator and generate the constant accelerator pedal actuation force
ACCELERATOR PEDAL ACTUATOR TEST2	Drive the accelerator pedal actuator and generate the vibration

ACCELERATOR PEDAL ACTUATOR TEST 1

NOTE:

Check the accelerator pedal by depressing when performing the test.

Active test item	Operation	Description
ACCELERATOR PEDAL ACTUATOR TEST1	STOP	Finish the test
	START	Generate the constant accelerator pedal actuation force for accelerator pedal

ACCELERATOR PEDAL ACTUATOR TEST 2

NOTE:

Check the accelerator pedal by depressing when performing the test.

Active test item	Operation	Description
ACCELERATOR PEDAL ACTUATOR TEST 2	STOP	Finish the test
	START	Generate the vibration for accelerator pedal

ECU IDENTIFICATION

Displays accelerator pedal assembly parts number.

DIAGNOSIS SYSTEM (SIDE RADAR LH)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (SIDE RADAR LH)

CONSULT Function (SIDE RADAR LEFT)

INFOID:0000000014222344

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-273. "DTC Index"](#).

FFD (Freeze Frame Data)

The side radar records the following data when the malfunction is detected.

Freeze Frame Data item	Description
VHCL SP from ADAS	The vehicle speed (from ADAS control unit) at the moment a malfunction is detected is displayed
TURN SIG STATUS	Turn signal status at the moment a malfunction is detected is displayed

DATA MONITOR

NOTE:

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

Monitored Item [unit]		Description
BEAM DISTANCE	—	The item is displayed, but it is not used.
BEAM POSITION	—	The item is displayed, but it is not used.
SIDE RADAR MALF	Off	Side radar is normal.
	On	Side radar is malfunctioning.
BLOCKAGE COND	Off	Side radar is not blocked.
	On	Side radar is blocked.
ACTIVATE OPE	—	The item is displayed, but it is not used.
VEHICLE DETECT	Off	Does not detect a vehicle within detection area.
	On	Detects a vehicle within detection area.

ACTIVE TEST

CAUTION:

- **Never perform the active test while driving.**
- **Active test cannot be started while the Blind Spot Warning/Blind Spot Intervention indicator is illuminated.**

Active test item	Operation	Description
BSW/BSI INDICATOR DRIVE	On	Outputs the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.
	Off	Stops the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.

DIAGNOSIS SYSTEM (SIDE RADAR RH)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (SIDE RADAR RH)

CONSULT Function (SIDE RADAR RIGHT)

INFOID:000000014222345

DESCRIPTION

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

Select diag mode	Function
Self Diagnostic Result	Displays memorized DTC in the side radar.
Data Monitor	Displays real-time data of side radar.
Active Test	Enables operation check of electrical loads by sending driving signal to them.
ECU Identification	Displays part number of side radar.

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Displays memorized DTC in side radar RH. Refer to [DAS-276. "DTC Index"](#).

FFD (Freeze Frame Data)

The side radar records the following data when the malfunction is detected.

Freeze Frame Data item	Description
VHCL SP from ADAS	The vehicle speed (from ADAS control unit) at the moment a malfunction is detected is displayed
TURN SIG STATUS	Turn signal status at the moment a malfunction is detected is displayed

DATA MONITOR

NOTE:

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

Monitored Item [unit]	Description
BEAM DISTANCE	— The item is displayed, but it is not used.
BEAM POSITION	— The item is displayed, but it is not used.
SIDE RADAR MALF	Off Side radar is normal.
	On Side radar is malfunctioning.
BLOCKAGE COND	Off Side radar is not blocked.
	On Side radar is blocked.
ACTIVATE OPE	— The item is displayed, but it is not used.
VEHICLE DETECT	Off Does not detect a vehicle within detection area.
	On Detects a vehicle within detection area.

ACTIVE TEST

CAUTION:

- **Never perform the active test while driving.**
- **Active test cannot be started while the Blind Spot Warning/Blind Spot Intervention indicator is illuminated.**

Active test item	Operation	Description
BSW/BSI INDICATOR DRIVE	On	Outputs the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.
	Off	Stops the voltage to illuminate the Blind Spot Warning/Blind Spot Intervention indicator.

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE)

CONSULT Function (BSW/BUZZER)

INFOID:000000014222346

DESCRIPTION

CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with driver assistance buzzer control module.

Test mode	Function
Self Diagnostic Result	- Displays malfunctioning system memorized in driver assistance buzzer control module - Displays the Freeze Frame Data when the malfunction is detected
DATA MONITOR	Displays real-time input/output data of driver assistance buzzer control module
ACTIVE TEST	Enables operation check of electrical loads by sending driving signal to them
ECU Identification	Displays driver assistance buzzer control module parts number

SELF DIAGNOSTIC RESULT

Self Diagnostic Result

Refer to [DAS-280, "DTC Index"](#).

FFD (Freeze Frame Data)

The driver assistance buzzer control module records the following data when the malfunction is detected.

Freeze Frame Data item [Unit]	Description
IGN Counter ^{Note}	It displays number of ignition switch OFF → ON after the malfunction is detected

NOTE:

- The number is 0 when is detected now.
- The number increases like 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

DATA MONITOR

NOTE:

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

Monitor item [Unit]	FUNCTION DESCRIPTION
Buzzer 1 request (ADAS) [Off/TYPE 1 - 3/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 1 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 1 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 2 request (ADAS) [Off/TYPE 1 - 3/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 2 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 2 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 3 request (ADAS) [Off/TYPE 1/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 3 volume (ADAS) [Vol. 1- 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item [Unit]	FUNCTION DESCRIPTION
Buzzer 3 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 4 request (ADAS) [Off/TYPE 1 - 7/Cancel]	Indicates buzzer request type status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 4 volume (ADAS) [Vol. 1 - 16]	Indicates buzzer volume status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
Buzzer 4 stop (ADAS) [CYCLE/IMEDIAT]	Indicates buzzer stop status as judged from ADAS control unit through ITS communication (The ADAS control unit transmits the driver assistance buzzer signal via ITS communication)
ADAS MALFUNCTION [Off/On]	Indicates ADAS control unit status
DR ASSIST BUZZ MALF [Off/On]	Indicates driver assistance control buzzer module status
DR ASSIST BUZZ STATUS [1/2/3/1, 2/2, 4/1, 4/4]	Indicates driver assistance control buzzer sound status

ACTIVE TEST

CAUTION:

Never perform ACTIVE TEST while driving the vehicle.

Item list

Active test item	Description
BUZZER 1 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Lane Departure Warning (LDW) • Blind Spot Warning (BSW) • Blind Spot Intervention
BUZZER 2 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Intelligent Cruise Control (ICC) • Predictive Forward Collision Warning (PFCW) • Distance Control Assist (DCA)
BUZZER 3 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Forward Emergency Braking (FEB)
BUZZER 4 (ADAS)	Sounds a buzzer used for following systems by arbitrarily operating ON/OFF • Predictive Forward Collision Warning (PFCW)

BUZZER 1 (ADAS)

Active test item	Operation	Description
BUZZER 1 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test
	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 2 (ADAS)

Active test item	Operation	Description
BUZZER 2 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test
	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 3 (ADAS)

Active test item	Operation	Description
BUZZER 3 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test
	On	Transmits the warning buzzer signal to the warning buzzer

BUZZER 4 (ADAS)

DIAGNOSIS SYSTEM (DRIVER ASSISTANCE BUZZER CONTROL MODULE)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Active test item	Operation	Description
BUZZER 4 (ADAS)	Off	Stops transmitting the warning buzzer signal below to end of the test
	On	Transmits the warning buzzer signal to the warning buzzer

ECU IDENTIFICATION

Displays driver assistance buzzer control module parts number.

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

CONSULT Function (LANE CAMERA)

INFOID:0000000014222347

APPLICATION ITEMS

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

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

WORK SUPPORT

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

SELF DIAGNOSTIC RESULT

Refer to [DAS-283, "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.
AIMING RESULT (NOK/OK)	Displays result of camera aiming.

DIAGNOSIS SYSTEM (LANE CAMERA UNIT)

< SYSTEM DESCRIPTION >

[DRIVER ASSISTANCE SYSTEM]

Monitored item (Unit)	Description
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.

ECU DIAGNOSIS INFORMATION

ADAS CONTROL UNIT

Reference Value

INFOID:0000000014224825

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

Monitor item	Condition		Value/Status
MAIN SW	Ignition switch ON	When MAIN switch is pressed	On
		When MAIN switch is not pressed	Off
SET/COAST SW	Ignition switch ON	When SET/COAST switch is pressed	On
		When SET/COAST switch is not pressed	Off
CANCEL SW	Ignition switch ON	When CANCEL switch is pressed	On
		When CANCEL switch is not pressed	Off
RESUME/ACC SW	Ignition switch ON	When RESUME/ACCELERATE switch is pressed	On
		When RESUME/ACCELERATE switch is not pressed	Off
DISTANCE SW	Ignition switch ON	When DISTANCE switch is pressed	On
		When DISTANCE switch is not pressed	Off
CRUISE OPE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC system is controlling	On
		When ICC system is not controlling	Off
BRAKE SW	Ignition switch ON	When brake or clutch pedal is depressed	Off
		When brake or clutch pedal is not depressed	On
STOP LAMP SW	Ignition switch ON	When brake pedal is depressed	On
		When brake pedal is not depressed	Off
IDLE SW	Engine running	Idling	On
		Except idling (depress accelerator pedal)	Off
SET DISTANCE	- Start the engine and turn the ICC system ON - Press the DISTANCE switch to change the vehicle-to-vehicle distance setting	When set to "long"	Long
		When set to "middle"	Mid
		When set to "short"	Short
CRUISE LAMP	Start the engine and press MAIN switch	ICC system ON (MAIN switch indicator ON)	On
		ICC system OFF (MAIN switch indicator OFF)	Off
OWN VHCL	NOTE: The item is indicated, but not monitored		Off
VHCL AHEAD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
		When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
ICC WARNING	Start the engine and press MAIN switch	When ICC system is malfunctioning (ICC system malfunction ON)	On
		When ICC system is normal (ICC system malfunction OFF)	Off

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition		Value/Status
VHCL SPEED SE	While driving		Displays the vehicle speed calculated by ADAS control unit
SET VHCL SPD	While driving	When vehicle speed is set	Displays the set vehicle speed
BUZZER O/P	Engine running	When the buzzer of the following system operates • Vehicle-to-vehicle distance control mode • DCA system • PFCW system • FEB system	On
		When the buzzer of the following system not operates • Vehicle-to-vehicle distance control mode • DCA system • PFCW system • FEB system	Off
THRTL SENSOR	NOTE: The item is indicated, but not monitored		0.0
ENGINE RPM	Engine running		Equivalent to tachometer reading
WIPER SW	Ignition switch ON	Wiper not operating	Off
		Wiper LO operation	Low
		Wiper HI operation	High
YAW RATE	NOTE: The item is indicated, but not monitored		0.0
BA WARNING	Engine running	FEB OFF indicator lamp ON • When FEB system is malfunctioning • When FEB system is turned to OFF	On
		FEB OFF indicator lamp OFF • When FEB system is normal • When FEB system is turned to ON	Off
STP LMP DRIVE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When ICC brake hold relay is activated	On
		When ICC brake hold relay is not activated	Off
D RANGE SW	Engine running	When the selector lever is in "D" position or manual mode	On
		When the selector lever is in any position other than "D" or manual mode	Off
NP RANGE SW	Engine running	When the selector lever is in "N", "P" position	On
		When the selector lever is in any position other than "N", "P"	Off
PKB SW	Ignition switch ON	When the parking brake is applied	On
		When the parking brake is released	Off
PWR SUP MONI	Engine running		Power supply voltage value of ADAS control unit
VHCL SPD AT	While driving		Value of A/T vehicle speed sensor signal
THRTL OPENING	Engine running	Depress accelerator pedal	Displays the throttle position

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition		Value/Status
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 switch indicator ON	On
		SET switch indicator OFF	Off
DISTANCE	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the distance from the preceding vehicle
		When a vehicle ahead is not detected	0.0
RELATIVE SPD	Drive the vehicle and activate the vehicle-to-vehicle distance control mode	When a vehicle ahead is detected	Displays the relative speed.
		When a vehicle ahead is not detected	0.0
DYNA ASIST SW	Ignition switch ON	When dynamic driver assistance switch is pressed	On
		When dynamic driver assistance switch is not pressed	Off
DCA ON IND	Start the engine and press dynamic driver assistance switch (When DCA setting is ON)	DCA system OFF	Off
		DCA system ON	On
DCA VHL AHED	Drive the vehicle and activate the DCA system	When a vehicle ahead is not detected (vehicle ahead detection indicator OFF)	Off
		When a vehicle ahead is detected (vehicle ahead detection indicator ON)	On
FCW SYSTEM ON	Ignition switch ON	When the PFCW system is ON	On
		When the PFCW system is OFF	Off
APA TEMP	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA PWR	Ignition switch ON		Power supply voltage value of accelerator pedal actuator
LDW SYSTEM ON	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDW ON LAMP	Ignition switch ON	When the LDW system is ON	On
		When the LDW system is OFF	Off
LDP ON IND	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	LDP ON indicator lamp ON	On
		LDP ON indicator lamp OFF	Off
LANE DPRT W/L	Drive the vehicle and activate the LDW system or LDP system	Lane departure warning lamp ON	On
		Lane departure warning lamp OFF	Off

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ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition		Value/Status
LDW BUZER OUT-PUT	Drive the vehicle and activate the LDW/LDP system or Blind Spot Warning/Blind Spot Intervention system	When the buzzer of the following system operates • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	On
		When the buzzer of the following system does not operate • LDW/LDP system • Blind Spot Warning/Blind Spot Intervention system	Off
LDP SYSTEM ON	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
WARN REQ	Drive the vehicle and activate the LDP system	Lane departure warning is operating	On
		Lane departure warning is not operating	Off
READY signal	Start the engine and press dynamic driver assistance switch (When LDP system setting is ON)	When the LDP system is ON	On
		When the LDP system is OFF	Off
Camera lost	Drive the vehicle and activate the LDW system, LDP system or Blind Spot Intervention system	Both side lane markers are detected	Detect
		Deviate side lane marker is lost	Deviate
		Both side lane markers are lost	Both
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	Ignition switch ON		FUNC3
FUNC ITEM (FCW)	Engine running		On
FUNC ITEM (LDW)	Engine running		On
FUNC ITEM (BSW)	Engine running		On
DCA SELECT	Ignition switch ON	"Distance Control Assist" set with the integral switch is ON	On
		"Distance Control Assist" set with the integral switch is OFF	Off
LDP SELECT	Ignition switch ON	"Lane Departure Intervention" set with the integral switch is ON	On
		"Lane Departure Intervention" set with the integral switch is OFF	Off
BSI SELECT	Ignition switch ON	"Blind Spot Intervention" set with the integral switch is ON	On
		"Blind Spot Intervention" set with the integral switch is OFF	Off

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition		Value/Status
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
DRIVE MODE STATS	Ignition switch ON	When drive mode select switch position is STANDARD	STD
		When drive mode select switch position is in SPORT	SPORT
		When drive mode select switch position is in ECO	ECO
		When drive mode select switch position is in SNOW	SNOW
		When drive mode select switch position is in PERSONAL	STD
		A signal other than those above is input	ERROR
WARN SYS SW	Ignition switch ON	When warning systems switch is pressed	On
		When warning systems switch is not pressed	Off
BSW/BSI WARN LMP	Engine running	When the BSW system is malfunctioning	On
		When the BSW system is normal	Off
BSI ON IND	Engine running	Blind Spot Intervention warning ON	On
		Blind Spot Intervention warning OFF	Off
BSW SYSTEM ON	Ignition switch ON	When the BSW system is ON	On
		When the BSW system is OFF	Off
BSI SYSTEM ON	Start the engine and press dynamic driver assistance switch (When Blind Spot Intervention system setting is ON)	When the Blind Spot Intervention system is ON	On
		When the Blind Spot Intervention system is OFF	Off
FCW SYSTEM ON	Engine running	When the FEB/PFCW system is ON	On
		When the FEB/PFCW system is OFF	Off
BCI SYSTEM ON	Engine running	When the BCI system is ON	On
		When the BCI system is OFF	Off
BCI SWITCH	NOTE: The item is indicated, but not monitored		Off
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
SYSTEM CANCEL MESSAGE	Engine running	When the vehicle is normal	NOREQ
		When the wheel is slipping	SLIP
		When the drive mode selector is SNOW mode	SNOW
		When the VDC is OFF	VDC OFF

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ADAS CONTROL UNIT

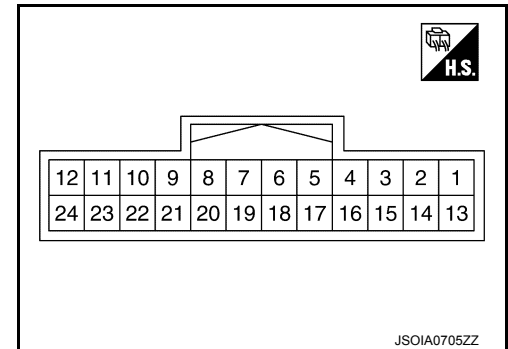
< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition		Value/Status
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(DCA)	Ignition switch ON		On
ITS SETTING ITEM(LDP)	Ignition switch ON		On
ITS SETTING ITEM(BSI)	Ignition switch ON		On
BSI WARNING INDICATOR	Engine running	When the Blind Spot Intervention is malfunctioning	On
		When the Blind Spot Intervention is normal	Off
BSW ON INDICATOR	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 BRIGHTNESS	Ignition switch ON	BSW system OFF	Nothing
		Blind Spot Warning/Blind Spot Intervention indicator brightness bright	Bright
		Blind Spot Warning/Blind Spot Intervention indicator brightness normal	Normal
		Blind Spot Warning/Blind Spot Intervention indicator brightness dark	Dark

TERMINAL LAYOUT

PHYSICAL VALUES



ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (B)	Ground	CAN high	—	—	—	—
2 (W)		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 (Y)		Chassis communication low	—	—	—	—
12 (R)		Ignition power supply	Input	Ignition switch ON		Battery voltage
17 (G)		ICC brake hold relay drive signal	Output	Ignition switch ON	— At “STOP LAMP” test of “Active test”	Battery voltage 0 V
18 (BR)		Warning systems switch	Input	Ignition switch ON	When warning systems switch is not pressed When warning systems switch is pressed	Battery voltage 0 V
19 (W)		Warning systems ON indicator	Output	Ignition switch ON	Warning systems ON indicator ON Warning systems ON indicator OFF	0 V Battery voltage
22 (BG)		BCI OFF switch	Input	Ignition switch ON	When BCI OFF switch is not pressed When BCI OFF switch is pressed	Battery voltage 0 V

Fail-safe (ADAS Control Unit)

INFOID:0000000014224826

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
Predictive Forward Collision Warning (PFCW)	High-pitched tone	Warning message	Cancel
Distance Control Assist (DCA)	High-pitched tone	DCA system warning	Cancel
Lane Departure Warning (LDW)	—	Lane departure warning lamp	Cancel

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

System	Buzzer	Warning lamp/Warning display	Description
Lane Departure Prevention (LDP)	Low-pitched tone	Lane departure warning lamp	Cancel
Blind Spot Warning (BSW)	—	Blind Spot Warning warning lamp	Cancel
Blind Spot Intervention	Low-pitched tone	Blind Spot Intervention warning lamp	Cancel
Backup Collision Intervention (BCI)	High-pitched tone	Backup Collision Intervention warning indicator	Cancel
Rear Cross Traffic Alert (RCTA)	—	Rear Cross Traffic Alert warning	Cancel

DTC Inspection Priority Chart

INFOID:0000000014224827

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

Priority	Detected items (DTC)	
1	- U1507: LOST COMM (SIDE RDR R) - U1508: LOST COMM (SIDE RDR L)	
2	1CA0A: CONFIG UNFINISHED - U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)	
3	- C1B00: CAMERA UNIT MALF - C1F02: APA C/U MALF - C1B53: SIDE RDR R MALF - C1B54: SIDE RDR L MALF - C1B84: DIST SEN MALFUNCTION	
4	- C1A01: POWER SUPPLY CIR - C1A02: POWER SUPPLY CIR 2 - C1A04: ABS/TCS/VDC CIRC - C1A05: BRAKE SW/STOP L SW - C1A06: OPERATION SW CIRC - C1A13: STOP LAMP RLY FIX - C1A14: ECM CIRCUIT - C1A24: NP RANGE - C1A26: ECD MODE MALF - C1A27: ECD PWR SUPPLY CIR - C1A33: CAN TRANSMISSION ERR - C1A34: COMMAND ERROR - C1A35: APA CIR - C1A36: APA CAN COMM CIR - C1A37: APA CAN CIR 2 - C1A38: APA CAN CIR 1 - C1A39: STRG SEN CIR - C1A40: SYSTEM SW CIR - C1B01: CAM AIMING INCOMP - C1B03: CAM ABNORMAL TMP DETCT - C1B56: SONAR CIRCUIT - C1B57: AVM CIRCUIT - C1B58: DR ASSIST BUZZER CIRCUIT - C1B82: DIST SEN OFF-CENTER - C1B85: DIST SEN ABNORMAL TEMP - C1B86: DIST SEN PWR SUP CIR - C1F01: APA MOTOR MALF - C1F05: APA PWR SUPPLY CIR	- U0121: VDC CAN CIR 2 - U0126: STRG SEN CAN CIR 1 - U0235: ICC SENSOR CAN CIRC 1 - U0401: ECM CAN CIR 1 - U0402: TCM CAN CIR 1 - U0415: VDC CAN CIR 1 - U0424: HVAC CAN CIR 1 - U0428: STRG SEN CAN CIR 2 - 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 - U150B: ECM CAN CIRC 3 - U150C: VDC CAN CIRC 3 - U150D: TCM CAN CIRC 3 - U150E: BCM CAN CIRC 3 - U1512: HVAC CAN CIRC3 - U1513: METER CAN CIRC 3 - U1514: STRG SEN CAN CIRC 3 - U1515: ICC SENSOR CAN CIRC 3 - U1516: CAM CAN CIR 3 - U1517: APA CAN CIRC 3 - U1518: SIDE RDR L CAN CIRC 3 - U1519: SIDE RDR R CAN CIRC 3 - U1521: SONAR CAN COMMUNICATION 2 - U1522: SONAR CAN COMMUNICATION 1 - U1523: SONAR CAN COMMUNICATION 3 - U1524: AVM CAN COMMUNICATION 1 - U1525: AVM CAN COMMUNICATION 3 - U1530: DR ASSIST BUZZER CAN CIR 1

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Priority	Detected items (DTC)
5	• C1A03: VHCL SPEED SE CIRC
6	• C1A15: GEAR POSITION
7	• C1A00: CONTROL UNIT

DTC Index

INFOID:0000000014224828

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)/Blind Spot Intervention (BSI)/Rear Cross Traffic Alert (RCTA)
- G: Back-up Collision Intervention (BCI)
- H: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	55	NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED	—	—
C1A0A	41	CONFIG UNFINISHED	A, B, C, D, E, F, G, H	DAS-68
C1A00	0	CONTROL UNIT	A, B, C, D, E, F, G, H	DAS-69
C1A01	1	POWER SUPPLY CIR	A, B, C, D, E, F, G, H	DAS-70
C1A02	2	POWER SUPPLY CIR 2	A, B, C, D, E, F, G, H	DAS-70
C1A03	3	VHCL SPEED SE CIRC	A, B, C, D, E, F, G, H	DAS-71
C1A04	4	ABS/TCS/VDC CIRC	A, B, C, D, E, F, G, H	DAS-73
C1A05	5	BRAKE SW/STOP L SW	A, B, C, D, G, H	DAS-75
C1A06	6	OPERATION SW CIRC	A, B, C, D, E, H	DAS-80
C1A13	13	STOP LAMP RLY FIX	A, B, C, D, E, G	DAS-82
C1A14	14	ECM CIRCUIT	A, B, C, D, E	DAS-89
C1A15	15	GEAR POSITION	A, B, C, D, E	DAS-91
C1A24	24	NP RANGE	A, B, C, D, E, F, G	DAS-93
C1A26	26	ECD MODE MALF	A, B, C, D, G	DAS-95
C1A27	27	ECD PWR SUPPLY CIR	A, B, C, D, G	DAS-97
C1A33	33	CAN TRANSMISSION ERR	A, B, C, D, E	DAS-99
C1A34	34	COMMAND ERROR	A, B, C, D, E	DAS-100
C1A35	35	APA CIR	A, C, D, E	DAS-101
C1A36	36	APA CAN COMM CIR	A, C, D, E	DAS-102
C1A37	133	APA CAN CIR 2	A, C, D, E	DAS-103
C1A38	132	APA CAN CIR 1	A, C, D, E	DAS-104
C1A39	39	STRG SEN CIR	A, B, C, D, E, F, G	DAS-105
C1A40	40	SYSTEM SW CIR	G	DAS-105
C1B00	81	CAMERA UNIT MALF	F, H	DAS-108
C1B01	82	CAM AIMING INCOMP	F, H	DAS-109
C1B03	83	ABNRML TMP DETCT	F, H	DAS-110
C1B53	84	SIDE RDR R MALF	F, G	DAS-111

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)/Blind Spot Intervention (BSI)/Rear Cross Traffic Alert (RCTA)
- G: Back-up Collision Intervention (BCI)
- H: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
C1B54	85	SIDE RDR L MALF	F, G	DAS-112
C1B56	86	SONAR CIRCUIT	G	DAS-113
C1B57	87	AVM CIRCUIT	G	DAS-114
C1A58	182	DR ASSIST BUZZER CIRCUIT		DAS-115
C1B82	12	DIST SEN OFF-CENTER	A, C, D, E	DAS-116
C1B83	16	DIST SEN BLOCKED	A, C, D, E	DAS-117
C1B84	17	DIST SEN MALFUNCTION	A, C, D, E	DAS-118
C1B85	21	DIST SEN ABNORMAL TEMP	A, C, D, E	DAS-119
C1B86	80	DIST SEN PWR SUP CIR	A, C, D, E	DAS-120
C1F01	91	APA MOTOR MALF	A, C, D, E	DAS-122
C1F02	92	APA C/U MALF	A, C, D, E	DAS-123
C1F05	95	APA PWR SUPPLY CIR	A, C, D, E	DAS-124
U0121	127	VDC CAN CIR 2	A, B, C, D, E, F, G, H	DAS-125
U0126	130	STRG SEN CAN CIR 1	A, B, C, D, E, F, G	DAS-126
U0235	144	ICC SENSOR CAN CIRC 1	A, C, D, E	DAS-127
U0401	120	ECM CAN CIR 1	A, B, C, D, E, F, G	DAS-128
U0402	122	TCM CAN CIR 1	A, B, C, D, E, F, G, H	DAS-129
U0415	126	VDC CAN CIR 1	A, B, C, D, E, F, G, H	DAS-131
U0424	156	HVAC CAN CIR 1		DAS-133
U0428	131	STRG SEN CAN CIR 2	A, B, C, D, E, F, G	DAS-134
U1000 ^{NOTE}	100	CAN COMM CIRCUIT	A, B, C, D, E, F, G, H	DAS-135
U1010	110	CONTROL UNIT (CAN)	A, B, C, D, E, F, G, H	DAS-137
U150B	157	ECM CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-138
U150C	158	VDC CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-140
U150D	159	TCM CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-142
U150E	160	BCM CAN CIRC 3	A, B, C, D, F, G, H	DAS-144
U1500	145	CAM CAN CIR2	F, H	DAS-145
U1501	146	CAM CAN CIR 1	F, H	DAS-146
U1502	147	ICC SEN CAN COMM CIR	A, C, D, E	DAS-147
U1503	150	SIDE RDR L CAN CIR 2	F, G	DAS-148
U1504	151	SIDE RDR L CAN CIR 1	F, G	DAS-149
U1505	152	SIDE RDR R CAN CIR 2	F, G	DAS-150
U1506	153	SIDE RDR R CAN CIR 1	F, G	DAS-151
U1507	154	LOST COMM (SIDE RDR R)	F, G	DAS-152
U1508	155	LOST COMM (SIDE RDR L)	F, G	DAS-153
U1512	162	HVAC CAN CIRC3		DAS-154

ADAS CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Systems for fail-safe

- A: Vehicle-to-vehicle distance control mode
- B: Conventional (fixed speed) cruise control mode
- C: Distance Control Assist (DCA)
- D: Forward Emergency Braking (FEB)
- E: Predictive Forward Collision Warning (PFCW)
- F: Blind Spot Warning (BSW)/Blind Spot Intervention (BSI)/Rear Cross Traffic Alert (RCTA)
- G: Back-up Collision Intervention (BCI)
- H: Lane Departure Warning (LDW)/Lane Departure Prevention (LDP)

DTC		CONSULT display	Fail-safe	Reference
CONSULT	On board display		System	
U1513	163	METER CAN CIRC 3	A, B, C, D, E, F, G, H	DAS-155
U1514	164	STRG SEN CAN CIRC 3	A, B, C, D, E, F, G	DAS-156
U1515	165	ICC SENSOR CAN CIRC 3	A, C, D, E	DAS-157
U1516	166	CAM CAN CIRC 3	F, H	DAS-158
U1517	167	APA CAN CIRC 3	A, C, D, E	DAS-159
U1518	168	SIDE RDR L CAN CIRC 3	F, G	DAS-160
U1519	169	SIDE RDR R CAN CIRC 3	F, G	DAS-161
U1521	177	SONAR CAN COMMUNICATION 2	G	DAS-163
U1522	178	SONAR CAN COMMUNICATION 1	G	DAS-164
U1523	179	SONAR CAN COMMUNICATION 3	G	DAS-165
U1524	180	AVM CAN COMMUNICATION 1	G	DAS-166
U1525	181	AVM CAN COMMUNICATION 3	G	DAS-167
U1530	183	DR ASSIST BUZZER CAN CIR1		DAS-168

NOTE:

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

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

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ICC SENSOR

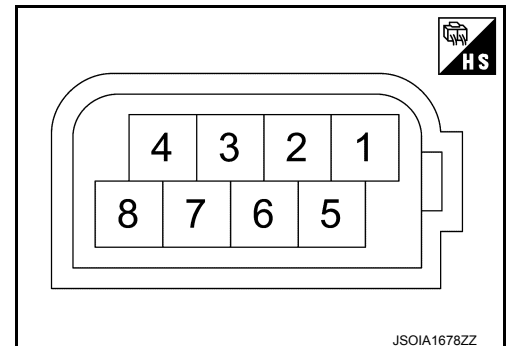
Reference Value

INFOID:0000000014224831

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
RADAR OFFSET	NOTE: The item is indicated, but not used		—
RADAR HEIGHT	NOTE: The item is indicated, but not used		—
STEERING ANGLE	Ignition switch ON	When setting the steering wheel in straight-ahead position	0.0
		When turning the steering wheel 90° rightward	+90
		When turning the steering wheel 90° leftward	-90
STRG ANGLE SPEED	Ignition switch ON	At the time of turning the steering wheel	Steering wheel turning speed is displayed
L/R ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Horizontal correction value is displayed
U/D ADJUST	Ignition switch ON	At the completion of radar alignment adjustment	Vertical correction value is displayed

TERMINAL LAYOUT



PHYSICAL VALUES

ICC SENSOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal No. (Wire color)		Description		Condition	Standard value	Reference value (Approx.)
+	—	Signal name	Input/ Output			
1 (P)	8 (B)	Ignition power supply	Input	Ignition switch ON	9.5 - 16 V	Battery voltage
3 (L)	—	ITS communication-L	—	—	—	—
6 (Y)		ITS communication-H	—	—	—	—
8 (B)	Ground	Ground	—	Ignition switch ON	0 - 0.1 V	0 V

Fail-safe (ICC Sensor)

INFOID:0000000014224832

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:0000000014224833

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

ICC SENSOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

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 • C1A13: STOP LSMP RLY FIX • C1A14: ECM CIRCUIT • C1A15: GEAR POSITION • C1A23: UNIT LOW TEMP • C1A24: NP RANGE • C1A26: ECD MODE MALF • C1A27: ECD PWR SUPPLY CIR • C1A33: CAN TRANSMISSION ERR • C1A34: COMMAND ERROR • C1A35: APA CIR • C1A36: APA CAN COMM CIR • C1A37: APA CAN CIR2 • C1A38: APA CAN CIR1 • 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 SUPPLY 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 • U1517: APA CAN CIRC3
4	• C1A00: CONTROL UNIT

DTC Index

INFOID:0000000014224834

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.

ICC SENSOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

×: Applicable

DTC			Fail-safe function					Reference
			Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Distance Control Assist (DCA)	Forward Collision Warning (FCW)	Forward Emergency Braking (FEB)	
CONSULT	CONSULT display	ICC system warning lamp						
C1A00	CONTROL UNIT	ON	×	×	×	×	×	CCS-96, "ICC SENSOR : DTC Logic"
C1A01	POWER SUPPLY CIR	ON	×	×	×	×	×	CCS-98, "ICC SENSOR : DTC Logic"
C1A02	POWER SUPPLY CIR2	ON	×	×	×	×	×	CCS-98, "ICC SENSOR : DTC Logic"
C1A03	VHCL_SPEED SE CIRC	ON	×	×	×	×	×	CCS-100, "DTC Logic"
C1A04	ABS/TCS/VDC_CIRC	ON	×	×	×	×	×	CCS-102, "DTC Logic"
C1A05	BRAKE_SW/STOP_L_SW	ON	×	×	×	×	×	CCS-104, "DTC Logic"
C1A06	OPERATION_SW_CIRC	ON	×	×	×	×	×	CCS-109, "DTC Logic"
C1A13	STOP_LAMP_RLY_FIX	ON	×	×	×	×	×	CCS-112, "DTC Logic"
C1A14	ECM_CIRCUIT	ON	×	×	×	×	×	CCS-118, "DTC Logic"
C1A15	GEAR_POSITION	ON	×	×	×	×	×	CCS-119, "DTC Logic"
C1A23	UNIT HIGH TEMP	ON	×	×	×	×	×	CCS-121, "DTC Logic"
C1A24	NP_RANGE	ON	×	×	×	×	×	CCS-122, "DTC Logic"
C1A26	ECD_MODE_MALF	ON	×	×	×	×	×	CCS-124, "DTC Logic"
C1A27	ECD_PWR_SUPLY_CIR	ON	×	×	×	×	×	CCS-126, "DTC Logic"
C1A33	CAN TRANSMISSION ERROR	ON	×	×	×	×	×	CCS-128, "DTC Logic"
C1A34	COMMAND ERROR	ON	×	×	×	×	×	CCS-129, "DTC Logic"
C1A35	APA CIR	ON	×	×	×	×	×	CCS-130, "DTC Logic"

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ICC SENSOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC			Fail-safe function					Reference
			Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Distance Control Assist (DCA)	Forward Collision Warning (FCW)	Forward Emergency Braking (FEB)	
CONSULT	CONSULT display	ICC system warning lamp						
C1A36	APA CAN COMM CIR	ON	×	×	×	×	×	CCS-131. "DTC Logic"
C1A37	APA CAN CIR2	ON	×	×	×	×	×	CCS-132. "DTC Logic"
C1A38	APA CAN CIR2	ON	×	×	×	×	×	CCS-133. "DTC Logic"
C1A39	STRG SEN CIR	ON	×	×	×	×	×	CCS-135. "ICC SEN- SOR : DTC Logic"
C1B58	DR ASSIST BUZZER CIRCUIT	ON	×	×	×	×	×	CCS-169. "DTC Logic"
C1B83	DIST SEN BLOCKED	ON	×	×	×	×	×	CCS-137. "DTC Logic"
C1F01	APA MOTOR MALF	ON	×	×	×	×	×	CCS-138. "DTC Logic"
C1F02	APA C/U MALF	ON	×	×	×	×	×	CCS-139. "DTC Logic"
C1F05	APA PWR SUPPLY CIR	ON	×	×	×	×	×	CCS-140. "DTC Logic"
U0121	VDC CAN CIR2	ON	×	×	×	×	×	CCS-142. "ICC SEN- SOR : DTC Logic"
U0126	STRG SEN CAN CIR1	ON	×	×	×	×	×	CCS-144. "ICC SEN- SOR : DTC Logic"
U0235	ICC SENSOR CAN CIR1	ON	×	×	×	×	×	CCS-146. "DTC Logic"
U0401	ECM CAN CIR1	ON	×	×	×	×	×	CCS-147. "DTC Logic"
U0402	TCM CAN CIRC1	ON	×	×	×	×	×	CCS-148. "DTC Logic"
U0415	VDC CAN CIR1	ON	×	×	×	×	×	CCS-151. "ICC SEN- SOR : DTC Logic"

ICC SENSOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC			Fail-safe function					Reference
			Vehicle-to-vehicle distance control mode	Conventional (fixed speed) cruise control mode	Distance Control Assist (DCA)	Forward Collision Warning (FCW)	Forward Emergency Braking (FEB)	
CONSULT	CONSULT display	ICC system warning lamp						
U0428	STRG SEN CAN CIR2	ON	×	×	×	×	×	CCS-153. "ICC SEN- SOR : DTC Logic"
U1000	CAN COMM CIRCUIT	ON	×	×	×	×	×	CCS-155. "ICC SEN- SOR : DTC Logic"
U1010	CONTROL UNIT (CAN)	ON	×	×	×	×	×	CCS-157. "ICC SEN- SOR : DTC Logic"
U150B	ECM CAN CIRC3	ON	×	×	×	×	×	CCS-158. "DTC Logic"
U150C	VDC CAN CIRC3	ON	×	×	×	×	×	CCS-160. "DTC Logic"
U150D	TCM CAN CIRC3	ON	×	×	×	×	×	CCS-162. "DTC Logic"
U150E	BCM CAN CIRC3	ON	×	×	×	×	×	CCS-164. "DTC Logic"
U1513	METER CAN CIRC#	ON	×	×	×	×	×	CCS-165. "DTC Logic"
U1514	STRG SEN CAN CIRC3	ON	×	×	×	×	×	CCS-166. "DTC Logic"
U1515	ICC SENSOR CAN CIRC3	ON	×	×	×	×	×	CCS-167. "DTC Logic"
U1517	APA CAN CIRC3	ON	×	×	×	×	×	CCS-168. "DTC Logic"

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DAS

ACCELERATOR PEDAL ACTUATOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

ACCELERATOR PEDAL ACTUATOR

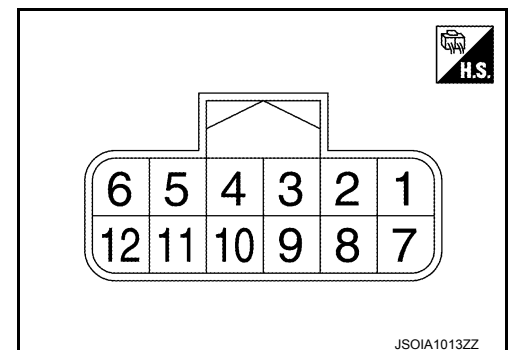
Reference Value

INFOID:0000000014222356

VALUES ON THE DIAGNOSIS TOOL

Monitor item	Condition		Value/Status
TGT FBK FRC	Drive the vehicle and operate the DCA system	When the ADAS control unit is controlling the accelerator pedal actuator	It changes with the demand from the ADAS control unit
ACT MOT POSI	Engine running	Depress accelerator pedal	It changes according to the depressed amount of accelerator pedal
AP OPEN	Engine running	Depress accelerator pedal	It changes according to the depressed amount of accelerator pedal
APA TEMP	Engine running		Display the accelerator pedal actuator integrated motor temperature
APA CURRENT	Drive the vehicle and operate the DCA system	When the ADAS control unit is controlling the accelerator pedal actuator	Display the accelerator pedal actuator motor operation consumption current
APA PWR	Ignition switch ON		Battery voltage
APA OPE STATS	Engine running	When the accelerator pedal actuator control is permitted	On
		When the accelerator pedal actuator control is invalid	Off
APA STATS	Engine running	When the accelerator pedal actuator is normal	Ready
		When the accelerator pedal actuator is temporarily malfunctioning	TP NG
		When the accelerator pedal actuator is malfunctioning	NG
		During the accelerator pedal actuator operation preparations	Init

TERMINAL LAYOUT



PHYSICAL VALUES

ACCELERATOR PEDAL ACTUATOR

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	–	Signal name	Input/ Output		
1 (BG)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
2 (R)		Ignition power supply	Input	Ignition switch ON	Battery voltage
3 (BG)		ITS communication high	—	—	—
4 (L/G)		Sensor power supply (Accelerator pedal position sensor 1)	—	—	—
5 (W)		Sensor ground (Accelerator pedal position sensor 1)	—	—	—
(6) (W/L)		Accelerator pedal position sensor 1	—	—	—
7 (GR)		Ground	—	Ignition switch ON	0 V
9 (Y)		ITS communication low	—	—	—
10 (LY)		Sensor power supply (Accelerator pedal position sensor 2)	—	—	—
11 (O)		Sensor ground (Accelerator pedal position sensor 2)	—	—	—
(12) (O/L)		Accelerator pedal position sensor 2	—	—	—

DTC Inspection Priority Chart

INFOID:0000000014222357

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

Priority	Detected items (DTC)
1	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
2	C1F02: APA C/U MALF
3	- C1F01: APA MOTOR MALF - C1F05: APA PWR SUPPLY CIR

DTC Index

INFOID:0000000014222358

×: Applicable

CONSULT display	Fail-safe function	Reference
C1F01: APA MOTOR MALF	×	DAS-341
C1F02: APA C/U MALF	×	DAS-342
C1F05: APA PWR SUPPLY CIR	×	DAS-343
U1000: CAN COMM CIRCUIT	×	DAS-349
U1010: CONTROL UNIT (CAN)	×	DAS-354

DAS

P

SIDE RADAR LH

Reference Value

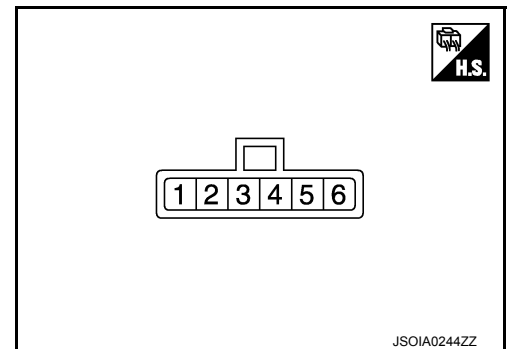
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VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
BEAM DISTANCE	NOTE: The item is displayed, but it is not used.	—
BEAM POSITION	NOTE: The item is displayed, but it is not used.	—
SIDE RADAR MALF	Side radar is normal.	Off
	Side radar is malfunctioning.	On
BLOCKAGE COND	Side radar is not blocked.	Off
	Side radar is blocked.	On
ACTIVATE OPE	NOTE: The item is displayed, but it is not used.	—
VEHICLE DETECT	Radar does not detect a vehicle.	Off
	Radar detects a vehicle.	On

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail-safe (Side Radar)

INFOID:0000000014222360

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning/Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Blind Spot Intervention

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds and then the Blind Spot Intervention malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Back-up Collision Intervention (BCI)

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

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:0000000014222361

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• U0104: ADAS CAN CIR 1 • U0405: ADAS CAN CIR 2
3	C1B50: SIDE RDR MALFUNCTION
4	• C1B51: BSW/BSI IND SHORT CIR • C1B52: BSW/BSI IND OPEN CIR • C1B55: RADAR BLOCKAGE

DTC Index

INFOID:0000000014222362

x: Applicable

DTC		Fail-safe		Reference page
		Blind Spot Warning/ Rear Cross Traffic Alert/ Blind Spot Intervention	BCI	
C1B50	SIDE RDR MALFUNCTION	x	x	DAS-334
C1B51	BSW/BSI IND SHORT CIR	x	x	DAS-335
C1B52	BSW/BSI IND OPEN CIR	x	x	DAS-337
C1B55	RADAR BLOCKAGE	x	x	DAS-339
U1000	CAN COMM CIRCUIT	x	x	DAS-351
U1010	CONTROL UNIT (CAN)	x	x	DAS-355

SIDE RADAR LH

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC		Fail-safe		Reference page
		Blind Spot Warning/ Rear Cross Traffic Alert/ Blind Spot Intervention	BCI	
U0104	ADAS CAN CIR1	×	×	DAS-344
U0405	ADAS CAN CIR2	×	×	DAS-347

SIDE RADAR RH

Reference Value

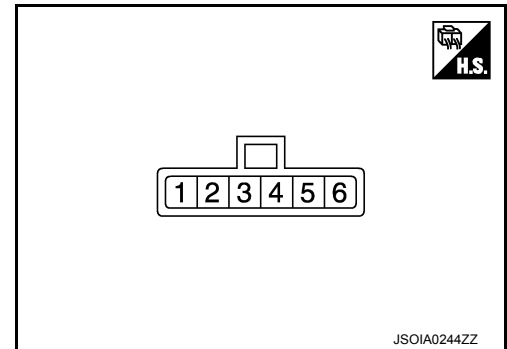
INFOID:0000000014222363

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
BEAM DISTANCE	NOTE: The item is displayed, but it is not used.	—
BEAM POSITION	NOTE: The item is displayed, but it is not used.	—
SIDE RADAR MALF	Side radar is normal.	Off
	Side radar is malfunctioning.	On
BLOCKAGE COND	Side radar is not blocked.	Off
	Side radar is blocked.	On
ACTIVATE OPE	NOTE: The item is displayed, but it is not used.	—
VEHICLE DETECT	Radar does not detect a vehicle.	Off
	Radar detects a vehicle.	On

TERMINAL LAYOUT



PHYSICAL VALUES

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

Fail-safe (Side Radar)

INFOID:0000000014222364

FAIL-SAFE CONTROL BY DTC

Blind Spot Warning (BSW)

If a malfunction occurs in the side radar, ADAS control unit cancels control, and turns ON the Blind Spot Warning/Blind Spot Intervention malfunction in information display.

TEMPORARY DISABLED STATUS AT BLOCKAGE

Blind Spot Warning (BSW)

When the side radar is blocked, the operation is temporarily cancelled. Then the Blind Spot Warning malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Blind Spot Intervention

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds and then the Blind Spot Intervention malfunction in information display. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

Back-up Collision Intervention (BCI)

When the side radar is blocked, the operation is temporarily cancelled. Then the buzzer sounds. Also, under the following conditions, the operation may be temporarily cancelled.

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.

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:0000000014222365

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• U0104: ADAS CAN CIR 1 • U0405: ADAS CAN CIR 2
3	C1B50: SIDE RDR MALFUNCTION
4	• C1B51: BSW/BSI IND SHORT CIR • C1B52: BSW/BSI IND OPEN CIR • C1B55: RADAR BLOCKAGE

DTC Index

INFOID:0000000014222366

×: Applicable

DTC		Fail-safe		Reference page
		Blind Spot Warning/Rear Cross Traffic Alert/Blind Spot Intervention warning	BCI	
C1B50	SIDE RDR MALFUNCTION	×	×	DAS-334
C1B51	BSW/BSI IND SHORT CIR	×	×	DAS-335
C1B52	BSW/BSI IND OPEN CIR	×	×	DAS-337
C1B55	RADAR BLOCKAGE	×	×	DAS-339
U1000	CAN COMM CIRCUIT	×	×	DAS-352
U1010	CONTROL UNIT (CAN)	×	×	DAS-356

SIDE RADAR RH

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DTC		Fail-safe		Reference page
		Blind Spot Warning/Rear Cross Traffic Alert/Blind Spot Intervention warning	BCI	
U0104	ADAS CAN CIR1	×	×	DAS-344
U0405	ADAS CAN CIR2	×	×	DAS-347

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DAS

DRIVER ASSISTANCE BUZZER CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE BUZZER CONTROL MODULE

Reference Value

INFOID:0000000014222367

VALUES ON THE DIAGNOSIS TOOL

Monitor item	Condition		Value/Status
Buzzer 1 request (ADAS)	Drive the vehicle and operate each system	Except for the LDW/LDP/Blind Spot Warning/Blind Spot Intervention warning condition	Off
		When the LDW warning condition	TYPE 1
		When the BSW warning condition	TYPE 2
		When the Blind Spot Intervention warning condition	TYPE 3
		When the warning condition cancel	Cancel
Buzzer 1 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
Buzzer 1 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 2 request (ADAS)	Drive the vehicle and operate each system	Except for the ICC/PFCW/DCA warning condition	Off
		When the approach warning condition	TYPE 1
		When the PFCW warning condition	TYPE 2
		When the DCA condition	TYPE 3
		When the warning condition cancel	Cancel
Buzzer 2 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
Buzzer 2 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 3 request (ADAS)	Drive the vehicle and operate each system	Except for the FEB warning condition	Off
		When the FEB warning condition	TYPE 1
		When the warning condition cancel	Cancel
Buzzer 3 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
Buzzer 3 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
Buzzer 4 request (ADAS)	Drive the vehicle and operate each system	Except for the PFCW warning condition	Off
		When the PFCW warning condition	TYPE 1
		When the warning condition cancel	Cancel
Buzzer 4 volume (ADAS)	Ignition switch ON	When the buzzer sound	It changes according to the sound volume of buzzer
Buzzer 4 stop (ADAS)	Ignition switch ON	When the buzzer cancel immediate	IMEDIAT
		When the buzzer cancel other than above	CYCLE
ADAS MALFUNCTION	Ignition switch ON	When the ADAS control unit malfunction	On
		When the ADAS control unit normal	Off

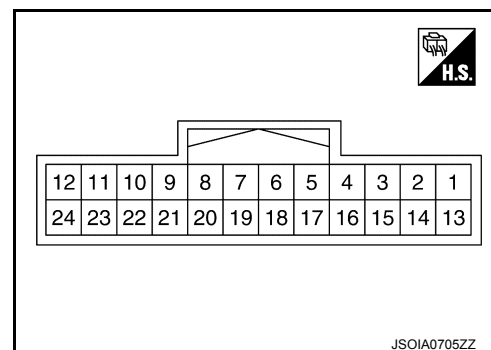
DRIVER ASSISTANCE BUZZER CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Monitor item	Condition		Value/Status
DR ASSIST BUZZ MALF	Ignition switch ON	When the driver assistance control module malfunction	On
		When the driver assistance control module normal	Off
DR ASSIST BUZZ STATUS	Drive the vehicle and operate each system	Except for the warning condition	Off
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention system warning in progress	1
		ICC/PFCW/DCA system warning in progress	2
		FEB system warning in progress	3
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention/ICC/PFCW/DCA system warning in progress	1, 2
		ICC/PFCW/DCA system warning in progress.	2, 4
		LDW/LDP//Blind Spot Warning/Blind Spot Intervention/PFCW system warning in progress	1, 4
		PFCW system	4

TERMINAL LAYOUT



PHYSICAL VALUES

DAS

DRIVER ASSISTANCE BUZZER CONTROL MODULE

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	—	—	—
2 (L)		ITS communication high	—	—	—	—
3 (LG)		Ignition power supply	Input	Ignition switch ON	—	Battery voltage
5 (Y)		ITS communication low	—	—	—	—
6 (Y)		CAN low	—	—	—	—
9 (L)		CAN high	—	—	—	—
10 (Y)		CAN low	—	—	—	—
12 (G)		Warning buzzer signal	—	—	—	—
18 (L)		CAN high	—	—	—	—
24 (W)		Warning buzzer ground	Output	Ignition switch ON	—	—

DTC Inspection Priority Chart

INFOID:0000000014222368

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

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• U0104: ADAS CAN CIR2
3	• C1B20: CONTROL MODULE

DTC Index

INFOID:0000000014222369

NOTE:

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

×: Applicable

DTC		Reference
C1B20	CONTROL MODULE	DAS-332
U0104	ADAS CAN CIR2	DAS-345
U1000	CAN COMM CIRCUIT	DAS-352
U1010	CONTROL UNIT (CAN)	DAS-357

LANE CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

LANE CAMERA UNIT

Reference Value

INFOID:0000000014222370

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

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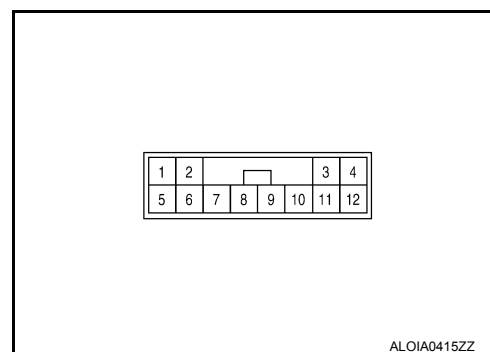
LANE CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

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 (BR)		ITS communication high	—	—	—
6 (Y)		ITS communication low	—	—	—

Fail-safe (Lane Camera Unit)

INFOID:0000000014222371

FAIL-SAFE CONTROL BY DTC

LANE CAMERA UNIT

< ECU DIAGNOSIS INFORMATION >

[DRIVER ASSISTANCE SYSTEM]

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 blink.
- 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 blink.
- When interior temperature is reduced, the system will resume when dynamic driver assistance switch is turned OFF and turned ON and the lane departure warning lamp (yellow) in the combination meter will stop blinking.

DTC Inspection Priority Chart

INFOID:0000000014222372

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

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• C1B01: CAM AIMING INCOMP • C1B03: ABNRML TEMP DETECT • C1B09: POWER SUPPLY CIRCUIT
3	C1B00: CAMERA UNIT MALF

DTC Index

INFOID:0000000014222373

×: Applicable

DTC		Warning display			Fail-safe		Reference
		LDW system warning	LDP system warning	Blind Spot Intervention system warning	LDW/LDP	Blind Spot Intervention	
C1B00	CAMERA UNIT MALF	ON	ON	ON	×	×	DAS-328
C1B01	CAM AIMING INCOMP	ON	ON	ON	×	×	DAS-329
C1B03	ABNRML TEMP DETECT	Message ↓ Blink	Message ↓ OFF	Message ↓ OFF	×	×	DAS-330
C1B09	POWER SUPPLY CIRCUIT	ON	ON	×	×	×	DAS-331
U1000	CAN COMM CIRCUIT	ON	ON	ON	×	×	DAS-350
U1010	CONTROL UNIT (CAN)	ON	ON	ON	×	×	DAS-137

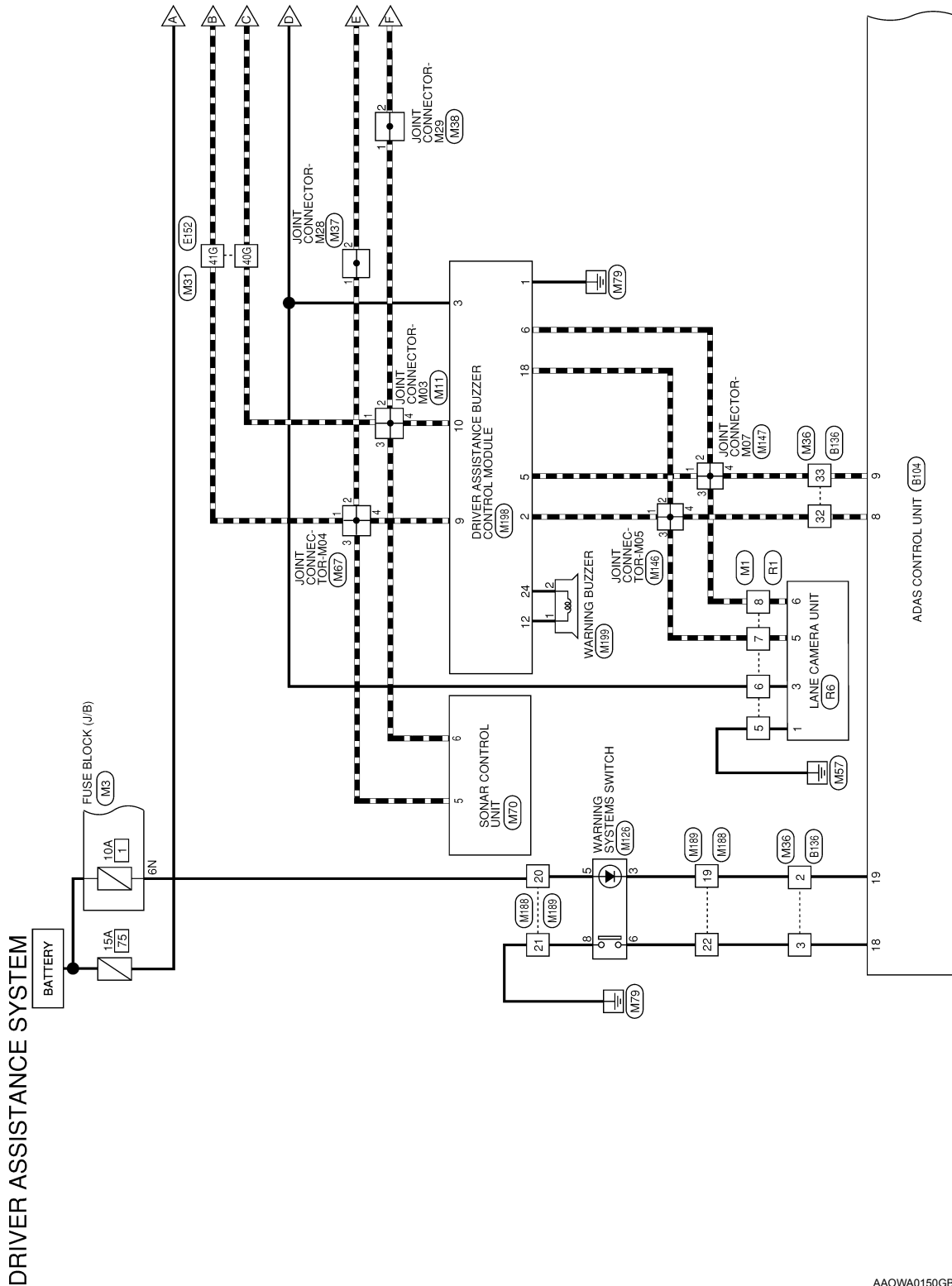
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WIRING DIAGRAM

DRIVER ASSISTANCE SYSTEMS

Wiring Diagram

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[DRIVER ASSISTANCE SYSTEM]

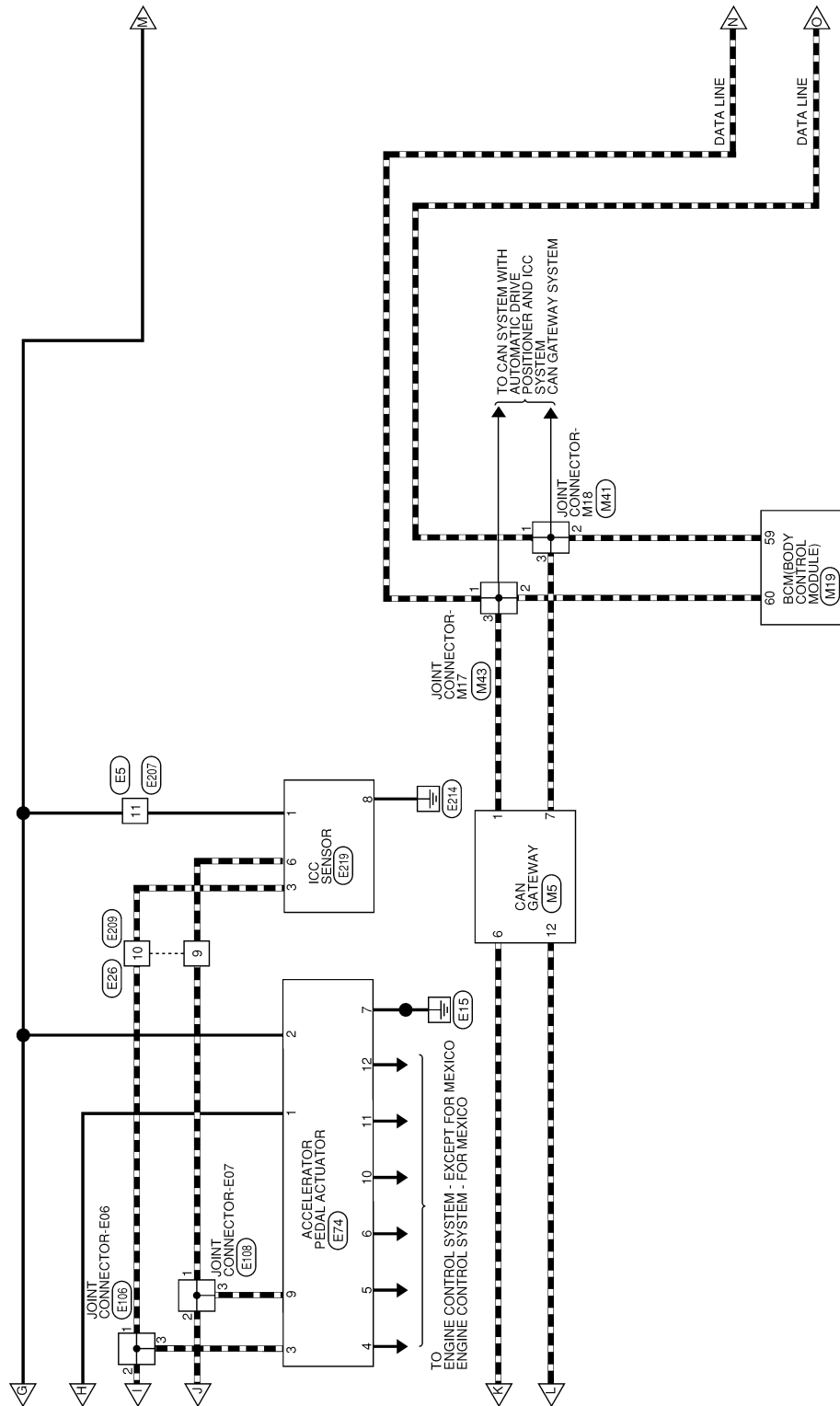
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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

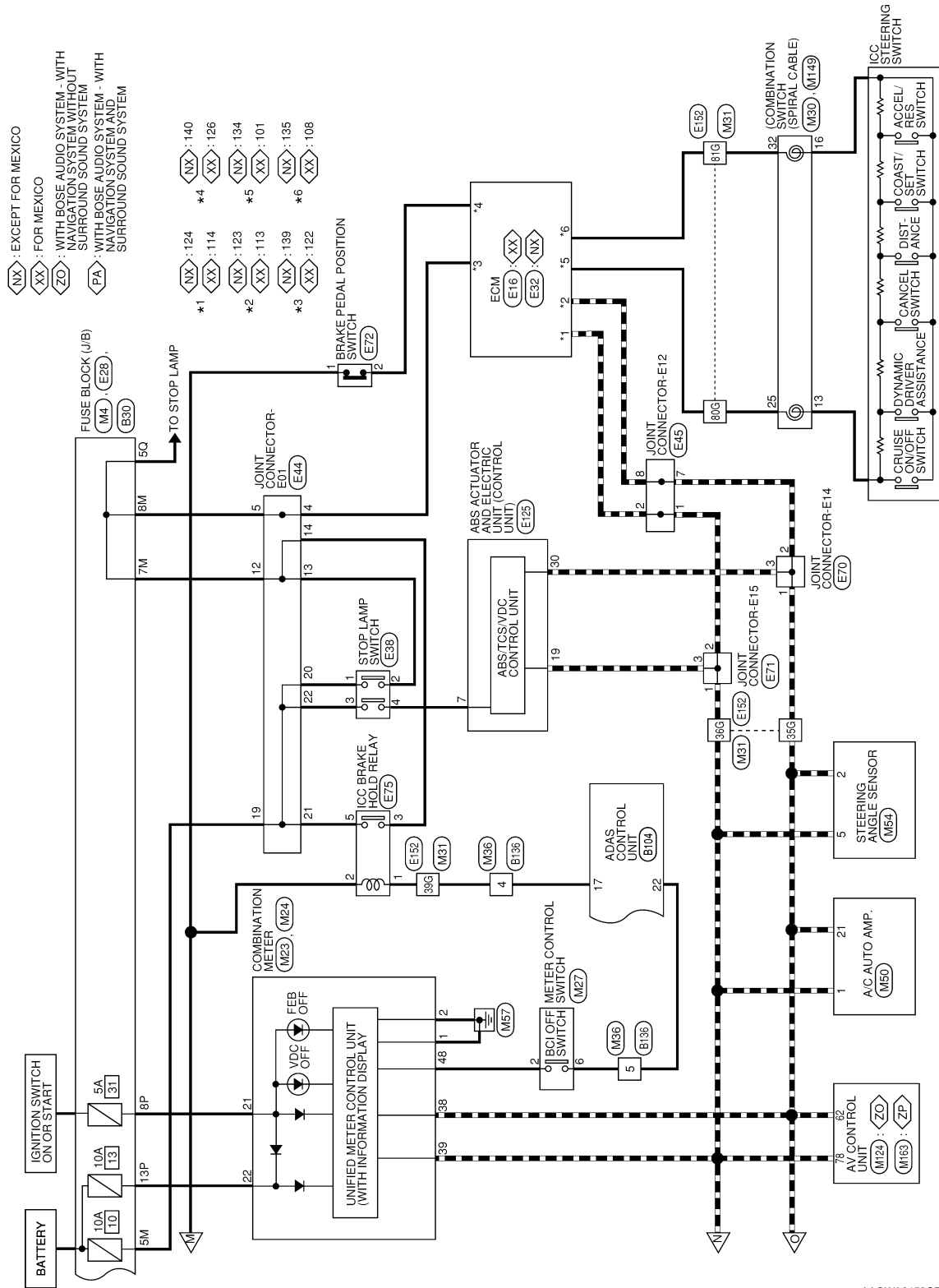


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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]



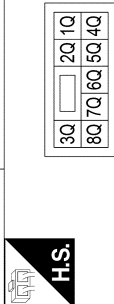
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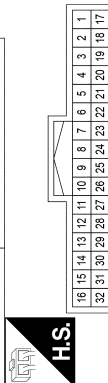
DRIVER ASSISTANCE SYSTEM CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1Q	-	-
2Q	-	-
3Q	-	-
4Q	-	-
5Q	G	BRAKE PEDAL POSITION SWITCH
6Q	P	BATTERY
7Q	-	-
8Q	-	-

Connector No.	B32
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

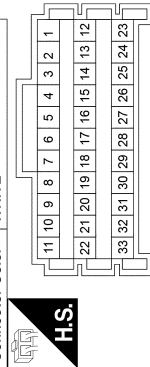


Terminal No.	Color of Wire	Signal Name
1	-	TO BODY HARNESS RH
2	-	TO BODY HARNESS RH
3	-	TO BODY HARNESS RH
4	-	TO BODY HARNESS RH
5	G	TO BODY HARNESS RH
6	R	TO BODY HARNESS RH
7	B	TO BODY HARNESS RH
8	R	TO BODY HARNESS RH
9	W	TO BODY HARNESS RH
10	SHIELD	TO BODY HARNESS RH
11	B	TO BODY HARNESS RH
12	L	TO BODY HARNESS RH
13	B	TO BODY HARNESS RH
14	R	TO BODY HARNESS RH
15	W	TO BODY HARNESS RH

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16	SHIELD	TO BODY HARNESS RH
17	L	TO BODY HARNESS RH
18	L	TO BODY HARNESS RH
19	P	TO BODY HARNESS RH
20	Y	TO BODY HARNESS RH
21	L	TO BODY HARNESS RH
22	B	TO BODY HARNESS RH
23	W	TO BODY HARNESS RH
24	SHIELD	TO BODY HARNESS RH
25	BR	TO BODY HARNESS RH
26	V	TO BODY HARNESS RH
27	-	TO BODY HARNESS RH
28	-	TO BODY HARNESS RH
29	-	TO BODY HARNESS RH
30	-	TO BODY HARNESS RH
31	-	TO BODY HARNESS RH
32	-	TO BODY HARNESS RH

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Type	BJ30FW
Connector Color	WHITE

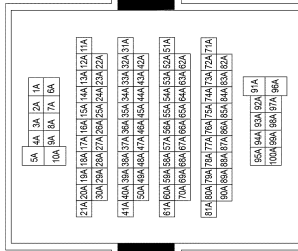


Terminal No.	Color of Wire	Signal Name
1	L	ITS CAN-H
2	L	ITS CAN-H
3	L	ITS CAN-H
4	Y	ITS CAN-L
5	Y	ITS CAN-L
6	Y	ITS CAN-L
7	-	-
8	SHIELD	GND
9	B	GND
10	B	GND
11	B	GND
12	LG	ILLUMI CONT OUT
13	LG	ILLUMI CONT OUT
14	LG	ILLUMI CONT OUT
15	-	-
16	W	ALERT SIGNAL
17	W	ALERT SIGNAL
18	-	-
19	B	GND
20	B	GND
21	SHIELD	SHIELD

22	B	GND
23	-	-
24	-	-
25	SHIELD	SHIELD
26	B	GND
27	B	GND
28	B	GND
29	W	TAIL
30	W	TAIL
31	W	TAIL
32	W	TAIL
33	W	TAIL

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Type	TH80MDGY-CS16-TM4
Connector Color	GRAY



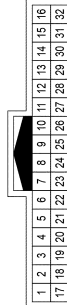
25A	SHIELD	TO MAIN HARNESS
26A	B	TO MAIN HARNESS
27A	B	TO MAIN HARNESS
28A	SHIELD	TO MAIN HARNESS
29A	R	TO MAIN HARNESS
30A	B	TO MAIN HARNESS
31A	BR	TO MAIN HARNESS
32A	-	TO MAIN HARNESS
33A	W	TO MAIN HARNESS
34A	B	TO MAIN HARNESS
35A	SHIELD	TO MAIN HARNESS
36A	-	TO MAIN HARNESS
37A	LG	TO MAIN HARNESS
38A	V	TO MAIN HARNESS
39A	SB	TO MAIN HARNESS
40A	BR	TO MAIN HARNESS
41A	Y	TO MAIN HARNESS
42A	-	TO MAIN HARNESS
43A	-	TO MAIN HARNESS
44A	V	TO MAIN HARNESS
45A	G	TO MAIN HARNESS
46A	V	TO MAIN HARNESS
47A	L	TO MAIN HARNESS
48A	SB	TO MAIN HARNESS
49A	G	TO MAIN HARNESS
50A	W	TO MAIN HARNESS
51A	-	TO MAIN HARNESS
52A	-	TO MAIN HARNESS
53A	R	TO MAIN HARNESS
54A	SB	TO MAIN HARNESS
55A	LG	TO MAIN HARNESS
56A	Y	TO MAIN HARNESS
57A	SB	TO MAIN HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
57A	V	TO MAIN HARNESS - (WITH CLIMATE CONTROLLED SEAT)
58A	BR	TO MAIN HARNESS
59A	BR	TO MAIN HARNESS
60A	L	TO MAIN HARNESS
61A	Y	TO MAIN HARNESS
62A	-	TO MAIN HARNESS
63A	P	TO MAIN HARNESS
64A	R	TO MAIN HARNESS
65A	SB	TO MAIN HARNESS
66A	L	TO MAIN HARNESS
67A	LG	TO MAIN HARNESS
68A	P	TO MAIN HARNESS
69A	W	TO MAIN HARNESS
70A	G	TO MAIN HARNESS
71A	BR	TO MAIN HARNESS
72A	-	TO MAIN HARNESS
73A	Y	TO MAIN HARNESS
74A	P	TO MAIN HARNESS
75A	V	TO MAIN HARNESS

Terminal No.	Color of Wire	Signal Name
1A	-	TO MAIN HARNESS
2A	Y	TO MAIN HARNESS
3A	Y	TO MAIN HARNESS
4A	G	TO MAIN HARNESS
5A	-	TO MAIN HARNESS
6A	LG	TO MAIN HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
6A	R	TO MAIN HARNESS - (WITH CLIMATE CONTROLLED SEAT)
7A	BR	TO MAIN HARNESS
8A	G	TO MAIN HARNESS
9A	P	TO MAIN HARNESS
10A	-	TO MAIN HARNESS
11A	W	TO MAIN HARNESS
12A	G	TO MAIN HARNESS
13A	-	TO MAIN HARNESS
14A	R	TO MAIN HARNESS
15A	G	TO MAIN HARNESS
16A	W	TO MAIN HARNESS
17A	B	TO MAIN HARNESS
18A	B	TO MAIN HARNESS
19A	SHIELD	TO MAIN HARNESS
20A	W	TO MAIN HARNESS
21A	SHIELD	TO MAIN HARNESS
22A	-	TO MAIN HARNESS
23A	W	TO MAIN HARNESS
24A	B	TO MAIN HARNESS

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76A	R	TO MAIN HARNESS
77A	Y	TO MAIN HARNESS
78A	LG	TO MAIN HARNESS
79A	BR	TO MAIN HARNESS
80A	Y	TO MAIN HARNESS
81A	L	TO MAIN HARNESS
82A	BG	TO MAIN HARNESS
83A	Y	TO MAIN HARNESS
84A	LG	TO MAIN HARNESS
85A	SHIELD	TO MAIN HARNESS
86A	LG	TO MAIN HARNESS
87A	SB	TO MAIN HARNESS
88A	BG	TO MAIN HARNESS
89A	L	TO MAIN HARNESS
90A	P	TO MAIN HARNESS
91A	L	TO MAIN HARNESS
92A	LG	TO MAIN HARNESS
93A	B	TO MAIN HARNESS
94A	-	TO MAIN HARNESS
95A	-	TO MAIN HARNESS
96A	-	TO MAIN HARNESS
97A	BR	TO MAIN HARNESS
98A	L	TO MAIN HARNESS
99A	-	TO MAIN HARNESS
100A	-	TO MAIN HARNESS

Connector No.	B77
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	TO BODY NO. 3 HARNESS
2	-	TO BODY NO. 3 HARNESS
3	-	TO BODY NO. 3 HARNESS
4	G	TO BODY NO. 3 HARNESS
5	W	TO BODY NO. 3 HARNESS
6	R	TO BODY NO. 3 HARNESS
7	W	TO BODY NO. 3 HARNESS
8	B	TO BODY NO. 3 HARNESS
9	W	TO BODY NO. 3 HARNESS
10	G	TO BODY NO. 3 HARNESS
11	-	TO BODY NO. 3 HARNESS
12	L	TO BODY NO. 3 HARNESS
13	Y	TO BODY NO. 3 HARNESS

DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

< WIRING DIAGRAM >

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE



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

28	Y	TO MAIN HARNESS
29	SB	TO MAIN HARNESS
30	LG	TO MAIN HARNESS
31	G	TO MAIN HARNESS
32	-	TO MAIN HARNESS

Connector No.	B102
Connector Name	JOINT CONNECTOR-B14
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	SHIELD	TO MAIN HARNESS
4	R	TO MAIN HARNESS
5	V	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	Y	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
6	W	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
7	R	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
8	B	TO MAIN HARNESS - (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	TO MAIN HARNESS - (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	TO MAIN HARNESS
10	G	TO MAIN HARNESS
11	SB	TO MAIN HARNESS
12	P	TO MAIN HARNESS
13	W	TO MAIN HARNESS
14	-	TO MAIN HARNESS
15	-	TO MAIN HARNESS
16	-	TO MAIN HARNESS
17	L	TO MAIN HARNESS
18	P	TO MAIN HARNESS
19	LG	TO MAIN HARNESS
20	BR	TO MAIN HARNESS
21	LG	TO MAIN HARNESS
22	LG	TO MAIN HARNESS
23	W	TO MAIN HARNESS
24	V	TO MAIN HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
24	BR	TO MAIN HARNESS - (WITH CLIMATE CONTROLLED SEAT)
25	SB	TO MAIN HARNESS
26	LG	TO MAIN HARNESS
27	Y	TO MAIN HARNESS

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Connector No.	B104
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH
Connector Color	WHITE



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

Connector No.	B109
Connector Name	SIDE RADAR RH
Connector Type	AAC08FB-WP
Connector Color	BLACK



1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	B	ADDRESS
2	B	GND
3	Y	ITS CAN-L
4	L	ITS CAN-H
5	R	POWER (IGN)
6	W	ALERT SIGNAL

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

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	B	CAN-H
4	-	-

Connector No.	B103
Connector Name	JOINT CONNECTOR-B15
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	P	CAN-L
3	W	CAN-L
4	-	-

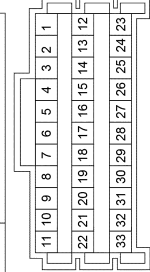
DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

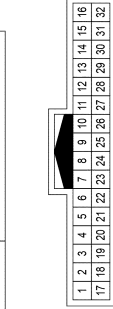
[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

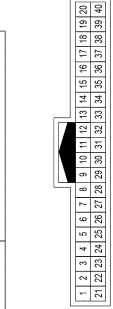
Connector No.	B115
Connector Name	JOINT CONNECTOR-B08
Connector Type	BJ30FW
Connector Color	WHITE



Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE

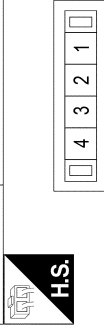


Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-NH
Connector Color	WHITE



35	-	TO MAIN HARNESS
36	-	TO MAIN HARNESS
37	BR	TO MAIN HARNESS
38	-	TO MAIN HARNESS
39	-	TO MAIN HARNESS
40	-	TO MAIN HARNESS

Connector No.	B146
Connector Name	JOINT CONNECTOR-B12
Connector Type	TK04FW-J
Connector Color	WHITE

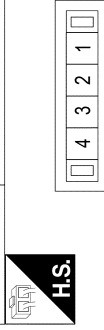


Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	B	GND
10	GR	GND
11	SHIELD	SHIELD
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	R	IGNITION
20	R	IGNITION
21	R	IGNITION
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	W	ALERT SIGNAL
28	W	ALERT SIGNAL
29	B	ADDRESS
30	B	GND
31	GR	GND
32	SHIELD	SHIELD
33	B	GND

Terminal No.	Color of Wire	Signal Name
1	-	TO BODY HARNESS
2	-	TO BODY HARNESS
3	-	TO BODY HARNESS
4	-	TO BODY HARNESS
5	G	TO BODY HARNESS
6	R	TO BODY HARNESS
7	G	TO BODY HARNESS
8	R	TO BODY HARNESS
9	W	TO BODY HARNESS
10	SHIELD	TO BODY HARNESS
11	B	TO BODY HARNESS
12	L	TO BODY HARNESS
13	G	TO BODY HARNESS
14	R	TO BODY HARNESS
15	W	TO BODY HARNESS
16	SHIELD	TO BODY HARNESS
17	Y	TO BODY HARNESS
18	L	TO BODY HARNESS
19	P	TO BODY HARNESS
20	Y	TO BODY HARNESS
21	L	TO BODY HARNESS
22	B	TO BODY HARNESS
23	W	TO BODY HARNESS
24	SHIELD	TO BODY HARNESS
25	BR	TO BODY HARNESS
26	V	TO BODY HARNESS
27	-	TO BODY HARNESS
28	-	TO BODY HARNESS
29	-	TO BODY HARNESS
30	-	TO BODY HARNESS
31	-	TO BODY HARNESS
32	-	TO BODY HARNESS

Terminal No.	Color of Wire	Signal Name
1	G	TO MAIN HARNESS
2	W	TO MAIN HARNESS
3	BR	TO MAIN HARNESS
4	G	TO MAIN HARNESS
5	BG	TO MAIN HARNESS
6	B	TO MAIN HARNESS
7	W	TO MAIN HARNESS
8	W	TO MAIN HARNESS
9	B	TO MAIN HARNESS
10	W	TO MAIN HARNESS
11	SHIELD	TO MAIN HARNESS
12	B	TO MAIN HARNESS
13	W	TO MAIN HARNESS
14	SHIELD	TO MAIN HARNESS
15	B	TO MAIN HARNESS
16	W	TO MAIN HARNESS
17	SHIELD	TO MAIN HARNESS
18	W	TO MAIN HARNESS
19	LG	TO MAIN HARNESS - (WITHOUT SURROUND SOUND SYSTEM)
19	B	TO MAIN HARNESS - (WITH SURROUND SOUND SYSTEM)
20	SB	TO MAIN HARNESS - (WITHOUT SURROUND SOUND SYSTEM)
20	W	TO MAIN HARNESS - (WITH SURROUND SOUND SYSTEM)
21	B	TO MAIN HARNESS
22	W	TO MAIN HARNESS
23	SHIELD	TO MAIN HARNESS
24	B	TO MAIN HARNESS
25	W	TO MAIN HARNESS
26	SHIELD	TO MAIN HARNESS
27	B	TO MAIN HARNESS
28	W	TO MAIN HARNESS
29	SHIELD	TO MAIN HARNESS
30	B	TO MAIN HARNESS
31	W	TO MAIN HARNESS
32	L	TO MAIN HARNESS
33	Y	TO MAIN HARNESS
34	-	TO MAIN HARNESS

Connector No.	B147
Connector Name	JOINT CONNECTOR-B13
Connector Type	TK04FW-J
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	ITS CAN-L
2	Y	ITS CAN-L
3	Y	ITS CAN-L
4	-	-

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DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

< WIRING DIAGRAM >

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	B400
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE



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

Connector No.	B416
Connector Name	SIDE RADAR LH
Connector Type	AAC06FB-WP-5P
Connector Color	BLACK



1	2	3	4	5	6

Connector No.	D21
Connector Name	BLIND SPOT WARNING LH
Connector Type	TH04MW-NH
Connector Color	WHITE



4	3	2	1

Connector No.	D111
Connector Name	BLIND SPOT WARNING RH
Connector Type	TH04MW-NH
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	-	TO BODY HARNESS
2	-	TO BODY HARNESS
3	-	TO BODY HARNESS
4	G	TO BODY HARNESS
5	W	TO BODY HARNESS
6	R	TO BODY HARNESS
7	W	TO BODY HARNESS
8	B	TO BODY HARNESS
9	W	TO BODY HARNESS
10	G	TO BODY HARNESS
11	-	TO BODY HARNESS
12	L	TO BODY HARNESS
13	Y	TO BODY HARNESS
14	-	TO BODY HARNESS
15	G	TO BODY HARNESS
16	B	TO BODY HARNESS
17	B	TO BODY HARNESS
18	B	TO BODY HARNESS
19	SHIELD	TO BODY HARNESS
20	R	TO BODY HARNESS
21	B	TO BODY HARNESS
22	W	TO BODY HARNESS
23	SHIELD	TO BODY HARNESS
24	W	TO BODY HARNESS
25	B	TO BODY HARNESS
26	SHIELD	TO BODY HARNESS
27	B	TO BODY HARNESS
28	B	TO BODY HARNESS
29	SHIELD	TO BODY HARNESS
30	LG	TO BODY HARNESS
31	W	TO BODY HARNESS
32	-	TO BODY HARNESS

Terminal No.	Color of Wire	Signal Name
1	-	-
2	B	GND
3	Y	ITS CAN-L
4	L	ITS CAN-H
5	R	POWER (IGN)
6	W	ALERT SIGNAL

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



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

Terminal No.	Color of Wire	Signal Name
1	W	SIGNAL
2	-	-
3	-	-
4	B	GND

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	W	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	SHIELD	TO MAIN HARNESS
4	L	TO MAIN HARNESS
5	BR	TO MAIN HARNESS
6	Y	TO MAIN HARNESS
7	LG	TO MAIN HARNESS
8	B	TO MAIN HARNESS
9	G	TO MAIN HARNESS
10	W	TO MAIN HARNESS

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

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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE

Connector No.	E16
Connector Name	ECM (FOR MEXICO)
Connector Type	RH24FGY-RZ8-R-RH
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
1	Y	TO FRONT END MODULE HARNESS
2	SB	TO FRONT END MODULE HARNESS
3	BR	TO FRONT END MODULE HARNESS
4	B	TO FRONT END MODULE HARNESS
5	B	TO FRONT END MODULE HARNESS
6	P	TO FRONT END MODULE HARNESS
7	W/G	TO FRONT END MODULE HARNESS
8	G	TO FRONT END MODULE HARNESS
9	L	TO FRONT END MODULE HARNESS
10	G	TO FRONT END MODULE HARNESS
11	R	TO FRONT END MODULE HARNESS
12	P	TO FRONT END MODULE HARNESS
13	SHIELD	TO FRONT END MODULE HARNESS
14	SHIELD	TO FRONT END MODULE HARNESS
15	P	TO FRONT END MODULE HARNESS
16	B	TO FRONT END MODULE HARNESS

Terminal No.	Color of Wire	Signal Name
97	W	ACCELERATOR PEDAL POSITION SENSOR 1 (WITHOUT ICC SYSTEM)
97	R	ACCELERATOR PEDAL POSITION SENSOR 1 (WITH ICC SYSTEM)
98	P	ACCELERATOR PEDAL POSITION SENSOR 2 (WITHOUT ICC SYSTEM)
98	B	ACCELERATOR PEDAL POSITION SENSOR 2 (WITH ICC SYSTEM)
99	R	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)
99	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)
100	R	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)
100	W	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)
101	G	ASCD STEERING SWITCH/ICC STEERING SWITCH
102	O	EVAP CONTROL SYSTEM PRESSURE SENSOR
103	W	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)
103	Y	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)
104	P	DATA LINK CONNECTOR
105	-	-
106	Y	EVAP CANISTER VENT CONTROL VALVE
107	W	SENSOR POWER SUPPLY (EVAP CONTROL SYSTEM PRESSURE SENSOR, ENGINE OIL PRESSURE SENSOR)
108	R	SENSOR GROUND (ASCD STEERING SWITCH)
109	SB	IGNITION SWITCH
110	-	-

111	BR	FUEL TANK TEMPERATURE SENSOR	TO FRONT END MODULE HARNESS
112	G	SENSOR GROUND (EVAP CONTROL SYSTEM PRESSURE SENSOR, ENGINE OIL PRESSURE SENSOR)	TO FRONT END MODULE HARNESS
113	P	CAN-L	TO FRONT END MODULE HARNESS
114	L	CAN-H	TO FRONT END MODULE HARNESS
115	-	-	TO FRONT END MODULE HARNESS
116	G	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)	TO FRONT END MODULE HARNESS
116	L	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)	TO FRONT END MODULE HARNESS
117	-	-	TO FRONT END MODULE HARNESS
118	W	PNP SIGNAL	TO FRONT END MODULE HARNESS
119	-	-	TO FRONT END MODULE HARNESS
120	LG	SENSOR GROUND (FUEL TANK TEMPERATURE SENSOR)	TO FRONT END MODULE HARNESS
121	LG	POWER SUPPLY FOR ECM	TO FRONT END MODULE HARNESS
122	R	STOP LAMP SWITCH	TO FRONT END MODULE HARNESS
123	B	ECM GND	TO FRONT END MODULE HARNESS
124	B	ECM GND	TO FRONT END MODULE HARNESS
125	-	-	TO FRONT END MODULE HARNESS
126	LG	BRAKE PEDAL POSITION SWITCH	TO FRONT END MODULE HARNESS
127	B	ECM GND	TO FRONT END MODULE HARNESS
128	B	ECM GND	TO FRONT END MODULE HARNESS

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

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	R	TO FRONT END MODULE HARNESS
2	W	TO FRONT END MODULE HARNESS
3	B	TO FRONT END MODULE HARNESS
4	SHIELD	TO FRONT END MODULE HARNESS
5	B	TO FRONT END MODULE HARNESS
6	R	TO FRONT END MODULE HARNESS
7	W	TO FRONT END MODULE HARNESS

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DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

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



4M	3M	2M	1M
10M	9M	8M	7M
6M	5M	4M	3M

Terminal No.	Color of Wire	Signal Name
1M	R	IGNITION
2M	-	-
3M	-	-
4M	-	-
5M	Y	BATTERY
6M	L	TAIL LH
7M	P	BRAKE PEDAL POSITION SWITCH
8M	R	BRAKE PEDAL POSITION SWITCH
9M	-	-
10M	-	-

Connector No.	E32
Connector Name	ECM (EXCEPT FOR MEXICO)
Connector Type	RH24FB-RZ8-L-LH
Connector Color	BLACK



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

Terminal No.	Color of Wire	Signal Name
121	W	EVAP CONTROL SYSTEM PRESSURE SENSOR
122	-	-
123	P	CAN-L
124	L	CAN-H
125	R	POWER SUPPLY (EVAP CONTROL SYSTEM PRESSURE SENSOR)
126	-	-
127	-	-
128	BR	FUEL TANK TEMPERATURE SENSOR
129	-	-
130	-	-

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131	-	-	-
132	-	-	-
133	SB	POWER SUPPLY	-
134	G	ASCD STEERING SWITCH/ICC STEERING SWITCH	-
135	R	SENSOR GROUND	-
136	-	-	-
137	-	-	-
138	-	-	-
139	R	STOP LAMP SWITCH	-
140	LG	BRAKE PEDAL POSITION SWITCH	-
141	Y	EVAP CANISTER VENT CONTROL VALVE	-
142	Y	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITH ICC SYSTEM)	-
142	W	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (WITHOUT ICC SYSTEM)	-
143	B	ACCELE PEDAL POSITION SENSOR 2 (WITH ICC SYSTEM)	-
143	P	ACCELE PEDAL POSITION SENSOR 2 (WITHOUT ICC SYSTEM)	-
144	L	SENSOR GROUND [ACCELERATOR PEDAL POSITION SENSOR (SENSOR 2) (WITH ICC SYSTEM)]	-
144	G	SENSOR GROUND [ACCELERATOR PEDAL POSITION SENSOR (WITHOUT ICC SYSTEM)]	-
145	LG	POWER SUPPLY FOR ECM	-
146	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITH ICC SYSTEM)	-
146	R	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (WITHOUT ICC SYSTEM)	-
147	B	SENSOR GROUND	-
148	LG	SENSOR GROUND	-
149	B	SENSOR GROUND	-
150	R	ACCELE PEDAL POSITION SENSOR 1 (WITH ICC SYSTEM)	-
150	W	ACCELE PEDAL POSITION SENSOR 1 (WITHOUT ICC SYSTEM)	-
151	W	SENSOR GROUND [ACCELERATOR PEDAL POSITION SENSOR (SENSOR 1) (WITH ICC SYSTEM)]	-
151	R	SENSOR GROUND [ACCELERATOR PEDAL POSITION SENSOR (WITHOUT ICC SYSTEM)]	-
152	B	SENSOR GROUND	-

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Type	MO4FW-LC
Connector Color	WHITE



3	4
1	2

Terminal No.	Color of Wire	Signal Name
1	Y	BATT
2	P	BRAKE PEDAL POSITION SWITCH
3	Y	BATT
4	G	STP

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Type	BJ30FW
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	W	SENSOR POWER SUPPLY
2	W	SENSOR POWER SUPPLY
3	W	SENSOR POWER SUPPLY
4	R	BATTERY
5	R	BATTERY
6	R	BATTERY
7	-	-
8	LG	BATTERY
9	LG	BATTERY
10	LG	BATTERY
11	LG	BATTERY
12	P	BATTERY
13	P	BATTERY
14	P	BATTERY
15	GR	GND
16	B	GND
17	B	GND
18	-	-
19	Y	BATTERY

20	Y	BATTERY
21	Y	BATTERY
22	Y	BATTERY
23	BG	EVAP CONTROL SYSTEM PRESSURE SENSOR
24	O	EVAP CONTROL SYSTEM PRESSURE SENSOR
25	-	-
26	G	GND
27	G	GND
28	G	GND
29	-	-
30	V	BATTERY
31	LG	BATTERY
32	V	BATTERY
33	V	BATTERY

Connector No.	E45
Connector Name	JOINT CONNECTOR-E12
Connector Type	A12FL
Connector Color	BLUE



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

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	L	CAN-H
4	L	CAN-H
5	-	-
6	-	-
7	P	CAN-L
8	P	CAN-L
9	P	CAN-L
10	P	CAN-L
11	-	-
12	-	-

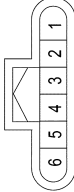
DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

< WIRING DIAGRAM >

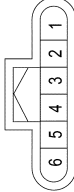
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E70
Connector Name	JOINT CONNECTOR-E14
Connector Type	RH06FB
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	P	CAN-L
3	P	CAN-L
4	P	CAN-L
5	-	-
6	-	-

Connector No.	E71
Connector Name	JOINT CONNECTOR-E15
Connector Type	RH06FB
Connector Color	BLACK

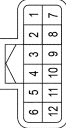
Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	L	CAN-H
4	L	CAN-H
5	-	-
6	-	-

Connector No.	E72
Connector Name	BRAKE PEDAL POSITION SWITCH (WITH INTELLIGENT CRUISE CONTROL)
Connector Type	M02FBR-LC
Connector Color	BROWN




Terminal No.	Color of Wire	Signal Name
1	R	IGN
2	LG	BRAKE PEDAL POSITION SWITCH

Connector No.	E74
Connector Name	ACCELERATOR PEDAL ACTUATOR (WITH INTELLIGENT CRUISE CONTROL)
Connector Type	RH12FB
Connector Color	BLACK

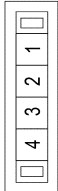
Terminal No.	Color of Wire	Signal Name
1	BG	+VB
2	R	IGN SW
3	BG	CAN-H
4	L/G	APST VDD
5	W	APST GND
6	W/L	APST OUT
7	GR	GND
8	-	-
9	Y	CAN-L
10	L/Y	APST VDD
11	O	APST GND
12	O/L	APST OUT

Connector No.	E75
Connector Name	ICC BRAKE HOLD RELAY
Connector Type	MS02FL-IM2-LC
Connector Color	BLUE




Terminal No.	Color of Wire	Signal Name
1	W	BRAKE HOLD RLY DRIVE SIGNAL
2	R	IGN
3	P	BRAKE PEDAL POSITION SWITCH
5	Y	BATT

Connector No.	E106
Connector Name	JOINT CONNECTOR-E06
Connector Type	TK04FW-J
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	BG	CAN-H
2	BG	CAN-H
3	BG	CAN-H
4	-	-

Connector No.	E108
Connector Name	JOINT CONNECTOR-E07
Connector Type	TK04FW-J
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
1	Y	CAN-L
2	Y	CAN-L
3	Y	CAN-L
4	-	-

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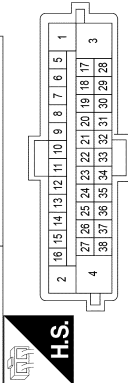
DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

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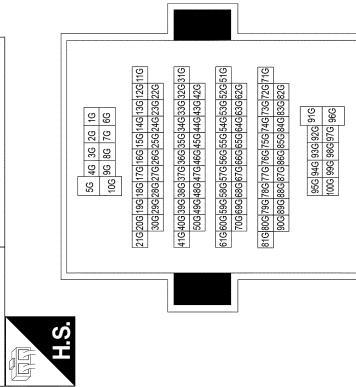
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	SAZ34FB-HS2-SJS22-UH
Connector Color	BLACK



36	-	-	-
37	-	-	-
38	-	-	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	SOLENOID (POWER)
2	B	ECU (GND)
3	W	MOTOR (POWER)
4	B/W	MOTOR (GND)
5	-	-
6	-	-
7	P	STOP LAMP SW (WITHOUT CC)
7	G	STOP LAMP SW (WITH INTELLIGENT CRUISE CONTROL)
8	-	-
9	R	VDC OFF SW
10	-	-
11	G	FR RH SEN (POWER)
12	W	FR RH SEN (SIGNAL)
13	R	RR LH SEN (POWER)
14	G	RR LH SEN (SIGNAL)
15	-	-
16	-	-
17	-	-
18	-	-
19	L	CAN-H
20	SHIELD	VAC SEN (GND)
21	B	VAC SEN (POWER)
22	W	WAC SEN (SIGNAL)
23	G	FR LH SEN (POWER)
24	W	FR LH SEN (SIGNAL)
25	BG	RR RH SEN (POWER)
26	P	RR RH SEN (SIGNAL)
27	-	-
28	BR	IGN (POWER)
29	-	-
30	P	CAN-L
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-

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76G	Y	TO MAIN HARNESS
77G	BR	TO MAIN HARNESS
78G	-	TO MAIN HARNESS
79G	P	TO MAIN HARNESS
80G	G	TO MAIN HARNESS
81G	R	TO MAIN HARNESS
82G	-	TO MAIN HARNESS
83G	-	TO MAIN HARNESS
84G	-	TO MAIN HARNESS
86G	-	TO MAIN HARNESS
86G	-	TO MAIN HARNESS
87G	-	TO MAIN HARNESS
88G	-	TO MAIN HARNESS
89G	R	TO MAIN HARNESS
90G	L	TO MAIN HARNESS
91G	L	TO MAIN HARNESS
92G	-	TO MAIN HARNESS
93G	-	TO MAIN HARNESS
94G	Y	TO MAIN HARNESS
95G	W	TO MAIN HARNESS
96G	-	TO MAIN HARNESS
97G	-	TO MAIN HARNESS
98G	-	TO MAIN HARNESS
99G	-	TO MAIN HARNESS
100G	SHIELD	TO MAIN HARNESS

23G	SHIELD	TO MAIN HARNESS
24G	R	TO MAIN HARNESS
25G	W	TO MAIN HARNESS
26G	SHIELD	TO MAIN HARNESS
27G	W	TO MAIN HARNESS
28G	R	TO MAIN HARNESS
29G	B	TO MAIN HARNESS
30G	G	TO MAIN HARNESS
31G	L	TO MAIN HARNESS
32G	LG	TO MAIN HARNESS
33G	LG	TO MAIN HARNESS
34G	W	TO MAIN HARNESS
35G	P	TO MAIN HARNESS
36G	L	TO MAIN HARNESS
37G	BG	TO MAIN HARNESS
38G	W	TO MAIN HARNESS
39G	W	TO MAIN HARNESS
40G	Y	TO MAIN HARNESS
41G	BG	TO MAIN HARNESS
42G	P	TO MAIN HARNESS
43G	R	TO MAIN HARNESS
44G	W	TO MAIN HARNESS
45G	Y	TO MAIN HARNESS
46G	SB	TO MAIN HARNESS
47G	V	TO MAIN HARNESS
48G	BR	TO MAIN HARNESS
49G	W	TO MAIN HARNESS
50G	G	TO MAIN HARNESS
51G	B/W	TO MAIN HARNESS
52G	BR	TO MAIN HARNESS
53G	L	TO MAIN HARNESS
54G	P	TO MAIN HARNESS
55G	BR	TO MAIN HARNESS
56G	R	TO MAIN HARNESS
57G	P	TO MAIN HARNESS
58G	BG	TO MAIN HARNESS
59G	W	TO MAIN HARNESS
60G	B	TO MAIN HARNESS
61G	SHIELD	TO MAIN HARNESS
62G	P	TO MAIN HARNESS
63G	L	TO MAIN HARNESS
64G	R	TO MAIN HARNESS
65G	G/R	TO MAIN HARNESS
66G	R	TO MAIN HARNESS
67G	BG	TO MAIN HARNESS
68G	LG/R	TO MAIN HARNESS
69G	W	TO MAIN HARNESS
70G	G	TO MAIN HARNESS
71G	GR	TO MAIN HARNESS
72G	-	TO MAIN HARNESS
73G	-	TO MAIN HARNESS
74G	-	TO MAIN HARNESS
75G	G	TO MAIN HARNESS

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

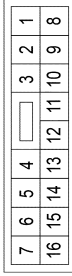
DRIVER ASSISTANCE SYSTEMS

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< WIRING DIAGRAM >

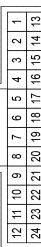
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	E207
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	P	TO ENGINE ROOM HARNESS
2	P	TO ENGINE ROOM HARNESS
3	R	TO ENGINE ROOM HARNESS
4	B	TO ENGINE ROOM HARNESS
5	G	TO ENGINE ROOM HARNESS
6	-	TO ENGINE ROOM HARNESS
7	-	TO ENGINE ROOM HARNESS
8	G	TO ENGINE ROOM HARNESS
9	R	TO ENGINE ROOM HARNESS
10	G	TO ENGINE ROOM HARNESS
11	P	TO ENGINE ROOM HARNESS
12	R	TO ENGINE ROOM HARNESS
13	SHIELD	TO ENGINE ROOM HARNESS
14	SHIELD	TO ENGINE ROOM HARNESS
15	-	TO ENGINE ROOM HARNESS
16	-	TO ENGINE ROOM HARNESS

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	Y	TO ENGINE ROOM HARNESS
2	L	TO ENGINE ROOM HARNESS
3	B	TO ENGINE ROOM HARNESS
4	SHIELD	TO ENGINE ROOM HARNESS
5	B	TO ENGINE ROOM HARNESS
6	R	TO ENGINE ROOM HARNESS
7	W	TO ENGINE ROOM HARNESS

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8	SHIELD	TO ENGINE ROOM HARNESS
9	Y	TO ENGINE ROOM HARNESS
10	L	TO ENGINE ROOM HARNESS
11	SB	TO ENGINE ROOM HARNESS
12	Y	TO ENGINE ROOM HARNESS
13	R	TO ENGINE ROOM HARNESS
14	B	TO ENGINE ROOM HARNESS
15	G	TO ENGINE ROOM HARNESS
16	SHIELD	TO ENGINE ROOM HARNESS
17	W	TO ENGINE ROOM HARNESS
18	L	TO ENGINE ROOM HARNESS
19	Y	TO ENGINE ROOM HARNESS
20	V	TO ENGINE ROOM HARNESS
21	G	TO ENGINE ROOM HARNESS
22	L	TO ENGINE ROOM HARNESS
23	G	TO ENGINE ROOM HARNESS
24	R	TO ENGINE ROOM HARNESS

Connector No.	E219
Connector Name	ICC SENSOR
Connector Type	AAZ08FB
Connector Color	BLACK




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

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE




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

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	CS06FW-M2
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
1N	LG	IGNITION
2N	BG	BATTERY
3N	L	IGNITION
4N	V	BATTERY
5N	Y	BATTERY
6N	W	BATTERY
7N	L	BATTERY
8N	L	IGNITION

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M4	8	-	-	53	-	-
Connector Name	FUSE BLOCK (J/B)	9	BG	IGN	54	W	PW LIN/COM
Connector Type	NS16FW-CS	10	P	CAN-L	55	BR	R SENSOR K-LINE
Connector Color	WHITE	11	B	GND	56	-	-
		12	P	CAN-L	57	-	-

Connector No.	M11	58	-	-	58	-	-
Connector Name	JOINT CONNECTOR-M03	59	P	CAN-L	59	P	CAN-L
Connector Type	TK04FW-J	60	L	CAN-H	60	L	CAN-H
Connector Color	WHITE	61	BG	REAR DEFROGGER RELAY OUT	61	BG	REAR DEFROGGER RELAY OUT
		62	W	STARTER RELAY OUT	62	W	STARTER RELAY OUT
		63	BG	I-KEY LINK SIGNAL	63	BG	I-KEY LINK SIGNAL
		64	P	BUZZER OUT	64	P	BUZZER OUT
		65	P	DOOR HANDLE LAMP	65	P	DOOR HANDLE LAMP
		66	W	BLOWER FAN RELAY OUT	66	W	BLOWER FAN RELAY OUT
		67	G	IGN ELEC RELAY OUT 2	67	G	IGN ELEC RELAY OUT 2
		68	P	MR OUTPUT	68	P	MR OUTPUT
		69	G	AT DEVICE OUT	69	G	AT DEVICE OUT
		70	P	IGN USM OUT 1	70	P	IGN USM OUT 1
		71	R	DR REQUEST SW	71	R	DR REQUEST SW
		72	G	AS REQUEST SW	72	G	AS REQUEST SW
		73	-	-	73	-	-
		74	-	-	74	-	-
		75	BG	COMBI SW OUT 5	75	BG	COMBI SW OUT 5
		76	P	COMBI SW OUT 4	76	P	COMBI SW OUT 4
		77	P	COMBI SW OUT 3	77	P	COMBI SW OUT 3
		78	W	COMBI SW OUT 2	78	W	COMBI SW OUT 2
		79	W	COMBI SW OUT 1	79	W	COMBI SW OUT 1
		80	R	BACK DOOR OPEN SW	80	R	BACK DOOR OPEN SW

Connector No.	M23	46	45	44	43	42	41
Connector Name	COMBINATION METER	52	51	50	49	48	47
Connector Type	TH12FW-NH						
Connector Color	WHITE						

Terminal No.	Color of Wire	Signal Name
41	LG	TRIP/RESET
42	Y	ILLUMI DOWN SW
43	V	M RANGE SE
44	BG	AT SHIFT UP
45	W	AT SHIFT DOWN
46	P	NOT M RANGE SW
47	BR	ILLUMI UP SW
48	G	SW GND
49	P	WASHER LEVEL SW
50	-	-

Connector No.	M19	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
Connector Name	BCM (BODY CONTROL MODULE)	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
Connector Type	TH40FB-NH																				
Connector Color	BLACK																				

Terminal No.	Color of Wire	Signal Name
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	R	HIGH SIDE START SW LED
49	-	-
50	-	-
51	-	-
52	W	AUDIO DONGLE

Connector No.	M5	1	2	3	4	5	6
Connector Name	CAN GATEWAY	7	8	9	10	11	12
Connector Type	TH12FW-NH						
Connector Color	WHITE						

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	LG	IGNITION
3P	G	IGN ELEC RELAY OUT 2
4P	-	-
5P	P	IGNITION
6P	BG	REAR DEFROGGER RELAY OUT
7P	LG	IGNITION
8P	BG	IGNITION
9P	L	BATTERY
10P	BR	IGNITION
11P	-	-
12P	-	-
13P	W	BATTERY
14P	Y	BATTERY
15P	L	BATT
16P	W	BLOWER FAN RELAY OUT

Connector No.	M5	1	2	3	4	5	6
Connector Name	CAN GATEWAY	7	8	9	10	11	12
Connector Type	TH12FW-NH						
Connector Color	WHITE						

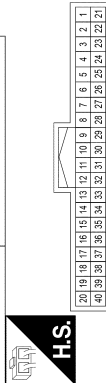
Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	-	-
3	BG	BAT
4	L	CAN-H
5	B	GND
6	L	CAN-H
7	P	CAN-L

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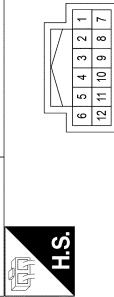
DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M24
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE



39	L	CAN-H
40	-	-

Connector No.	M27
Connector Name	METER CONTROL SWITCH
Connector Type	TH12FW-NH
Connector Color	WHITE

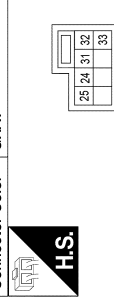


Terminal No.	Color of Wire	Signal Name
1	B	GN01
2	B	GN02
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
5	P	ACC
6	V	SECURITY
7	R	AIR BAG
8	G	AS BELT
9	Y	DR BUCKLE SW
10	-	-
11	BG	ALTERNATOR (CHARGE)
12	G	PKB
13	-	-
14	G	STRG SW OUTPUT 1
15	W	STRG SW OUTPUT 2
16	B	STRG SW OUTPUT GND
17	-	-
18	-	-
19	-	-
20	-	-
21	BG	IGN
22	W	BAT
23	B	ILLUMI CONT OUT
24	R	STRG SW GND
25	G	BRAKE OIL SW
26	R	FUEL SENSOR GND
27	W	FUEL SENSOR
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	BR	SPEED 2 P/R
34	BG	SPEED 8 P/R
35	-	-
36	-	-
37	-	-
38	P	CAN-L

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Terminal No.	Color of Wire	Signal Name
1	Y	ILLUMI DOWN SW
2	G	SW GND
3	LG	TRIP/RESET
4	R	ILL PWR
5	B	ILLUMI CONT OUT
6	BG	BGI OFF SWITCH
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	BR	ILLUMI UP SW

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
24	P	AUDIO STRG SW REMOTE A
25	W	ASCD
31	BG	AUDIO STRG SW REMOTE B
32	G	ASCDG
33	R	AUDIO STRG SW GND

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

Terminal No.	Color of Wire	Signal Name
1G	SB	TO ENGINE ROOM HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
1G	P	TO ENGINE ROOM HARNESS - (WITH CLIMATE CONTROLLED SEAT)
2G	W	TO ENGINE ROOM HARNESS
3G	P	TO ENGINE ROOM HARNESS
4G	G	TO ENGINE ROOM HARNESS
5G	P	TO ENGINE ROOM HARNESS
6G	SB	TO ENGINE ROOM HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
6G	R	TO ENGINE ROOM HARNESS - (WITH CLIMATE CONTROLLED SEAT)
7G	SHIELD	TO ENGINE ROOM HARNESS
8G	G	TO ENGINE ROOM HARNESS
9G	BG	TO ENGINE ROOM HARNESS
10G	W	TO ENGINE ROOM HARNESS
11G	R	TO ENGINE ROOM HARNESS
12G	G	TO ENGINE ROOM HARNESS
13G	G	TO ENGINE ROOM HARNESS
14G	V	TO ENGINE ROOM HARNESS
15G	W	TO ENGINE ROOM HARNESS
16G	R	TO ENGINE ROOM HARNESS
17G	B	TO ENGINE ROOM HARNESS
18G	SHIELD	TO ENGINE ROOM HARNESS
19G	SB	TO ENGINE ROOM HARNESS

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Terminal No.	Color of Wire	Signal Name
1	V	TO BODY HARNESS RH
2	G	TO BODY HARNESS RH
3	Y	TO BODY HARNESS RH
4	R	TO BODY HARNESS RH
5	BQ	TO BODY HARNESS RH
6	LG	TO BODY HARNESS RH
7	SB	TO BODY HARNESS RH
8	G	TO BODY HARNESS RH
9	B	TO BODY HARNESS RH
10	W	TO BODY HARNESS RH

☐	4	3	2	1	☐

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	B	CAN-H

DRIVER ASSISTANCE SYSTEMS

[DRIVER ASSISTANCE SYSTEM]

< WIRING DIAGRAM >

DRIVER ASSISTANCE SYSTEM CONNECTORS

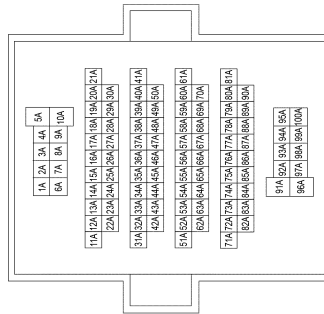
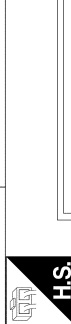
Connector No.	M38
Connector Name	JOINT CONNECTOR-M29
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	Y	CAN-L
2	Y	CAN-L
3	W	CAN-L
4	-	-

Connector No.	M40
Connector Name	WIRE TO WIPE
Connector Type	TH80FDGY-CS16-TM4
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1A	GR	TO BODY HARNESS
2A	BR	TO BODY HARNESS
3A	Y	TO BODY HARNESS
4A	V	TO BODY HARNESS
5A	L/B	TO BODY HARNESS

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57A	P	TO BODY HARNESS - (WITH CLIMATE CONTROLLED SEAT)
57A	L	TO BODY HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
58A	G	TO BODY HARNESS
59A	SB	TO BODY HARNESS
60A	L	TO BODY HARNESS
61A	G	TO BODY HARNESS
62A	BR	TO BODY HARNESS
63A	BR	TO BODY HARNESS
64A	Y	TO BODY HARNESS
65A	W	TO BODY HARNESS
66A	BG	TO BODY HARNESS
67A	Y	TO BODY HARNESS
68A	LG	TO BODY HARNESS
69A	R	TO BODY HARNESS
70A	P	TO BODY HARNESS
71A	BR	TO BODY HARNESS
72A	SB	TO BODY HARNESS
73A	BG	TO BODY HARNESS
74A	BR	TO BODY HARNESS
75A	LG	TO BODY HARNESS
76A	W	TO BODY HARNESS
77A	L	TO BODY HARNESS
78A	V	TO BODY HARNESS
79A	LG	TO BODY HARNESS
80A	Y	TO BODY HARNESS
81A	L	TO BODY HARNESS
82A	BG	TO BODY HARNESS
83A	Y	TO BODY HARNESS
84A	LG	TO BODY HARNESS
85A	SHIELD	TO BODY HARNESS
86A	Y	TO BODY HARNESS
87A	LG	TO BODY HARNESS
88A	BR	TO BODY HARNESS
89A	L	TO BODY HARNESS
90A	P	TO BODY HARNESS
91A	L	TO BODY HARNESS
92A	L	TO BODY HARNESS
93A	B	TO BODY HARNESS
94A	W	TO BODY HARNESS
95A	W	TO BODY HARNESS
96A	-	TO BODY HARNESS
97A	SB	TO BODY HARNESS
98A	Y	TO BODY HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
99A	L	TO BODY HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
100A	-	TO BODY HARNESS

6A	L	TO BODY HARNESS - (WITHOUT CLIMATE CONTROLLED SEAT)
6A	G	TO BODY HARNESS - (WITH CLIMATE CONTROLLED SEAT)
7A	Y	TO BODY HARNESS
8A	W	TO BODY HARNESS
9A	L	TO BODY HARNESS
10A	R	TO BODY HARNESS
11A	R	TO BODY HARNESS
12A	BG	TO BODY HARNESS
13A	O	TO BODY HARNESS
14A	LG	TO BODY HARNESS
15A	R	TO BODY HARNESS
16A	G	TO BODY HARNESS
17A	B	TO BODY HARNESS
18A	B	TO BODY HARNESS
19A	SHIELD	TO BODY HARNESS
20A	B	TO BODY HARNESS
21A	SHIELD	TO BODY HARNESS
22A	-	TO BODY HARNESS
23A	W	TO BODY HARNESS
24A	B	TO BODY HARNESS
25A	SHIELD	TO BODY HARNESS
26A	B	TO BODY HARNESS
27A	B	TO BODY HARNESS
28A	SHIELD	TO BODY HARNESS
29A	R	TO BODY HARNESS
30A	R	TO BODY HARNESS
31A	R	TO BODY HARNESS
32A	Y/R	TO BODY HARNESS
33A	W	TO BODY HARNESS
34A	B	TO BODY HARNESS
35A	SHIELD	TO BODY HARNESS
36A	L/Y	TO BODY HARNESS
37A	LG	TO BODY HARNESS
38A	V	TO BODY HARNESS
39A	SB	TO BODY HARNESS
40A	BR	TO BODY HARNESS
41A	Y	TO BODY HARNESS
42A	G	TO BODY HARNESS
43A	-	TO BODY HARNESS
44A	W	TO BODY HARNESS
45A	R	TO BODY HARNESS
46A	BG	TO BODY HARNESS
47A	LG	TO BODY HARNESS
48A	R	TO BODY HARNESS
49A	P	TO BODY HARNESS
50A	W	TO BODY HARNESS
51A	L	TO BODY HARNESS
52A	P	TO BODY HARNESS
53A	G	TO BODY HARNESS
54A	W	TO BODY HARNESS
55A	BG	TO BODY HARNESS
56A	BR	TO BODY HARNESS

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	P	CAN-L
3	P	CAN-L
4	-	-

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	L	CAN-H
4	-	-

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M50
Connector Name	A/C AUTO AMP.
Connector Type	TH40FW-NH
Connector Color	WHITE



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

39	L	PTC 2
40	Y	WATER VALVE CLOSE A



1	2	3	4
5	6	7	8

Connector No.	M54
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	GR	GND
3	G	BATT
4	-	-
5	G	TX RR
6	-	-
7	G	AMB SENS
8	G	STRG HTR SW
9	W	SUN SENS
10	SB	MODE 1
11	G	MODE 3
12	G	FAN OUT (COOLER)
13	W	IGN 2
14	W	FAN OUT (BOOSTER)
15	-	-
16	Y	ACTR (LIN)
17	LG	VACTR
18	W	FR FAN PWM
19	W	PTC 1
20	BR	STRG HTR RLY
21	P	CAN-L
22	GR	GND (POWER)
23	LG	IGN
24	-	-
25	W	RX RR
26	G	SENS GND
27	W	INC SENS
28	W	INT SENS
29	P	MODE 2
30	R	GAS SENS
31	BG	MODE 4
32	L	FAN F/B (COOLER)
33	-	-
34	L	FAN F/B (BOOSTER)
35	-	-
36	BR	WATER VALVE OPEN B
37	BR	ACTR GND
38	P	ION ON/OFF

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Connector No.	M70
Connector Name	SONAR CONTROL UNIT
Connector Type	TH24FW-NH
Connector Color	WHITE



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	FR SENSOR SIGNAL
2	B	FL SENSOR SIGNAL
3	R	FOL SENSOR SIGNAL
4	R	FOR SENSOR SIGNAL
5	B	Y CAN-H
6	W	Y CAN-L
7	-	-
8	-	-
9	B	RIR SENSOR SIGNAL
10	B	ROR SENSOR SIGNAL
11	-	-
12	LG	IGN
13	B	FR SENSOR GND
14	B	RR SENSOR GND
15	GR	GND
16	LG	DISABLE SW
17	GR	LED OUTPUT
18	-	-
19	BR	SPEAKER PWR
20	LG	SPEAKER RR SIGNAL
21	B	RIL SENSOR SIGNAL
22	W	ROL SENSOR SIGNAL
23	-	-
24	-	-

Connector No.	M67
Connector Name	JOINT CONNECTOR-M04
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	L	CAN-H
3	B	CAN-H
4	L	CAN-H

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE



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

25	W	TO BODY HARNESS RH
26	W	TO BODY HARNESS RH
27	BG	TO BODY HARNESS RH
28	V	TO BODY HARNESS RH
29	SB	TO BODY HARNESS RH
30	L	TO BODY HARNESS RH
31	W	TO BODY HARNESS RH
32	-	TO BODY HARNESS RH

Connector No.	M124
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM- WITH NAVI WITHOUT SURROUND SOUND SYSTEM)
Connector Type	TH32FW-NH
Connector Color	WHITE



49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
1	B	TO BODY HARNESS RH
2	W	TO BODY HARNESS RH
3	SHIELD	TO BODY HARNESS RH
4	LG	TO BODY HARNESS RH
5	P	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	Y	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
6	W	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
7	R	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
8	B	TO BODY HARNESS RH - (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	TO BODY HARNESS RH - (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	TO BODY HARNESS RH
10	G	TO BODY HARNESS RH
11	L	TO BODY HARNESS RH
12	G	TO BODY HARNESS RH
13	G	TO BODY HARNESS RH
14	P	TO BODY HARNESS RH
15	O	TO BODY HARNESS RH
16	SB	TO BODY HARNESS RH
17	L	TO BODY HARNESS RH
18	P	TO BODY HARNESS RH
19	R	TO BODY HARNESS RH
20	-	TO BODY HARNESS RH
21	G	TO BODY HARNESS RH
22	R	TO BODY HARNESS RH
23	G	TO BODY HARNESS RH
24	R	TO BODY HARNESS RH - (WITH CLIMATE CONTROLLED SEAT)
24	V	TO BODY HARNESS RH - (WITHOUT CLIMATE CONTROLLED SEAT)

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75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP IT
78	L	CAN-H
79	SB	M CAN-H
80	SB	M CAN-H TRM

Connector No.	M126
Connector Name	WARNING SYSTEM SWITCH
Connector Type	TH08FB-NH
Connector Color	BLACK



4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	R	ILL
2	-	-
3	G	WARNING SYSTEM ON IND
4	B	ILL CONT
5	W	BATT
6	Y	WARNING SYSTEM SW
7	-	-
8	B	GND

Connector No.	M146
Connector Name	JOINT CONNECTOR-M05
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	ITS CAN-H
2	L	ITS CAN-H
3	L	ITS CAN-H
4	L	ITS CAN-H

Connector No.	M147
Connector Name	JOINT CONNECTOR-M07
Connector Type	TK04FW-J
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	Y	ITS CAN-L
2	Y	ITS CAN-L
3	Y	ITS CAN-L
4	Y	ITS CAN-L

Connector No.	M149
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY
Connector Color	GRAY



20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
13	R	ASCD
14	B	AUDIO STRG SW REMOTE A
15	GR	AUDIO STRG SW REMOTE B
16	L	ASCDG
17	BR	AUDIO STRG SW GND
18	G	HORN SWITCH
19	Y	ILL CONT
20	W	ILL

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS
Connector Color	WHITE

1	2	3	4
5	6	7	8
9	10		

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	TO FRONT DOOR RH HARNESS
2	B	TO FRONT DOOR RH HARNESS
3	SHIELD	TO FRONT DOOR RH HARNESS
4	BR	TO FRONT DOOR RH HARNESS
5	Y	TO FRONT DOOR RH HARNESS
6	L	TO FRONT DOOR RH HARNESS
7	LG	TO FRONT DOOR RH HARNESS
8	GR	TO FRONT DOOR RH HARNESS
9	BR	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)
9	G	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)
10	Y	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)
10	W	TO FRONT DOOR RH HARNESS - (WITH BASE AUDIO SYSTEM)

Connector No.	M163
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM - WITH NAVI AND SURROUND SOUND SYSTEM)
Connector Type	TH32FW-NH
Connector Color	WHITE

H.S.

48	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
49	-	-
50	-	-
51	-	-
52	-	-
53	G	PKG SIG

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54	-	-
55	W	NAVI COMPT+
56	B	NAVI COMPT+
57	BG	RESERVE I1
58	G	RESERVE I2
59	SHIELD	MIC GND
60	W	MIC VCC
61	W	IT-DISP
62	P	CAN-L
63	LG	M-CAN L
64	LG	M-CAN L TRM
65	-	-
66	-	-
67	P	MFI OUTPUT
68	LG	IGN
69	R	REVERSE SIG
70	BG	SPEED
71	SHIELD	NAVI COMPT SHIELD
72	R	GND
73	-	-
74	-	-
75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP-IT
78	L	CAN-H
79	SB	M-CAN H
80	SB	M-CAN H TRM

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	B	TO FRONT DOOR LH HARNESS
2	V	TO FRONT DOOR LH HARNESS
3	G/B	TO FRONT DOOR LH HARNESS
4	V	TO FRONT DOOR LH HARNESS
5	SB	TO FRONT DOOR LH HARNESS
6	BR	TO FRONT DOOR LH HARNESS
7	Y	TO FRONT DOOR LH HARNESS
8	W	TO FRONT DOOR LH HARNESS - (WITH BASE AUDIO SYSTEM)
8	V	TO FRONT DOOR LH HARNESS - (WITH BASE AUDIO SYSTEM)

9	P	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM WITHOUT SURROUND SOUND SYSTEM)
9	G	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM AND SURROUND SOUND SYSTEM)
9	SB	TO FRONT DOOR LH HARNESS - (WITH BASE AUDIO SYSTEM)
10	L	TO FRONT DOOR LH HARNESS
11	BR	TO FRONT DOOR LH HARNESS
12	Y	TO FRONT DOOR LH HARNESS
13	LG	TO FRONT DOOR LH HARNESS
14	SHIELD	TO FRONT DOOR LH HARNESS
15	B	TO FRONT DOOR LH HARNESS
16	W	TO FRONT DOOR LH HARNESS

Connector No.	M188
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	-	TO MAIN HARNESS
2	-	TO MAIN HARNESS
3	-	TO MAIN HARNESS
4	-	TO MAIN HARNESS
5	-	TO MAIN HARNESS
6	-	TO MAIN HARNESS
7	B	TO MAIN HARNESS
8	W	TO MAIN HARNESS
9	LG	TO MAIN HARNESS
10	G	TO MAIN HARNESS
11	B	TO MAIN HARNESS
12	R	TO MAIN HARNESS
13	B	TO MAIN HARNESS
14	Y	TO MAIN HARNESS
15	GR	TO MAIN HARNESS
16	G	TO MAIN HARNESS
17	B	TO MAIN HARNESS
18	R	TO MAIN HARNESS
19	G	TO MAIN HARNESS
20	W	TO MAIN HARNESS
21	B	TO MAIN HARNESS
22	Y	TO MAIN HARNESS
23	B	TO MAIN HARNESS

24	R	TO MAIN HARNESS

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	-	TO MAIN HARNESS
2	-	TO MAIN HARNESS
3	-	TO MAIN HARNESS
4	-	TO MAIN HARNESS
5	-	TO MAIN HARNESS
6	-	TO MAIN HARNESS
7	B	TO MAIN HARNESS
8	W	TO MAIN HARNESS
9	LG	TO MAIN HARNESS
10	G	TO MAIN HARNESS
11	B	TO MAIN HARNESS
12	R	TO MAIN HARNESS
13	B	TO MAIN HARNESS
14	Y	TO MAIN HARNESS
15	GR	TO MAIN HARNESS
16	G	TO MAIN HARNESS
17	B	TO MAIN HARNESS
18	R	TO MAIN HARNESS
19	G	TO MAIN HARNESS
20	W	TO MAIN HARNESS
21	B	TO MAIN HARNESS
22	Y	TO MAIN HARNESS
23	B	TO MAIN HARNESS
24	R	TO MAIN HARNESS

DRIVER ASSISTANCE SYSTEMS

< WIRING DIAGRAM >

[DRIVER ASSISTANCE SYSTEM]

DRIVER ASSISTANCE SYSTEM CONNECTORS

Connector No.	M198
Connector Name	DRIVER ASSISTANCE BUZZER CONTROL MODULE
Connector Type	TH24FW-NH
Connector Color	WHITE



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

Connector No.	M199
Connector Name	WARNING SYSTEM BUZZER
Connector Type	NS02FW-CS
Connector Color	WHITE



2	1

21	SB	TO MAIN HARNESS
22	L	TO MAIN HARNESS
23	W	TO MAIN HARNESS
24	B	TO MAIN HARNESS

Connector No.	R6
Connector Name	LANE CAMERA UNIT
Connector Type	MUB12FB
Connector Color	BLACK



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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	L	1TS CAN-H
3	LG	IGN
4	-	-
5	Y	1TS CAN-L
6	Y	3RD CAN-L
7	-	-
8	-	-
9	L	V-CAN-H
10	Y	V-CAN-L
11	-	-
12	G	SPEAKER +
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	L	3RD CAN-H
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	W	SPEAKER -

Terminal No.	Color of Wire	Signal Name
1	G	SPEAKER DRIVE(+)
2	W	SPEAKER DRIVE(-)

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE



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	GND
2	-	-
3	LG	IGN
4	-	-
5	BR	CAN-H
6	Y	CAN-L
7	-	-
8	-	-

Terminal No.	Color of Wire	Signal Name
1	G	TO MAIN HARNESS
2	R	TO MAIN HARNESS
3	W	TO MAIN HARNESS
4	Y/R	TO MAIN HARNESS
5	B	TO MAIN HARNESS
6	LG	TO MAIN HARNESS
7	BR	TO MAIN HARNESS
8	Y	TO MAIN HARNESS
9	G	TO MAIN HARNESS
10	W	TO MAIN HARNESS
11	SB	TO MAIN HARNESS
12	R/G	TO MAIN HARNESS
13	W	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	SHIELD	TO MAIN HARNESS
16	P	TO MAIN HARNESS
17	BG	TO MAIN HARNESS
18	-	TO MAIN HARNESS
19	V	TO MAIN HARNESS
20	W	TO MAIN HARNESS

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DAS

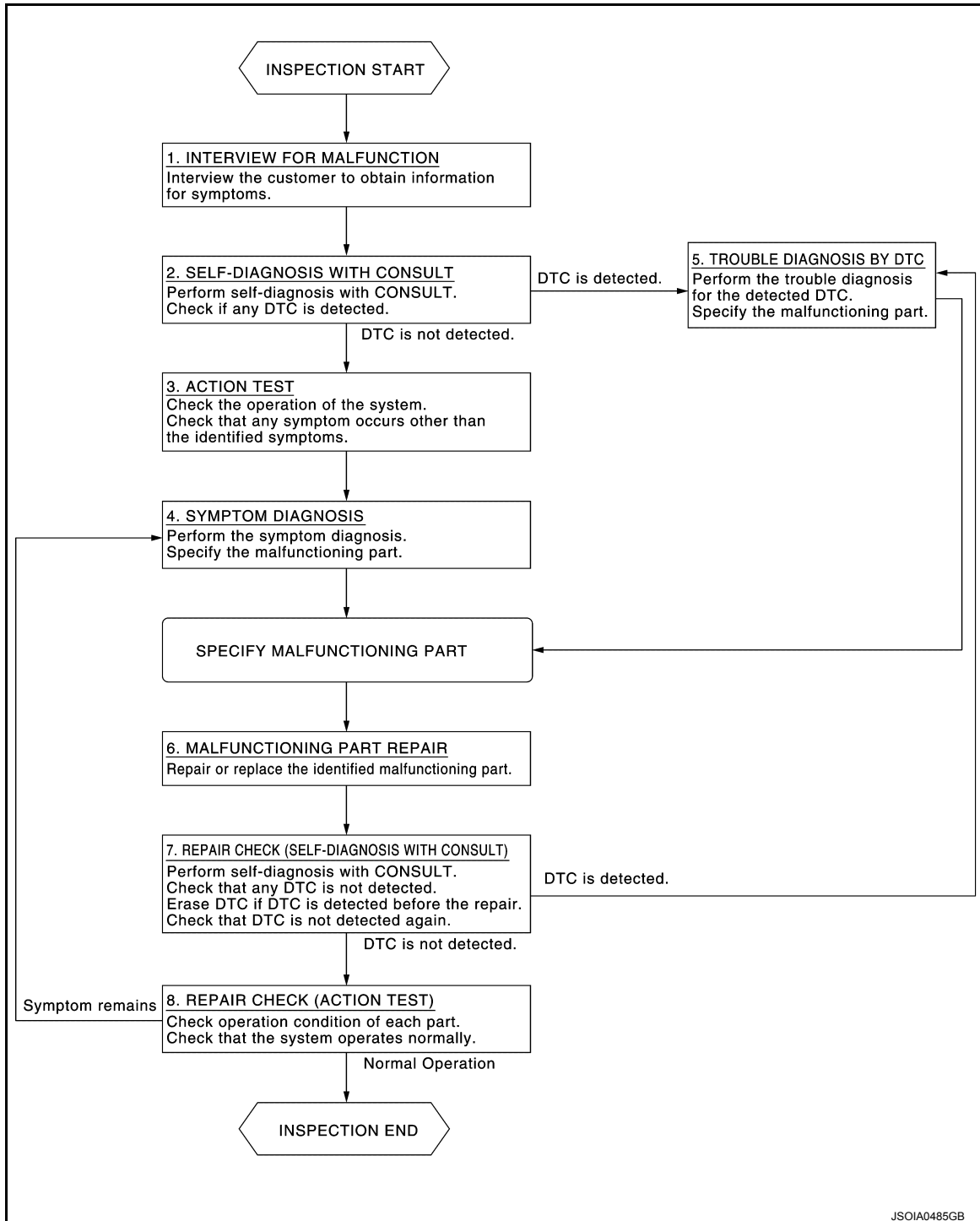
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000014222375

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

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

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

NOTE:

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

>> GO TO 2.

2.SELF-DIAGNOSIS WITH CONSULT

1. Perform “All DTC Reading” with CONSULT.
2. Check if the DTC is detected on the self-diagnosis results of following.
 - “ICC/ADAS”
 - “LASER/RADAR”
 - “ACCELE PEDAL ACT”
 - “LANE CAMERA”
 - “SIDE RADAR LEFT”
 - “SIDE RADAR RIGHT”
 - “BSW/BUZZER”

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 3.

3.ACTION TEST

Perform Following system action test to check the operation status. Refer to [DAS-318, "DCA : Description"](#).
Check if any other malfunctions occur.

>> GO TO 4.

4.SYMPTOM DIAGNOSIS

Perform the applicable diagnosis according to the diagnosis chart by symptom. Refer to [DAS-371, "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-261, "DTC Index"](#)
 - “LASER/RADAR” Refer to [DAS-266, "DTC Index"](#)
 - “ACCELE PEDAL ACT”: Refer to [DAS-271, "DTC Index"](#)
 - “LANE CAMERA”: Refer to [DAS-283, "DTC Index"](#)
 - “SIDE RADAR LEFT”: Refer to [DAS-273, "DTC Index"](#)
 - “SIDE RADAR RIGHT”: Refer to [DAS-276, "DTC Index"](#)
 - “BSW/BUZZER”: Refer to [DAS-280, "DTC Index"](#)

NOTE:

If “DTC: U1000” is detected, first diagnose the CAN communication system or ITS communication system.

>> GO TO 6.

6.MALFUNCTIONING PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 7.

7.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

1. Erases self-diagnosis results.
2. Perform “All DTC Reading” again after repairing or replacing the specific items.
3. Check if any DTC is detected in self-diagnosis results of following.
 - “ICC/ADAS”
 - “LASER/RADAR”

DIAGNOSIS AND REPAIR WORK FLOW

[DRIVER ASSISTANCE SYSTEM]

< BASIC INSPECTION >

- "ACCELE PEDAL ACT"
- "LANE CAMERA"
- "SIDE RADAR LEFT"
- "SIDE RADAR RIGHT"
- "BSW/BUZZER"

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 8.

8. REPAIR CHECK (ACTION TEST)

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

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

Is there a malfunction symptom?

YES >> GO TO 4.

NO >> INSPECTION END

ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

Description

INFOID:0000000014222376

- Always perform the radar alignment after removing and installing or replacing the ICC sensor.
CAUTION:
The system does not operate normally unless the laser beam aiming adjustment is performed. Always perform it.
- Perform the DCA system action test check that the DCA system operates normally.

Work Procedure

INFOID:0000000014222377

1. RADAR ALIGNMENT

Perform the radar alignment. Refer to [CCS-82. "Description"](#).

>> GO TO 2.

2. DCA SYSTEM ACTION TEST

1. Perform the DCA system action test. Refer to [DAS-318. "DCA : Description"](#).
2. Check that the DCA system operates normally.

>> INSPECTION END

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DAS

ADDITIONAL SERVICE WHEN REPLACING ACCELERATOR PEDAL ASSEMBLY

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING ACCELERATOR PEDAL ASSEMBLY

Description

INFOID:0000000014222378

- Always perform accelerator pedal released position learning when replacing the accelerator pedal assembly or disconnecting the accelerator pedal position sensor connector.
- Perform the DCA system action test check that the DCA system operates normally.

Work Procedure

INFOID:0000000014222379

1.ACCELERATOR PEDAL RELEASED POSITION LEARNING

Perform accelerator pedal released position learning. Refer to [DAS-310. "Description"](#).

>> GO TO 2.

2.DCA SYSTEM ACTION TEST

1. Perform the DCA system action test. Refer to [DAS-318. "DCA : Description"](#).
2. Check that the DCA system operates normally.

>> INSPECTION END

ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING LANE CAMERA UNIT

Description

INFOID:0000000014222380

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

CAUTION:

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

Work Procedure

INFOID:0000000014222381

1. CAMERA AIMING ADJUSTMENT

Perform the camera aiming adjustment. Refer to [DAS-315, "Work Procedure \(Camera Aiming Adjustment\)"](#).

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

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

Is any DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC. Refer to [DAS-283, "DTC Index"](#)

NO >> GO TO 3.

3. LDW/LDP SYSTEM ACTION TEST

1. Perform the LDW/LDP system action test. Refer to [DAS-319, "LDW/LDP : Description"](#).

2. Check that the LDW/LDP system operates normally.

>> GO TO 4.

4. BLIND SPOT WARNING/BLIND SPOT INTERVENTION SYSTEM ACTION TEST

1. Perform the Blind Spot Warning/Blind Spot Intervention system action test. Refer to [DAS-321, "BSW/RCTA : Description"](#).

2. Check that the Blind Spot Warning/Blind Spot Intervention system operates normally.

>> WORK END

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DAS

PRE-INSPECTION FOR DIAGNOSIS

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

PRE-INSPECTION FOR DIAGNOSIS

LANE CAMERA UNIT

LANE CAMERA UNIT : Inspection Procedure

INFOID:0000000014222382

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-313, "Description"](#).

3.CHECK VEHICLE HEIGHT

Check vehicle height. Refer to [FSU-23, "Wheelarch Height"](#).

Is vehicle height appropriate?

YES >> INSPECTION END

NO >> Repair vehicle to appropriate height.

CAMERA AIMING ADJUSTMENT

Description

INFOID:000000014222383

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

CAUTION:

- Place the vehicle on level ground when the camera aiming adjustment is operated.
- Follow the **CONSULT** when performing the camera aiming. (Camera aiming adjustment cannot be operated without **CONSULT**.)

Work Procedure (Preparation)

INFOID:000000014222384

1.PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of ADAS control unit and lane camera unit.

Is any DTC detected?

Except "C1B01">>Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [DAS-40, "DTC Index"](#) (ICC/ADAS) or [DAS-283, "DTC Index"](#) (LANE CAMERA).

"C1B01" or no DTC>>GO TO 2.

2.PREPARATION BEFORE CAMERA AIMING ADJUSTMENT

1. Perform pre-inspection for diagnosis. Refer to [DAS-312, "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.

>> GO TO 3.

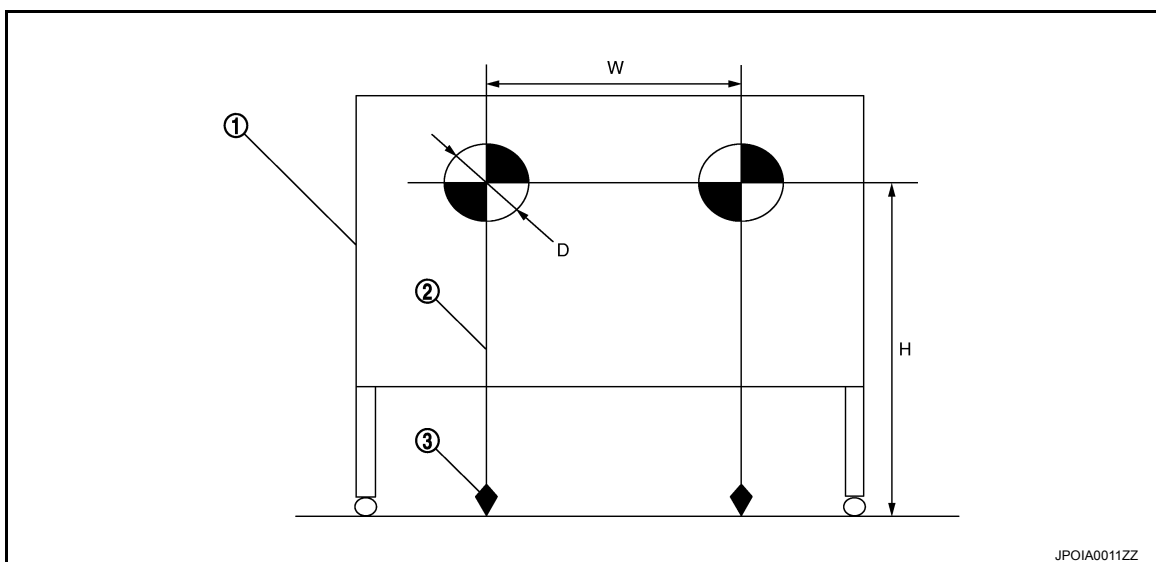
3. PREPARATION OF AIMING ADJUSTMENT JIG

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

1. Print out the target mark attached in this service manual. Refer to [DAS-316, "Work Procedure \(Target Mark Sample\)"](#).
2. Stick a printed target mark on the board with a scotch tape or a piece of double-sided tape.

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.



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CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

① Board

② String

③ Cone

● : Target mark

Diameter of a target (D) : 200 mm (7.87 in)
 Height of a target center (H) : 1,450 mm (57.09 in)
 Width between a right target center from a left target center (W) : 600 mm (23.62 in)

>> Go to [DAS-314, "Work Procedure \(Target Setting\)"](#).

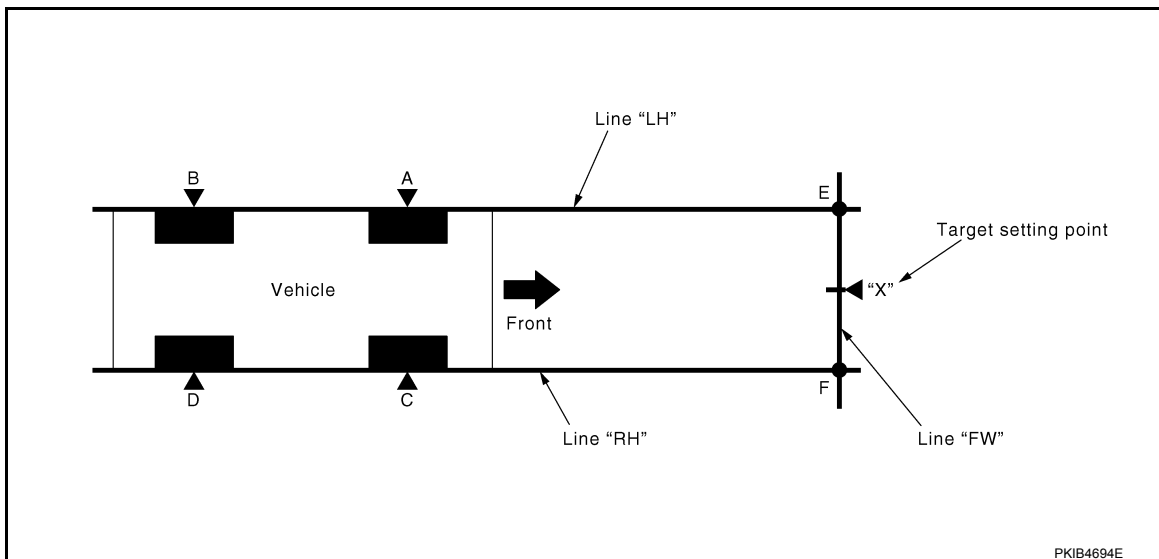
Work Procedure (Target Setting)

INFOID:0000000014222385

CAUTION:

- 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.

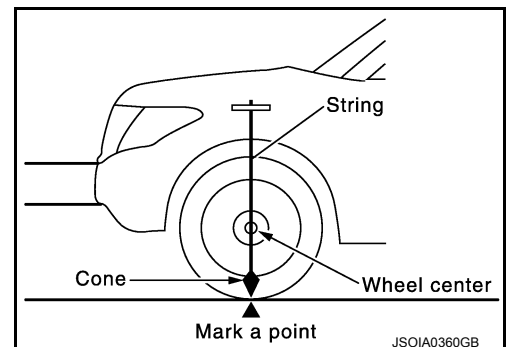
NOTE:

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.

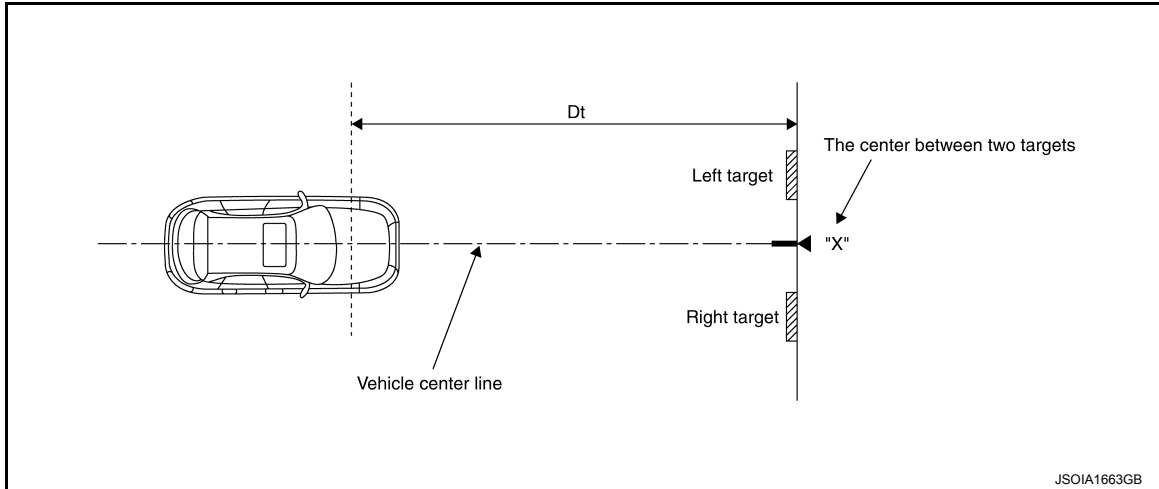


CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

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)

>> Go to [DAS-315, "Work Procedure \(Camera Aiming Adjustment\)"](#).

Work Procedure (Camera Aiming Adjustment)

INFOID:0000000014222386

CAUTION:

Perform the adjustment under unloaded vehicle condition.

1. CHECK VEHICLE HEIGHT

Measure the wheelarch height. Calculate "Dh".

$$Dh [mm] = (Hfl + Hfr) \div 2 - 821 \text{ mm (32.32 in)}$$

where,

Hfl: Front left wheelarch height [mm]

Hfr: Front right wheelarch height [mm]

NOTE:

"Dh" may be calculated as a minus value.

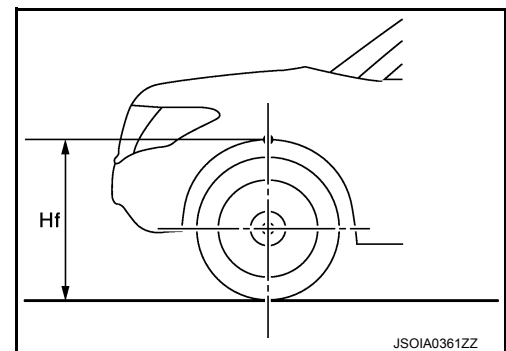
>> GO TO 2.

2. CAMERA AIMING ADJUSTMENT

CAUTION:

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

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



DAS

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

CAUTION:

- Never select “Start” when the target is not accurately placed.
- Wait 5 seconds or more after selecting “Start”.

5. Input “Dh”, and then select “Start”.

CAUTION:

Never change “Ht” and “Dt”.

6. Confirm the displayed item.

- “Normally Completed”: Select “Completion”.
- “SUSPENSION”, “X AIMING NG Y”, “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. Perform the aiming again. Refer to DAS-314, "Work Procedure (Target Setting)"
	10H Writing error	• Temporary malfunction in internal processing of the lane camera unit. • Lane camera unit malfunction.	
X AIMING NG Y (X: 0 - 7, Y: 1 - 8)	—	• A target is not-yet-placed. (The lane camera unit cannot detect a target.) • The position of the lane camera unit is not correct.	Position the target appropriately again. Perform the aiming again. Refer to DAS-313, "Work Procedure (Preparation)" .
ABNORMALLY COMPLETED	—	• Inappropriate work environment. • Inappropriate vehicle condition.	

NOTE:

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

7. Confirm that “Normally Completed” is displayed and then select “End” to close the aiming adjustment procedure.

>> GO TO 3.

3.PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of lane camera unit with CONSULT.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to [DAS-283, "DTC Index"](#).

NO >> GO TO 4.

4.ACTION TEST

Test the LDW/LDP system operation by action test. Refer to [DAS-319, "LDW/LDP : Description"](#).

>> WORK END

Work Procedure (Target Mark Sample)

INFOID:0000000014222387

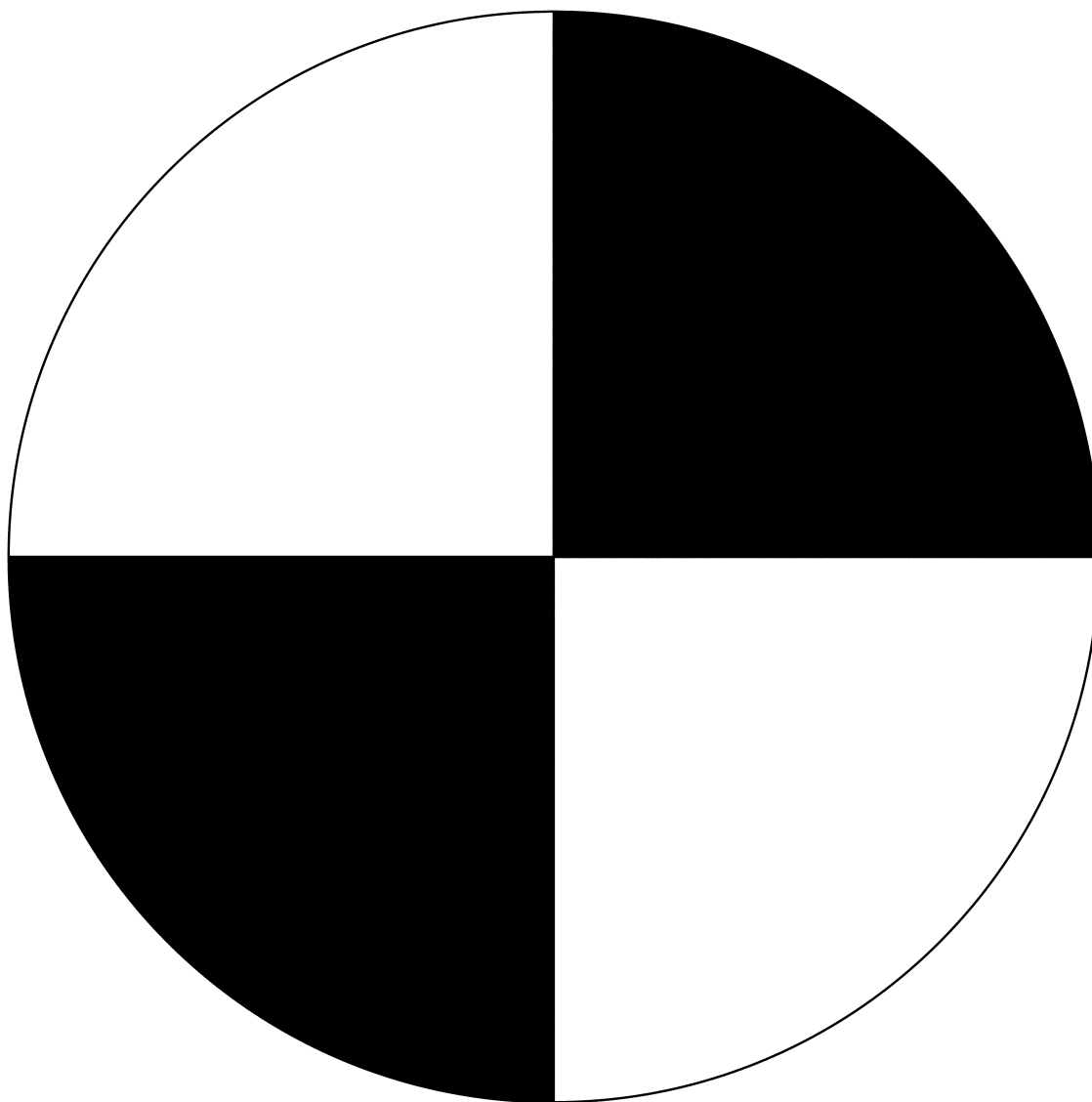
NOTE:

CAMERA AIMING ADJUSTMENT

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Print this illustration so that the diameter of the circle is 200 mm (7.87 in).



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< BASIC INSPECTION >

ACTION TEST

DCA

DCA : Description

INFOID:0000000014222388

Always perform the DCA system action test to check that the system operates normally after replacing the ICC sensor, replacing the accelerator pedal assembly, or repairing any DCA system malfunction.

CAUTION:

Perform the DCA system action test after checking that the ICC system operates normally because the DCA system shares components with the ICC system.

DCA : Work Procedure

INFOID:0000000014222389

NOTE:

When the ICC system is set, the information display changes to the ICC system display.

1. ICC SYSTEM ACTION TEST

Perform the ICC system action test. Refer to [CCS-89, "Description"](#).

>> GO TO 2.

2. CHECK DCA SYSTEM SETTING

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

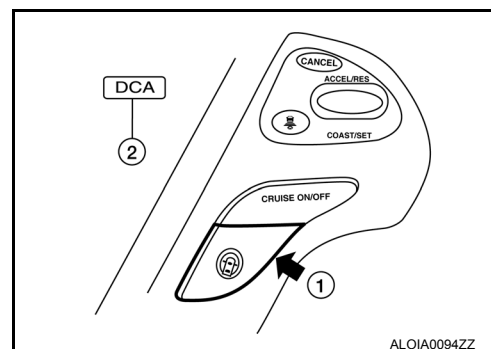
>> GO TO 3.

3. CHECK DYNAMIC DRIVER ASSISTANCE SWITCH

1. Start the engine.
2. After starting the engine wait for 30 seconds or more.
3. Enable the setting of the DCA system on the information display.
4. Press the dynamic driver assistance switch (1).
5. Check that the DCA system switch indicator (2) on the information display illuminates.
6. Check that the DCA system switch indicator turns OFF when the system is turned OFF by pressing the dynamic driver assistance switch.
7. Check that the DCA system switch indicator turns OFF when the engine starts again.

NOTE:

The DCA system switch indicator does not illuminate even when the dynamic driver assistance switch is turned ON within approximately 5 seconds after starting the engine.



ALOIA0094ZZ

If the accelerator pedal assembly is not replaced>>INSPECTION END

If the accelerator pedal assembly is replaced>>GO TO 4.

4. CHECK DCA SYSTEM OPERATION

Check that the accelerator pedal actuator operates by the "Active Test" items "ACCELERATOR PEDAL ACTUATOR TEST1" and "ACCELERATOR PEDAL ACTUATOR TEST2" of "ACCELE PEDAL ACT" with CONSULT.

>> INSPECTION END

LDW/LDP

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

LDW/LDP : Description

INFOID:000000014222390

- 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-171, "Precaution for LDW/LDP System Service"](#).
- System description for LDW: Refer to [DAS-187, "LDW : System Description"](#).
- System description for LDP: Refer to [DAS-190, "LDP : System Description"](#).
- Handling precaution: Refer to [DAS-223, "Precautions for Lane Departure Warning/Lane Departure Prevention"](#).

LDW/LDP : Inspection Procedure

INFOID:000000014222391

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-171, "Precaution for LDW/LDP System Service"](#).
- System description for LDW: Refer to [DAS-187, "LDW : System Description"](#).
- System description for LDP: Refer to [DAS-190, "LDP : System Description"](#).
- Handling precaution: Refer to [DAS-223, "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. Turn warning systems switch ON (warning systems ON indicator is ON).

NOTE:

LDP system is OFF.

3. 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. 60 km/h (40 MPH)	Close to lane marker	No action	ON	OFF	—
Approx. 70 km/h (45 MPH) or more	Close to lane marker	Warning • Buzzer sounds • Warning lamp blinks	ON	 ALOIA0104ZZ	Short continuous beeps
	• Close to lane marker • Turn signal ON (Deviate side)	No action	ON	OFF	—

NOTE:

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ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to [DAS-190, "LDP : 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. Turn dynamic driver assistance switch ON (LDP ON indicator lamp is ON).

NOTE:

LDW system is OFF.

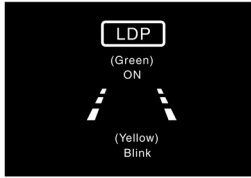
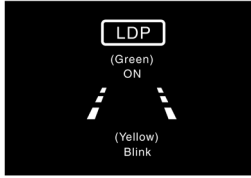
3. Check the LDP operation according to the following table.

Vehicle condition/ Driver's operation		Action	Indication on the combination meter	Buzzer
Less than Approx. 60 km/h (40 MPH)	Close to lane marker	No action	 ALOIA0136GB	—

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition/ Driver's operation	Action	Indication on the combination meter	Buzzer
Approx. 70 km/h (45 MPH) or more	Close to lane marker	 ALOIA0135GB	Short continuous beeps
	- Close to lane marker - Turn signal ON (Deviate side)	 ALOIA0136GB	—
	Close to lane marker with soft braking	 ALOIA0135GB	Short continuous beeps
	- VDC OFF Switch OFF ⇒ ON (VDC system ON ⇒ OFF) - SNOW mode switch OFF ⇒ ON - Road condition is wet - Lane camera temperature is high	Cancellation - Buzzer sounds - Each message is displayed NOTE: When dynamic driver assistance switch is ON ⇒ OFF, message is turned OFF.	Beep

NOTE:

After the operating conditions are satisfied, the control continues until the vehicle speed reaches approximately 60 km/h (40 MPH). Refer to [DAS-190, "LDP : System Description"](#).

>> INSPECTION END

BSW/RCTA

BSW/RCTA : Description

INFOID:0000000014222392

Always perform the Blind Spot Warning/Rear Cross Traffic Alert and Blind Spot Intervention system action test to check that the system operates normally after replacing the lane camera unit, replacing the side radar left (right), or repairing any Blind Spot Warning/Rear Cross Traffic Alert/Blind Spot Intervention system malfunction.

NOTE:

Perform the Blind Spot Intervention system action test after checking that the LDP system operates normally because the Blind Spot Intervention system shares components with the LDP system.

WARNING:

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

CAUTION:

Fully understand the following items well before the road test;

- **Precautions:** Refer to [DAS-172, "Precaution for Blind Spot Warning/Blind Spot Intervention System Service"](#).
- **System description for Blind Spot Warning:** Refer to [DAS-193, "BSW : System Description"](#).
- **System description for Rear Cross Traffic Alert:** Refer to [DAS-196, "RCTA : System Description"](#).

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

- System description for Blind Spot Intervention: Refer to [DAS-199, "BLIND SPOT INTERVENTION : System Description"](#).
- Normal operating condition: Refer to [DAS-394, "Description"](#).

BSW/RCTA : Work Procedure

INFOID:0000000014222393

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-172, "Precaution for Blind Spot Warning/Blind Spot Intervention System Service"](#).
- System description for Blind Spot Warning: Refer to [DAS-193, "BSW : System Description"](#).
- System description for Rear Cross Traffic Alert: Refer to [DAS-196, "RCTA : System Description"](#).
- System description for Blind Spot Intervention: Refer to [DAS-199, "BLIND SPOT INTERVENTION : System Description"](#).
- Normal operating condition: Refer to [DAS-394, "Description"](#).

1. LDW/LDP SYSTEM ACTION TEST

Perform the LDW/LDP system action test. Refer to [DAS-319, "LDW/LDP : Inspection Procedure"](#).

>> GO TO 2.

2. CHECK BSW SYSTEM SETTING

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

>> GO TO 3.

3. BSW SYSTEM ACTION TEST

1. Enable the setting of the BSW system in the vehicle information display.
2. Turn warning systems switch ON (warning systems ON indicator is ON).

NOTE:

Blind Spot Intervention system is OFF.

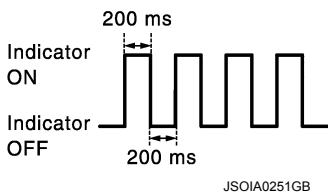
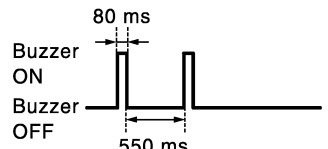
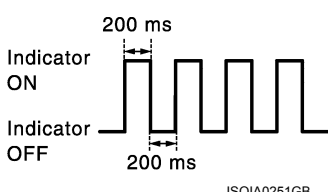
3. Check BSW operation according to the following table.

Vehicle condition/ Driver's operation				Action	
Warning systems ON indicator	Vehicle speed (Approx.) [km/h (MPH)]	Turn signal condition	Status of vehicle detection within detection area	Indication on the Blind Spot Warning/Blind Spot Intervention indicator	Buzzer
OFF	—	—	—	OFF	OFF

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

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

NOTE:

- If vehicle speed exceeds approximately 32 km/h (20MPH), BSW function operates until the vehicle speed becomes lower than approximately 29km/h (18MPH).
- Time shown in the figure is approximate time.
- Always Blind Spot Intervention system operates together with BSW system. Whenever Blind Spot Intervention system is turned on by pushing the dynamic driver assistance switch, BSW system also be turned on even if the BSW system is turned off. However, at this time the warning systems ON indicator remains OFF.

>> GO TO 4.

4.CHECK BLIND SPOT INTERVENTION SYSTEM SETTING

1. Start the engine.
2. Check that the Blind Spot Intervention system setting can be enabled/disabled in the vehicle information display.
3. Turn OFF the ignition switch and wait for 5 seconds or more.
4. Check that the previous setting is saved when the engine starts again.

>> GO TO 5.

5.CHECK DYNAMIC DRIVER ASSISTANCE SWITCH

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. Enable the setting of the Blind Spot Intervention system in the vehicle information display.
4. Press the dynamic driver assistance switch.
5. Check that the Blind Spot Intervention ON indicator on the combination meter illuminates.
6. Check that the Blind Spot Intervention ON indicator turns OFF when the system is turned OFF by pressing the dynamic driver assistance switch.
7. Check that the Blind Spot Intervention ON indicator turns OFF when the engine starts again.

NOTE:

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

- The Blind Spot Intervention ON indicator does not illuminate even when the dynamic driver assistance switch is turned ON within approximately 5 seconds after starting the engine.

>> Inspection End.

BCI

BCI : Description

INFOID:0000000014222394

Always perform the Backup Collision Intervention system action test to check that the system operates normally after replacing the side radar (left or right), or repairing any Backup Collision Intervention 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-172, "Precaution for Backup Collision Intervention"](#).
- System description for Backup Collision Intervention: Refer to [DAS-203, "BCI : System Description"](#).
- Normal operating condition: Refer to [DAS-394, "Description"](#).

BCI : Work Procedure

INFOID:0000000014222395

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-172, "Precaution for Backup Collision Intervention"](#).
- System description for Backup Collision Intervention: Refer to [DAS-203, "BCI : System Description"](#).
- Normal operating condition: Refer to [DAS-394, "Description"](#).

1. CHECK BCI SYSTEM SETTING

1. Start the engine.
2. Check that the BCI system setting can be enabled/disabled in the meter setting.
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.

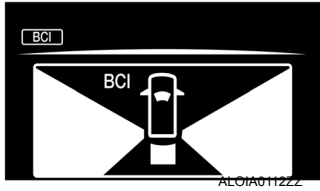
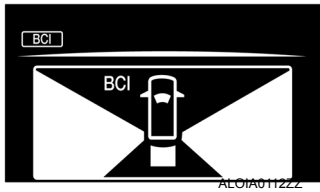
2. ACTION TEST FOR BCI

1. Enable the setting of the BCI system in the meter setting.
2. Turn BCI OFF switch OFF (Backup Collision Intervention system ON indicator is ON).
3. Check the BCI operation according to the following table.

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition		Action	Indication on the combination meter	Buzzer
0 MPH (0 km/h) R range	If the radar detects an approaching vehicle from the side.	- Chime sound (single beep) - Flashes Blind spot warning indicator light on the side the approaching vehicle is detected. - Yellow rectangular frame appears in the display.		single beep
	No approaching vehicle	No action		—

NOTE:

After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches a speed above 5 MPH (8 km/h). Refer to [DAS-203. "BCI : System Description"](#).

>> GO TO 3.

3.CHECK BCI SYSTEM SETTING

- Start the engine.
- Check that the BCI system setting can be enabled/disabled on the information display.
- Turn OFF the ignition switch and wait for 30 seconds or more.
- Check that the previous setting is saved when the engine starts again.

>> GO TO 4.

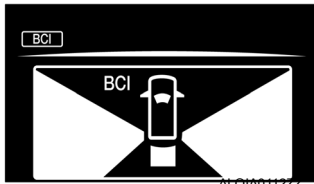
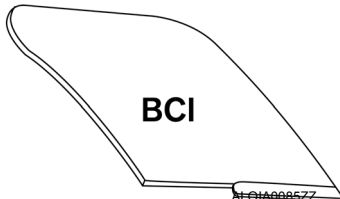
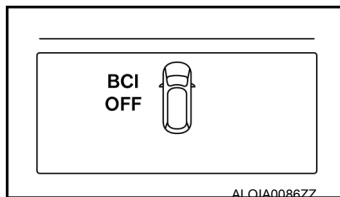
4.ACTION TEST FOR BCI

- Enable the setting of the BCI system on the information display.
- Turn BCI OFF switch OFF (BCI ON indicator lamp is ON).
- Check the BCI operation according to the following table.

ACTION TEST

< BASIC INSPECTION >

[DRIVER ASSISTANCE SYSTEM]

Vehicle condition	Backup Collision Intervention indicator	Warning buzzer	Indication on the combination meter
Shift lever in reverse	ON	OFF	
When DTC is detected	OFF	Beep	OFF (orange) 
When radar blockage is detected	ON	Beep	Unavailable: Side Radar Obstruction
When the accelerator pedal actuator detects that the internal motor temperature is high	ON	Beep	Unavailable: High Accelerator Temp.
Unless the driver overrides it and turns it off, the BCI system is always set to ON everytime the engine is started and the shifter placed in reverse.	OFF	—	
The BCI system is turned off temporarily by pushing the BCI switch. The BCI OFF display appears on the meter display. When the selector lever is switched into R again the BCI system is turned on.	OFF	—	

NOTE:

After the operating conditions are satisfied, the control continues until the vehicle reaches a speed above approximately 5 MPH (8 km/h). Refer to [DAS-203, "BCI : System Description"](#).

>> Inspection End.

DTC/CIRCUIT DIAGNOSIS**C1A07 CVT****DTC Logic**

INFOID:0000000014224836

DTC DETECTION LOGIC

DTC (On board display)	Trouble diagnosis name	DTC detecting condition
C1A07 (7)	CVT MSG CIRCUIT (CVT msg circuit)	If ICC sensor detects an error signal that is received from TCM via CAN communication

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 MAIN switch of ICC system ON.
3. Select "Self Diagnostic Result" mode of "LASER/RADAR".
4. Check if the "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-327, "Diagnosis Procedure"](#).
 NO >> Refer to [GI-50, "Intermittent Incident"](#).

Diagnosis Procedure

INFOID:0000000014224837

1.CHECK ICC SENSOR SELF-DIAGNOSIS RESULT

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 [CCS-157, "ICC SENSOR : Description"](#).
 NO >> GO TO 2.

2.CHECK TCM SELF DIAGNOSTIC 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-64, "DTC Index"](#) (RE0F10E). or [TM-291, "DTC Index"](#) (RE0F10J)
 NO >> Replace the ICC sensor. Refer to [CCS-188, "Removal and Installation"](#).

C1B00 CAMERA UNIT MALF

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B00 CAMERA UNIT MALF

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222398

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B00	CAMERA UNIT MALF (Camera unit malfunction)	If lane camera unit is malfunctioning

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B00" detected as the current malfunction?

YES >> Refer to [DAS-328, "LANE CAMERA UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222399

1.CHECK SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-283, "DTC Index"](#).

NO >> Replace the lane camera unit. Refer to [DAS-409, "Removal and Installation"](#).

C1B01 CAM AIMING INCMP

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222400

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B01	CAM AIMING INCMP (Camera aiming incomplete)	Camera aiming is not completed

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)/Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B01" detected as the current malfunction?

- YES >> Refer to [DAS-329, "LANE CAMERA UNIT : Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222401

1.CAMERA AIMING ADJUSTMENT

1. Perform the camera aiming. Refer to [DAS-313, "Description"](#).
2. Erase all self-diagnosis results with CONSULT.
3. Perform "All DTC Reading".
4. Check if the "C1B01" is detected in "Self Diagnostic Result" of "LANE CAMERA".

Is "C1B01" detected?

- YES >> Replace the lane camera unit. Refer to [DAS-409, "Removal and Installation"](#).
 NO >> INSPECTION END

C1B03 ABNRML TEMP DETECT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B03 ABNRML TEMP DETECT

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222402

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B03	ABNRML TEMP DETECT (Abnormal temperature detect)	Temperature around lane camera unit is excessively high

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)/Blind Spot Intervention

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B03" detected as the current malfunction?

YES >> Refer to [DAS-330. "LANE CAMERA UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222403

1.COOLING LANE CAMERA UNIT

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

Is "C1B03" detected?

YES >> Replace the lane camera unit. Refer to [DAS-409. "Removal and Installation"](#).

NO >> INSPECTION END

C1B09 POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B09 POWER SUPPLY CIRCUIT

DTC Logic

INFOID:0000000014222404

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

The following functions are suspended.

- LDW

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1B09" detected as the current malfunction?

- YES >> Refer to [DAS-331, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000014222405

1.CHECK LANE CAMERA UNIT SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of lane camera unit. Refer to [DAS-360, "LANE CAMERA UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace the lane camera unit. Refer to [DAS-409, "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

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DAS

C1B20 CONTROL MODULE

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B20 CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000014222406

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B20	CONTROL MODULE (Control module)	- If driver assistance buzzer control module is malfunctioning - Malfunction is detected buzzer signal circuits between driver assistance buzzer control module and driver assistance buzzer

POSSIBLE CAUSE

- Driver assistance buzzer control module
- Driver assistance buzzer
- Driver assistance buzzer circuit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Perform "All DTC Reading" with CONSULT.
- Check if the "C1B20" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "C1B20" detected as the current malfunction?

YES >> Refer to [DAS-332, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000014222407

Regarding Wiring Diagram information, refer to [DAS-284, "Wiring Diagram"](#).

1.CHECK SELF-DIAGNOSIS RESULTS

Check if any DTC other than "C1B20" is detected in "Self Diagnostic Result" of "BSW/BUZZER".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-280, "DTC Index"](#).

NO >> GO TO 2.

2.CHECK WARNING BUZZER SIGNAL CIRCUIT FOR OPEN

- Turn ignition switch OFF.
- Disconnect the warning buzzer connector.
- Disconnect the driver assistance buzzer control module connector.
- Check continuity between the driver assistance buzzer control module harness connector and warning buzzer harness connector.

Driver assistance buzzer control module		Warning buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M198	12	M199	1	Yes
	24		2	

C1B20 CONTROL MODULE

[DRIVER ASSISTANCE SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK WARNING BUZZER SIGNAL CIRCUIT FOR SHORT

Check continuity between the driver assistance buzzer control module harness connector and ground.

Driver assistance buzzer control module		Ground	Continuity
Connector	Terminal		
M198	12		No
	24		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK WARNING BUZZER

Check warning buzzer. Refer to [DAS-333, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the driver assistance buzzer control module. Refer to [DAS-404, "Removal and Installation"](#).

NO >> Replace the warning buzzer. Refer to [DAS-405, "Removal and Installation"](#).

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Component Inspection

INFOID:0000000014222408

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-405, "Removal and Installation"](#).

DAS

C1B50 SIDE RADAR MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B50 SIDE RADAR MALFUNCTION

SIDE RADAR

SIDE RADAR : DTC LOGIC

INFOID:0000000014222409

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B50	SIDE RDR MALFUNCTION (Side radar malfunction)	Side radar malfunction

POSSIBLE CAUSE

Side radar

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B50" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the "C1B50" detected as the current malfunction?

- YES >> Refer to [DAS-334, "SIDE RADAR : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000014222410

1.CHECK SELF-DIAGNOSIS RESULT

Check if any DTC other than "C1B50" is detected in "Self Diagnostic Result" of "SIDE RADAR LEFT/RIGHT"

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunction part. Refer to [DAS-276, "DTC Index"](#) (SIDE RADAR RIGHT) or [DAS-273, "DTC Index"](#) (SIDE RADAR LEFT).
NO >> Replace the side radar. Refer to [DAS-170, "Removal and Installation"](#).

C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000014222411

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B51	BSW/BSI IND SHORT CIR (Blind Spot Warning/Blind Spot Intervention indicator short circuit)	Short circuit in Blind Spot Warning/Blind Spot Intervention indicator circuit is detected. (Over current is detected)

POSSIBLE CAUSE

- Blind Spot Warning/Blind Spot Intervention indicator circuit.
- Blind Spot Warning/Blind Spot Intervention indicator.
- Side radar.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B51" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the "C1B51" detected as the current malfunction?

YES >> Refer to [DAS-335, "SIDE RADAR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000014222412

Regarding Wiring Diagram information, refer to [DAS-284, "Wiring Diagram"](#).

1.CHECK BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR CIRCUIT FOR SHORT

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

Side radar		Ground	Continuity
Connector	Terminal		
B416 (LH)	6		No
B109 (RH)			

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

C1B51 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR SHORT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

2. REPLACE THE SIDE RADAR

1. Replace the side radar. Refer to [DAS-402, "Removal and Installation"](#).
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B51" is detected in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT"

Is the DTC "C1B51" detected?

- YES >> Replace the side radar. Refer to [DAS-402, "Removal and Installation"](#).
- NO >> INSPECTION END

C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000014222413

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1B52	BSW/BSI IND OPEN CIR (Blind Spot Warning/Blind Spot Intervention indicator open circuit)	Open circuit in Blind Spot Warning/Blind Spot Intervention indicator circuit is detected.

POSSIBLE CAUSE

- Blind Spot Warning/Blind Spot Intervention indicator circuit.
- Blind Spot Warning/Blind Spot Intervention indicator.
- Side radar.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1B52" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the "C1B52" detected as the current malfunction?

YES >> Refer to [DAS-337, "SIDE RADAR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000014222414

Regarding Wiring Diagram information, refer to [DAS-284, "Wiring Diagram"](#).

1.CHECK BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR CIRCUIT FOR OPEN 1

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

Side radar		Blind Spot Warning/Blind Spot Intervention indicator		Continuity
Connector	Terminal	Connector	Terminal	
B416 (LH)	6	D21 (LH)	1	Yes
B109 (RH)		D111 (RH)		

Is the inspection result normal?

YES >> GO TO 2.

C1B52 BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR OPEN CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

NO >> Repair the harnesses or connectors.

2.CHECK BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR CIRCUIT FOR OPEN 2

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

Blind Spot Warning/Blind Spot Intervention indicator		Ground	Continuity
Connector	Terminal		
D21 (LH)	4		Yes
D111 (RH)			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK SIDE RADAR VOLTAGE OUTPUT

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

Blind Spot Warning/Blind Spot Intervention indicator		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
D21 (LH)	1		Ignition switch OFF ⇒ ON (Approx. 2 sec.)	6 V
D111 (RH)				

Is the inspection result normal?

YES >> Replace Blind Spot Warning/Blind Spot Intervention indicator. Refer to [DAS-403. "Removal and Installation"](#).

NO >> Replace side radar. Refer to [DAS-402. "Removal and Installation"](#).

C1B55 RADAR BLOCKAGE

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1B55 RADAR BLOCKAGE

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000014222415

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition
C1B55	RADAR BLOCKAGE (Radar blockage)	Side radar is blocked.

NOTE:

DTC "C1B55" may be detected under the following conditions except for possible cause. (Explain to the customer about the difference between the contamination detection function and the indication when the malfunction is detected and tell them "This is not malfunction".)

- The side radar may be blocked by temporary ambient conditions such as splashing water, mist or fog.
- The blocked condition may also be caused by objects such as ice, frost or dirt obstructing the side radar.
- Due to the nature of radar technology it is possible to get a blockage warning and not actually be blocked. This is rare and is known as a false blockage warning. A false blocked condition either self-clears or clears after an ignition cycle.

POSSIBLE CAUSE

Stain or foreign materials is deposited.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the C1B55 is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the DTC "C1B55" detected?

- YES >> Refer to [DAS-339, "SIDE RADAR : Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000014222416

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).

C1B55 RADAR BLOCKAGE

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

>> GO TO 4.

4. INTERVIEW

1. Ask if there is stain or foreign materials.
2. Ask if there is any temporary ambient condition such as splashing water, mist or fog.
3. Ask if there is any object such as ice, frost or dirt obstructing the side radar.

Is any of above conditions seen?

YES >> Explain to the customer about the difference between the blockage detection function and the indication when the malfunction is detected and tell them "This is not malfunction".

NO >> INSPECTION END

C1F01 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F01 ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000014222417

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
C1F01	APA MOTOR MALF (Accelerator pedal actuator motor malfunction)	If the accelerator pedal actuator motor error is detected

POSSIBLE CAUSE

Accelerator pedal actuator integrated motor malfunction

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1F01" detected as the current malfunction?

- YES >> Refer to [DAS-341, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000014222418

1.REPLACE ACCELERATOR PEDAL ASSEMBLY

Perform DTC confirmation procedure. If "C1F01" is detected, replace the accelerator pedal assembly. Refer to [DAS-400, "Removal and Installation"](#).

>> INSPECTION END

DAS

C1F02 ACCELERATOR PEDAL ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F02 ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000014222419

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Accelerator pedal actuator integrated control unit malfunction

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "C1F02" detected as the current malfunction?

- YES >> Refer to [DAS-342, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000014222420

1.CHECK SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "C1F02" is detected as the current malfunction on the self-diagnosis results of "ACCELE PEDAL ACT" or "ICC/ADAS".

Is "C1F02" detected as the current malfunction?

- YES >> Replace the accelerator pedal assembly. Refer to [DAS-400, "Removal and Installation"](#).
NO >> INSPECTION END

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

C1F05 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000014222421

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Harness, connector, or fuse
- Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the DCA system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "C1F05" is detected as the current malfunction on the self-diagnosis results of "ACCELERATOR PEDAL ACT".

Is "C1F05" detected as the current malfunction?

- YES >> Refer to [DAS-343, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000014222422

1.CHECK POWER SUPPLY CIRCUIT

Check the accelerator pedal actuator power supply circuit. Refer to [DAS-343, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace the accelerator pedal assembly. Refer to [DAS-400, "Removal and Installation"](#).
NO >> Repair or replace the malfunctioning parts.

DAS

U0104 ADAS CAN 1

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000014222423

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0104	ADAS CAN CIR1 (ADAS control unit CAN circuit 1)	Side radar detected an error of ITS communication signal that was received from ADAS control unit.

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-351, "SIDE RADAR LH : DTC Logic"](#) (SIDE RADAR LH) or [DAS-352, "SIDE RADAR RH : DTC Logic"](#) (SIDE RADAR RH).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the U0104 is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the DTC "U0104" detected?

YES >> Refer to [DAS-344, "SIDE RADAR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000014222424

1.CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-351, "SIDE RADAR LH : DTC Logic"](#) (SIDE RADAR LH) or [DAS-352, "SIDE RADAR RH : DTC Logic"](#) (SIDE RADAR RH).

NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-261, "DTC Index"](#).

NO >> Replace side radar LH or RH. Refer to [DAS-402, "Removal and Installation"](#)

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:000000014222425

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0104	ADAS CAN CIR 1 (ADAS control unit CAN circuit 1)	If driver assistance buzzer control module detects an error signal that is received from ADAS control unit via ITS communication

POSSIBLE CAUSE

ADAS control unit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

CHECK DTC PRIORITY

1.CHECK DTC PRIORITY

If DTC "U0104" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [DAS-352. "DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U0104" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "U0104" detected as the current malfunction?

YES >> Refer to [DAS-345. "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:000000014222426

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-352. "DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic"](#).

NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-280. "DTC Index"](#).

NO >> Replace the driver assistance buzzer control module. Refer to [DAS-404. "Removal and Installation"](#).

U0126 STRG SEN CAN 1

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222427

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

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

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-350, "LANE CAMERA UNIT : DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDP system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U0126" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "U0126" detected as the current malfunction?

- YES >> Refer to [DAS-346, "LANE CAMERA UNIT : Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222428

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-350, "LANE CAMERA UNIT : DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-261, "DTC Index"](#).
 NO >> Replace the lane camera unit. Refer to [DAS-170, "Removal and Installation"](#).

< DTC/CIRCUIT DIAGNOSIS >

U0405 ADAS CAN 2

SIDE RADAR

SIDE RADAR : DTC Logic

INFOID:0000000014222429

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U0405	ADAS CAN CIR2 (ADAS control unit CAN circuit 2)	Side radar detected an error of ITS communication signal that was received from ADAS control unit.

POSSIBLE CAUSE

ADAS control unit.

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC "U0405" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-351, "SIDE RADAR LH : DTC Logic"](#) (SIDE RADAR LH) or [DAS-352, "SIDE RADAR RH : DTC Logic"](#) (SIDE RADAR RH).
- NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the U0405 is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT/LEFT".

Is the DTC "U0405" detected?

- YES >> Refer to [DAS-347, "SIDE RADAR : Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR : Diagnosis Procedure

INFOID:0000000014222430

1.CHECK DTC PRIORITY

If DTC "U0405" is displayed with DTC "U1000", first diagnose the DTC "U1000".

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [DAS-351, "SIDE RADAR LH : DTC Logic"](#) (SIDE RADAR LH) or [DAS-352, "SIDE RADAR RH : DTC Logic"](#) (SIDE RADAR RH).
- NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-349, "ACCELERATOR PEDAL ACTUATOR : DTC Logic"](#).
- NO >> Replace side radar LH or RH. Refer to [DAS-402, "Removal and Installation"](#).

U0428 STRG SEN CAN 2

LANE CAMERA UNIT

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222431

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

Steering angle sensor

FAIL-SAFE

The following systems are canceled.

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

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-350, "LANE CAMERA UNIT : DTC Logic"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDP system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U0428" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "U0428" detected as the current malfunction?

- YES >> Refer to [DAS-348, "LANE CAMERA UNIT : Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222432

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-350, "LANE CAMERA UNIT : DTC Logic"](#).
 NO >> GO TO 2.

2.CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

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

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DAS-261, "DTC Index"](#).
 NO >> Replace the lane camera unit. Refer to [DAS-170, "Removal and Installation"](#).

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U1000 CAN COMM CIRCUIT

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : Description

INFOID:0000000014222433

ITS COMMUNICATION

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

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000014222434

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If accelerator pedal actuator is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the DCA system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-349. "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000014222435

1.PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON.
2. Turn the DCA system ON, and then wait for 2 seconds or more.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ACCELERATOR PEDAL ACT".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [LAN-28. "Trouble Diagnosis Flow Chart"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT

LANE CAMERA UNIT : Description

INFOID:0000000014222436

ITS COMMUNICATION

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222437

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If lane camera unit is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the LDP system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

YES >> Refer to [DAS-350, "LANE CAMERA UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222438

1.PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON.
2. Turn the LDP system ON, and then wait for 2 seconds or more.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "U1000" detected as the current malfunction?

YES >> Refer to [LAN-28, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-50, "Intermittent Incident"](#).

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000014222439

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-49, "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.

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

SIDE RADAR LH : DTC Logic

INFOID:0000000014222440

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Start the engine.
- Turn the Blind Spot Intervention system ON.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

YES >> Refer to [DAS-351, "SIDE RADAR LH : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000014222441

1.PERFORM THE SELF-DIAGNOSIS

- Start the engine.
- Turn the Blind Spot Intervention system ON, and then wait for 30 seconds or more.
- Perform "All DTC Reading" with CONSULT.
- Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is "U1000" detected as the current malfunction?

YES >> Refer to [LAN-28, "Trouble Diagnosis Flow Chart"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000014222442

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-49, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

ITS COMMUNICATION

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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

SIDE RADAR RH : DTC Logic

INFOID:0000000014222443

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-352, "SIDE RADAR RH : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000014222444

1.PERFORM THE SELF-DIAGNOSIS

1. Start the engine.
2. Turn the Blind Spot Intervention system ON, and then wait for 30 seconds or more.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [LAN-28, "Trouble Diagnosis Flow Chart"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description

INFOID:0000000014222445

ITS COMMUNICATION

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

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000014222446

DTC DETECTION LOGIC

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

DTC	Trouble diagnosis name	DTC detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	If driver assistance buzzer control module is not transmitting or receiving ITS communication signal for 2 seconds or more

POSSIBLE CAUSE

ITS communication system

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

YES >> Refer to [DAS-353. "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000014222447

1.PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON.
2. Turn the MAIN switch of ICC system ON, and then wait for 2 seconds or more.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "BSW/BUZZER".

Is "U1000" detected as the current malfunction?

YES >> Refer to [LAN-28. "Trouble Diagnosis Flow Chart"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

DAS

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

U1010 CONTROL UNIT (CAN) ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : Description

INFOID:0000000014222448

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

ACCELERATOR PEDAL ACTUATOR : DTC Logic

INFOID:0000000014222449

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If accelerator pedal actuator detects malfunction by CAN controller initial diagnosis

POSSIBLE CAUSE

Accelerator pedal actuator

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the DCA system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-354, "ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000014222450

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the DCA system ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "ACCELERATOR PEDAL ACT".

Is "U1010" detected as the current malfunction?

- YES >> Replace the accelerator pedal actuator. Refer to [DAS-400, "Removal and Installation"](#).
NO >> INSPECTION END

LANE CAMERA UNIT

LANE CAMERA UNIT : Description

INFOID:0000000014222451

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

LANE CAMERA UNIT : DTC Logic

INFOID:0000000014222452

DTC DETECTION LOGIC

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If lane camera unit detects malfunction by CAN controller initial diagnosis

POSSIBLE CAUSE

Lane camera unit

FAIL-SAFE

The following systems are canceled.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1010" detected as the current malfunction?

YES >> Refer to [DAS-355, "LANE CAMERA UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-50, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

LANE CAMERA UNIT : Diagnosis Procedure

INFOID:0000000014222453

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the LDP system ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "LANE CAMERA".

Is "U1010" detected as the current malfunction?

YES >> Replace the lane camera unit. Refer to [DAS-409, "Removal and Installation"](#).

NO >> INSPECTION END

SIDE RADAR LH

SIDE RADAR LH : Description

INFOID:0000000014222454

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

SIDE RADAR LH : DTC Logic

INFOID:0000000014222455

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If side radar LH detects malfunction by CAN controller initial diagnosis.

POSSIBLE CAUSE

Side radar LH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-356. "SIDE RADAR LH : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000014222456

1.CHECK SELF-DIAGNOSIS RESULT

1. Turn the Blind Spot Intervention system ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR LEFT".

Is "U1010" detected as the current malfunction?

- YES >> Replace the side radar LH. [DAS-402. "Removal and Installation"](#).
NO >> INSPECTION END

SIDE RADAR RH

SIDE RADAR RH : Description

INFOID:0000000014222457

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

SIDE RADAR RH : DTC Logic

INFOID:0000000014222458

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If Side radar RH detects malfunction by CAN controller initial diagnosis.

POSSIBLE CAUSE

Side radar RH

FAIL-SAFE

The following systems are canceled.

- Blind Spot Warning (BSW)
- Rear Cross Traffic Alert (RCTA)
- Blind Spot Intervention
- Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the Blind Spot Intervention system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-357. "SIDE RADAR RH : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

SIDE RADAR RH : Diagnosis Procedure

INFOID:0000000014222459

1.CHECK SELF-DIAGNOSIS RESULT

1. Turn the Blind Spot Intervention system ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U1010" is detected as the current malfunction in "Self Diagnostic Result" of "SIDE RADAR RIGHT".

Is "U1010" detected as the current malfunction?

- YES >> Replace the side radar RH. [DAS-402. "Removal and Installation"](#).
NO >> INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Description

INFOID:0000000014222460

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

DRIVER ASSISTANCE BUZZER CONTROL MODULE : DTC Logic

INFOID:0000000014222461

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	If driver assistance buzzer control module detects malfunction by CAN controller initial diagnosis

POSSIBLE CAUSE

Driver assistance buzzer control module

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform "All DTC Reading" with CONSULT.
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS".

Is "U1000" detected as the current malfunction?

- YES >> Refer to [DAS-357. "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-50. "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000014222462

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is "U1010" detected as the current malfunction?

- YES >> Replace the driver assistance buzzer control module. Refer to [DAS-404. "Removal and Installation"](#).
NO >> INSPECTION END

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DAS

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

ACCELERATOR PEDAL ACTUATOR

ACCELERATOR PEDAL ACTUATOR : Diagnosis Procedure

INFOID:0000000014222463

Regarding Wiring Diagram information, refer to [DAS-284. "Wiring Diagram"](#).

1.CHECK FUSES

Check that the following fuses are not blown:

Signal name	Fuse No.
Battery power supply	75 (15A)
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 ACCELERATOR PEDAL ACTUATOR POWER SUPPLY CIRCUIT

Check voltage between accelerator pedal actuator harness connector and ground.

Terminal		Condition	Voltage (Approx.)
(+)	(-)		
Accelerator pedal actuator		Ignition switch	Battery voltage
Connector	Terminal		
E74	1	OFF	
	2	ON	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the accelerator pedal actuator power supply circuit.

3.CHECK ACCELERATOR PEDAL ACTUATOR GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the accelerator pedal actuator connector.
3. Check for continuity between accelerator pedal actuator harness connector and ground.

Accelerator pedal actuator		Ground	Continuity
Connector	Terminal		
E74	7		Yes

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the accelerator pedal actuator ground circuit.

SIDE RADAR LH

SIDE RADAR LH : Diagnosis Procedure

INFOID:0000000014222464

Regarding Wiring Diagram information, refer to [DAS-284. "Wiring Diagram"](#).

1.CHECK FUSES

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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		Ignition switch	0 V
Connector	Terminal		
B416	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		
B416	2		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:0000000014222465

Regarding Wiring Diagram information, refer to [DAS-284, "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 RH connector.
3. Check voltage between side radar RH harness connector and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
Side radar RH		Ignition switch	0 V
Connector	Terminal		
B109	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		
B109	2		Yes

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:0000000014222466

Regarding Wiring Diagram information, refer to [DAS-284. "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		Ignition switch	0 V
Connector	Terminal		
R6	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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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		
R6	1		Yes

Is the inspection result normal?

- YES >> Inspection End.
NO >> Repair the lane camera unit ground circuit.

DRIVER ASSISTANCE BUZZER CONTROL MODULE

DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000014222467

Regarding Wiring Diagram information, refer to [DAS-284, "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 DRIVER ASSISTANCE BUZZER CONTROL MODULE POWER SUPPLY CIRCUIT

Check voltage between driver assistance buzzer control module harness connector and ground.

Terminal			Condition	Voltage (Approx.)
(+)		(-)		
Driver assistance buzzer control module			Ignition switch	
Connector	Terminal	Ground		
M198	3		ON	Battery voltage

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Repair the driver assistance buzzer control module power supply circuit.

3.CHECK DRIVER ASSISTANCE BUZZER CONTROL MODULE GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the driver assistance buzzer control module.
3. Check for continuity between driver assistance buzzer control module harness connector and ground.

Driver assistance buzzer control module		Ground	Continuity
Connector	Terminal		
M198	1		Yes

Is the inspection result normal?

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

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

RIGHT/LEFT SWITCHING SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000014222468

Regarding Wiring Diagram information, refer to [DAS-284. "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		
B109	1		Yes

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

WARNING BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

WARNING BUZZER CIRCUIT

Component Function Check

INFOID:0000000014222469

1.CHECK WARNING BUZZER

1. Turn the ignition switch ON.
2. Select the active test item "BUZZER 1 (ADAS)" of "BSW/BUZZER" with CONSULT.
3. With operating the test item, check the operation.

On : Warning buzzer is activated.

Off : Warning buzzer is not activated.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to [DAS-363, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014222470

Regarding Wiring Diagram information, refer to [DAS-284, "Wiring Diagram"](#).

1.CHECK WARNING BUZZER SIGNAL CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect the warning buzzer connector.
3. Disconnect the driver assistance buzzer control module connector.
4. Check continuity between the driver assistance buzzer control module harness connector and warning buzzer harness connector.

Driver assistance buzzer control module		Warning buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M198	12	M199	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 driver assistance buzzer control module harness connector and ground.

Driver assistance buzzer control module		Ground	Continuity
Connector	Terminal		
M198	12		No
	24		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

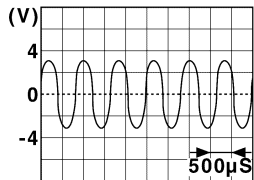
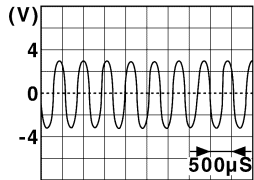
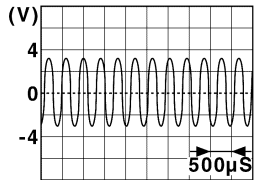
3.CHECK WARNING BUZZER SIGNAL

1. Connect the warning buzzer connector and driver assistance buzzer control module connector.
2. Turn ignition switch ON.
3. Select the active test of "BSW/BUZZER" with CONSULT.
4. Check waveform between the driver assistance buzzer control module harness connector and ground.

WARNING BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Driver assistance buzzer control module			Condition	Voltage (Approx.)
Connector	Terminal			
	+	-		
M199	12	24	At “BUZZER 1” test of “Active test”	 JSOIA0949ZZ
			At “BUZZER 2” test of “Active test”	 JSOIA0950ZZ
			At “BUZZER 3” test of “Active test”	 JSOIA0951ZZ

Is the inspection result normal?

- YES >> Replace the warning buzzer. Refer to [DAS-405, "Removal and Installation"](#).
- NO >> Replace the driver assistance buzzer control module. Refer to [DAS-404, "Removal and Installation"](#).

BCI SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

BCI SWITCH CIRCUIT

Component Function Check

INFOID:0000000014222471

1.CHECK BCI SYSTEM SWITCH INPUT SIGNAL

1. Turn the ignition switch ON.
2. Select the DATA MONITOR item "BCI SWITCH" of "ICC/ADAS" with CONSULT.
3. While operating the BCI OFF switch, check the monitor status.

Monitor item	Condition	Monitor status
BCI SWITCH	BCI OFF switch is pressed	On
	BCI OFF switch is not pressed	OFF

Is the inspection result normal?

- YES >> BCI OFF switch circuit is normal.
NO >> Refer to [DAS-365. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014222472

Regarding Wiring Diagram information, refer to [DAS-284. "Wiring Diagram"](#).

1.CHECK METER CONTROL SWITCH (BCI OFF SWITCH) SIGNAL INPUT

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

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
ADAS control unit		BCI OFF switch	
Connector	Terminal		
B104	22	Pressed	0 V
		Released	Battery voltage

Is the inspection result normal?

- YES >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK METER CONTROL SWITCH (BCI OFF SWITCH)

1. Turn ignition switch OFF.
2. Remove meter control switch (BCI OFF switch).
3. Check meter control switch (BCI OFF switch). Refer to [DAS-366. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace the meter control switch (BCI OFF switch). Refer to [DAS-414. "Removal and Installation"](#).

3.CHECK METER CONTROL SWITCH (BCI OFF SWITCH) CIRCUIT FOR OPEN

1. Disconnect the ADAS control unit connector.
2. Check continuity between the ADAS control unit harness connector and meter control switch (BCI OFF switch) harness connector.

ADAS control unit		Meter control switch (BCI OFF switch)		Continuity
Connector	Terminal	Connector	Terminal	
B104	22	M27	6	Yes

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BCI SWITCH CIRCUIT

[DRIVER ASSISTANCE SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK METER CONTROL SWITCH (BCI OFF SWITCH) CIRCUIT FOR SHORT

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

ADAS control unit		Ground	Continuity
Connector	Terminal		
B104	22		No

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.

Component Inspection

INFOID:0000000014222473

1.CHECK METER CONTROL SWITCH (BCI OFF SWITCH)

Check continuity of BCI OFF switch terminals.

Terminal		Condition	Continuity
2	6	When BCI OFF switch is pressed	Yes
		When BCI OFF switch is released	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace meter control switch (BCI OFF switch). Refer to [DAS-414. "Removal and Installation"](#).

WARNING SYSTEMS SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

WARNING SYSTEMS SWITCH CIRCUIT

Component Function Check

INFOID:0000000014222474

1.CHECK WARNING SYSTEM SWITCH INPUT SIGNAL

1. Turn the ignition switch ON.
2. Select the DATA MONITOR item "WARN SYS SW" of "ICC/ADAS" with CONSULT.
3. While operating the warning system switch, check the monitor status.

Monitor item	Condition	Monitor status
WARN SYS SW	Warning system switch is pressed	On
	Warning system switch is not pressed	OFF

Is the inspection result normal?

- YES >> Warning system switch circuit is normal.
NO >> Refer to [DAS-367. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014222475

Regarding Wiring Diagram information, refer to [DAS-284. "Wiring Diagram"](#).

1.CHECK WARNING SYSTEM SWITCH SIGNAL INPUT

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

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
ADAS control unit		Warning system switch	
Connector	Terminal		
B104	18	Pressed	0 V
		Released	12 V

Is the inspection result normal?

- YES >> Replace the ADAS control unit. Refer to [DAS-170. "Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK WARNING SYSTEM SWITCH

1. Turn ignition switch OFF.
2. Remove warning system switch. Refer to [DAS-408. "Removal and Installation"](#).
3. Check warning system switch. Refer to [DAS-366. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace the warning system switch. Refer to [DAS-408. "Removal and Installation"](#).

3.CHECK WARNING SYSTEM SWITCH GROUND CIRCUIT

Check continuity between warning system switch harness connector terminal and the ground.

Warning system switch		Ground	Continuity
Connector	Terminal		
M126	8		Yes

Is the inspection result normal?

- YES >> GO TO 4.

WARNING SYSTEMS SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

NO >> Repair harness or connector.

4.CHECK WARNING SYSTEM SWITCH SIGNAL INPUT CIRCUIT FOR OPEN

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

ADAS control unit		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
B104	18	M126	6	Yes

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

5.CHECK WARNING SYSTEM SWITCH SIGNAL INPUT CIRCUIT FOR SHORT

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

ADAS control unit		Ground	Continuity
Connector	Terminal		
B104	18		No

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

NO >> Repair the harnesses or connectors.

Component Inspection

INFOID:0000000014222476

1.CHECK WARNING SYSTEM SWITCH

Check continuity of warning system switch.

Terminal		Condition	Continuity
6	8	When warning system switch is pressed	Yes
		When warning system switch is released	No

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace warning systems switch. Refer to [DAS-408, "Removal and Installation"](#).

WARNING SYSTEMS ON INDICATOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

WARNING SYSTEMS ON INDICATOR CIRCUIT

Component Function Check

INFOID:0000000014222477

1.CHECK WARNING SYSTEMS ON INDICATOR

1. Turn the ignition switch ON.
2. Select the active test item "WARNING SYSTEM IND" of "ICC/ADAS" with CONSULT.
3. While operating the test item, check the operation.

On : Warning systems ON indicator illuminates

Off : Warning systems ON indicator is turned OFF

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Refer to [DAS-369, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014222478

Regarding Wiring Diagram information, refer to [DAS-284, "Wiring Diagram"](#).

1.CHECK WARNING ON INDICATOR POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(-)	
Warning system switch			
Connector	Terminal		
M126	5		Battery voltage

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the warning systems ON indicator power supply circuit.

2.CHECK WARNING SYSTEMS ON INDICATOR SIGNAL FOR OPEN

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

ADAS control unit		Warning system switch		Continuity
Connector	Terminal	Connector	Terminal	
B104	19	M126	3	Yes

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK WARNING SYSTEMS ON INDICATOR SIGNAL CIRCUIT FOR SHORT

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

WARNING SYSTEMS ON INDICATOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

ADAS control unit		Ground	Continuity
Connector	Terminal		
B104	19		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK WARNING SYSTEMS ON INDICATOR

Check the warning systems ON indicator. Refer to [DAS-370, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

NO >> Replace warning system switch. [DAS-408, "Removal and Installation"](#).

Component Inspection

INFOID:0000000014222479

1.CHECK WARNING SYSTEMS ON INDICATOR

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

Terminals		Condition	Warning systems ON indicator
(+)	(-)		
5	3	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-408, "Removal and Installation"](#).

DRIVER ASSISTANCE SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

SYMPTOM DIAGNOSIS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000014222480

DCA

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 DCA system. Refer to [DAS-182, "DCA : System Description"](#).

Symptoms		Reference page
Operation	Switch does not turn ON	Refer to DAS-383, "DCA : Description" .
	Switch does not turn OFF	
	DCA system setting cannot be turned ON on the information display	Refer to DAS-375, "DCA : Description" .
	DCA system setting cannot be turned OFF on the information display	
	DCA system not activated (switch is ON)	Refer to DAS-378, "DCA : Description" .
Display/Chime	Information display is not illuminated (vehicle ahead indicator)	Refer to MWI-9, "METER SYSTEM : System Description" .
	Chime does not sound	Refer to DAS-381, "Description" .
Control	No force generated for putting back the accelerator pedal	Refer to DAS-386, "Description" .
Detection of lead vehicle	Frequently cannot detect the vehicle ahead	Refer to DAS-387, "Description" .
	Detection zone is short	
	System misidentifies a vehicle even though there is no vehicle ahead	• Adjust ICC sensor aiming: Refer to CCS-82, "Description" . • Perform action test. Refer to DAS-318, "DCA : Description" .
	System misidentifies a vehicle in the next lane	
	System does not detect the vehicle ahead at all	Refer to DAS-389, "Description" .

BLIND SPOT WARNING/REAR CROSS TRAFFIC ALERT/BLIND SPOT INTERVENTION

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/Blind Spot Intervention system.

- Blind Spot Warning system: [DAS-193, "BSW : System Description"](#).
- Rear Cross Traffic Alert system: [DAS-196, "RCTA : System Description"](#).
- Blind Spot Intervention system: [DAS-199, "BLIND SPOT INTERVENTION : System Description"](#).

DAS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Symptom		Possible cause	Inspection item/Reference page
Indicator/warning lamps do not illuminate when ignition switch OFF ⇒ ON.	Blind Spot Warning/Blind Spot Intervention warning lamp (orange) does not illuminate	- Blind Spot Warning/Blind Spot Intervention warning lamp signal (CAN) - Combination meter - ADAS control unit - Blind Spot Warning/Blind Spot Intervention warning lamp (combination meter)	- ADAS control unit Active test "BSW/BSI WARNING LAMP" and "BSI ON INDICATOR". Refer to DAS-229, "CONSULT Function (ICC/ADAS)". - ADAS control unit Data monitor "BSW/BSI WARN LMP" and "BSI ON IND". Refer to DAS-229, "CONSULT Function (ICC/ADAS)". - Combination meter Data monitor "BSI IND" Refer to MWI-17, "CONSULT Function (METER/M&A)"
	Blind Spot Intervention ON indicator (Green) does not illuminate	- Blind Spot Intervention ON indicator lamp signal (CAN) - Combination meter - ADAS control unit - Blind Spot Intervention ON indicator (combination meter)	
	Blind Spot Intervention ON indicator (Green) and Blind Spot Warning/Blind Spot Intervention warning lamp (orange) do not illuminate	- Combination meter - ADAS control unit	
	All of indicator/warning lamps do not illuminate; - Blind Spot Warning/Blind Spot Intervention warning lamp - Blind Spot Intervention ON indicator - Warning systems ON indicator	- Power supply and ground circuit of ADAS control unit - ADAS control unit - Combination meter	Power supply and ground circuit of ADAS control unit. Refer to DAS-169, "Diagnosis Procedure"
	Warning systems ON indicator (on the warning systems switch) does not illuminate	- Harness between ADAS control unit and warning systems switch - Warning systems switch - ADAS control unit	Warning systems ON indicator circuit. Refer to DAS-369, "Diagnosis Procedure"
	Blind Spot Warning/Blind Spot Intervention indicator does not turn ON	- Harness between side radar and Blind Spot Warning/Blind Spot Intervention indicator - Side radar LH/RH - Blind Spot Warning/Blind Spot Intervention indicator	Perform self-diagnosis of side radar. Refer to DAS-246, "CONSULT Function (SIDE RADAR LEFT)" or DAS-247, "CONSULT Function (SIDE RADAR RIGHT)" .
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 and warning systems switch - Harness between warning systems switch and ground - ADAS control unit - Warning systems switch	- Warning systems switch circuit. Refer to DAS-367, "Diagnosis Procedure". - BSW system setting cannot be turned ON/OFF on the information display. Refer to DAS-376, "BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description"
	Buzzer is not sounding	- Power supply and ground circuit of driver assistance buzzer control module - Harness between the driver assistance buzzer control module and warning buzzer - Warning buzzer - Driver assistance buzzer control module	Power supply and ground circuit of Driver assistance buzzer control module. Refer to DAS-361, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure" Warning buzzer circuit. Refer to DAS-363, "Diagnosis Procedure"

DRIVER ASSISTANCE SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Symptom		Possible cause	Inspection item/Reference page
Blind Spot Intervention system is not activated. (BSW system is functioning normally)	Blind Spot Intervention ON indicator is not turned ON ⇔ OFF when operating dynamic driver assistance switch.	- Dynamic driver assistance switch - Combination meter - ADAS control unit	- Dynamic driver assistance switch does not turn ON/OFF. Refer to DAS-383. "DCA : Description" - Blind Spot Intervention system setting cannot be turned ON/OFF on the information display. Refer to DAS-376. "BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description"
	Warning is functioning but yawing is not functioning.	—	- Check "Cause of auto-cancel 2". Refer to DAS-19. "CONSULT Function (ICC/ADAS)" - Check normal operating condition. Refer to DAS-394. "Description"
Blind Spot Intervention functions are not timely.(BSW system is functioning normally.) (Example)		- Camera aiming adjustment - Lane camera unit	Camera aiming adjustment. Refer to DAS-313. "Description" .

BCI

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 BCI system. Refer to [DAS-203. "BCI : System Description"](#).

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F
G
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DAS

DRIVER ASSISTANCE SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

Symptom	Possible cause	Inspection item/Reference page
Indicator/warning lamps do not illuminate when ignition switch OFF ⇒ ON.	Backup Collision Intervention ON indicator (Green) does not illuminate	• Backup Collision Intervention ON indicator lamp signal (CAN) - Combination meter - ADAS control unit • Backup Collision Intervention ON indicator (combination meter) • ADAS control unit Active test "BCI ON INDICATOR". Refer to DAS-19, "CONSULT Function (ICC/ADAS)". • ADAS control unit Data monitor "BCI WARN LMP". Refer to DAS-19, "CONSULT Function (ICC/ADAS)". • Combination meter Data monitor "BCI W/L". Refer to MWI-17, "CONSULT Function (METER/M&A)".
	All of indicator/warning lamps do not illuminate; • Backup Collision Intervention warning lamp • Backup Collision Intervention ON indicator • Warning systems ON indicator	• Power supply and ground circuit of ADAS control unit • ADAS control unit • Combination meter Power supply and ground circuit of ADAS control unit. Refer to DAS-169, "Diagnosis Procedure"
	Backup Collision Intervention indicator does not turn ON	• Harness between side radar and Backup Collision Intervention indicator • Side radar LH/RH • Backup Collision Intervention indicator Perform self-diagnosis of side radar. Refer to DAS-246, "CONSULT Function (SIDE RADAR LEFT)" or DAS-247, "CONSULT Function (SIDE RADAR RIGHT)".
	Sonar buzzer is not sounding	• Buzzer power supply circuit. • Harness between sonar control unit and sonar buzzer • Harness between sonar buzzer and ground. • Sonar buzzer • Sonar control unit Refer to sonar buzzer for repair AV-265, "Diagnosis Procedure"
	Warning buzzer is not sounding	• Power supply and ground circuit of driver assistance buzzer control module • Harness between the driver assistance buzzer control module and warning buzzer • Warning buzzer • Driver assistance buzzer control module Power supply and ground circuit of Driver assistance buzzer control module. Refer to DAS-361, "DRIVER ASSISTANCE BUZZER CONTROL MODULE : Diagnosis Procedure" Warning buzzer circuit. Refer to DAS-363, "Diagnosis Procedure"

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

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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

DCA

DCA : Description

INFOID:0000000014222481

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

DCA : Diagnosis Procedure

INFOID:0000000014222482

1.CHECK DCA SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. Check that DCA system setting on the information display is ON.

Is DCA system setting ON?

- YES >> GO TO 2.
NO >> Enable the DCA system setting.

2.DYNAMIC DRIVER ASSISTANCE SWITCH INSPECTION

1. Start the engine.
2. Check that "DYNA ASIST SW" operates normally in "DATA MONITOR" of "ICC/ADAS" with CONSULT.

Is the inspection result normal?

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

3.CHECK DCA SYSTEM SWITCH INDICATOR CIRCUIT

1. Start the engine.
2. Select the active test item "DCA INDICATOR" of "ICC/ADAS" with CONSULT.
3. Check if the DCA system switch indicator illuminates when the test item is operated.

Is the inspection result normal?

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

4.PERFORM THE SELF-DIAGNOSIS OF COMBINATION METER

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "METER/M&A". Refer to [MWI-26. "DTC Index"](#).

Is the inspection result normal?

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

5.CHECK STEERING SWITCH CIRCUIT

Check the steering switch circuit. Refer to [MWI-83. "Diagnosis Procedure"](#).

Is the inspection result normal?

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

6.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "ICC/ADAS". Refer to [DAS-261. "DTC Index"](#).

Is any DTC detected?

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

7.REPAIR OR REPLACE MALFUNCTIONING PARTS.

Repair or replace malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

>> GO TO 8.

8.CHECK DCA SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to [DAS-318, "DCA : Description"](#) for action test.)
2. Check that the DCA system is normal.

>> INSPECTION END

LDW/LDP

LDW/LDP : Description

INFOID:0000000014222483

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

LDW/LDP : Diagnosis Procedure

INFOID:0000000014222484

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-83, "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-83, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-94, "Removal and Installation"](#).
NO >> Replace steering switch. Refer to [AV-137, "Removal and Installation"](#).

BLIND SPOT WARNING/BLIND SPOT INTERVENTION

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description

INFOID:0000000014222485

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

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Diagnosis Procedure

INFOID:0000000014222486

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-83, "Diagnosis Procedure"](#).

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

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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-83, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-94, "Removal and Installation"](#).

NO >> Replace steering switch. Refer to [AV-137, "Removal and Installation"](#).

BCI

BCI : Description

INFOID:0000000014222487

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

BCI : Diagnosis Procedure

INFOID:0000000014222488

1.CHECK BACK-UP COLLISION INTERVENTION SYSTEM SETTING

1. Start the engine.

2. Check that the Backup Collision Intervention 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-83, "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-83, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-94, "Removal and Installation"](#).

NO >> Replace steering switch. Refer to [AV-137, "Removal and Installation"](#).

DAS

SYSTEM NOT ACTIVATED

DCA

DCA : Description

INFOID:0000000014222489

The dynamic driver assistance switch can be turned ON/OFF, but the DCA system does not operate.

NOTE:

Never start the operation under the following conditions.

- No operation condition
- When the brake pedal depressed
- When the ICC system is set
- When the system judges that the vehicle comes to a standstill by the system control
- When the vehicle ahead is not detected
- Operation cancellation condition
- When the dynamic driver assistance switch is turned to OFF
- When the system malfunction occurs
- When ABS or VDC (including the TCS) operates
- When the VDC is turned OFF
- When the sensor area of the front bumper is dirty and the measurement of the distance between the vehicles becomes difficult
- When ABS warning lamp is ON
- When the SNOW mode switch is turned ON

DCA : Diagnosis Procedure

INFOID:0000000014222490

1. CHECK CAUSE OF AUTOMATIC CANCELLATION

Check if there is any cancellation cause in the "CAUSE OF AUTO-CANCEL" on "WORK SUPPORT" of "ICC/ADAS" with CONSULT.

Is it displayed?

- Not displayed>>GO TO 2.
- "OPE SW VOLT CIRC">>Refer to [DAS-80, "DTC Logic"](#).
- "VHCL SPD UNMATCH">>Refer to [DAS-71, "DTC Logic"](#).
- "IGN LOW VOLT">>Refer to [DAS-70, "DTC Logic"](#).
- "CAN COMM ERROR">>Refer to [DAS-135, "DTC Logic"](#).
- "ICC SENSOR CAN COMM ERR">>Refer to [DAS-127, "DTC Logic"](#).
- "ABS/TCS/VDC CIRC">>Refer to [DAS-73, "DTC Logic"](#).
- "ECD CIRCUIT">>Refer to [DAS-95, "DTC Logic"](#).

2. PERFORM ALL OF THE SELF-DIAGNOSIS

1. Perform "All DTC Reading".
2. Check if any DTC is detected in self-diagnosis results of "ICC/ADAS". Refer to [DAS-261, "DTC Index"](#).

Is any DTC detected?

- YES >> GO TO 3.
- NO >> GO TO 4.

3. REPAIR OR REPLACE MALFUNCTIONING PARTS

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

>> GO TO 6.

4. CHECK EACH SWITCH AND VEHICLE SPEED SIGNAL

1. Start the engine.
2. Check that the following items operate normally in "DATA MONITOR" of "ICC/ADAS".
 - "VHCL SPEED SE"
 - "BRAKE SW"
 - "DYNA ASIST SW"

Is there a malfunctioning item?

All items are normal>>GO TO 5.

SYSTEM NOT ACTIVATED

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

"VHCL SPEED SE">>Refer to [DAS-71, "DTC Logic"](#).

"BRAKE SW">>Refer to [DAS-75, "DTC Logic"](#).

"DYNA ASIST SW">>Refer to [DAS-80, "DTC Logic"](#).

5.REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

>> GO TO 6.

6.CHECK DCA SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to [DAS-318, "DCA : Description"](#) for action test.)
2. Check that the DCA system is normal.

>> INSPECTION END

BCI

BCI : Description

INFOID:0000000014222491

The switch does not turn ON

- When the Backup Collision Intervention system setting is ON, the Backup Collision Intervention ON indicator does not illuminate even if the BCI OFF switch is depressed.

The switch does not turn OFF

- The Backup Collision Intervention ON indicator does not turn off even if the BCI OFF switch is pressed when the Backup Collision Intervention ON indicator illuminates.

BCI : Diagnosis Procedure

INFOID:0000000014222492

1.CHECK BACKUP COLLISION INTERVENTION SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. Check that Backup Collision Intervention system setting on the information display is ON.

Is Backup Collision Intervention system setting ON?

YES >> GO TO 2.

NO >> Enable the Backup Collision Intervention system setting.

2.BCI OFF SWITCH INSPECTION

1. Start the engine.
2. Check that "BCI SW" operates normally in "DATA MONITOR" of "ICC/ADAS" with CONSULT.

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 5.

3.CHECK BACKUP COLLISION INTERVENTION ON INDICATOR CIRCUIT

1. Start the engine.
2. Select the active test item "BSI ON IND" of "ICC/ADAS" with CONSULT.
3. Check if the Backup Collision Intervention ON indicator illuminates when the test item is operated.

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 4.

4.PERFORM THE SELF-DIAGNOSIS OF COMBINATION METER

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "METER/M&A". Refer to [MWI-26, "DTC Index"](#).

Is the inspection result normal?

YES >> GO TO 7.

SYSTEM NOT ACTIVATED

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

NO >> GO TO 6.

5.CHECK STEERING SWITCH CIRCUIT

Check the steering switch circuit. Refer to [MWI-83, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 7.

6.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the DTC is detected in self-diagnosis results of "ICC/ADAS". Refer to [DAS-261, "DTC Index"](#).

Is any DTC detected?

YES >> GO TO 7.

NO >> GO TO 8.

7.REPAIR OR REPLACE MALFUNCTIONING PARTS.

Repair or replace malfunctioning parts.

>> GO TO 8.

8.CHECK BACKUP COLLISION INTERVENTION SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test.
(Refer to [DAS-324, "BCI : Description"](#) for action test.)

2. Check that the Backup Collision Intervention system is normal.

>> Inspection End.

CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

CHIME DOES NOT SOUND

Description

INFOID:0000000014222493

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-387, "Description"](#).)

Diagnosis Procedure

INFOID:0000000014222494

1.PERFORM ACTIVE TEST

Check if the warning chime sounds on the active test item "ICC BUZZER" of "ICC/ADAS" with CONSULT.

Does the warning chime sound?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK THE MALFUNCTION SYMPTOM DURING WARNING CHIME OPERATION

Understand the vehicle ahead detection condition when the malfunction occurred. If the warning chime should have sounded, replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

>> GO TO 9.

3.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the "U1000" is detected in self-diagnosis results of "ICC/ADAS".

Is "U1000" detected?

YES >> GO TO 4.

NO >> GO TO 5.

4.CAN COMMUNICATIONS INSPECTION

Check the CAN communication and repair or replace malfunctioning parts. Refer to [DAS-135, "DTC Logic"](#).

>> GO TO 9.

5.PERFORM THE SELF-DIAGNOSIS OF DRIVER ASSISTANCE BUZZER CONTROL MODULE

1. Perform "All DTC Reading" with CONSULT.

2. Check if any DTC is detected in self-diagnosis results of "BSW/BUZZER".

Is any DTC detected?

YES >> Repair or replace malfunctioning parts. Refer to [DAS-280, "DTC Index"](#).

NO >> GO TO 6.

6.CHECK DRIVER ASSISTANCE BUZZER CIRCUIT

Check driver assistance buzzer. Refer to [DAS-363, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> GO TO 7.

7.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts.

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CHIME DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

>> GO TO 9.

8.REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

>> GO TO 9.

9.CHECK EACH SYSTEM

-
1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test.
(Refer to [DAS-318, "DCA : Description"](#) for action test.)
 2. Check if the each system is normal.

>> INSPECTION END

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

DCA

DCA : Description

INFOID:0000000014222495

The switch does not turn ON

- When the DCA system setting is ON, the DCA system switch indicator does not illuminate even if the dynamic driver assistance switch is depressed.

The switch does not turn OFF

- The DCA system switch indicator does not turn OFF even if the dynamic driver assistance switch is pressed when the DCA system switch indicator illuminates.

NOTE:

The system cannot be operated when setting conventional (fixed speed) cruise control mode.

DCA : Diagnosis Procedure

INFOID:0000000014222496

1.CHECK DCA SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. Check that DCA system setting on the information display is ON.

Is DCA system setting ON?

YES >> GO TO 2.

NO >> Enable the DCA system setting.

2.DYNAMIC DRIVER ASSISTANCE SWITCH INSPECTION

1. Start the engine.
2. Check that "DYNA ASIST SW" operates normally in "DATA MONITOR" of "ICC/ADAS" with CONSULT.

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 5.

3.CHECK DCA SYSTEM SWITCH INDICATOR CIRCUIT

1. Start the engine.
2. Select the active test item "DCA INDICATOR" of "ICC/ADAS" with CONSULT.
3. Check if the DCA system switch indicator illuminates when the test item is operated.

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 4.

4.PERFORM THE SELF-DIAGNOSIS OF COMBINATION METER

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "METER/M&A". Refer to [MWI-26. "DTC Index"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 6.

5.CHECK STEERING SWITCH CIRCUIT

Check the steering switch circuit. Refer to [DAS-80. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 7.

6.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "ICC/ADAS". Refer to [DAS-261. "DTC Index"](#).

Is any DTC detected?

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SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

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

7. REPAIR OR REPLACE MALFUNCTIONING PARTS.

Repair or replace malfunctioning parts.

>> GO TO 8.

8. CHECK DCA SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to [DAS-318. "DCA : Description"](#) for action test.)
2. Check that the DCA system is normal.

>> INSPECTION END

BLIND SPOT WARNING/BLIND SPOT INTERVENTION

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Description

INFOID:0000000014222497

The switch does not turn ON

- When the Blind Spot Intervention system setting is ON, the Blind Spot Intervention ON indicator does not illuminate even if the dynamic driver assistance switch is depressed.

The switch does not turn OFF

- The Blind Spot Intervention ON indicator does not turn off even if the dynamic driver assistance switch is pressed when the Blind Spot Intervention ON indicator illuminates.

BLIND SPOT WARNING/BLIND SPOT INTERVENTION : Diagnosis Procedure

INFOID:0000000014222498

1. CHECK BLIND SPOT INTERVENTION SYSTEM SETTING

1. Start the engine.
2. After starting the engine wait for 5 seconds or more.
3. Check that Blind Spot Intervention system setting on the information display is ON.

Is Blind Spot Intervention system setting ON?

- YES >> GO TO 2.
NO >> Enable the Blind Spot Intervention system setting.

2. DYNAMIC DRIVER ASSISTANCE SWITCH INSPECTION

1. Start the engine.
2. Check that "DYNA ASIST SW" operates normally in "DATA MONITOR" of "ICC/ADAS" with CONSULT.

Is the inspection result normal?

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

3. CHECK BLIND SPOT INTERVENTION ON INDICATOR CIRCUIT

1. Start the engine.
2. Select the active test item "BSI ON IND" of "ICC/ADAS" with CONSULT.
3. Check if the Blind Spot Intervention ON indicator illuminates when the test item is operated.

Is the inspection result normal?

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

4. PERFORM THE SELF-DIAGNOSIS OF COMBINATION METER

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "METER/M&A". Refer to [MWI-26. "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 7.

SWITCH DOES NOT TURN ON / SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

NO >> GO TO 6.

5.CHECK STEERING SWITCH CIRCUIT

Check the steering switch circuit. Refer to [DAS-80, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 7.

6.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the DTC is detected in self-diagnosis results of "ICC/ADAS". Refer to [DAS-261, "DTC Index"](#).

Is any DTC detected?

YES >> GO TO 7.

NO >> GO TO 8.

7.REPAIR OR REPLACE MALFUNCTIONING PARTS.

Repair or replace malfunctioning parts.

>> GO TO 8.

8.CHECK BLIND SPOT INTERVENTION SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test.
(Refer to [DAS-321, "BSW/RCTA : Description"](#) for action test.)

2. Check that the Blind Spot Intervention system is normal.

>> INSPECTION END

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DAS

NO FORCE GENERATED FOR PUTTING BACK THE ACCELERATOR PEDAL

Description

INFOID:0000000014222499

The dynamic driver assistance switch can be turned ON/OFF but the actuation force of accelerator pedal is not generated.

NOTE:

- When the vehicle ahead detection indicator does not illuminate, the control and warning with the system are not performed.
- The actuation force of accelerator pedal may not be generated sufficiently depending on depressing method or depressing amount of accelerator pedal.

Diagnosis Procedure

INFOID:0000000014222500

1.PERFORM THE SELF-DIAGNOSIS

1. Perform "All DTC Reading" with CONSULT.
2. Check if any DTC is detected in self-diagnosis results of "ICC/ADAS" or "ACCELE PEDAL ACT".

Is any DTC detected?

- YES >> GO TO 2.
NO >> GO TO 3.

2.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts. Refer to [DAS-261. "DTC Index"](#) (ICC/ADAS) or [DAS-271. "DTC Index"](#) (ACCELE PEDAL ACT).

>> GO TO 5.

3.PERFORM ACTIVE TEST

Check if the accelerator pedal actuator operates by the active test items "ACCELERATOR PEDAL ACTUATOR TEST1" and "ACCELERATOR PEDAL ACTUATOR TEST2" of "ACCELE PEDAL ACT" with CONSULT.

Does it operate?

- YES >> GO TO 4.
NO >> Replace the accelerator pedal assembly.

4.CHECK VEHICLE AHEAD DETECTION PERFORMANCE

Understand the vehicle ahead detection condition when the malfunction occurred. If the detecting function is malfunctioning, check according to [DAS-387. "Description"](#).

>> INSPECTION END

5.CHECK DCA SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to [DAS-318. "DCA : Description"](#) for action test.)
2. Check if the DCA system is normal.

>> INSPECTION END

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

Description

INFOID:0000000014222501

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:0000000014222502

1.VISUAL CHECK (1)

Check front bumper grille near the ICC sensor for contamination and foreign materials.

Do foreign materials adhere?

YES >> GO TO 2.

NO >> GO TO 3.

2.WIPE OUT DIRT AND FOREIGN OBJECTS

Wipe out the contamination and/or foreign materials from the front bumper grille near the ICC sensor.

>> GO TO 7.

3.VISUAL CHECK (2)

Check ICC sensor for cracks and/or scratches.

Are there cracks?

YES >> GO TO 5.

NO >> GO TO 4.

4.PERFORM RADAR ALIGNMENT

1. Perform radar alignment. Refer to [CCS-82, "Description"](#).

2. Perform action test. Refer to [CCS-89, "Description"](#).

3. Check that the vehicle ahead detection performance improves.

Does it improve?

YES >> INSPECTION END

NO >> GO TO 5.

5.REPLACE ICC SENSOR

1. Replace the ICC sensor. Refer to [CCS-188, "Removal and Installation"](#).

2. Perform radar alignment. Refer to [CCS-82, "Description"](#).

3. Perform action test. Refer to [CCS-89, "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-170, "Removal and Installation"](#).

>> GO TO 7.

7.CHECK DCA SYSTEM

1. Erase "self-diagnosis result", and then perform "All DTC Reading" again after performing the action test. (Refer to [DAS-318, "DCA : Description"](#) for action test.)

2. Check that the DCA/FCW system is normal.

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

>> INSPECTION END

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

Description

INFOID:0000000014222503

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

Diagnosis Procedure

INFOID:0000000014222504

1.CHECK INFORMATION DISPLAY

1. Start the self-diagnosis mode of combination meter. Refer to [MWI-17, "Description"](#).
2. Check that the segment of information display is displayed normally.

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace the combination meter.

2.VISUAL CHECK (1)

Check front bumper grille near the ICC sensor for contamination and/or foreign materials.

Do foreign materials adhere?

- YES >> GO TO 3.
NO >> GO TO 4.

3.WIPE OUT DIRT AND FOREIGN MATERIALS

Wipe out the contamination and/or foreign materials from the front bumper grille near the ICC sensor.

>> GO TO 8.

4.VISUAL CHECK (2)

Check ICC sensor for cracks and/or scratches.

Are there cracks?

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

5.PERFORM RADAR ALIGNMENT

1. Perform radar alignment. Refer to [CCS-82, "Description"](#).
2. Perform action test. Refer to [CCS-89, "Description"](#).
3. Check that the vehicle ahead detection performance improves.

Does it improve?

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

6.REPLACE ICC SENSOR

1. Replace the ICC sensor. Refer to [CCS-188, "Removal and Installation"](#).
2. Perform radar alignment. Refer to [CCS-82, "Description"](#).
3. Perform action test. Refer to [CCS-89, "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-170, "Removal and Installation"](#).

>> GO TO 8.

8.CHECK DCA SYSTEM

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THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

1. Erase “self-diagnosis result”, and then perform “All DTC Reading” again after performing the action test.
(Refer to [DAS-318, "DCA : Description"](#) for action test.)
2. Check that the DCA system is normal.

>> INSPECTION END

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

THE SYSTEM OPERATES EVEN WHEN USING TURN SIGNAL

Description

INFOID:0000000014222505

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-187, "LDW : System Description"](#)
- LDP: [DAS-190, "LDP : System Description"](#)

Diagnosis Procedure

INFOID:0000000014222506

1.CHECK TURN SIGNAL OPERATION

Check that both right and left turn signals are normal.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts. Refer to [DAS-371, "Symptom Table"](#).

2.CHECK SELF-DIAGNOSIS RESULTS

1. Perform "All DTC Reading" with CONSULT.

2. Check if the DTC is detected in self-diagnosis results of "ICC/ADAS" Refer to [DAS-261, "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-170, "Removal and Installation"](#).

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LANE DEPARTURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

LANE DEPARTURE WARNING LAMP DOES NOT TURN ON

Description

INFOID:0000000014222507

The lane departure warning lamp in the combination meter does not turn ON when turning on the ignition switch

Diagnosis Procedure

INFOID:0000000014222508

1. CHECK LANE DEPARTURE WARNING LAMP

1. Check that "LANE DEPARTURE W/L" operate normally in "ACTIVE TEST" of "ICC/ADAS".
2. Operate the test items to check that the lane departure warning lamp blinks

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> GO TO 2.

2. CHECK COMBINATION METER

Turn the ignition switch from OFF to ON to check that "LANE W/L" included in "DATA MONITOR" in "METER/M&A" operates normally.

Is the inspection result normal?

- YES >> Replace the combination meter. Refer to [MWI-94, "Removal and Installation"](#).
- NO >> GO TO 3.

3. CHECK SELF-DIAGNOSIS RESULTS OF COMBINATION METER

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "METER/M&A". Refer to [MWI-26, "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

Check if the DTC is detected in self-diagnosis results of "ICC/ADAS" Refer to [DAS-40, "DTC Index"](#).

Is any DTC detected?

- YES >> Repair or replace malfunctioning parts.
- NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

LDP ON INDICATOR LAMP DOES NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

LDP ON INDICATOR LAMP DOES NOT TURNED ON

Description

INFOID:0000000014222509

The LDP ON indicator lamp in the combination meter does not turn ON when turning on the ignition switch

Diagnosis Procedure

INFOID:0000000014222510

1.CHECK LDP ON INDICATOR LAMP

1. Check that "LDP ON IND" operate normally in "ACTIVE TEST" of "ICC/ADAS".
2. Check if the LDP ON indicator lamp illuminates when operates each test item.

Is the inspection result normal?

- YES >> GO TO 4.
NO >> GO TO 2.

2.CHECK COMBINATION METER

Turn the ignition switch from OFF to ON to check that "LDP IND" included in "DATA MONITOR" in "METER/M&A" operates normally.

Is the inspection result normal?

- YES >> Replace the combination meter. Refer to [MWI-94, "Removal and Installation"](#).
NO >> GO TO 3.

3.CHECK SELF-DIAGNOSIS RESULTS OF COMBINATION METER

1. Perform "All DTC Reading" with CONSULT.
2. Check if the DTC is detected in self-diagnosis results of "METER/M&A" Refer to [MWI-26, "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

Check if the DTC is detected in self-diagnosis results of "ICC/ADAS" Refer to [DAS-40, "DTC Index"](#).

Is any DTC detected?

- YES >> Repair or replace malfunctioning parts.
NO >> Replace the ADAS control unit. Refer to [DAS-170, "Removal and Installation"](#).

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DAS

NORMAL OPERATING CONDITION**Description**

INFOID:0000000014222511

PRECAUTIONS FOR DISTANCE CONTROL ASSIST (DCA) SYSTEM

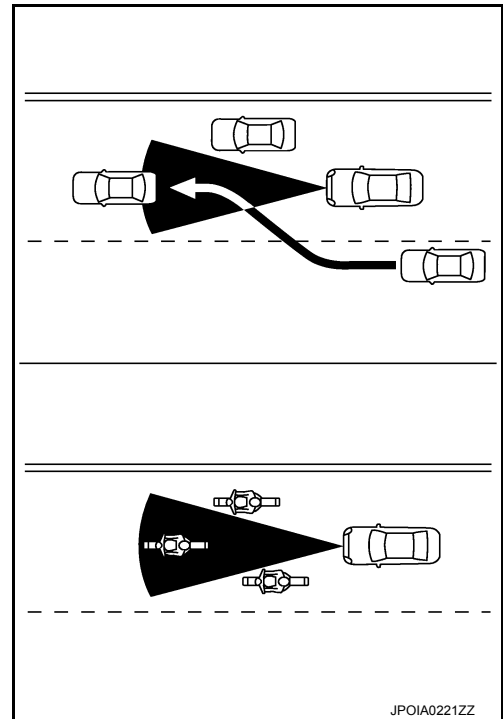
- If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill with a warning chime. To prevent the vehicle from moving, the driver must depress the brake pedal.
- The DCA system will not apply brake control while the driver's foot is on the accelerator pedal.
- This system is only an aid to assist the driver and is not a collision warning or avoidance device. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- This system will not adapt automatically to road conditions. Do not use the system on roads with sharp curves, or on icy roads, in heavy rain or in fog.
- The distance sensor will not detect the following object.
 - Stationary and slow moving vehicles
 - Pedestrians or objects in the roadway
 - Oncoming vehicles in the same lane
 - Motorcycles traveling offset in the travel lane
- As there is a performance limit to the distance control function, never rely solely on the DCA system. This system does not correct careless, inattentive or absent-minded driving, or overcome poor visibility in rain, fog, or other bad weather. Decelerate the vehicle speed by depressing the brake pedal, depending on the distance to the vehicle ahead and the surrounding circumstances in order to maintain a safe distance between vehicles.
- The system may not detect the vehicle in front of own vehicle in certain road or weather conditions. To avoid accidents, never use the DCA system under the following conditions.
 - On roads with sharp curves
 - On slippery road surfaces such as on ice or snow, etc.
 - During bad weather (rain, fog, snow, etc.)
 - When rain, snow or dirt adhere to the system sensor
 - On steep downhill roads (frequent braking may result in overheating the brakes)
 - On repeated uphill and downhill roads
- In some road or traffic conditions, a vehicle or object can unexpectedly come into the sensor detection zone and cause automatic braking. Driver may need to control the distance from other vehicles using the accelerator pedal. Always stay alert and avoid using the DCA system when it is not recommended in this section.
- The following are some conditions in which the sensor cannot detect the signals.
 - When the snow or road spray from traveling vehicles reduces the sensor's visibility
 - When excessively heavy baggage is loaded in the rear seat or the luggage room of own vehicle
- The DCA system is designed to automatically check the sensor's operation. When the sensor area of front bumper is covered with dirt or is obstructed, the system will automatically be canceled. If the sensor is covered with ice, a transparent or translucent vinyl bag, etc., the DCA system may not detect them. In these instances, the DCA system may not be able to decelerate the vehicle properly. Be sure to check and clean the sensor regularly.
- The DCA system is designed to help assist the driver to maintain a following distance from the vehicle ahead. The system will decelerate as necessary and if the vehicle ahead comes to a stop, the vehicle decelerates to standstill. However, the DCA system can only apply up to approximately 40% of the vehicle's total braking power. If a vehicle moves into the traveling lane ahead or if a vehicle traveling ahead rapidly decelerates, the distance between vehicles may become closer because the DCA system cannot decelerate the vehicle quickly enough. If this occurs, the DCA system will sound a warning chime and blink the system display to notify the driver to take necessary action.
- The DCA system does not control vehicle speed or warn when driver approach stationary and slow moving vehicles. Driver must pay attention to vehicle operation to maintain proper distance from vehicles ahead.

NORMAL OPERATING CONDITION

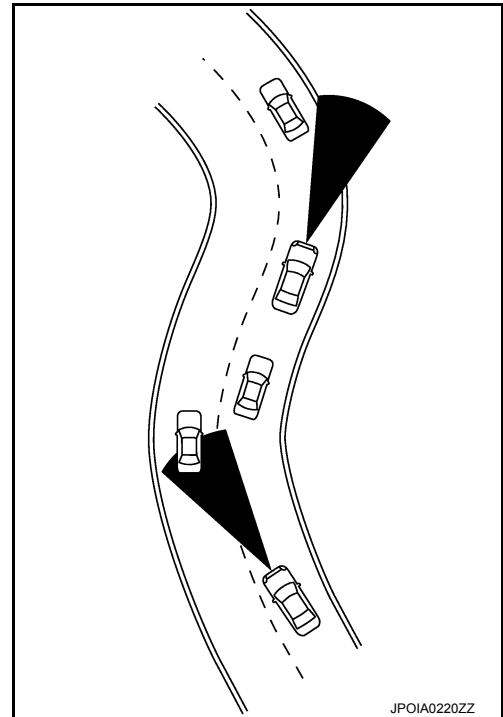
< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- The detection zone of the sensor is limited. A vehicle ahead must be in the detection zone for the system to operate.
- A vehicle ahead may move outside of the detection zone due to its position within the same lane of travel. Motorcycles may not be detected in the same lane ahead if they are traveling offset from the center line of the lane. A vehicle that is entering the lane ahead may not be detected until the vehicle has completely moved into the lane. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime. The driver may have to manually control the proper distance away from vehicle traveling ahead.



- When driving on some roads, such as winding, hilly, curved, narrow roads, or roads which are under construction, the sensor may detect vehicles in a different lane, or may temporarily not detect a vehicle traveling ahead. This may cause the system to work inappropriately. The detection of vehicles may also be affected by vehicle operation (steering maneuver or traveling position in the lane, etc.) or vehicle condition. If this occurs, the system may warn driver by blinking the system indicator and sounding the chime unexpectedly. The driver will have to manually control the proper distance away from the vehicle traveling ahead.
- The approach warning chime may sound and the driver assist system forward indicator (orange) may blink when the radar sensor detects objects on the side of the vehicle or on the side of the road. This may cause the DCA system to decelerate or accelerate the vehicle. The radar sensor may detect these objects when the vehicle is driven on winding roads, narrow roads, hilly roads or when entering or exiting a curve. In these cases driver will have to manually control the proper distance ahead of own vehicle. Also, the sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle condition (for example, if a vehicle is being driven with some damage).
- The DCA system automatically decelerates own vehicle to help assist the driver to maintain a following distance from the vehicle ahead. Manually brake when deceleration is required to maintain a safe distance upon sudden braking by the vehicle ahead or when a vehicle suddenly appears in front of own vehicle. Always stay alert when using the DCA system.



- When the vehicle ahead detection indicator lamp is not illuminated, system will not control or warn the driver.
- Never place a foot under the brake pedal. A foot may be caught when the system controls the brake.
- Depending on the position of the accelerator pedal, the system may not be able to assist the driver to release the accelerator pedal appropriately.
- If the vehicle ahead comes to a standstill, the vehicle decelerates to a standstill within the limitations of the system. The system will release brake control with a warning chime once it judges the vehicle is at a standstill. To prevent the vehicle from moving, the driver must depress the brake pedal. [The system will resume control automatically once the system reaches 5 km/h (3 MPH)].
- When the brake operates, a noise may be heard. This is not a malfunction.

PRECAUTIONS FOR PREDICTIVE FORWARD COLLISION WARNING (PFCW)

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- The predictive forward collision warning system is designed to warn driver before a collision but will not avoid a collision. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- The radar sensor does not detect the following objects.
 - Pedestrians, animals, or obstacles in the roadway.
 - Oncoming vehicles
 - Crossing vehicles
- The predictive forward collision warning system does not function when a vehicle ahead is a narrow vehicle, such as a motorcycle.
- The radar sensor may not detect a second vehicle ahead in the following conditions:
 - Snow or heavy rain
 - Dirt, ice, snow or other material covering the radar sensor
 - Interference by other radar sources
 - Snow or road spray from traveling vehicles is splashed
 - Driving in a tunnel
- The radar sensor may not detect a second vehicle when the vehicle ahead is being towed.
- When the distance to the vehicle ahead is too close, the beam of the radar sensor is obstructed.
- The radar sensor may not detect a second vehicle when driving on a steep downhill slope or on roads with sharp curves.
- Excessive noise will interfere with the warning tone sound, and it may not be heard.

PRECAUTIONS FOR LANE DEPARTURE WARNING (LDW)

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

PRECAUTIONS FOR LANE DEPARTURE PREVENTION (LDP)

- If the LDP system malfunctions, it will cancel automatically, and the LDP malfunction message will appear in the vehicle information display.
- The LDP system will not always steer the vehicle to keep it in the lane. It is not designed to prevent loss of control. It is the driver's responsibility to stay alert, drive safely, keep the vehicle in the traveling lane, and be in control of vehicle at all times.
- LDP system is primarily intended for use on well-developed freeways or highways. It may not detect the lane markers in certain roads, weather or driving conditions.
- Using the LDP system under some conditions of road, lane marker or weather, or when driver change lanes without using the turn signal could lead to an unexpected system operation. In such conditions, driver needs to correct the vehicle's direction with driver's steering operation to avoid accidents.
- The LDP system will not operate at speeds below approximately 70 km/h (45 MPH) or if it cannot detect lane markers.
- Do not use the LDP system under the following conditions as it may not function properly:

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- During bad weather (rain, fog, snow, etc.).
- When driving on slippery roads, such as on ice or snow, etc.
- When driving on winding or uneven roads.
- When there is a lane closure due to road repairs.
- When driving in a makeshift or temporary lane.
- When driving on roads where the lane width is too narrow.
- When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
- When the vehicle is equipped with non-original brake or steering parts or suspension parts.
- Excessive noise will interfere with the warning chime sound, and the chime may not be heard.
- The functions of the LDP system (warning and, system application of the steering or brakes) may or may not operate properly under the following conditions:
- On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; non-standard lane markers or lane markers covered with water, dirt or snow, etc.
- On roads where discontinued lane markers are still detectable.
- On roads where there are sharp curves.
- On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs (The LDP system could detect these items as lane markers.).
- On roads where the traveling lane merges or separates.
- When the vehicle's traveling direction does not align with the lane marker.
- When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
- When rain, snow or dirt adheres to the windshield in front of the lane camera unit.
- When the headlights are not bright due to dirt on the lens or if the aiming is not adjusted properly.
- When strong light enters the lane camera unit (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
- When a sudden change in brightness occurs (For example, when the vehicle enters or exits a tunnel or under a bridge.)

PRECAUTIONS FOR BLIND SPOT WARNING/REAR CROSS TRAFFIC ALERT & BLIND SPOT INTERVENTION

- The Blind Spot Warning/Rear Cross Traffic Alert and Blind Spot Intervention systems are not a replacement for proper driving procedure and are not designed to prevent contact with vehicles or objects. When changing lanes, always use the side and rear mirrors and turn and look in the direction driver will move to ensure it is safe to change lanes. Never rely solely on the Blind Spot Warning or Blind Spot Intervention system.
- Using the Blind Spot Intervention system under some road, lane marker or weather conditions could lead to improper system operation. Always rely on driver's own steering and braking operation to avoid accidents.
- The 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.
- The Blind Spot Warning and Blind Spot Intervention systems may not provide the warning or the control for vehicles that pass through the detection zone quickly.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.
- The side radar may not be able to detect and activate Blind Spot Warning/Blind Spot Intervention when certain objects are present such as:
 - Pedestrians, bicycles, animals.
 - Several types of vehicles such as motorcycles.
 - Oncoming vehicles.
 - Vehicles remaining in the detection zone when driver accelerate from a stop.
 - A vehicle merging into an adjacent lane at a speed approximately the same as vehicle.
 - A vehicle approaching rapidly from behind.
 - A vehicle which vehicle overtakes rapidly.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The side radar detection zone is designed based on a standard lane width. When driving in a wider lane, the side radar may not detect vehicles in an adjacent lane. When driving in a narrow lane, the side radar may detect vehicles driving two lanes away.
- The side radar are designed to ignore most stationary objects, however objects such as guardrails, walls, foliage and parked vehicles may occasionally be detected. This is a normal operating condition.

REAR CROSS TRAFFIC ALERT (RCTA)

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- 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.

PRECAUTIONS FOR BLIND SPOT INTERVENTION

- Do not use the Blind Spot Intervention system under the following conditions because the system may not function properly.
 - During bad weather (for example. rain, fog, snow, etc.)
 - When driving on slippery roads, such as on ice or snow, etc.
 - When driving on winding or uneven roads.
 - When there is a lane closure due to road repairs.
 - When driving in a makeshift or temporary lane.
 - When driving on roads where the lane width is too narrow.
 - When driving with a tire that is not within normal tire conditions (for example, tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
 - When the vehicle is equipped with non-original steering parts, brake parts or suspension parts.
- The camera may not detect lane markers in the following situations and the Blind Spot Intervention system may not operate properly.
 - On roads where there are multiple parallel lane markers; lane markers that are faded or not painted clearly; yellow painted lane markers; nonstandard lane markers; lane markers covered with water, dirt, snow, etc.
 - On roads where discontinued lane markers are still detectable.
 - On roads where there are sharp curves.
 - On roads where there are sharply contrasting objects, such as shadows, snow, water, wheel ruts, seams or lines remaining after road repairs.
 - On roads where the traveling lane merges or separates.
 - When the vehicle is traveling direction does not align with the lane markers.
 - When traveling close to the vehicle in front of driver, which obstructs the lane camera unit detection range.
 - When rain, snow or dirt adheres to the windshield in front of a lane camera unit.
 - When the headlights are not bright due to dirt on the lens or if aiming is not adjusted properly.
 - When strong light enters a lane camera unit. (for example, light directly shines on the front of the vehicle at sunrise or sunset.)
 - When a sudden change in brightness occurs. (for example, when the vehicle enters or exits a tunnel or under a bridge.)
- The Blind Spot Intervention system will not operate if own vehicle is on a lane marker when another vehicle enters the detection zone. In this case only the BSW system operates.
- Blind Spot Intervention assist will not operate or will stop operating and only a warning chime will sound under the following conditions.
 - When the accelerator pedal is depressed while the assist is provided.
 - When steering quickly.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DRIVER ASSISTANCE SYSTEM]

- When the ICC, DCA, predictive forward collision warning or forward emergency braking warnings sound.
- When the hazard warning flashers are operated.
- When driving on a curve at a high speed.

PRECAUTIONS FOR BACKUP COLLISION INTERVENTION (BCI)

- The Back-up Collision Intervention system is not a replacement for proper driving procedure and is not designed to prevent contact with vehicles or objects. When backing out of parking space, always use the inside and outside rear view mirrors and turn and look in the direction own vehicle will move. Never rely solely on the Back-up Collision Intervention system.
- There is a limitation to the detection capability of the radar and the sonar. Using the BCI system under some road, ground, lane marker, traffic or weather conditions could lead to improper system operation. Always rely on driver operation to avoid accidents.
- In the case of several vehicles approaching in a row or in the opposite direction, a chime may not be issued to the BCI system after the first vehicle passes the sensors.
- When the sonar sounds a tone, the BCI system does not chime a sound (single beep).
- The BCI system does not operate if the object is very close to the bumper.
- The radar sensor may not be able to detect certain objects are present such as:
 - Pedestrians, bicycles or animals.
 - A vehicle that is passing at a speed greater than approximately 24 km/h (15 MPH).
- The radar sensor may not detect approaching vehicles in certain situations:
 - When the vehicle parked next to own vehicle obstructs the beam of the radar sensor.
 - When the vehicle is parked in an angled parking space.
 - When the vehicle is parked on inclined ground.
 - When the vehicle turns around into own vehicle's aisle.
 - When the angle formed by own vehicle and approaching vehicle is small.
- Severe weather or road spray conditions may reduce the ability of the radar to detect other vehicles.
- The sonar sensor system may not detect:
 - Small or moving object.
 - Wedge-shaped objects.
 - Object closer to the bumper [less than approximately 30 cm (10 in)].
 - Thin objects such as rope, wire, chain, etc...
- The brakes engaged by the BCI system is not as effective on a slope as it is on flat ground. When on a steep slope, the system may not function properly.
- Do not use the BCI system under the following conditions because the system may not function properly:
 - When driving with a tire that is not the within normal tire condition (example: tire wear, low tire pressure, installation of spare tire, tire chains, non-standard wheels).
 - When the vehicle is equipped with non-original brake parts or suspension parts.
- Excessive noise (for example, audio system volume, open vehicle window) will interfere with the chime sound, and it may not be heard.

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REMOVAL AND INSTALLATION

ACCELERATOR PEDAL ASSEMBLY

Removal and Installation

INFOID:0000000014222512

For accelerator pedal assembly removal and installation, refer to [ACC-5, "MODELS WITH DISTANCE CONTROL ASSIST SYSTEM : Removal and Installation"](#).

CAUTION:

Always perform accelerator pedal released position learning after replacement, removal, or installation of accelerator pedal assembly, and then check the DCA system operation. Refer to [DAS-310, "Description"](#).

DYNAMIC DRIVER ASSISTANCE SWITCH

Removal and Installation

INFOID:0000000014222513

Dynamic driver assistance switch is integrated in the ICC steering switch. Refer to [CCS-190, "Removal and Installation"](#).

CAUTION:

Always perform the DCA system action test to check that the system operates normally after replacing the ICC sensor, replacing the accelerator pedal or repairing any DCA system malfunction. Refer to [DAS-318, "DCA : Description"](#).

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DAS

SIDE RADAR

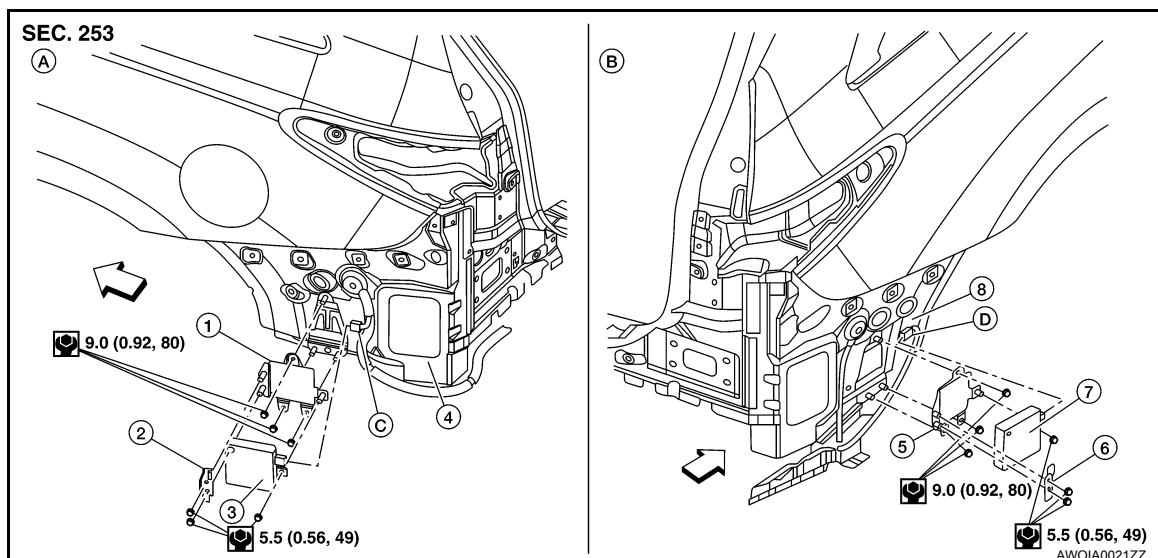
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

SIDE RADAR

Exploded View

INFOID:0000000014222514



1. Retaining inner bracket (LH)	2. Retaining outer bracket (LH)	3. Side radar (LH)
4. Body side (LH)	5. Retaining inner bracket (RH)	6. Retaining outer bracket (RH)
7. Side radar (RH)	8. Body side (RH)	A. LH side
B. RH side	C. Harness connector (LH)	D. Harness connector (RH)

⇐ Front

Removal and Installation

INFOID:0000000014222515

REMOVAL

1. Remove the rear bumper fascia. Refer to [EXT-20, "Removal and Installation"](#).
2. Disconnect the harness connector from the side radar.
3. Remove the retaining outer bracket 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-318, "DCA : Description"](#).

NOTE:

- Always lock the side radar connector.
- Do not touch the side radar lens and keep lens area clean.

BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR

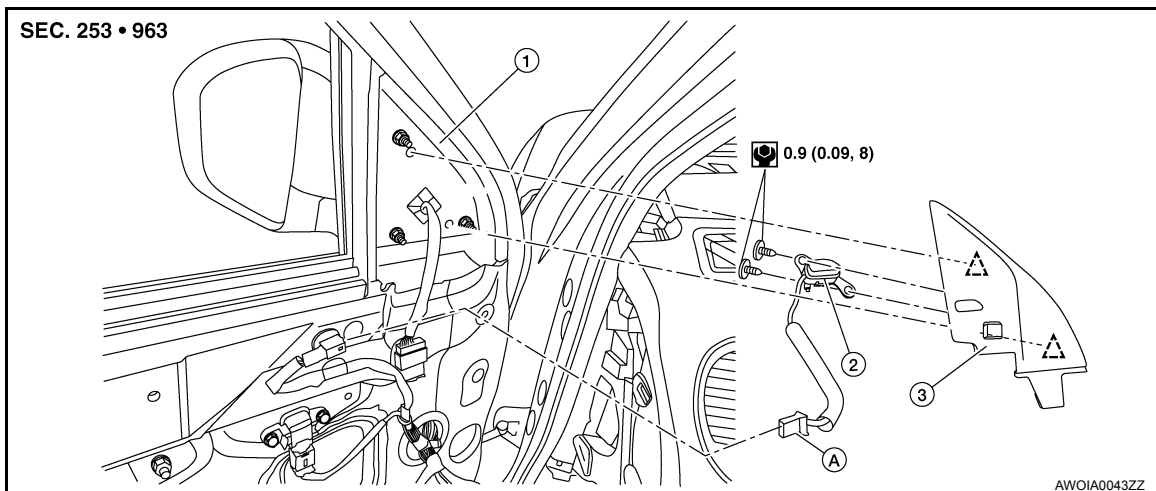
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

BLIND SPOT WARNING/BLIND SPOT INTERVENTION INDICATOR

Exploded View

INFOID:0000000014222516



1. Front door	2. Blind spot warning/blind spot intervention indicator	3. Door mirror corner finisher
A. Blind spot warning/blind spot intervention indicator harness connector	△ Clip	

Removal and Installation

INFOID:0000000014222517

REMOVAL

1. Remove the front door finisher. Refer to [INT-15. "Removal and Installation"](#).
2. Remove the door mirror corner finisher using a suitable tool. Refer to [DAS-403. "Exploded View"](#).
3. Disconnect the harness connector from the blind spot warning/blind spot intervention indicator.
4. Remove the blind spot warning/blind spot intervention indicator screws.
5. Remove the blind spot warning/blind spot intervention indicator.

INSTALLATION

Installation is in the reverse order of removal.

DAS

DRIVER ASSISTANCE BUZZER CONTROL MODULE

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

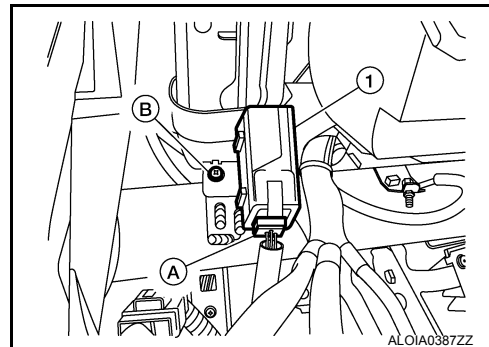
DRIVER ASSISTANCE BUZZER CONTROL MODULE

Removal and Installation

INFOID:0000000014222518

REMOVAL

1. Remove the instrument lower panel LH. Refer to [IP-25. "Removal and Installation"](#).
2. Disconnect the harness connector (A) from the driver assistance buzzer control module (1).
3. Remove screw (B) and remove the buzzer control module.



INSTALLATION

Installation is in the reverse order of removal.

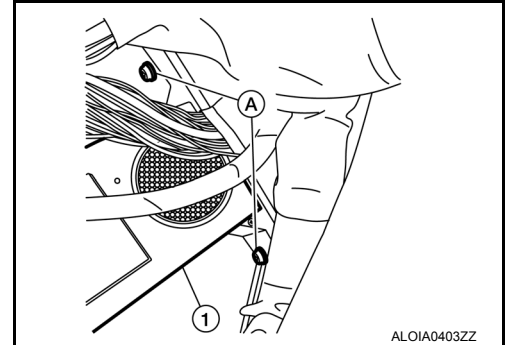
WARNING BUZZER

Removal and Installation

INFOID:0000000014222519

REMOVAL

1. Remove the instrument panel. Refer to [IP-25. "Removal and Installation"](#).
2. Remove screws (A) from the warning buzzer (1).



3. Disconnect the harness connector from the warning buzzer.
4. Remove the warning buzzer.

INSTALLATION

Installation is in the reverse order of removal.

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ICC SENSOR

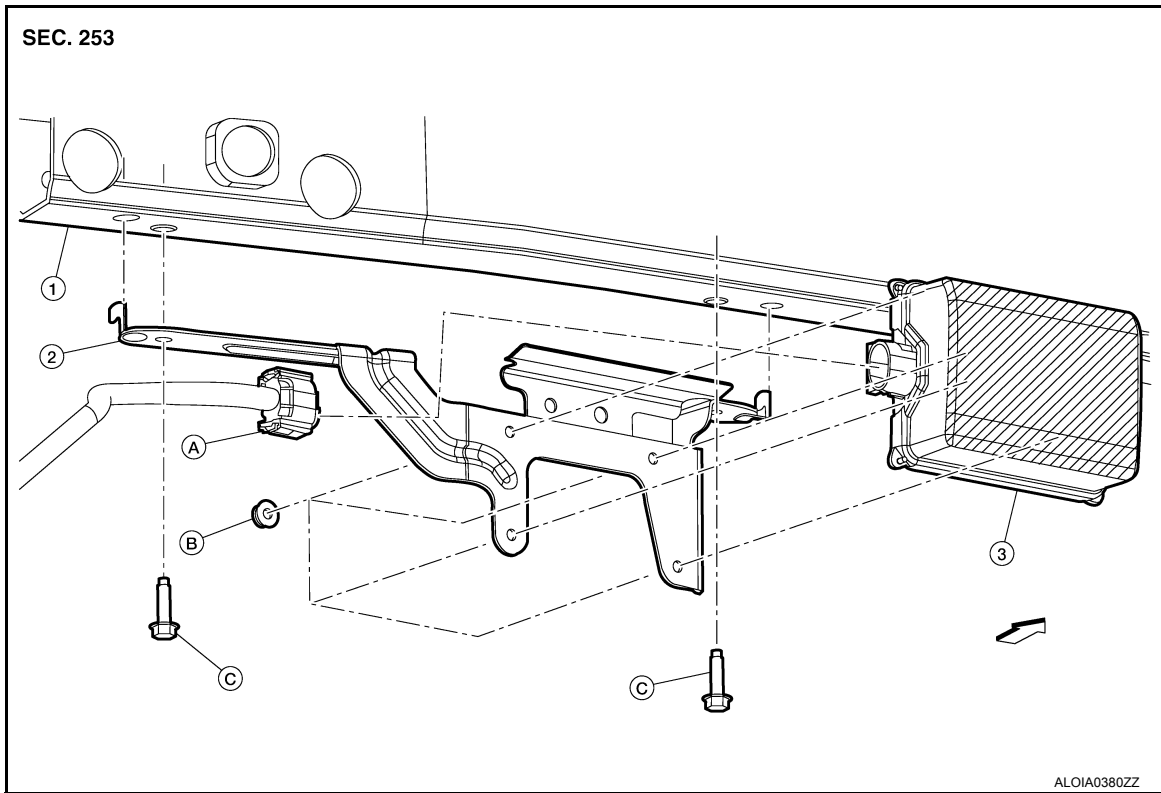
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

ICC SENSOR

Exploded View

INFOID:0000000014222520



1. Front bumper reinforcement	2. ICC sensor bracket	3. ICC sensor
A. ICC sensor harness connector	B. Refer to INSTALLATION.	C. Refer to INSTALLATION.

⇐ Front

Removal and Installation

INFOID:0000000014222521

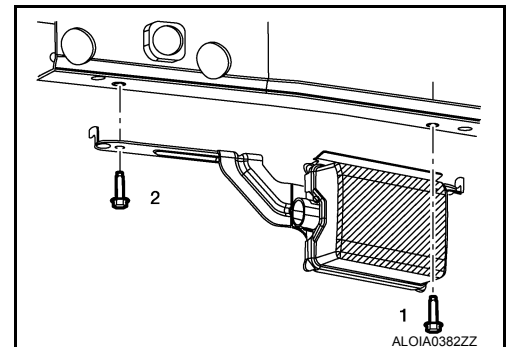
REMOVAL

1. Remove front bumper fascia. Refer to [EXT-17. "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 bracket and ICC sensor bracket bolts finger-tight (if necessary).
2. 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)



3. Install ICC sensor and ICC sensor nuts finger-tight.

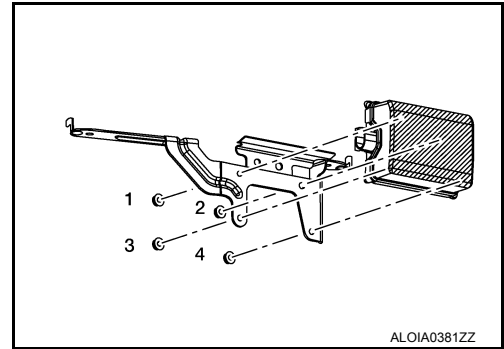
ICC SENSOR

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

4. Tighten ICC sensor nuts to the specified torque in the sequence shown.

ICC sensor bolts : 5.5 N·m (0.56 kg-m, 49 in-lb)



5. Installation of the remaining components is in the reverse order of removal.

CAUTION:

- Perform additional service when replacing the ICC sensor. Refer to [DAS-309, "Description"](#).
- Do not drop or shock ICC sensor.
- Make sure ICC sensor harness is installed without any twists.

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WARNING SYSTEMS SWITCH

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

WARNING SYSTEMS SWITCH

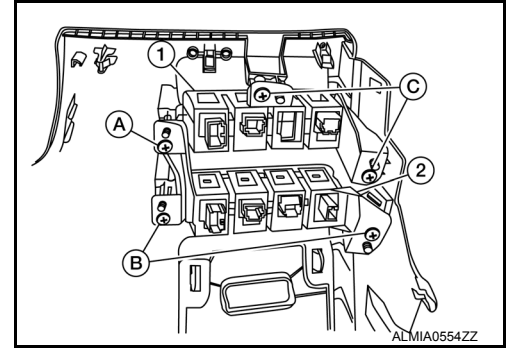
Removal and Installation

INFOID:000000014222522

REMOVAL

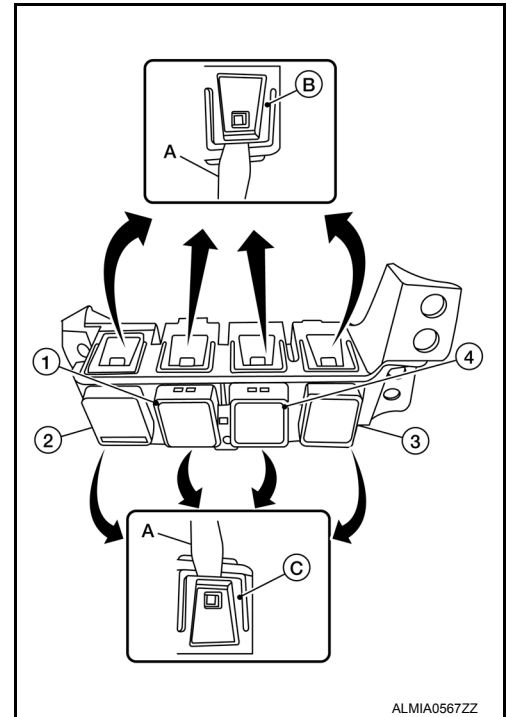
1. Remove the instrument lower panel LH. Refer to [IP-25. "Removal and Installation"](#).
2. Remove three screws (A, B) that retain the lower switch carrier (2).

- (1) : Upper switch carrier
(C) : Upper switch carrier screws



3. Release upper (B) and lower (C) pawl using a suitable tool (A), then remove the warning system switch (1) from the lower switch carrier.

- (2) : Heated steering wheel switch (if equipped)
(3) : AC 120V outlet main switch (if equipped)
(4) : Headlamp aiming switch (if equipped)



INSTALLATION

Installation is in the reverse order of removal.

LANE CAMERA UNIT

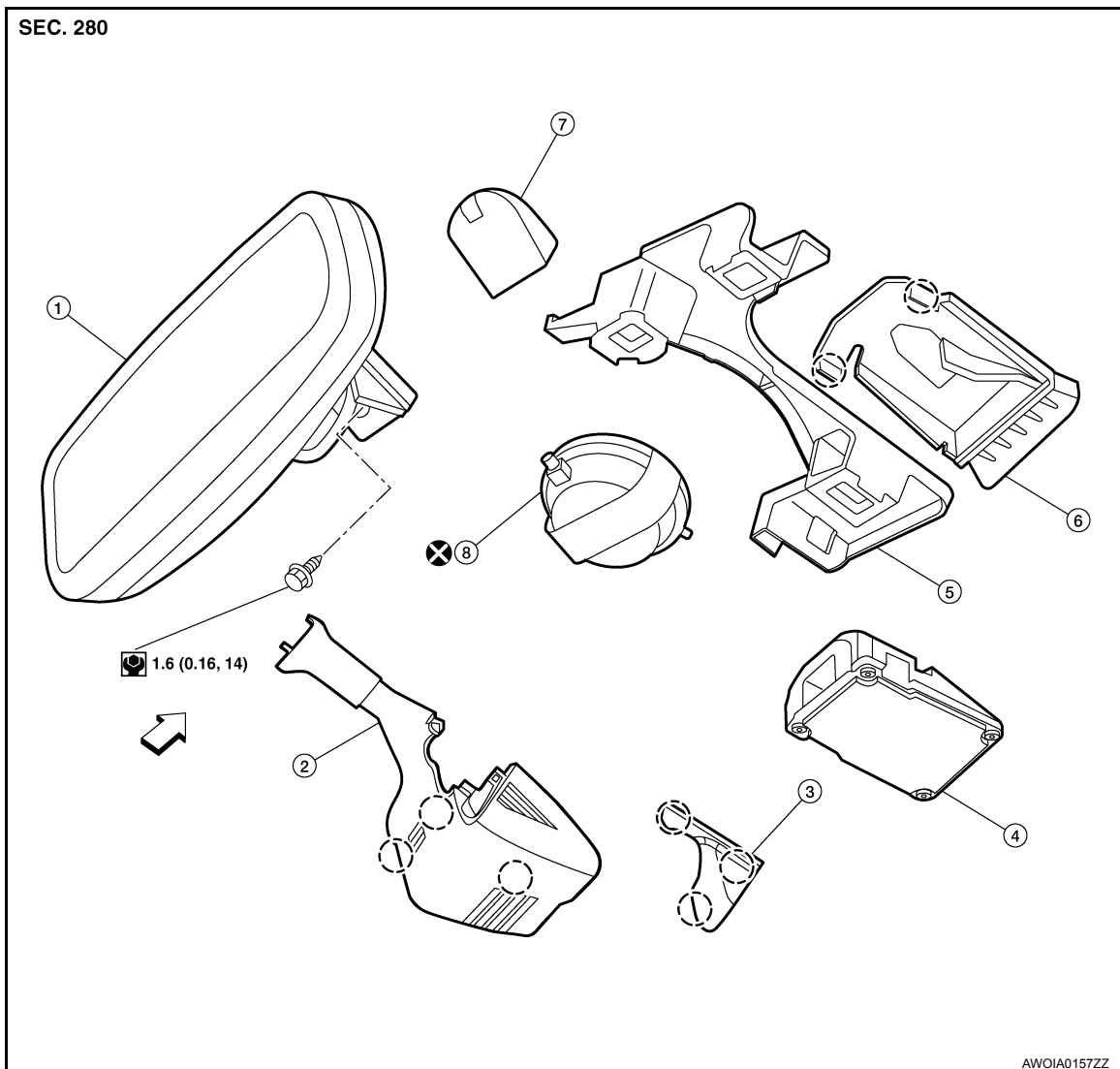
< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

LANE CAMERA UNIT

Exploded View

INFOID:000000014222523



1. Inside mirror	2. Lane camera cover (RH)	3. Lane camera cover (LH)
4. Lane camera	5. Lane camera cover bracket	6. Lane camera bracket
7. Mirror base	8. Rain sensor (if equipped)	⊗ Pawl

↖ Front

Removal and Installation

INFOID:000000014222524

REMOVAL

1. Release clips using suitable tool and remove the lane camera cover (LH).
2. Release clips using suitable tool and remove the lane camera cover (RH).
3. Release clips using suitable tool and remove the lane camera from the lane camera bracket.

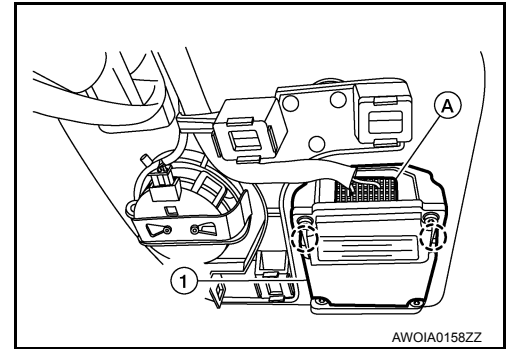
LANE CAMERA UNIT

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

4. Disconnect harness connector (A) from the lane camera (1) and remove.

 : Pawl



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- Do not touch or shock the lane camera lens area or drop the lane camera unit.
- Make sure that the lane camera harness is not twisted after installation.
- Align the lane camera cover clips with the cover bracket holes and install by hand. Do not use excessive force.
- Perform additional service when reinstalling or replacing the lane camera unit. Refer to [DAS-311, "Description"](#).

SONAR SENSOR

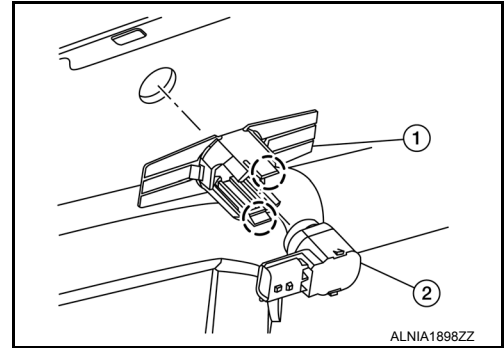
Removal and Installation

INFOID:000000014222525

REAR SONAR SENSOR

Removal

1. Remove rear bumper fascia. Refer to [EXT-20, "Removal and Installation"](#).
2. Disconnect the harness connector from the rear sonar sensor.
3. Release the rear sonar sensor finisher (1) pawls using suitable tool and remove the rear sonar sensor (2).

 :Pawl


4. Remove the rear sonar sensor finisher from the bumper fascia (if necessary).

CAUTION:

If the rear sonar sensor finisher is replaced, clean area before installation.

Installation

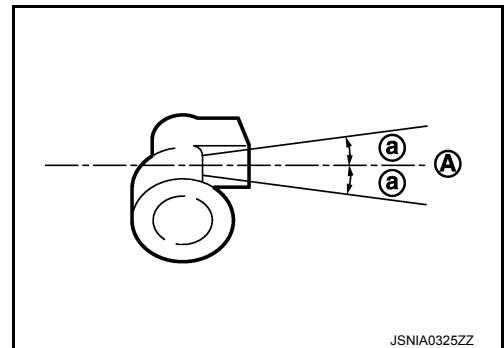
Installation is in the reverse order of removal.

CAUTION:

Verify that the connector direction is within the specification shown when assembling the bumper fascia.

(A) : Horizontal position

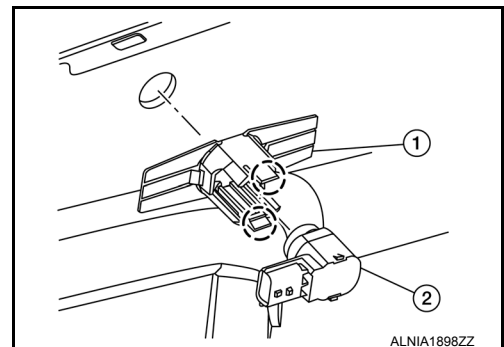
(a) : $\pm 10^\circ$



FRONT SONAR SENSOR (OUTER)

Removal

1. Remove the front bumper fascia. Refer to [EXT-17, "Removal and Installation"](#).
2. Disconnect the harness connector from the front sonar sensor (outer).
3. Release the front sonar sensor finisher (1) pawls using suitable tool and remove the front sonar sensor (outer) (2).

 :Pawl


4. Remove the front sonar sensor finisher (1) from the bumper fascia (if necessary).

CAUTION:

If the sonar sensor finisher is replaced, clean area before installation.

SONAR SENSOR

< REMOVAL AND INSTALLATION >

[DRIVER ASSISTANCE SYSTEM]

Installation

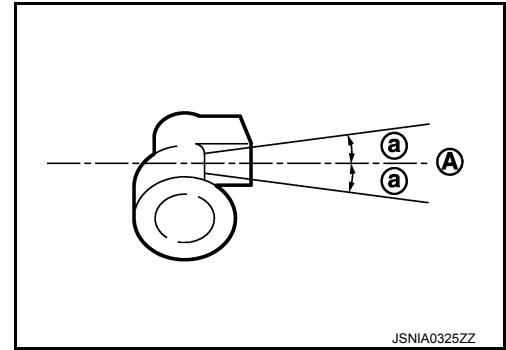
Installation is in the reverse order of removal.

CAUTION:

Verify that the connector direction is within the specification shown when assembling the bumper fascia.

(A) : Horizontal position

(a) : 10°

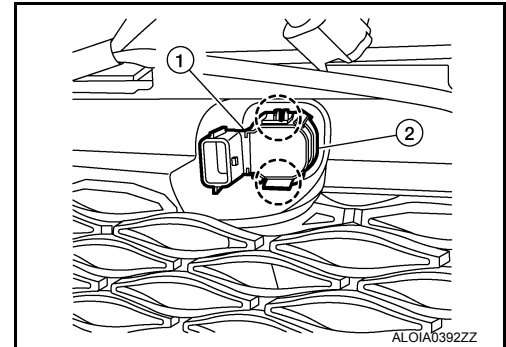


FRONT SONAR SENSOR (INNER)

Removal

1. Remove the front bumper fascia. Refer to [EXT-17, "Removal and Installation"](#).
2. Disconnect the harness connector from the front sonar sensor (inner).
3. Release the front sonar sensor (inner) finisher (2) pawls using suitable tool and remove the sensor (1).

 :Pawl



4. Remove the sonar sensor finisher from the grille (if necessary).

CAUTION:

If the sonar sensor finisher is replaced, clean area before installation.

Installation

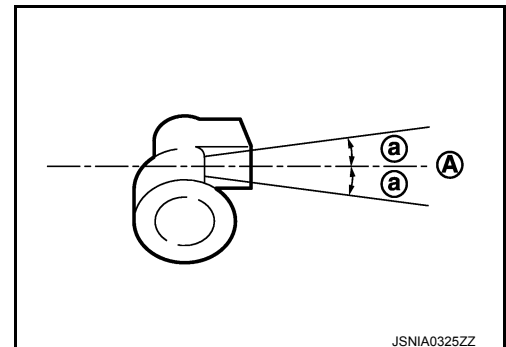
Installation is in the reverse order of removal.

CAUTION:

Verify that the connector direction is within the specification shown when assembling the bumper fascia.

(A) : Horizontal position

(a) : 10°



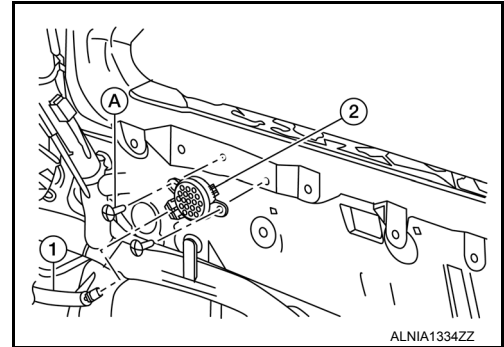
SONAR BUZZER

Removal and Installation

INFOID:0000000014222526

REMOVAL

1. Remove luggage side lower finisher (LH). Refer to [INT-31. "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
2. Disconnect harness connector (1) from the sonar buzzer (2).
3. Remove sonar buzzer screws (A) and the sonar buzzer (2).



INSTALLATION

Installation is in the reverse order of removal.

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BCI SWITCH**Removal and Installation**

INFOID:0000000014222527

The backup collision intervention (BCI) off switch is serviced as part of the meter control switch. Refer to [MWI-95, "Removal and Installation"](#).

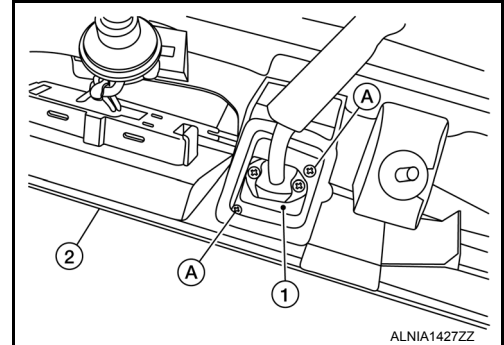
REAR VIEW CAMERA

Removal and Installation

INFOID:0000000014227040

REMOVAL

1. Remove back door outer upper finisher. Refer to [EXT-45, "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. Refer to [AV-484, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Description"](#).

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