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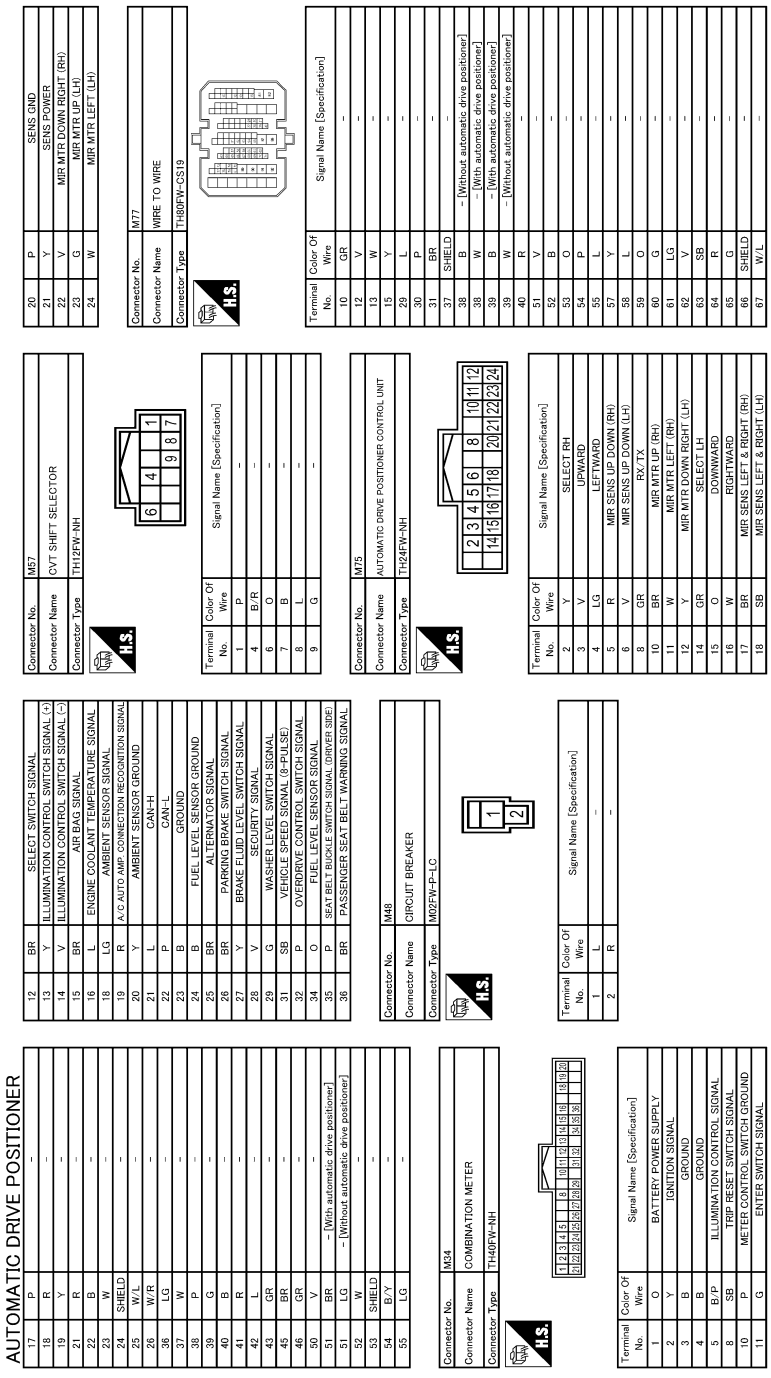
NISSAN
QUEST
MODEL E52 SERIES

QUICK REFERENCE INDEX



JRJWC2278GB

LIFTING MOTOR (FRONT)

Component Function Check

INFOID:0000000009649682

1.CHECK FUNCTION

1. Select “SEAT LIFTER FR” in “Active test” mode with CONSULT.
2. Check the lifting motor (front) operation.

Test item		Description	
SEAT LIFTER FR	OFF	Seat lifting (front)	Stop
	UP		Upward
	DWN		Downward

Is the operation of relevant parts normal?

YES >> INSPECTION END
NO >> Refer to ADP-91, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009649683

1.CHECK LIFTING MOTOR (FRONT) INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect lifting motor (front) connector.
3. Turn ignition switch ON.
4. Perform “Active test” (“SEAT LIFTER FR”) with CONSULT.
5. Check voltage between lifting motor (front) harness connector and ground.

(+)		(-)	Condition		Voltage (V)
Lifting motor (front)					
Connector	Terminals				
B555	36	Ground	SEAT LIFTER FR	OFF	0 – 1
				Downward	9 – 16
	40			OFF	0 – 1
				Upward	9 – 16

Is the inspection result normal?

YES >> Replace lifting motor (front) (built in seat cushion frame).
NO >> GO TO 2.

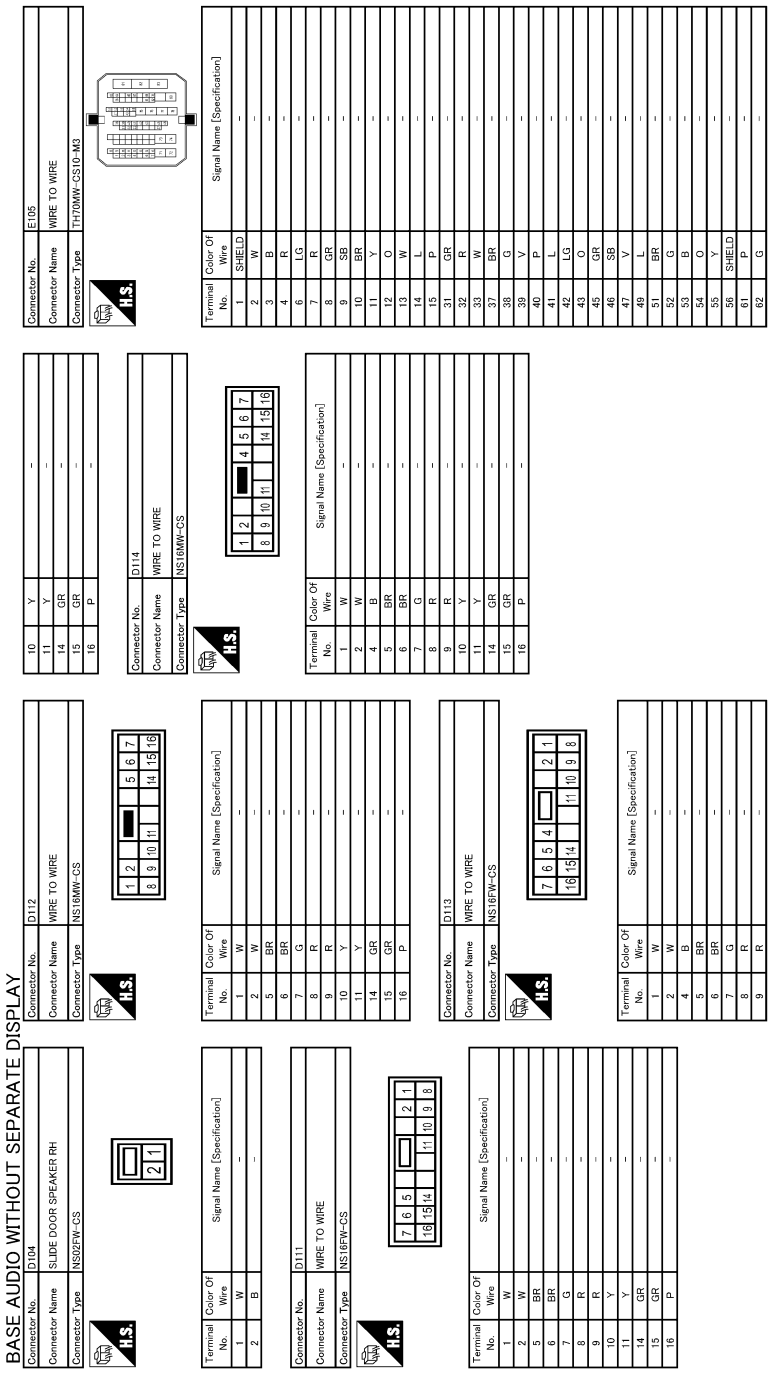
2.CHECK LIFTING MOTOR (FRONT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit connector.
3. Check continuity between driver seat control unit harness connector and lifting motor (front) harness connector.

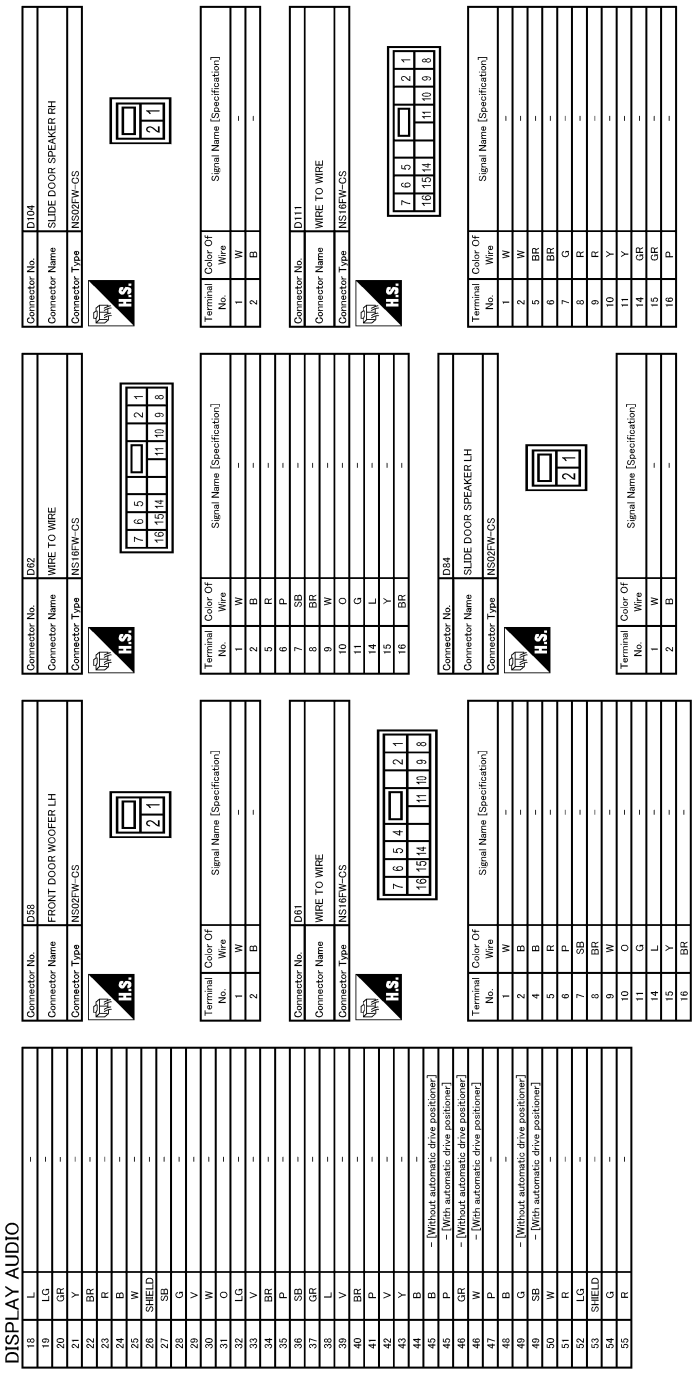
Driver seat control unit		Lifting motor (front)		Continuity
Connector	Terminal	Connector	Terminal	
B551	36	B555	36	Existed
	40		40	

4. Check continuity between driver seat control unit harness connector and ground.

Driver seat control unit		Ground	Continuity
Connector	Terminal		
B551	36		Not existed
	40		



JRNWC6725GB

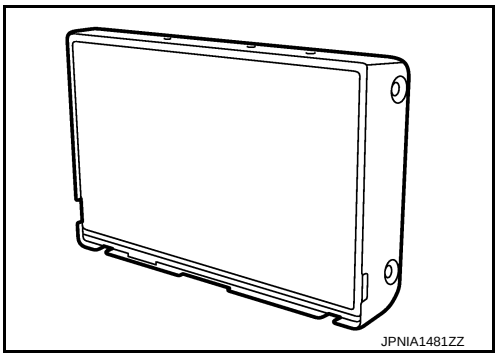


JRNWC6753GB

Front Display Unit

INFOID:0000000009651989

- The front display unit has an 7-inch QVGA liquid-crystal display.
- It receives the power (signal VCC and inverter VCC) from the AV control unit and operates.
- Composite image signals (DVD, USB memory-stored video data, auxiliary input, and camera) are input from AV control unit.
- RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing).
- Synchronizing signal (HP, VP) is output to AV control unit.
- This unit is connected to the AV control unit via serial communication. Images shown on the front display unit are controlled by the AV control unit.



Specification

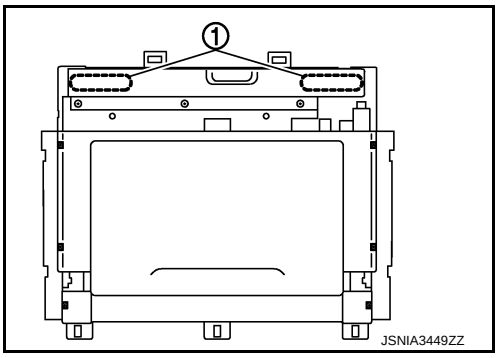
Manufacturer name	Panasonic corporation
Screen size	7-inch QVGA [154.08 × 86.58 mm (6.1 × 3.4 in)]
Number of pixels	480 × 234 pixels

Rear Display Unit

INFOID:0000000009651990

- The rear display unit has an 11-inch WVGA* liquid-crystal display and a remote-control automatic folding function.
- Composite image signal [USB (video data), DVD and auxiliary input] and headphone sound signal are input from AV control unit.
- A remote control operation signal is received through the built-in light-receptive spot (1).
- The display brightness is adjusted automatically, according to ambient brightness.

*: WVGA (Wide VGA) is a standard of the resolution of the display. It extended width of VGA.



Specification

Manufacturer name	Clarion Co., Ltd.
Screen size	11-inch WVGA [243.6 mm × 137.52mm (9.6 in × 5.4 in)]
Number of pixels	800 × 480 pixels

Speaker

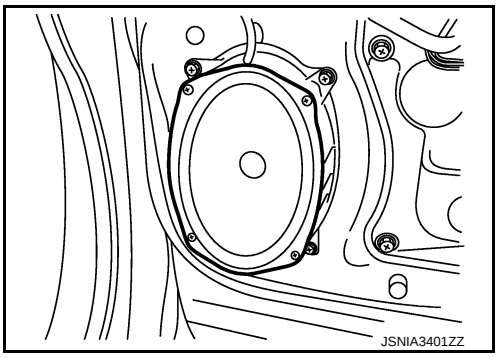
INFOID:0000000009651991

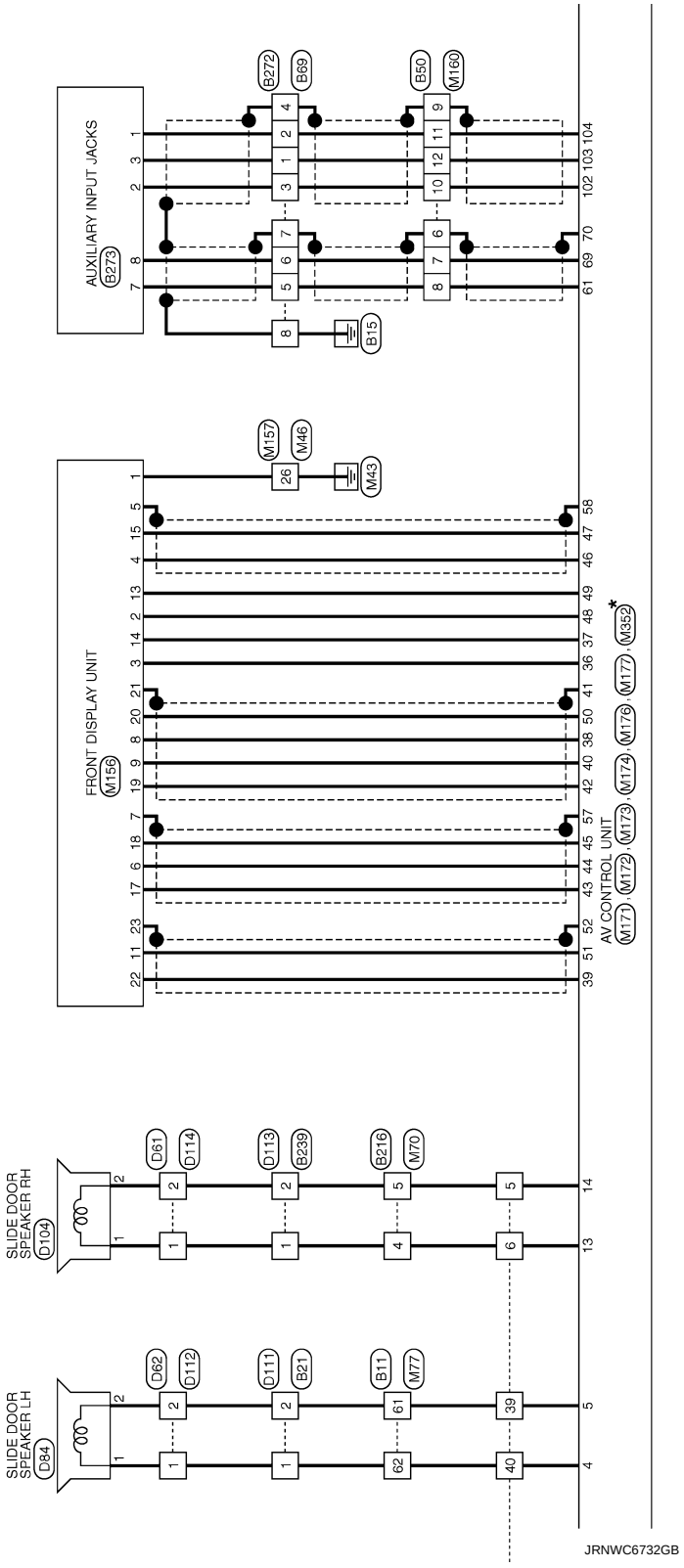
6 speakers system is adopted.

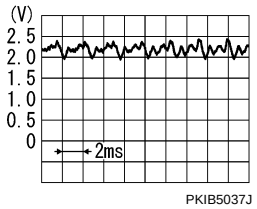
FRONT DOOR WOOFER

- ϕ 15.0 × 23.0 cm (6 × 9 in) speaker is installed to the bottom of the front door.
- Sound signal is input from the AV control unit to output low range sounds.

Rated input : 20 W
Maximum input : 40 W
Impedance : 2 Ω




AUXILIARY INPUT JACKS
B273
B272
B69
B50
M160
B15
FRONT DISPLAY UNIT
M156
M157
M46
M43
AV CONTROL UNIT
M171, M172, M173, M174, M176, M177, M352*
SLIDE DOOR SPEAKER RH
D104
D61
D114
D113
B239
B216
M70
SLIDE DOOR SPEAKER LH
D84
D62
D112
D111
B21
B11
M77
JRNWC6732GB

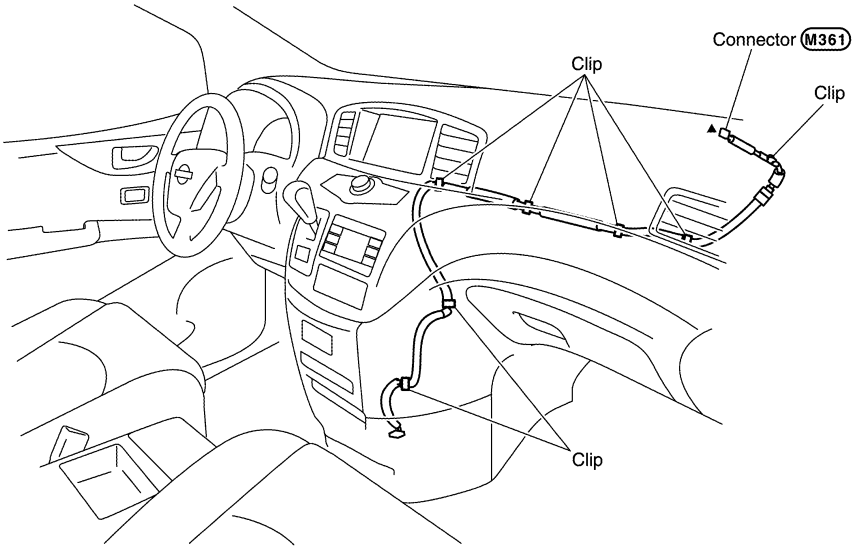
Probe				Condition	Standard	Reference value
(+)		(+)				
TEL adapter unit						
Connector	Terminal	Connector	Terminal			
M138	7	M138	8	Give a voice.	Waveform according to voice is input.	 PKIB5037J

Is the inspection result normal?

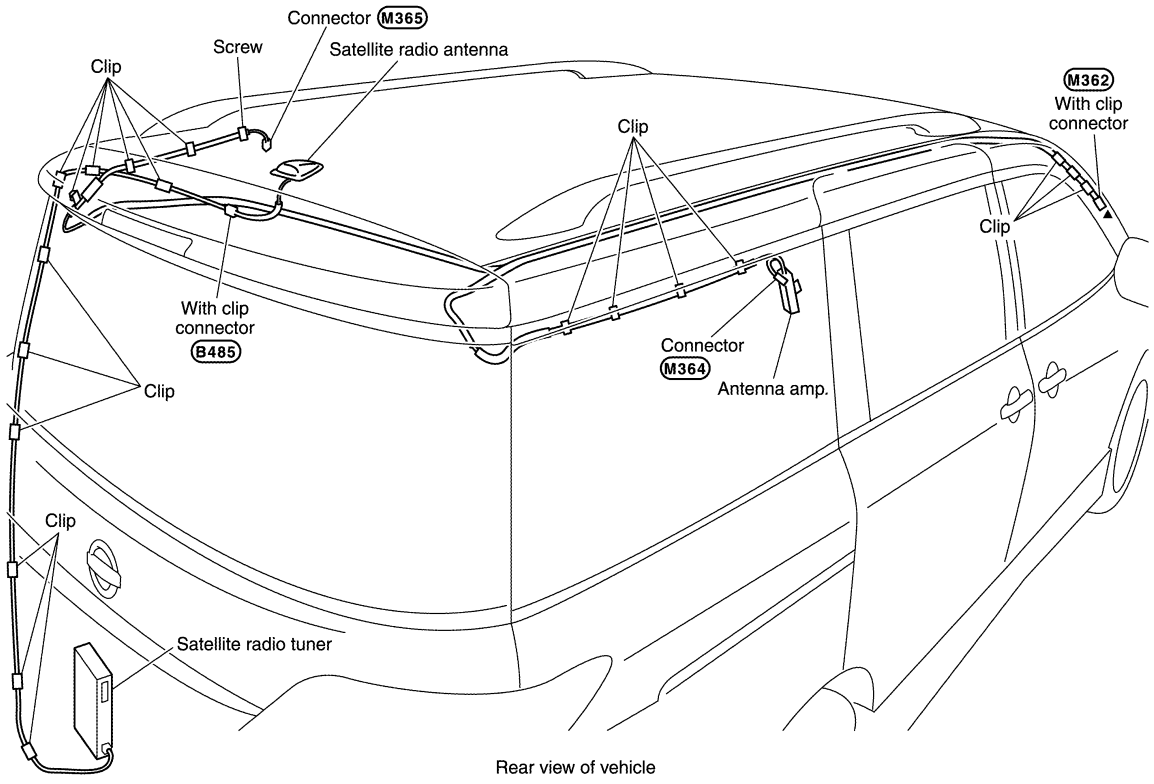
YES >> Replace TEL adapter unit. Refer to AV-261, "Removal and Installation".
NO >> Replace microphone. Refer to AV-263, "Removal and Installation".

ANTENNA FEEDER LAYOUT

SEC. 280



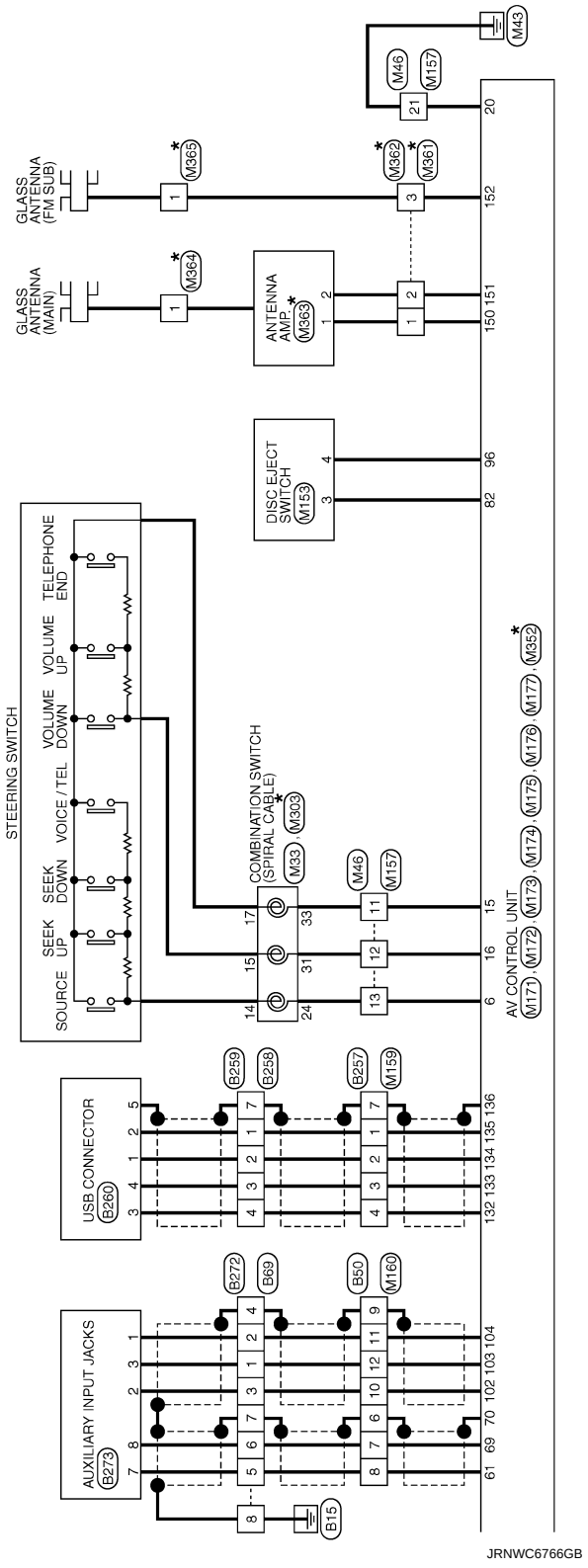
Instrument panel passenger side



Rear view of vehicle

JSNIA4219GB

▲: Indicates that the part is connected at points with same symbol in actual vehicle.


M43
M46
M157
21
20
GLASS ANTENNA (FM SUB)
M365
M362
M361
152
GLASS ANTENNA (MAIN)
M364
ANTENNA AMP.
M363
150 151
DISC EJECT SWITCH
M153
96
82
STEERING SWITCH
SOURCE
SEEK UP
SEEK DOWN
VOICE / TEL
VOLUME DOWN
VOLUME UP
TELEPHONE END
COMBINATION SWITCH (SPIRAL CABLE)
M33
M303
M46
M157
AV CONTROL UNIT
M171, M172, M173, M174, M175, M176, M177, M352
USB CONNECTOR
B260
B259
B258
B257
M159
132 133 134 135 136
AUXILIARY INPUT JACKS
B273
B272
B69
B50
M160
61 69 70 102 103 104
B15
JRNWC6766GB

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000009652200

TEL adapter unit supplies power to microphone. The microphone transmits the sound voice to the TEL adapter unit.

Diagnosis Procedure

INFOID:0000000009652201

1.CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and microphone connector.
3. Check continuity between TEL adapter unit harness connector and microphone harness connector.

TEL adapter unit		Microphone		Continuity
Connector	Terminals	Connector	Terminals	
M138	7	R20	1	Existed
	8		2	
	29		4	

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminals		
M138	29		Not existed
	7		

Is the inspection result normal?

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

2.CHECK VOLTAGE MICROPHONE VCC

1. Connect TEL adapter unit connector.
2. Turn ignition switch ON.
3. Check voltage between TEL adapter unit harness connector.

Probe				Standard	Voltage (Approx.)
(+)		(–)			
TEL adapter unit					
Connector	Terminal	Connector	Terminal		
M138	29	M138	8	4.7 - 5.3 V	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-420, "Removal and Installation".

3.CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between TEL adapter unit harness connector.

Hands-free phone	Compliant communication type	Wireless connection	Bluetooth® communication compliant type
	Compliant profile		HFP 1.0,1.5
			DUN 1.1
			OPP 1.1
Other functions			Speed sensitive volume function
			Steering switch compliant
			Voice recognition function

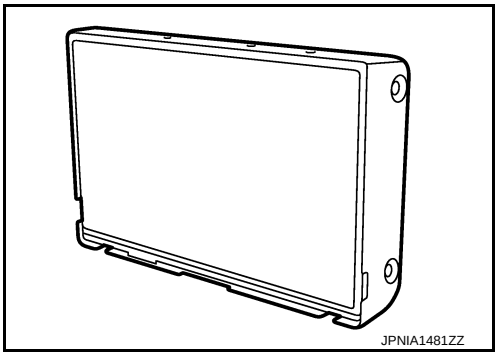
- *1: If the reflectance of the surface of the media is low, the data may not be read.
- *2: It may not be used if it is not updated to the latest firmware or partial functions may not work if it is used.

Front Display Unit

INFOID:0000000009652251

- The front display unit has a high-resolution 8-inch WVGA* display and a touch panel function.
- RGB digital image signal and composite image signal [USB (video data), DVD and auxiliary input] are input from AV control unit.
- Camera image signal is input from rear view camera.
- This unit is connected to the AV control unit via serial communication. Images shown on the front display unit are controlled by the AV control unit.
- Touch panel operation signal is output to the AV control unit by serial communication.

*: WVGA (Wide VGA) is a standard of the resolution of the display. It extended width of VGA.



Specification

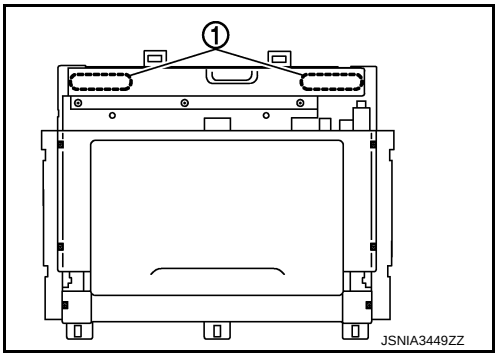
Manufacturer name	Johnson controls KK
Touch panel detection	4 wires analogue resistive film type
Screen size	8-inch WVGA [174 mm × 104.4 mm (6.9 in × 4.1 in)]
Number of pixels	800 × 480 pixels

Rear Display Unit

INFOID:0000000009652252

- The rear display unit has an 11-inch WVGA* liquid-crystal display and a remote-control automatic folding function.
- Composite image signal [USB (video data), DVD and auxiliary input] and headphone sound signal are input from AV control unit.
- A remote control operation signal is received through the built-in light-receptive spot (1).
- The display brightness is adjusted automatically, according to ambient brightness.

*: WVGA (Wide VGA) is a standard of the resolution of the display. It extended width of VGA.



Specification

Manufacturer name	Clarion Co., Ltd.
Screen size	11-inch WVGA [243.6 mm × 137.52mm (9.6 in × 5.4 in)]
Number of pixels	800 × 480 pixels

DTC	Display item	Refer to
U1206	GPS RAM [U1206]	AV-551, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-552, "Diagnosis Procedure"
U1216	CAN CONT [U1216]	AV-553, "DTC Logic"
U1217	BLUETOOTH MODULE [U1217]	AV-554, "DTC Logic"
U1218	HDD CONN [U1218]	AV-555, "DTC Logic"
U1219	HDD READ [U1219]	AV-556, "DTC Logic"
U121A	HDD WRITE [U121A]	AV-557, "DTC Logic"
U121B	HDD COMM [U121B]	AV-558, "DTC Logic"
U121C	HDD ACCESS [U121C]	AV-559, "DTC Logic"
U121D	DSP CONN [U121D]	AV-560, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-561, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-562, "DTC Logic"
U1227	DVD COMM [U1227]	AV-563, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-564, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-565, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-566, "Diagnosis Procedure"
U122E	Built-in AUDIO CONN [U122E]	AV-567, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-568, "AV CONTROL UNIT : Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-569, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-571, "Diagnosis Procedure"
U1258	XM ANTENNA CONN [U1258]	AV-572, "Diagnosis Procedure"
U1263	USB OVERCURRENT [U1263]	AV-573, "Diagnosis Procedure"
U1264	ANTENNA AMP TERMINAL [OPEN or SHORT] [U1264]	AV-574, "Diagnosis Procedure"
U1265	AMP ON TERMINAL [GND-SHORT or VB-SHORT] [U1265]	AV-575, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-579, "DTC Logic"
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	AV-576, "Description"
U1300 U1246	• AV COMM CIRCUIT [U1300] • VIDEO DIST CONN [U1246]	
U1300 U1240 U1246	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • VIDEO DIST CONN [U1246]	

U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

DTC Logic

INFOID:0000000009942956

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U111A	REAR CAMERA IMAGE SIGNAL	Rear camera image signal circuit is open or shorted.	Check rear camera image signal circuit between rear camera and around view monitor control unit.

Diagnosis Procedure

INFOID:0000000009942957

1.CHECK CONTINUITY REAR CAMERA POWER SUPPLY AND GROUND CIRCUIT

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

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector	Terminals	
M253	26	D197	1	Existed
	25		2	

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M253	26		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE REAR CAMERA POWER SUPPLY

1. Connect around view monitor control unit connector and rear camera connector.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
Around view monitor control unit				
Connector	Terminal			
M253	26	Ground	“CAMERA” switch is ON or shift position is “R”.	6.2 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace around view monitor control unit. Refer to AV-631, "Removal and Installation".

3.CHECK CONTINUITY REAR CAMERA IMAGE SIGNAL CIRCUIT

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

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:0000000009652389

The disk eject switch outputs disk eject signal to the AV control unit when the switch of disk eject switch is pressed.

Diagnosis Procedure

INFOID:0000000009652390

1. CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and disk eject switch connector.
3. Check continuity between AV control unit harness connector and disk eject switch harness connector.

AV control unit		Disk eject switch		Continuity
Connector	Terminal	Connector	Terminal	
M179	29	M153	4	Existed
	49		3	

4. Check continuity between AV control unit harness connector and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M179	29		Not existed
	49		

Is the inspection result normal?

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

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector.
2. Turn ignition switch ON.
3. Check voltage between disk eject switch harness connector and ground.

Probe				Standard	Voltage (Approx.)
(+)		(–)			
Disk eject switch					
Connector	Terminal	Connector	Terminal		
M153	4	M153	3	5.0 V or more	5.0 V

Is the inspection result normal?

YES >> Replace disk eject switch. Refer to AV-623, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-610, "Removal and Installation".

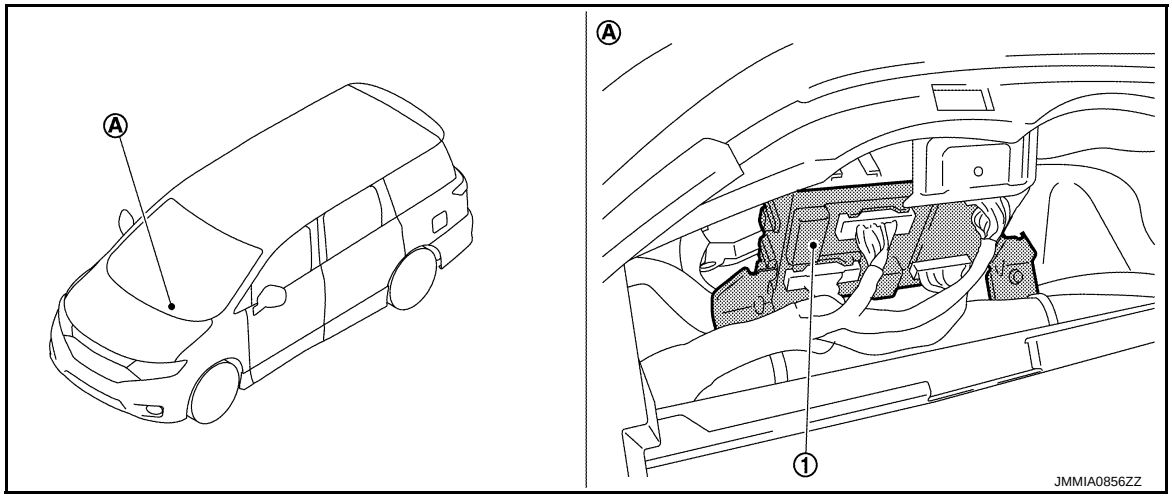
SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

INFOID:0000000009651681

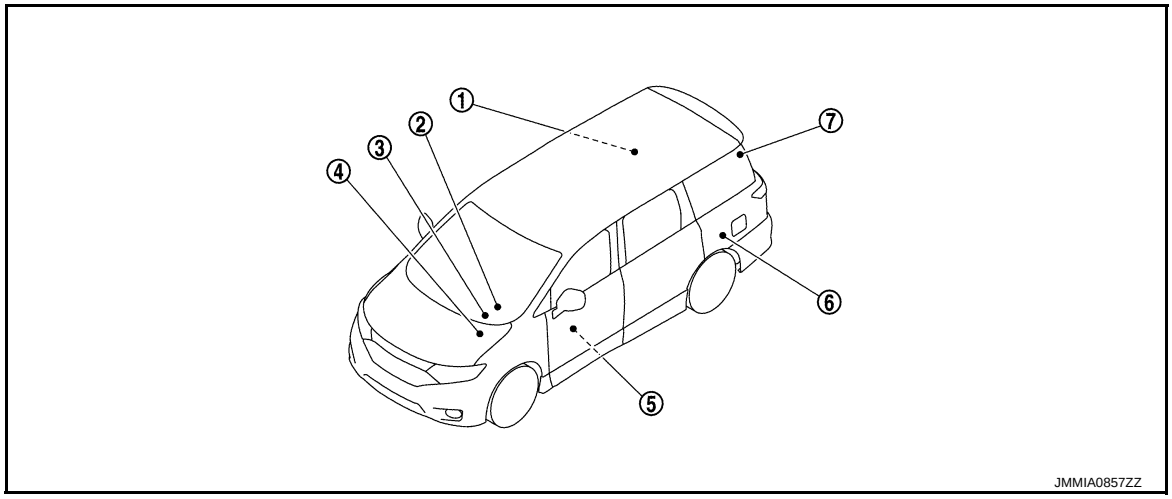


1. BCM
A. Behind of combination meter

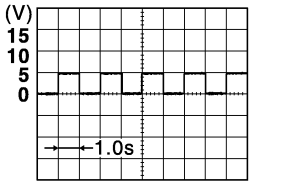
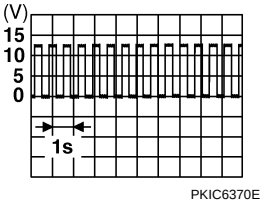
POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

INFOID:0000000009651682



1. Sliding door control unit RH
Refer to DLK-23, "AUTOMATIC SLIDING DOOR SYSTEM : Component Parts Location".
2. Combination meter
Refer to MWI-6, "METER SYSTEM : Component Parts Location".
3. BCM
Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
53*5 (BR)	Ground	Back door open request	Output	Back door opener switch	OFF (Actuator is not activated)	9 – 16 V
					ON (Actuator is activated)	0 – 1.5 V (Approx. 500m seconds)
54 (R)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Activated)	9 – 16 V
55 (G)	Ground	Sliding door RH UNLOCK (with automatic sliding door system)	Output	Sliding door RH	UNLOCK (Actuator is activated)	9 – 16 V
					Other then UNLOCK (Actuator is not activated)	0 V
		Sliding door UNLOCK (without automatic sliding door system)		Sliding door	UNLOCK (Actuator is activated)	9 – 16 V
					Other then UNLOCK (Actuator is not activated)	0 V
56 (P)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		9 – 16 V
57 (GR)	Ground	Battery power supply	Input	Ignition switch OFF		9 – 16 V
58 (O)	Ground	Air bag signal	Input	Ignition switch	OFF	5 V
					ON	 JPMIA1034GB 2.5 V
59 (SB)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	9 – 16 V
					Other then UNLOCK (Actuator is not activated)	0 V
60 (V)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKIC6370E 6.5 V (Turn signal lamp turn on: 9 - 16 V)

PERIODIC MAINTENANCE

BRAKE PEDAL

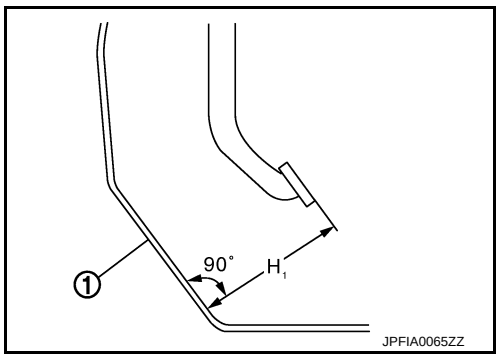
Inspection and Adjustment

INFOID:0000000009651802

INSPECTION

Brake Pedal Height

Check the height (H_1) between the dash lower panel (1) and the brake pedal upper surface.

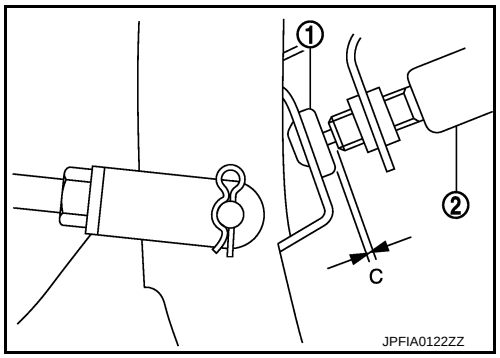


H_1 : Refer to BR-51, "Brake Pedal".

CAUTION:
Remove the floor trim.

Stop Lamp Switch and Brake Switch

Check the clearance (C) among the stopper rubber (1) and the stop lamp switch and brake switch (2) threaded end.

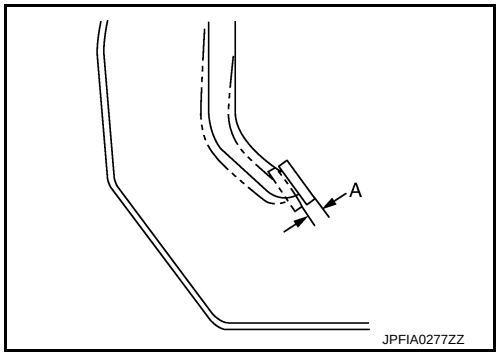


C : Refer to BR-51, "Brake Pedal".

CAUTION:
The stop lamp must turn off when the brake pedal is released.
NOTE:
Pull the brake pedal pad to make the clearance between the stop lamp switch and brake switch threaded end and the stopper rubber.

Brake Pedal Play

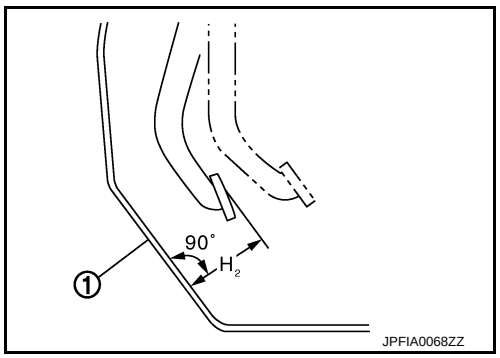
Press the brake pedal. Check the brake pedal play (A) (stroke until fluid pressure occurs).



A : Refer to BR-51, "Brake Pedal".

Depressed Brake Pedal Height

Check the height between the dash lower panel (1) and the brake pedal upper surface (H_2) when depressing the brake pedal at 490 N (50 kg, 110 lb) while turning engine ON.



H_2 : Refer to BR-51, "Brake Pedal".

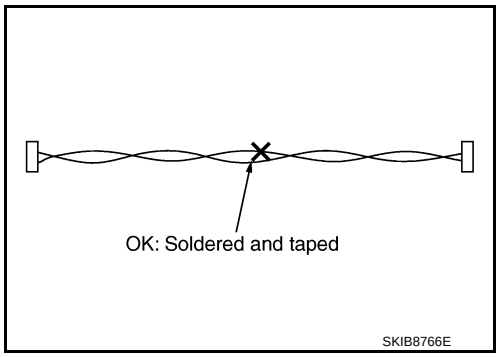
CAUTION:
Remove the floor trim.

ADJUSTMENT

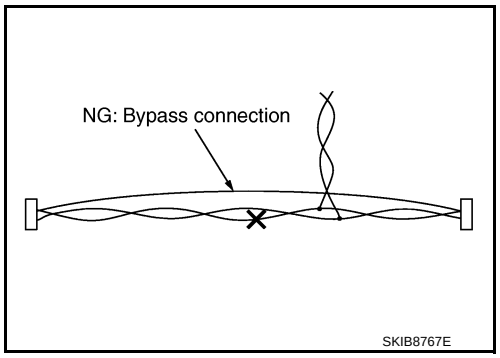
Precaution for Harness Repair

INFOID:0000000009651347

- Solder the repair part, and wrap it with tape. [Twisted wire fray must be 110 mm (4.33 in) or less.]



- Never bypass the repair point with wire. (If it is bypassed, the turn-out point cannot be separated and the twisted wire characteristics are lost.)



Regarding the deference at 30 km/h (19 MPH) between the wheel speed detected by the error detecting wheel sensor and the maximum/minimum wheel speed detected by the normal wheel sensors, is the difference within 5%, respectively?

YES >> GO TO 16.
NO >> GO TO 17.

16. PERFORM SELF-DIAGNOSIS (5)

With CONSULT
1. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
2. Stop the vehicle.
3. Perform self-diagnosis for “ABS”.

Is DTC “C1105”, “C1106”, “C1107” or “C1108” detected?

YES >> GO TO 17.
NO >> INSPECTION END

17. REPLACE WHEEL SENSOR

With CONSULT
1. Replace wheel sensor.
- Front: Refer to BRC-119, "FRONT WHEEL SENSOR : Removal and Installation".
- Rear: Refer to BRC-120, "REAR WHEEL SENSOR : Removal and Installation".
2. Erase self-diagnosis result for “ABS”.
3. Turn the ignition switch OFF, and wait 10 seconds or more.
4. Start the engine.
5. Select “ABS” and “DATA MONITOR”, check “FR LH SENSOR”, “FR RH SENSOR”, “RR LH SENSOR” and “RR RH SENSOR”.
   NOTE:
   Set the “DATA MONITOR” recording speed to “10 msec”.
6. Read a value (wheel speed) of both normal wheel sensors and error-detecting wheel sensor.

Regarding the deference at 30 km/h (19 MPH) between the wheel speed detected by the error detecting wheel sensor and the maximum/minimum wheel speed detected by the normal wheel sensors, is the difference within 5%, respectively?

YES >> GO TO 18.
NO >> GO TO 19.

18. PERFORM SELF-DIAGNOSIS (6)

With CONSULT
1. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
2. Stop the vehicle.
3. Perform self-diagnosis for “ABS”.

Is DTC “C1105”, “C1106”, “C1107” or “C1108” detected?

YES >> GO TO 19.
NO >> INSPECTION END

19. REPLACE SENSOR ROTOR

With CONSULT
1. Replace sensor rotor.
- Front: Refer to BRC-122, "FRONT SENSOR ROTOR : Removal and Installation".
- Rear: Refer to BRC-122, "REAR SENSOR ROTOR : Removal and Installation".
2. Erase self-diagnosis result for “ABS”.
3. Turn the ignition switch OFF, and wait 10 seconds or more.
4. Start the engine.
5. Drive the vehicle at approx. 30 km/h (19 MPH) or more for approx. 1 minute.
6. Stop the vehicle.
7. Perform self-diagnosis for “ABS”.

Is DTC “C1105”, “C1106”, “C1107” or “C1108” detected?

YES >> Replace ABS actuator and electric unit (control unit). Refer to BRC-123, "Removal and Installation".
NO >> INSPECTION END

BRAKE WARNING LAMP

Component Function Check

INFOID:0000000009651433

1.CHECK BRAKE WARNING LAMP FUNCTION (1)

Check that brake warning lamp in combination meter turns ON for approx. 2 second after ignition switch is turned ON.

CAUTION:

Never start engine.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Proceed to BRC-109, "Diagnosis Procedure".

2.CHECK BRAKE WARNING LAMP FUNCTION (2)

Check that brake warning lamp in combination meter turns ON/OFF when parking brake is operated.

NOTE:

Brake warning lamp turns ON when parking brake is operated (when parking brake switch is ON).

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check parking brake switch system. Refer to BRC-104, "Diagnosis Procedure".

3.CHECK BRAKE WARNING LAMP FUNCTION (3)

Check that brake warning lamp in combination meter turns ON/OFF when brake fluid level switch is operated while brake fluid level in reservoir tank is with the specified level.

NOTE:

Brake warning lamp turns ON when brake fluid is less than the specified level (when brake fluid level switch is ON).

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check brake fluid level switch system. Refer to BRC-89, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009651434

1.CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) POWER SUPPLY AND GROUND CIRCUIT

Perform the trouble diagnosis for ABS actuator and electric unit (control unit) power supply and ground circuit. Refer to BRC-101, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace error-detected parts.

2.PERFORM THE SELF-DIAGNOSIS

With CONSULT

Perform self-diagnosis for “ABS”.

Is any DTC detected?

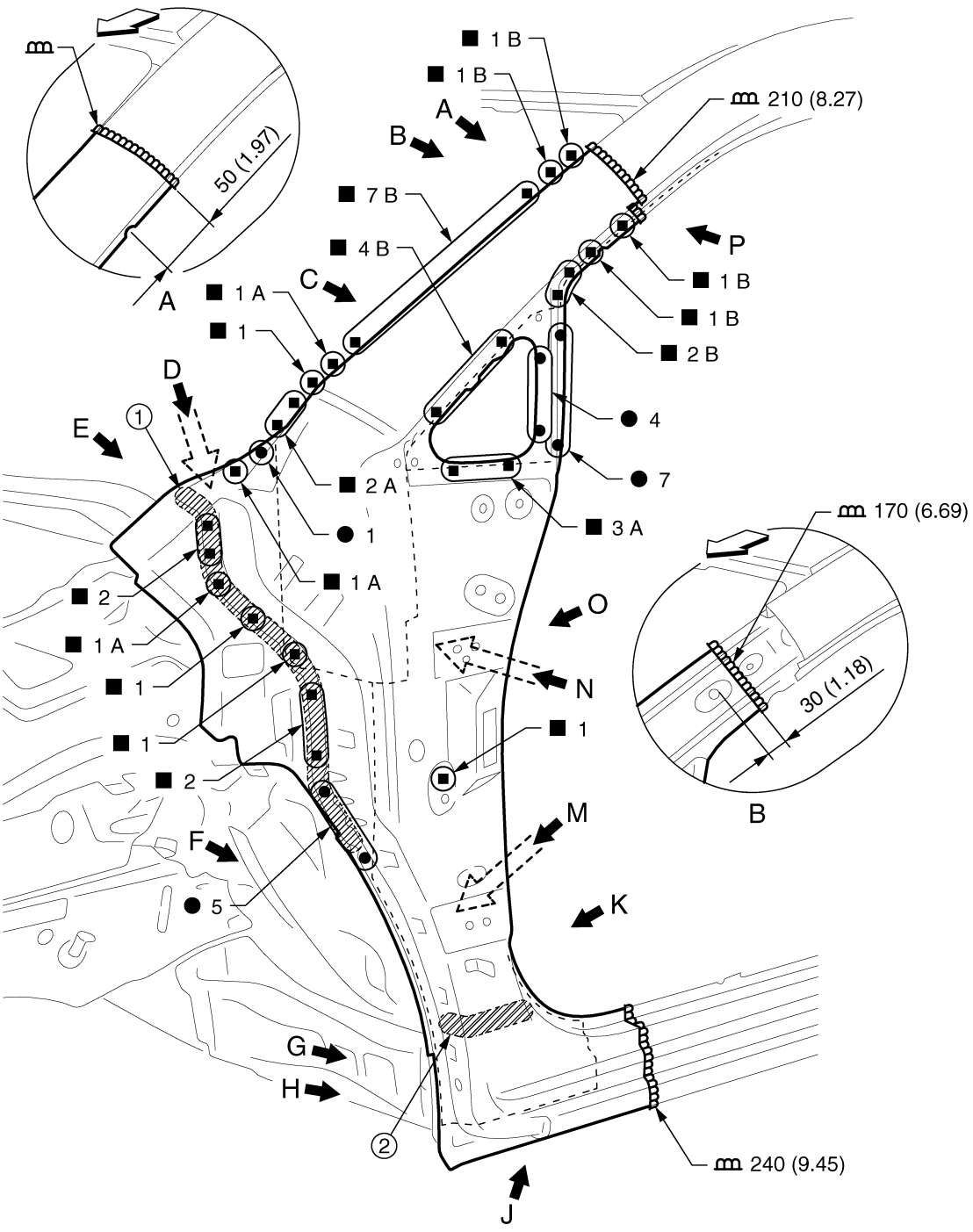
YES >> Check the DTC. Refer to BRC-38, "DTC Index".
NO >> GO TO 3.

3.CHECK COMBINATION METER

Check combination meter. Refer to MWI-35, "CONSULT Function".

Is the inspection result normal?

YES >> Replace ABS actuator and electric unit (control unit). Refer to BRC-123, "Removal and Installation".
NO >> Repair or replace combination meter. Refer to MWI-93, "Removal and Installation".



JSKIA2459GB

1. Body sealing
2. Urethane foam

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer front side body
- Upper front pillar reinforcement
- Front pillar brace
- Upper inner front pillar
- Side dash
- Front fender bracket assembly

View B: Before installing outer front side body and front fender bracket assembly

CHARGING SYSTEM PRELIMINARY INSPECTION

Inspection Procedure

INFOID:0000000009650424

1.CHECK BATTERY TERMINALS CONNECTION

Check if battery terminals are clean and tight.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair battery terminals connection.

2.CHECK FUSE

Check for blown fuse and fusible link.

Unit	Power source (Power supply terminals)	Fuse No.
Alternator	Battery (“S” terminal)	38
Combination meter	Ignition switch ON (“L” terminal)	4

Is the inspection result normal?

YES >> GO TO 3.
NO >> Be sure to eliminate the cause of malfunction before installing new fuse.

3.CHECK “E” TERMINAL CONNECTION (ALTERNATOR GROUND)

Check if “E” terminal (alternator ground) is clean and tight.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair “E” terminal (alternator ground) connection.

4.CHECK DRIVE BELT TENSION

Check drive belt tension. Refer to EM-14, "Checking".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair as needed.

- Side radar detects a vehicle in the adjacent lane, and transmits the vehicle detection signal to BSW control module via BSW communication.
- BSW control module starts the control as follows, based on a vehicle detection signal, turn signal and dimmer signal transmitted from BCM via CAN communication:
  - Buzzer output signal transmission to combination meter via CAN communication.
  - BSW indicator signal and BSW indicator dimmer signal transmission to side radar via BSW communication.
- Side radar transmits an indicator operation signal to the BSW indicator according to BSW indicator signal and BSW indicator dimmer signal.

Operation Condition of BSW System

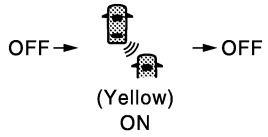
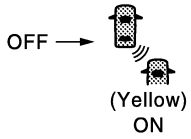
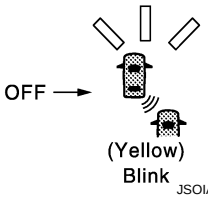
BSW control module performs the control when the following conditions are satisfied.

- When the BSW switch in turned ON.
- When the vehicle drives at approximately 32 km/h (20 MPH) or more to the forward direction.

NOTE:

- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 29 km/h (18 MPH)
- The BSW system may not function properly, depending on the situation. Refer to DAS-17, "Precautions for Blind Spot Warning".

BULB CHECK ACTION AND FAIL-SAFE INDICATION

Vehicle condition/Driver's operation	BSW indicator	BSW ON indicator	Indication on the combination meter
Ignition switch: OFF ⇒ ON	Approx. 2 sec. ON	Approx. 5 sec. ON*	
When DTC is detected	OFF	ON	
When radar blockage is detected	OFF	ON	

*: If BSW initial state is ON, BSW ON indicator continues turned ON.

U0415 VDC CAN 1

DTC Logic

INFOID:0000000009940739

DTC DETECTION LOGIC

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

NOTE:
If DTC “U0415” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to DAS-53, "BSW CONTROL MODULE : DTC Logic".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is “U0415” detected as the current malfunction?

YES >> Refer to DAS-62, "Diagnosis Procedure".
NO >> Refer to GI-42, "Intermittent Incident".

Diagnosis Procedure

INFOID:0000000009940740

1.CHECK SELF-DIAGNOSIS RESULTS

Check if “U1000” is detected other than “U0415” in “Self Diagnostic Result” of “BSW”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to DAS-53, "BSW CONTROL MODULE : 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-38, "DTC Index".
NO >> Replace the BSW control module. Refer to DAS-84, "Removal and Installation".

REAR WINDOW DEFOGGER

Component Function Check

INFOID:0000000009650827

1.CHECK REAR WINDOW DEFOGGER

1. Perform Active Test (“REAR DEFOGGER”) with CONSULT.
2. Touch “ON”.
3. Check that the rear window heating wire is getting warmer.

Is the inspection result normal?

YES >> Rear window defogger is OK.
NO >> Refer to DEF-25, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009650828

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check 20A fuse [No.15, located in fuse block (J/B)].

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect rear window defogger harness connector.
2. Turn ignition switch ON.
3. Check voltage between rear window defogger connector and ground.

(+)		(-)	Condition		Voltage (V) (Approx.)
Rear window defogger					
Connector	Terminal				
D184	1	Ground	Rear window defogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear window defogger harness connector and ground.

Rear window defogger		Ground	Continuity
Connector	Terminal		
D185	2		Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness or connector between rear window defogger and ground.

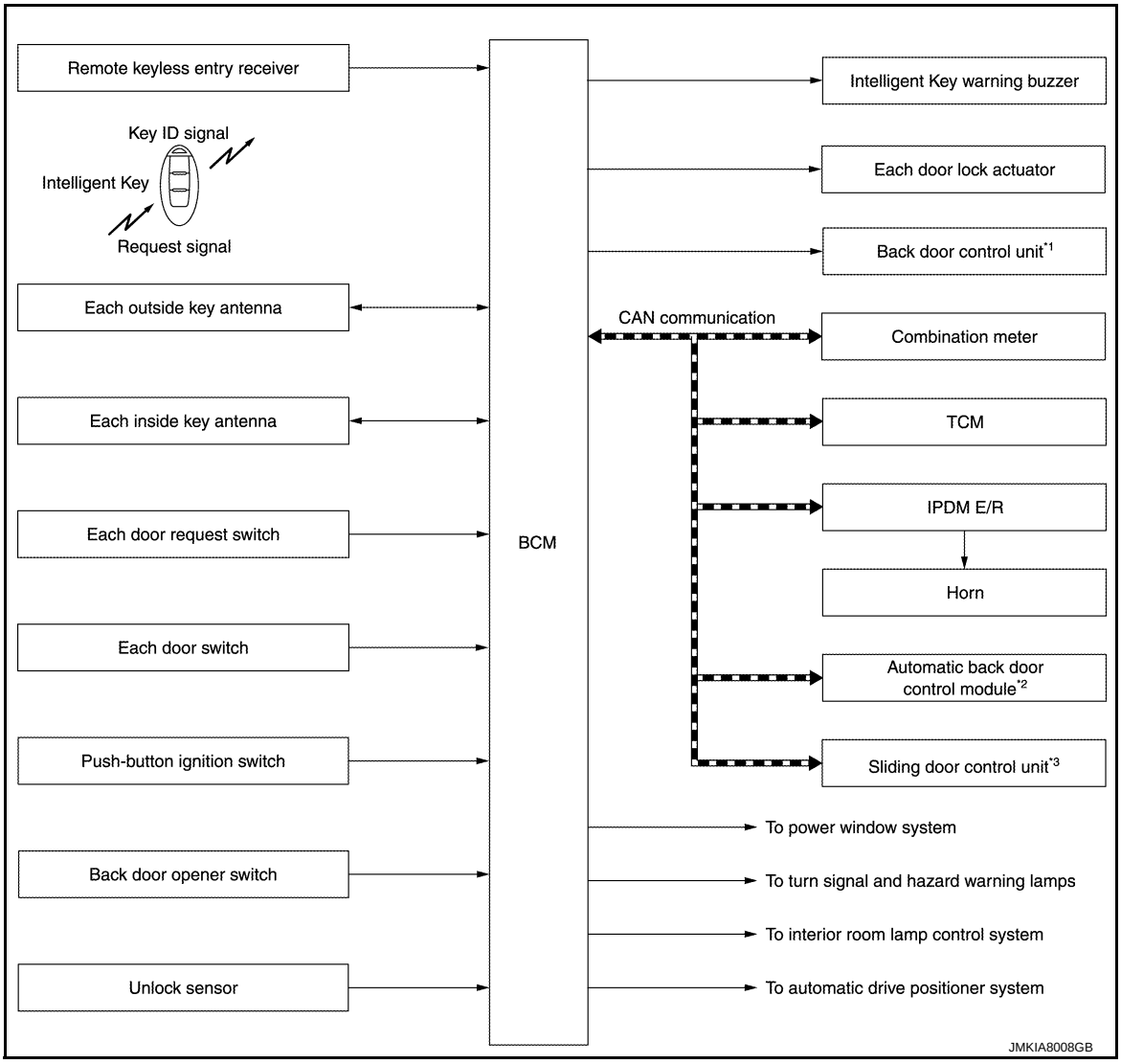
4.CHECK REAR WINDOW DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) harness connector.
3. Check continuity between fuse block (J/B) harness connector and rear window defogger harness connector.

SYSTEM (INTELLIGENT KEY SYSTEM)
INTELLIGENT KEY SYSTEM
INTELLIGENT KEY SYSTEM : System Description

INFOID:0000000009648976

SYSTEM DIAGRAM



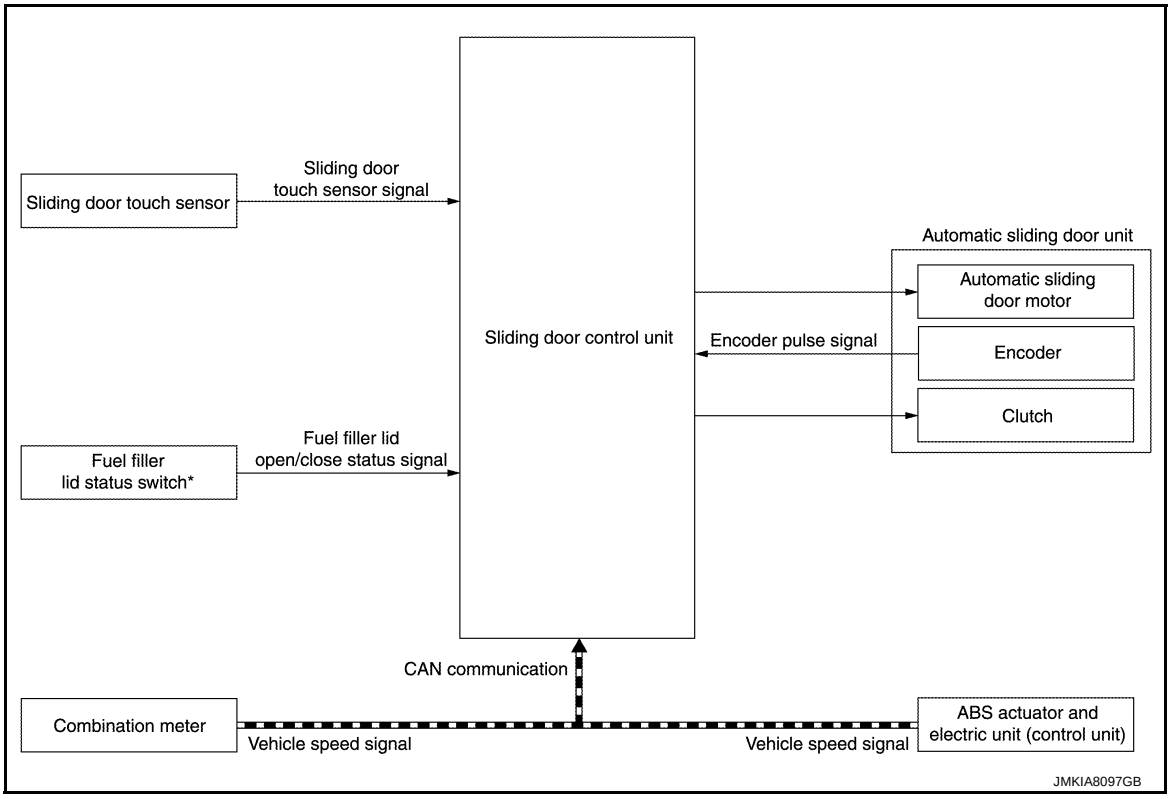
*1:With back door auto closure system
*2:With automatic back door system
*:With automatic sliding door system

- The Intelligent Key system is a system that makes it possible to lock and unlock the door locks (door lock/unlock function) by carrying the Intelligent Key, which operates based on the results of electronic ID verification using two-way communication between the Intelligent Key and the vehicle (BCM).
  NOTE:
  The driver should always carry the Intelligent Key
- The settings for each function can be changed with CONSULT.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It is possible to perform a diagnosis on the system and register an Intelligent Key with CONSULT.

INTERMITTENT CLUTCH FUNCTION : System Description

INFOID:0000000009649006

SYSTEM DIAGRAM



*: For automatic sliding door LH

- During automatic operation of sliding door, when the vehicle is on a slope, it may become impossible to continue automatic operation of sliding door and its operation may stop suddenly, or door may open or close suddenly. This is due to automatic door main switch being turned the OFF position or any other cause. For prevention purposes, sliding door control unit stops automatic sliding door motor, and simultaneously operates clutch intermittently and prevents sliding door from opening or closing suddenly, so that safety can be secured.
- Intermittent clutch function operates when any of the following conditions is satisfied.

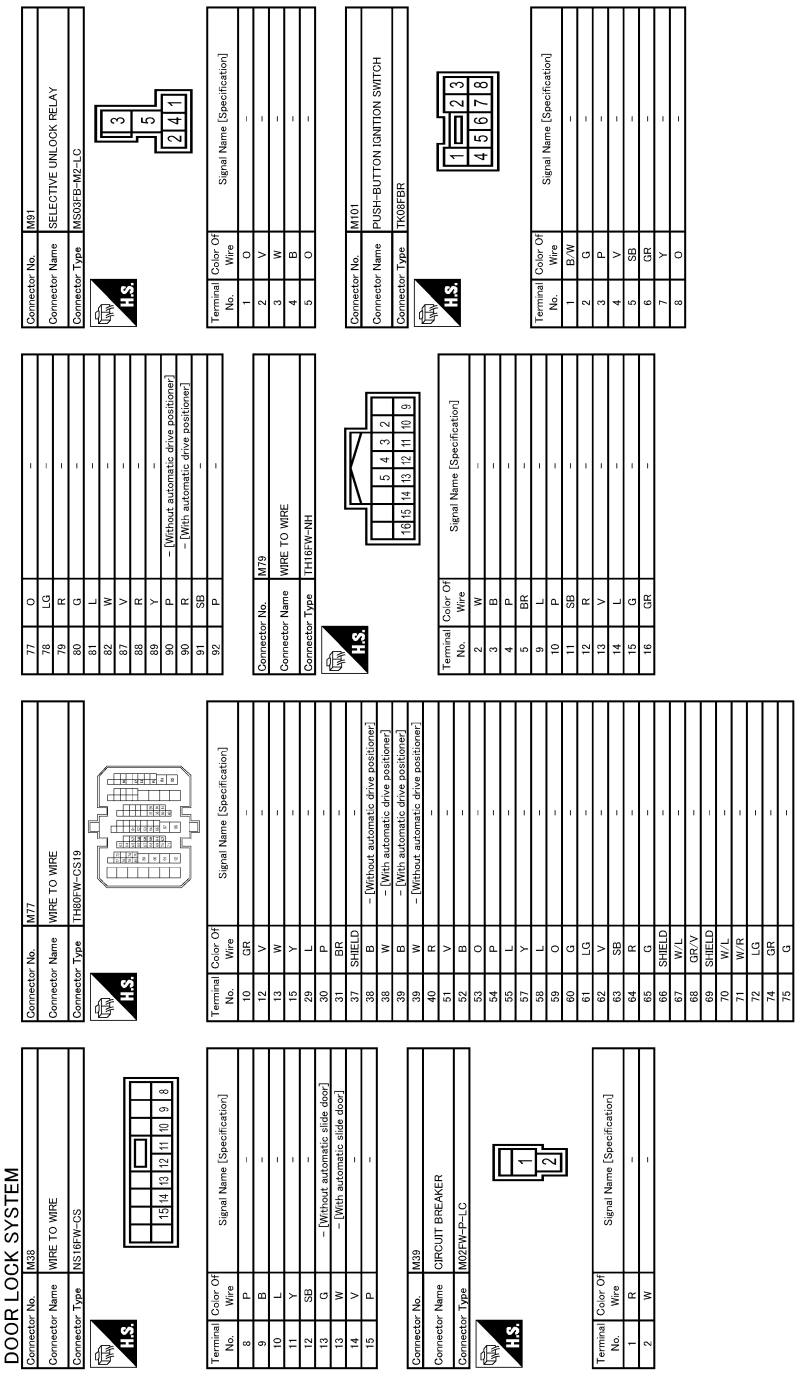
Operation	Operation condition
auto open/close function in operation	Fuel filler lid status: Closed → Open
	Automatic sliding door system malfunction
	Battery voltage: Continuous detection of 9 V or less for 2 seconds or more
Hold function in operation	Vehicle speed: 0 km/h
	Fuel filler lid status: Closed → Open
	Automatic sliding door system malfunction
Anti-pinch function	Continuous detection of pinching for 3 times during auto close operation

INTERMITTENT CLUTCH FUNCTION : Fail-safe

INFOID:0000000009649007

FAIL-SAFE CONTROL BT DTC

Sliding door control unit performs fail-safe control when any DTC is detected.



JRKWC6511GB

Automatic back door control module		Back door lock assembly		Continuity
Connector	Terminal	Connector	Terminal	
B8	22	D190	6	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module		Ground	Continuity
Connector	Terminal		
B8	22		Not existed

Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to DLK-495, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK HALF LATCH SWITCH GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock assembly		Ground	Continuity
Connector	Terminal		
D190	8		Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace back door lock assembly ground circuit.

5.CHECK HALF LATCH SWITCH

Refer to DLK-189, "AUTOMATIC BACK DOOR CONTROL MODULE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace back door lock assembly.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

AUTOMATIC BACK DOOR CONTROL MODULE : Component Inspection

INFOID:0000000009649084

1.CHECK HALF LATCH SWITCH

1. Turn ignition switch OFF.
2. Disconnect back door lock assembly connector.
3. Check continuity between back door lock assembly terminals.

Back door lock assembly		Condition		Continuity
Terminal				
6	8	Back door lock	Open	Existed
			Fully closed/Half latch	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace back door lock assembly.

SLIDING DOOR LH

SLIDING DOOR LH : DTC Logic

INFOID:0000000009649085

DTC DETECTION LOGIC

Sliding door LH

(+)		(–)	Condition		Voltage
Sliding door control unit LH					
Connector	Terminal				
B45	6	Ground	Ignition switch	ON	9 – 16 V
	12			OFF	8 – 16 V
B46	36				9 – 16 V
	42				

Sliding door RH

(+)		(–)	Condition		Voltage
Sliding door control unit RH					
Connector	Terminal				
B247	6	Ground	Ignition switch	ON	9 – 16 V
	12			OFF	8 – 16 V
B248	36				9 – 16 V
	42				

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between sliding door control unit harness connector and ground.

Sliding door LH

Sliding door control unit LH		Ground	Continuity
Connector	Terminal		
B45	27		Existed
B46	33		
	37		

Sliding door RH

Sliding door control unit RH		Ground	Continuity
Connector	Terminal		
B247	27		Existed
B248	33		
	37		

Is the inspection result normal?

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

CLOSE SWITCH

Diagnosis Procedure

INFOID:0000000009649216

1.CHECK CLOSE SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect back door lock assembly connector.
3. Check voltage between back door lock assembly harness connector and ground.

(+)		(–)	Voltage
Back door lock assembly			
Connector	Terminal		
D190	5	Ground	8 - 16

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 2.

2.CHECK CLOSE SWITCH CIRCUIT

1. Disconnect back door control unit connector.
2. Check continuity between back door control unit harness connector and back door lock assembly harness connector.

Back door control unit		Back door lock assembly		Continuity
Connector	Terminal	Connector	Terminal	
D181	1	D190	5	Existed

3. Check continuity between back door control unit harness connector and ground.

Back door control unit		Ground	Continuity
Connector	Terminal		
D181	1		Not existed

Is the inspection result normal?

YES >> Replace back door control unit. Refer to DLK-494, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK CLOSE SWITCH GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock assembly		Ground	Continuity
Connector	Terminal		
D190	8		Existed

Is the inspection result normal?

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

4.CHECK CLOSE SWITCH

Refer to DLK-292, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace back door lock assembly.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

3. Check voltage between sliding door open/close switch (front side) harness connector and ground.

(+)		(–)	Voltage
Sliding door open/close switch (front side)			
Connector	Terminal		
M90	1	Ground	8 – 16 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 2.

2.CHECK SLIDING DOOR OPEN/CLOSE SWITCH CIRCUIT

1. Disconnect sliding door control unit RH connector.
2. Check continuity between sliding door control unit RH harness connector and sliding door open/close switch (front side) harness connector.

Sliding door control unit RH		Sliding door open/close switch (front side)		Continuity
Connector	Terminal	Connector	Terminal	
B247	19	M90	1	Existed

3. Check continuity between sliding door control unit RH harness connector and ground.

Sliding door control unit RH		Ground	Continuity
Connector	Terminal		
B247	19		Not existed

Is the inspection result normal?

YES >> Replace sliding door control unit RH. Refer to DLK-500, "RH : Removal and Installation".
NO >> Repair or replace harness.

3.CHECK SLIDING DOOR OPEN/CLOSE SWITCH GROUND CIRCUIT

Check continuity between sliding door open/close switch (front side) harness connector and ground.

Sliding door open/close switch (front side)		Ground	Continuity
Connector	Terminal		
M90	3		Existed

Is the inspection result normal?

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

4.CHECK SLIDING DOOR OPEN/CLOSE SWITCH

Refer to DLK-342, "FRONT RH : Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace sliding door open/close switch (front side).

5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

FRONT RH : Component Inspection

INFOID:0000000009649288

1.CHECK SLIDING DOOR OPEN/CLOSE SWITCH

1. Turn ignition switch OFF.
2. Disconnect sliding door open/close switch (front side) connector.
3. Check continuity between sliding door open/close switch (front side) terminals.

BACK DOOR AUTO CLOSURE FUNCTION DOES NOT OPERATE

OPEN/CLOSURE FUNCTION

OPEN/CLOSURE FUNCTION : Description

INFOID:0000000009649357

Back door auto closure does not operate when back door opening and closing operations are performed.

OPEN/CLOSURE FUNCTION : Diagnosis Procedure

INFOID:0000000009649358

1. CHECK DTC WITH BCM

Check that DTC is not detected with BCM.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Refer to BCS-63, "DTC Index".

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check back door control unit power supply and ground circuit.
Refer to DLK-238, "BACK DOOR CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

3. CHECK BACK DOOR CLOSURE MOTOR

Check back door closure motor.
Refer to DLK-304, "WITHOUT AUTOMATIC BACK DOOR : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4. REPLACE BACK DOOR CONTROL UNIT

1. Replace back door control unit.
2. Confirm the operation after replacement.

Is the result normal?

YES >> INSPECTION END
NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

OPEN FUNCTION

OPEN FUNCTION : Description

INFOID:0000000009649359

Back door auto closure does not operate when back door opening operation is performed.

OPEN FUNCTION : Diagnosis Procedure

INFOID:0000000009649360

1. CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.
Refer to DLK-271, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

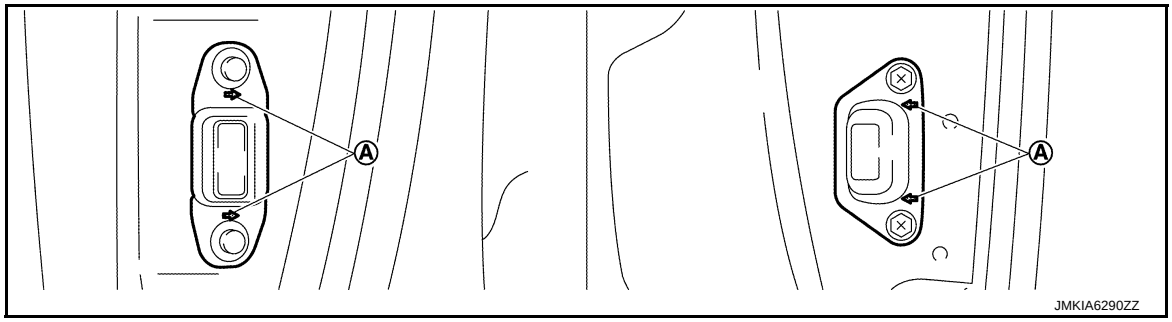
2. CHECK BACK DOOR OPEN REQUEST SIGNAL CIRCUIT

Check back door open request signal circuit.
Refer to DLK-280, "Diagnosis Procedure".

Is the inspection result normal?

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

CAUTION:
After installation, check that the direction of arrows (A), as shown in the figure, faces toward passenger room.



Dovetail (female) Dovetail (male)

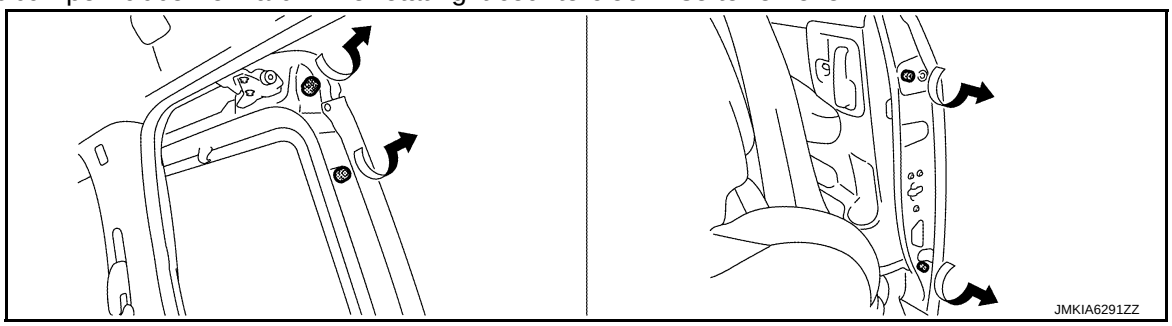
BUMPER RUBBER

BUMPER RUBBER : Removal and Installation

INFOID:0000000009649445

BUMPER RUBBER

Removal
Pull out bumper rubber forward while rotating it counterclockwise to remove.

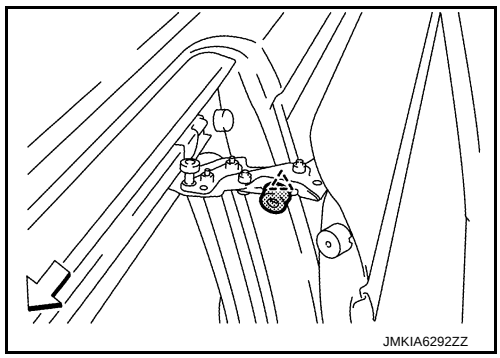


Installation
Install in the reverse order of removal.

STOPPER RUBBER

Removal
Disengage pawl of stopper rubber to remove.

: Pawl
: Vehicle front



Installation
Install in the reverse order of removal.

BUMPER RUBBER (BODY UPPER PORTION AND SLIDE DOOR REAR LOWER PORTION)

Removal

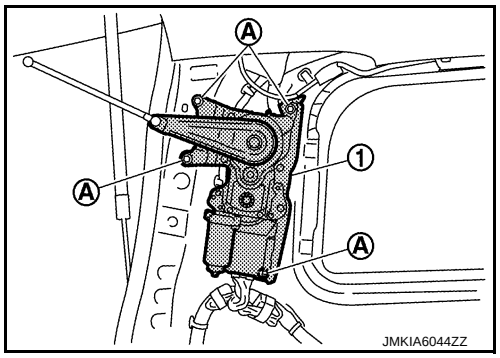
AUTOMATIC BACK DOOR CONTROL MODULE

Removal and Installation

INFOID:0000000009649509

REMOVAL

1. Remove the back pillar garnish LH. Refer to INT-27, "BACK PILLAR GARNISH : Removal and Installation".
2. Remove the back door support rod. Refer to DLK-477, "BACK DOOR SUPPORT ROD : Removal and Installation".
3. Remove the automatic back door control module mounting bolt (A), and then remove the automatic back door control module (1).



INSTALLATION

Install in the reverse order of removal.

NOTE:

After installing automatic back door control module, perform additional service when replace control unit. Refer to DLK-169, "Work Procedure".

FUEL SHUT-OFF

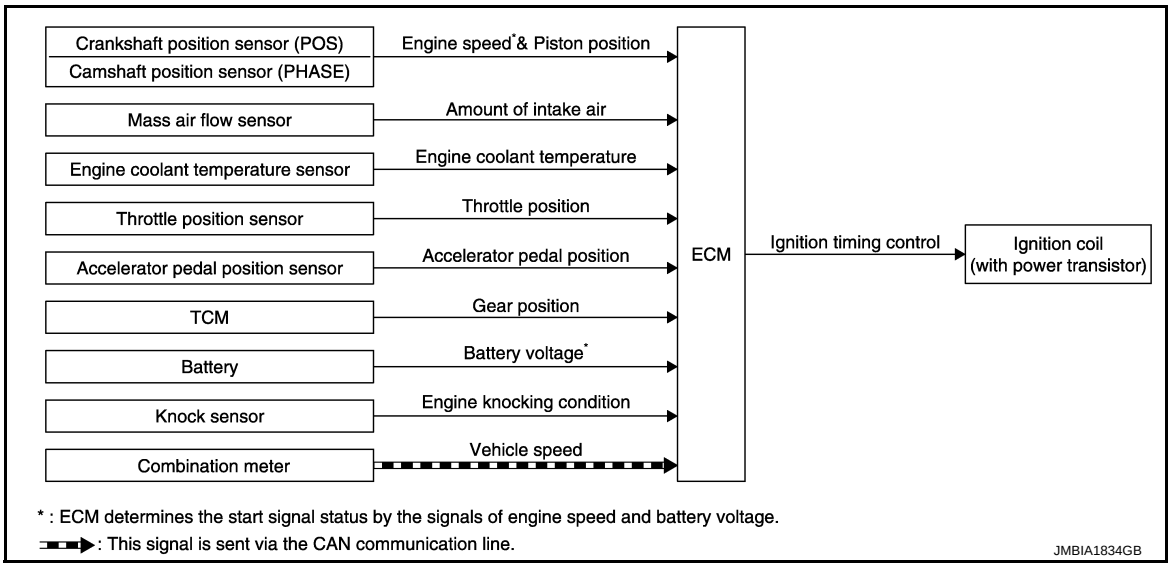
Fuel to each cylinder is cut off during deceleration, operation of the engine at excessively high speeds or operation of the vehicle at excessively high speeds.

ELECTRIC IGNITION SYSTEM

ELECTRIC IGNITION SYSTEM : System Description

INFOID:0000000009650958

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL CHART

Sensor	Input signal to ECM	ECM function	Actuator
Crankshaft position sensor (POS)	Engine speed*2 Piston position	Ignition timing control	Ignition coil (with power transistor)
Camshaft position sensor (PHASE)			
Mass air flow sensor	Amount of intake air		
Engine coolant temperature sensor	Engine coolant temperature		
Throttle position sensor	Throttle position		
Accelerator pedal position sensor	Accelerator pedal position		
TCM	Gear position		
Battery	Battery voltage*2		
Knock sensor	Engine knocking		
Combination meter	Vehicle speed*1		

*1: This signal is sent to the ECM via the CAN communication line.

*2: ECM determines the start signal status by the signals of engine speed and battery voltage.

SYSTEM DESCRIPTION

Ignition order: 1 - 2 - 3 - 4 - 5 - 6

The ignition timing is controlled by the ECM to maintain the best air-fuel ratio for every running condition of the engine. The ignition timing data is stored in the ECM.

The ECM receives information such as the injection pulse width and camshaft position sensor (PHASE) signal. Computing this information, ignition signals are transmitted to the power transistor.

During the following conditions, the ignition timing is revised by the ECM according to the other data stored in the ECM.

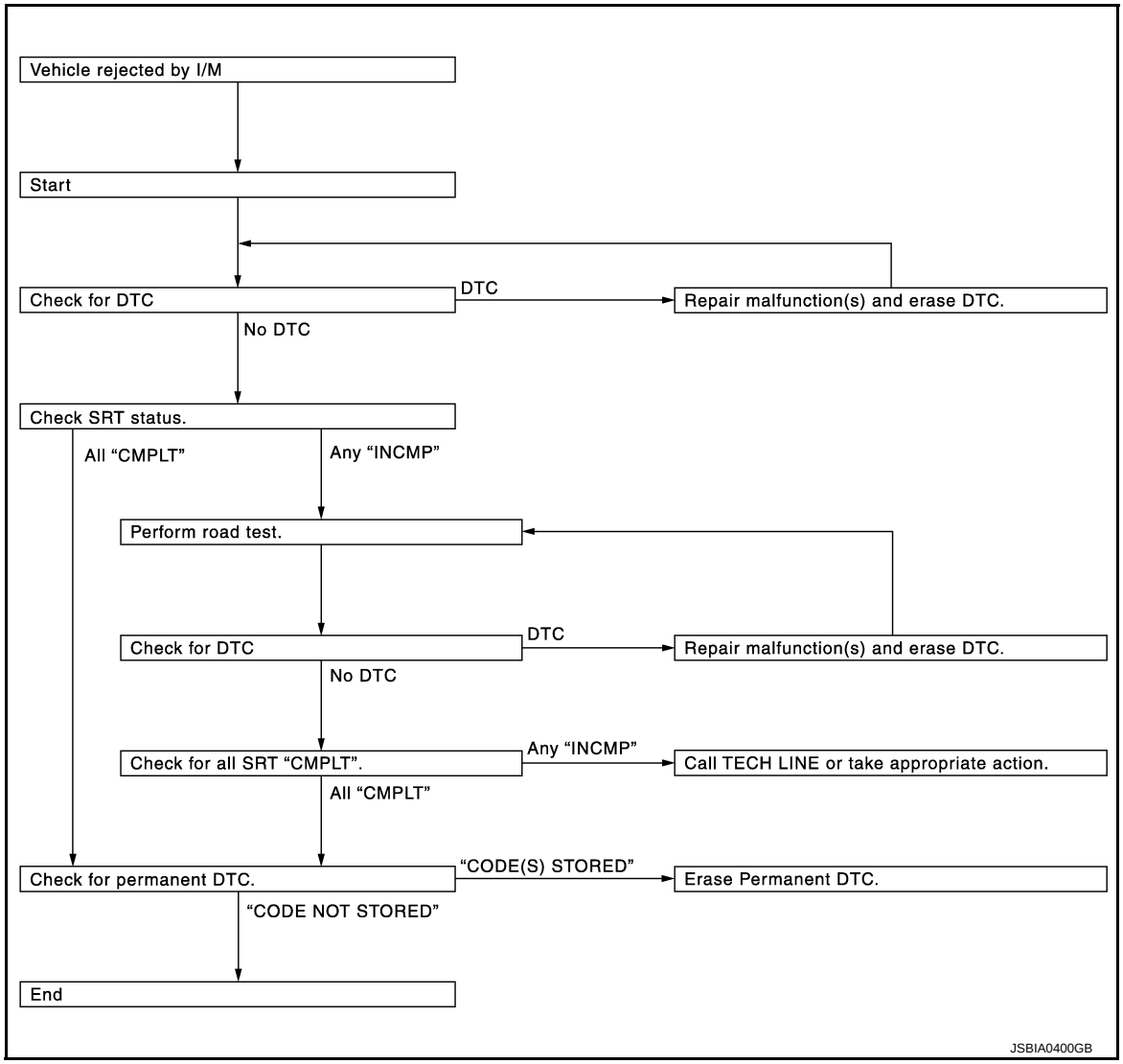
- At starting
- During warm-up
- At idle
- At low battery voltage
- During acceleration

Engine operating condition in fail-safe mode	Detected items	Remarks	Reference page
Engine speed will not rise more than 2,500 rpm due to the fuel cut	Malfunction indicator lamp circuit	When there is an open circuit on MIL circuit, the ECM cannot warn the driver by illuminating MIL when there is malfunction on engine control system. Therefore, when electrical controlled throttle and part of ECM related diagnoses are continuously detected as NG for 5 trips, ECM warns the driver that engine control system malfunctions and MIL circuit is open by means of operating the fail-safe function. The fail-safe function also operates when above diagnoses except MIL circuit are detected and demands the driver to repair the malfunction.	EC-437

DTC RELATED ITEM

DTC No.	Detected items	Engine operating condition in fail-safe mode	
P0011 P0021	Intake valve timing control	The signal is not energized to the intake valve timing control solenoid valve and the valve control does not function.	
P0101 P0102 P0103	Mass air flow sensor circuit	Engine speed will not rise more than 2,400 rpm due to the fuel cut.	
P0117 P0118	Engine coolant temperature sensor circuit	Engine coolant temperature will be determined by ECM based on the following condition. CONSULT displays the engine coolant temperature decided by ECM.	
		Condition	Engine coolant temperature decided (CONSULT display)
		Just as ignition switch is turned ON or START	40°C (104°F)
		Approx 4 minutes or more after engine starting	80°C (176°F)
		Except as shown above	40 - 80°C (104 - 176°F) (Depends on the time)
		When the fail-safe system for engine coolant temperature sensor is activated, the cooling fan operates while engine is running.	
P0122 P0123 P0222 P0223 P2135	Throttle position sensor	The ECM controls the electric throttle control actuator in regulating the throttle opening in order for the idle position to be within +10 degrees. The ECM regulates the opening speed of the throttle valve to be slower than the normal condition. Therefore, the acceleration will be poor.	
P0196 P0197 P0198	Engine oil temperature sensor	Intake valve timing control does not function.	
P0500	Vehicle speed sensor	The cooling fan operates (Highest) while engine is running.	
P0605	ECM	(When ECM calculation function is malfunctioning:) ECM stops the electric throttle control actuator control, throttle valve is maintained at a fixed opening (approx. 5 degrees) by the return spring. ECM deactivates ASCD operation.	
P0643	Sensor power supply	ECM stops the electric throttle control actuator control, throttle valve is maintained at a fixed opening (approx. 5 degrees) by the return spring.	
P1805	Brake switch	ECM controls the electric throttle control actuator by regulating the throttle opening to a small range. Therefore, acceleration will be poor.	
		Vehicle condition	Driving condition
		When engine is idling	Normal
		When accelerating	Poor acceleration
P2100 P2103	Throttle control motor relay	ECM stops the electric throttle control actuator control, throttle valve is maintained at a fixed opening (approx. 5 degrees) by the return spring.	

If a vehicle has failed the state emissions inspection due to one or more SRT items indicating “INCMP”, review the flowchart diagnostic sequence, referring to the following flowchart.



SRT Set Driving Pattern

INFOID:0000000009651007

CAUTION:

P0117, P0118 ECT SENSOR

DTC Logic

INFOID:0000000009651051

DTC DETECTION LOGIC

DTC No.	Trouble Diagnosis Name	DTC detecting condition	Possible Cause
P0117	Engine coolant temperature sensor circuit low input	An excessively low voltage from the sensor is sent to ECM.	• Harness or connectors (The sensor circuit is open or shorted.) • Engine coolant temperature sensor
P0118	Engine coolant temperature sensor circuit high input	An excessively high voltage from the sensor is sent to ECM.	

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If DTC Confirmation Procedure has been previously conducted, always perform the following before conducting the next test.

1. Turn ignition switch OFF and wait at least 10 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 10 seconds.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait at least 5 seconds.
2. Check DTC.

Is DTC detected?

YES >> Proceed to EC-195, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009651052

1.CHECK ECT SENSOR POWER SUPPLY

1. Disconnect engine coolant temperature (ECT) sensor harness connector.
2. Turn ignition switch ON.
3. Check the voltage between ECT sensor harness connector and ground.

ECT sensor		Ground	Voltage
Connector	Terminal		
F80	1	Ground	Approx. 5 V

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair open circuit, short to ground or short to power in harness or connectors.

2.CHECK ECT SENSOR GROUND CIRCUIT FOR OPEN AND SHORT

1. Turn ignition switch OFF.
2. Disconnect ECM harness connector.
3. Check the continuity between ECT sensor harness connector and ECM harness connector.

ECT sensor		ECM		Continuity
Connector	Terminal	Connector	Terminal	
F80	2	F8	76	Existed

4. Also check harness for short to ground and short to power.

1. Turn ignition switch OFF and wait at least 10 seconds.
2. Start engine.
3. Maintain the following conditions for at least 10 consecutive minutes.
   Hold the accelerator pedal as steady as possible.

VHCL SPEED SE	50 - 120 km/h (31 - 75 mph)

CAUTION:
Always drive vehicle at a safe speed.

4. Check 1st trip DTC.

Is 1st trip DTC detected?

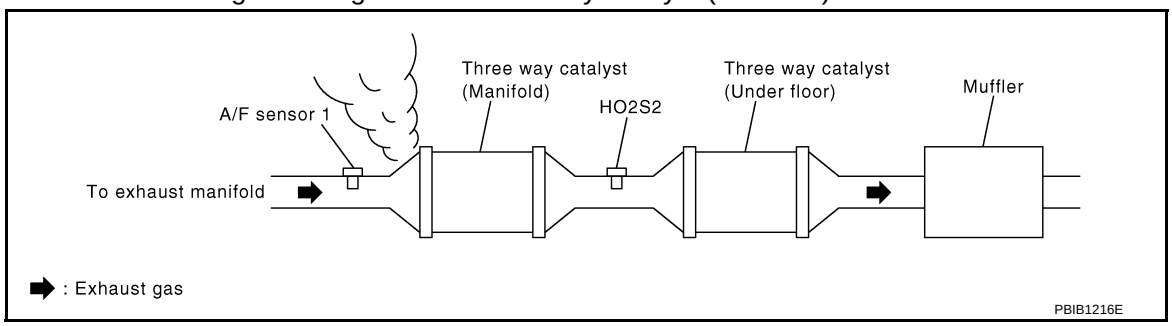
YES >> Proceed to EC-246, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009651090

1.CHECK EXHAUST GAS LEAKAGE

1. Start engine and run it at idle.
2. Listen for an exhaust gas leakage before three way catalyst (manifold).



Is exhaust gas leakage detected?

YES >> Repair or replace malfunctioning part.
NO >> GO TO 2.

2.CHECK FOR INTAKE AIR LEAKAGE

Listen for an intake air leakage after the mass air flow sensor.

Is intake air leakage detected?

YES >> Repair or replace malfunctioning part.
NO >> GO TO 3.

3.CHECK A/F SENSOR 1 INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect corresponding A/F sensor 1 harness connector.
3. Disconnect ECM harness connector.
4. Check the continuity between A/F sensor 1 harness connector and ECM harness connector.

DTC	A/F sensor 1			ECM		Continuity
	Bank	Connector	Terminal	Connector	Terminal	
P0172	1	F27	1	F8	69	Existed
			2		73	
P0175	2	F64	1		77	
			2		81	

5. Check the continuity between A/F sensor 1 harness connector and ground, or ECM harness connector and ground.

Component Inspection

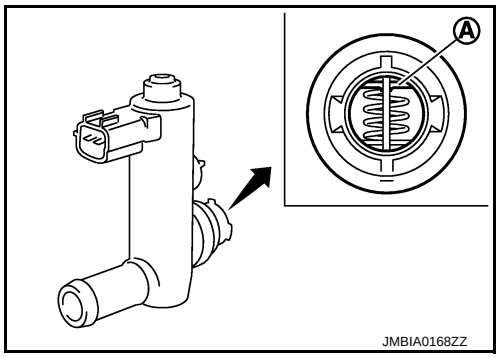
INFOID:0000000009651133

1. CHECK EVAP CANISTER VENT CONTROL VALVE-I

1. Remove EVAP canister vent control valve from EVAP canister. Refer to FL-16, "Exploded View".
2. Check portion (A) of EVAP canister vent control valve for rust.

Is it rusted?

YES >> Replace EVAP canister vent control valve. Refer to FL-16, "Exploded View".
NO >> GO TO 2.



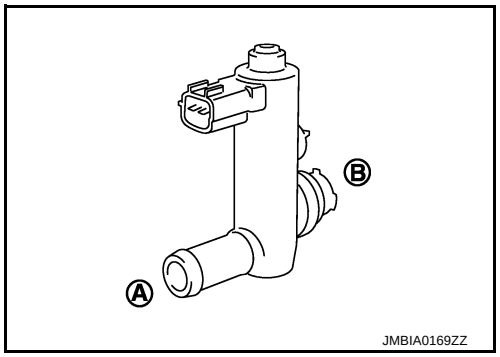
2. CHECK EVAP CANISTER VENT CONTROL VALVE-II

With CONSULT

1. Reconnect harness connectors disconnected.
2. Turn ignition switch ON.
3. Perform “VENT CONTROL/V” in “ACTIVE TEST” mode.
4. Check air passage continuity and operation delay time.
   Check that new O-ring is installed properly.

Condition VENT CONTROL/V	Air passage continuity between (A) and (B)
ON	Not existed
OFF	Existed

Operation takes less than 1 second.



Without CONSULT

1. Disconnect EVAP canister vent control valve harness connector.
2. Check air passage continuity and operation delay time under the following conditions.

Check that new O-ring is installed properly.

Condition	Air passage continuity between (A) and (B)
12 V direct current supply between terminals 1 and 2	Not existed
OFF	Existed

Operation takes less than 1 second.

Is the inspection result normal?

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

3. CHECK EVAP CANISTER VENT CONTROL VALVE-III

With CONSULT

1. Clean the air passage [portion (A) to (B)] of EVAP canister vent control valve using an air blower.
2. Perform “VENT CONTROL/V” in “ACTIVE TEST” mode.

P1225 TP SENSOR

DTC Logic

INFOID:0000000009651190

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1225	Closed throttle position learning performance	Closed throttle position learning value is excessively low.	• Electric throttle control actuator (TP sensor 1 and 2)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If DTC Confirmation Procedure has been previously conducted, always perform the following before conducting the next test.

1. Turn ignition switch OFF and wait at least 10 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 10 seconds.

TESTING CONDITION:

Before performing the following procedure, confirm that battery voltage is more than 10 V at idle.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 10 seconds.
3. Turn ignition switch ON.
4. Check 1st trip DTC.

Is 1st trip DTC detected?

YES >> Proceed to EC-348, "Diagnosis Procedure".
NO >> INSPECTION END

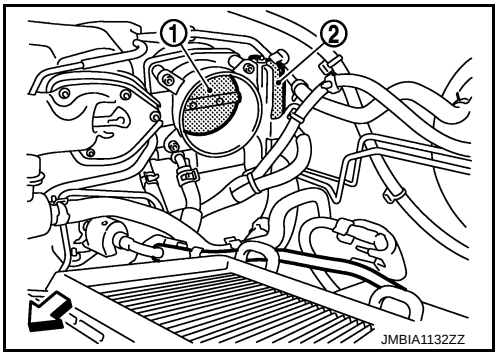
Diagnosis Procedure

INFOID:0000000009651191

1.CHECK ELECTRIC THROTTLE CONTROL ACTUATOR VISUALLY

1. Turn ignition switch OFF.
2. Remove the intake air duct. Refer to EM-26, "Exploded View".
3. Check if foreign matter is caught between the throttle valve (1) and the housing.

- Electric throttle control actuator (2)
- ⇦: Vehicle front



Is the inspection result normal?

YES >> GO TO 2.
NO >> Remove the foreign matter and clean the electric throttle control actuator inside, and then perform throttle valve closed position learning. Refer to EC-136, "Description".

2.REPLACE ELECTRIC THROTTLE CONTROL ACTUATOR

1. Replace electric throttle control actuator. Refer to EM-28, "Exploded View".
2. Go to EC-137, "Description".

>> INSPECTION END

6. CHECK THROTTLE CONTROL MOTOR

Check throttle control motor. Refer to EC-399, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace electric throttle control actuator. Refer to EM-28, "Exploded View".

7. CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace electric throttle control actuator. Refer to EM-28, "Exploded View".
NO >> Repair or replace error-detected parts.

Component Inspection

INFOID:0000000009651253

1. CHECK THROTTLE CONTROL MOTOR

1. Turn ignition switch OFF.
2. Disconnect electric throttle control actuator harness connector.
3. Check resistance between electric throttle control actuator terminals as per the following.

Terminals	Resistance
5 and 6	Approx. 1 - 15 Ω [at 25°C (77°F)]

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace electric throttle control actuator. Refer to EM-28, "Exploded View".

SYMPTOM DIAGNOSIS

ENGINE CONTROL SYSTEM SYMPTOMS

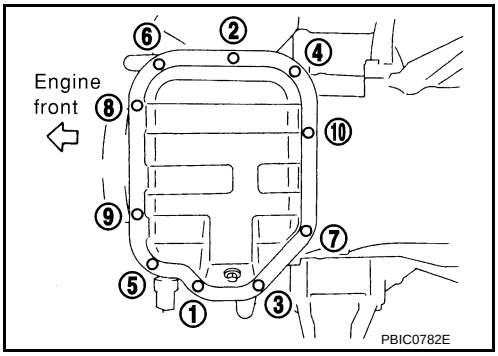
Symptom Table

INFOID:0000000009651306

SYSTEM — BASIC ENGINE CONTROL SYSTEM

		SYMPTOM													Reference page
		HARD/NO START/RESTART (EXCP. HA)	ENGINE STALL	HESITATION/SURGING/FLAT SPOT	SPARK KNOCK/DETONATION	LACK OF POWER/POOR ACCELERATION	HIGH IDLE/LOW IDLE	ROUGH IDLE/HUNTING	IDLING VIBRATION	SLOW/NO RETURN TO IDLE	OVERHEATS/WATER TEMPERATURE HIGH	EXCESSIVE FUEL CONSUMPTION	EXCESSIVE OIL CONSUMPTION	BATTERY DEAD (UNDER CHARGE)	
Warranty symptom code		AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AM	HA	
Fuel	Fuel pump circuit	1	1	2	3	2		2	2			3		2	EC-429
	Fuel pressure regulator system	3	3	4	4	4	4	4	4	4		4			EC-141
	Fuel injector circuit	1	1	2	3	2		2	2			2			EC-426
	Evaporative emission system	3	3	4	4	4	4	4	4	4		4			EC-49
Air	Positive crankcase ventilation system	3	3	4	4	4	4	4	4	4		4	1		EC-30
	Incorrect idle speed adjustment						1	1	1	1		1			EC-129
	Electric throttle control actuator	1	1	2	3	3	2	2	2	2		2		2	EC-397, EC-402
Ignition	Incorrect ignition timing adjustment	3	3	1	1	1		1	1			1			EC-129
	Ignition circuit	1	1	2	2	2		2	2			2			EC-431
Power supply and ground circuit		2	2	3	3	3		3	3		2	3			EC-163
Mass air flow sensor circuit		1	1	2	2	2		2	2			2			EC-179, EC-184
Engine coolant temperature sensor circuit					3		3			3					EC-195, EC-199
Air fuel ratio (A/F) sensor 1 circuit			1	2	3	2		2	2			2			EC-206, EC-210, EC-213, EC-235, EC-391
Throttle position sensor circuit							2			2					EC-197, EC-261, EC-348, EC-349, EC-409
Accelerator pedal position sensor circuit				3	2	1									EC-337, EC-404, EC-406, EC-411

a. Loosen mounting bolts in the reverse order as shown in the figure to remove.

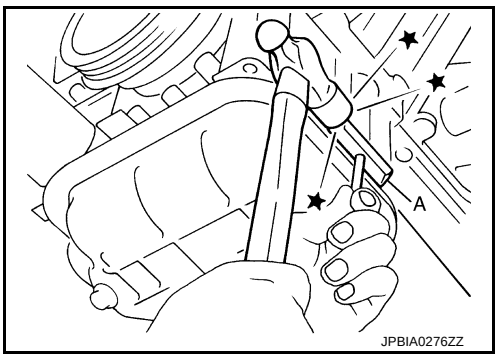


b. Insert the seal cutter [SST: KV10111100 (J-37228)] (A) between oil pan (upper) and oil pan (lower).

CAUTION:

- **Be careful not to damage the mating surfaces.**
- **Never insert a screwdriver, this will damage the mating surfaces.**

c. Slide the seal cutter by tapping on the side of tool with a hammer. Remove oil pan (lower).

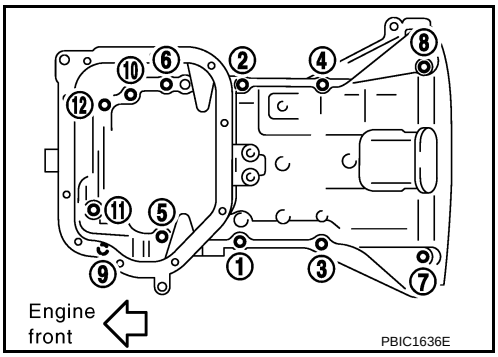


32. Remove oil strainer.

33. Loosen mounting bolts in the reverse order as shown in the figure to remove.
    - Insert the seal cutter [SST: KV10111100 (J-37228)] between oil pan (upper) and cylinder block. Slide seal cutter by tapping on the side of tool with a hammer. Remove oil pan (upper).

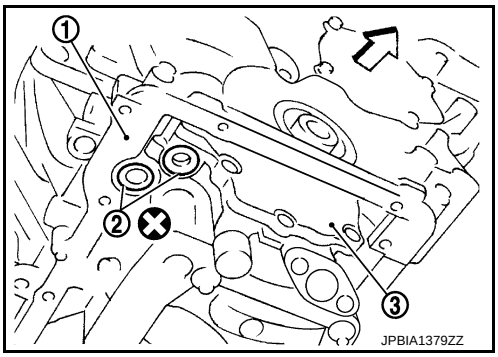
    CAUTION:

    - **Be careful not to damage the mating surfaces.**
    - **Never insert a screwdriver, this will damage the mating surfaces.**



34. Remove O-rings (2) from bottom of cylinder block (1) and oil pump (3).

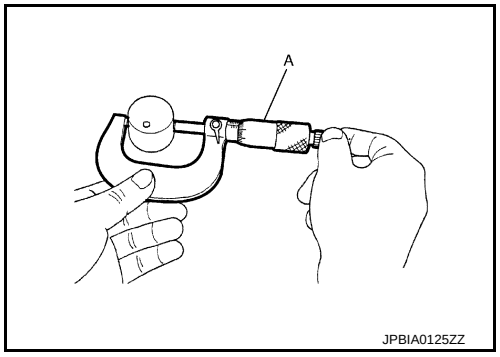
⇦ : Engine front



VALVE LIFTER OUTER DIAMETER

- Measure the outer diameter at 1/2 height of valve lifter with a micrometer (A) since valve lifter is in barrel shape.

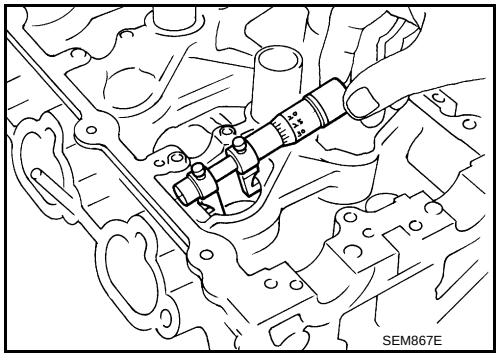
Standard (Intake and exhaust) : **Refer to EM-129, "Camshaft".**



VALVE LIFTER HOLE DIAMETER

- Measure the inner diameter of valve lifter hole of cylinder head with an inside micrometer.

Standard (Intake and exhaust) : **Refer to EM-129, "Camshaft".**



VALVE LIFTER CLEARANCE

- (Valve lifter clearance) = (Valve lifter hole diameter) – (Valve lifter outer diameter)

Standard (Intake and exhaust) : **Refer to EM-129, "Camshaft".**

- If the calculated value is out of the standard, referring to each standard of valve lifter outer diameter and valve lifter hole diameter, replace either or both valve lifter and cylinder head.

INSPECTION AFTER INSTALLATION

Inspection of Camshaft Sprocket (INT) Oil Groove

CAUTION:

- **Perform this inspection only when DTC P0011 is detected in self-diagnostic results of CONSULT and it is directed according to inspection procedure of EC section. Refer to EC-171, "Component Inspection".**
- **Check when engine is cold so as to prevent burns from the splashing engine oil.**

1. Check engine oil level. Refer to LU-8, "Inspection".
2. Perform the following procedure so as to prevent the engine from being unintentionally started while checking.

a. Release the fuel pressure. Refer to EC-141, "Work Procedure".

b. Disconnect ignition coil and injector harness connectors. Refer to EM-52, "Exploded View" and EM-47, "Exploded View".

3. Remove intake valve timing control solenoid valve. Refer to EM-66, "Exploded View".

PERIODIC MAINTENANCE

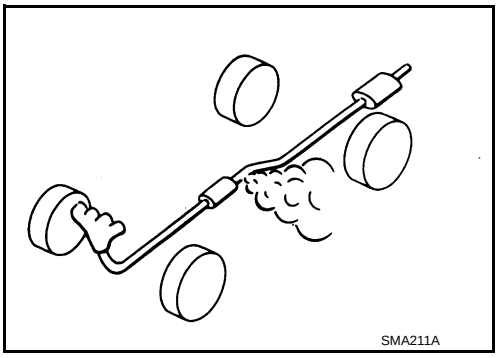
EXHAUST SYSTEM

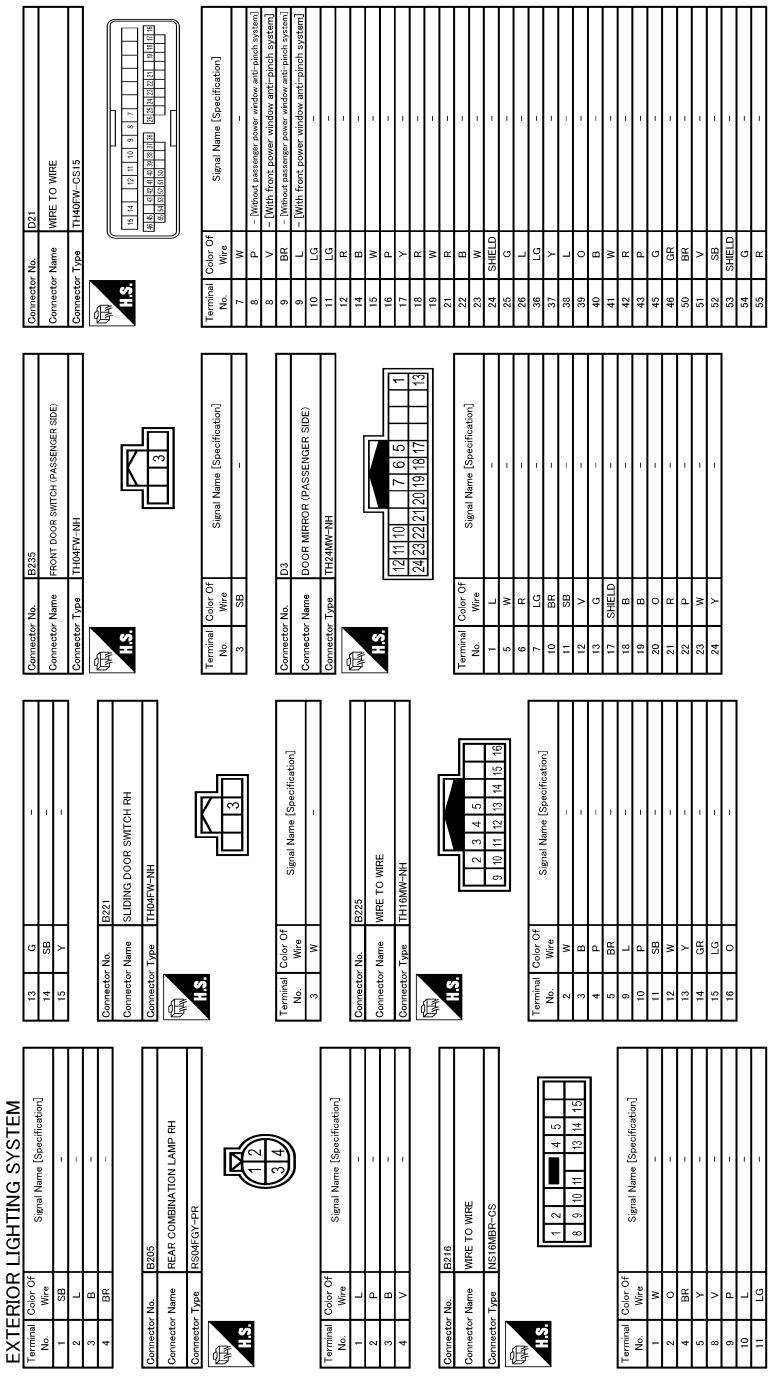
Inspection

INFOID:0000000009650909

Check exhaust pipes, muffler, and mounting for improper attachment, leakage, cracks, damage or deterioration.

- If anything is found, repair or replace damaged parts.





JRLWC7438GB

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description

INFOID:0000000009653082

preparation before adjusting

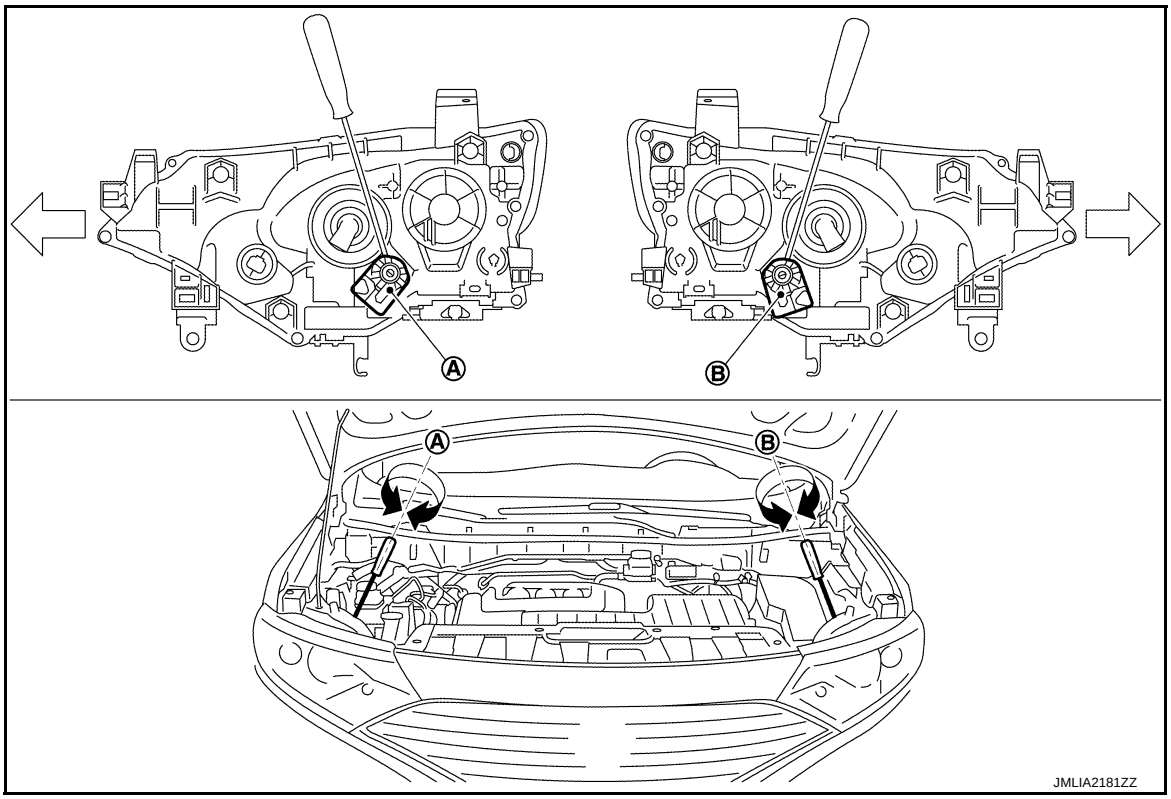
NOTE:

- for details, refer to the regulations in your own country.
- perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

before performing aiming adjustment, check the following.

- adjust the tire pressure to the specification.
- fill with fuel, engine coolant and each oil.
- maintain the unloaded vehicle condition. (remove luggage from the passenger compartment and the luggage room.)
  NOTE:
  do not remove the temporary tire, jack and on-vehicle tool.
- wipe out dirt on the headlamp.
  CAUTION:
  never use organic solvent (thinner, gasoline etc.)
- ride alone on the driver seat.

aiming adjustment screw



A. Headlamp RH HI/LO (UP/DOWN) adjustment screw
B. Headlamp LH HI/LO (UP/DOWN) adjustment screw

⇦: Vehicle center

Symptom	Inspection contents		Possible cause
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	• Cooling fan • Harness or connector between cooling fan and cooling fan relay • Harness or connector between IPDM E/R and cooling fan relay • Cooling fan relay • IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000009984874

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with IPDM E/R.

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

SELF DIAGNOSTIC RESULT

Refer to PCS-24, "DTC Index".

DATA MONITOR

NOTE:

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

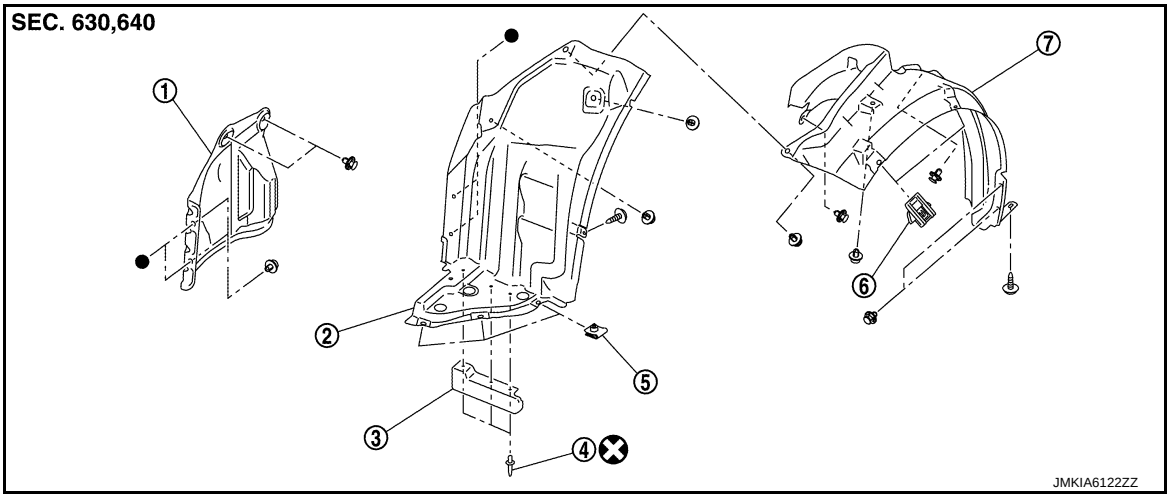
Monitor Item [Unit]	MAIN SIGNALS	Description
MOTOR FAN REQ [1/2/3/4]	×	Displays the value of the cooling fan speed signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper stop position signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.

Symptom		Possible cause	Inspection item
Front side marker lamp is not turned ON.		• Front side marker lamp bulb • Harness between IPDM E/R and front side marker lamp • Harness between front side marker lamp and ground • IPDM E/R	Front side marker lamp circuit Refer to EXL-184, "Component Function Check".
Tail lamp (Rear side marker lamp) is not turned ON.		• Fuse • Tail lamp bulb • Harness between IPDM E/R and rear combination lamp • Harness between and rear combination lamp and ground	Tail lamp circuit Refer to EXL-185, "Component Function Check".
License plate lamp is not turned ON.		• License plate lamp bulb • Harness between IPDM E/R and license plate lamp • Harness between license plate lamp and ground	License plate lamp circuit Refer to EXL-187, "Component Function Check".
Parking lamp, side marker lamp, tail lamp and license plate lamp are not turned ON.		**Symptom diagnosis** “PARKING, SIDE MARKER, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-207, "Diagnosis Procedure".	
Tail lamp indicator is not turned ON. (Exterior lamps are turned ON.)		Combination meter	• Combination meter Data monitor “LIGHT IND” • BCM (HEADLAMP) Active test “TAIL LAMP”
Turn signal lamp does not blink.	Indicator lamp is normal. (Applicable side performs high flasher activation.)	• Turn signal lamp bulb • Door mirror • Harness between BCM and each turn signal lamp • Harness between each turn signal lamp and ground	Turn signal lamp circuit Refer to EXL-188, "Component Function Check".
	Indicator lamp is included.	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch Refer to BCS-96, "Symptom Table".
Turn signal indicator lamp does not blink. (Turn signal lamp is normal.)	One side	Combination meter	—
	Both sides (Always)	• Turn signal indicator lamp signal • BCM • Combination meter	• Combination meter Data monitor “TURN IND” • BCM (FLASHER) Active test “FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply and ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-72, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate. • Hazard warning lamp continues activating. (Turn signal is normal.)		• Hazard switch • Harness between hazard switch and BCM • Harness between hazard switch and ground • BCM	Hazard switch circuit Refer to EXL-196, "Component Function Check".

FENDER PROTECTOR

Exploded View

INFOID:0000000009650497



1. Splash guard
2. Fender protector (front)
3. Air guide
4. Rivet
5. U-nut
6. Fender clip
7. Fender protector (rear)

⊗ : Always replace after every disassembly.

● : Indicates that the part is connected at points with same symbol in actual vehicle.

Removal and Installation

INFOID:0000000009650498

REMOVAL

1. Remove splash guard fixing clips, and then remove splash guard.
2. Remove fender protector (rear) fixing clips, screw, and fender clips, and then remove fender protector (rear).
3. Remove fender protector (front) fixing clips and screws, and then remove fender protector (front).
4. Remove air guide from fender protector (front).

CAUTION:
Removal of rivet.
Grind the head of rivet with a drill [bit of ϕ4.5 – 5.0 mm (ϕ0.177 – 0.197 in)] and then remove the bumper brace.

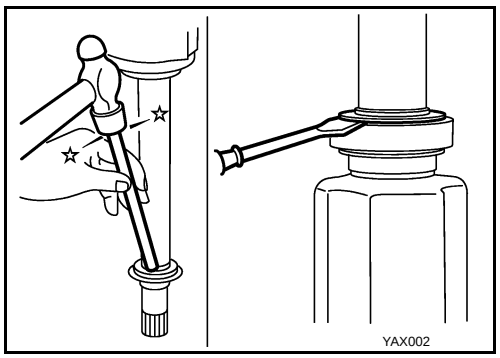
INSTALLATION

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

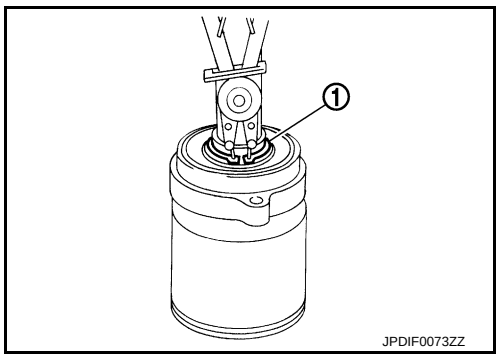
NOTE:
Securely crimp the bumper brace with the bumper fascia assembly with a hand riveter.

Size of rivet	
Prepared hole diameter	**ϕ5.1 – 5.3 mm (ϕ0.201 – 0.209 in)**
Used rivet head diameter	**ϕ16.0 mm (ϕ0.630 in)**
Crimping thickness	**0.5 – 6.4 mm (0.020 – 0.252 in)**

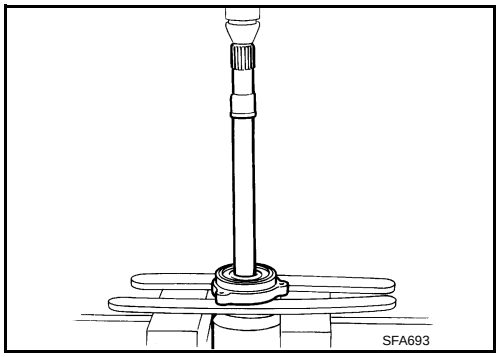
a. Remove dust shield from housing.



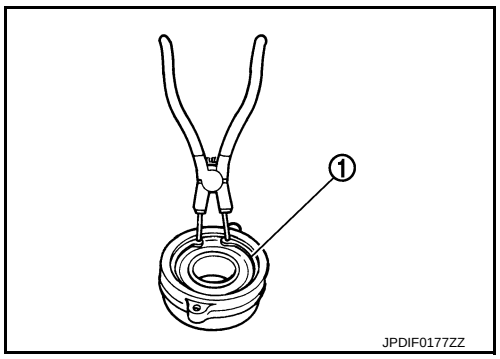
b. Remove snap ring (1).



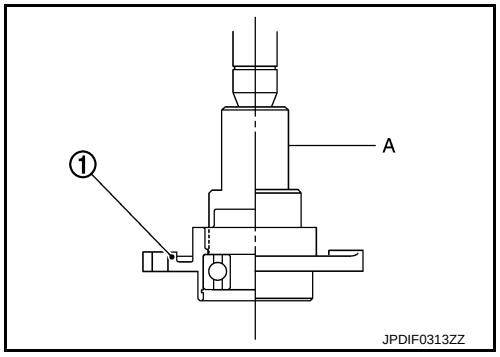
c. Press out bearing housing and support bearing from housing assembly.
d. Remove dust shield from housing assembly.



e. Remove snap ring (1).

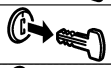
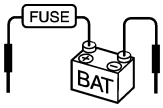


f. Press out support bearing from bearing housing (1), using the drift (A) [SST: ST17130000 (—)].
5. Perform inspection after disassembly. Refer to FAX-30, "Inspection".



Key to Symbols Signifying Measurements or Procedures

INFOID:0000000009652449

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	Check after disconnecting the connector to be measured.		Procedure with Generic Scan Tool. (GST, OBD-II scan tool)
	Check after connecting the connector to be measured.		Procedure without CONSULT or GST
	Insert key into ignition switch.		A/C switch is “OFF”.
	Remove key from ignition switch.		A/C switch is “ON”.
	Insert and remove key repeatedly.		REC switch is “ON”.
	Turn ignition switch to “OFF” position.		REC switch is “OFF”.
	Turn ignition switch to “ACC” position.		Fan switch is “ON”. (At any position except for “OFF” position)
	Turn ignition switch to “ON” position.		Fan switch is “OFF”.
	Turn ignition switch to “START” position.		Apply fuse.
	Turn ignition switch from “OFF” to “ACC” position.		Apply positive voltage from battery with fuse directly to components.
	Turn ignition switch from “ACC” to “ON” position.		
	Turn ignition switch from “ACC” to “OFF” position.		

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INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Required Procedure After Battery Disconnection

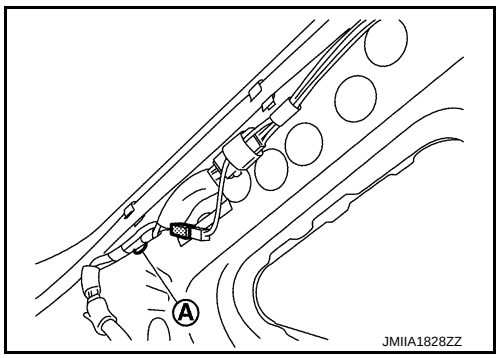
INFOID:0000000009803635

SYSTEM	ITEM		REFERENCE
Automatic air conditioning system	Temperature setting trimmer (Front)		HAC-82, "Temperature Setting Trimmer (Front)"
	Temperature setting trimmer (Rear)		HAC-83, "Temperature Setting Trimmer (Rear)"
	Foot position setting trimmer		HAC-84, "Foot Position Setting Trimmer"
	Inlet port memory function		HAC-84, "Inlet Port Memory Function"
	Inlet port memory function (FRE)*1		—
	Inlet port memory function (REC)*1		—
	Exhaust gas / outside odor detecting gas sensor sensitivity adjustment function*2		HAC-85, "Exhaust Gas/Outside Odor Detecting Sensor Sensitivity Adjustment Function"
	Auto intake switch interlocking movement change*2		HAC-85, "AUTO Intake Switch Interlocking Movement Change Function"
	Clean switch interlocking movement change*1		—
Automatic drive positioner	Automatic drive positioner system		ADP-46, "Description"
Power window control	Power window control system	FRONT WINDOW ANTI-PINCH	PWC-92, "Description"
		DRIVER SIDE WINDOW ANTI-PINCH	PWC-32, "Description"
Sunroof system	Sunroof system		—
Sunshade system	Sunshade system		—
Rear view monitor	Rear view monitor predictive course line center position adjustment		—
Around view monitor	Predictive course line center position adjustment		—
Automatic sliding door system*1	Automatic sliding door system		DLK-168, "AUTOMATIC SLIDING DOOR SYSTEM : Description"
Automatic back door system*1	Automatic back door system		DLK-168, "AUTOMATIC BACK DOOR SYSTEM : Description"
Engine oil level read*1	Engine oil level read		—

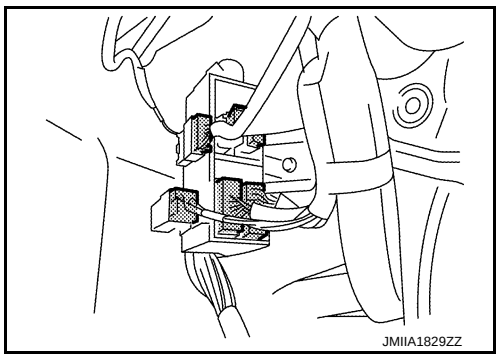
*1: Not equipped.

*2: With ACCS (Advanced climate control system)

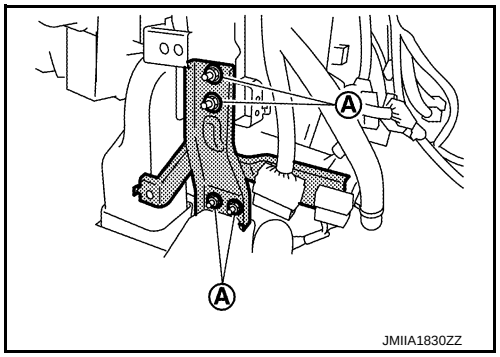
15. Remove harness fixing clip (A), and then disconnect harness connector.



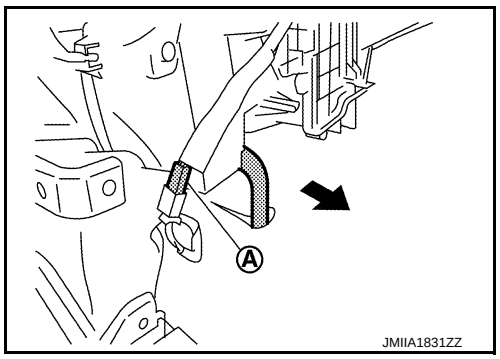
16. Disconnect junction harness connectors. (Passenger side)



17. Remove mounting nuts (A), and then remove instrument stay. (LH and RH)



18. Remove harness fixing clip (A).
19. Disconnect drain hose from heater & cooling unit assembly.



20. Disconnect front door harness connector. Refer to DLK-432, "DOOR ASSEMBLY : Removal and Installation". (Passenger side)
21. Disconnect diagnosis sensor unit harness connectors. Refer to SR-29, "Removal and Installation".
    NOTE:
    Remove all of harness connectors and clips necessary to allow steering member to be moved. Move main harness aside and secure work space so that steering member can be easily moved.
22. Perform the following operation to move steering member (1).
    - Remove steering member mounting bolts (A) from the vehicle.
    - Remove steering member mounting bolts (B) and harness fixing clip (C) from heater & cooling unit assembly

Switch name	Function
Fan switch	Air flow can be set within a range between 1st – 7th speed according to switch operation. • Press +: Air flow increases • Press –: Air flow decreases **NOTE:** Automatic air flow control is cancelled (AUTO switch indicator turns OFF), when fan switch is pressed while AUTO switch indicator is ON.
A/C switch	When this switch is pressed, rear air conditioning becomes the following status according to the setting status of air outlet. • Rear air conditioning turns OFF simultaneously with compressor control (A/C switch indicator) and becomes the following status, when this switch is pressed while the setting of air outlet is other than FOOT (automatic control/manual control). - Air outlet: FOOT - Air flow: OFF • Compressor control (A/C switch indicator) turns OFF but rear air conditioning remains ON and becomes the following status, when this switch is pressed while the setting of air outlet is FOOT (automatic control/manual control). - Air outlet: FOOT [Automatic air outlet control is cancelled (AUTO switch indicator turns OFF) when this switch is pressed while automatic control is ON] - Air flow: Previous status before switch is pressed.
REAR switch	• Front A/C control changes between front air conditioning operation screen (“REAR” is not indicated) ⇔ rear air conditioning operation screen (“REAR” is indicated), each time this switch is pressed while rear air conditioning is ON. • Rear air conditioning turns ON simultaneously with compressor control (A/C switch indicator) and operates according to the previous setting before rear air conditioning is turned OFF, when this switch is pressed while rear air conditioning is OFF. **NOTE:** Switch operation is not accepted when front air conditioning is OFF.
DEF switch	• Rear air conditioning turns ON simultaneously with front air conditioning and operates according to the settings set before rear air conditioning is turned OFF, when this switch is pressed after rear air conditioning is turns OFF simultaneously with front air conditioning by ON·OFF switch in previous operation. • Rear air conditioning becomes the following status, when this switch is pressed again. - Air outlet: FOOT - Air flow: OFF

NOTE:
The following switches are not necessary for rear air conditioning system operation.

Intake switch	Refer to HAC-34, "FRONT AUTOMATIC AIR CONDITIONING SYSTEM : Switch Name and Function".
Temperature control switch (passenger side)	
DUAL switch	
AUTO intake switch	Refer to HAC-44, "ACCS (ADVANCED CLIMATE CONTROL SYSTEM) : Switch Name and Function".

FRONT A/C CONTROL OPERATION [WITHOUT ACCS (ADVANCED CLIMATE CONTROL SYSTEM)]

Display: Display in front A/C control
- Rear air conditioning operation status is indicated on display in front A/C control.
- Front A/C control changes to rear air conditioning operation screen when REAR switch is pressed while front air conditioning is ON. “REAR” is indicated on display in front A/C control display. The status continues for 10 seconds, and during this period of time, rear air conditioning setting can be set using front A/C control.
- When 10 seconds are passed, front A/C control returns to front air conditioning operation screen and “REAR” on front A/C control display turns OFF. In this case, rear air conditioning setting can be set using rear A/C control.

Operation: Front A/C control

Rear A/C control		—	Continuity
Connector	Terminal		
R16 (without rear entertainment)	10	Ground	Not existed
R101 (with rear entertainment)			

Is the inspection result normal?

YES >> Replace front A/C control (A/C auto amp.). Refer to HAC-143, "Removal and Installation".
NO >> Repair harness or connector.

5. CHECK COMMUNICATION SIGNAL (A/C AUTO AMP. → REAR A/C CONTROL) CIRCUIT FOR OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect A/C auto amp. connector.
3. Turn ignition switch ON.
4. Check voltage between A/C auto amp. harness connector and ground.

+		–	Voltage (Approx.)
A/C auto amp.			
Connector	Terminal		
M50	32	Ground	5 V

Is the inspection result normal?

YES >> Replace front A/C control (A/C auto amp.). Refer to HAC-143, "Removal and Installation".
NO >> GO TO 6.

6. CHECK COMMUNICATION SIGNAL (A/C AUTO AMP. → REAR A/C CONTROL) CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect rear A/C control connector.
3. Check continuity between rear A/C control harness connector and A/C auto amp. harness connector.

Rear A/C control		A/C auto amp.		Continuity
Connector	Terminal	Connector	Terminal	
R16 (without rear entertainment)	9	M50	32	Existed
R101 (with rear entertainment)				

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair harness or connector.

7. CHECK COMMUNICATION SIGNAL (A/C AUTO AMP. → REAR A/C CONTROL) CIRCUIT FOR SHORT

Check continuity between rear A/C control harness connector and ground.

Rear A/C control		—	Continuity
Connector	Terminal		
R16 (without rear entertainment)	9	Ground	Not existed
R101 (with rear entertainment)			

Is the inspection result normal?

YES >> Check rear A/C control power supply circuit. Refer to HAC-88, "REAR A/C CONTROL : Diagnosis Procedure".

REMOVAL AND INSTALLATION

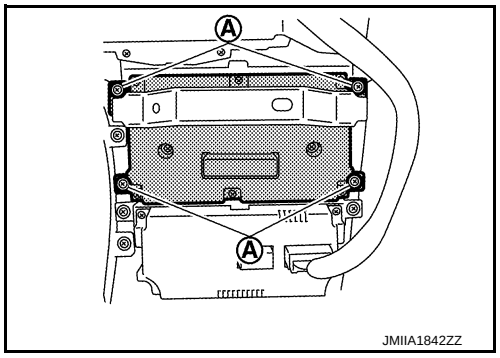
FRONT A/C CONTROL

Removal and Installation

INFOID:0000000009652594

REMOVAL

1. Remove cluster lid C. Refer to IP-28, "Removal and Installation".
2. Remove fixing screws (A), and then remove front A/C control.



INSTALLATION

Install in the reverse order of removal.

OPERATION INSPECTION
FRONT MANUAL AIR CONDITIONING SYSTEM
FRONT MANUAL AIR CONDITIONING SYSTEM : Work Procedure

INFOID:0000000009652645

DESCRIPTION
The purpose of the operation inspection is to check that the individual system operates normally.

Check condition : Engine running at normal operating temperature.

OPERATION INSPECTION
1.CHECK MEMORY FUNCTION

1. Press fan switch to activate front A/C system.
2. Operating temperature control switch to full hot position.
3. Press ON·OFF switch.
4. Turn ignition switch OFF.
5. Turn ignition switch ON.
6. Press fan switch.
7. Check that the air flow temperature position (full hot) is maintained.

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 9.

2.CHECK FRONT BLOWER MOTOR

1. Start engine.
2. Operate fan switch and check that fan speed changes.
3. Check operation for all fan speeds.

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 9.

3.CHECK DISCHARGE AIR (MODE SWITCH AND DEF SWITCH)

1. Operate fan switch to set the fan speed to maximum speed.
2. Operate MODE switch and DEF switch.
3. Check that air outlets change according to each indicated air outlet by placing a hand in front of the outlets. Refer to VTL-6, "VENTILATION SYSTEM (FRONT AIR CONDITIONING) : System Description".

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 9.

4.CHECK INTAKE AIR

1. Press REC switch to set the air inlet to recirculation. The REC switch indicator turns ON.
2. Listen to intake sound and confirm air inlets change.
3. Press FRE switch again to set the air inlet to fresh air intake. The FRE switch indicator turns OFF.
4. Listen to intake sound and confirm air inlets change.

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 9.

5.CHECK COMPRESSOR

1. Press A/C switch. The A/C switch indicator is turns ON.
2. Check visually and by sound that the compressor operates.
3. Press A/C switch again. The A/C switch indicator is turns OFF.
4. Check that compressor stops.

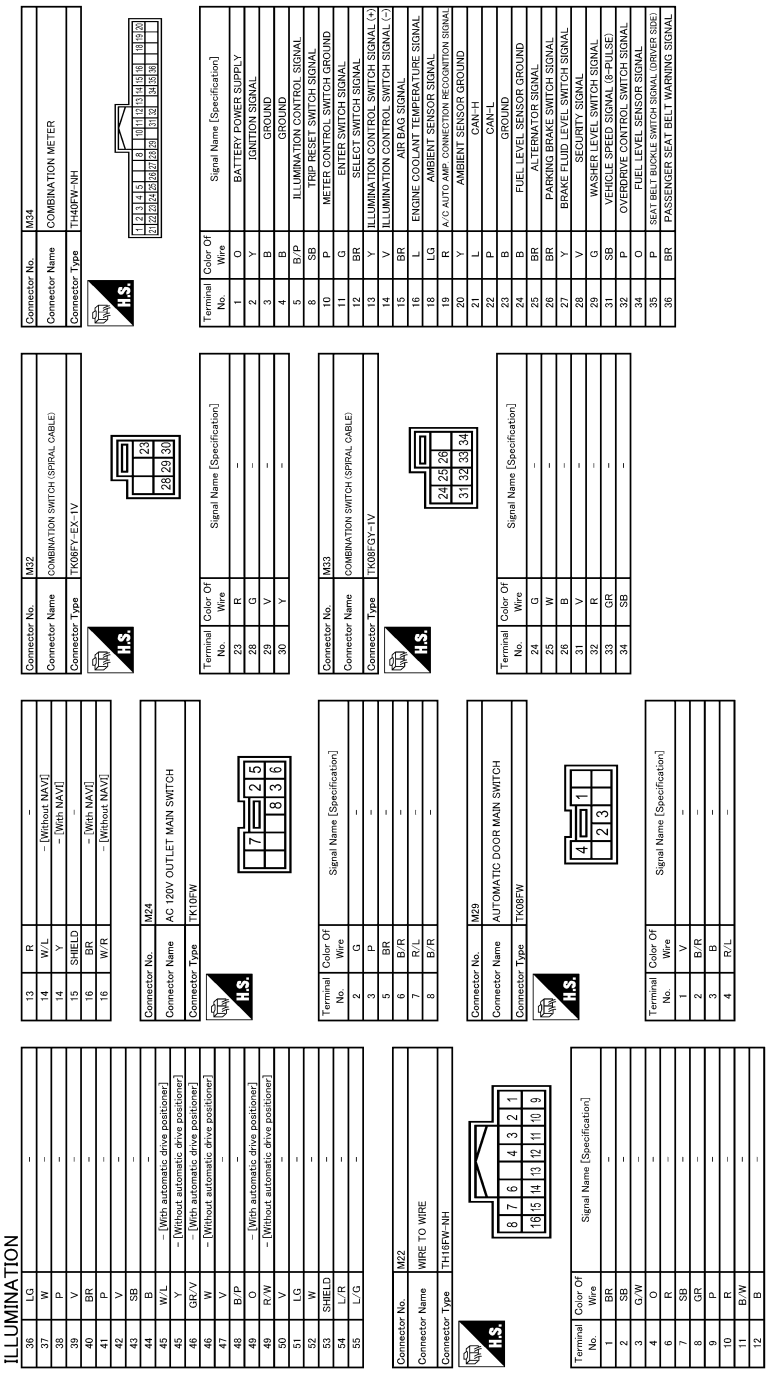
Is the inspection result normal?

YES >> GO TO 6.

SECTION HRN

HORN

CONTENTS



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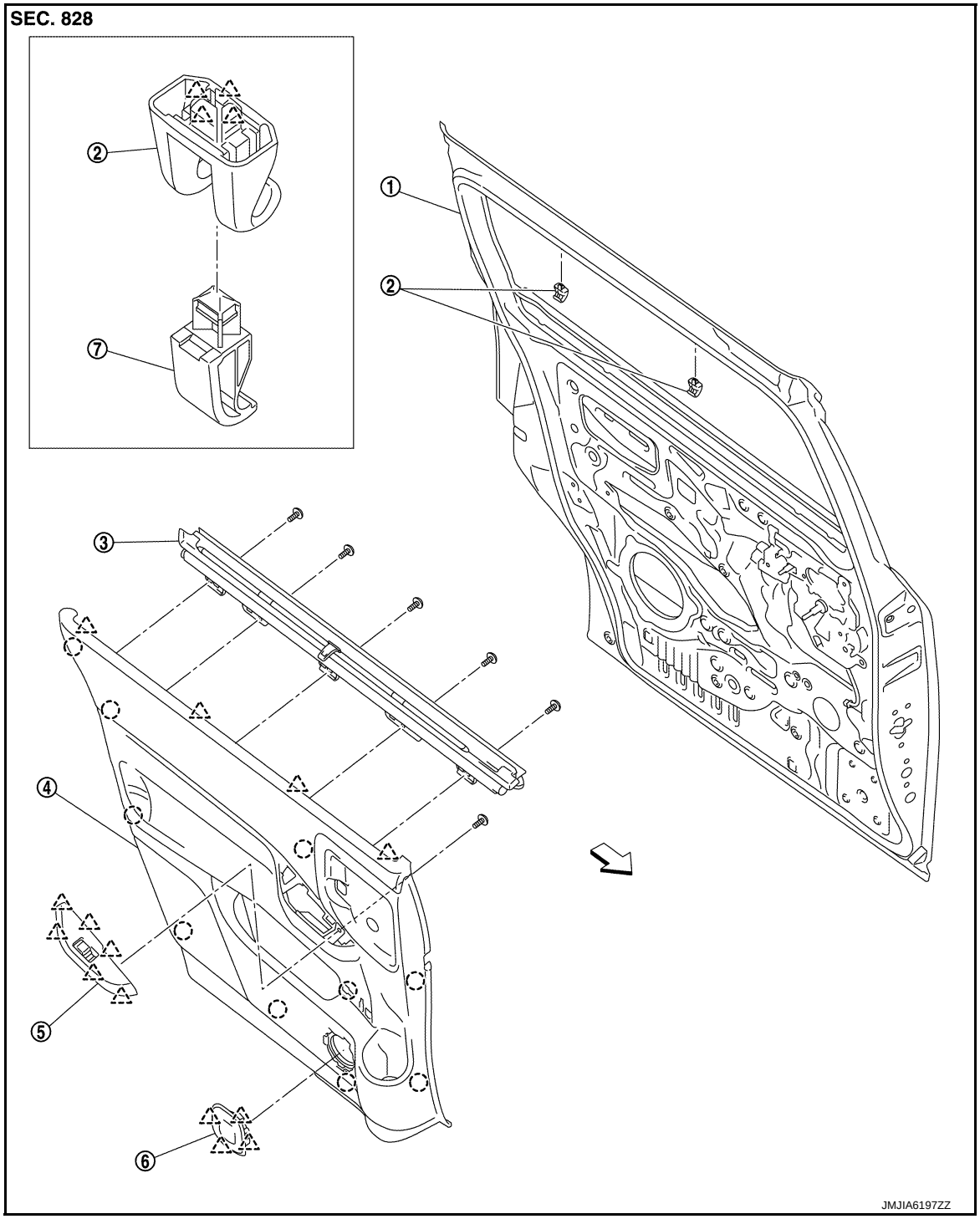
SLIDE DOOR FINISHER

Exploded View

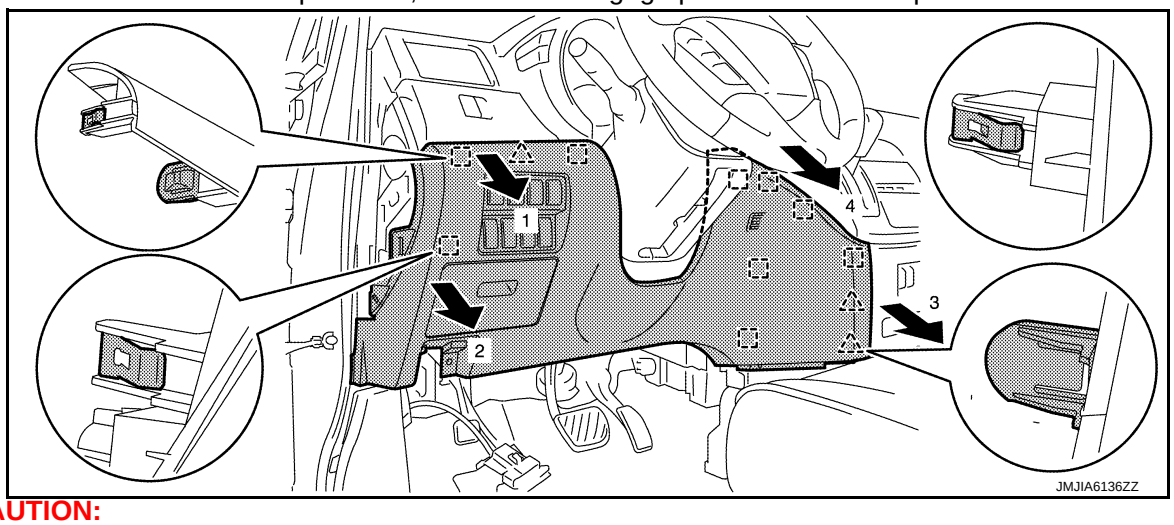
INFOID:0000000009650276



1. Rear door panel
2. Shade hook
3. Second roll sunshade assembly (with roll sunshade)
4. Slide door finisher
5. Power window switch finisher
6. Speaker grille
7. Hook pin

: Clip

i. Remove clips (A).
ii. Pull back instrument lower cover center (1), and then disengage pawl and metal clips.
iii. Disconnect harness connector and remove harness clip.
b. With NAVI
i. Remove clips (A).
ii. Pull back instrument lower cover center (2), and then disengage metal clips.
iii. Disconnect harness connector and remove harness clip.
10. Remove instrument lower panel LH.
a. Remove hood opener and fuel lid opener lever fixing bolts. Refer to DLK-459, "HOOD LOCK : Removal and Installation".
b. Pull back instrument lower panel LH, and then disengage pawls and metal clips.



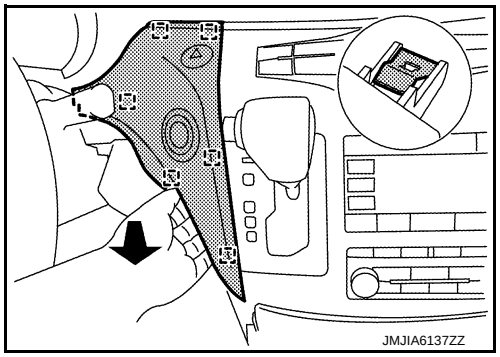
CAUTION:
Never pull instrument lower panel LH forcefully.

: Pawl
: Metal clip

c. Release data link connector (pawls) then remove it from instrument lower panel LH.
d. Disconnect harness connectors, aspirator duct and remove harness clip.
11. Remove instrument finisher A.
a. Pull back instrument finisher A, and then disengage metal clips.
b. Disconnect harness connectors.

CAUTION:
Never pull instrument finisher A forcefully.

: Metal clip



12. Remove instrument finisher B.

Signal name/Connecting unit	ECM	EPS	ABS	TCM	BCM	M&A	STRG	AV	AVM	BSW	ASD-R	ADP	ASD-L	PWBD	IPDM-E
Engine speed signal	T		R	R		R				R					
Engine status signal	T	R			R	R		R							
Fuel consumption monitor signal	T					R		R							
Fuel filler cap warning display signal	T					R									
Malfunctioning indicator lamp signal	T					R									
Power generation command value signal	T														R
Starter motor relay cut off signal	T				R										R
EPS operation signal	R	T													
Hydraulic pump electric power steering warning lamp signal		T				R									
ABS operation signal			T	R											
ABS warning lamp signal			T			R									
Brake warning lamp signal			T			R									
TCS operation signal			T	R											
VDC OFF indicator lamp signal			T			R									
VDC operation signal			T	R											
VDC warning lamp signal			T			R									
Vehicle speed signal	R	R			R	T		R			R	R	R	R	R
			T	R	R	R			R	R	R	R	R	R	
Current gear position signal			R	T											
CVT self-diagnosis signal	R			T											
Input shaft revolution signal	R			T											
N range signal			R	T											
OD OFF indicator signal				T		R									
Output shaft revolution signal	R			T											
P range signal			R	T	R										
R range signal			R	T											
Shift position signal			R	T		R				R	R	R	R		
A/C ON signal	R				T										
ACC signal					T							R			
Automatic back door request signal					T									R	
Automatic sliding door operate request signal					T						R				
					T								R		
Back door lock status signal					T									R	
Blower fan ON signal	R				T										
Buzzer output signal					T	R									
						R				T					
Daytime running light request signal					T										R
Dimmer signal					T	R*				R					
Door lock/unlock status signal					T	R									
Door switch signal					T	R						R			R
Door unlock signal					T							R			
Front fog light request signal					T										R

TCM BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000009978222

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).

- TCM
- Harness connector F123
- Harness connector E6

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of TCM.
2. Check the resistance between the TCM harness connector terminals.

TCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		
F23	32	31	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the TCM branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to TM-114, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the TCM. Refer to TM-158, "Removal and Installation".
YES (Past error)>>Error was detected in the TCM branch line.
NO >> Repair the power supply and the ground circuit.

MAIN LINE BETWEEN A-BAG AND ASD-R CIRCUIT

Diagnosis Procedure

INFOID:0000000009978963

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).

- Harness connector M79
- Harness connector B225

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M79 and B225.
2. Check the continuity between the data link connector and the harness connector.

Data link connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M4	6	M79	9	Existed
	14		10	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the main line between the air bag diagnosis sensor unit and the harness connector M79.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of sliding door control unit RH.
2. Check the continuity between the harness connector and the sliding door control unit RH harness connector.

Harness connector		Sliding door control unit RH harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
B225	9	B247	10	Existed
	10		9	Existed

Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.
YES (Past error)>>Error was detected in the main line between the air bag diagnosis sensor unit and the sliding door control unit RH.
NO >> Repair the main line between the harness connector B225 and the sliding door control unit RH.

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000009979400

1.CHECK CONNECTOR

1. Turn the ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Check the terminals and connectors of the steering angle sensor for damage, bend and loose connection (unit side and connector side).

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect the connector of steering angle sensor.
2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		
M30	5	2	Approx. 54 – 66

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the steering angle sensor branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to BRC-40, "Wiring Diagram".

Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-126, "Removal and Installation".
YES (Past error)>>Error was detected in the steering angle sensor branch line.
NO >> Repair the power supply and the ground circuit.

SPARK PLUG : Removal and Installation

INFOID:0000000009651632

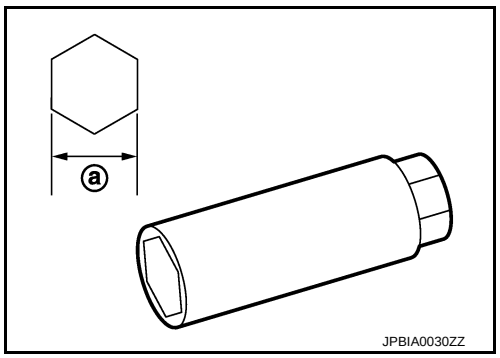
REMOVAL

CAUTION:

Do not reuse O-rings.

1. Remove engine cover. Refer to EM-24, "Exploded View".
2. Remove air cleaner cases (upper and lower) and air duct assembly. Refer to EM-26, "Exploded View".
3. Remove intake manifold collector. Refer to EM-28, "Exploded View".
4. Remove ignition coil. Refer to EM-52, "Exploded View".
5. Remove spark plug with a spark plug wrench (commercial service tool).

a : 14 mm (0.55 in)



INSTALLATION

Install in the reverse order of removal.

SPARK PLUG : Inspection

INFOID:0000000009651633

INSPECTION AFTER REMOVAL

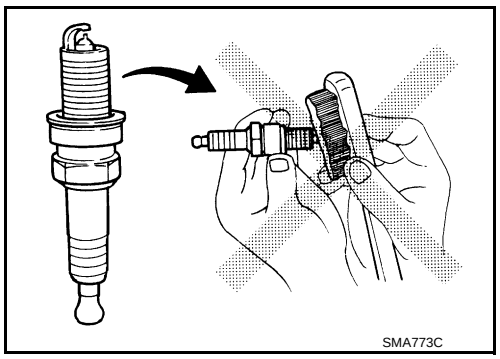
Use the standard type spark plug for normal condition.

Spark plug (Standard type) : Refer to EM-129, "Spark Plug".

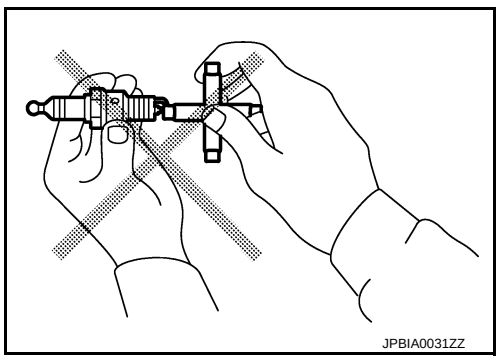
CAUTION:

- **Never drop or shock spark plug.**
- **Never use a wire brush for cleaning.**
- **If plug tip is covered with carbon, spark plug cleaner may be used.**

Cleaner air pressure:	**Less than 588 kPa (6 kg/cm^2, 85 psi)**
Cleaning time:	**Less than 20 seconds**



- **Spark plug gap adjustment is not required between replacement intervals.**
- **Measure spark plug gap. When it exceeds the limit, replace spark plug even if it is within the specified replacement mileage. Refer to EM-129, "Spark Plug".**

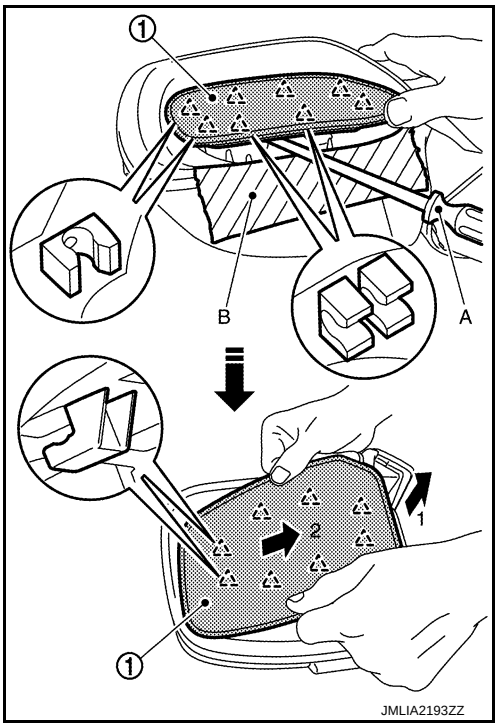


POSITIVE CRANKCASE VENTILATION SYSTEM

1. Place the glass mirror upward.
2. As shown in the figure, insert a flat-bladed screwdriver (A) into the recess between glass mirror (1) and actuator. Push up both pawls simultaneously to remove glass mirror lower half side.
   NOTE:
   - Insert the screwdriver between the fixing pawls.
   - Insert screwdriver into recesses, and push up while rotating (twisting) to make work easier.

   CAUTION:
   Put a strip of protective tape (B) on housing assembly.
3. Lift up and slide glass mirror as shown by the arrows in the figure to disengage the fixing pawls.

   : Pawl



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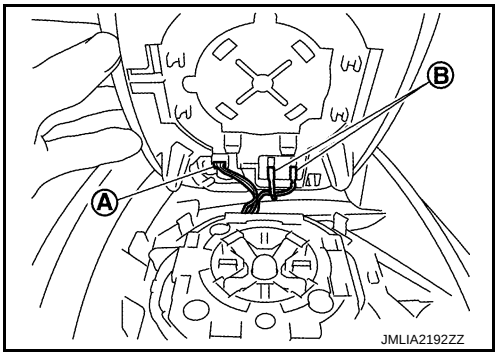
4. Remove BSW indicator harness connector (A). (if equipped)
5. Remove both terminals of mirror heater attachment (B).(if equipped)



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6. Lightly lift up lower side of glass mirror, and detach both pawls of upper side as if pulling it out. Remove glass mirror from actuator.
   NOTE:
   Be certain not to allow grease on sealing agent in center of mirror or back side of glass mirror.

INSTALLATION

Install in the reverse order of disassemble.

CAUTION:
After installation, visually check that pawls are securely engaged.

DOOR MIRROR COVER

DOOR MIRROR COVER : Removal and Installation

INFOID:0000000009652721

CAUTION:
When removing, always use a remover tool that is made of plastic.

REMOVAL

1. Remove the glass mirror. Refer to MIR-37, "GLASS MIRROR : Removal and Installation".

Setting item		Setting range
Maintenance	Engine oil	No setting, 500 km - 30,000 km (No setting, 250 mile - 18,500 mile)
	Oil filter	No setting, 500 km - 30,000 km (No setting, 250 mile - 18,500 mile)
	Tire	No setting, 500 km - 30,000 km (No setting, 250 mile - 18,500 mile)
	Other	No setting, 500 km - 30,000 km (No setting, 250 mile - 18,500 mile)

Options
Setting values for language, unit, and effect items can be adjusted to meet the user's needs.

Setting item		
Options	Language	ENGLISH
		FRANCAISE
	Unit	miles, MPG, °F
		km, l/100 km, °C
	Effect	ON/OFF

Settings-reject Indication
- Regarding settings-reject indications, “SETTING CAN BE OPERATED WHEN STOPPED” is shown on the information display when indication conditions are satisfied.
- When reaching 5 km/h (3.1 MPH) after accelerating from a stopping condition, a settings-reject indication is displayed.
- When reaching less than 2 km/h (1.2 MPH) after decelerating from 5 km/h (3.1 MPH), a settings-reject indication is cancelled to allow settings.
- The combination meter judges a vehicle condition based on the following signals and displays a settings-reject indication on the information display.

Signal name	Signal Path
Ignition signal	—
Vehicle speed signal	ABS actuator and electric unit (control unit) —CAN→ Combination meter

WASHER LEVEL SWITCH SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000009651519

1.CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and washer level switch connector.
3. Check continuity between combination meter harness connector and washer level switch harness connector.

Terminals				Continuity
Combination meter		Washer level switch		
Connector	Terminal	Connector	Terminal	
M34	29	E303	1	Existed

4. Check continuity between combination meter harness connector and ground.

Terminals			Continuity
Combination meter		Ground	
Connector	Terminal		
M34	29		Not existed

Is the inspection result normal?

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

2.CHECK WASHER LEVEL SWITCH GROUND CIRCUIT

Check continuity between washer level switch connector and ground.

Terminals			Continuity
Washer level switch		Ground	
Connector	Terminal		
E303	2		Existed

Is the inspection result normal?

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

Component Inspection

INFOID:0000000009651520

1.CHECK WASHER LEVEL SWITCH

1. Turn ignition switch OFF.
2. Disconnect washer level switch connector.
3. Check washer level switch.

Terminals		Condition	Continuity
Washer level switch			
1	2	Washer level switch ON	Existed
		Washer level switch OFF	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace washer level switch. Refer to WW-71, "Removal and Installation".

- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay and daytime running light relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Voltage judgment		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
ON	ON	Ignition relay ON normal	—
OFF	OFF	Ignition relay OFF normal	—
ON	OFF	Ignition relay ON stuck	• Detects DTC “B2098: IGN RELAY ON” • Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC “B2099: IGN RELAY OFF”

FRONT WIPER PROTECTION FUNCTION

IPDM E/R detects front wiper stop position by a front wiper stop position signal.
When a front wiper stop position signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 seconds activation and 20 seconds stop five times.

Ignition switch	Front wiper switch	Front wiper stop position signal
ON	OFF	The front wiper stop position signal (stop position) cannot be input for 10 seconds.
	ON	The front wiper stop position signal does not change for 10 seconds.

NOTE:
This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

INFOID:0000000009652856

NOTE:
- The details of time display are as follows.
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.
- IGN counter is displayed on FFD (Freeze Frame Data).
- 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.

×: Applicable

CONSULT display	Fail-safe	Reference
No DTC is detected. further testing may be required.	—	—
U1000: CAN COMM CIRCUIT	×	PCS-30
B2098: IGN RELAY ON CIRC	×	PCS-31
B2099: IGN RELAY OFF CIRC	—	PCS-33
B209F: STR CUT OFF OPEN	—	SEC-104
B20A0: STR CUT OFF SHORT	—	SEC-106
B210B: STR CONT RLY ON CIRC	—	SEC-108
B210C: STR CONT RLY OFF CIRC	—	SEC-109
B210D: STARTER RLY ON CIRC	—	SEC-111
B210E: STARTER RLY OFF CIRC	—	SEC-113

2. Check continuity between BCM harness connector and push-button ignition switch harness connector.

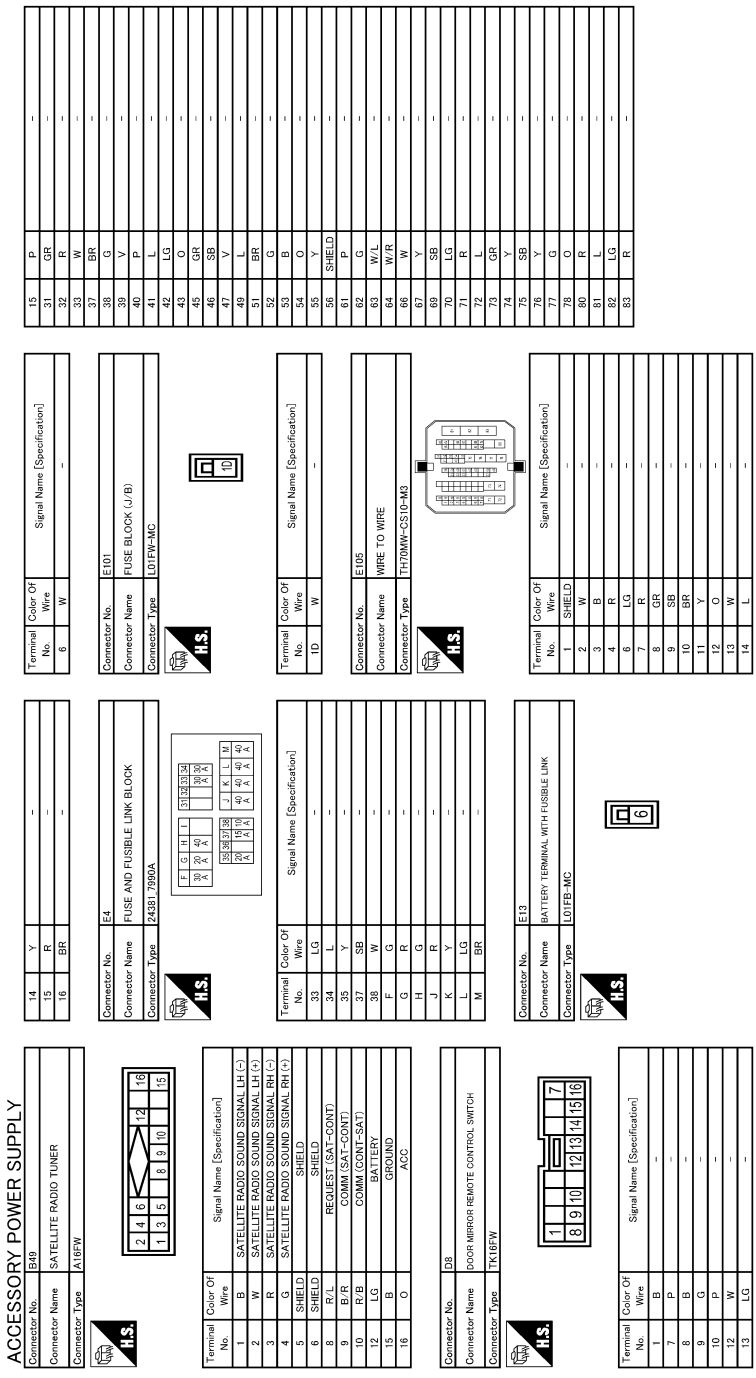
Indicator	BCM		Push-button ignition switch		Continuity
	Connector	Terminal	Connector	Terminal	
LOCK	M124	91	M101	5	Existed
ACC		109		6	
ON		73		7	

3. Check continuity between BCM harness connector and ground.

Indicator	BCM			Continuity
	Connector	Terminal		
LOCK	M124	91	Ground	Not existed
ACC		109		
ON		73		

Is the inspection normal?

YES >> Replace push-button ignition switch.
NO >> Repair or replace harness.



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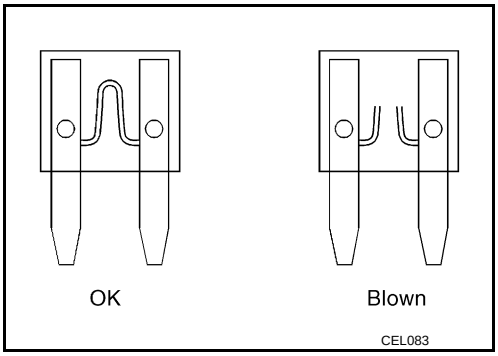
FUSE INSPECTION

How To Check

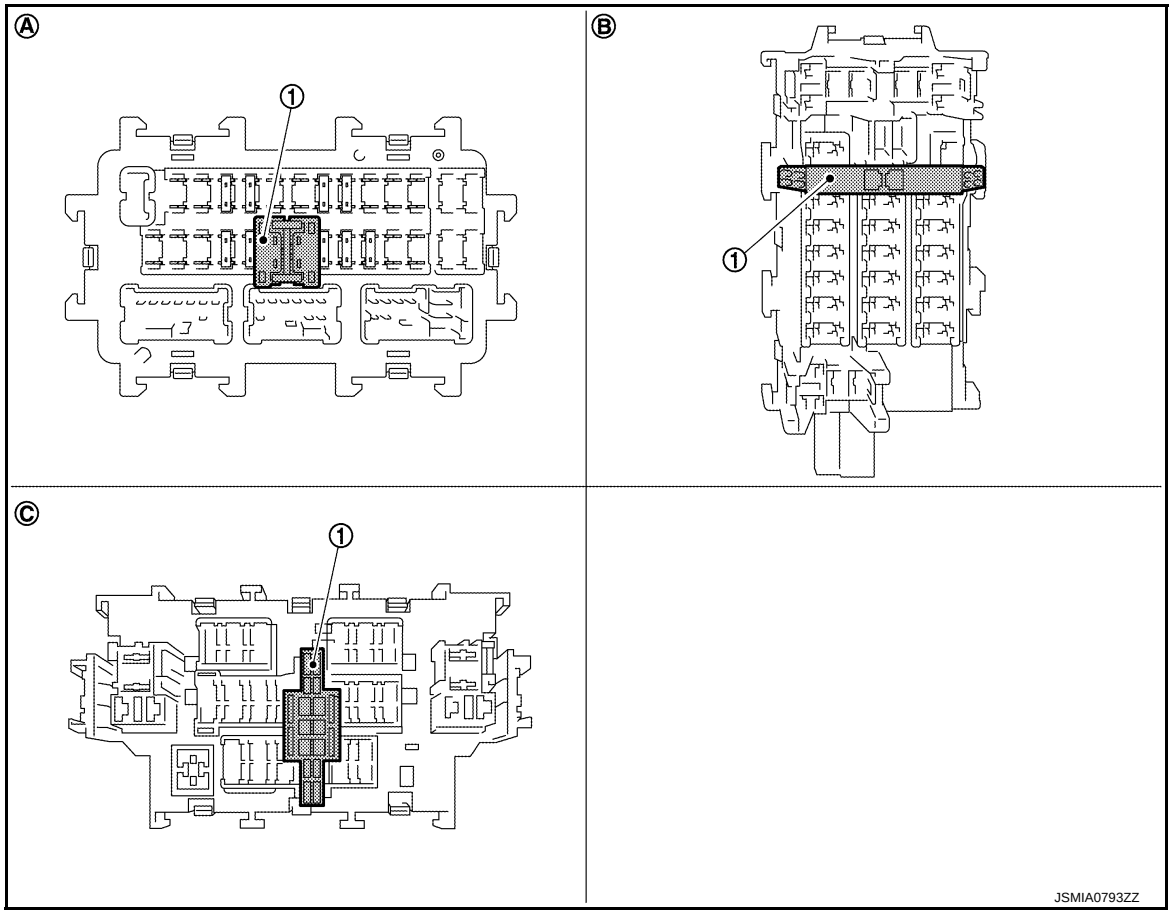
INFOID:0000000009651788

- If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for “ELECTRICAL PARTS (BAT)” if vehicle is not used for a long period of time.



EXTENDED STORAGE FUSE SWITCH (IF EQUIPPED)

The following switch may be mounted on the fuse block (Junction Box) for transportation and storage.



1. Extended storage fuse switch

A. Type A B. Type B C. Type C

- Remove the extended storage fuse switch when replacing the fuse of extended storage fuse switch.
- Remove the extended storage fuse switch if it causes the interference when the fuse or the other fuses is checked.

How To Extended Storage Fuse Switch ON/OFF

CAUTION:

- **Turn the ignition switch OFF when operating the extended storage fuse switch.**
- **Under normal conditions, keep the extended storage fuse switch in ON state. Never operate the extended storage fuse switch except when necessary.**

SLIDING DOOR LH : Component Function Check

INFOID:0000000009653307

1.CHECK FUNCTION

Check sliding door power window motor LH operation with power window main switch or sliding door power window switch LH.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to PWC-43, "SLIDING DOOR LH : Diagnosis Procedure".

SLIDING DOOR LH : Diagnosis Procedure

INFOID:0000000009653308

1.CHECK SLIDING DOOR POWER WINDOW MOTOR LH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect sliding door power window motor LH connector.
3. Turn ignition switch ON.
4. Check voltage between sliding door power window motor LH harness connector and ground.

(+)		(-)	Condition		Voltage (V)
Sliding door power window motor LH					
Connector	Terminal				
D82	1	Ground	Sliding door power window switch LH	NEUTRAL	0 – 1
				UP	9 – 16
	3			NEUTRAL	0 – 1
				DOWN	9 – 16

Is the inspection result normal?

YES >> Replace sliding door power window motor LH.
NO >> GO TO 2.

2.CHECK SLIDING DOOR POWER WINDOW MOTOR LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sliding door power window switch LH connector.
3. Check continuity between sliding door power window motor LH harness connector and sliding door power window switch LH harness connector.

Sliding door power window motor LH		Sliding door power window switch LH		Continuity
Connector	Terminal	Connector	Terminal	
D82	1	D88	5	Existed
	3		4	

4. Check continuity between sliding door power window motor LH harness connector and ground.

Sliding door power window motor LH		Ground	Continuity
Connector	Terminal		
D82	1		Not existed
	3		

Is the inspection result normal?

YES >> Replace sliding door power window switch LH. Refer to PWC-69, "Removal and Installation".
NO >> Repair or replace harness.

SLIDING DOOR RH

SLIDING DOOR RH : Component Function Check

INFOID:0000000009653309

1. CHECK FUNCTION

SYSTEM INITIALIZATION

Description

INFOID:0000000009653365

If any of the following operations are performed, the initialization is necessary for normal operation of power window system.

- Disconnection and connection of battery cable from negative terminal.
- When power window main switch replaced.
- Electric power supply to power window main switch or power window motor (driver side) is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc.
- Disconnection and connection of power window main switch harness connector.
- Removal of power window motor (driver side) from regulator assembly.
- Operation of regulator assembly as an independent unit.
- Removal and installation of glass.
- Removal and installation of door glass run.

CAUTION:

The following specified operations can not be performed under the non-initialized condition.

- **Auto-up operation**
- **Anti-pinch function**

Work Procedure

INFOID:0000000009653366

1.STEP 1

1. Turn ignition switch ON.
2. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
3. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 2 seconds or more.
4. Check that AUTO-UP function operates normally.

>> GO TO 2.

2.STEP 2

Check anti-pinch function. Refer to PWC-95, "Work Procedure".

>> END

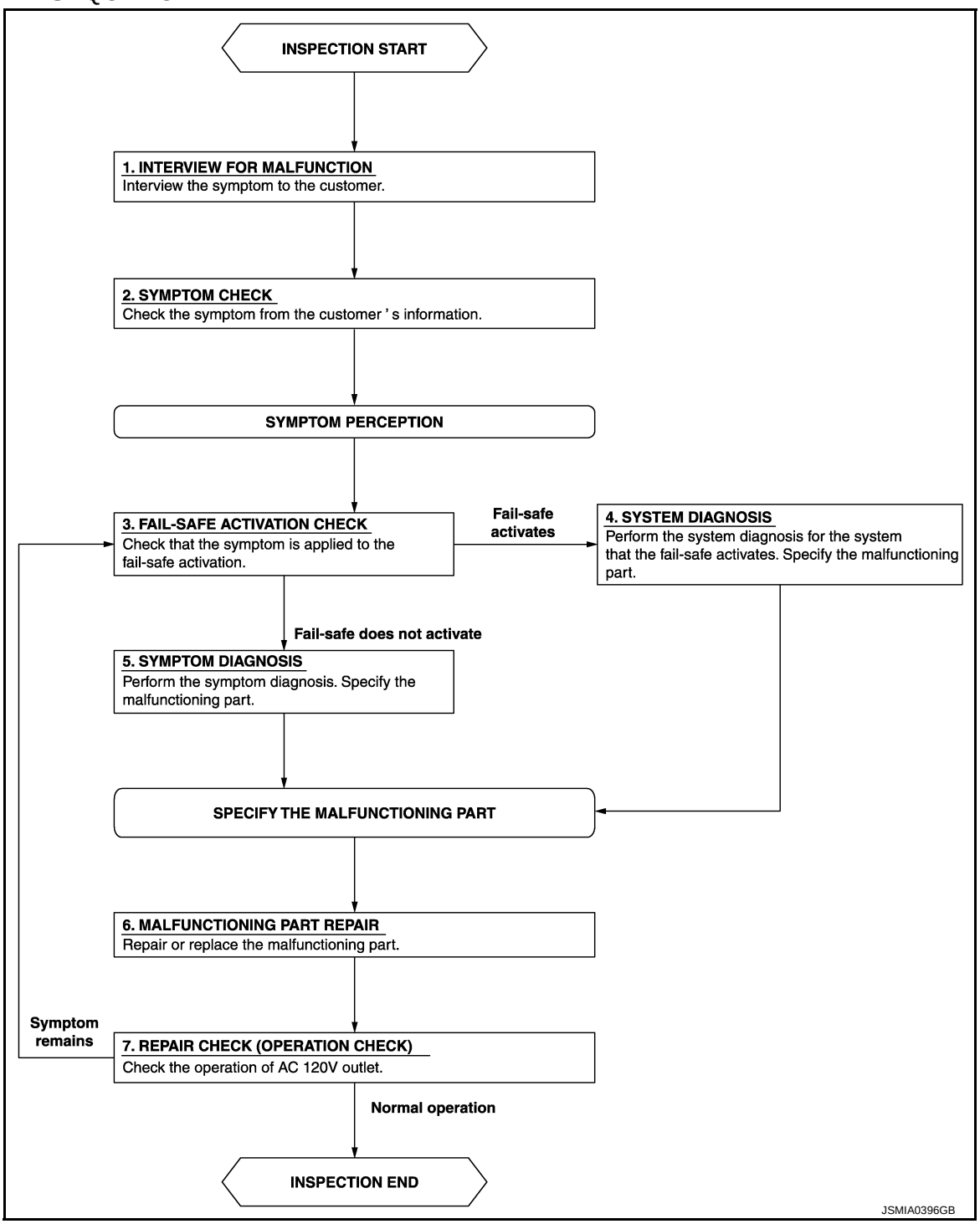
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009651882

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

BCM		Ground	Continuity
Connector	Terminal		
M123	68		Not existed

Is the inspection result normal?

YES >> Check BCM power supply and ground circuit. Refer to BCS-91, "Diagnosis Procedure".
NO >> Repair or replace harness.

3. CHECK VEHICLE SPEED SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector.
3. Check continuity between rear sunroof motor assembly harness connector and combination meter harness connector.

Rear sunroof motor assembly		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
R32	8	M34	31	Exists

4. Check continuity between rear sunroof motor assembly harness connector and ground.

Rear sunroof motor assembly		Ground	Continuity
Connector	Terminal		
R32	8		Not existed

Is the inspection result normal?

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

4. CHECK COMBINATION METER

Check combination meter.
Refer to MWI-69, "DTC Logic".

Is the inspection result normal?

YES >> Replace rear sunroof motor assembly. Refer to RF-55, "REAR SUNROOF : Removal and Installation".
NO >> Repair or replace malfunctioning parts.

WHEEL ALIGNMENT

Inspection

INFOID:0000000009652819

DESCRIPTION

Measure wheel alignment under unladen conditions.

NOTE:

“Unladen conditions” means that fuel, engine coolant, and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

PRELIMINARY CHECK

Check the following:

- Tires for improper air pressure and wear. Refer to WT-51, "Tire Air Pressure".
- Road wheels for runout.
- Wheel bearing axial end play. Refer to RAX-4, "Inspection".
- Ball joint axial end play of suspension arm. Refer to RSU-5, "Inspection".
- Shock absorber operation.
- Each mounting point of axle and suspension for looseness and deformation.
- Each of front lower link, rear lower link, radius rod, rear suspension member, suspension arm, and shock absorber for cracks, deformation, and other damage.
- Vehicle height (posture).

GENERAL INFORMATION AND RECOMMENDATIONS

- A four-wheel thrust alignment should be performed.
  - This type of alignment is recommended for any NISSAN/INFINITI vehicle.
  - The four-wheel “thrust” process helps ensure that the vehicle is properly aligned and the steering wheel is centered.
  - The alignment rack itself should be capable of accepting any NISSAN/INFINITI vehicle.
  - The rack should be checked to ensure that it is level.
- Make sure the machine is properly calibrated.
  - Your alignment equipment should be regularly calibrated in order to give correct information.
  - Check with the manufacturer of your specific equipment for their recommended Service/Calibration Schedule.

ALIGNMENT PROCESS

IMPORTANT:

Use only the alignment specifications listed in this Service Manual.

- When displaying the alignment settings, many alignment machines use “indicators”: (Green/red, plus or minus, Go/No Go). **Never use these indicators.**
  - The alignment specifications programmed into your machine that operate these indicators may not be correct.
  - This may result in an ERROR.
- Most camera-type alignment machines are equipped with both “Rolling Compensation” method and optional “Jacking Compensation” method to “compensate” the alignment targets or head units. “Rolling Compensation” is the preferred method.
  - If using the “Rolling Compensation” method, after installing the alignment targets or head units, push or pull on the rear wheel to move the vehicle. **Do not push or pull on the vehicle body.**
  - If using the “Jacking Compensation” method, after installing the alignment targets or head units, raise the vehicle and rotate the wheels 1/2 turn both ways.

    NOTE:

    Do not use the “Rolling Compensation” method if you are using sensor-type alignment equipment.
  - Follow all instructions for the alignment machine you're using for more information.

Adjustment

INFOID:0000000009652820

CAMBER

When third seatback folds down, seatback angle limit switch turns ON, and seatback power return control units judges that third seatback is in the folded down status (folding down position).

3. When third seat fold switch is pressed in the direction of folding up, seatback power return control unit supplies power supply to power return motor and sounds return operation start buzzer.
   Power return motor, which is supplied power from seatback power return control unit, rotates to the folding up direction, and operates third seat return operation via sector gear.
   When sector gear starts to rotate in the folding up direction, sector gear position limit switch tuns ON, and seatback power return control unit judges that sector gear is in a position other than the initial position.
4. When third seat folds up to the return complete position, seatback angle limit switch turns OFF, and seatback power return control unit sounds return completion buzzer and stops power return motor.
   When power return motor is stopped, after 0.2 seconds, seatback power return control unit rotates power return motor in the reverse direction so that sector gear returns to the initial position.
5. When sector gear returns to the initial position according to the reverse rotation of power return motor, sector gear position limit switch turns OFF and seatback power return control unit stops the reverse rotation of power return motor, and the return operation is complete.

NOTE:

- When third seat fold switch is released during return operation (sector gear position limit switch and seatback angle limit switch are in the ON position), seatback power return control unit detects third seat fold switch OFF signal, rotates power return motor in the reverse direction, and then returns third seatback to the folded down position.
  When third seat fold switch is pressed again during reverse operation, return operation restarts.
- When battery cable is disconnected from battery terminal while sector gear is in a position other than the initial position (sector gear position limit switch is in the ON position), and then when battery cable is connected again to battery terminal, sector gear returns to the initial position.

Anti-Pinch Function

When signal change from motor sensor is detected during third seatback return operation, due to foreign material trapping, seatback power return control unit sounds buzzer, stops power return motor, and rotates power return motor in the reverse direction after 0.2 seconds. Third seatback returns to the folded down position.

Sector Gear Reverse Starting Condition

Sector gear rotates in the reverse direction when any of the following conditions is satisfied.

- Third seatback return operation is complete (seatback angle limit switch: OFF)
- Third seat fold switch is released before return operation is complete
- Trapping is detected
- Lock status of power return motor is detected
- Third seatback return operation is not complete within 60 seconds
- Battery voltage malfunction is detected during return operation
- Battery voltage returns to normal after battery voltage malfunction is detected during return operation
- Sector gear position limit switch does not turn from OFF to ON within the specified number of times of motor pulse from the start of return operation

The reverse rotation operation stops when any of the following conditions is satisfied.

- Sector gear initial position (sector gear position limit switch: OFF)
- Lock status of power return motor is detected (lock during reverse rotation operation)
- The sector gear initial position is not completed within 60 seconds

Consumption Electricity Control System

Seatback power return control unit controls electric power so that electric power consumption can be reduced according to the vehicle condition.

Low Electric Power Consumption Mode

The system shifts to low electric power consumption mode when all the following conditions are satisfied.

- Third seat fold switch is OFF
- Power return motor is not in operation
- When the condition that the vehicle speed is 2 km/h (1 MPH) or less continues for 30 seconds or more

The system releases low electric power consumption mode when any of the following conditions is satisfied.

- When third seat fold switch is pressed
- When the change occurs to the pulse of vehicle speed sensor

For low electric power consumption mode, the following functions are available.

- Power supply for sector gear position limit switch and seatback angle limit switch is turned OFF
- Power supply for motor sensor is turned OFF when power return motor is not in operation

2. Check voltage between power return motor assembly (RH) harness connector and ground.

(+)		(–)	Condition		Voltage (V)
Power return motor assembly (RH)					
Connector	Terminal				
B494	1	Ground	Power return motor assembly (RH)	Reverse operation	9 – 16
				Other than the above	0 – 0.5
	5			Return operation	9 – 16
				Other than the above	0 – 0.5

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 2.

2.CHECK POWER RETURN MOTOR (RH) CIRCUIT

1. Disconnect seatback power return control unit connector and power return motor assembly (RH) connector.
2. Check continuity between seatback power return control unit harness connector and power return motor assembly (RH) harness connector.

Seatback power return control unit		Power return motor assembly (RH)		Continuity
Connector	Terminal	Connector	Terminal	
B487	7	B494	1	Existed
	8		5	

3. Check continuity between seatback power return control unit harness connector and ground.

Seatback power return control unit		Ground	Continuity
Connector	Terminal		
B487	7		Not existed
	8		

Is the inspection result normal?

YES >> Replace seatback power return control unit. Refer to SE-139, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-42, "Intermittent Incident".

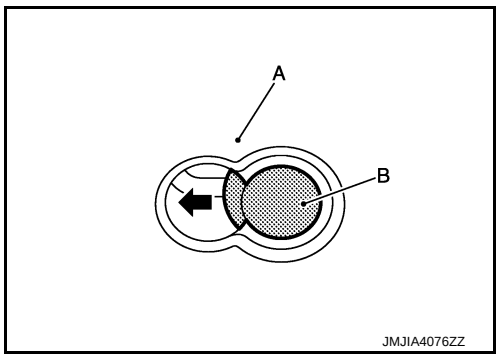
Is the inspection result normal?

YES >> Replace power return motor assembly (RH) [reclining device assembly (RH)]. Refer to SE-122, "Exploded View".
NO >> Repair or replace harness.

e. Slide and align the clips (B) to the holes on the seatback as shown in the figure, and then remove the seatback board (A).

CAUTION:

Always slide clips before removing seatback board. Clips may be damaged if seatback board is removed without sliding the clips.



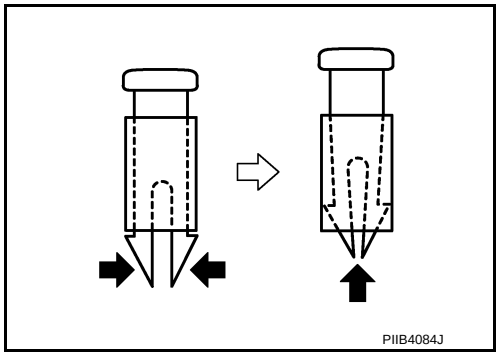
f. Remove seatback board fixing clips from seatback frame assembly.

4. Set the seatback vertically.

5. Use pincers, etc., to press up pawls as shown by the arrows in the figure, and remove headrest holder from seatback.

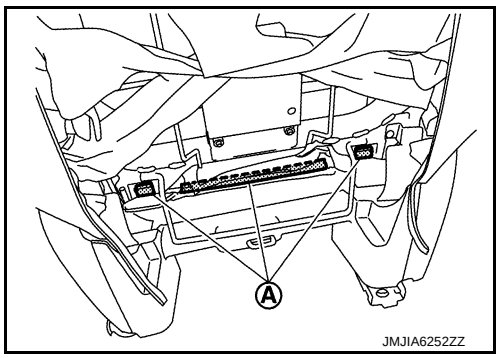
CAUTION:

Before installing headrest holder check its orientation. (front/rear and right/left)



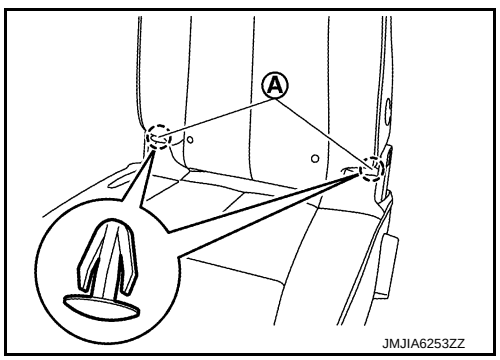
6. Remove seatback trim and seatback pad from seat frame & adjuster assembly.

a. Remove retainer (A) installed on seat frame & adjuster assembly.



b. Remove seat cushion trim fixing clips (A) installed on seatback trim.

: Clip



DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000009982299

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control system	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning control system	AIR CONDITONER		×	×*
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

NOTE:

*: For models with automatic air conditioning control system, this diagnosis mode is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

NO >> GO TO 4.

4. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	8	M124	104	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	8		Not existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. REPLACE BCM

1. Replace BCM. Refer to BCS-98, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

6. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM connector and IPDM E/R connector.
2. Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	M121	37	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		Not existed

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

7. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-81, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace CVT shift selector. Refer to TM-154, "Removal and Installation".

8. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009650312

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

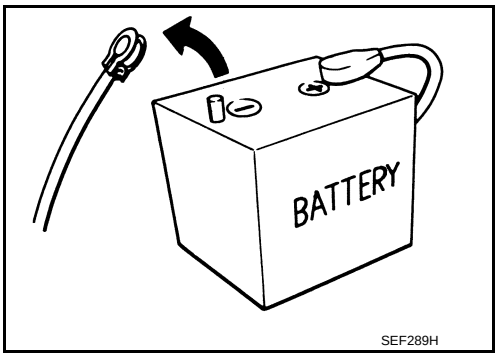
WARNING:

Always observe the following items for preventing accidental activation.

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

Precautions for Removing Battery Terminal

INFOID:0000000009931746



- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

Service

INFOID:0000000009650313

- Never use electrical test equipment to check SRS circuits unless instructed to in this Service Manual.
- Before servicing the SRS, turn ignition switch OFF, disconnect battery negative terminal and wait at least 3 minutes.

DIAGNOSIS SYSTEM (OCCUPANT DETECTION SYSTEM)

CONSULT Function

INFOID:0000000009649847

ZERO POINT RESET DESCRIPTION

This vehicle adopts occupant detection system with a weight detecting method. When replacing, or removing and installing passenger seat, always perform “zero point rest” so that the vehicle recognizes zero point.
If zero point reset is incomplete, occupant detection seat sensor does not operate normally.

WORK SUPPORT

Monitor item	Description
Zero point reset function	Perform zero point reset. Refer to SRC-41, "ZERO POINT RESET : Special Repair Requirement".

Combination switch (spiral cable)				Continuity
Connector	Terminal	Connector	Terminal	
M301	10	M301	11	Not existed
		M300	9	
			12	

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace combination switch (spiral cable). Refer to SR-15, "Removal and Installation".

4.CHECK SPIRAL CABLE CIRCUIT-II

Check continuity between combination switch (spiral cable) terminals.

Combination switch (spiral cable)			Continuity
Connector	Terminal	Terminal	
M32	28	29	Not existed
		30	

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace combination switch (spiral cable). Refer to SR-15, "Removal and Installation".

5.REPLACE AIR BAG DIAGNOSIS SENSOR UNIT

1. Replace air bag diagnosis sensor unit. Refer to SR-29, "Removal and Installation".
2. Perform DTC confirmation procedure. Refer to SRC-71, "DTC Logic".

Is DTC detected?

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

6.REPLACE DRIVER AIR BAG MODULE

1. Replace driver air bag module. Refer to SR-12, "Removal and Installation".
2. Perform DTC confirmation procedure. Refer to SRC-71, "DTC Logic".

Is DTC detected?

YES >> GO TO 1.
NO >> INSPECTION END

YES >> GO TO 1.
NO >> INSPECTION END

B1218, B1219, B1220, B1221, B1222, B1223 DIAGNOSIS SENSOR UNIT

DTC Logic

INFOID:0000000009650009

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detecting condition	Possible cause
B1218 B1219 B1220 B1221 B1222 B1223	CONTROL UNIT	Air bag diagnosis sensor unit is malfunctioning	Malfunction in air bag diagnosis sensor unit

DTC CONFIRMATION PROCEDURE

1.CHECK SELF-DIAG RESULT

With CONSULT
1. Turn ignition switch ON.
2. Perform “Self Diagnostic Result” mode of “AIR BAG” using CONSULT.

Without CONSULT
1. Turn ignition switch ON.
2. Check the air bag warning lamp status. Refer to SRC-15, "On Board Diagnosis Function".

NOTE:
SRS does not enter the diagnosis mode if no malfunction is detected in the user mode.

Is malfunctioning part detected?

YES >> Refer to SRC-174, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009650010

WARNING:
- **Before servicing, turn ignition switch OFF, disconnect battery negative terminal, and wait at least 3 minutes or more. (To discharge backup capacitor.)**
- **Never use unspecified tester or other measuring device.**

1.CHECK HARNESS CONNECTOR

Check the harness connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace harness connectors.

2.CHECK WIRING HARNESS

Check the wiring harness externals.

Is the inspection result normal?

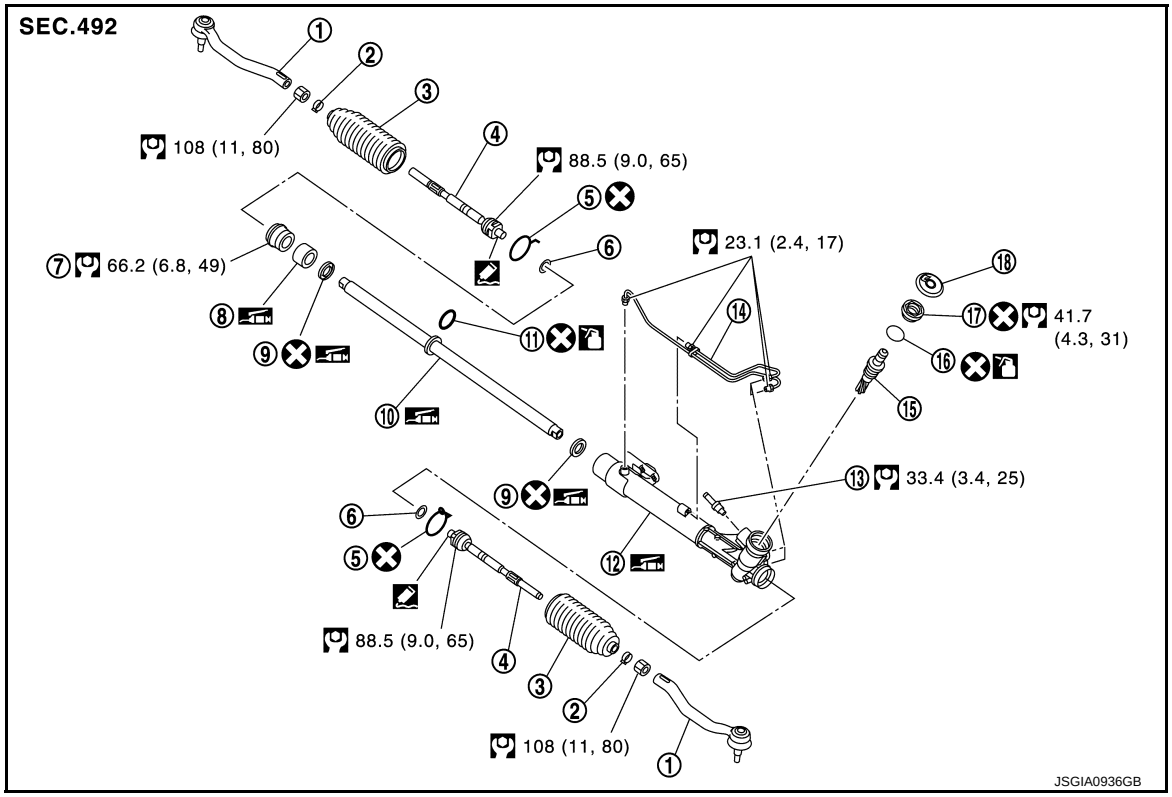
YES >> GO TO 3.
NO >> Replace wiring harness.

3.REPLACE AIR BAG DIAGNOSIS SENSOR UNIT

1. Replace air bag diagnosis sensor unit. Refer to SR-29, "Removal and Installation".
2. Perform DTC confirmation procedure. Refer to SRC-174, "DTC Logic".

Is DTC detected?

YES >> GO TO 1.
NO >> INSPECTION END



1. Outer socket
2. Boot clamp
3. Boot
4. Inner socket
5. Boot clamp (stainless wire)
6. Spacer
7. End cover assembly
8. Rack spacer
9. Rack oil seal
10. Rack assembly
11. O-ring
12. Gear housing assembly
13. Low pressure piping
14. Cylinder tubes
15. Gear-sub assembly
16. O-ring
17. Rear cover
18. Rear cover cap

: N·m (kg-m, ft-lb)

: Always replace after every disassembly.

: Apply power steering fluid. Refer to MA-10, "Fluids and Lubricants".

: Apply Genuine High Strength Thread Locking Sealant or equivalent. Refer to GI-22, "Recommended Chemical Products and Sealants".

: Apply multi-purpose grease.

Removal and Installation

INFOID:0000000009648915

REMOVAL

1. Set the vehicle to the straight-ahead position.
2. Remove tires with power tool. Refer to WT-46, "Exploded View".
3. Remove engine under cover. Refer to EXT-28, "Exploded View".
4. Remove exhaust front tube. Refer to EX-6, "Removal and Installation".
5. Remove heat insulator from front suspension member.
6. Remove cotter pin, and then loosen the nut.

UNBALANCE STEERING WHEEL TURNING FORCE AND RETURN BETWEEN RIGHT AND LEFT

Diagnosis Procedure

INFOID:0000000009650888

1.CHECK THE ILLUMINATION OF THE HYDRAULIC PUMP ELECTRIC POWER STEERING WARNING LAMP

Check the hydraulic pump electric power steering warning lamp while engine is running.

Does the hydraulic pump electric power steering warning lamp turn OFF?

YES >> GO TO 2.
NO >> Refer to STC-33, "Diagnosis Procedure".

2.CHECK WHEEL ALIGNMENT

Check the wheel alignment. Refer to FSU-7, "Inspection".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Adjustment of wheel alignment. Refer to FSU-7, "Adjustment".

3.CHECK STEERING WHEEL TURNING FORCE

Check the steering wheel turning force. Refer to ST-6, "Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the steering wheel turning force for mechanical malfunction. Refer to ST-30, "Inspection".

DTC	Conditions of vehicle	Vehicle behavior
P1722	—	Lock-up is not performed in coast condition
P1723	When detected malfunction of primary speed sensor	• Acceleration is slow • Restart is slow after stopping with strong deceleration • “L” position cannot be recognized • Lock-up is not performed
	When detected malfunction of secondary speed sensor	• Start is slow • Acceleration is slow • Restart is slow after stopping with strong deceleration • “L” position cannot be recognized • Lock-up is not performed
P1726	—	Acceleration is slow
P1740	—	• Selector shock is large • Lock-up is not performed
P1777	When detected malfunction of low side (stop the vehicle)	• Vehicle speed is not increased • Lock-up is not performed
	When detected malfunction of high side (driving the vehicle)	• Start is slow • Acceleration is slow • Lock-up is not performed
U0100	—	• Start is slow • Acceleration is slow • Vehicle speed is not increased
U1000	—	• Start is slow • Acceleration is slow • Vehicle speed is not increased
U1010	—	• Start is slow • Acceleration is slow • Vehicle speed is not increased

OIL PRESSURE CONTROL SYSTEM

Stop lamp relay		Condition	Continuity
Terminal			
3	5	Apply 12 V direct current between terminals 1 and 2.	Existed
		Does not apply 12 V direct current between terminals 1 and 2.	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace the stop lamp relay.

SHIFT POSITION INDICATOR CIRCUIT

Component Function Check

INFOID:0000000009650207

1.CHECK SHIFT POSITION INDICATOR

1. Start the engine.
2. Check that correct selector lever position (“P”, “R”, “N”, “D”, “L”) is displayed as selector lever is moved into each position.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to TM-130, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009650208

1.CHECK INPUT SIGNALS

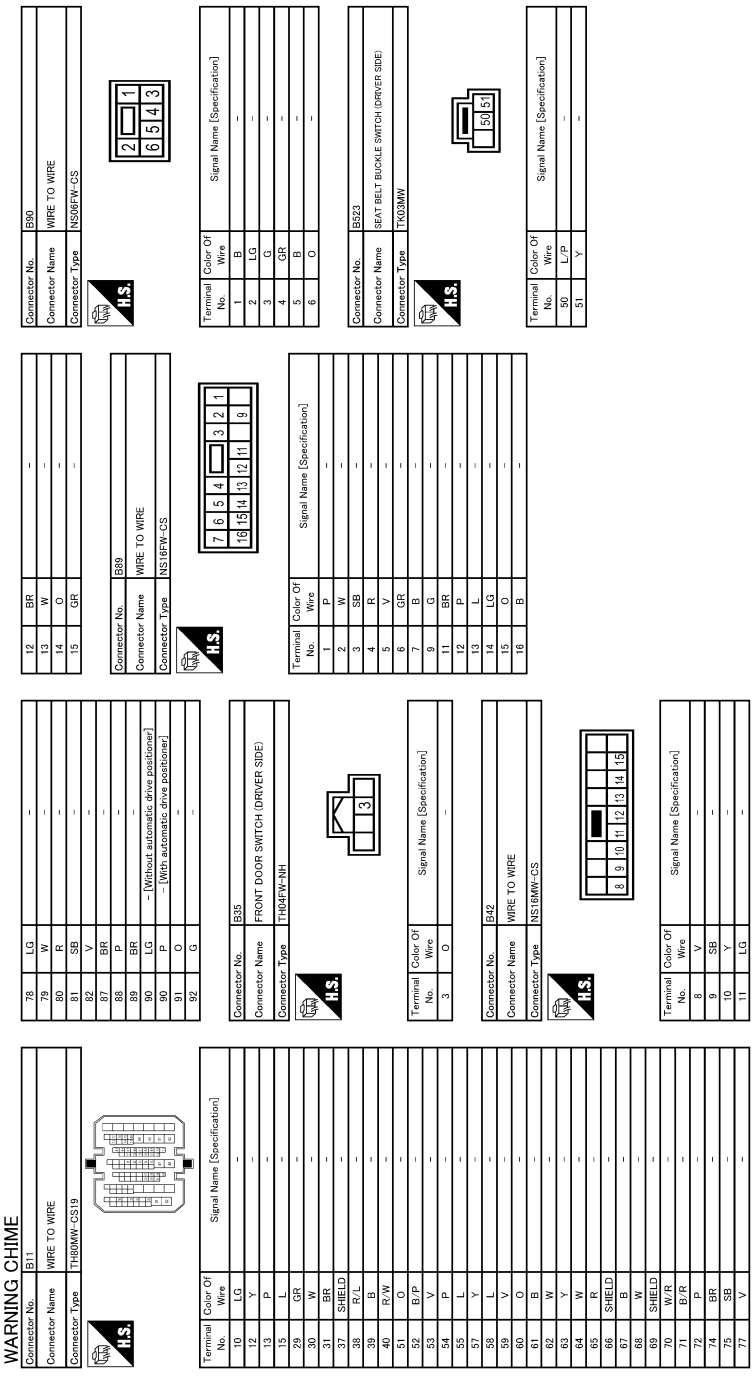
With CONSULT
1. Start the engine.
2. Select “Data Monitor” in “TRANSMISSION”.
3. Select “RANGE”.
4. Check that correct selector lever position (“P”, “R”, “N”, “D”, “L”) is displayed as selector lever is moved into each position.

Is the inspection result normal?

YES >> INSPECTION END
NO-1 (The actual gear position changes, but the shift position indicator is not indicated.)>>Perform “Self Diagnostic Results” in “TRANSMISSION”.
NO-2 (The actual gear position and the indication on the shift position indicator do not coincide.)>>Perform “Self Diagnostic Results” in “TRANSMISSION”.
NO-3 (Only a specific position or positions is/are not indicated on the shift position indicator.)>>Check the combination meter. Refer to MWI-35, "CONSULT Function".

SECTION VTL
VENTILATION SYSTEM

CONTENTS



JRNWC6718GB

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

Description

INFOID:0000000009653443

The low tire pressure warning lamp does not turn OFF after several seconds is passed after engine starts.

Diagnosis Procedure

INFOID:0000000009653444

1.CHECK TIRE PRESSURE

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-51, "Tire Air Pressure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels.

2.CHECK LOW TIRE PRESSURE WARNING LAMP

Check low tire pressure warning lamp display.

Does not low tire pressure warning lamp turn OFF?

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

3.CHECK BCM

With CONSULT

Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is any DTC detected?

YES >> Check the DTC. Refer to BCS-63, "DTC Index".
NO >> GO TO 4.

4.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Perform the trouble diagnosis for power supply and ground circuit. Refer to WT-32, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the BCM. Refer to BCS-98, "Removal and Installation".
NO >> Repair or replace error-detected parts.