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INFINITI®

G37 Sedan

MODEL V36 SERIES

QUICK REFERENCE INDEX

YES >> GO TO 3.
NO >> Replace driver seat control unit. Refer to ADP-221, "Removal and Installation".

3. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

Automatic drive positioner control unit		Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
M52	41	D3	12	Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness.

6. CHECK DOOR MIRROR (DRIVER SIDE) SENSOR GROUND CIRCUIT 2

1. Connect automatic drive positioner control unit connector.
2. Check continuity between automatic drive positioner control unit harness connector and ground.

Automatic drive positioner control unit		Ground	Continuity
Connector	Terminal		
M52	41		Existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-222, "Removal and Installation".
NO >> Replace door mirror sensor (Built in driver side door mirror). Refer to MIR-17, "DOOR MIRROR ASSEMBLY : Removal and Installation".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000004556823

- The mirror sensor (passenger side) is installed to the door mirror (passenger side).
- The resistance of 2 sensors (horizontal and vertical) is changed when the door mirror (passenger side) is operated.
- Automatic drive positioner control unit calculates the door mirror position according to the change of the voltage of 2 sensor input terminals.

PASSENGER SIDE : Component Function Check

INFOID:0000000004556824

1. CHECK FUNCTION

1. Turn ignition switch ON.
2. Select “MIR/SEN RH U-D”, “MIR/SEN RH R-L” in “Data monitor” using CONSULT-III.
3. Check the mirror sensor (passenger side) signal under the following conditions.

Monitor item	Condition	Value
MIR/SEN RH U-D	Door mirror (passenger side)	Change between 3.4 [V] (close to peak) 0.6 [V] (close to valley)
MIR/SEN RH R-L		Change between 3.4 [V] (close to left edge) 0.6 [V] (close to right edge)

Is the indication normal?

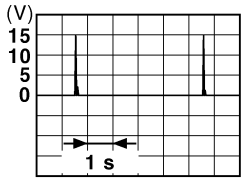
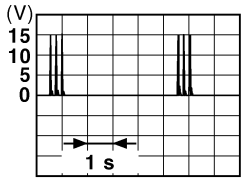
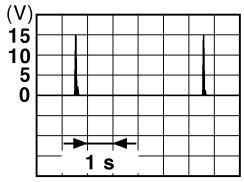
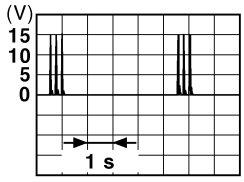
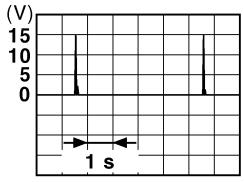
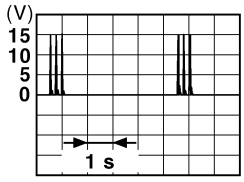
YES >> INSPECTION END
NO >> Perform diagnosis procedure. Refer to ADP-114, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000004556825

1. CHECK DOOR MIRROR SENSOR (PASSENGER SIDE) SIGNAL

1. Turn ignition switch ON.
2. Check voltage automatic drive positioner control unit harness connector and ground.

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
34 (SB)	Ground	Trunk room antenna (–)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
35 (V)	Ground	Trunk room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (B)	Ground	Rear bumper antenna (–)	Output	When the trunk lid opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

1. Connect CONSULT-III and perform a self-diagnosis for “MULTI AV”. Refer to AV-26, "CONSULT - III Function (MULTI AV)".
   NOTE:
   Skip to step 4 of the diagnosis procedure if “MULTI AV” is not displayed.
2. Check if any DTC is displayed in the self-diagnosis results.

Is DTC displayed?

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

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-78, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-107, "Symptom Table".

>> GO TO 5.

5. ERROR PART REPAIR

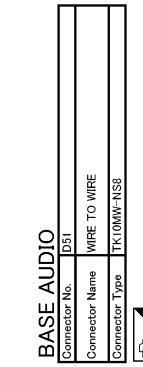
1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for “MULTI AV” with CONSULT-III.
   NOTE:
   Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.
3. Check that the symptom does not occur.

Does the symptom occur?

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

BASE AUDIO

Connector No.	D51
Connector Name	WIRE TO WIRE
Connector Type	TK10MW-NS8

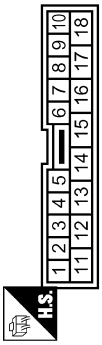


Terminal No.	Color of Wire	Signal Name [Specification]
16	LG	–
17	Y	–

Connector No.	D53
Connector Name	REAR DOOR SPEAKER LH
Connector Type	NS02FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	Y	–

Connector No.	D71
Connector Name	WIRE TO WIRE
Connector Type	TK10MW-NS8

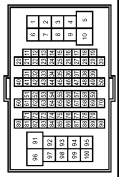


Terminal No.	Color of Wire	Signal Name [Specification]
16	L	–
17	P	–

Connector No.	D73
Connector Name	REAR DOOR SPEAKER RH
Connector Type	NS02FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	P	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

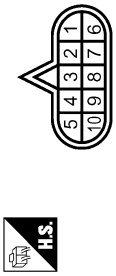


Terminal No.	Color of Wire	Signal Name [Specification]
36	O	–
92	LG	–

Connector No.	E107
Connector Name	PARKING BRAKE SWITCH (WITH A/T)
Connector Type	TB01FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	–

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG-DGY



Terminal No.	Color of Wire	Signal Name [Specification]
7	R	–

Connector No.	F56
Connector Name	BACK-UP LAMP SWITCH
Connector Type	RK02FB

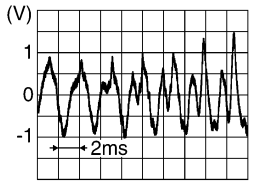
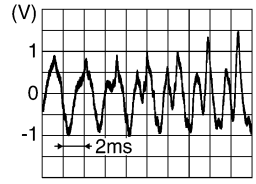
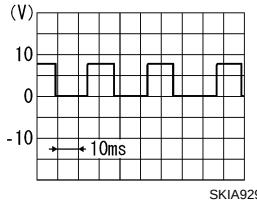
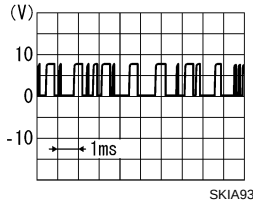
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	O	–

JCNWA1744GE

Component Description

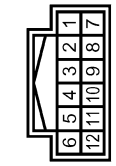
INFOID:0000000004238549

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system, and it is connected to each control unit by communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and unified meter and A/C amp. via CAN communication to obtain necessary information for the vehicle information function. • It is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function. • It inputs the illumination signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake). • Auxiliary image signal is input from the auxiliary input jacks. • BOSE amp. ON signal, sound signal and mode change signal transmitted to BOSE amp.
DISPLAY UNIT	• Display image is controlled by the serial communication 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. • Auxiliary image signal is input from AV control unit.
BOSE AMP.	Inputs power (amp. ON) and sound signal from AV control unit, and outputs sound signal to each speaker.
FRONT DOOR WOOFER	• Outputs sound signal from BOSE amp. • Outputs low-pitched sound.
FRONT DOOR SQUAWKER	• Outputs sound signal from BOSE amp. • Outputs midrange sound.
REAR DOOR SPEAKER	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
TWEETER	• Outputs sound signal from BOSE amp. • Outputs high range sound.
CENTER SPEAKER	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
REAR WOOFER	• Outputs sound signal from BOSE amp. • Outputs low-pitched sound. • Power (amp. ON signal) is supplied from BOSE amp.
MULTIFUNCTION SWITCH	• Operation panel is equipped with the centralized switch where audio and auxiliary input operations are integrated. • Connected with AV control unit via cable, and operation signal is transmitted to AV control unit via AV communication.
PRESET SWITCH	• Operation panel is equipped with the centralized switch where audio and air conditioner operations are integrated. • Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication. • The CD ejection operating signal is performed by hardwire.
STEERING SWITCH	• Operations such as audio and hands-free phone are possible. • Steering switch signal (operation signal) is output to AV control unit.
MICROPHONE	• Used only when hands-free phone is operated. • Outputs Mic. signal (TEL voice signal) to the TEL adapter unit. • The power (Mic. power supply) is supplied from the TEL adapter unit.
AUXILIARY INPUT JACKS	The image signal of the auxiliary input is output via the AV control unit to the display, and it outputs the sound signal to the AV control unit.
ANTENNA AMP.	• Radio signal received by glass antenna is amplified and transmitted to AV control unit. • Power (antenna amp. ON signal) is supplied from AV control unit.

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
15 (B)	Ground	Steering switch signal GND	—	Ignition switch ON	—	0 V
16 (L)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	0.7 V
					Keep pressing ☎ switch.	1.3 V
					Except for above.	3.3 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	GND	—	Ignition switch ON	—	0 V
22 (B)	21 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
24 (G)	23 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
25	—	Shield	—	—	—	—
26	—	Shield	—	—	—	—
27 (SB)	Ground	Mode change signal	Output	Ignition switch ON	Driver's Audio Stage ON	0 V
					Driver's Audio Stage OFF	8.5 V
28 (P)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9299J
29 (G)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9300J

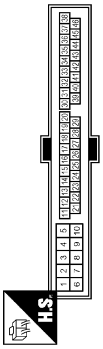
BOSE AUDIO WITHOUT NAVIGATION SYSTEM

Connector No.	M114
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH



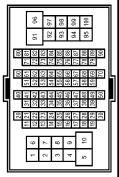
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	G	–
3	O	–
4	SHIELD	–
5	W	–
6	B	–
7	R	–
8	BR	–
9	W	–
10	W	–
11	SHIELD	–
12	P	–

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK36MW-NS10



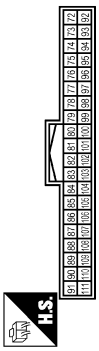
Terminal No.	Color of Wire	Signal Name [Specification]
30	LG	–
31	W	–
41	O	–

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



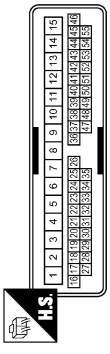
Terminal No.	Color of Wire	Signal Name [Specification]
31	SB	–
32	Y	–
33	V	–
34	LG	–
40	Y	–
41	G	–
42	LG	–
43	B	–
44	R	–
45	W	–
46	SHIELD	–
47	P	–
48	L	–
49	SHIELD	–
50	V	–
80	W	–
81	SHIELD	–
82	P	–
83	L	–
84	G	–
85	SHIELD	–
86	W	–
87	B	–
88	R	–
89	G	–
90	Y	–
99	P	–
100	L	–

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
90	P	CAN-L
91	L	CAN-H

Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color of Wire	Signal Name [Specification]
9	R	–
10	G	–
36	R	–
37	BR	–

JCNWA1764GE

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000004238637

OPERATION

Symptoms	Check items	Possible malfunction location / Action to take
Multifunction switch and preset switch operation does not work.	• All switches cannot be operated. • “MULTI AV” is displayed on system selection screen when the CONSULT-III is started.	• Multifunction switch power supply and ground circuit. • AV communication circuit between AV control unit and multifunction switch. Perform CONSULT-III self-diagnosis. Refer to AV-150, "CONSULT - III Function (MULTI AV)".
	• All switches cannot be operated. • “MULTI AV” is not displayed on system selection screen when the CONSULT-III is started.	AV control unit power supply and ground circuit malfunction. Refer to AV-165, "AV CONTROL UNIT : Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-141, "Diagnosis Description".

RELATED TO HANDS-FREE PHONE

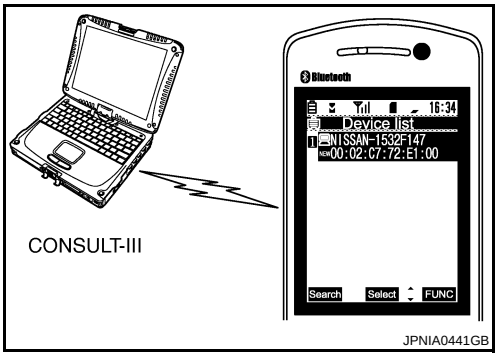
Basic Inspection

- Check that the cellular phone is corresponding type (Bluetooth® correspond) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone.

Simple check for Bluetooth® communication

- If cellular phone and AV control unit cannot be connected with Bluetooth® communication, following procedure allows the technician to judge which device has malfunction.

1. Turn on a cellular phone, not connecting Bluetooth® communication.
2. Start CONSULT-III, then start Windows®.
3. Set CONSULT-III near a cellular phone.
4. When operated Bluetooth® registration by cellular phone, check if CONSULT-III* would be displayed on the device name.
   (If other Bluetooth® device is located near cellular phone, a name of the device would be displayed also.)
   NOTE:
   *:Displayed device name is “NISSAN-********”.



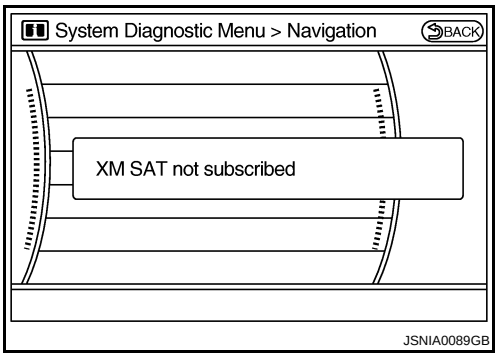
- If no device name is displayed, cellular phone is malfunctioning. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

On Board Self-diagnosis of Hands-free Phone System

Always perform the on board self-diagnosis at first after completing the basic inspection when the malfunction is detected on the hands-free phone system. Narrow down possible causes using the Diagnosis Chart if there is no malfunction in the on board self-diagnosis.

Trouble Diagnosis Chart by Symptom

XM SAT SUBSCRIPTION STATUS
The XM NavTraffic subscription status can be checked.



Error History
The self-diagnosis results are judged depending on whether any error occurs from when “Self-diagnosis” is selected until the self-diagnosis results are displayed.
However, the diagnosis results are judged normal if an error has occurred before the ignition SW is turned ON and then no error has occurred until the self-diagnosis start. Check the “Error Record” to detect any error that may have occurred before the self-diagnosis start because of this situation.
The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.
- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

Count up method A
- The counter resets to 0 if an error occurs when IGN switch is turned ON. The counter increases by 1 if the condition is normal at a next IGN ON cycle.
- The counter upper limit is 39. Any counts exceeding 39 are ignored.“ The counter can be reset (no error record display) with the “Delete log” switch or CONSULT-III.

Count up method B
- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN ON cycle.
- The counter upper limit is 50. Any counts exceeding 50 are ignored. “ The counter can be reset (no error record display) with the “Delete log” switch or CONSULT-III.

Display type of occurrence frequency	Error history display item
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)
Count up method B	Other than the above

STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000004238817

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000004238818

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

1. Disconnect AV control unit connector and spiral cable connector.
2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M80	16	M36	31	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M80	16		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector and spiral cable connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector.

(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M80	16	M80	15	5 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit.

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-438, "Component Inspection".

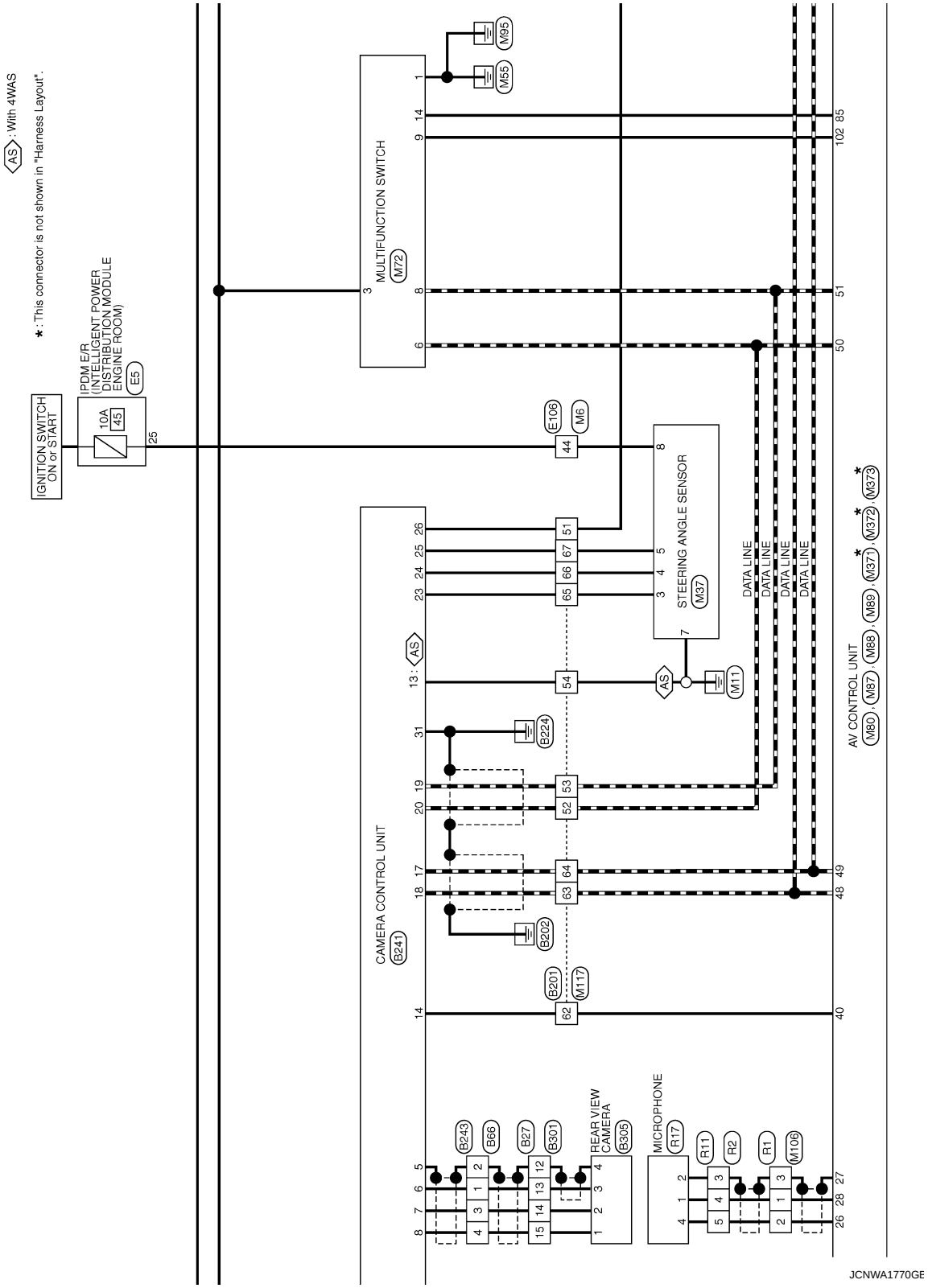
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch.

Component Inspection

INFOID:0000000004238819

Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.


AS : With 4WAS
* : This connector is not shown in "Harness Layout".
IGNITION SWITCH ON or START
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E5
10A 45
25
MULTIFUNCTION SWITCH
M72
M95
M55
E106
M6
STEERING ANGLE SENSOR
M37
M11
CAMERA CONTROL UNIT
B241
B224
B202
B201
M117
DATA LINE
AV CONTROL UNIT
M80, M87, M88, M89, M37*, M372*, M373*
REAR VIEW CAMERA
B305
B243
B66
B27
B301
MICROPHONE
R17
R11
R2
R1
M106
JCNWA1770GE

BOSE AUDIO WITH NAVIGATION SYSTEM

Connector No.	M373
Connector Name	AV CONTROL UNIT (WITH NAVI)
Connector Type	GT5-1S-HU

H.S.

110
111

Terminal No.	Color of Wire	Signal Name [Specification]
110	–	GPS ANTENNA
111	SHIELD	SHIELD

Connector No.	M374
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1PP-HU

H.S.

1
2

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	–
2	SHIELD	–

Connector No.	M375
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-2/1S-HU

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	–
2	–	–
3	–	–

Connector No.	M376
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-2/1PP-HU

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	–
2	–	–
3	–	–

Connector No.	M377
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1S-HU

H.S.

1
2

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	–
2	SHIELD	–

Connector No.	M378
Connector Name	ANTENNA AMP.
Connector Type	GT13SC-1/1S-HU

H.S.

1
2

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	ANTENNA AMP. ON SIGNAL
2	–	AM-FM MAIN

Connector No.	M379
Connector Name	GLASS ANTENNA (SUB)
Connector Type	P01FB-A

H.S.

1

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	–

Connector No.	M380
Connector Name	WIRE TO WIRE
Connector Type	GT16-1PP-HU

H.S.

1
2

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	–
2	SHIELD	–

JCNWA1786GE

Service item	Setting item	Setting	
ILL DELAY SET	MODE 1*	45 sec.	Sets delay timer function timer operation time. (All doors closed)
	MODE 2	Without the function	
	MODE 3	30 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	
CUSTOM A/LIGHT SETTING	MODE 1*	Normal	
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)	
	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)	
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)	

*: Factory setting

DATA MONITOR

Monitor item [Unit]	Description
PUSH SW [On/Off]	The switch status input from push-button ignition switch
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from unified meter and A/C amp. with CAN communication
KEY SW-SLOT [On/Off]	Key switch status input from key slot
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW1 [On/Off]	
HEAD LAMP SW2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	
RR FOG SW [On/Off]	**NOTE:** The item is indicated, but not monitored.
DOOR SW-DR [On/Off]	The switch status input from driver side door switch
DOOR SW-AS [On/Off]	The switch status input from passenger side door switch

PRECAUTION

PRECAUTIONS

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

INFOID:0000000004468309

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:

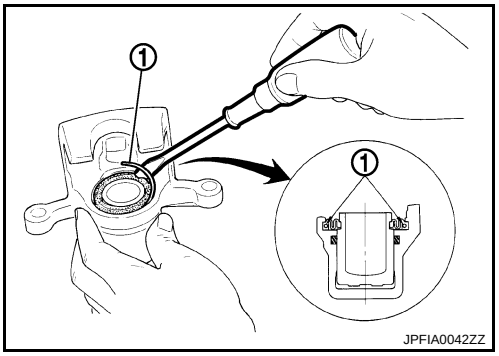
- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal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

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

5. Secure piston boot with retaining ring (1).
   CAUTION:
   - **Make sure that boot is securely engaged in the groove on cylinder body.**
   - **Never reuse retaining ring.**
6. Apply rubber grease to bushing, and install bushing to sliding pin bolt.
7. Apply rubber grease to sliding pin boots, and install sliding pin boot to torque member.
8. Install brake pads, shims and shim cover. Refer to BR-51, "BRAKE PAD (1 PISTON TYPE) : Exploded View".



9. Apply rubber grease to sliding pin bolts, and install the cylinder body to the torque member and tighten the sliding pin bolt to the specified torque.

BRAKE CALIPER ASSEMBLY (1 PISTON TYPE) : Inspection

INFOID:0000000004499602

INSPECTION AFTER DISASSEMBLY

Cylinder Body

Check the inner wall of the cylinder for rust, wear, cracks or damage. Replace the cylinder if any abnormal condition is detected.

CAUTION:

Always clean with new brake fluid. Never clean with mineral oil such as gasoline and light oil.

Torque Member

Check the torque member for rust, wear, cracks or damage. Replace the member if any abnormal condition is detected.

Piston

Check the piston for rust, wear, cracks or damage. Replace the piston if any abnormal condition is detected.

CAUTION:

A piston sliding surface is plated. Never polish with sandpaper.

Sliding Pin Bolt and Sliding Pin Boot

Check the sliding pin bolts and sliding pin boots for rust, wear, cracks or damage. Replace the parts if any abnormal condition is detected.

INSPECTION AFTER INSTALLATION

1. Check a drag of rear disc brake. If any drag is found, follow the procedure described below.
2. Remove brake pads. Refer to BR-51, "BRAKE PAD (1 PISTON TYPE) : Exploded View".
3. Press the pistons.
   CAUTION:
   - **Never damage the piston boot.**
   - **When replacing a pad with new one, check a brake fluid level in the reservoir tank because brake fluid returns to master cylinder reservoir tank when pressing piston in.**

   NOTE:
   Use a disc brake piston tool to easily press piston.
4. Install brake pads. Refer to BR-51, "BRAKE PAD (1 PISTON TYPE) : Exploded View".
5. Depress the brake pedal several times.
6. Check a drag of rear disc brake again. If any drag is found, disassemble the cylinder body. Refer to BR-57, "BRAKE CALIPER ASSEMBLY (1 PISTON TYPE) : Disassembly and Assembly".
7. Burnish contact surface between disc rotor and brake pads after refinishing or replacing disc rotor, or if a soft pedal occurs at very low mileage. Refer to BR-16, "DISC ROTOR : Inspection and Adjustment".

BRAKE CALIPER ASSEMBLY (2 PISTON TYPE)

BRAKE CALIPER ASSEMBLY (2 PISTON TYPE) : Exploded View

INFOID:0000000004499603

REMOVAL

C1130, C1131, C1132 ENGINE SIGNAL

Description

INFOID:0000000004242418

ABS actuator and electric unit (control unit) and ECM exchange the engine signal with CAN communication line.

DTC Logic

INFOID:0000000004242419

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
C1130	ENGINE SIGNAL 1	Major engine components are malfunctioning.	• Harness or connector • ABS actuator and electric unit (control unit) • ECM • CAN communication line
C1131	ENGINE SIGNAL 2		
C1132	ENGINE SIGNAL 3		

DTC CONFIRMATION PROCEDURE

1.CHECK SELF-DIAGNOSIS RESULTS

Check the self-diagnosis results.

Self-diagnosis results
ENGINE SIGNAL 1
ENGINE SIGNAL 2
ENGINE SIGNAL 3

Is above displayed on the self-diagnosis display?

YES >> Proceed to diagnosis procedure. Refer to BRC-55, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004242420

1.CHECK ENGINE SYSTEM

1. Perform ECM self-diagnosis. Repair or replace items indicated, then perform ECM self-diagnosis again.
2. Perform ABS actuator and electric unit (control unit) self-diagnosis.

Is any item indicated on the self-diagnosis display?

YES >> Repair or replace the affected part.
NO >> INSPECTION END

Special Repair Requirement

INFOID:0000000004242421

1.ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION

Always perform the neutral position adjustment for the steering angle sensor, when replacing the ABS actuator and electric unit (control unit). Refer to BRC-8, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Description".

>> END

PRECAUTION

HANDLING PRECAUTIONS

Precautions for Plastics

INFOID:0000000004240849

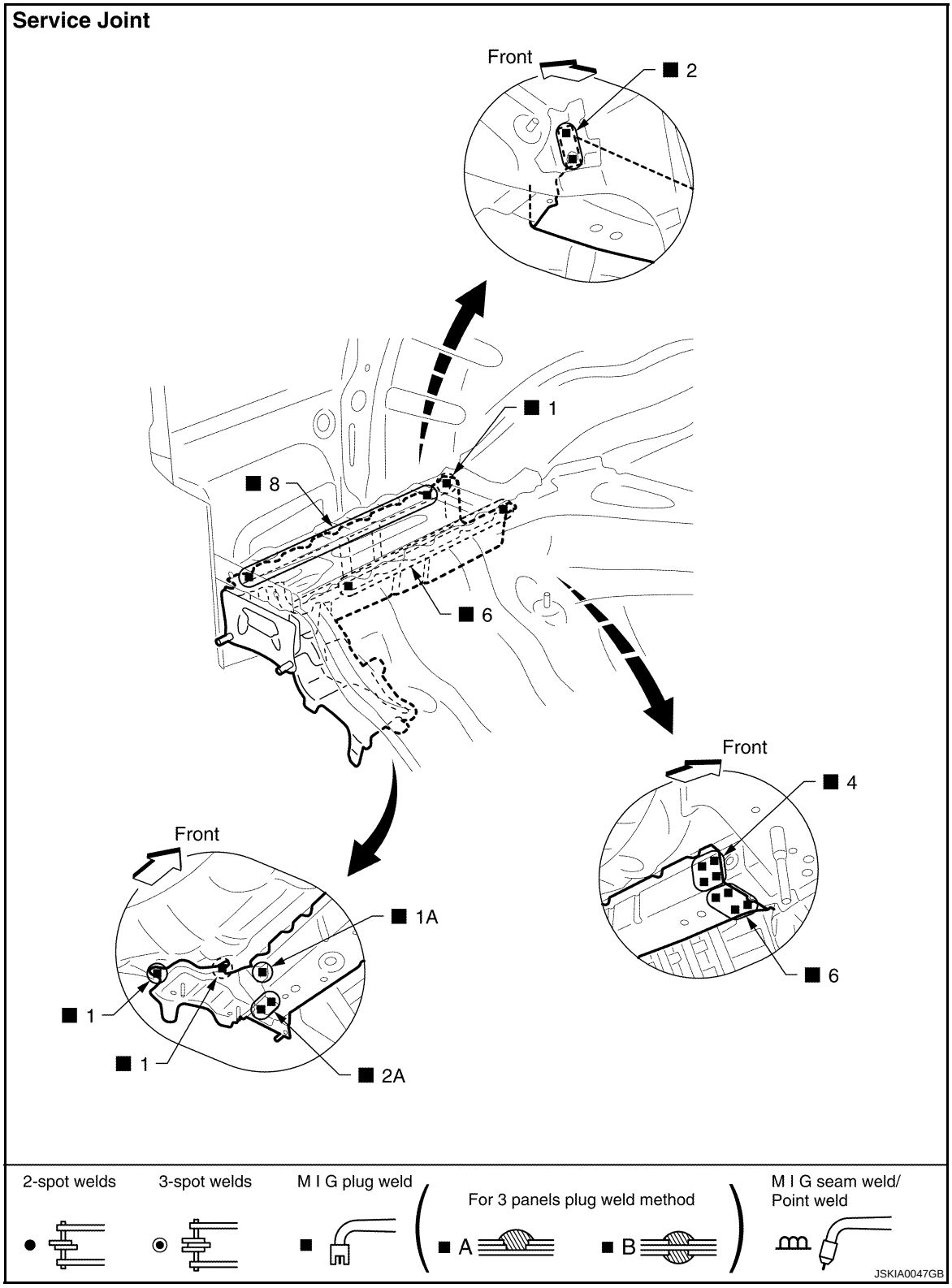
Abbreviation	Material name	Heat resisting temperature °C (°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60 (140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
ABS	Acrylonitrile Butadiene Styrene	80 (176)	Avoid gasoline and solvents.	—
EPM/ EPDM	Ethylene Propylene (Diene) copolymer	80 (176)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PS	Polystyrene	80 (176)	Avoid solvents.	Flammable
PVC	Poly Vinyl Chloride	80 (176)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Poison gas is emitted when burned.
TPO	Thermoplastic Olefine	80 (176)	Same as above.	Flammable
AAS	Acrylonitrile Acrylic Styrene	85 (185)	Avoid gasoline and solvents.	—
PMMA	Poly Methyl Methacrylate	85 (185)	Same as above.	—
EVAC	Ethylene Vinyl Acetate	90 (194)	Avoid gasoline and solvents.	—
PP	Polypropylene	90 (194)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable, avoid battery acid.
PUR	Polyurethane	90 (194)	Avoid gasoline and solvents.	—
UP	Unsaturated Polyester	90 (194)	Same as above.	Flammable
ASA	Acrylonitrile Styrene Acrylate	100 (212)	Same as above.	Flammable
PPE	Poly Phenylene Ether	110 (230)	Same as above.	—
TPU	Thermoplastic Urethane	110 (230)	Same as above.	—
PBT+ PC	Poly Butylene Terephthalate + Polycarbonate	120 (248)	Same as above.	Flammable
PC	Polycarbonate	120 (248)	Same as above.	—
POM	Poly Oxymethylene	120 (248)	Same as above.	Avoid battery acid.
PA	Polyamide	140 (284)	Same as above.	Avoid immersing in water.
PBT	Poly Butylene Terephthalate	140 (284)	Same as above.	—
PAR	Polyarylate	180 (356)	Same as above.	—
PET	Polyester	180 (356)	Same as above.	—
PEI	Polyetherimide	200 (392)	Same as above.	—

CAUTION:

- **When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.**
- **Plastic parts should be repaired and painted using methods suiting the materials' characteristics.**

LOCATION OF PLASTIC PARTS

Service Joint



Replacement parts

- Rear side member extension (LH)
- Muffler mounting bracket assembly

Spiral cable		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M36	25	M107	101	Existed
	32		108	

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

Spiral cable		Ground	Continuity
Connector	Terminal		
M36	25		Not existed
	32		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair the harnesses or connectors.

4. CHECK SPIRAL CABLE

Check for continuity between spiral cable terminals.

Spiral cable		Continuity
Terminal		
13	25	Existed
16	32	

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace the spiral cable.

5. PERFORM SELF-DIAGNOSIS OF ECM

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

Is any DTC detected?

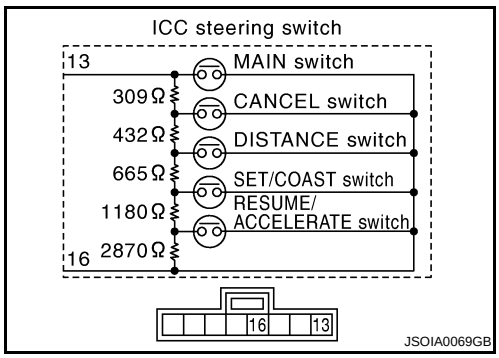
YES >> Perform self-diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-564, "DTC Index".
NO >> Replace the ICC sensor integrated unit. Refer to CCS-131, "Exploded View".

Component Inspection

INFOID:0000000004467925

1. CHECK ICC STEERING SWITCH

Check resistance between ICC steering switch terminals.



Terminal		Switch operation	Resistance [Ω]
13	16	When pressing MAIN switch	Approx. 0
		When pressing CANCEL switch	Approx. 309
		When pressing DISTANCE switch	Approx. 741
		When pressing SET/COAST switch	Approx. 1406
		When pressing RESUME/ACCELERATE switch	Approx. 2586
		When all switches are not pressed	Approx. 5456

2. Adjust the laser beam aiming. Refer to CCS-6, "LASER BEAM AIMING ADJUSTMENT : Description".

>> GO TO 8.

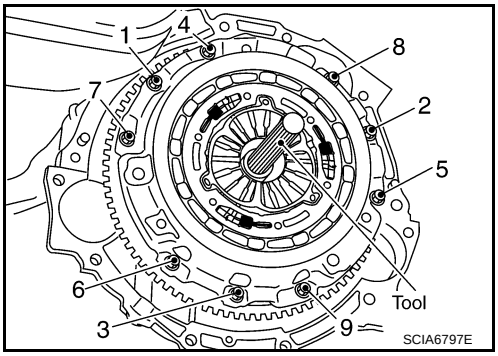
8. CHECK ICC SYSTEM

1. Erase the self-diagnosis results, and then perform “All DTC Reading” again after performing the action test. (Refer to CCS-12, "ACTION TEST : Description" for action test.)
2. Check that the ICC system is normal.

>> INSPECTION END

Be sure to apply grease to the points specified. Otherwise, noise, poor disengagement, or damage to the clutch may result. Excessive grease may cause slip or judder. And if it adheres to seal of CSC body, it cause clutch fluid leakage. Wipe out excess grease. Wipe out any grease oozing from the parts.

3. Install clutch disc using a clutch aligner [Commercial service tool].
   CAUTION:
   If either clutch disc or clutch cover is needed to be replaced, replace them as a set.
4. Install clutch cover. Temporarily tighten clutch cover mounting bolts.
   CAUTION:
   If either clutch disc or clutch cover is needed to be replaced, replace them as a set.
5. Tighten clutch cover mounting bolts evenly in two steps in the order shown in the figure.



6. Install transmission assembly to the engine. Refer to TM-26, "Removal and Installation".

Inspection

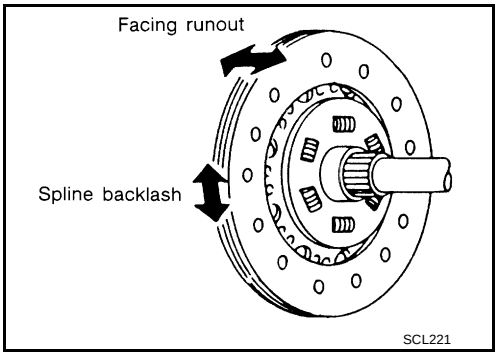
INFOID:0000000004243166

INSPECTION AFTER REMOVAL

CLUTCH DISC

- Measure circumferential runout relative to clutch disc center spline. If it is outside the specification, replace clutch disc and clutch cover as a set.

Runout limit/diameter of the area to be measured : Refer to CL-22, "Clutch Disc".

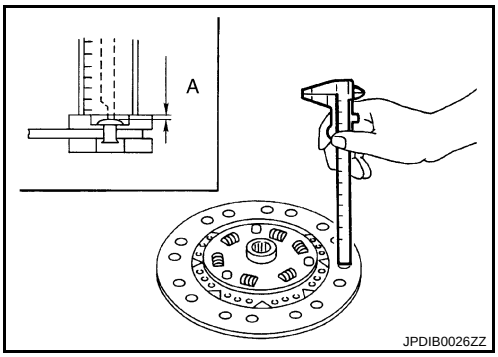


- Measure backlash to clutch disc spline and main drive gear spline at the circumference of clutch disc. If it is outside the specification, replace clutch disc and clutch cover as a set.

Maximum allowable spline backlash (at outer edge of disc) : Refer to CL-22, "Clutch Disc".

- Measure the depth “A” to clutch disc facing rivet heads using a calipers. If it exceeds the allowable wear limit, replace clutch disc and clutch cover as a set.

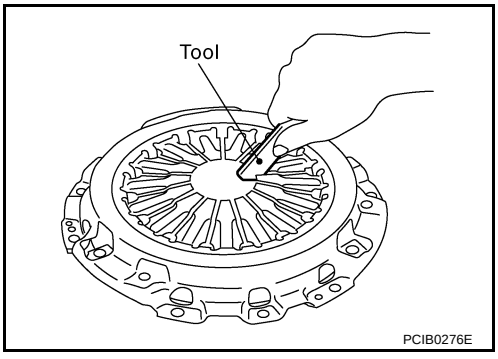
Facing wear limit (depth to the rivet head) “A” : Refer to CL-22, "Clutch Disc".



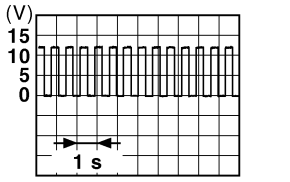
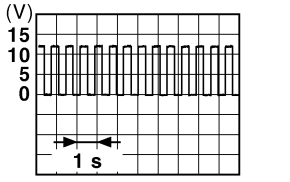
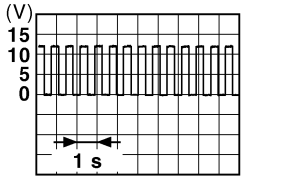
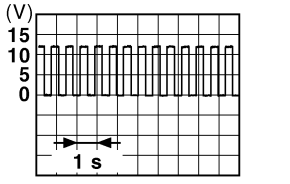
CLUTCH COVER

Check diaphragm spring lever claws for unevenness with the lever still on the vehicle. If they exceed the tolerance, adjust lever height using the diaphragm adjusting wrench [SST: ST20050240 (-)].

Tolerance for diaphragm spring lever unevenness : Refer to CL-22, "Clutch Cover".



- Check clutch cover thrust ring for wear or breakage. If wear or breakage is found, replace clutch disc and clutch cover as a set.
  NOTE:

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (O)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	12 V
					ON	0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
23 (L)	Ground	Trunk lid open	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	12 V
					Other than OPEN (Trunk lid opener actuator is not activated)	0 V
25 (Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
30 (P)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0 V
					OFF	12 V

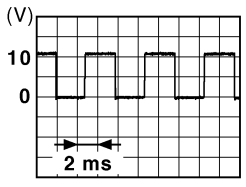
Door lock function	Intelligent Key	Key slot	Remote keyless entry receiver	Door switch	Door request switch	Door lock actuator and fuel lid lock actuator	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	CAN communication system	BCM	Hazard warning lamp	Push-button ignition switch	Combination meter
Door lock/unlock function by request switch	×	×	×	×	×	×	×	×			×			
Hazard and buzzer reminder function for door lock/ unlock operation									×	×	×	×		×
Selective unlock function by request switch	×				×	×	×	×			×			
Auto door lock function	×	×		×	×	×					×		×	

1. Connect BCM connector.
2. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	137		Existed

Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to DLK-255, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-82, "Removal and Installation".

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		12 V
4 (LG)	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)		12 V
5 (P)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK) Actuator is not activated	0 V
7 (BR)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	12 V
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH UNLOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (O)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC	0 V

KEY ID WARNING DOES NOT OPERATE

Description

INFOID:0000000004613855

NOTE:
Warning functions operating condition is extremely complicated. During operation confirmation reconfirm the list above twice in order to check for normal operation. Refer to DLK-40, "WARNING FUNCTION : System Description".

Diagnosis Procedure

INFOID:0000000004613856

1.CHECK INTELLIGENT KEY

Check Intelligent Key.
Refer to DLK-100, "Component Function Check".

Is the inspection result normal?

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

2.CHECK COMBINATION METER DISPLAY FUNCTION

Check combination meter display function.
Refer to DLK-108, "Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".
NO >> GO TO 1.

DIAGNOSIS SYSTEM (AWD CONTROL UNIT)

CONSULT-III Function

INFOID:0000000004674520

FUNCTION

CONSULT-III can display each diagnostic item using the diagnostic test modes as follows.

Diagnostic test mode	Function
ECU Identification	AWD control unit part number can be read.
Self Diagnostic Result	Self-diagnostic results can be read and erased quickly.
Data Monitor	Input/Output data in the AWD control unit can be read.
Active Test	Diagnostic Test Mode in which CONSULT-III drives some actuators apart from the AWD control unit and also shifts some parameters in a specified range.

ECU IDENTIFICATION

AWD control unit part number can be read.

SELF DIAGNOSTIC RESULT

Before performing the self-diagnosis, start the engine and drive vehicle at 30 km/h (19 MPH) or more for approximately 1 minute.

Display Item List

Refer to DLN-38, "DTC Index".

How to Erase Self-Diagnostic Results

Before erasing DTC memory, start the engine and drive at 30 km/h (19 MPH) or more for approximately 1 minute. Check that ABS warning lamp turns OFF.

NOTE:

When AWD warning lamp is ON with system malfunction of DTC “C1203”, run the vehicle at 30 km/h (19MPH) or more for a minute and check that ABS warning lamp is turned OFF. Then turn ignition switch OFF, and start the engine again. Otherwise AWD warning lamp may not turn OFF even if it is normal.

DATA MONITOR

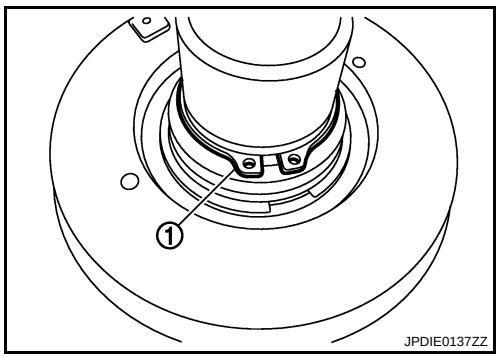
Display Item List

Monitor item (Unit)	Remarks
STOP LAMP SW [On/Off]	Stop lamp switch signal status via CAN communication line is displayed.
ENG SPEED SIG [Run/Stop]	Engine status is displayed.
ETS ACTUATOR [On/Off]	Operating condition of AWD actuator relay (integrated in AWD control unit) is displayed.
4WD WARN LAMP [On/Off]	Control status of AWD warning lamp is displayed.
4WD MODE SW [##]	Mode switch is not equipped, but displayed.
4WD MODE MON [AUTO]	Control status of AWD is displayed.
DIS-TIRE MONI [mm]	Improper size tire installed condition is displayed.
P BRAKE SW [On/Off]	Parking brake switch signal status via CAN communication line is displayed.
BATTERY VOLT [V]	Power supply voltage for AWD control unit
THRTL POS SEN [%]	Throttle opening status is displayed.
ETS SOLENOID [A]	Monitored value of current at AWD solenoid
FR RH SENSOR [km/h] or [mph]	Wheel speed calculated by front RH wheel sensor signal is displayed.
FR LH SENSOR [km/h] or [mph]	Wheel speed calculated by front LH wheel sensor signal is displayed.
RR RH SENSOR [km/h] or [mph]	Wheel speed calculated by rear RH wheel sensor signal is displayed.
RR LH SENSOR [km/h] or [mph]	Wheel speed calculated by rear LH wheel sensor signal is displayed.

ACTIVE TEST

Description

8. Install snap ring (1) to main shaft.
CAUTION:
Never reuse snap ring.
9. Install main shaft assembly to rear case, then install front case and rear case. Refer to DLN-64, "Assembly".

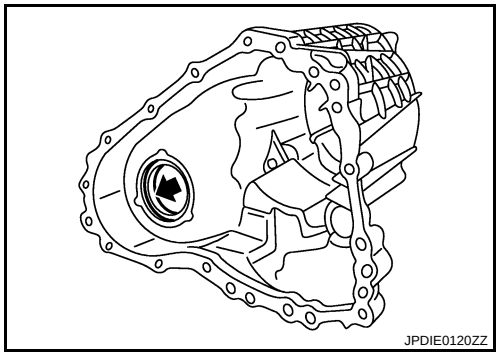


INFOID:0000000004674598

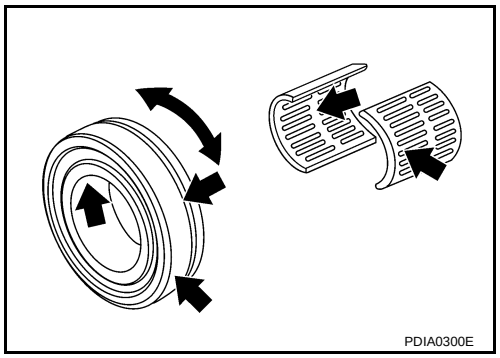
Inspection

Check items below. If necessary, replace them with new ones.

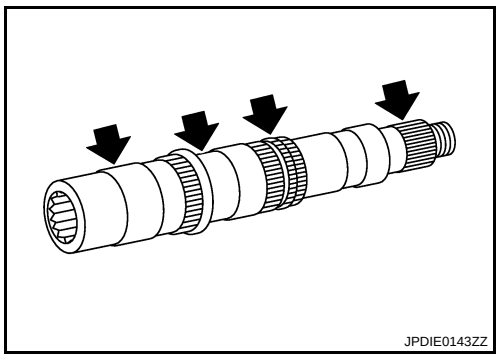
CASES
- Contact surfaces of bearing for wear, damage, etc.
- Damage and cracks of case.



BEARING
Damage and rough rotation of bearing.



SHAFT
Damage, peeling, dent, uneven wear, bending, etc. of shaft.



GEARS AND CHAIN

- If measured value is out of the specification, disassemble it to check and adjust each part. Adjust the pinion bearing preload and side bearing preload.
  Adjust the pinion bearing preload first, then adjust the side bearing preload.

When the preload torque is large

On pinion bearings: **Decrease the drive pinion bearing adjusting washer and drive pinion adjusting washer thickness.**

On side bearings: **Increase the side bearing adjusting shim thickness. For select parts refer to parts information.**

When the preload torque is small

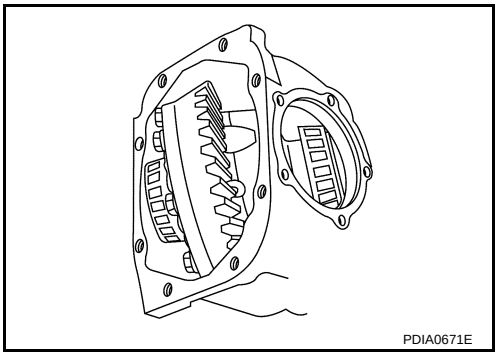
On pinion bearings: **Increase the drive pinion bearing adjusting washer and drive pinion adjusting washer thickness.**

On side bearings: **Decrease the side bearing adjusting shim thickness. For select parts refer to parts information.**

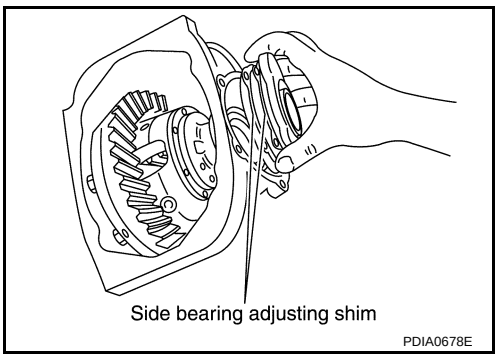
SIDE BEARING PRELOAD

- Before inspection and adjustment, drain gear oil.

1. Remove carrier cover and side retainer. Refer to DLN-126, "Disassembly".
2. Make sure all parts are clean. Also, make sure the bearings are well lubricated with gear oil.
3. Place the differential case assembly into gear carrier.


PDIA0671E

4. Install side bearing adjusting shim before disassembling or shim which thickness is the same as the one before disassembling.
5. Install side retainer assembly to gear carrier.
   CAUTION:
   Never install O-ring.



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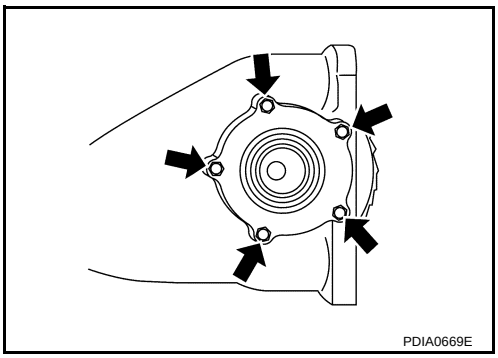
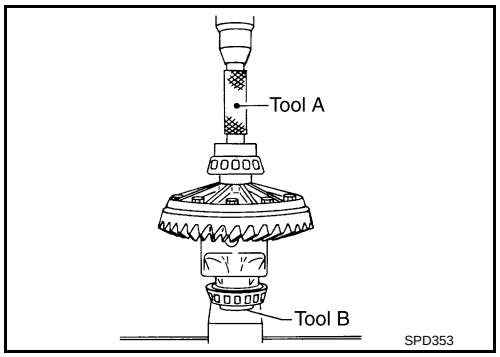
6. Install side retainer mounting bolts to the specified torque.


PDIA0669E

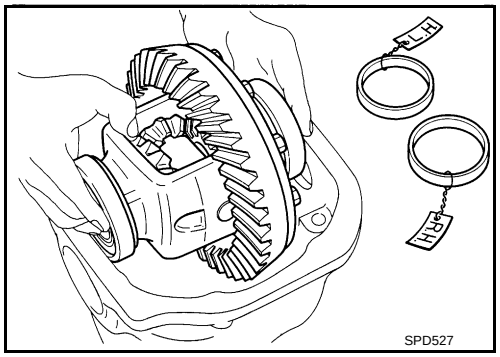
10. Press side bearing inner races to differential case, using the drift and the base.

A : Drift [SST: KV38100300 (J-25523)]
B : Base [SST: ST33061000 (J-8107-2)]

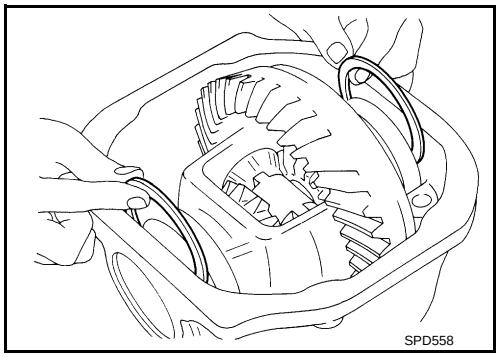
CAUTION:
Never reuse side bearing inner race.



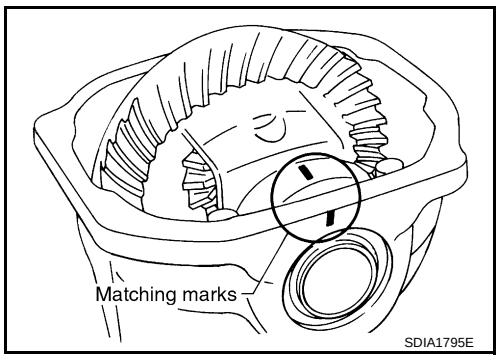
11. Install differential case assembly with side bearing outer races into gear carrier.
12. Measure side bearing preload. If necessary, select the appropriate side bearing adjusting washers. Refer to DLN-196, "AWD : Adjustment".



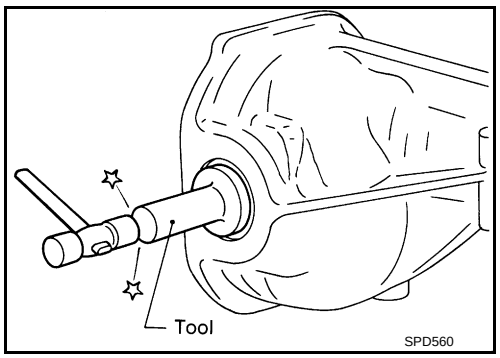
13. Insert selected left and right side bearing adjusting washers in place between side bearings and gear carrier. Refer to DLN-196, "AWD : Adjustment".



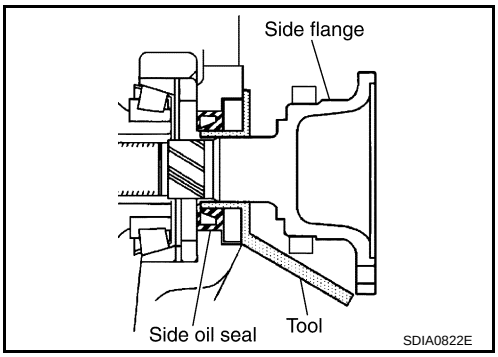
14. Align matching marks on bearing cap with that on gear carrier.
15. Install bearing caps and tighten bearing cap mounting bolts.



16. Using the drift [SST: KV38100200 (J-26233)], drive side oil seals until it becomes flush with the case end.
CAUTION:
- **Never reuse oil seal.**
- **When installing, never incline oil seal.**
- **Apply multi-purpose grease onto oil seal lips, and gear oil onto the circumference of oil seal.**
17. Check and adjust drive gear runout, tooth contact, drive gear to drive pinion backlash, and total preload torque. Refer to DLN-196, "AWD : Adjustment".

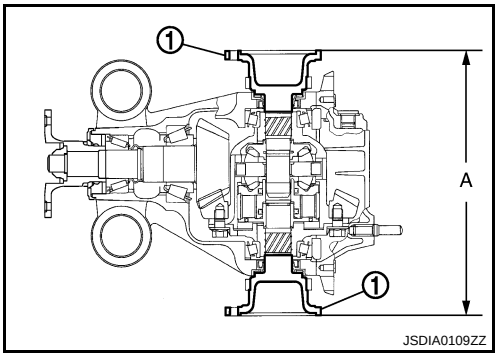


21. Install side flange with the following procedure.
a. Attach the protector [SST: KV38107900 (J-39352)] to side oil seal.
b. After the side flange is inserted and the serrated part of side gear has engaged the serrated part of flange, remove the protector.



c. Put a suitable drift on the center of side flange, then drive it until sound changes.
NOTE:
When installation is completed, driving sound of the side flange turns into a sound that seems to affect the whole final drive.
d. Confirm that the dimension of the side flange (1) installation (Measurement A) in the figure comes into the following.

Measurement "A" : 326 – 328 mm (12.83 – 12.91 in)



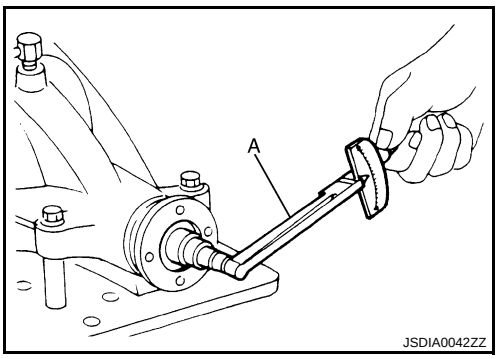
M/T : Adjustment

INFOID:0000000004507535

TOTAL PRELOAD TORQUE

- Before inspection and adjustment, drain gear oil.

1. Secure final drive assembly onto an attachment [SST: KV38100800 (J-25604-01)].
2. Remove side flanges.
3. Rotate drive pinion back and forth 2 to 3 times to check for unusual noise and rotation malfunction.
4. Rotate drive pinion at least 20 times to check for smooth operation of the bearing.
5. Measure total preload with the preload gauge (A) [SST: ST3127S000 (J-25765-A)].



Standard

Total preload torque : Refer to DLN-292, "Preload Torque".

NOTE:
Total preload torque = Pinion bearing preload torque + Side bearing preload torque

- If measured value is out of the specification, disassemble it to check and adjust each part. Adjust the pinion bearing preload and side bearing preload.
  Adjust the pinion bearing preload first, then adjust the side bearing preload.

When the preload torque is large

On pinion bearings: Replace the collapsible spacer.

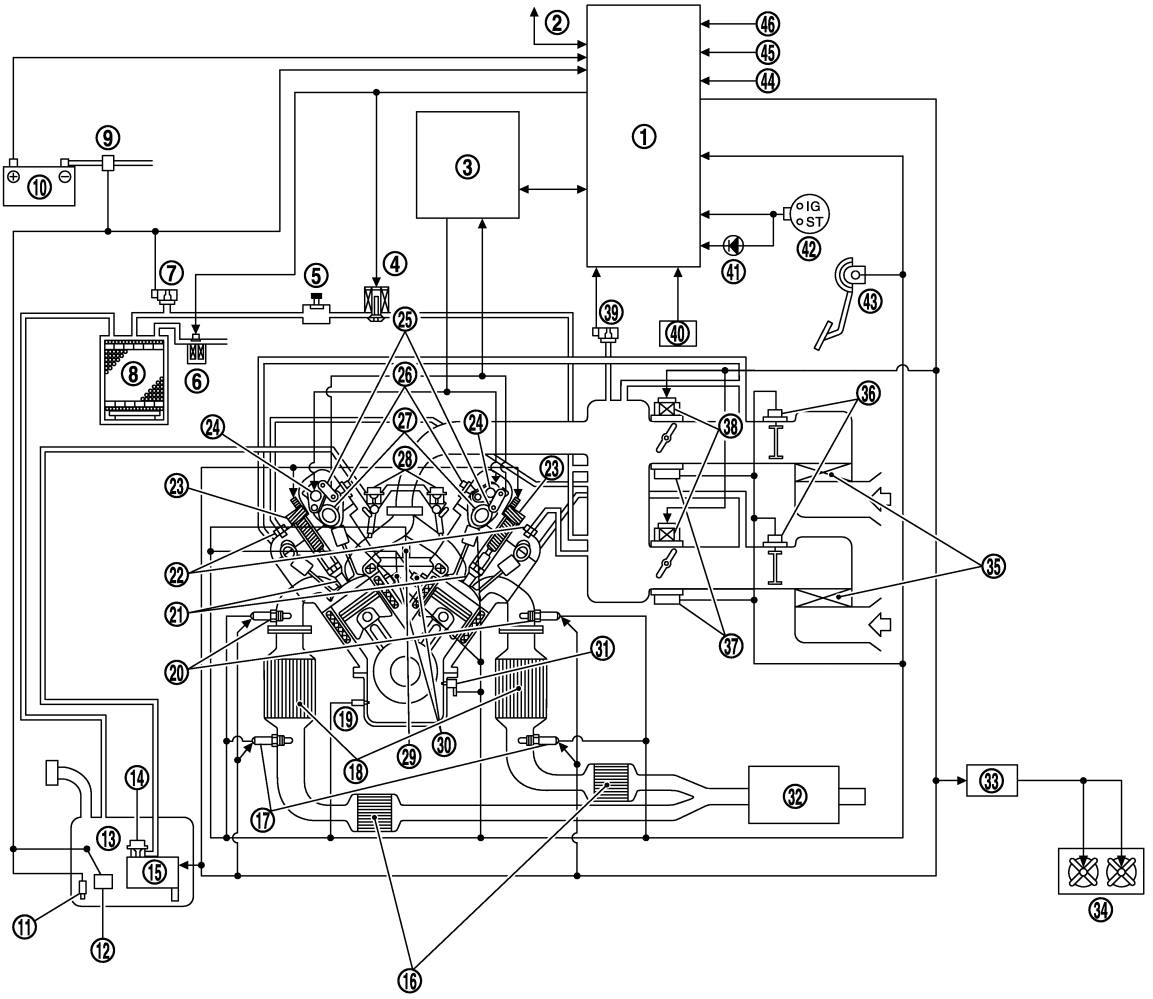
On side bearings: Use thinner side bearing adjusting washers by the same amount to each side.

SYSTEM DESCRIPTION

ENGINE CONTROL SYSTEM

System Diagram

INFOID:0000000004476519



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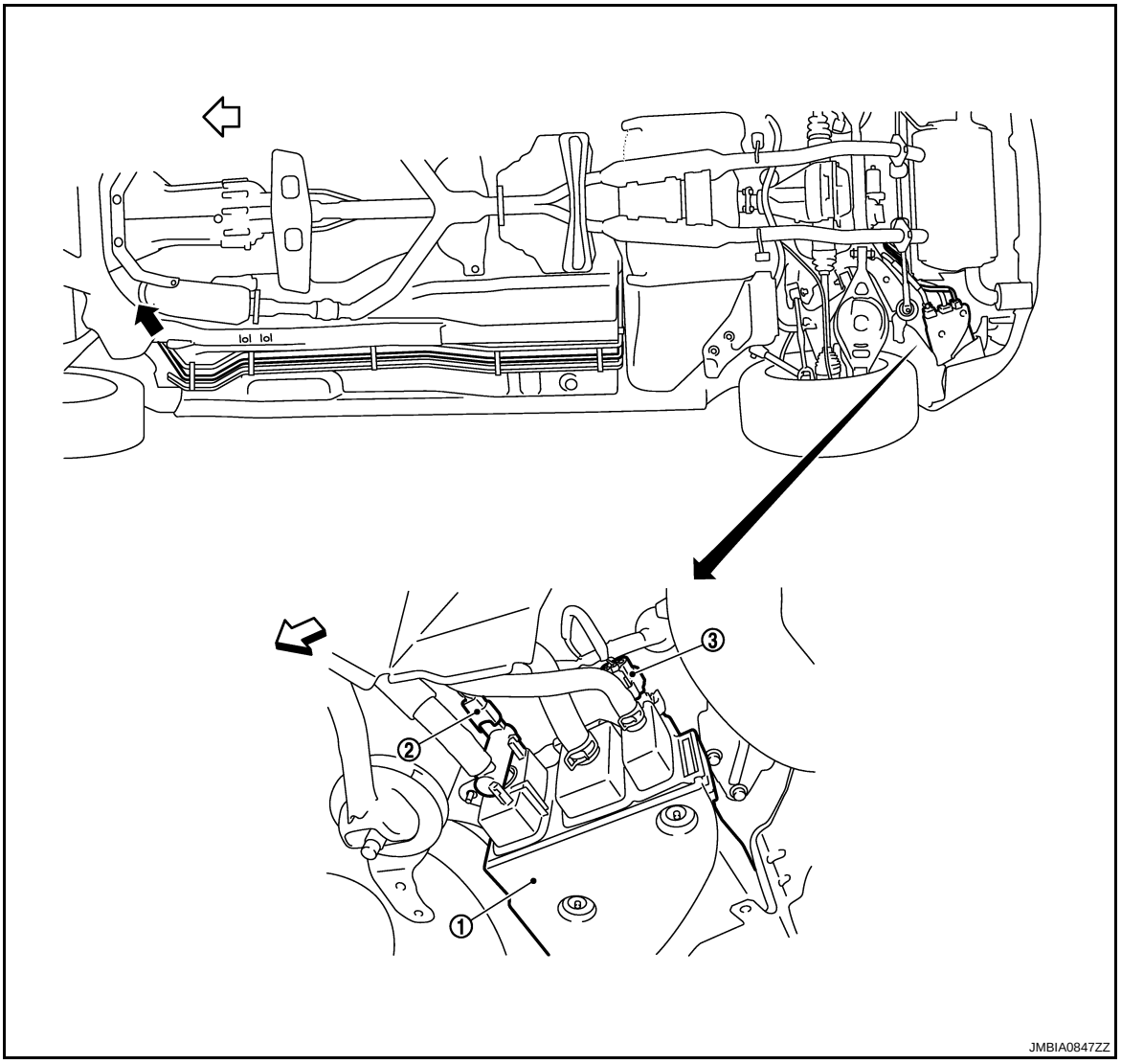
1. ECM
2. Can communication
3. VVEL control module
4. EVAP canister purge volume control solenoid valve
5. EVAP service port
6. EVAP canister vent control valve
7. EVAP control system pressure sensor
8. EVAP canister
9. Battery current sensor
10. Battery
11. Fuel tank temperature sensor
12. Fuel level sensor
13. Fuel tank
14. Fuel pressure regulator
15. Fuel pump
16. Three way catalyst 2
17. Heated oxygen sensor 2
18. Three way catalyst 1
19. Engine oil temperature sensor
20. A/F sensor 1
21. Spark plug
22. PCV valve
23. Ignition coil (with power transistor)
24. VVEL actuator motor

1. Intake manifold collector
2. EVAP canister purge volume control solenoid valve
3. EVAP service port

⬅ : From next figure



⇦ : Vehicle front

1. EVAP canister
2. EVAP canister vent control valve
3. EVAP control system pressure sensor

⬅ : To previous figure

NOTE:
Do not use soapy water or any type of solvent while installing vacuum hose or purge hoses.

>> Repair open circuit, short to ground or short to power in harness or connectors.

6.CHECK ECM POWER SUPPLY CIRCUIT-II

1. Turn ignition switch OFF and wait at least 10 seconds.
2. Check the voltage between ECM harness connector terminals as follows.

ECM			Voltage
Connector	+	–	
	Terminal	Terminal	
M107	125	128	After turning ignition switch OFF, battery voltage will exist for a few seconds, then drop to approximately 0 V.

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 9.

7.CHECK ECM POWER SUPPLY CIRCUIT-III

1. Turn ignition switch ON.
2. Check the voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Voltage
Connector	Terminal		
E7	53	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace IPDM E/R.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

9.CHECK ECM POWER SUPPLY CIRCUIT-IV

1. Turn ignition switch OFF and wait at least 10 seconds.
2. Check the voltage between ECM harness connector terminals as follows.

ECM				Voltage
+		–		
Connector	Terminal	Connector	Terminal	
F101	24	M107	128	Battery voltage

Is the inspection result normal?

YES >> GO TO 13.
NO >> GO TO 10.

10.CHECK ECM POWER SUPPLY CIRCUIT-V

1. Disconnect ECM harness connector.
2. Disconnect IPDM E/R harness connector.
3. Check the continuity between ECM harness connector and IPDM E/R harness connector.

ECM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F101	24	E7	69	Existed

YES >> INSPECTION END
NO >> Go to EC-207, "Diagnosis Procedure".

Component Function Check

INFOID:0000000004673131

1. PERFORM COMPONENT FUNCTION CHECK

With GST

1. Start engine and warm it up to normal operating temperature.
2. Drive the vehicle at a speed of 80 km/h (50 MPH) for a few minutes in the suitable gear position.
3. Shift the selector lever to D position (A/T) or 5th position (M/T), then release the accelerator pedal fully until the vehicle speed decreases to 50 km/h (30 MPH).
   CAUTION:
   Always drive vehicle at a safe speed.
   NOTE:
   Never apply brake when releasing the accelerator pedal.
4. Repeat steps 2 and 3 for five times.
5. Stop the vehicle and turn ignition switch OFF.
6. Turn ignition switch ON.
7. Turn ignition switch OFF and wait at least 10 seconds.
8. Restart engine.
9. Repeat steps 2 and 3 for five times.
10. Stop the vehicle and connect GST to the vehicle.
11. Check 1st trip DTC.

Is 1st trip DTC detected?

YES >> Go to EC-207, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004673132

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection M95. Refer to Ground Inspection in GI-44, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace ground connection.

2. CHECK AIR FUEL RATIO (A/F) SENSOR 1 POWER SUPPLY CIRCUIT

1. Disconnect A/F sensor 1 harness connector.
2. Turn ignition switch ON.
3. Check the voltage between A/F sensor 1 harness connector and ground.

DTC	A/F sensor 1			Ground	Voltage
	Bank	Connector	Terminal		
P0130	1	F3	4	Ground	Battery voltage
P0150	2	F20	4		

Is the inspection result normal?

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

3. DETECT MALFUNCTIONING PART

Check the following.
- Harness connectors E40, F39
- IPDM E/R harness connector E7
- 15 A fuse (No. 46)
- Harness for open or short between A/F sensor 1 and fuse

>> Repair or replace harness or connectors.

12. CHECK IDLE SPEED AND IGNITION TIMING

For procedure, refer to EC-13, "BASIC INSPECTION : Special Repair Requirement".
For specification, refer to EC-619, "Idle Speed" and EC-619, "Ignition Timing".

Is the inspection result normal?

YES >> GO TO 13.
NO >> Follow the EC-13, "BASIC INSPECTION : Special Repair Requirement".

13. 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.

A/F sensor 1			ECM		Continuity
Bank	Connector	Terminal	Connector	Terminal	
1	F3	1	F102	57	Existed
		2		61	
2	F20	1		65	
		2		66	

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

A/F sensor 1			Ground	Continuity
Bank	Connector	Terminal		
1	F3	1	Ground	Not existed
		2		
2	F20	1		
		2		

ECM			Ground	Continuity
Bank	Connector	Terminal		
1	F102	57	Ground	Not existed
		61		
2		65		
		66		

6. Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 14.
NO >> Repair open circuit, short to ground or short to power in harness or connectors.

14. CHECK A/F SENSOR 1 HEATER

Refer to EC-161, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 15.
NO >> Replace (malfunctioning) A/F sensor 1.

15. CHECK MASS AIR FLOW SENSOR

With CONSULT-III
Check mass air flow sensor signal in “DATA MONITOR” mode with CONSULT-III.
For specification, refer to EC-619, "Mass Air Flow Sensor".

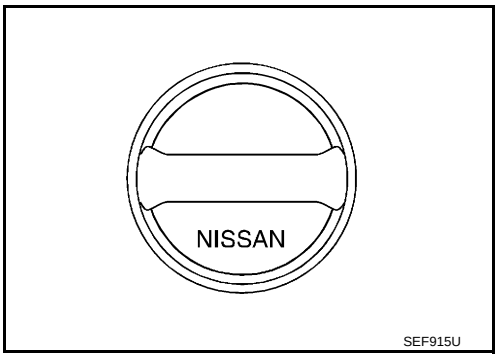
With GST

Diagnosis Procedure

INFOID:0000000004673234

1. CHECK FUEL FILLER CAP DESIGN

1. Turn ignition switch OFF.
2. Check for genuine NISSAN fuel filler cap design.



Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace with genuine NISSAN fuel filler cap.

2. CHECK FUEL FILLER CAP INSTALLATION

Check that the cap is tightened properly by rotating the cap clockwise.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Open fuel filler cap, then clean cap and fuel filler neck threads using air blower. Retighten until ratcheting sound is heard.

3. CHECK FUEL FILLER CAP FUNCTION

Check for air releasing sound while opening the fuel filler cap.

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 4.

4. CHECK FUEL TANK VACUUM RELIEF VALVE

Refer to EC-516, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace fuel filler cap with a genuine one.

5. CHECK EVAP PURGE LINE

Check EVAP purge line (pipe, rubber tube, fuel tank and EVAP canister) for cracks, improper connection or disconnection.
Refer to EC-83, "System Diagram".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or reconnect the hose.

6. CLEAN EVAP PURGE LINE

Clean EVAP purge line (pipe and rubber tube) using air blower.

>> GO TO 7.

7. CHECK EVAP CANISTER VENT CONTROL VALVE

Check the following.
- EVAP canister vent control valve is installed properly.
  Refer to EC-617, "Removal and Installation".
- EVAP canister vent control valve.
  Refer to EC-307, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace EVAP canister vent control valve and O-ring.

- Harness connector E40, F39
- Harness for open or short between ECM and VVEL control module

>> Repair open circuit, short to ground or short to power in harness or connectors.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace.

9.REPLACE VVEL CONTROL MODULE

1. Replace VVEL control module.
2. Go to EC-17, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (VVEL CONTROL MODULE) : Special Repair Requirement".

>> GO TO 10.

10.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC Confirmation Procedure.
   See EC-388, "DTC Logic".

Is the DTC P1091 displayed again?

YES >> GO TO 11.
NO >> INSPECTION END

11.REPLACE ECM

1. Replace ECM.
2. Go to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM) : Special Repair Requirement".

>> INSPECTION END

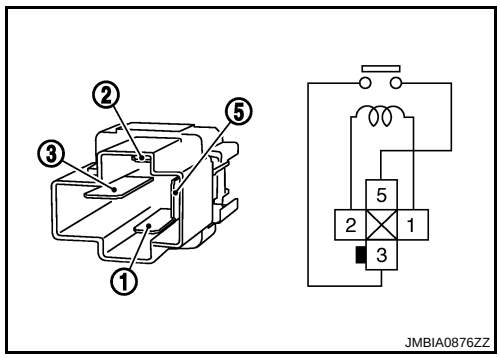
Component Inspection

INFOID:0000000004673305

1.CHECK VVEL ACTUATOR MOTOR RELAY

1. Turn ignition switch OFF.
2. Remove VVEL actuator motor relay.
3. Check the continuity between VVEL actuator motor relay terminals under the following conditions.

Terminal	Condition	Continuity
3 and 5	12 V direct current supply between terminals 1 and 2	Existed
	No current supply	Not existed



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Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace VVEL actuator motor relay.

1. Turn ignition switch OFF.
2. Disconnect ICC brake switch harness connector.
3. Check the continuity between ICC brake switch terminals under the following conditions.

Terminals	Condition		Continuity
1 and 2	Brake pedal	Fully released	Existed
		Slightly depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK ICC BRAKE SWITCH-II

1. Adjust ICC brake switch installation. Refer to BR-7, "Inspection and Adjustment".
2. Check the continuity between ICC brake switch terminals under the following conditions.

Terminals	Condition		Continuity
1 and 2	Brake pedal	Fully released	Existed
		Slightly depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace ICC brake switch.

Component Inspection (ICC Clutch Switch)

INFOID:0000000004673386

1.CHECK ICC CLUTCH SWITCH-I

1. Turn ignition switch OFF.
2. Disconnect ICC clutch switch harness connector.
3. Check the continuity between ICC clutch switch terminals under the following conditions.

Terminals	Condition		Continuity
1 and 2	Clutch pedal	Fully released	Existed
		Slightly depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK ICC CLUTCH SWITCH-II

1. Adjust ICC clutch switch installation. Refer to CL-5, "Inspection and Adjustment".
2. Check the continuity between ICC clutch switch terminals under the following conditions.

Terminals	Condition		Continuity
1 and 2	Clutch pedal	Fully released	Existed
		Slightly depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace ICC clutch switch.

Component Inspection (Stop Lamp Switch)

INFOID:0000000004673387

1.CHECK STOP LAMP SWITCH-I

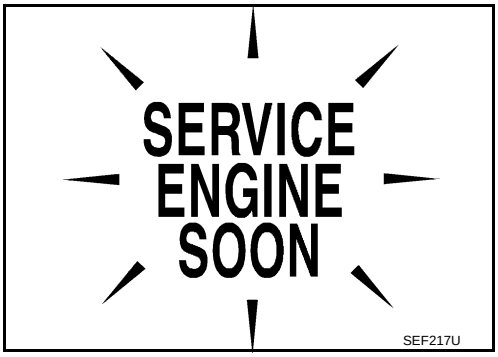
1. Turn ignition switch OFF.
2. Disconnect stop lamp switch harness connector.
3. Check the continuity between stop lamp switch terminals under the following conditions.

MALFUNCTION INDICATOR LAMP

Description

INFOID:0000000004673460

The Malfunction Indicator Lamp (MIL) is located on the combination meter.
The MIL will illuminate when the ignition switch is turned ON without the engine running. This is a bulb check.
When the engine is started, the MIL should turn off. If the MIL remains illuminated, the on board diagnostic system has detected an engine system malfunction.
For details, refer to EC-112, "Diagnosis Description".



Component Function Check

INFOID:0000000004673461

1.CHECK MIL FUNCTION

1. Turn ignition switch ON.
2. Make sure that MIL illuminates.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to EC-512, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004673462

1.CHECK DTC

Check that DTC UXXXX is not displayed.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Perform trouble diagnosis for DTC UXXXX.

2.CHECK DTC WITH “UNIFIED METER AND A/C AMP.”

Refer to MWI-38, "CONSULT-III Function (METER/M&A)".

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace combination meter.
NO >> Repair or replace.

Item	OBD-MID	Self-diagnostic test item	DTC	Test value and Test limit (GST display)		Description
				TID	Unit and Scaling ID	
HO2S	05H	Air fuel ratio (A/F) sensor 1 (Bank 2)	P0151	83H	0BH	Minimum sensor output voltage for test cycle
			P0151	84H	0BH	Maximum sensor output voltage for test cycle
			P0150	85H	0BH	Minimum sensor output voltage for test cycle
			P0150	86H	0BH	Maximum sensor output voltage for test cycle
			P0153	87H	04H	Response rate: Response ratio (Lean to Rich)
			P0153	88H	04H	Response rate: Response ratio (Rich to Lean)
			P2A03	89H	84H	The amount of shift in air fuel ratio
			P2A03	8AH	84H	The amount of shift in air fuel ratio
			P0150	8BH	0BH	Difference in sensor output voltage
			P0153	8CH	83H	Response gain at the limited frequency
	06H	Heated oxygen sensor 2 (Bank 2)	P0158	07H	0CH	Minimum sensor output voltage for test cycle
			P0157	08H	0CH	Maximum sensor output voltage for test cycle
			P0158	80H	0CH	Sensor output voltage
			P0159	81H	0CH	Difference in sensor output voltage
	07H	Heated oxygen sensor 3 (Bank2)	P0163	07H	0CH	Minimum sensor output voltage for test cycle
			P0164	08H	0CH	Maximum sensor output voltage for test cycle
			P0166	80H	0CH	Sensor output voltage
			P0165	81H	0CH	Difference in sensor output voltage
CATALYST	21H	Three way catalyst function (Bank1)	P0420	80H	01H	O2 storage index
			P0420	82H	01H	Switching time lag engine exhaust index value
			P2423	83H	0CH	Difference in 3rd O2 sensor output voltage
			P2423	84H	84H	O2 storage index in HC trap catalyst
	22H	Three way catalyst function (Bank2)	P0430	80H	01H	O2 storage index
			P0430	82H	01H	Switching time lag engine exhaust index value
			P2424	83H	0CH	Difference in 3rd O2 sensor output voltage
			P2424	84H	84H	O2 storage index in HC trap catalyst

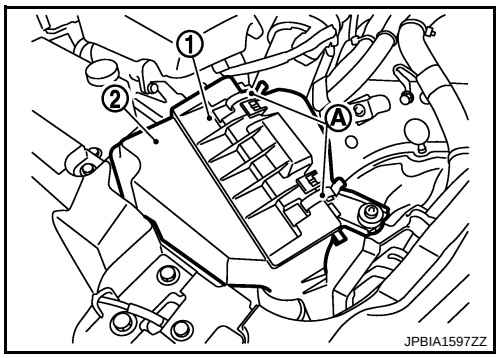
AIR CLEANER FILTER

Removal and Installation

INFOID:0000000004497824

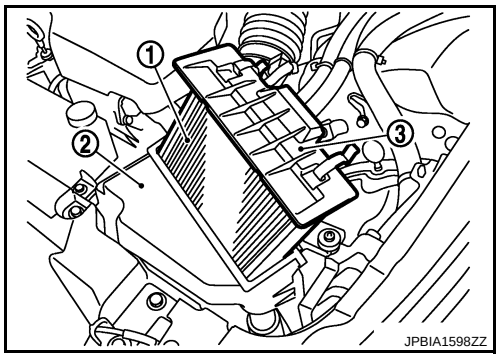
REMOVAL

1. Unhook clips (A).



1 : Holder
2 : Air cleaner case

2. Remove holder (3) from air cleaner case (2), and then remove air cleaner filter (1) from holder.



INSTALLATION

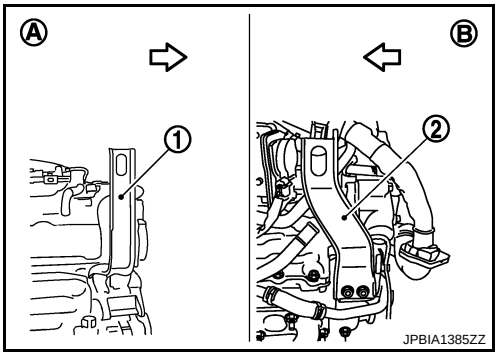
Note the following, and install in the reverse order of removal.

- Install the air cleaner filter by aligning the seal with the notch of air cleaner case.

4. Carefully lower jack, or raise lift to remove the engine, transmission assembly, transfer, front final drive assembly and front suspension member. When performing work, observe the following caution:
   CAUTION:
   - **Confirm there is no interference with the vehicle.**
   - **Check that all connection points have been disconnected.**
   - **Keep in mind that the center of gravity of the vehicle changes. If necessary, use jack(s) to support the vehicle at rear jacking point(s) to prevent it from falling it off the lift.**

Separation Work

1. Install engine slingers into front of cylinder head (bank 1) and rear of cylinder head (bank 2).



1 : Engine front slinger
2 : Engine rear slinger
A : Bank 1
B : Bank 2
⇦ : Engine front

Slinger bolts:

: 28.0 N·m (2.9 kg-m, 21 ft-lb)

2. Remove power steering oil pump from engine side. Refer to ST-48, "FOR MODELS WITHOUT 4WAS AND MODELS EXCEPT SPORT MODELS : Exploded View" (without 4WAS models).
3. Remove engine mounting insulators (RH and LH) under side nuts with power tool.
4. Lift with hoist and separate the engine, transmission assembly, transfer, front final drive assembly and front suspension member.
   CAUTION:
   - **Before and during this lifting, always check any harnesses are left connected.**
   - **Never damage engine mounting insulator and avoid oil/grease smearing or spills onto engine mounting insulator.**
5. Remove alternator. Refer to CHG-27, "AWD : Exploded View".
6. Remove starter motor. Refer toSTR-15, "Exploded View".
7. Remove front propeller shaft from the front final drive assembly side. Refer to DLN-83, "Exploded View".
8. Separate the engine from the transmission assembly. Refer to TM-296, "AWD : Exploded View".
9. Remove the front final drive assembly from oil pan (upper). Refer to DLN-120, "Exploded View".
10. Remove each engine mounting insulator and each engine mounting bracket from the engine with power tool.

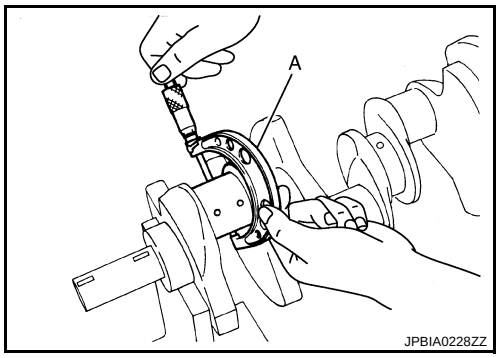
INSTALLATION

Note the following, and install in the reverse order of removal.
- Do not damage engine mounting insulator and do not spill oil on it.
- For a location with a positioning pin, insert it securely into hole of mating part.
- For a part with a specified installation orientation, refer to component figure in EM-73, "AWD : Exploded View".

- If out of the standard, measure the main bearing oil clearance. Then use undersize bearing. Refer to EM-146, "Main Bearing".

CRANKSHAFT PIN JOURNAL DIAMETER

- Measure the outer diameter of crankshaft pin journal with a micrometer (A).

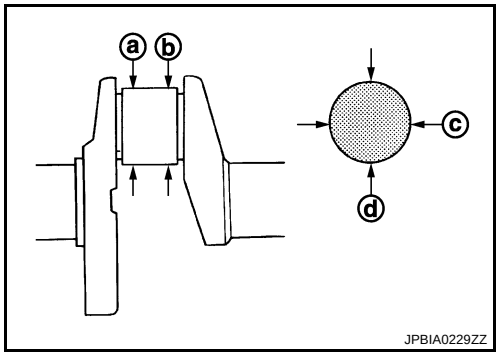


Standard : Refer to EM-153, "Cylinder Block".

- If out of the standard, measure the connecting rod bearing oil clearance. Then use undersize bearing. Refer to EM-143, "Connecting Rod Bearing".

CRANKSHAFT OUT-OF-ROUND AND TAPER

- Measure the dimensions at four different points as shown in the figure on each main journal and pin journal with a micrometer.
- Out-of-round is indicated by the difference in the dimensions between (d) and (c) at (a) and (b).
- Taper is indicated by the difference in the dimensions between.

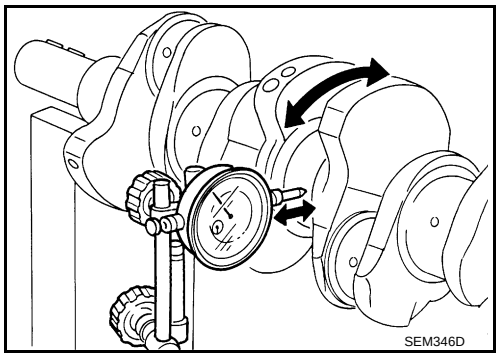


Limit : Refer to EM-153, "Cylinder Block".

- If the measured value exceeds the limit, correct or replace crankshaft.
- If corrected, measure the bearing oil clearance of the corrected main journal and/or pin journal. Then select the main bearing and/or connecting rod bearing. Refer to EM-146, "Main Bearing" and/or EM-143, "Connecting Rod Bearing".

CRANKSHAFT RUNOUT

- Place V-block on precise flat table, and support the journals on both ends of crankshaft.
- Place a dial indicator straight up on the No. 3 journal.
- While rotating crankshaft, read the movement of the pointer on a dial indicator. (Total indicator reading)



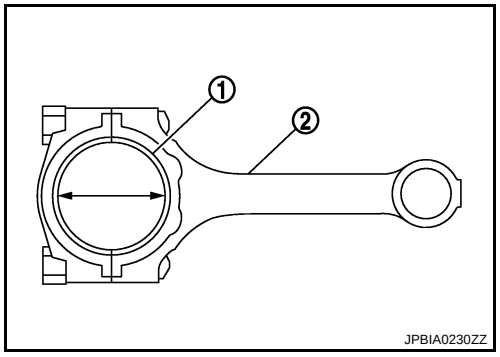
Standard and limit : Refer to EM-153, "Cylinder Block".

- If it exceeds the limit, replace crankshaft.

CONNECTING ROD BEARING OIL CLEARANCE

Method by Calculation

- Install connecting rod bearings (1) to connecting rod (2) and connecting rod cap, and tighten connecting rod bolts to the specified torque. Refer to EM-122, "Disassembly and Assembly" for the tightening procedure.



- Measure the inner diameter of connecting rod bearing with an inside micrometer.

(Oil clearance) = (Connecting rod bearing inner diameter) – (Crankshaft pin journal diameter)

Monitor item [Unit]	Description
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
DOOR SW-BK [On/Off]	**NOTE:** The item is indicated, but not monitored.
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	Off	Stops the position light request signal transmission.
HEAD LAMP	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
	Low	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	Off	Stops the high & low beam request signal transmission.
FR FOG LAMP	On	Transmits the front fog light request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog light request signal transmission.
RR FOG LAMP	On	**NOTE:** The item is indicated, but cannot be tested.
	Off	
DAYTIME RUNNING LIGHT	On	**NOTE:** The item is indicated, but cannot be tested.
	Off	
CORNERING LAMP	RH	**NOTE:** The item is indicated, but cannot be tested.
	LH	
	Off	
ILL DIM SIGNAL	On	**NOTE:** The item is indicated, but cannot be tested.
	Off	

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:0000000004557127

WORK SUPPORT

Service item	Setting item	Setting	
HAZARD ANSWER BACK	Lock Only*	With locking only	Sets the hazard warning lamp answer back function when the door is lock/unlock with the request switch or the key fob.
	Unlk Only	With unlocking only	
	Lock/Unlk	With locking/unlocking	
	Off	Without the function	

*: Factory setting

DATA MONITOR

AUTO LIGHT SYSTEM

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS08FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
83	R	–
84	V	–
89	BR	–
90	P	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6	P	–
7	L	–
91	W	–

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
7A	R	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6	P	–
7	L	–
91	W	–

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
87	GR	–
88	R	–

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW-P

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	O	INPUT 3
8	BR	OUTPUT 5
9	W	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	Y	INPUT 5
14	G	OUTPUT 2

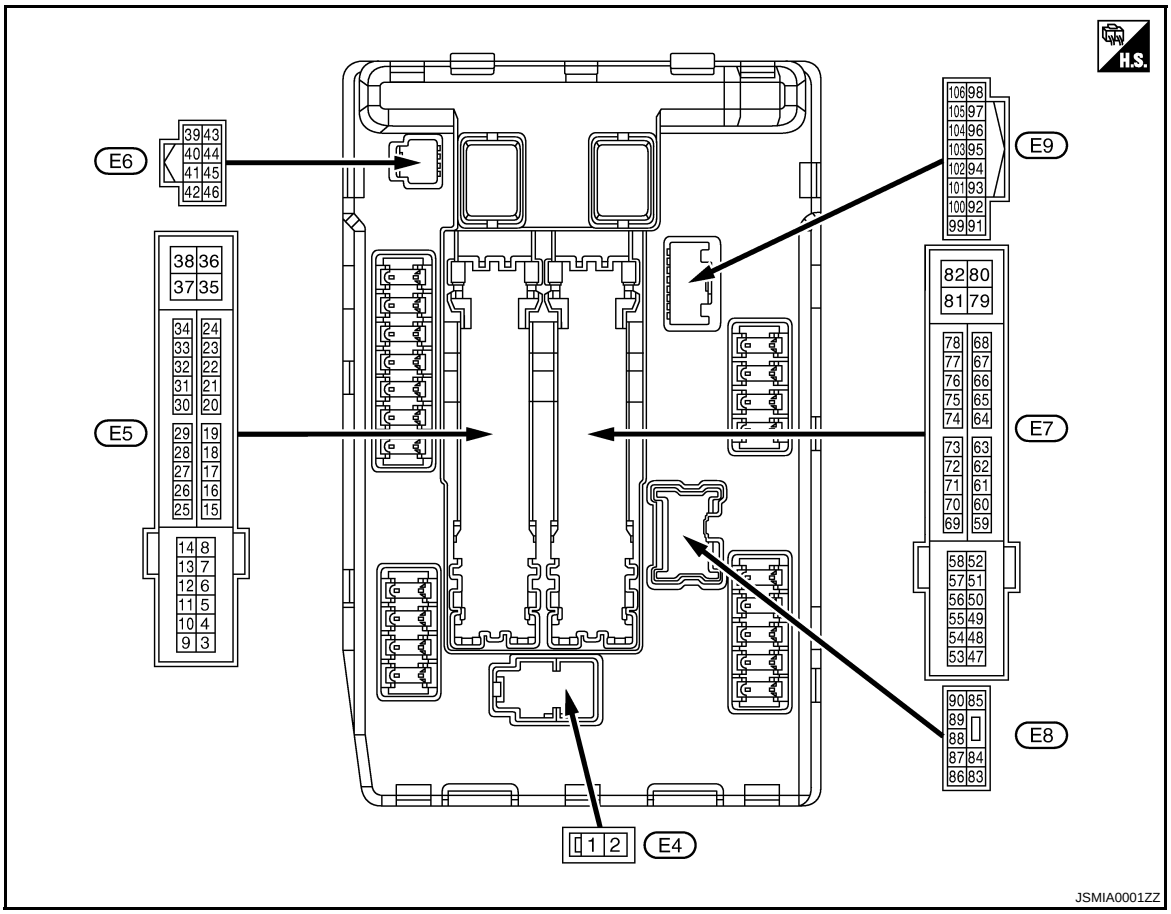
Connector No.	M94
Connector Name	OPTICAL SENSOR
Connector Type	TK03FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	POWER
2	O	OUTPUT
3	B	GND

JCLWA2445GB

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (V)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch LO	Battery voltage
5 (L)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch HI	Battery voltage
7 (R)	Ground	Tail, license plate lamps & interior lamps	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
11 (W)	Ground	Steering lock unit power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B/W)	Ground	Ground	—	Ignition switch ON		0 V

Used to insulate where movement does not occur. Ideal for instrument panel applications.
- 68370-4B000: 15 × 25 mm (0.591 × 0.984 in) pad
- 68239-13E00: 5 mm (0.197 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles.
UHMW (TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.
SILICONE GREASE
Used in place of UHMW tape that is be visible or does not fit. Will only last a few months.
SILICONE SPRAY
Used when grease cannot be applied.
DUCT TAPE
Used to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Inspection Procedure

INFOID:0000000004678249

Refer to Table of Contents for specific component removal and installation information.

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

   These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

   CAUTION:

   Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.

CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the following:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J-43980) to repair the noise.

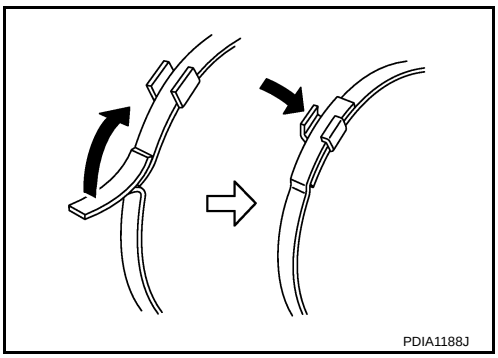
TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer.
In addition look for the following:

1. Trunk lid dumpers out of adjustment

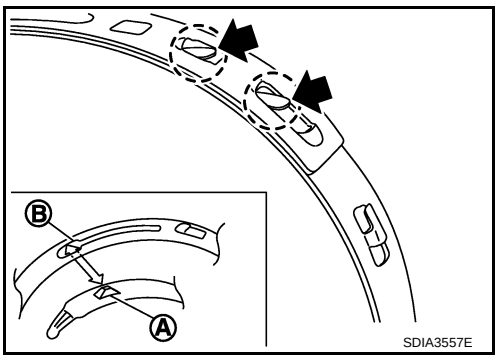
a. For one-touch clamp band

i. Secure the large and small ends of a boot with new boot bands as shown in the figure.



b. For low profile type band

i. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
NOTE:
For the large diameter side, fit projection (A) and guide slit (B) at first.

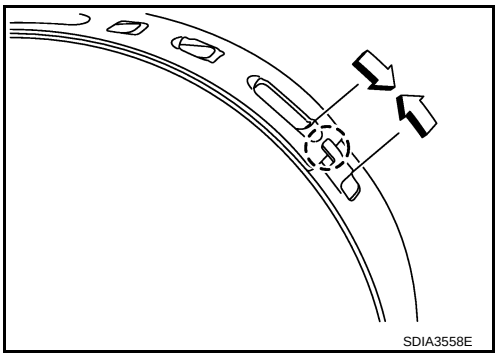


ii. Pinch projection on the band with suitable pliers to tighten band.

iii. Insert tip of band below end of the pawl.

13. Secure housing and shaft, and then make sure that they are in the correct position when rotating boot. Install them with new boot band when the mounting positions become incorrect.

14. Install dust cover to housing. (right side)
CAUTION:
Never reuse dust cover.



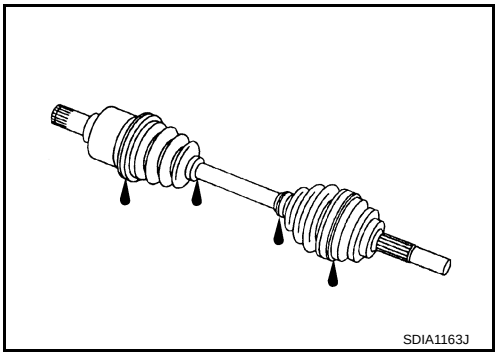
Wheel Side
For further details on the installation procedure, refer to the installation procedure of “Replacement” for the drive shaft boot.

Inspection

INFOID:0000000004511893

INSPECTION AFTER REMOVAL

- Move joint up/down, left/right, and in the axial directions. Check for motion that is not smooth and for significant looseness.
- Check boot for cracks, damage, and leakage of grease.
- Disassemble drive shaft and exchange malfunctioning part if there is a non-standard condition.



INSPECTION AFTER DISASSEMBLY

1. Piston rod lock nut
2. Mounting seal
3. Shock absorber mounting bracket
4. Bound bumper
5. Rubber seat
6. Coil spring
7. Shock absorber
8. Stopper rubber
9. Upper link
10. Steering knuckle
11. Cotter pin
12. Insulator
13. Transverse link
14. Stabilizer bar
15. Stabilizer connecting rod
16. Stabilizer bushing
17. Stabilizer clamp
18. Front cross bar
19. Front suspension member

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000004512019

REMOVAL

1. Remove tire with power tool.
2. Remove under cover with power tool.
3. Remove front cross bar.
4. Separate steering gear assembly and lower joint. Refer to ST-24, "WITHOUT 4WAS : Exploded View".
5. Remove steering outer socket from steering knuckle. Refer to ST-37, "AWD : Exploded View".
6. Remove wheel sensor from steering knuckle. Refer to BRC-102, "FRONT SENSOR ROTOR : Exploded View".
7. Remove shock absorber. Refer to FSU-31, "Exploded View".
8. Remove front stabilizer. Refer to FSU-41, "Exploded View".
9. Install engine slinger, and then hoist engine. Refer to EM-74, "AWD : Removal and Installation".
10. Remove transverse link from front suspension member with power tool. Refer to FSU-36, "Exploded View".
11. Remove steering hydraulic piping bracket and steering gear from front suspension member. Refer to ST-61, "AWD : Exploded View".
12. Set suitable jack front suspension member.
13. Remove mounting nuts between engine mounting insulator and from suspension member. Refer to EM-73, "AWD : Exploded View".
14. Remove mounting bolts and nuts of front suspension member with power tool.
15. Gradually lower jack to remove front suspension assembly from vehicle.

INSTALLATION

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

- Perform final tightening of installation position between front suspension member and transverse links (rubber bushing) under unladen condition with tires on level ground.

Inspection

INFOID:0000000004512020

INSPECTION AFTER REMOVAL

Check the front suspension member for significant deformation, cracks, or damages. Replace if necessary.

INSPECTION AFER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-101, "Exploded View".
2. Check wheel alignment. Refer to FSU-30, "Inspection".
3. Adjust the neutral position of the steering angle sensor. Refer to BRC-8, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement".

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SILICONE GREASE
Used in place of UHMW tape that is visible or does not fit. Only lasts a few months.
SILICONE SPRAY
Used when grease cannot be applied.
DUCT TAPE
Used to eliminate movement.

CONFIRM THE REPAIR

After repair is complete, test drive the vehicle to confirm that the cause of noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Inspection Procedure

INFOID:0000000004676919

Refer to Table of Contents for specific component removal and installation information.

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint
   These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.
   CAUTION:
   Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.

CENTER CONSOLE

Components to check include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Check the following items:

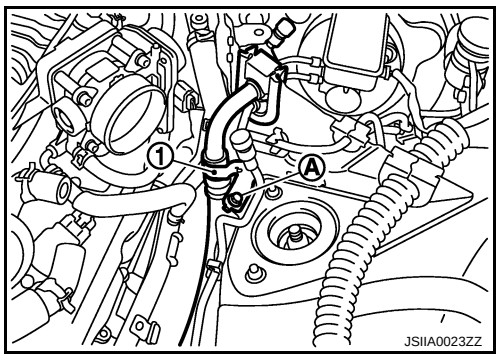
1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon connection to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping, moving the components, or pressing on them while driving to duplicate the conditions can isolate many of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-43980) to repair the noise.

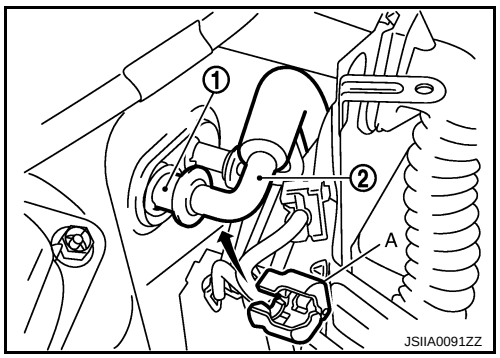
TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer.
In addition check for the following items:

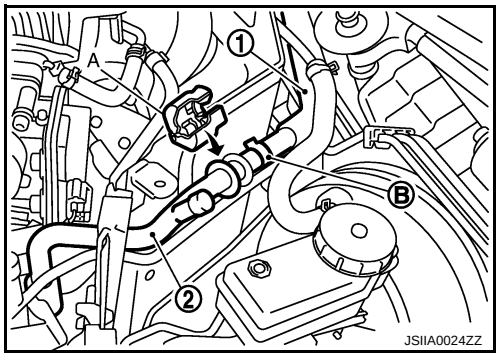
5. Remove mounting bolt (A) from low-pressure flexible hose bracket (1).



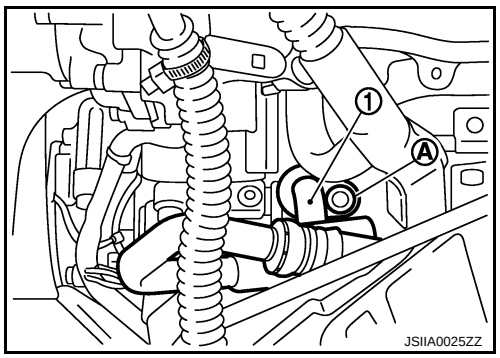
6. Disconnect one-touch joint between low-pressure pipe 1 (1) and low-pressure pipe 2 (2) with disconnector (A) (SST: J-45815).
CAUTION:
Cap or wrap the joint of the A/C piping with suitable material such as vinyl tape to avoid the entry of air.



7. Disconnect one-touch joint between low-pressure pipe 2 (1) and low-pressure flexible hose (2) with disconnector (A) (SST: J-45815).
CAUTION:
Cap or wrap the joint of the A/C piping with suitable material such as vinyl tape to avoid the entry of air.
8. Remove low-pressure pipe 2 clip (B).
9. Remove low-pressure pipe 2.



10. Remove mounting nut (A) from low-pressure flexible hose (1).
CAUTION:
Cap or wrap the joint of the A/C piping and compressor with suitable material such as vinyl tape to avoid the entry of air.
11. Remove low-pressure flexible hose.



INSTALLATION

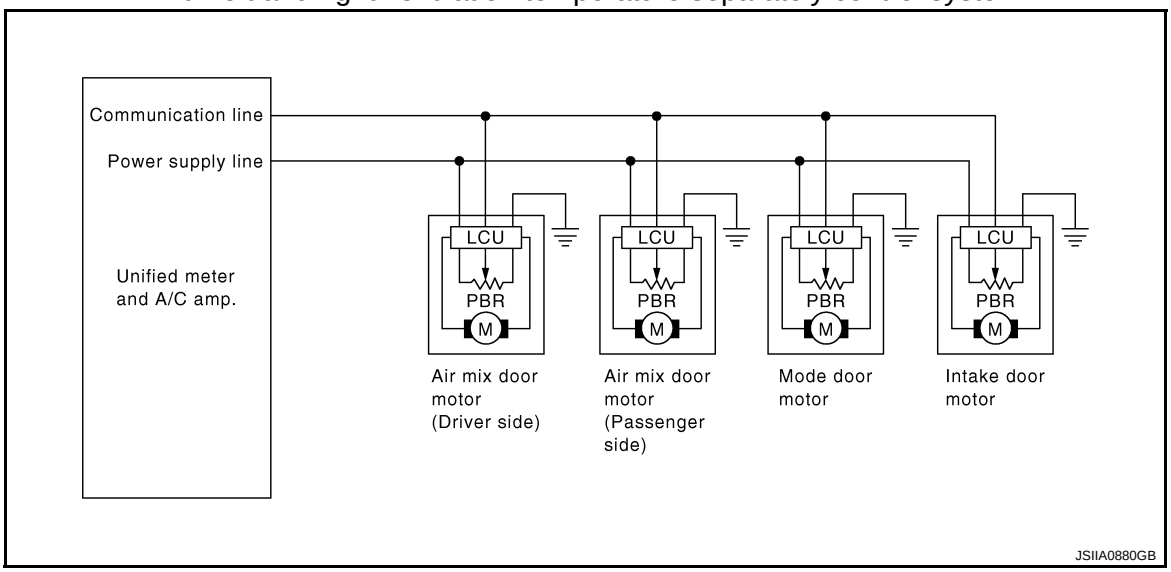
Installation is basically the reverse order of removal.

CAUTION:

- **Replace O-rings with new ones. Then apply compressor oil to them when installing.**
- **Female-side piping connection is thin and easy to deform. Slowly insert the male-side piping straight in axial direction.**
- **Insert piping securely until a click is heard.**
- **After piping connection is completed, pull male-side piping by hand to check that connection does not come loose.**
- **Check for leakages when recharging refrigerant.**

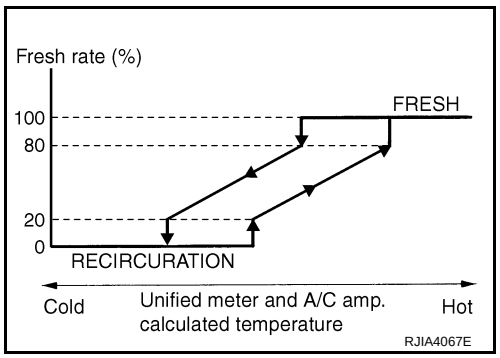
HIGH-PRESSURE FLEXIBLE HOSE

With left and right ventilation temperature separately control system



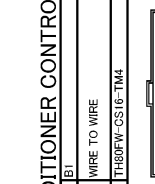
Intake Door Control Specification

- Intake door position is basically fixed at FRE when FRE indicator of intake switch is ON or DEF switch is ON.
- Intake door position is basically fixed at REC when REC indicator of intake switch is ON.
- Intake door automatic control selects FRE, 20 - 80% FRE, or REC depending on a target air mix door opening angle, based on in-vehicle temperature, ambient temperature, and sunload.



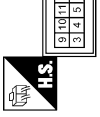
AIR CONDITIONER CONTROL

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



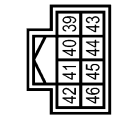
Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



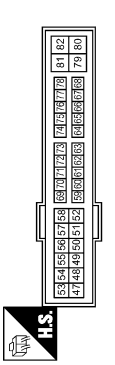
Terminal No.	Color of Wire	Signal Name [Specification]
12	B/W	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
48	L	–

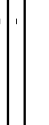
Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ6

Terminal No.	Color of Wire	Signal Name [Specification]
13	L	–

Connector No.	E76
Connector Name	AMBIENT SENSOR
Connector Type	RS02FB

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	P	–

Connector No.	E77
Connector Name	REFRIGERANT PRESSURE SENSOR
Connector Type	RK03FB



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	L	–
3	W	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

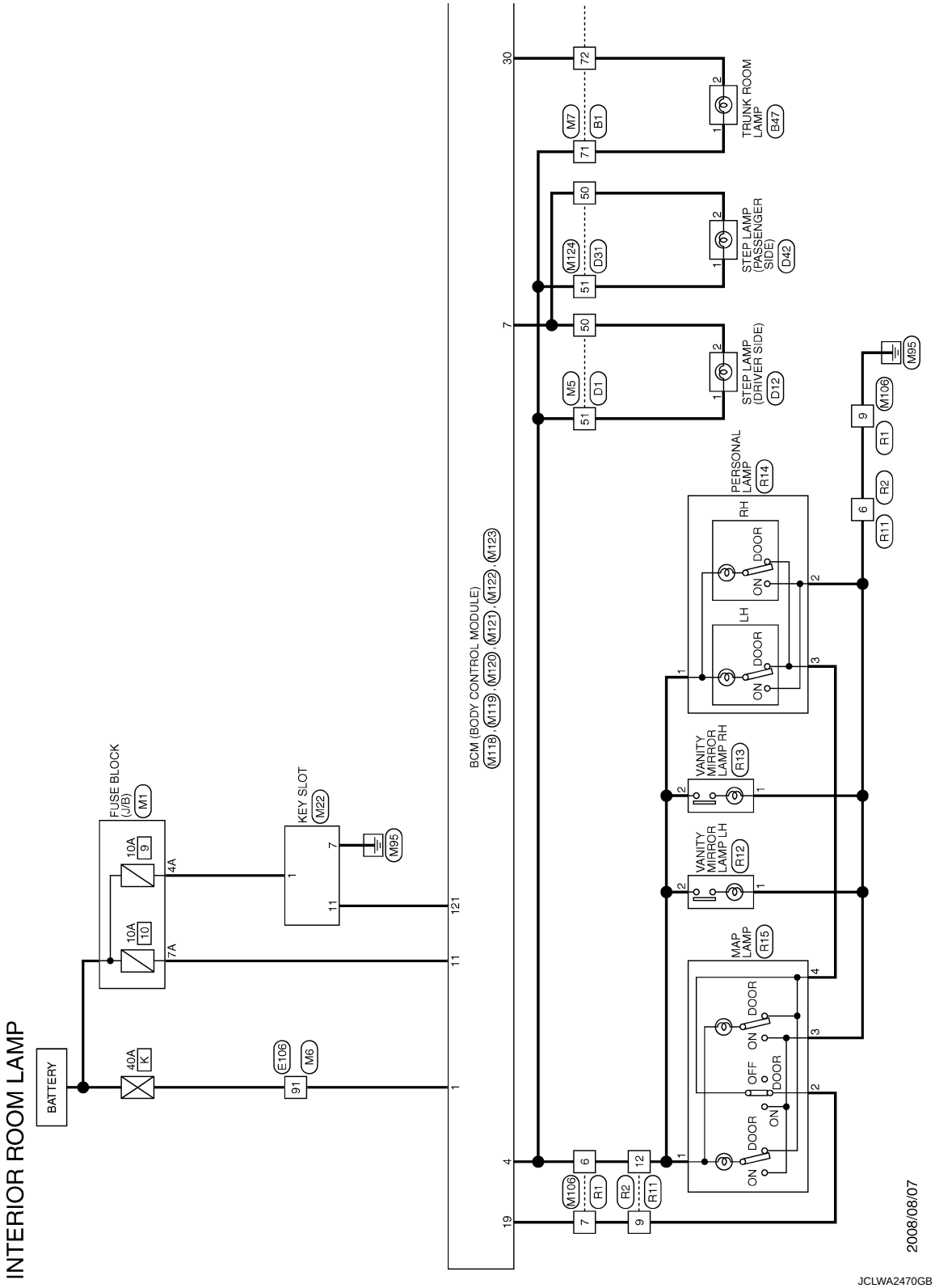
Terminal No.	Color of Wire	Signal Name [Specification]
6	P	–
7	L	–
81	P	–
82	G	–
83	V	–
84	L	–
85	W	–

JCIWA0272GB

INTERIOR ROOM LAMP CONTROL SYSTEM

Wiring Diagram - INTERIOR ROOM LAMP -

INFOID:0000000004239780



METER

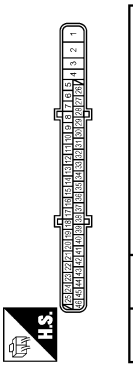
Connector No.	E32
Connector Name	WASHER LEVEL SWITCH
Connector Type	Z02FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	B	–

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SH28

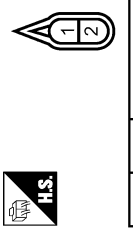
Terminal No.	Color of Wire	Signal Name [Specification]
21	SB	–

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BAA42FB-AH24-LH



Terminal No.	Color of Wire	Signal Name [Specification]
14	P	CAN-L
35	L	CAN-H

Connector No.	E47
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Type	YY02FGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	B	–

Connector No.	E51
Connector Name	ICC BRAKE HOLD RELAY
Connector Type	MS02FL-M2

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
2	SB	–
3	L	–
5	W	–

Connector No.	E67
Connector Name	ICC SENSOR INTEGRATED UNIT
Connector Type	RS06FB-PR

Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	BRAKE HOLD RLY DRIVE SIGNAL
3	L	CAN-H
6	P	CAN-L

Connector No.	E76
Connector Name	AMBIENT SENSOR
Connector Type	RS02FB

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	P	–

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
8F	L	–

JCNWA1728GE

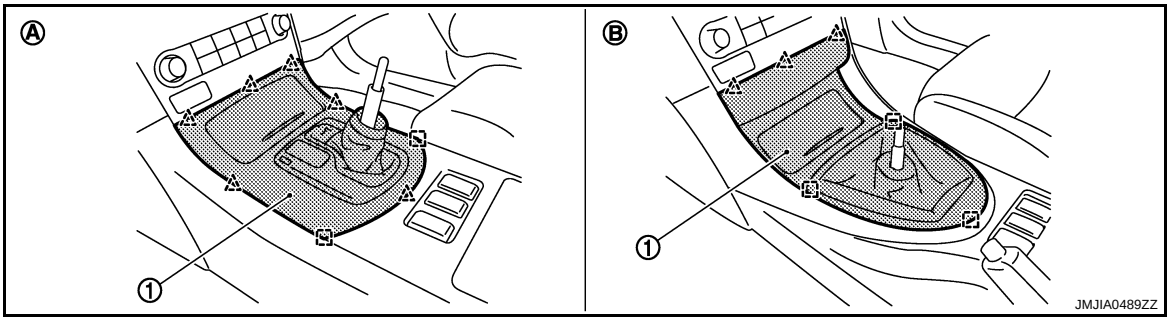
Body side welt RH	[26]			
Front pillar garnish RH	[27]			
Instrument side finisher RH	[28]			
Instrument lower cover	[29]			
Glove box assembly	[30]			
Instrument lower panel RH	[31]			
Instrument finisher B	[32]			
Instrument side panel RH	[33]			
Instrument panel assembly	[34]			

[ ]: Number indicates step in removal procedures.

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

REMOVAL

1. Put selector lever in drive position. (7AT Models only)
2. Remove selector lever knob. (7AT Models only)
   - Refer to TM-276, "2WD : Exploded View". (2WD models)
   - Refer to TM-278, "AWD : Exploded View". (AWD models)
3. Remove shift lever knob. (6MT Models only) Refer to TM-18, "Exploded View".
4. Remove console finisher.

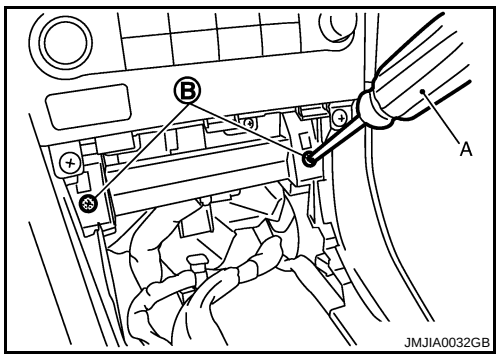


(A) Console finisher (7AT models) (B) Console finisher (6MT models)

- Remove clips from rear of console finisher (1), and then remove pawl of front.
- Pull console finisher (1) upward to disengage from center console.
- Disconnect harness connectors.

: Pawl
: Metal clip

5. Remove screws (B) of center console front side with screw driver (A).



MAIN LINE BETWEEN ADP AND ABS CIRCUIT

Diagnosis Procedure

INFOID:0000000004457899

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 B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

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 B1 and M7.
2. Check the continuity between the harness connector terminals.

Connector No.	Terminal No.		Continuity
B1	20	22	Existed
	21	23	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair the main line between the driver seat control unit and the harness connector B1.

3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the harness connectors M6 and E106.
2. Check the continuity between the harness connectors.

Harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
M7	22	M6	7	Existed
	23		6	Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair the main line between the harness connector M7 and M6.

4.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the connector of ABS actuator and electric unit (control unit).
2. Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness connector		ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E106	7	E41	35	Existed
	6		14	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 driver seat control unit and the ABS actuator and electric unit (control unit).

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000004457939

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.		
M37	1	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-83, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-107, "Exploded View".
YES (Past error)>>Error was detected in the steering angle sensor branch line.
NO >> Repair the power supply and the ground circuit.

IPDM-E BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000004458006

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 IPDM E/R 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 IPDM E/R.
2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector			Resistance (Ω)
Connector No.	Terminal No.		
E6	40	39	Approx. 108 – 132

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair the IPDM E/R branch line.

3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-18, "Diagnosis Procedure".

Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-33, "Exploded View".
YES (Past error)>>Error was detected in the IPDM E/R branch line.
NO >> Repair the power supply and the ground circuit.

DLC BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000004458059

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 data link connector for damage, bend and loose connection (connector side and harness side).

Is the inspection result normal?

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

2.CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector			Resistance (Ω)
Connector No.	Terminal No.		
M24	6	14	Approx. 54 – 66

Is the measurement value within the specification?

YES (Present error)>>Check CAN system type decision again.
YES (Past error)>>Error was detected in the data link connector branch line circuit.
NO >> Repair the data link connector branch line.

STRG BRANCH LINE CIRCUIT

Diagnosis Procedure

INFOID:0000000004458114

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.		
M37	1	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-83, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-107, "Exploded View".
YES (Past error)>>Error was detected in the steering angle sensor branch line.
NO >> Repair the power supply and the ground circuit.

Between unified meter and A/C amp. and combination meter.

Unit	Communication line	Input from combination meter	Output to combination meter
Unified meter and A/C amp.	Communication line (METER <-> AMP.)	• Parking brake switch signal • Washer level switch signal • Meter day/night condition signal • Illumination control switch signal • Refuel status signal • Low fuel warning lamp signal • Odo data signal	• Vehicle speed signal • Turn indicator signal • High beam request signal • Front fog light request signal • Engine speed signal • Fuel level sensor signal • Engine coolant temperature signal • A/T CHECK indicator signal • Oil pressure switch signal • Door switch signal • Buzzer output signal • AFS OFF indicator lamp signal • Tire pressure signal • AWD warning lamp signal • VDC OFF indicator signal • ABS warning lamp signal • Brake warning lamp signal • Malfunction indicator lamp signal • 4WAS warning lamp signal • Master warning signal • AWD warning lamp signal
	Communication line (LCD <-> AMP.)	• Average fuel consumption reset signal • Travel time reset signal • Possible driving distance reset signal • Average vehicle speed reset signal • Select switch signal • Enter switch signal • Trip A/B reset switch signal • Ambient air temperature display signal	• Shift position signal • Meter display signal • Door switch signal • Trunk switch signal • Fuel level sensor signal • Parking brake switch signal • Washer level switch signal • Charge warning signal • Instantaneous fuel consumption display signal • Ambient air temperature display signal • Average fuel consumption display signal • Average vehicle speed display signal • Possible driving distance display signal • Engine speed signal • Vehicle speed signal

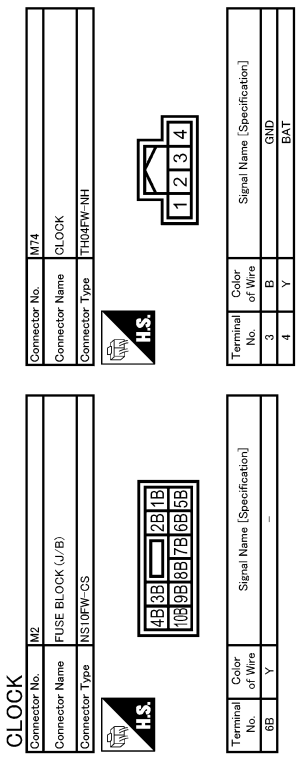
IPDM E/R

- IPDM E/R reads the ON/OFF signals of the oil pressure switch and transmits the oil pressure switch signal to the unified meter and A/C amp. via BCM with the CAN communication line.
- IPDM E/R is equipped with the diagnosis function. It can perform the operation check of oil pressure warning lamp with the auto active test and the diagnosis with CONSULT-III.

METER CONTROL FUNCTION LIST

X: Applicable

System		Description	Signal source	Via unified meter and A/C amp.
Meter/gauge	Speedometer	Receives vehicle speed signal and indicates vehicle speed.	ABS actuator and electric unit (control unit)	X
	Tachometer	Receives engine speed signal and indicates engine speed.	ECM	X
	Fuel gauge	Receives fuel level sensor signal and indicates fuel level.	Fuel level sensor unit	X
	Engine coolant temperature gauge	Receives engine coolant temperature signal and indicates coolant temperature.	ECM	X



JCNWA1735GE

METER CONTROL SWITCH

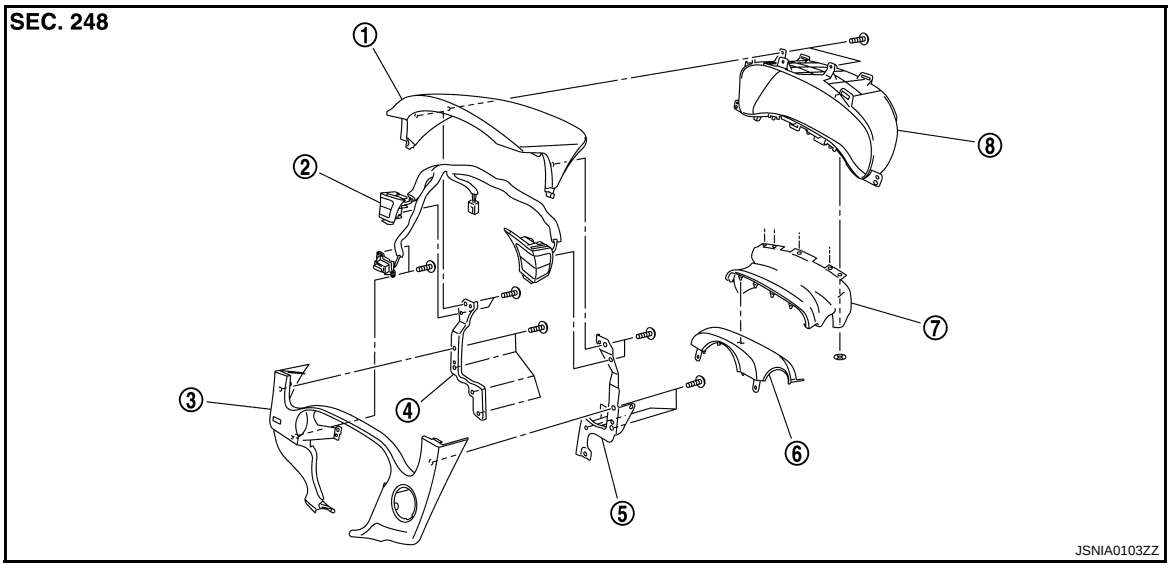
Exploded View

INFOID:0000000004534582

REMOVAL

Refer to IP-11, "Exploded View".

DISASSEMBLY



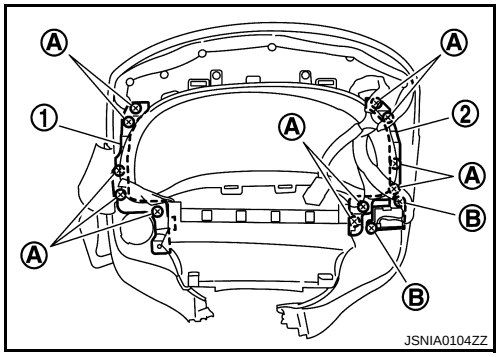
1. Cluster lid A
2. Meter control switch
3. Cluster lid A under cover
4. Bracket (LH)
5. Bracket (RH)
6. Steering column cover upper
7. Steering column blind
8. Meter housing

Removal and Installation

INFOID:0000000004534583

REMOVAL

1. Remove combination meter.
2. Remove screws (A) and remove bracket RH (1), LH (2).
3. Remove screws (B) and remove meter control switch.



INSTALLATION

Install in the reverse order of removal.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000004684001

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-28, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000004684002

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000004684003

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result”.

Is DTC “U1000” displayed?

YES >> Refer to LAN-19, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-41, "Intermittent Incident".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer-ence page
C1708: [NO DATA] FL	—	—	—	×	WT-19
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1712: [CHECKSUM ERR] FL	—	—	—	×	WT-21
C1713: [CHECKSUM ERR] FR	—	—	—	×	
C1714: [CHECKSUM ERR] RR	—	—	—	×	
C1715: [CHECKSUM ERR] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-24
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1720: [CODE ERR] FL	—	—	—	×	WT-26
C1721: [CODE ERR] FR	—	—	—	×	
C1722: [CODE ERR] RR	—	—	—	×	
C1723: [CODE ERR] RL	—	—	—	×	
C1724: [BATT VOLT LOW] FL	—	—	—	×	WT-29
C1725: [BATT VOLT LOW] FR	—	—	—	×	
C1726: [BATT VOLT LOW] RR	—	—	—	×	
C1727: [BATT VOLT LOW] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-32
C1734: CONTROL UNIT	—	—	—	×	WT-33

IGNITION POWER SUPPLY

Connector No.	D3
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH12MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
4	V	–

Connector No.	D31
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

Terminal No.	Color of Wire	Signal Name [Specification]
52	L	–

Connector No.	D33
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH12MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
4	L	–

Connector No.	E1
Connector Name	FUSIBLE LINK HOLDER
Connector Type	L02FBR-MC

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–

Connector No.	E2
Connector Name	FUSIBLE LINK HOLDER
Connector Type	L02FGY-MC

Terminal No.	Color of Wire	Signal Name [Specification]
3	L	–
4	R	–

Connector No.	E4
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	L02FB-MC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	L	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V

Terminal No.	Color of Wire	Signal Name [Specification]
4	V	–
5	L	–
12	B/W	–
13	Y	–
16	LG	–
19	R	–
25	G	–
26	Y	–
27	O	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–

JCMWA3094GE

Component	Function
Rear power window switch	• Controls anti-pinch operation of power window. • Controls power window motor of rear right and left doors.
Power window motor	• Integrates the ENCODER and WINDOW MOTOR. • Starts operating with signals from each power window switch. • Transmits power window motor rotation as a pulse signal to power window switch.
Front door lock assembly (door key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch	Detects door open/close condition and transmits to BCM.
Remote keyless entry receiver	Receives lock/unlock signal from the intelligent Key, and then transmits to BCM.

Priority	DTC
1	B2562: LOW VOLTAGE
2	• U1000: CAN COMM • U1010: CONTROL UNIT(CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26E8: CLUTCH SW • B26E9: S/L STATUS • B26EA: KEY REGISTRATION • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG

(+)		(–)	Condition		Voltage (V) (Approx.)
Front power window motor (passenger side)					
Connector	Terminal				
D40	1	Ground	Front power window switch (passenger side)	UP	Battery voltage
				DOWN	0
	2			UP	0
				DOWN	Battery voltage

Is the measurement value within the specification?

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

2.CHECK POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector.

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D38	9	D40	1	Existed
	8		2	

4. Check continuity between front power window switch (passenger side) connector and ground.

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D38	8		Not existed
	9		

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-117, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).
Refer to PWC-135, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace front power window motor (passenger side). Refer to GW-16, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

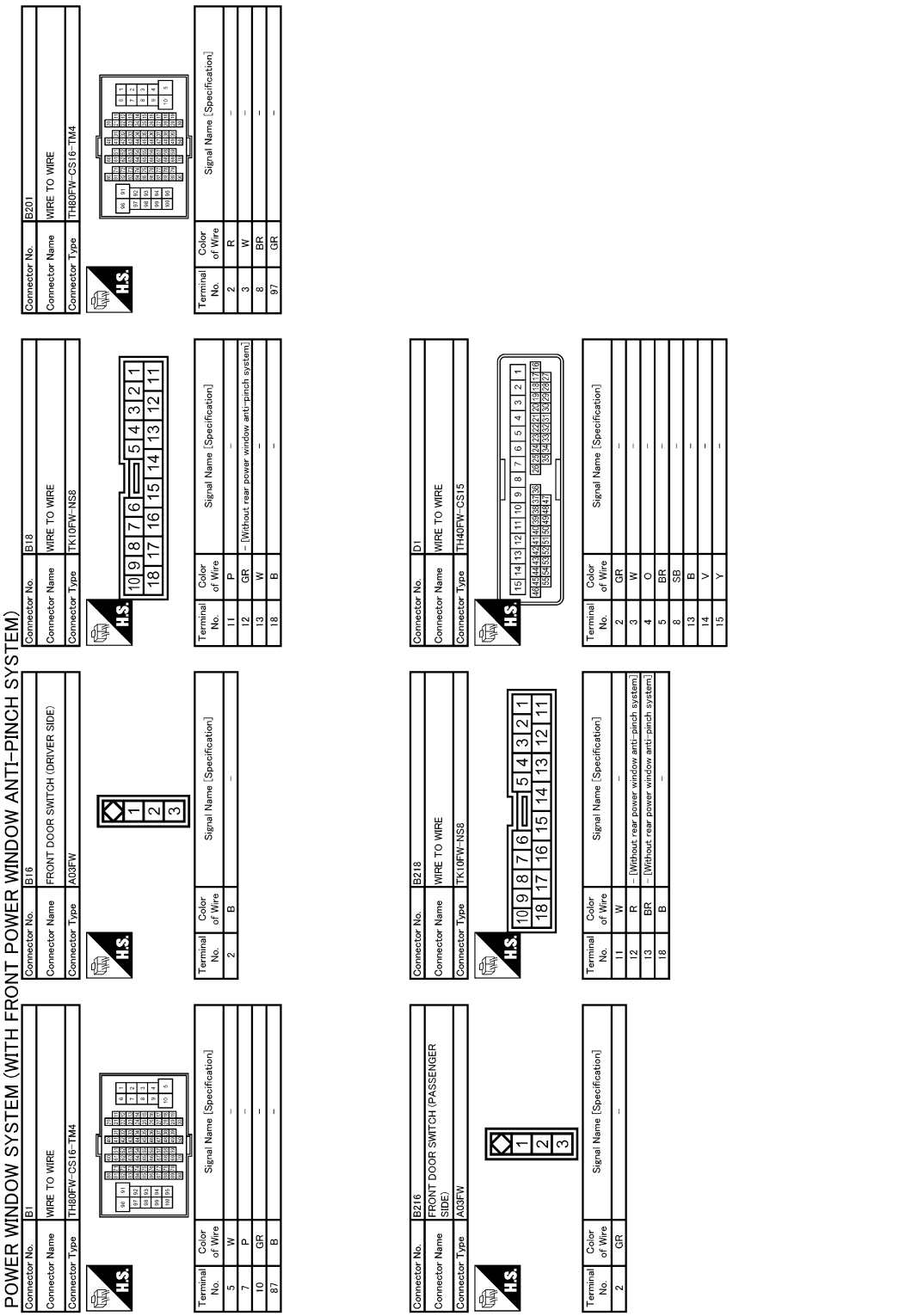
PASSENGER SIDE : Component Inspection

INFOID:0000000004240705

1.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Disconnect front power window motor (passenger side) connector.
3. Check motor operation by connecting the battery voltage directly to front power window motor (passenger side) terminals.

POWER WINDOW SYSTEM (WITH FRONT POWER WINDOW ANTI-PINCH SYSTEM)



JCKWA1894GE

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	**NOTE:** The item is indicated, but not monitored.	Off
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK	Off
	Driver door key cylinder LOCK	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK	Off
	Driver door key cylinder LOCK	On
KEY CYL SW-TR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	**NOTE:** The item is indicated, but not monitored.	Off
H/L WASH SW	**NOTE:** The item is indicated, but not monitored.	Off
TR CANCEL SW	Trunk lid opener cancel switch OFF	Off
	Trunk lid opener cancel switch ON	On
TR/BD OPEN SW	Trunk lid opener switch OFF	Off
	While the trunk lid opener switch is turned ON	On
TRNK/HAT MNTR	Trunk lid closed	Off
	Trunk lid opened	On
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	TRUNK OPEN button of the Intelligent Key is not pressed	Off
	TRUNK OPEN button of the Intelligent Key is pressed	On
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off
	PANIC button of the Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On

5. Remove grip bracket.
6. Remove sunroof bracket bolts.
7. Remove nuts from the front end and side rail, and then remove sunroof unit assembly from roof panel.
8. Remove sunroof unit assembly through the passenger compartment while being careful not to damage the seats and trim.

INSTALLATION

1. Temporarily tighten the mounting bolts to the sunroof brackets (RH/LH).
2. Bring sunroof unit into passenger compartment, and then place the rear end of the rail onto the sunroof brackets.
3. Temporarily tighten the mounting nuts to the front end of sunroof unit assembly.
4. Tighten the installation points diagonally excluding the installation point of the sunroof bracket around the roof opening.
5. Tighten the sunroof bracket bolts of the vehicle side, and then tighten the bolt of the rail side.
6. Tighten the mounting nuts to the front end and side rail.
7. Install the grip bracket.
8. Install the sunroof motor assembly. Refer to RF-73, "Removal and Installation".
9. Install glass lid. Refer to RF-71, "Removal and Installation".
10. Install side trim.
11. Connect drain hoses.
12. Install headlining. Refer to INT-25, "SUNROOF : Removal and Installation".

Disassembly and Assembly

INFOID:0000000004240808

DISASSEMBLY

1. Remove sunshade stopper mounting from the rear end of sunroof frame.
2. Remove rear drain assembly from sunroof guide assembly.
3. Remove sunshade from the rear end of sunroof frame.

ASSEMBLY

Assemble in the reverse order of disassembly.

B2454 MOTOR PWR SUP CIRC

Description

INFOID:0000000004683926

- When control unit activates pre-crush seat belt system, it retracts the shoulder belt with the electric motor and reduces seat belt slack.
- Power supply is supplied constantly from battery power supply.

DTC Logic

INFOID:0000000004683927

DTC DETECTION LOGIC

DTC No.	Self-diagnosis item	DTC Detection Condition	Possible causes
B2454	SEAT BLT PWR DR CIRC	Motor power supply circuit is open or shorted	• Open circuit and short circuit to ground in drive circuit power supply harness • Pre-crash seat belt control unit

DTC CONFIRMATION PROCEDURE

1.SELF-DIAGNOSIS WITH PRE-CRASH SEAT BELT CONTROL UNIT

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to SBC-18, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004683928

1.CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
2	Battery power supply	G

Is the inspection result normal?

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

2.CHECK PRE-CRASH SEAT BELT MOTOR POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect pre-crash seat belt control unit connector.
3. Check voltage between pre-crash seat belt control unit harness connector and ground.

Pre-crash seat belt control unit		Ground	Voltage (V) (Approx.)
Connector	Terminal		Battery voltage
M110	2		

Is the inspection result normal?

YES >> Replace pre-crash seat belt control unit. Refer to SBC-37, "Removal and Installation".
NO >> Repair or replace harness between pre-crash seat belt control unit and fusible link.

Tilt and telescopic sensor		Ground	Continuity
Connector	Terminal		
M48	4		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace automatic drive positioner. Refer to SE-127, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

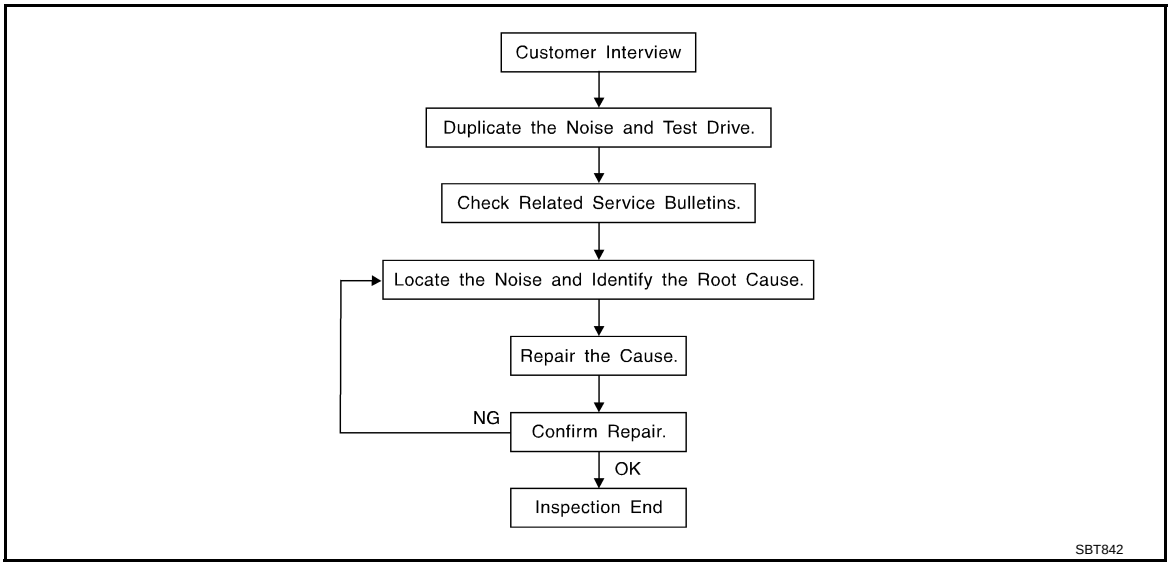
Check intermittent incident.
Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000004684735



CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any of customer's comments; refer to SE-107, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, perform a diagnosis and repair the noise that the customer is concerned about. This can be accomplished by performing a cruise test on the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak – (Like tennis shoes on a clean floor)
  Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces = higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping
- Creak – (Like walking on an old wooden floor)
  Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle – (Like shaking a baby rattle)
  Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock – (Like a knock on a door)
  Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick – (Like a clock second hand)
  Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump – (Heavy, muffled knock noise)
  Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz – (Like a bumblebee)
  Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending up on the person. A noise that a technician may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when the repair is reconfirmed.

Monitor item	Description
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side and passenger side) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. • MODE 1: 0.5 sec. • MODE 2: Non-operation • MODE 3: 1.5 sec.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. • MODE 1: 3 sec. • MODE 2: Non-operation • MODE 3: 5 sec.
TRUNK OPEN DELAY	Trunk button pressing on Intelligent Key button can be selected as per the following in this mode. • MODE 1: Press and hold • MODE 2: Press twice • MODE 3: Press and hold, or press twice
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode. • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK/UNLOCK: Lock/unlock operation • OFF: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. • Horn chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.

SELF-DIAG RESULT

Refer to SEC-188, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.

B26E9 STEERING STATUS

Description

INFOID:0000000004652292

There are 2 switches in the steering lock unit (steering lock/unlock switch 1 and 2). BCM compares the 2 switch conditions to judge the present steering status.

DTC Logic

INFOID:0000000004652293

DTC DETECTION LOGIC

NOTE:
If DTC B26E9 is displayed with DTC B2609, first perform the trouble diagnosis for DTC B2609. Refer to SEC-82, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E9	S/L STATUS	BCM requests lock to steering lock unit, then steering lock unit transmits a recognition signal to BCM, but steering lock unit remains unlocked.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait 1 second or more.
4. Turn ignition switch ON.
5. Check “Self-diagnostic result” using CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-92, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004652294

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self-diagnostic result” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC Confirmation Procedure.
   Refer to SEC-92, "DTC Logic".

Is the DTC B26E9 displayed again?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform DTC confirmation procedure. Refer to SEC-92, "DTC Logic".

Is the DTC B26E9 displayed again?

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

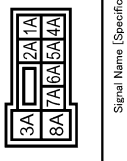
3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

VEHICLE SECURITY SYSTEM

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

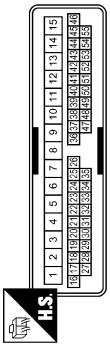


Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
7A	R	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

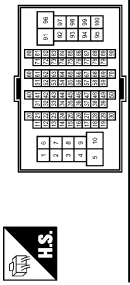
Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	V	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

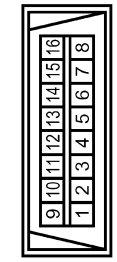


Terminal No.	Color of Wire	Signal Name [Specification]
6	P	–
7	L	–
91	W	–

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

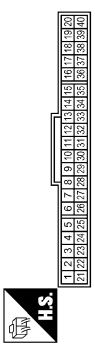
Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
85	O	–
87	GR	–
88	R	–

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW-P



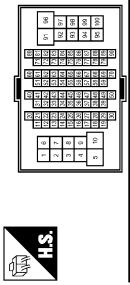
Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
10	R	SECURITY SIGNAL
21	R	IGNITION SIGNAL

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	–
98	BR	–

JCKWA1877GE

REMOVAL AND INSTALLATION

KEY SLOT

Exploded View

INFOID:0000000004240548

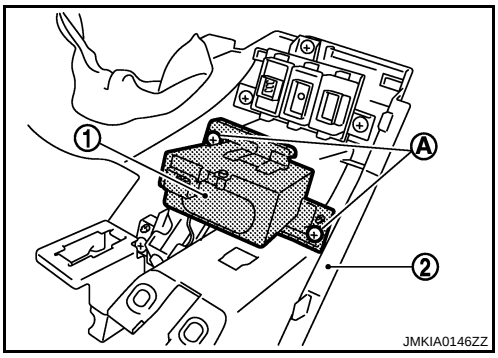
Refer to IP-11, "Exploded View".

Removal and Installation

INFOID:0000000004240549

REMOVAL

1. Remove the instrument driver lower panel (2). Refer to IP-12, "Removal and Installation".
2. Disconnect key slot connector.
3. Remove the key slot mounting screw (A), and then remove key slot (1) from instrument driver lower panel (2).



INSTALLATION

Install in the reverse order of removal.

B1023 PASS A/B INDCTR CKT

Description

INFOID:0000000004675956

Suppresses the deployment of front passenger air bag when the condition of passenger seat is empty or occupied with a child and child-seat. Also illuminates front passenger air bag OFF indicator lamp when the condition of passenger seat is occupied with a child-seat and child. In case of malfunction the blinking of the air bag warning lamp reports the malfunction to driver, and by the on board self-diagnosis system or CONSULT-III can detect the cause.

OPERATION

Illuminates front passenger air bag OFF indicator when the passenger seat is empty or occupied by a child or a child-seat.

STRUCTURE

Front passenger air bag OFF indicator with LED illumination.

INSTALLATION

Front passenger air bag OFF indicator is installed at the instrument panel center.

DTC Logic

INFOID:0000000004675957

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B1023	PASS A/B INDCTR CKT [UNIT FAIL]	Passenger air bag OFF indicator circuit is open or shorted to ground or the circuits are shorted each other	• Disconnection of wiring harness • Malfunction in front passenger air bag OFF indicator • Malfunction in air bag diagnosis sensor unit

DTC CONFIRMATION PROCEDURE

1.CHECK SELF-DIAG RESULT

With CONSULT-III
1. Turn ignition switch ON.
2. Perform “AIR BAG” Self Diagnostic Result CONSULT-III.

Without CONSULT-III
1. Turn ignition switch ON.
2. Check the air bag warning lamp status. Refer to SRC-15, "Air Bag Warning Lamp Diagnosis".

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

Is malfunctioning part detected?

YES >> Refer to SRC-33, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004675958

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

DIAGNOSTIC PROCEDURE

1.CHECK HARNESS CONNECTOR

Check the connection of harness connector.

Is the inspection result normal?

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

NO >> Replace wiring harness.

3. REPLACE FRONT SIDE AIR BAG MODULE

1. Replace front RH side air bag module. Refer to SE-112, "Exploded View".
2. Perform DTC confirmation procedure. Refer to SRC-93, "DTC Logic".

Is DTC detected?

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

4. REPLACE AIR BAG DIAGNOSIS SENSOR UNIT

1. Replace air bag diagnosis sensor unit. Refer to SR-24, "Exploded View".
2. Perform DTC confirmation procedure. Refer to SRC-93, "DTC Logic".

Is DTC detected?

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

PERIODIC MAINTENANCE

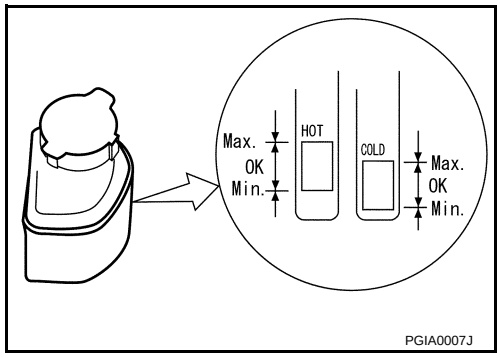
POWER STEERING FLUID

Inspection

INFOID:0000000004499466

FLUID LEVEL

1. Check fluid level with engine stopped.
2. Ensure that fluid level is between MIN and MAX.
3. Fluid levels at HOT and COLD are different. Do not confuse them.



HOT : Fluid temperature 50 – 80°C (122 – 176°F)
COLD : Fluid temperature 0 – 30°C (32 – 86°F)

Recommended fluid : Refer to MA-10, "Fluids and Lubricants".

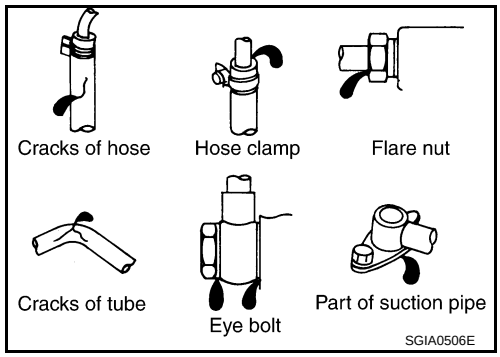
Fluid capacity : Refer to ST-62, "General Specifications".

CAUTION:
- **The fluid level should not exceed the MAX line. Excessive fluid causes fluid leakage from the cap.**
- **Never reuse drained power steering fluid.**

FLUID LEAKAGE

- Check hydraulic connections for fluid leakage, cracks, damage, looseness, or wear.

1. Run engine until the fluid temperature reaches 50 to 80°C (122 to 176°F) in reservoir tank, and keep engine speed idle.
2. Turn steering wheel several times from full left stop to full right stop.
3. Hold steering wheel at each lock position for five seconds and carefully, check for fluid leakage.
   CAUTION:
   Never hold the steering wheel in a locked position for more than 10 seconds. (There is the possibility that power steering oil pump assembly may be damaged.)



4. If fluid leakage at connections is noticed, then loosen flare nut and then retighten. Do not overtighten connector as this can damage O-ring, washer and connector.
5. If fluid leakage from oil pump is noticed, check oil pump. Refer to ST-52, "FOR MODELS WITHOUT 4WAS AND MODELS EXCEPT SPORT MODELS : Inspection" (Without 4WAS), ST-57, "FOR MODELS WITH 4WAS AND SPORT MODELS : Inspection" (With 4WAS).
6. Check steering gear boots for accumulation of fluid indicating from steering gear.

AIR BLEEDING HYDRAULIC SYSTEM

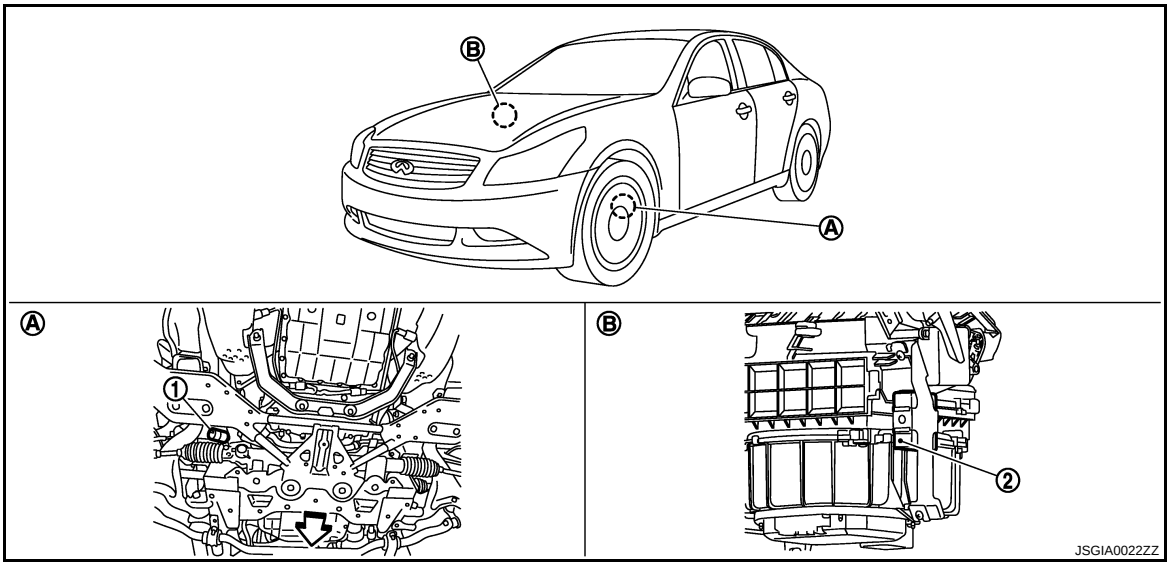
If air bleeding is not complete, the following symptoms can be observed.
- Bubbles are created in reservoir tank.
- Clicking noise can be heard from oil pump.
- Excessive buzzing in the oil pump.

NOTE:
Fluid noise may occur in the steering gear or oil pump. This does not affect performance or durability of the system.

1. Turn steering wheel several times from full left stop to full right stop with engine off.
   CAUTION:
   Fill reservoir tank with a sufficient amount of fluid so that fluid level is not below the MIN line while turning steering wheel.

Component Parts Location

INFOID:0000000004499633



1. Power steering solenoid valve
2. Power steering control unit
A. Steering gear assembly
B. Glove box assembly removed

⇦: Vehicle front

Component Description

INFOID:0000000004499634

Component parts	Reference/Function
Power steering control unit	• Signals from various sensors control the driving voltage to the power steering solenoid valve. • The power steering control unit controls the driving voltage to the power steering solenoid valve for maintaining the power steering assist force when the fail-safe function is activated. (The engine speed signals control EPS system if any vehicle speed signal error is detected.)
Unified meter and A/C amp.	STC-15, "Description"
ECM	STC-13, "Description"
Power steering solenoid valve	STC-11, "Description"

Is each data the standard value?

YES >> Check each harness connector pin terminal for disconnection.
NO >> Replace 4WAS front control unit. Refer to STC-177, "Exploded View".

Component Inspection (4WAS Front Lock Solenoid Valve)

INFOID:0000000004499711

1. CHECK 4WAS FRONT SOLENOID VALVE CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect 4WAS front actuator harness connector.
3. Check the resistance between 4WAS front actuator harness connectors.

4WAS front actuator				Resistance (Approx.)
Connector	Terminal	Connector	Terminal	
M351	10	M351	3	1 – 100 Ω

4. Check the continuity between 4WAS front actuator harness connector and the ground.

4WAS front actuator		Continuity
Connector	Terminal	
M351	3 – Ground	Not existed
	10 – Ground	

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace 4WAS front actuator. Refer to STC-179, "Removal and Installation".

Special Repair Requirement

INFOID:0000000004499712

AFTER REPLACING 4WAS FRONT ACTUATOR

- Perform 4WAS front actuator adjustment after replacing 4WAS front actuator. Refer to STC-29, "4WAS FRONT ACTUATOR NEUTRAL POSITION ADJUSTMENT : Special Repair Requirement (Pattern 2)".

BEFORE REPLACING 4WAS FRONT CONTROL UNIT

- Record the self-diagnosis results (history).

CAUTION:

- **Never erase the memory (history) of self-diagnosis results when replacing 4WAS front control unit after diagnosis.**
- **Erase the memory of the self-diagnosis results (record) after printing out or recording all the values of “DATA MONITOR”.**

AFTER REPLACING 4WAS FRONT CONTROL UNIT

- Perform 4WAS front actuator adjustment after replacing 4WAS front control unit. Refer to STC-29, "4WAS FRONT ACTUATOR NEUTRAL POSITION ADJUSTMENT : Special Repair Requirement (Pattern 3)".

Yaw rate/side G sensor		Resistance (Approx.)
Connector	Terminal	
M143	2 – 3	120 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace yaw rate/side G sensor.

Special Repair Requirement

INFOID:0000000004499822

BEFORE REPLACING 4WAS FRONT CONTROL UNIT

- Record the self-diagnosis results (history).

CAUTION:

- **Never erase the memory (history) of self-diagnosis results when replacing 4WAS front control unit after diagnosis.**
- **Erase the memory of the self-diagnosis results (record) after printing out or recording all the values of "DATA MONITOR".**

BEFORE REPLACING 4WAS MAIN CONTROL UNIT

- Record the self-diagnosis results (history).

CAUTION:

- **Never erase the memory (history) of self-diagnosis results when replacing 4WAS main control unit after diagnosis.**
- **Erase the memory of the self-diagnosis results (record) after printing out or recording all the values of "DATA MONITOR".**

AFTER REPLACING 4WAS FRONT CONTROL UNIT

- Perform 4WAS front actuator adjustment after replacing 4WAS front control unit. Refer to STC-29, "4WAS FRONT ACTUATOR NEUTRAL POSITION ADJUSTMENT : Special Repair Requirement (Pattern 3)".

SYMPTOM DIAGNOSIS

STARTING SYSTEM

Symptom Table

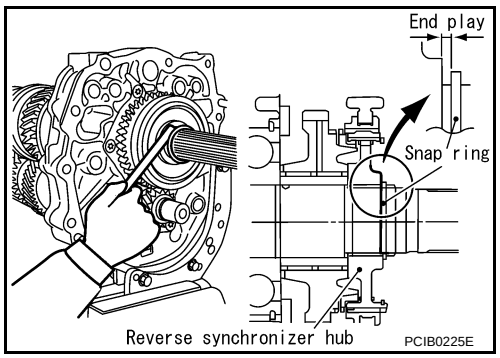
INFOID:0000000004639420

Symptom	Reference
No normal cranking	Refer to STR-2, "Work Flow".
Starter motor does not rotate	

14. Select and install a snap ring so that the end play comes within the standard value.

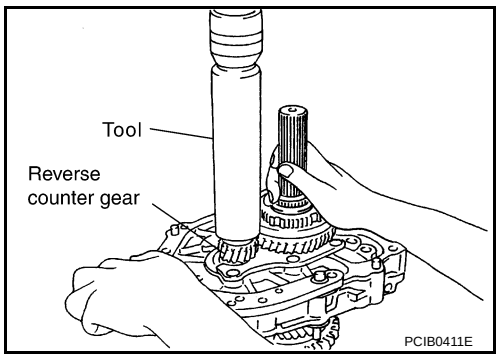
End play standard value : Refer to TM-99, "End Play".

CAUTION:
Never reuse snap ring.



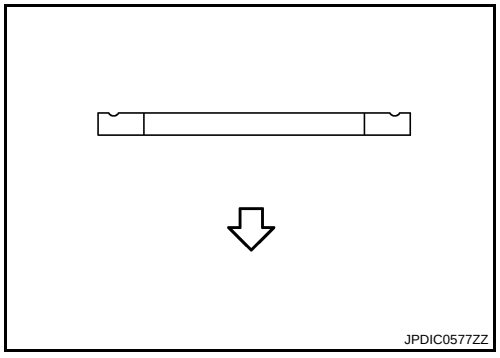
15. After installing counter rear bearing spacer, press and fit reverse counter gear onto counter shaft with drift [SST: ST23860000 (-)] and press.

CAUTION:
- **Never reuse reverse counter gear.**
- **Replace counter rear bearing inner race, counter rear bearing and counter rear bearing spacer as a set.**



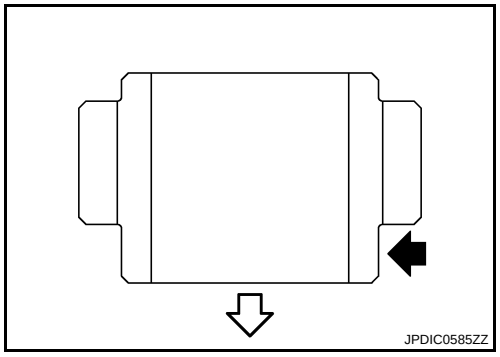
- **Be careful with the orientation of counter rear bearing spacer.**

⇦ : Counter rear bearing side



- **Be careful with the orientation of reverse counter gear.**

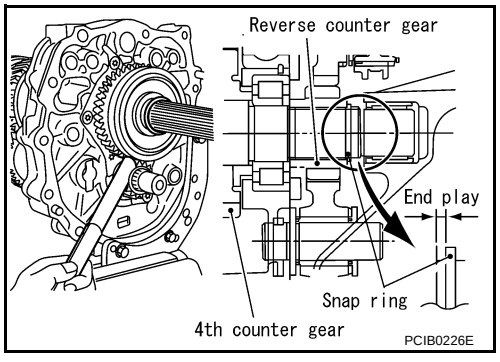
⇦ : Counter rear bearing side



16. Select and install a snap ring so that the end play comes within the standard value.

End play standard value : Refer to TM-99, "End Play".

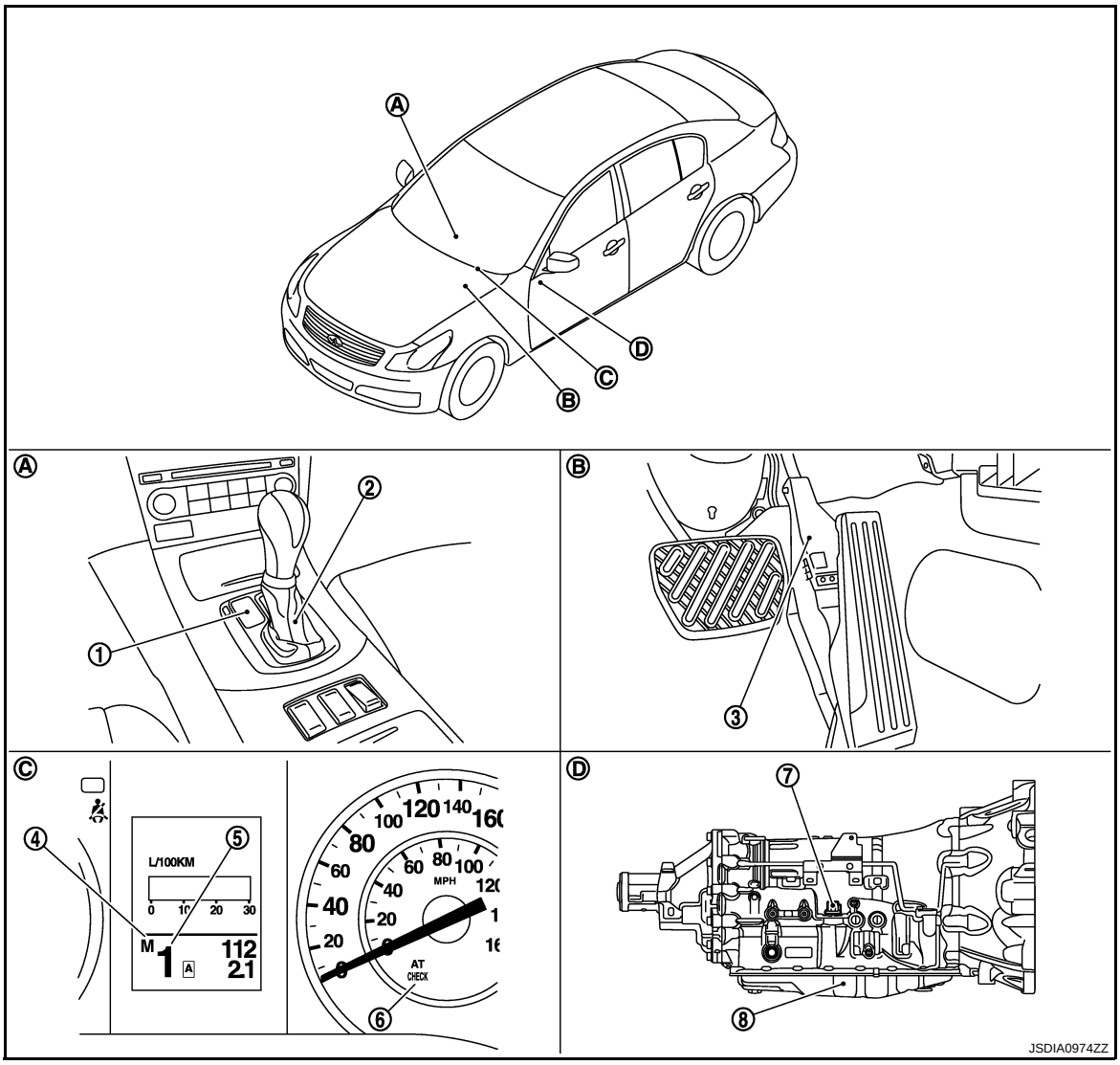
CAUTION:
Never reuse snap ring.



Component Parts Location

INFOID:0000000004437761

Without Paddle Shifter



1. Selector lever position indicator
2. A/T shift selector assembly
3. Accelerator pedal position sensor
4. Manual mode indicator
5. Shift position indicator
6. A/T CHECK indicator lamp
7. A/T assembly connector
8. Control valve with TCM*
- A. Center console
- B. Accelerator pedal
- C. Combination meter
- D. A/T assembly

*: Control valve with TCM is included in A/T assembly.

NOTE:

- The following components are included in A/T shift selector assembly (2).
- Manual mode select switch
- Manual mode position select switch
- Shift position switch
- The following components are included in control valve with TCM (8).
- TCM
- Input speed sensor 1, 2
- Output speed sensor
- A/T fluid temperature sensor
- Transmission range switch
- Direct clutch solenoid valve

P0710 TRANSMISSION FLUID TEMPERATURE SENSOR A

Description

INFOID:0000000004279122

The A/T fluid temperature sensor detects the A/T fluid temperature and transmits a signal to the TCM.

DTC Logic

INFOID:0000000004279123

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC is detected if...		Possible cause
P0710	Transmission Fluid Temperature Sensor A Circuit	The A/T fluid temperature sensor is –40°C (–40°F) or less for 5 seconds while driving the vehicle at the vehicle speed 10 km/h (7 MPH) or more.		• Harness or connectors (Sensor circuit is open.) • A/T fluid temperature sensor
		The A/T fluid temperature sensor is 180°C (356°F) or more for 5 seconds.		• Harness or connectors (Sensor circuit is short.) • A/T fluid temperature sensor
		The A/T fluid temperature sensor is in the following conditions while driving the vehicle at the vehicle speed 10 km/h (7 MPH) or more.		• Harness or connectors (Sensor circuit is stuck.) • A/T fluid temperature sensor
		For 4 minutes	: 15°C – 20°C (59°F – 68°F)	
			: 10°C – 15°C (50°F – 59°F)	
			: 5°C – 10°C (41°F – 50°F)	
			: 0°C – 5°C (32°F – 41°F)	
		For 7 minutes	: –5°C – 0°C (23°F – 32°F)	
			: –10°C – –5°C (14°F – 23°F)	
			: –15°C – –10°C (5°F – 14°F)	
			: –20°C – –15°C (–4°F – 5°F)	
		For 14 minutes	: –40°C – –20°C (–40°F – –4°F)	

DTC CONFIRMATION PROCEDURE

CAUTION:

Always drive vehicle at a safe speed.

1.PRECONDITIONING

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

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT-III

1. Start the engine.
2. Select “SLCT LVR POSI” and “VHCL/S SE-A/T” in “Data Monitor” in “TRANSMISSION”.
3. Drive vehicle and maintain the following conditions for 14 minutes or more.

SLCT LVR POSI	: D
VHCL/S SE-A/T	: 10 km/h (7 MPH) or more

4. Perform “Self Diagnostic Results” in “TRANSMISSION”.

With GST

Follow the procedure “With CONSULT-III”.

Is “P0710” detected?

YES >> Go to TM-178, "Diagnosis Procedure".

SELECTOR LEVER POSITION INDICATOR

Description

INFOID:0000000004279218

Indicates selector lever position.

Component Function Check

INFOID:0000000004279219

1.CHECK SELECTOR LEVER POSITION INDICATOR (PART 1)

1. Turn ignition switch ON.
2. Check that each position indicator lamp of the selector lever position indicator turns on when shifting the selector lever from “P” to “M” position.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Go to TM-238, "Diagnosis Procedure".

2.CHECK SELECTOR LEVER POSITION INDICATOR (PART 2)

Check that the night illumination of the selector lever position indicator turns on when setting the lighting switch in 1st position.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to TM-238, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004279220

1.CHECK MALFUNCTIONING ITEM

Which item is abnormal?

Position indicator lamp>> GO TO 2.
Illumination lamp>> GO TO 10.

2.CHECK POWER SOURCE

1. Turn ignition switch OFF.
2. Disconnect A/T shift selector connector.
3. Turn ignition switch ON.
4. Check voltage between A/T shift selector vehicle side harness connector terminals.

A/T shift selector vehicle side harness connector			Voltage (Approx.)
Connector	Terminal		
	+	–	
M137	10	4	Battery voltage

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 3.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between A/T shift selector vehicle side harness connector terminal and ground.

A/T shift selector vehicle side harness connector		Ground	Continuity
Connector	Terminal		
M137	4		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specification

INFOID:0000000004279270

Applied model		2WD	AWD
Transmission model code number		1XJ4A, 3RX0C	1XJ4B, 3RX0D
Stall torque ratio		1.92 : 1	
Transmission gear ratio	1st	4.924	
	2nd	3.194	
	3rd	2.043	
	4th	1.412	
	5th	1.000	
	6th	0.862	
	7th	0.772	
	Reverse	3.972	
Recommended fluid		Genuine NISSAN Matic S ATF*1	
Fluid capacity		9.2 liter (9-3/4 US qt, 8-1/8 Imp qt)*2	

CAUTION:
- **Use only Genuine NISSAN Matic S ATF. Never mix with other ATF.**
- **Using ATF other than Genuine NISSAN Matic S ATF will cause deterioration driveability and A/T durability, and may damage the A/T, which is not covered by the INFINITI new vehicle limited warranty.**

- *1: Refer to MA-10, "Fluids and Lubricants".
- *2: The fluid capacity is the reference value.

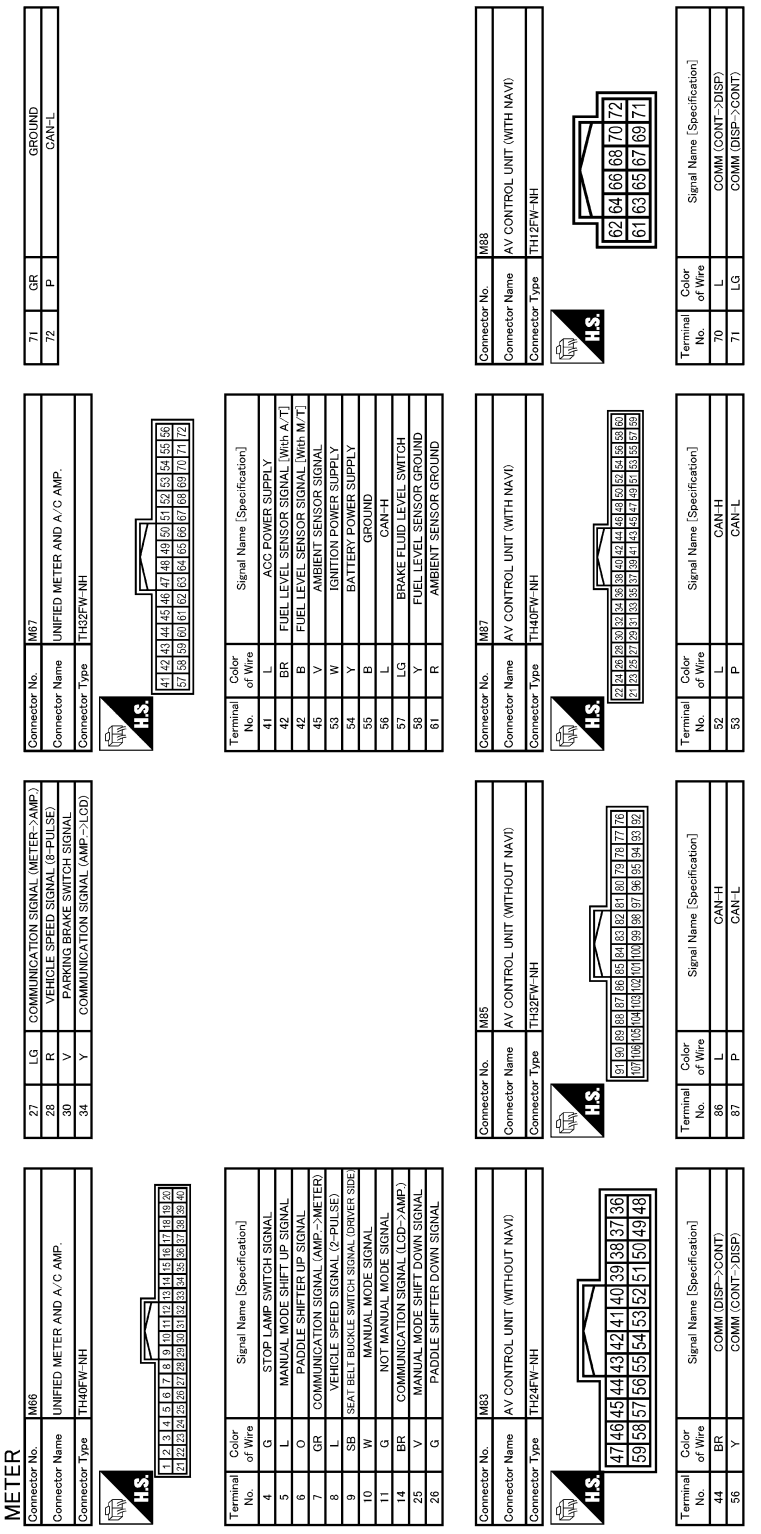
Vehicle Speed at Which Gear Shifting Occurs

INFOID:0000000004279271

Unit: km/h (MPH)

Gear position	Throttle position	
	Full throttle	Half throttle
$D_1 \rightarrow D_2$	51 – 55 (32 – 34)	42 – 46 (27 – 28)
$D_2 \rightarrow D_3$	80 – 88 (50 – 54)	62 – 70 (39 – 43)
$D_3 \rightarrow D_4$	126 – 136 (79 – 84)	97 – 107 (61 – 66)
$D_4 \rightarrow D_5$	184 – 194 (115 – 120)	141 – 151 (88 – 93)
$D_5 \rightarrow D_6$	250 – 260 (156 – 161)	179 – 189 (112 – 117)
$D_6 \rightarrow D_7$	250 – 260 (156 – 161)	215 – 225 (134 – 139)
$D_7 \rightarrow D_6$	240 – 250 (150 – 155)	114 – 124 (71 – 77)
$D_6 \rightarrow D_5$	240 – 250 (150 – 155)	114 – 124 (71 – 77)
$D_5 \rightarrow D_4$	158 – 168 (99 – 104)	69 – 79 (43 – 49)
$D_4 \rightarrow D_3$	111 – 121 (69 – 75)	39 – 49 (25 – 30)
$D_3 \rightarrow D_2$	53 – 61 (33 – 37)	14 – 18 (9 – 11)
$D_2 \rightarrow D_1$	7 – 11 (5 – 6)	7 – 11 (5 – 6)

- At half throttle, the accelerator opening is 4/8 of the full opening.



JCNWA1732GE

PRECAUTION

PRECAUTIONS

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

INFOID:0000000004713205

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.

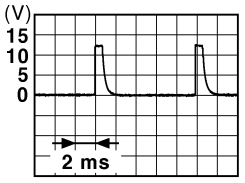
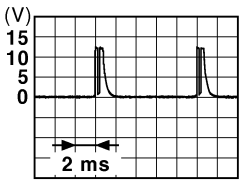
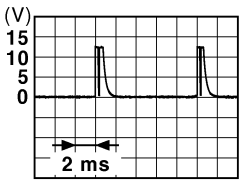
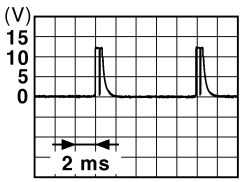
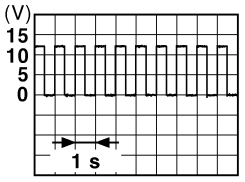
WARNING:

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

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (O)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
89 (BR)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	Battery voltage
90 (P)	Ground	CAN-L	Input/ Output	—		—
91 (L)	Ground	CAN-H	Input/ Output	—		—
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0 V
					Blinking	 JPMIA0015GB 6.5 V
					ON	12 V

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000004685241

1.CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Signal name	Fuse and fusible link No.
Battery power supply	K
	10

Is the fuse fusing?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check voltage between BCM harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(–)	
BCM		Ground	
Connector	Terminal		
M118	1		Battery voltage
M119	11		

Is the measurement value normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

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

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:0000000004685240

1.CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible links are not blown.