

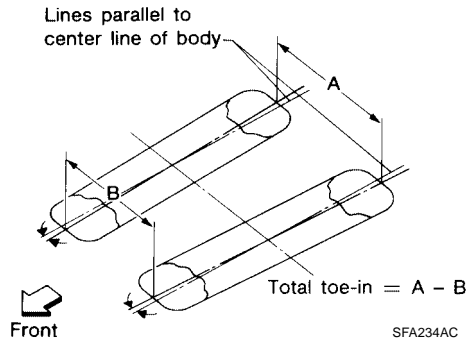
*5: Target value 34° 01' (34.02°)

*6: Some vehicles may be equipped with straight (non-adjustable) lower link bolts and washers. In order to adjust camber and caster on these vehicles, first replace the lower link bolts and washers with adjustable (cam) bolts and washers.

Rear Wheel Alignment (Unladen*1)

ELS001TZ

Applied model		Without air leveling	With air leveling
Camber Degree minute (decimal degree)	Minimum	- 0° 25' (- 0.4°)	- 1° 0' (- 1°)
	Nominal	0° 5' (0.1°)	- 0° 30' (- 0.5°)
	Maximum	0° 35' (0.6°)	0° 0' (0°)
	Cross camber	0° 45' (0.75°) or less	



Total toe-in	Distance (A - B)	Minimum	- 2.4 mm (- 0.094 in)	0 mm (0 in)
		Nominal	0.9 mm (0.035 in)	3.3 mm (0.130 in)
		Maximum	4.2 mm (0.165 in)	6.6 mm (0.260 in)
		Cross toe	2 mm (0.079 in) or less	
	Angle (left side and right side) Degree minute (decimal degree)	Minimum	- 0° 5' (- 0.8°)	0° 0' (0°)
		Nominal	0° 2' (0.03°)	0° 7' (0.11°)
		Maximum	0° 9' (0.14°)	0° 14' (0.22°)
		Cross toe	0° 8' (0.14°) or less	

*1: Fuel tank, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

Brake

ELS001U0

Unit: mm (in)

Front brake	Brake model	CLZ31VC
	Rotor outer diameter × thickness	320 × 26 (12.60 × 1.02)
	Pad Length × width × thickness	111.0 × 73.5 × 9.5 (4.73 × 2.894 × 0.374)
	Cylinder bore diameter	51 (2.01)
Rear brake	Brake model	AD14VE
	Rotor outer diameter × thickness	320 × 14 (12.60 × 0.55)
	Pad Length × width × thickness	83.0 × 33.0 × 8.5 (3.268 × 1.299 × 0.335)
	Cylinder bore diameter	48 (1.89)
Control valve	Valve model	Electric brake force distribution
Brake booster	Booster model	C215T
	Diaphragm diameter	215 (8.46)
Recommended brake fluid		Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent DOT 3 (US FMVSS No. 116)

SERVICE INFORMATION FOR ELECTRICAL INCIDENT

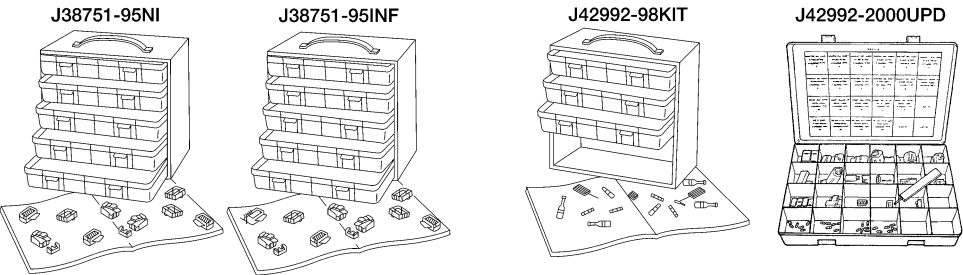
SERVICE INFORMATION FOR ELECTRICAL INCIDENT

PF0:0000

How to Check Terminal CONNECTOR AND TERMINAL PIN KIT

EAS001EK

Use the connector and terminal pin kits listed below when replacing connectors or terminals. The connector and terminal pin kits contain some of the most commonly used NISSAN/INFINITI connectors and terminals. For detailed connector and terminal pin replacement procedures, refer to the latest NISSAN/INFINITI CONNECTOR AND TERMINAL PIN SERVICE MANUAL.

Tool number (Kent-Moore No.) Tool name	Description
- (J38751-95NI) Connector and terminal pin kit (NISSAN) - (J38751-95INF) Connector and terminal pin kit (INFINITI) - (J42992-98KIT) OBD and terminal repair kit - (J42992-2000UPD) OBD-II Connector Kit Update	 <p style="text-align: center;">WAI A0004E WAI A0005E</p>

HOW TO PROBE CONNECTORS

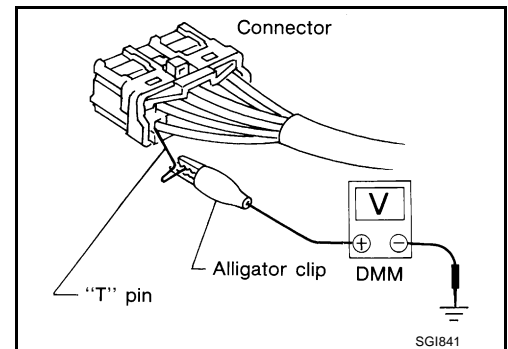
Connector damage and an intermittent connection can result from improperly probing of the connector during circuit checks.

The probe of a digital multimeter (DMM) may not correctly fit the connector cavity. To correctly probe the connector, follow the procedures below using a "T" pin. For the best contact grasp the "T" pin using an alligator clip.

Probing from Harness Side

Standard type (not waterproof type) connector should be probed from harness side with "T" pin.

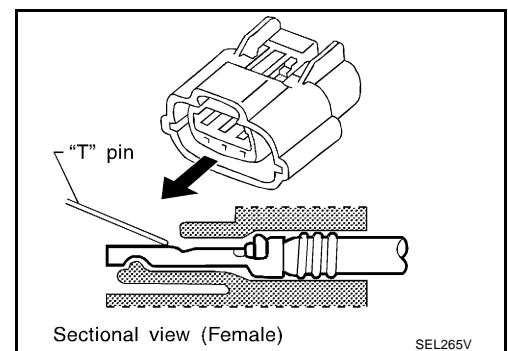
- If the connector has a rear cover such as a ECM connector, remove the rear cover before probing the terminal.
- Do not probe waterproof connector from harness side. Damage to the seal between wire and connector may result.



Probing from Terminal Side

FEMALE TERMINAL

- There is a small notch above each female terminal. Probe each terminal with the "T" pin through the notch. Do not insert any object other than the same type male terminal into female terminal.



ROCKER COVER

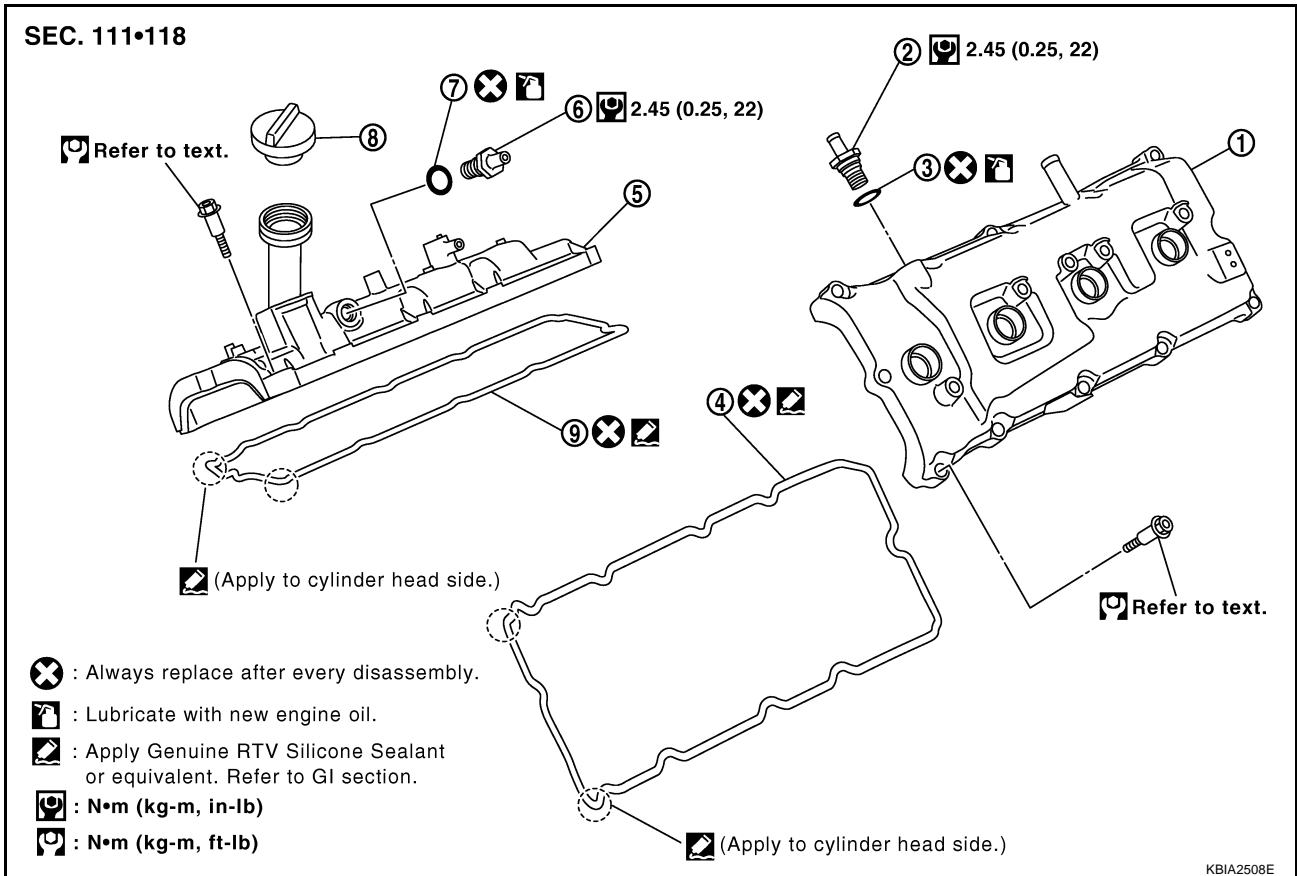
PFP:13264

EBS00L4E

ROCKER COVER

Removal and Installation

SEC. 111•118



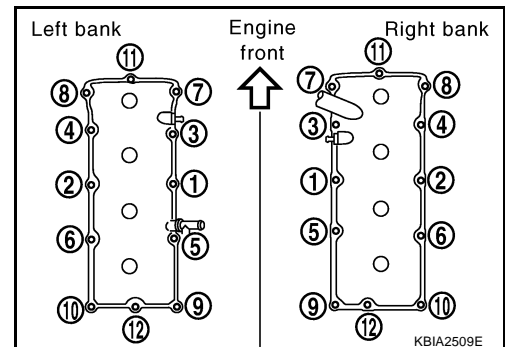
- | | | |
|------------------------------------|------------------------------|-------------------------------------|
| 1. Rocker cover (left bank) | 2. PCV control valve | 3. O-ring |
| 4. Rocker cover gasket (left bank) | 5. Rocker cover (right bank) | 6. PCV control valve |
| 7. O-ring | 8. Oil filler cap | 9. Rocker cover gasket (right bank) |

REMOVAL

1. Remove the engine room cover using power tool. Refer to [EM-11, "REMOVAL"](#).
2. Remove the air duct and resonator assembly. Refer to [EM-14, "REMOVAL"](#) (for left bank only).
3. Move the harness on the upper rocker cover and its peripheral aside.
4. Remove the electric throttle control actuator, loosening the bolts diagonally (for left bank only).
5. Remove the ignition coil. Refer to [EM-26, "REMOVAL"](#).
6. Remove the PCV hose from the PCV control valve.
7. Loosen the bolts in reverse order shown using power tool.

CAUTION:

Do not hold the rocker cover by the oil filler neck (right bank).



DTC P0101 MAF SENSOR

UBS00CHB

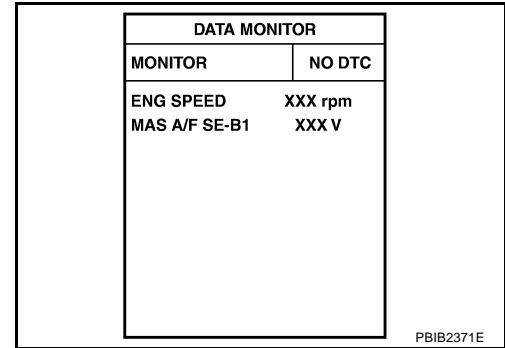
Component Inspection MASS AIR FLOW SENSOR

With CONSULT-II

1. Reconnect all harness connectors disconnected.
2. Start engine and warm it up to normal operating temperature.
3. Connect CONSULT-II and select "DATA MONITOR" mode.
4. Select "MAS A/F SE-B1" and check indication under the following conditions.

Condition	MAS A/F SE-B1 (V)
Ignition switch ON (Engine stopped.)	Approx. 0.4
Idle (Engine is warmed-up to normal operating temperature.)	1.0 - 1.3
2,500 rpm (Engine is warmed-up to normal operating temperature.)	1.7 - 2.1
Idle to about 4,000 rpm*	1.0 - 1.3 to Approx. 2.4

*: Check for linear voltage rise in response to engine being increased to about 4,000 rpm.



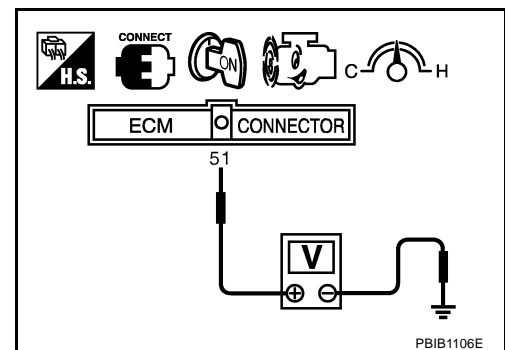
5. If the voltage is out of specification, proceed the following.
 - a. Check for the cause of uneven air flow through mass air flow sensor. Refer to following.
 - Crushed air ducts
 - Malfunctioning seal of air cleaner element
 - Uneven dirt of air cleaner element
 - Improper specification of intake air system parts
 - b. If NG, repair or replace malfunctioning part and perform step 2 to 4 again. If OK, go to next step.
6. Turn ignition switch OFF.
7. Disconnect mass air flow sensor harness connector and reconnect it again.
8. Perform step 2 to 4 again.
9. If NG, clean or replace mass air flow sensor.

Without CONSULT-II

1. Reconnect all harness connectors disconnected.
2. Start engine and warm it up to normal operating temperature.
3. Check voltage between ECM terminal 51 (Mass air flow sensor signal) and ground.

Condition	MAS A/F SE-B1 (V)
Ignition switch ON (Engine stopped.)	Approx. 0.4
Idle (Engine is warmed-up to normal operating temperature.)	1.0 - 1.3
2,500 rpm (Engine is warmed-up to normal operating temperature.)	1.7 - 2.1
Idle to about 4,000 rpm*	1.0 - 1.3 to Approx. 2.4

*: Check for linear voltage rise in response to engine being increased to about 4,000 rpm.



4. If the voltage is out of specification, proceed the following.
 - a. Check for the cause of uneven air flow through mass air flow sensor. Refer to following.
 - Crushed air ducts
 - Malfunctioning seal of air cleaner element
 - Uneven dirt of air cleaner element
 - Improper specification of intake air system parts

DTC P1272, P1282 A/F SENSOR 1

DTC P1272, P1282 A/F SENSOR 1

PF2:22693

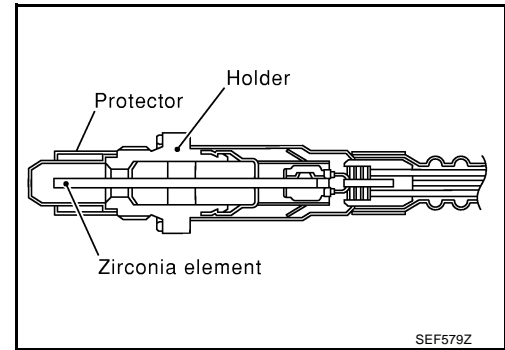
Component Description

UBS00CPU

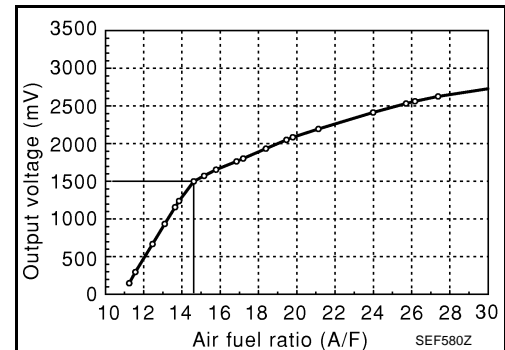
The air fuel ratio (A/F) sensor 1 is a planar dual-cell limit current sensor. The sensor element of the A/F sensor 1 is the combination of a Nernst concentration cell (sensor cell) with an oxygen-pump cell, which transports ions. It has a heater in the element.

The sensor is capable of precise measurement $\lambda = 1$, but also in the lean and rich range. Together with its control electronics, the sensor outputs a clear, continuous signal throughout a wide λ range ($0.7 < \lambda < \text{air}$).

The exhaust gas components diffuse through the diffusion gap at the electrode of the oxygen pump and Nernst concentration cell, where they are brought to thermodynamic balance.



An electronic circuit controls the pump current through the oxygen-pump cell so that the composition of the exhaust gas in the diffusion gap remains constant at $\lambda = 1$. Therefore, the A/F sensor 1 is able to indicate air/fuel ratio by this pumping of current. In addition, a heater is integrated in the sensor to ensure the required operating temperature of 700 - 800°C (1,292 - 1,472°F).



CONSULT-II Reference Value in Data Monitor Mode

UBS00CPV

Specification data are reference values.

MONITOR ITEM	CONDITION		SPECIFICATION
A/F SEN1 (B1) A/F SEN1 (B2)	● Engine: After warming up	Maintaining engine speed at 2,000 rpm	Fluctuates around 1.5V

On Board Diagnosis Logic

UBS00CPW

To judge the malfunction, the diagnosis checks that the A/F signal computed by ECM from the A/F sensor 1 signal is not inordinately high.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible Cause
P1272 1272 (Bank 1)	Air fuel ratio (A/F) sensor 1 circuit no activity detected	● The A/F signal computed by ECM from the A/F sensor 1 signal is constantly approx. 5V.	<ul style="list-style-type: none"> ● Harness or connectors (The A/F sensor 1 circuit is open or shorted.) ● Air fuel ratio (A/F) sensor 1
P1282 1282 (Bank 2)			

DTC Confirmation Procedure

UBS00CPX

NOTE:

If DTC Confirmation Procedure has been previously conducted, always turn ignition switch OFF and wait at least 10 seconds before conducting the next test.

TESTING CONDITION:

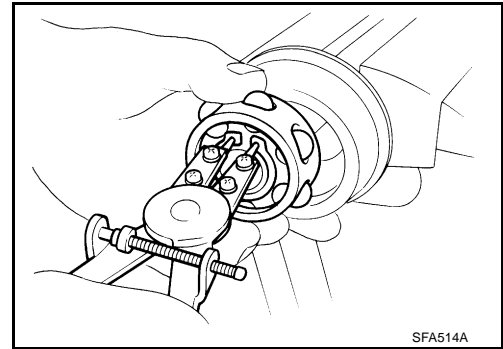
Before performing the following procedure, confirm that battery voltage is more than 10.5V at idle.

Ⓟ WITH CONSULT-II

1. Start engine and warm it up to normal operating temperature.
2. Select "A/F SEN1 (B1)" or "A/F SEN1 (B2)" in "DATA MONITOR" mode with CONSULT-II.

DRIVE SHAFT

4. Remove the snap ring, then remove the ball cage, steel ball, inner race assembly from the drive shaft.



5. Remove the boot from the drive shaft.
6. Remove any old grease on the housing using paper towels.

Wheel Side

1. Mount the drive shaft in a vise.

CAUTION:

When mounting the drive shaft in a vise, use copper or aluminum plates between the vise and the drive shaft.

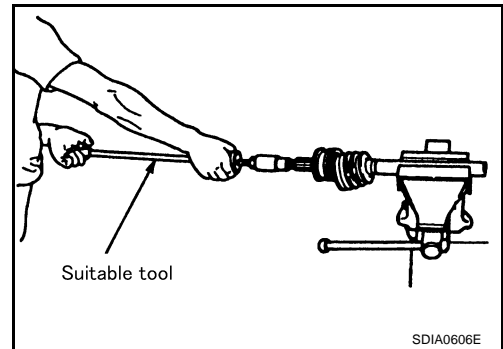
2. Remove the boot bands, then remove the boot from the joint sub-assembly.
3. Screw a suitable drive shaft puller 30 mm (1.18 in) or more into the threaded part of the joint sub-assembly. Pull the joint sub-assembly off of the drive shaft as shown.

NOTE:

Align the sliding hammer and drive shaft and remove the joint sub-assembly by pulling directly.

CAUTION:

- If the joint sub-assembly cannot be removed after five or more attempts, replace the drive shaft and joint sub-assembly as a set.



4. Remove the boot from the drive shaft.
5. Remove the circlip from the drive shaft.
6. While rotating the ball cage, remove any old grease from the joint sub-assembly using paper towels.

INSPECTION AFTER DISASSEMBLY

Drive Shaft

- Replace the drive shaft if there is any runout, cracking, or other damage.

Joint Sub-assembly

- Check for any rough rotation or unusual axial looseness.
- Clean any foreign material from inside the joint sub-assembly.
- Check for any compression scars, cracks, or fractures.

CAUTION:

If any defective conditions are found in the joint sub-assembly components, replace the entire joint sub-assembly.

Sliding Joint Side Housing

- Check for any compression scars, cracks, fractures, or unusual wear on the ball rolling surface.
- Check for any damage to the drive shaft screws.
- Check for any deformation of the boot installation components.

Ball Cage

- Check the sliding surface for any compression scars, cracks, or fractures.

HEIGHT SENSOR

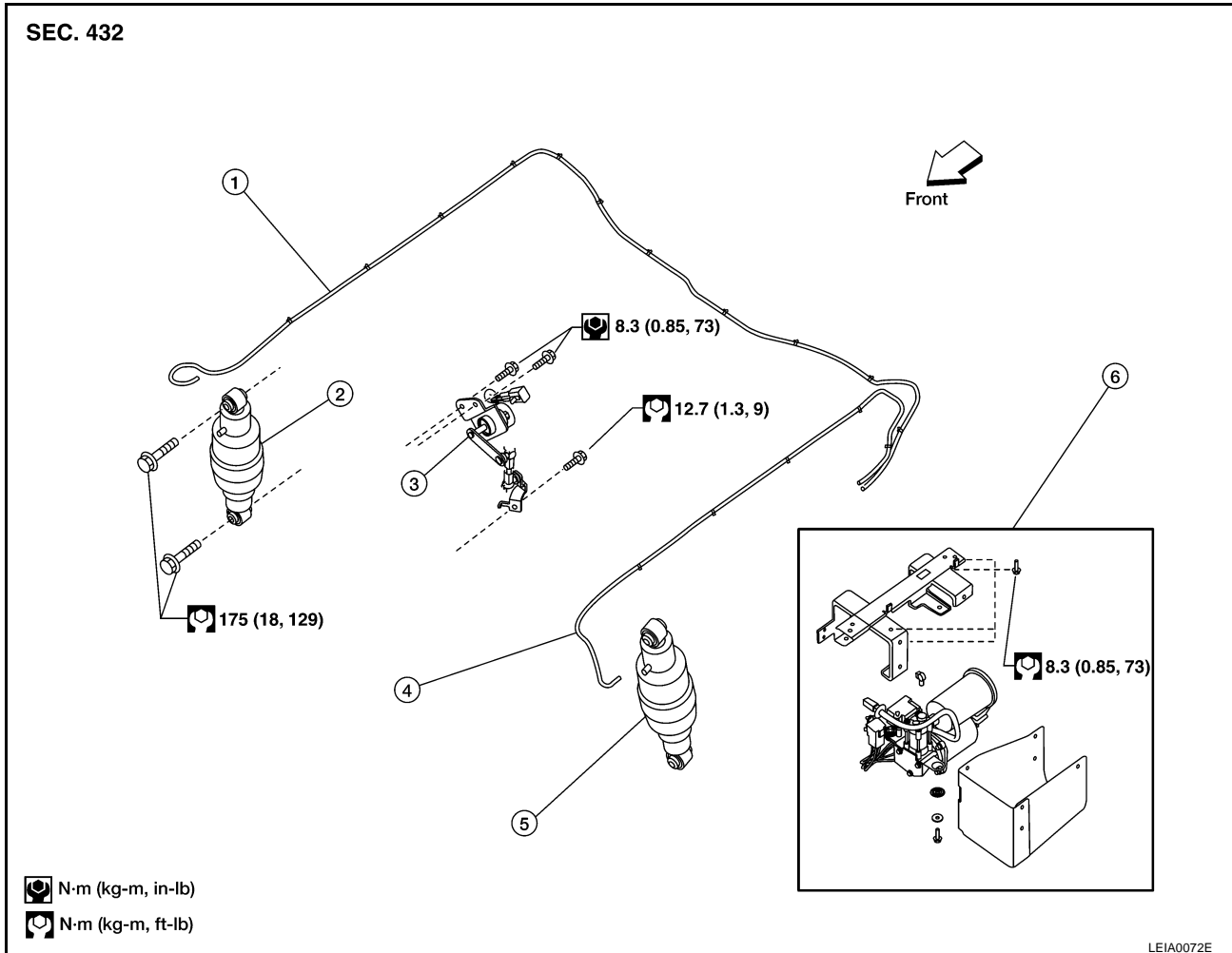
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EES001FD

HEIGHT SENSOR

Removal and Installation

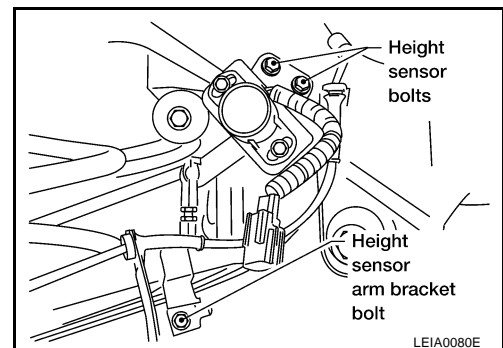
Rear Load Leveling Air Suspension System



- | | | |
|---|-----------------------|--|
| 1. Rear load leveling air suspension hose, RH | 2. Shock absorber, RH | 3. Height sensor |
| 4. Rear load leveling air suspension hose, LH | 5. Shock absorber, LH | 6. Rear load leveling air suspension compressor assembly |

REMOVAL

1. Use CONSULT-II "EXHAUST SOLENOID" active test to release the air pressure from the rear load leveling air suspension system.
2. Disconnect the electrical connector for the height sensor.
3. Remove the two height sensor bolts and height sensor arm bracket bolt.
4. Remove the height sensor.



NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PF0:00003

NVH Troubleshooting Chart

EES001FL

Use chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

Symptom		Possible cause and SUSPECTED PARTS														Reference page
		Out-of-round	Imbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	FRONT AND REAR FINAL DRIVE	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEEL	BRAKE	STEERING	
Noise	TIRES	×	×	×	×	×	×	×	×	×	×	×	×	×	×	WT-5
		×	×	×	×	×	×	×	×	×	×	×	×	×	×	WT-6
				×				×		×	×	×				WT-34
		×	×	×	×	×	×	×		×	×	×				WT-7
		×	×	×	×	×		×		×	×	×				—
		×	×	×	×	×		×		×	×	×				—
	ROAD WHEEL	×	×			×										WT-34
		×	×			×										FFD-6, "NVH Troubleshooting Chart" (FFD) RFD-5, "NVH Troubleshooting Chart" (RFD)
		×	×			×										FAX-4, "NVH Troubleshooting Chart" (FAX) FSU-4, "NVH Troubleshooting Chart" (FSU)
		×	×			×										RAX-4, "NVH Troubleshooting Chart" (RAX) RSU-5, "NVH Troubleshooting Chart" (RSU)
																Refer to TIRES in this chart.
																Refer to ROAD WHEEL in this chart.
																BR-5, "NVH Troubleshooting Chart"
																PS-5, "NVH Troubleshooting Chart"

x: Applicable

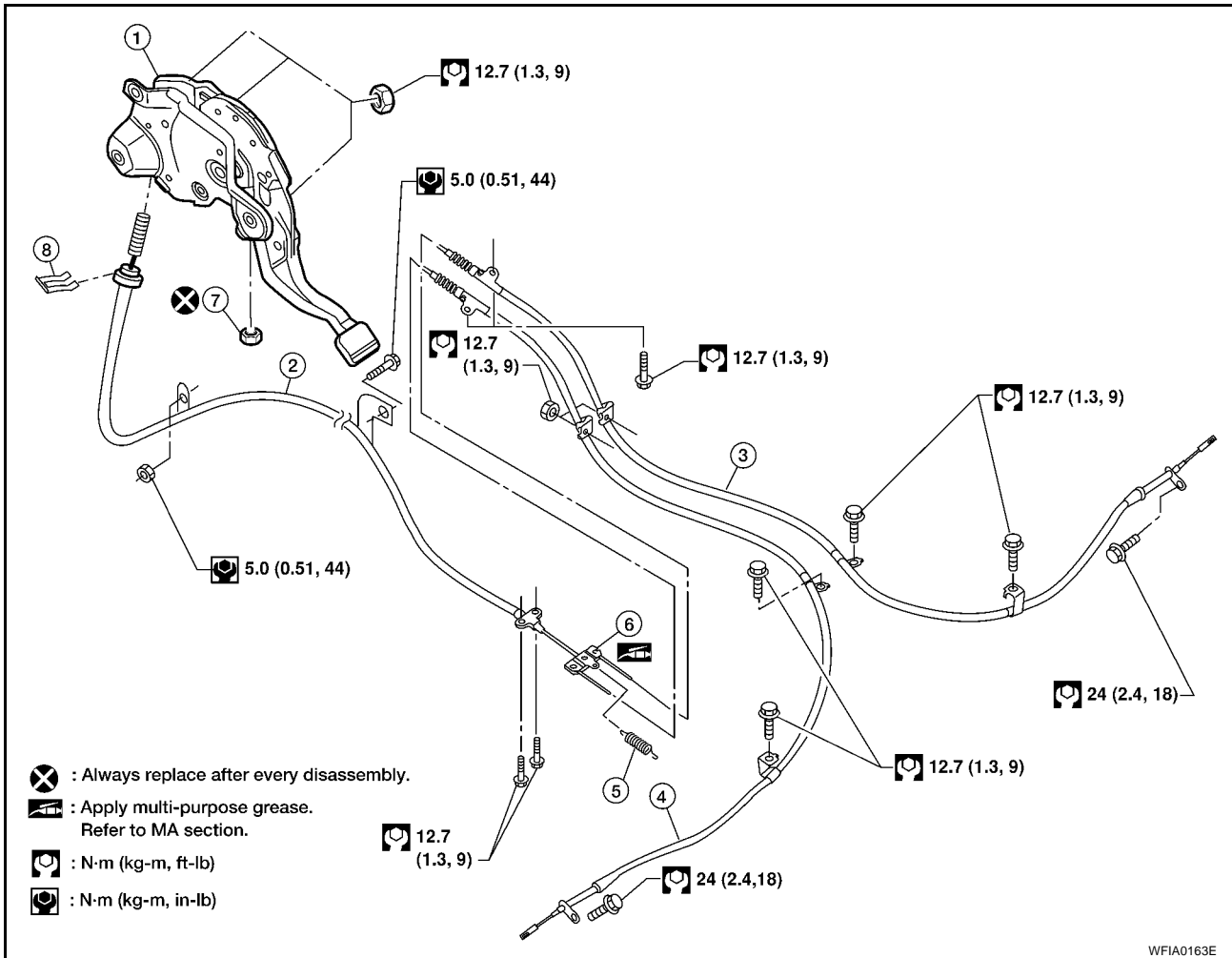
PARKING BRAKE CONTROL

PFP:36010

PARKING BRAKE CONTROL

EFS004U6

Components



WFIA0163E

- | | | |
|--------------------|------------------|---------------------|
| 1. Pedal assembly | 2. Front cable | 3. Right rear cable |
| 4. Left rear cable | 5. Return spring | 6. Equalizer |
| 7. Adjusting nut | 8. Lock plate | |

Removal and Installation

REMOVAL

EFS004U7

1. Remove the lower instrument panel LH and center console. Refer to [IP-13, "LOWER INSTRUMENT PANEL RH AND GLOVE BOX"](#) and [IP-14, "CENTER CONSOLE"](#).
2. Remove the floor trim. Refer to [EI-34, "Removal and Installation"](#).
3. Remove the parking brake control adjusting nut.
CAUTION:
Do not reuse adjusting nut after removing it.
4. Remove the lock plate from the front cable.
5. Remove front parking brake cable bolts and nut.
6. Disconnect return spring from equalizer.
7. Disconnect the front parking brake cable from the equalizer and remove front cable.
8. Remove the rear disc rotors. Refer to [BR-27, "Removal and Installation of Brake Caliper and Disc Rotor"](#).
9. Remove parking brake shoes, and remove rear cable from toggle lever. Refer to [PB-6, "Removal and Installation"](#).
10. Remove equalizer from right and left rear cables.
11. Remove right and left rear cable bolts and nuts, then remove right and left rear cables.

PREPARATION

PREPARATION

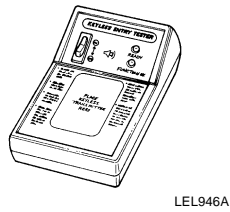
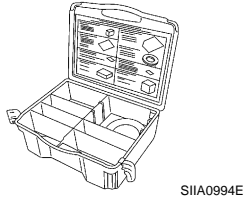
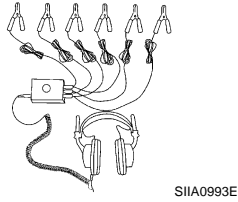
PFP:00002

Special service tool

EIS008IL

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

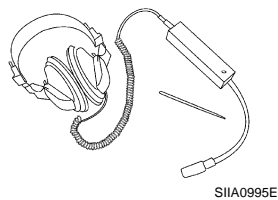
Tool number (Kent-Moore No.) Tool name	Description
— (J-39570) Chassis ear	Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester	Used to test keyfobs



Commercial Service Tool

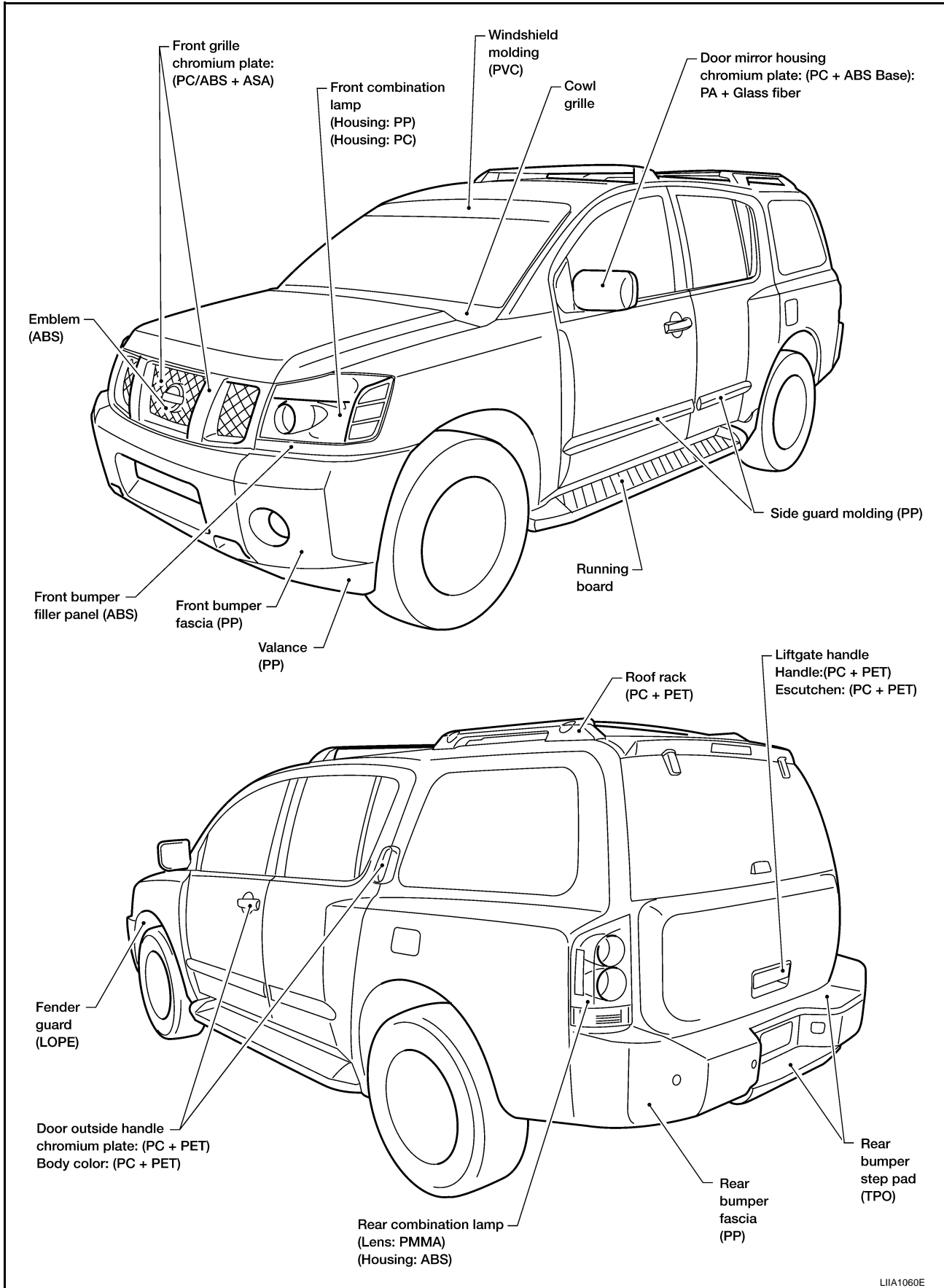
EIS008IM

(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear	Locating the noise



BODY REPAIR

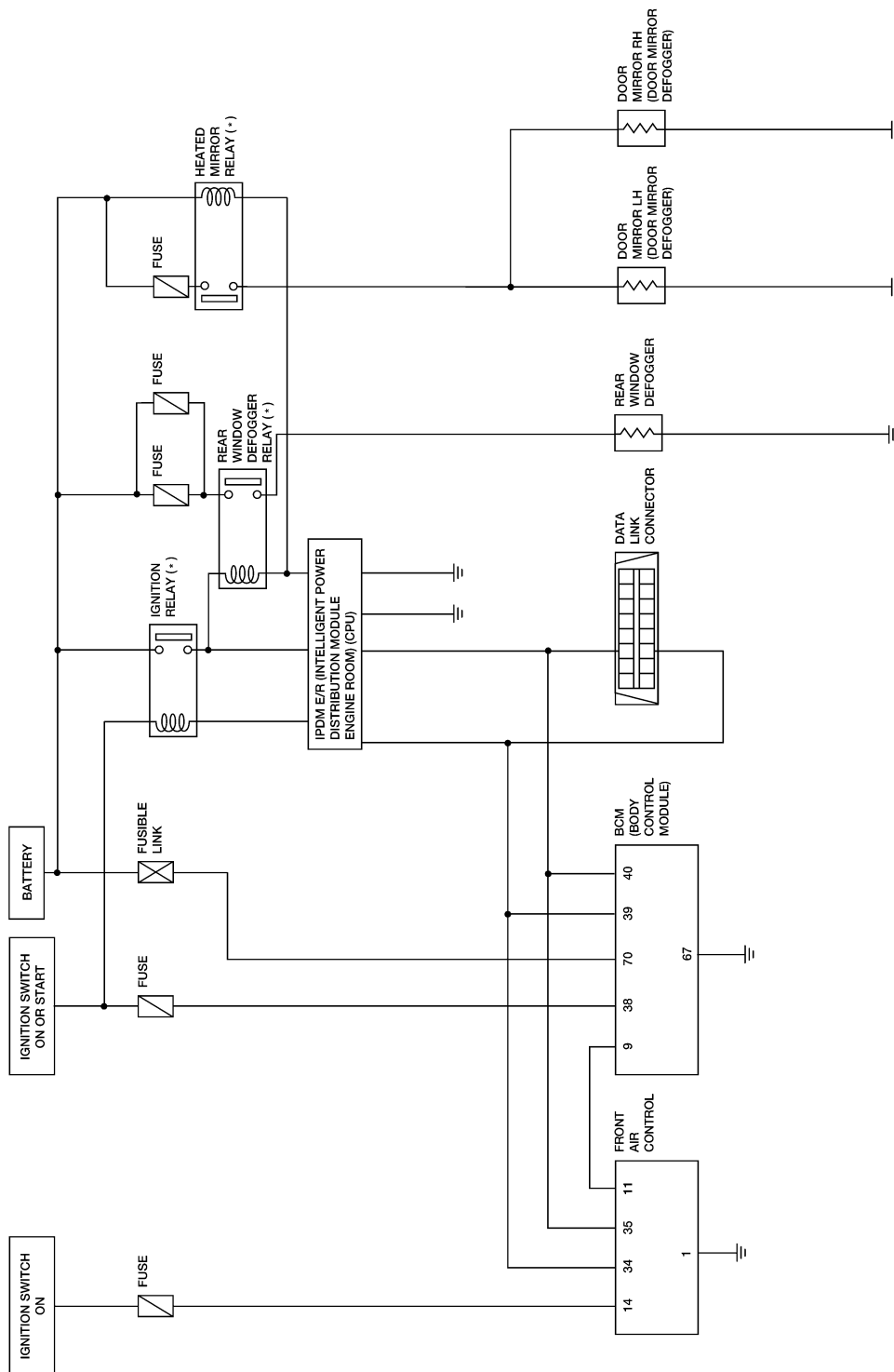
LOCATION OF PLASTIC PARTS



REAR WINDOW DEFOGGER

Schematic

EIS004LU

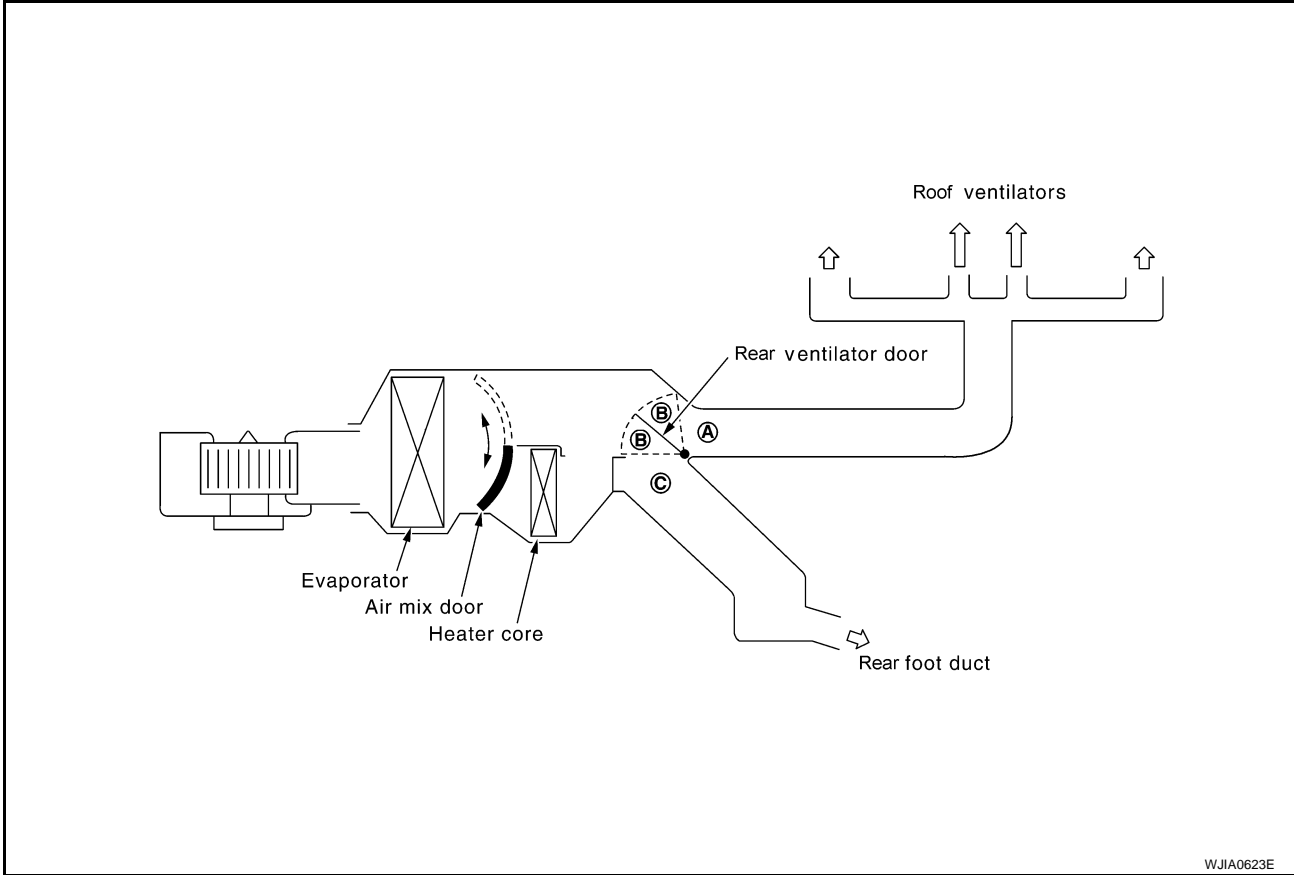


* : THIS RELAY IS BUILT INTO THE IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

AIR CONDITIONER CONTROL

System Description (Rear) SWITCHES AND THEIR CONTROL FUNCTION

EJS0034B



WJIA0623E

Position or switch	MODE SW			Temp Control Dial			OFF SW
	VENT	B/L	FOOT				
Door							
Mode door	(A)	(B)	(C)	—			(C)
Air mix door	—			(A)	AUTO	(B)	—

WJIA1067E

A
B
C
D
E
F
G
H
I

ATC

K
L
M

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-110, "IPDM E/R Ignition Relay Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	UNKW	—	UNKW	—	—	UNKW	UNKW
A/T	—	NG	UNKW	UNKW	—	UNKW	—	—	—	—	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	UNKW	—	UNKW	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKW	UNKW	—	UNKW	—	—	—	—	—	UNKW
HVAC	No indication	—	UNKW	UNKW	—	—	UNKW	UNKW	—	—	UNKW	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	UNKW	—	—	—
IPDM E/R	No indication	—	UNKW	UNKW	—	—	—	UNKW	—	—	—	—

PKIB6675E

Circuit Check Between TCM and Driver Seat Control Unit

UKS0018I

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E34
 - Harness connector B40

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.

