

# ACCELERATOR CONTROL, FUEL & EXHAUST SYSTEMS

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## SECTION FE

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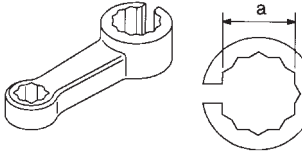
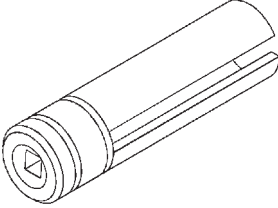
# PREPARATION

Special Service Tool

## Special Service Tool

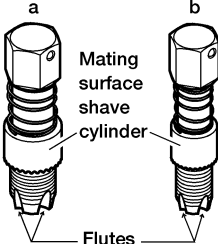
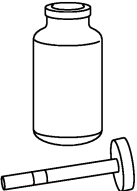
NAFE0001

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
KV10114400 (J38365) Heated oxygen sensor wrench	 <p data-bbox="1040 331 1435 411">Loosening or tightening heated oxygen sensor 2 (bank 1) <b>a: 22 mm (0.87 in)</b></p> <p data-bbox="427 506 483 527">NT636</p>
KV10117100 (J3647-A) Heated oxygen sensor wrench	 <p data-bbox="1040 543 1435 623">Loosening or tightening heated oxygen sensor 2 (bank 2) For 22 mm (0.87 in) width hexagon nut</p> <p data-bbox="427 779 483 800">NT379</p>

## Commercial Service Tools

NAFE0007

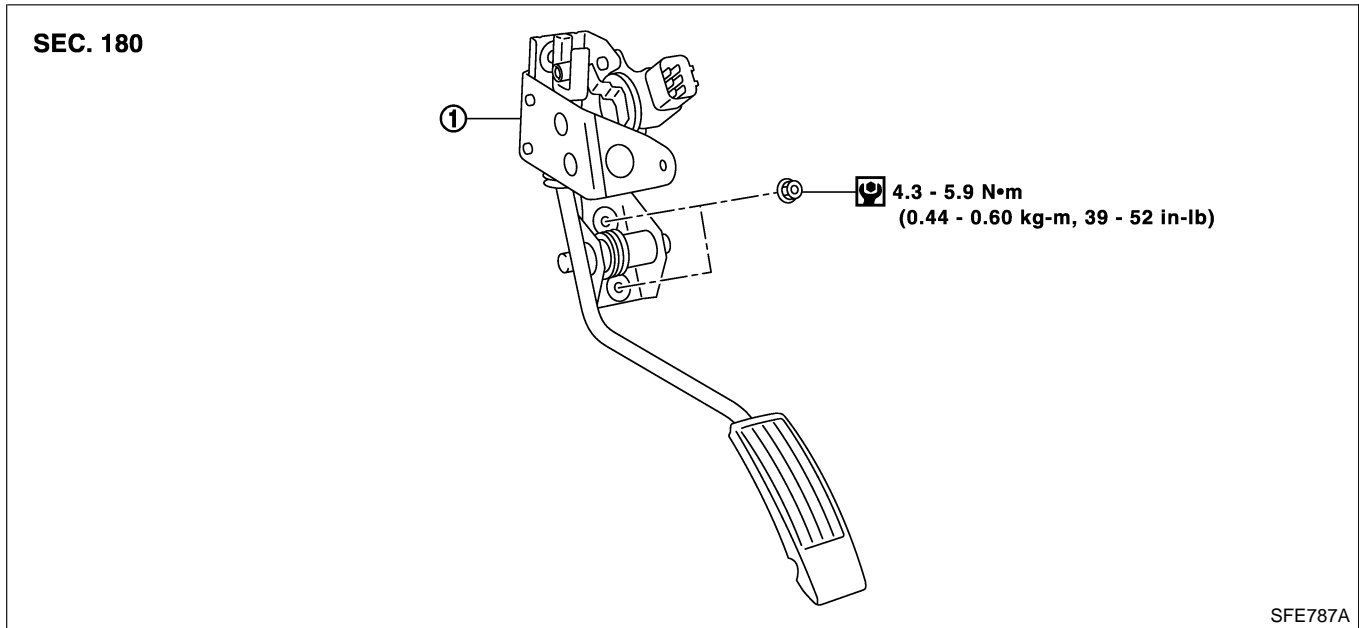
(Kent-Moore No.) Tool name	Description
(J-43897-18) (J-43897-12) Oxygen sensor thread cleaner	 <p data-bbox="1040 1024 1451 1129">Reconditioning the exhaust system threads before installing a new heated oxygen sensor. Use with anti-seize lubricant shown below.</p> <p data-bbox="1040 1136 1451 1184"><b>a: J-43897-18 [18 mm (0.71 in) dia.] for Zirconia Heated Oxygen Sensor</b></p> <p data-bbox="1040 1190 1451 1239"><b>b: J-43897-12 [12 mm (0.47 in) dia.] for Titania Heated Oxygen Sensor</b></p> <p data-bbox="427 1297 500 1318">AEM488</p>
Anti-seize lubricant (Permatex™ 133AR or equivalent meeting MIL specification MIL-A-907)	 <p data-bbox="1040 1337 1468 1417">Lubricating oxygen sensor thread cleaning tool when reconditioning exhaust system threads.</p> <p data-bbox="427 1581 483 1602">NT779</p>

## Removal and Installation

NAFE0008

**CAUTION:**

- Make sure that throttle valve opens when accelerator pedal is fully depressed. Also check that it returns to idle position when pedal is released when ignition switch is in "ON" position.
- Check accelerator control parts for improper contact with any adjacent parts.



1. Accelerator pedal assembly

### REMOVAL

1. Remove accelerator pedal position (APP) sensor harness connector.
2. Loosen nuts then remove accelerator pedal assembly.

NAFE0008S01

**CAUTION:**

- Do not disassemble accelerator pedal assembly or remove/install accelerator pedal position (APP) sensor.
- Do not drop or shock accelerator pedal assembly.
- Keep accelerator pedal assembly from getting wet.

### INSTALLATION

Install in reverse order of removal.

NAFE0008S02

### INSPECTION AFTER INSTALLATION

- Make sure that accelerator pedal moves smoothly within the whole operation range.
- Make sure that accelerator pedal returns securely to its original position.
- For electrical inspection of accelerator pedal assembly, refer to EC-697, "DTC P2138 APP SENSOR".

NAFE0008S03

**CAUTION:**

Perform "Accelerator Pedal Released Position Learning" when removing the accelerator pedal position sensor harness connector. Refer to EC-73, "BASIC SERVICE PROCEDURE".

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## Removal and Installation

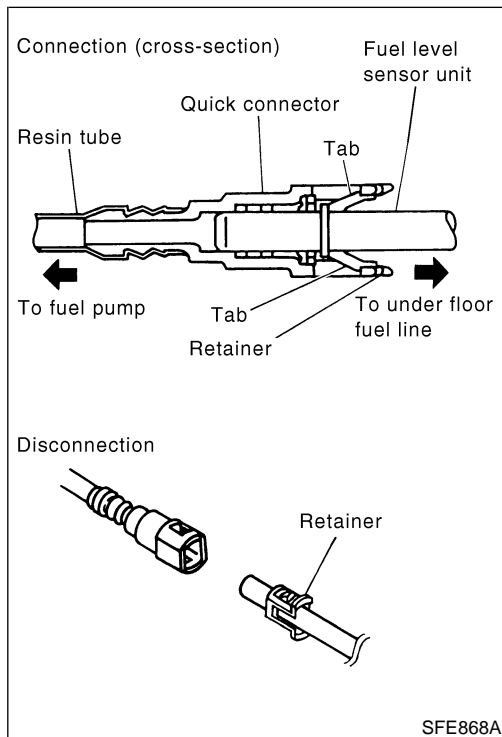
### WARNING:

When replacing fuel line parts, be sure to observe the following:

- Put a “CAUTION: INFLAMMABLE” sign in the workshop.
- Do not smoke while servicing fuel system. Keep open flames and sparks away from work area.
- Be sure to work in a well ventilated area and furnish the workshop with a CO<sub>2</sub> fire extinguisher.

### CAUTION:

- Before removing fuel line parts, perform the following procedures:
  - a) Put drained fuel in an explosion-proof container and put the lid on securely. Keep the container in safe area.
  - b) Release fuel pressure from the fuel line. Refer to MA-17, “Changing Fuel Filter”.
  - c) Disconnect battery ground cable.
- Always replace O-rings and clamps with new ones.
- Do not kink or twist hoses and tubes when they are installed.
- Do not tighten hose clamps excessively to avoid damaging hoses.
- After connecting fuel tube quick connectors, make sure that quick connectors are secure. Ensure that connector and resin tube do not contact any adjacent parts.
- For inspection of ORVR system parts, refer to EC-44, “ON Board Refueling Vapor Recovery (ORVR)”.
- After installation, make sure there is no fuel leaks at connections in the following steps.
  - a) Apply fuel pressure to fuel lines with turning ignition switch ON (with engine stopped). Then check for fuel leaks at connections.
  - b) Start the engine and rev it up and check for fuel leaks at connections.
- Use only a genuine NISSAN fuel filler cap as a replacement. If an incorrect fuel filler cap is used, the “MIL” may come on.
- For servicing “Evaporative Emission System” parts, refer to EC-38, “Evaporative Emission System”.

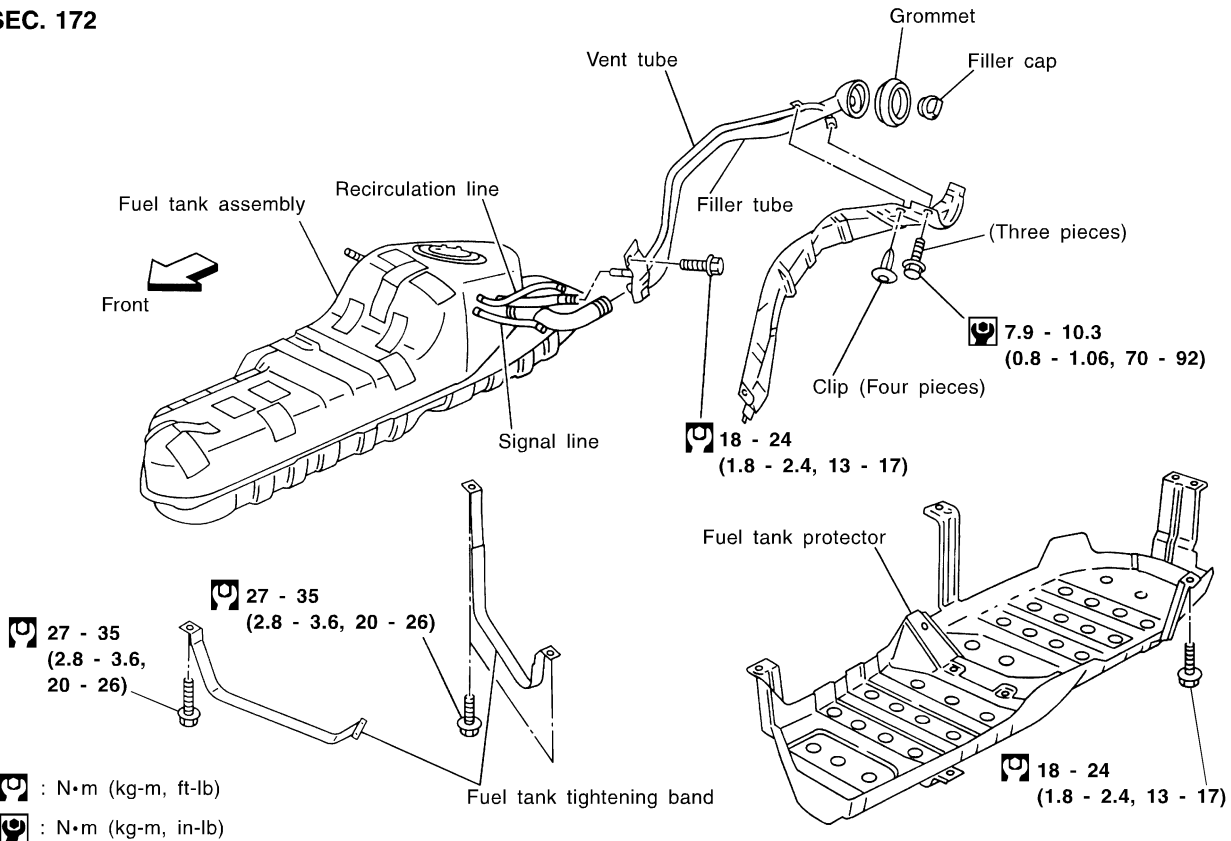


# FUEL SYSTEM

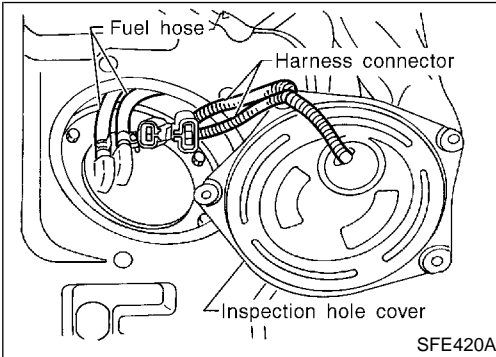
Removal and Installation (Cont'd)

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## SEC. 172



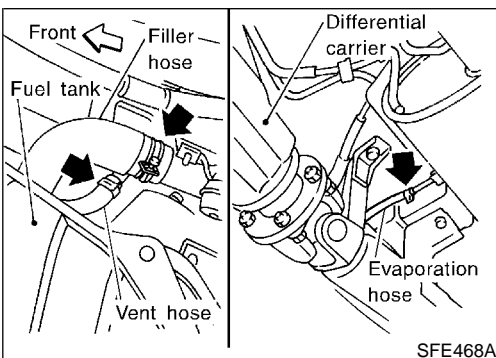
SFE766A



## FUEL TANK

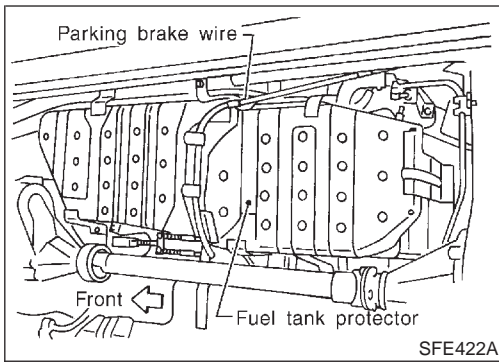
NAFE0004S01

1. Release fuel pressure from fuel line. Refer to MA-17, "Changing Fuel Filter".
2. Remove inspection hole cover located behind the rear seat.
3. Disconnect harness connectors under inspection hole cover.
4. Disconnect fuel hoses.
  - Put mating marks on hoses for correct installation.
5. Open fuel filler lid.
6. Open the filler cap and release the pressure inside fuel tank.
7. Disconnect filler hose, vent hose and evaporation hose at fuel tank side.

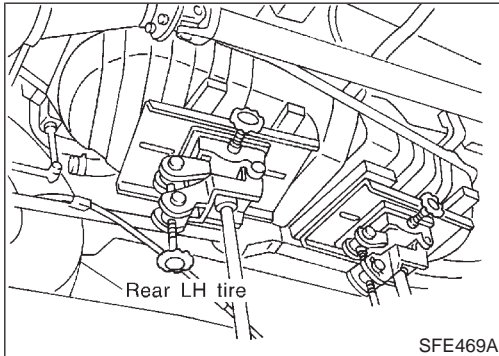


# FUEL SYSTEM

## Removal and Installation (Cont'd)



8. Remove parking brake wire from fuel tank protector.
9. Remove fuel tank protector.



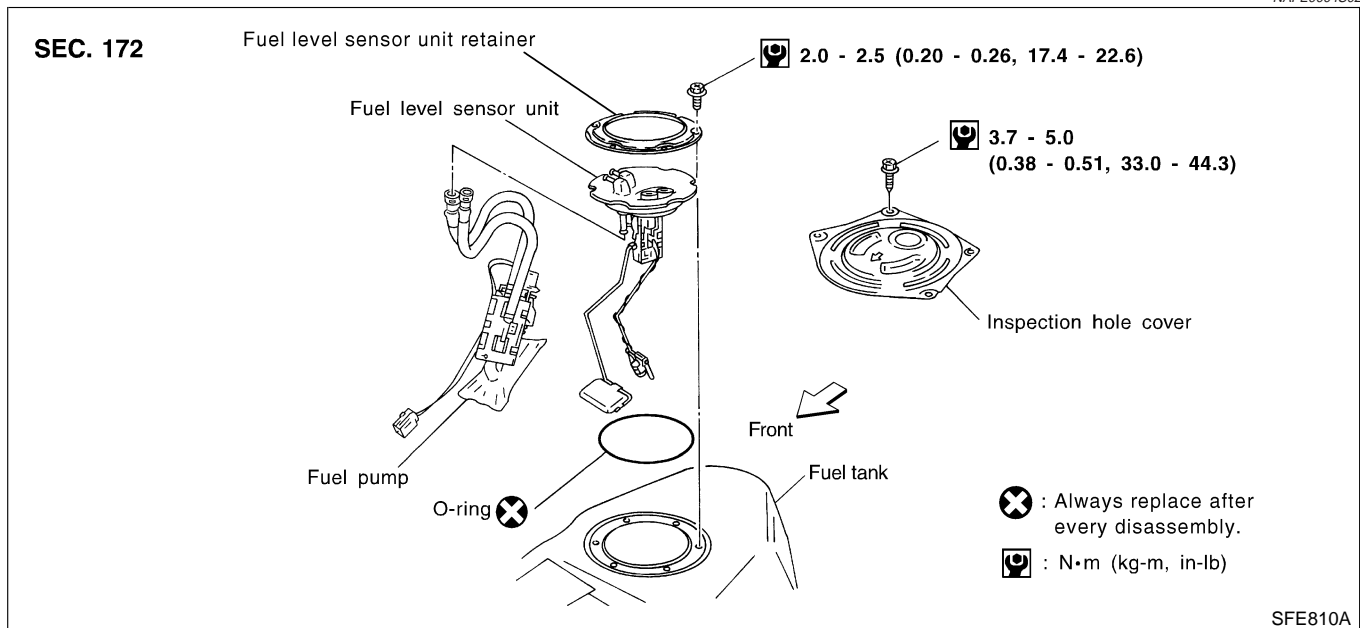
10. Remove fuel tank band mounting bolts while supporting fuel tank.

11. Remove fuel tank.

Installation procedure is the reverse order of removal.

## FUEL PUMP AND FUEL LEVEL SENSOR UNIT

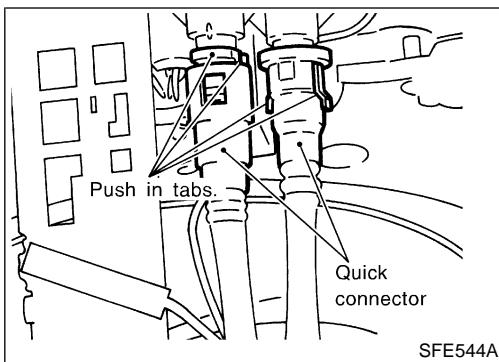
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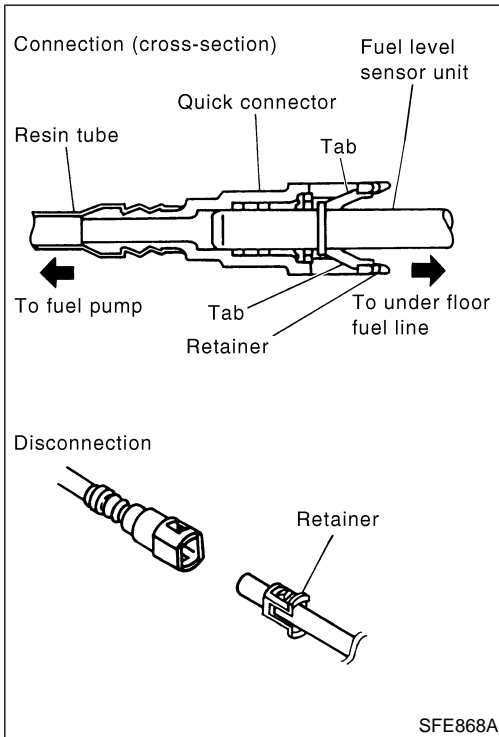
1. Release fuel pressure from fuel line. Refer to MA-17, "Changing Fuel Filter".
2. Open fuel filler lid.
3. Open the filler cap and release the pressure inside fuel tank.
4. Remove inspection hole cover located behind the rear seat.
5. Disconnect harness connectors and fuel tubes from upper plate of fuel level sensor unit.
  - Put mating marks on tubes for correct installation.
6. Remove fuel level sensor unit retainer and fuel level sensor unit.

# FUEL SYSTEM

Removal and Installation (Cont'd)

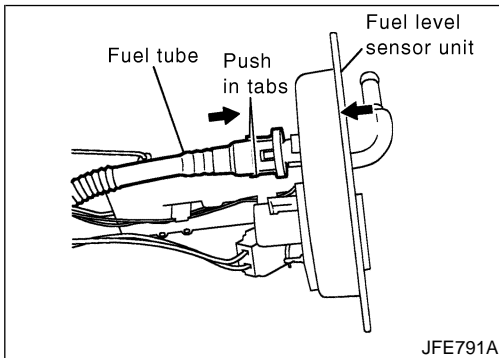


7. Disconnect the quick connectors as follows.
  - Hold the sides of the connector, push in tabs and pull out the tube.
  - If the connector and the tube are stuck together, push and pull several times until they start to move. Then disconnect them by pulling.

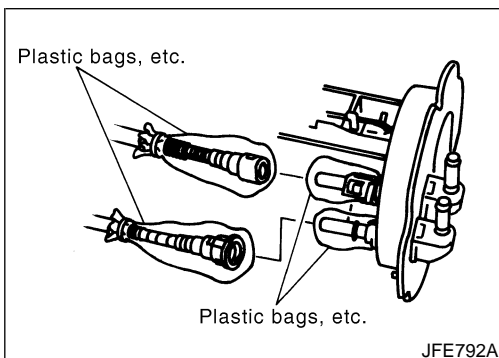


## CAUTION:

- The quick connector can be removed when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to remove the quick connector.
- Keep the resin tube away from heat. Be especially careful when welding near the tube.
- Prevent acid liquid such as battery electrolyte, etc. from getting on the resin tube.
- Do not bend or twist resin tube during connection and disconnection.
- Only when the quick connector is replaced, remove the remaining retainer on the fuel level sensor unit. (Feed tube)
- When the fuel level sensor unit is replaced, also replace the retainer with a new one [Yellow colored retainer]. (Feed tube)



- Press fuel tube and fuel level sensor unit as shown in the figure. Disconnect the joint by pushing tab and pull out fuel tube. (Return tube)

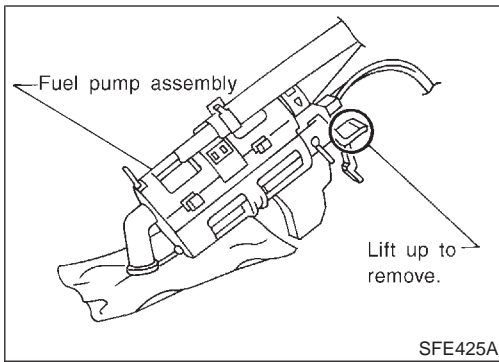


- To keep the connecting portion clean and to avoid damage and foreign materials, cover them completely with plastic bags or something similar.

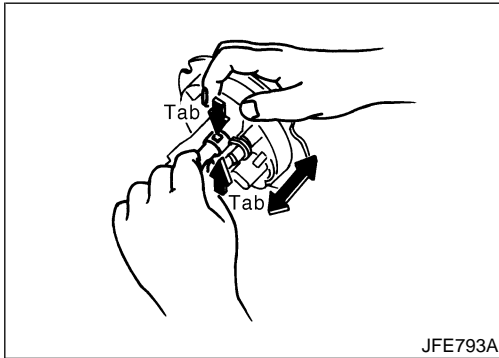
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# FUEL SYSTEM

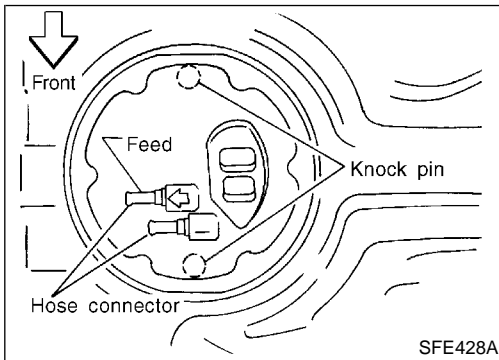
## Removal and Installation (Cont'd)



8. Remove fuel pump with bracket while lifting the pawl of the fuel pump bracket upward.



9. To install, reverse the removal procedure.
  - Connect the quick connectors as follows.
    - 1) Be sure that the connecting portion is clean and smooth.
    - 2) Align mating marks.
    - 3) Insert tube straight into the connector aligning each center until you hear a click.
    - 4) After connecting, make sure that the connection is secure by following method.
      - a. Pull the tube and the connector to make sure they are securely connected.
      - b. Visually confirm that the two retainer tabs are connected to the connector.



- Face fuel level sensor unit as shown in the figure, and install it with knock pin on back aligned with knock pin hole on fuel tank.



## Removal and Installation

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### CAUTION:

- Be sure to use genuine exhaust system parts or equivalents which are specially designed for heat resistance, corrosion resistance, and shape.
- Perform the operation with the exhaust system fully cooled down because the system will be hot just after engine stops.
- Be careful not to cut your hand on the insulator edge.
- Always replace exhaust gaskets with new ones when reassembling.
- If heat insulator is badly deformed, repair or replace it. If deposits such as mud pile up on heat insulator, remove them.
- Remove deposits from the sealing surface of each connection. Connect them securely to avoid gas leakage.
- Temporarily tighten mounting nuts on the exhaust manifold side and mounting bolts on the vehicle side. Check each part for unusual interference, and then tighten them to the specified torque.
- With engine running, check all tube connections for exhaust gas leaks, and entire system for unusual noises.
- Check to ensure that mounting brackets and mounting rubbers are installed properly and free from undue stress. Improper installation could result in excessive noise or vibration.
- Discard any heated oxygen sensor which has been dropped from a height of more than 0.5 m (19.7 in) onto a hard surface such as a concrete floor; use a new one.
- Before installing new heated oxygen sensor, clean exhaust system threads using Oxygen Sensor Thread Cleaner tool J-43897-18 or J-43897-12 and approved anti-seize lubricant.
- Do not overtorque the heated oxygen sensor. Doing so may cause damage to the heated oxygen sensor, resulting in the MIL coming on.

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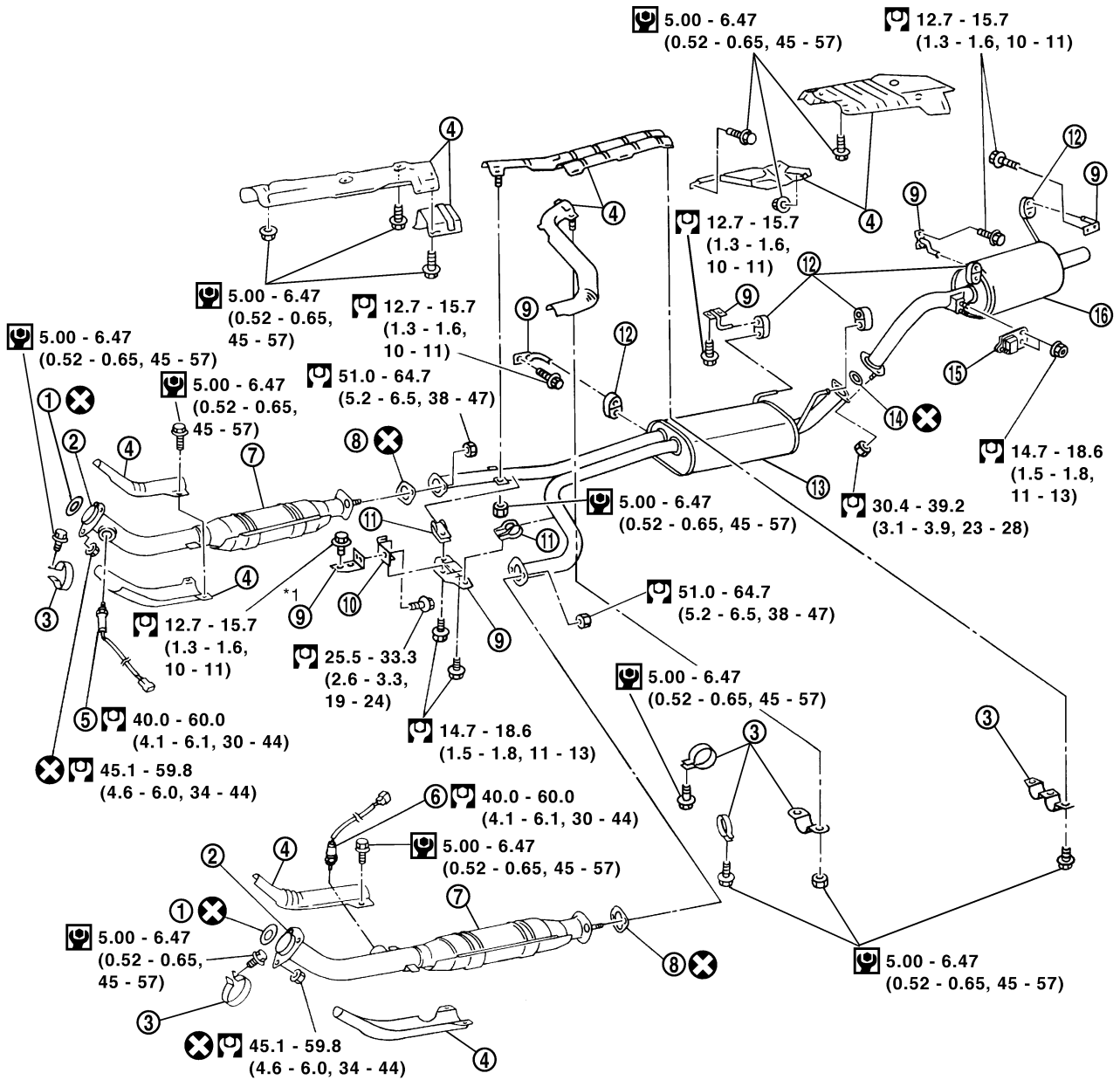
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# EXHAUST SYSTEM

Removal and Installation (Cont'd)

SEC. 200•208  
4WD model



\*1: Part-time 4WD models only

: N•m (kg-m, in-lb)

: N•m (kg-m, ft-lb)

: Always replace after every disassembly.

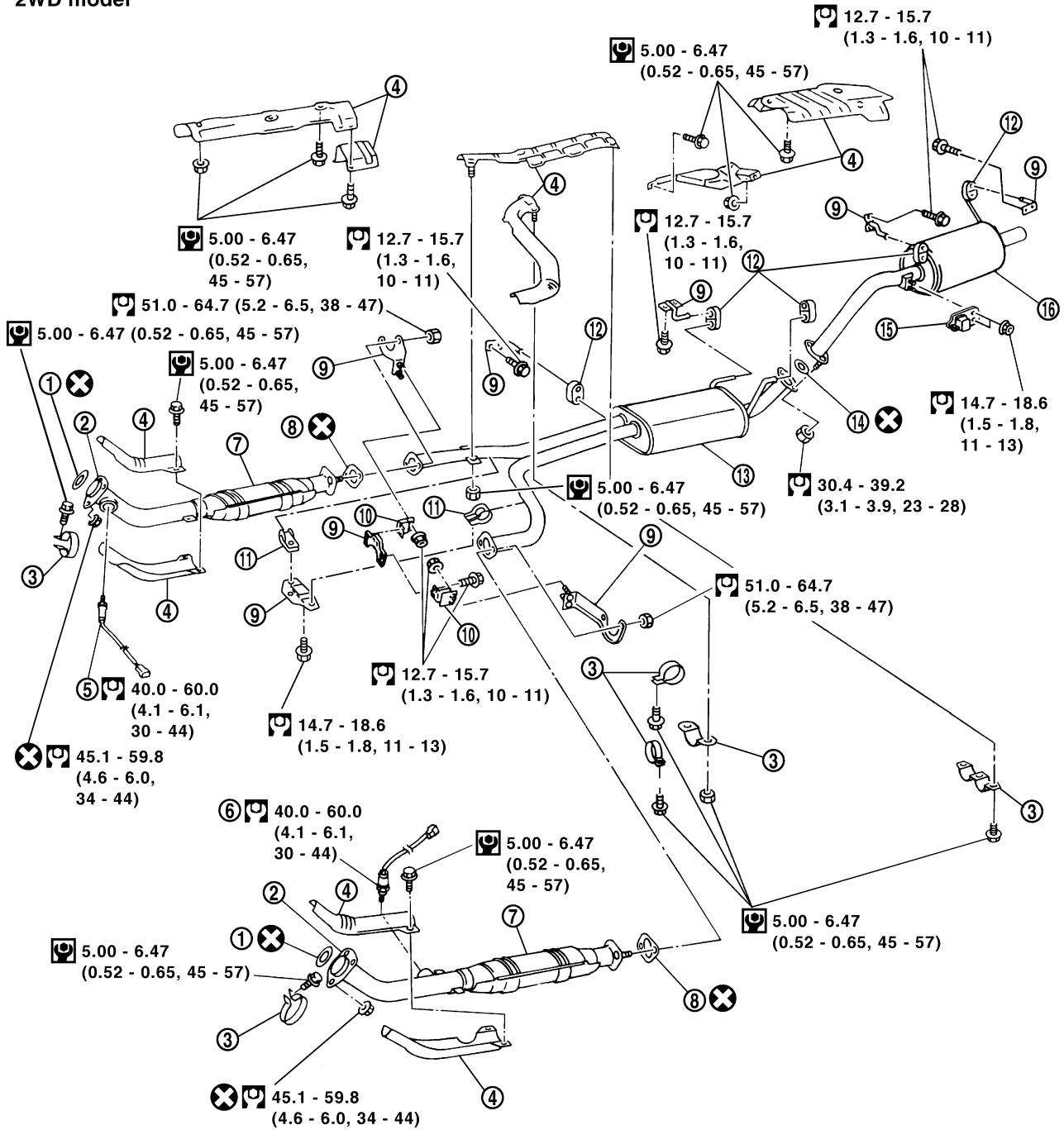
SFE863A

- |                                    |                      |                     |
|------------------------------------|----------------------|---------------------|
| 1. Gasket                          | 7. TWC (under floor) | 12. Mounting rubber |
| 2. Front tube                      | 8. Gasket            | 13. Main muffler    |
| 3. Clamp                           | 9. Mounting bracket  | 14. Gasket          |
| 4. Insulator                       | 10. Mounting rubber  | 15. Dynamic damper  |
| 5. Heated oxygen sensor 2 (bank 1) | 11. Clamp            | 16. Post muffler    |
| 6. Heated oxygen sensor 2 (bank 2) |                      |                     |

# EXHAUST SYSTEM

Removal and Installation (Cont'd)

SEC. 200•208  
2WD model



- : N•m (kg-m, in-lb)
- : N•m (kg-m, ft-lb)
- : Always replace after every disassembly.

SFE864A

- |                                    |                      |                     |
|------------------------------------|----------------------|---------------------|
| 1. Gasket                          | 7. TWC (under floor) | 12. Mounting rubber |
| 2. Front tube                      | 8. Gasket            | 13. Main muffler    |
| 3. Clamp                           | 9. Mounting bracket  | 14. Gasket          |
| 4. Insulator                       | 10. Mounting rubber  | 15. Dynamic damper  |
| 5. Heated oxygen sensor 2 (bank 1) | 11. Clamp            | 16. Post muffler    |
| 6. Heated oxygen sensor 2 (bank 2) |                      |                     |

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## NOTES