

# ACCELERATOR CONTROL, FUEL & EXHAUST SYSTEMS

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## SECTION FE

### CONTENTS

<b>PREPARATION</b> .....	2	Fuel Tank .....	5
Special Service Tool .....	2	REMOVAL.....	5
Commercial Service Tools .....	2	INSTALLATION.....	5
<b>ACCELERATOR CONTROL SYSTEM</b> .....	3	Fuel Pump, Fuel Level Sensor Unit and Fuel	
Removal and Installation .....	3	Filter.....	6
REMOVAL.....	3	REMOVAL.....	6
INSTALLATION.....	3	INSTALLATION.....	8
INSPECTION AFTER INSTALLATION .....	3	<b>EXHAUST SYSTEM</b> .....	9
<b>FUEL SYSTEM</b> .....	4	Removal and Installation .....	9
Removal and Installation .....	4		

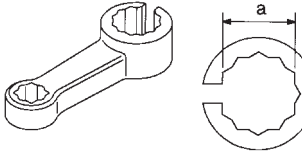
# PREPARATION

Special Service Tool

## Special Service Tool

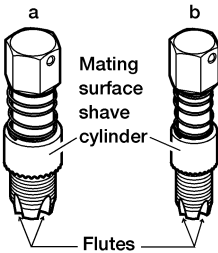
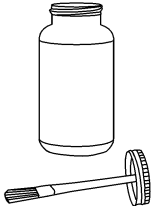
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
KV10114400 (J-38365) Heated oxygen sensor wrench	 <p>Loosening or tightening heated oxygen sensors <b>a: 22 mm (0.87 in)</b></p> <p>NT636</p>

## Commercial Service Tools

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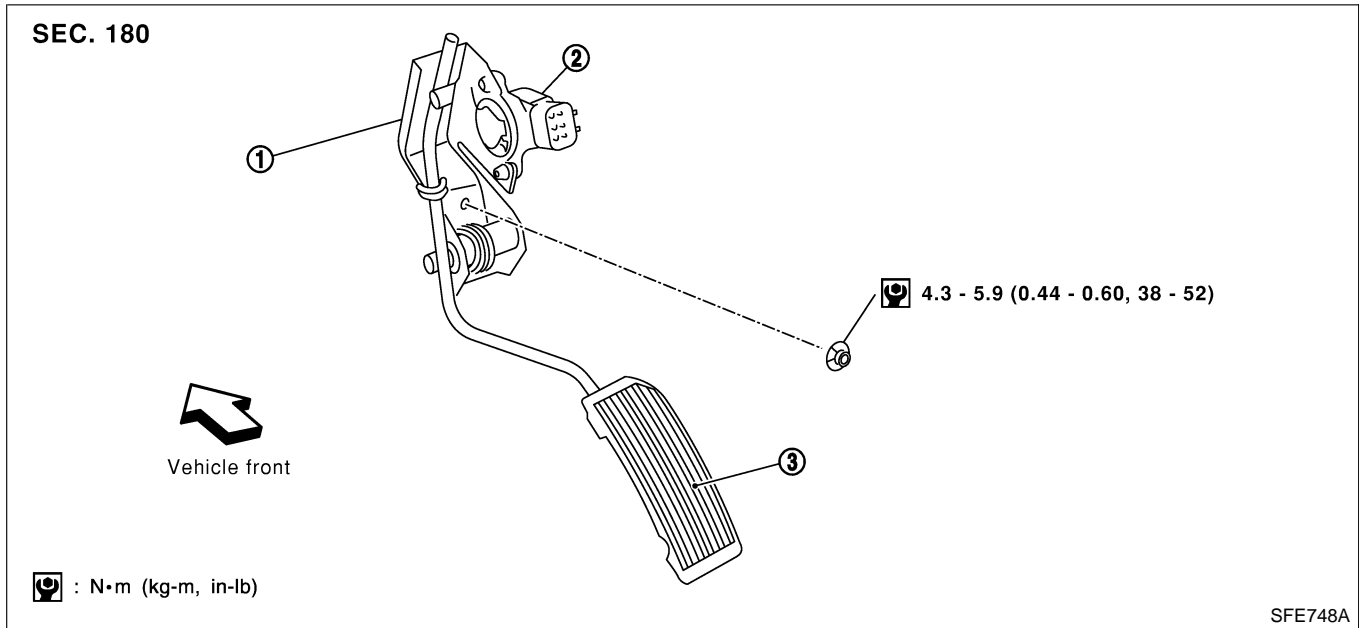
Tool number (Kent-Moore No.) Tool name	Description
(J-43897-18) (J-43897-12) Oxygen sensor thread cleaner	 <p>Reconditioning the exhaust system threads before installing a new heated oxygen sensor (Use with anti-seize lubricant shown below.) <b>a: J-43897-18 (18 mm dia.) for zirconia heated oxygen sensor</b> <b>b: J-43897-12 (12 mm dia.) for titania heated oxygen sensor</b></p> <p>AEM488</p>
Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	 <p>Lubricating heated oxygen sensor thread cleaning tool when reconditioning exhaust system threads</p> <p>AEM489</p>

## Removal and Installation

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**CAUTION:**

- Check 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
2. Accelerator pedal position sensor
3. Accelerator pedal

**REMOVAL**

1. Disconnect harness connector.
2. Remove mounting nut then remove accelerator pedal assembly.

**CAUTION:**

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

**INSTALLATION**

Install in reverse order of removal.

**INSPECTION AFTER INSTALLATION**

- Check if accelerator pedal moves smoothly within its range.
- Check if accelerator pedal returns securely to its original position.
- Perform “Accelerator Pedal Released Position Learning” when disconnecting the accelerator pedal position sensor harness connector. Refer to EC-72, “BASIC SERVICE PROCEDURE”.
- For electrical inspection of accelerator pedal assembly, refer to EC-669, “DTC P2138 APP SENSOR”.

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# FUEL SYSTEM

Removal and Installation

## Removal and Installation

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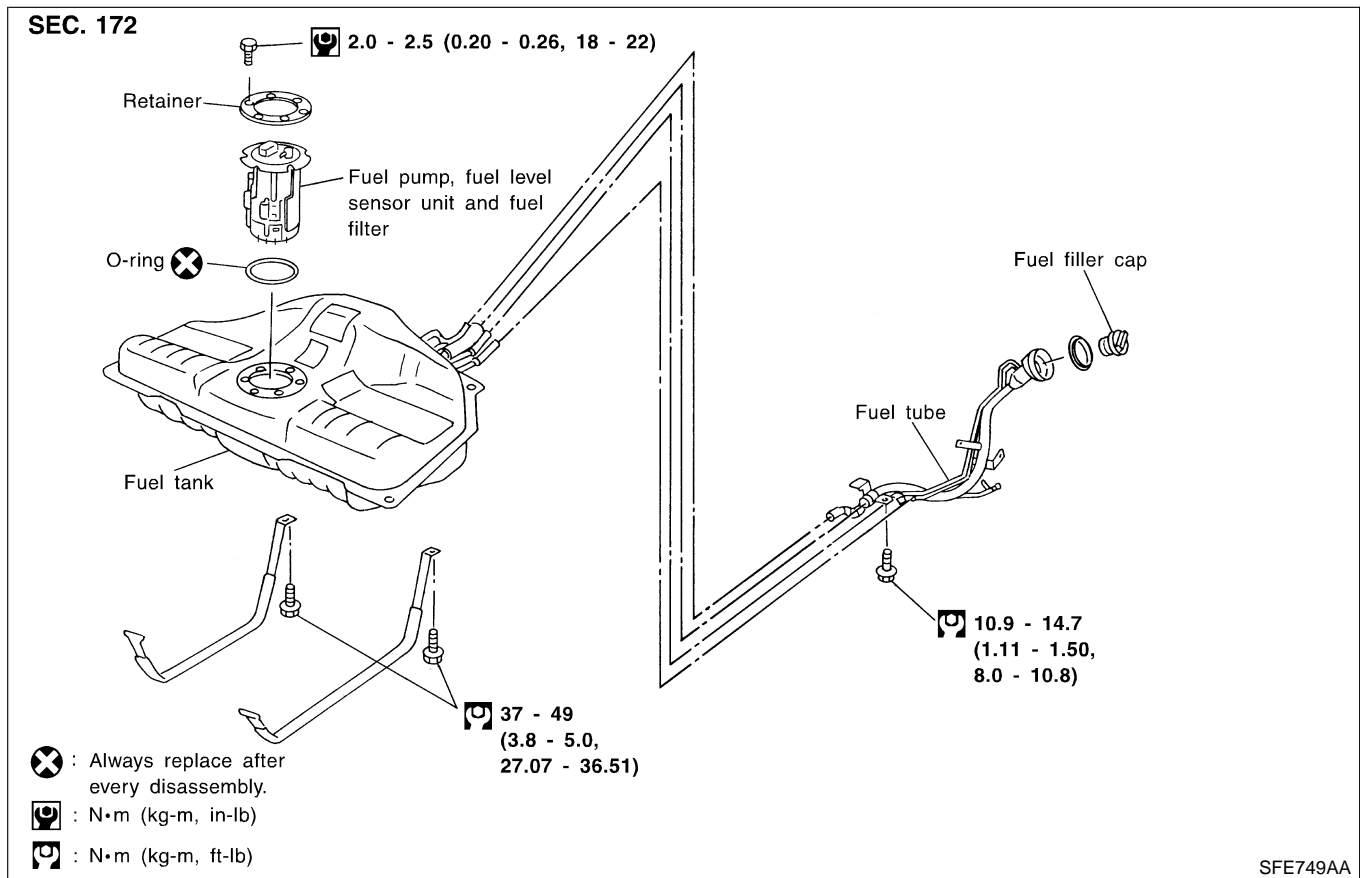
### WARNING:

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

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

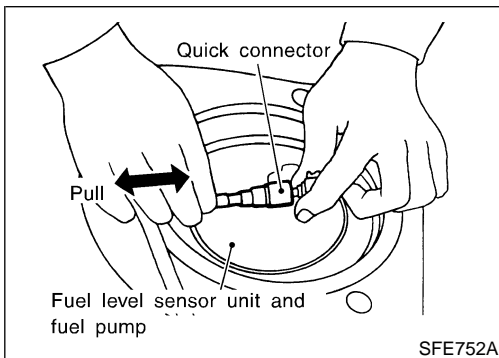
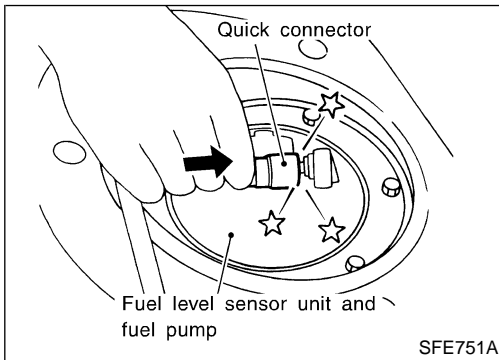
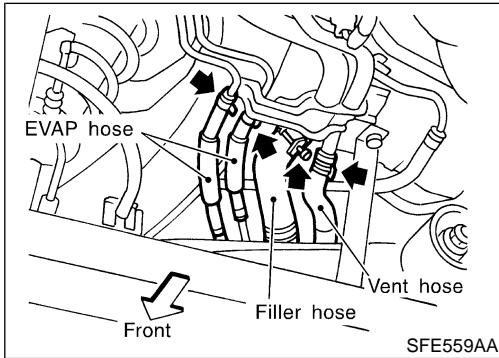
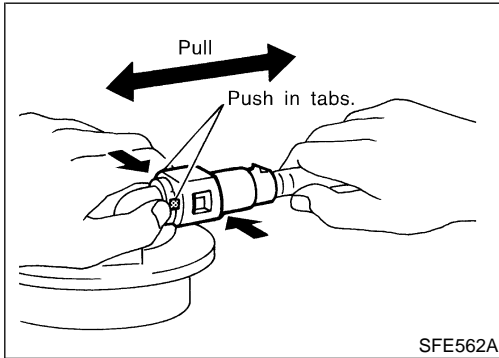
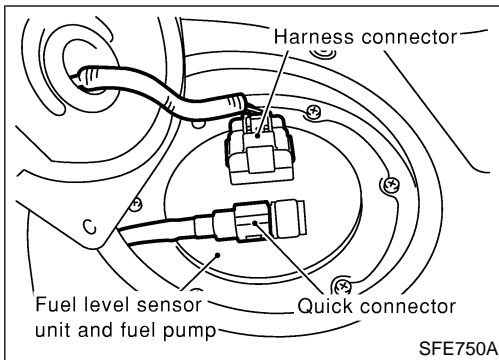
### CAUTION:

- Before removing fuel line parts, carry out 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 fuel line. Refer to EC-56, “Fuel Pressure Release”.
  - c) Disconnect battery ground cable.
- Always replace O-ring and clamps with new ones.
- Do not kink or twist tubes when they are being installed.
- Do not tighten hose clamps excessively to avoid damaging hoses.
- After installing fuel tubes, run engine and check for fuel leaks at connections.
- 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 inspection and installation of EVAP system parts, refer to EC-37, “Evaporative Emission System”.
- For inspection and installation of ORVR system parts, refer to EC-43, “On Board Refueling Vapor Recovery (ORVR)”.



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## Fuel Tank

### REMOVAL

1. Release fuel pressure from fuel line. Refer to EC-56, "Fuel Pressure Release".
  2. Disconnect battery ground cable.
  3. Drain fuel from fuel tank.
  4. Remove rear seat bottom. Refer to BT-52, "Removal and Installation".
  5. Disconnect electrical connector.
  6. Disconnect the quick connector as follows.
    - a. Put mating marks on tubes and connectors for correct installation.
    - b. Hold the sides of the connector, push in tabs, and pull out the tube inserted in the retainer.
- CAUTION:**
- The quick connector can be disconnected when the push in tabs are completely depressed. Do not twist it more than necessary.
  - Do not use any tools to disconnect the quick connector.
  - Keep clean the connecting portion of the tube and the quick connector.
7. Disconnect filler hose, vent hose and EVAP hose at fuel tank side.
  8. Remove exhaust heat insulators.
  9. Remove fuel tank mounting band bolts while supporting fuel tank.
  10. Remove fuel tank.

### INSTALLATION

To install, reverse the removal procedure. Connect the quick connector as follows:

- Align mating marks on tubes and connectors for correct installation.
- Be sure that the connecting portion of the tube and the quick connectors is clean and smooth.
- Align push in tabs with retainer openings.
- Insert tube into the center of the connector until you hear a click.

After connecting quick connector, make sure the connection is firmly made using the following method.

- Pull on the fuel tube and connector to make sure they are firmly connected.

Make sure that there are no leakage at fuel line connections as follows.

- Apply fuel pressure to fuel lines with ignition switch turned ON (with engine stopped). Then check that there are no leaks.
- Start the engine, increase engine speed and verify that there are no leaks again.

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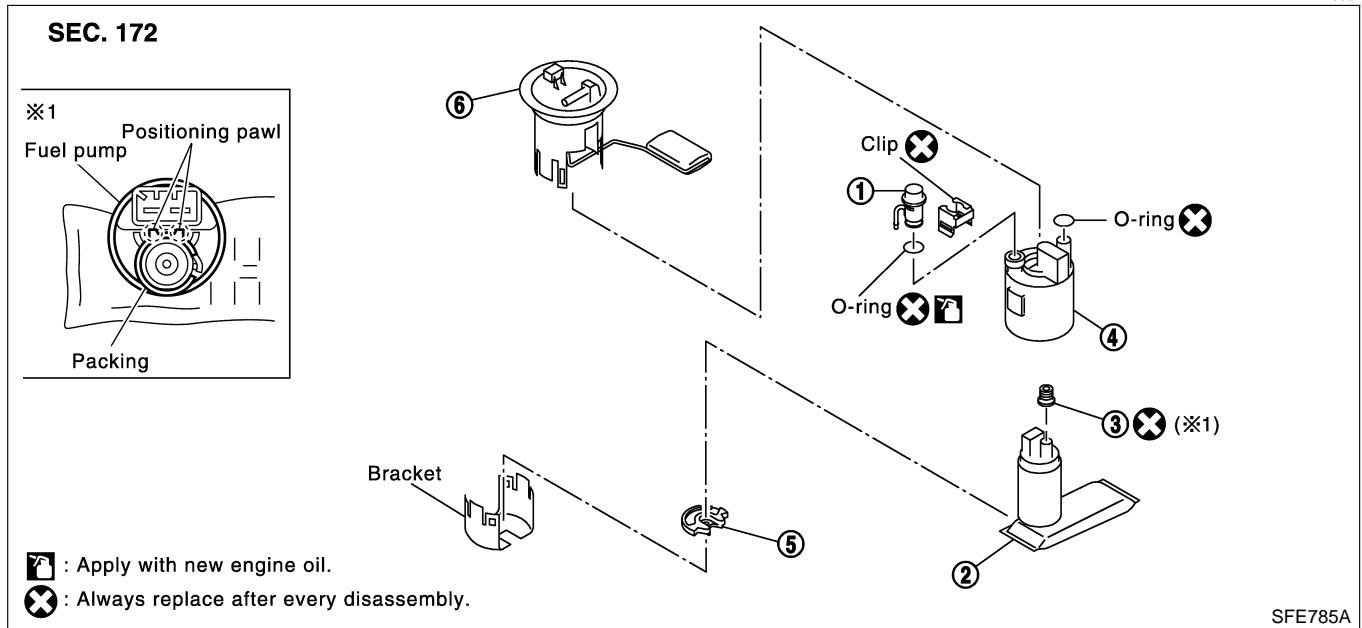
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# FUEL SYSTEM

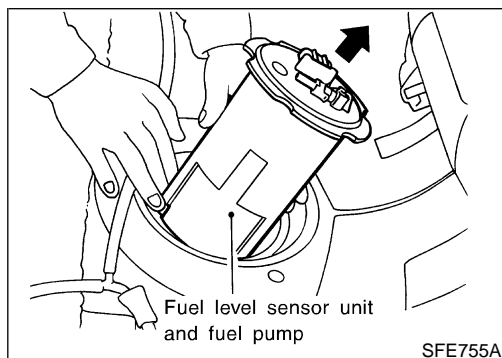
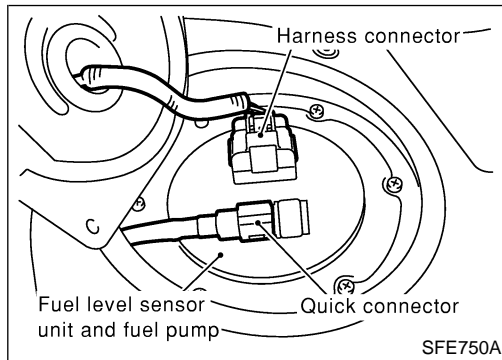
Fuel Pump, Fuel Level Sensor Unit and Fuel Filter

## Fuel Pump, Fuel Level Sensor Unit and Fuel Filter

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- |                       |                |                           |
|-----------------------|----------------|---------------------------|
| 1. Pressure regulator | 3. Packing     | 5. Rubber                 |
| 2. Fuel pump          | 4. Fuel filter | 6. Fuel level sensor unit |



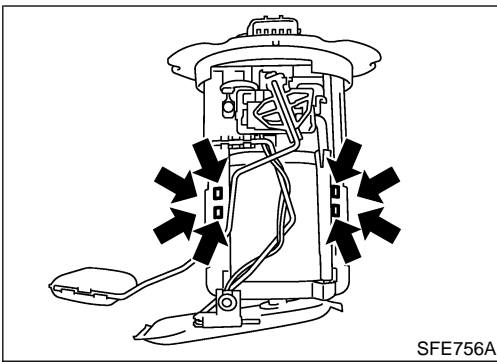
### REMOVAL

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1. Release fuel pressure from fuel line.  
**Refer to EC-56, "Fuel Pressure Release".**
2. Remove rear seat bottom. Refer to BT-52, "Removal and Installation".
3. Remove inspection hole cover located under the rear seat.
4. Disconnect electrical connector.
5. Disconnect the quick connectors.
  - For disconnection of quick connectors, refer to step 6. of "Fuel Tank Removal".
6. Remove the six screws.
7. Pull out the fuel level sensor unit and fuel pump.
  - **Do not damage the arm of the fuel level sensor and fuel tank temperature sensor.**

# FUEL SYSTEM

Fuel Pump, Fuel Level Sensor Unit and Fuel Filter (Cont'd)



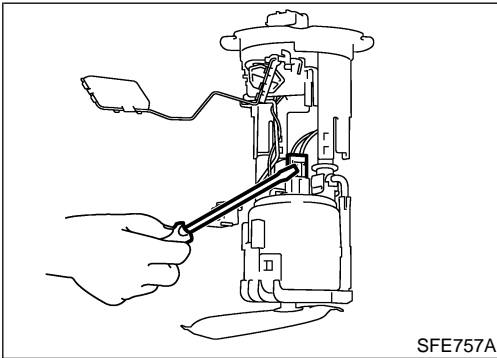
8. Remove flange of fuel level sensor unit and fuel pump.
  - Using a screwdriver, remove the snap fit portion as shown in the figure.

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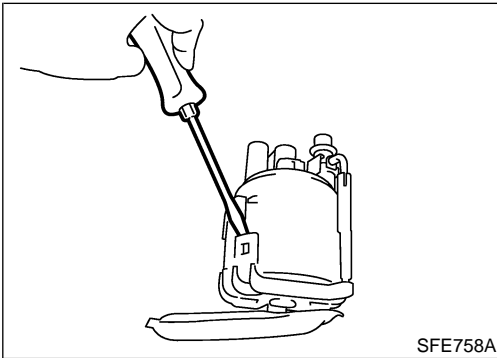
9. Push fuel level sensor flange.
  - Using a screwdriver, remove the snap fit portion as shown in the figure.
10. Pull up the fuel level sensor.

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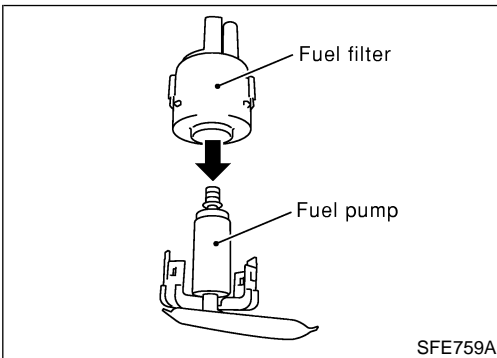
11. Remove fuel filter from pump bracket.
  - Using a screwdriver, remove the snap fit portion as shown in the figure.
12. Remove pressure regulator clip, then pull out pressure regulator.

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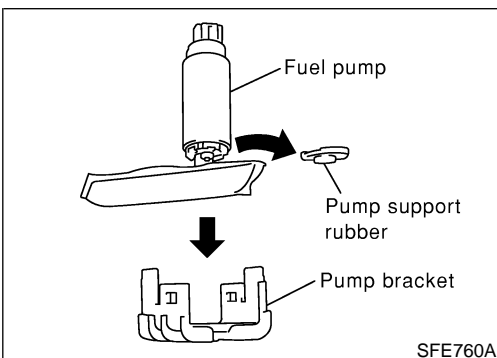
13. Remove fuel pump, then push down the fuel pump as shown in the figure.
14. Remove packing from fuel pump.

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15. Remove the pump support rubber from the fuel pump.

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# FUEL SYSTEM

Fuel Pump, Fuel Level Sensor Unit and Fuel Filter (Cont'd)

## INSTALLATION

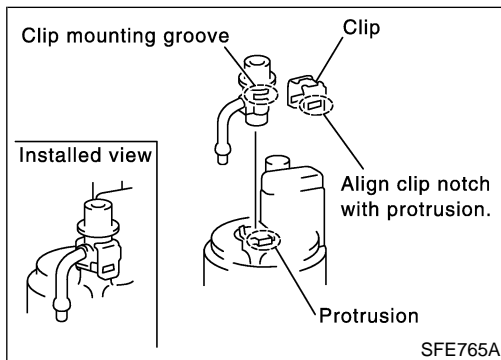
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Install in the reverse order of removal paying attention to the following.

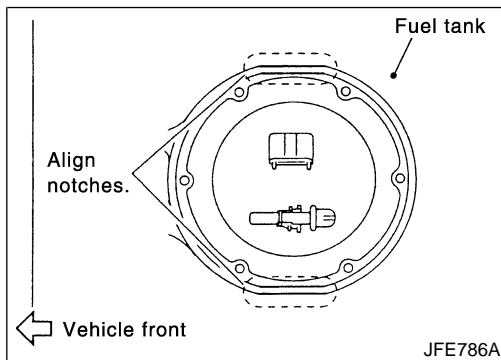
- Install the fuel filter and fuel pump with the tabs aligned, make sure a click sound of secure engagement is heard.
- Securely connect the harness connector of the fuel pump.
- Install the pressure regulator O-ring as follows.

### CAUTION:

- **When replacing, always use a new O-ring, packing and clip.**
- **Handle it with bare hands. (Do not use gloves.)**
- **Visually check the O-ring, mounting parts and mating parts for foreign materials and flaws.**
- **Before installing, apply new engine oil.**
- **To avoid damage, do not apply an excessive force (pulling or starching).**



- Install the pressure regulator as follows.
  - a) Insert the clip to the groove of the regulator.
  - b) With the clip installed, insert the regulator straight by matching the fuel filter protrusion and the clip notch.
  - c) Make sure that the fuel filter protrusion and clip notch are securely engaged.



- Install retainer so that its notch becomes parallel with notch on fuel tank.
- Tighten retainer mounting bolts evenly.



# EXHAUST SYSTEM

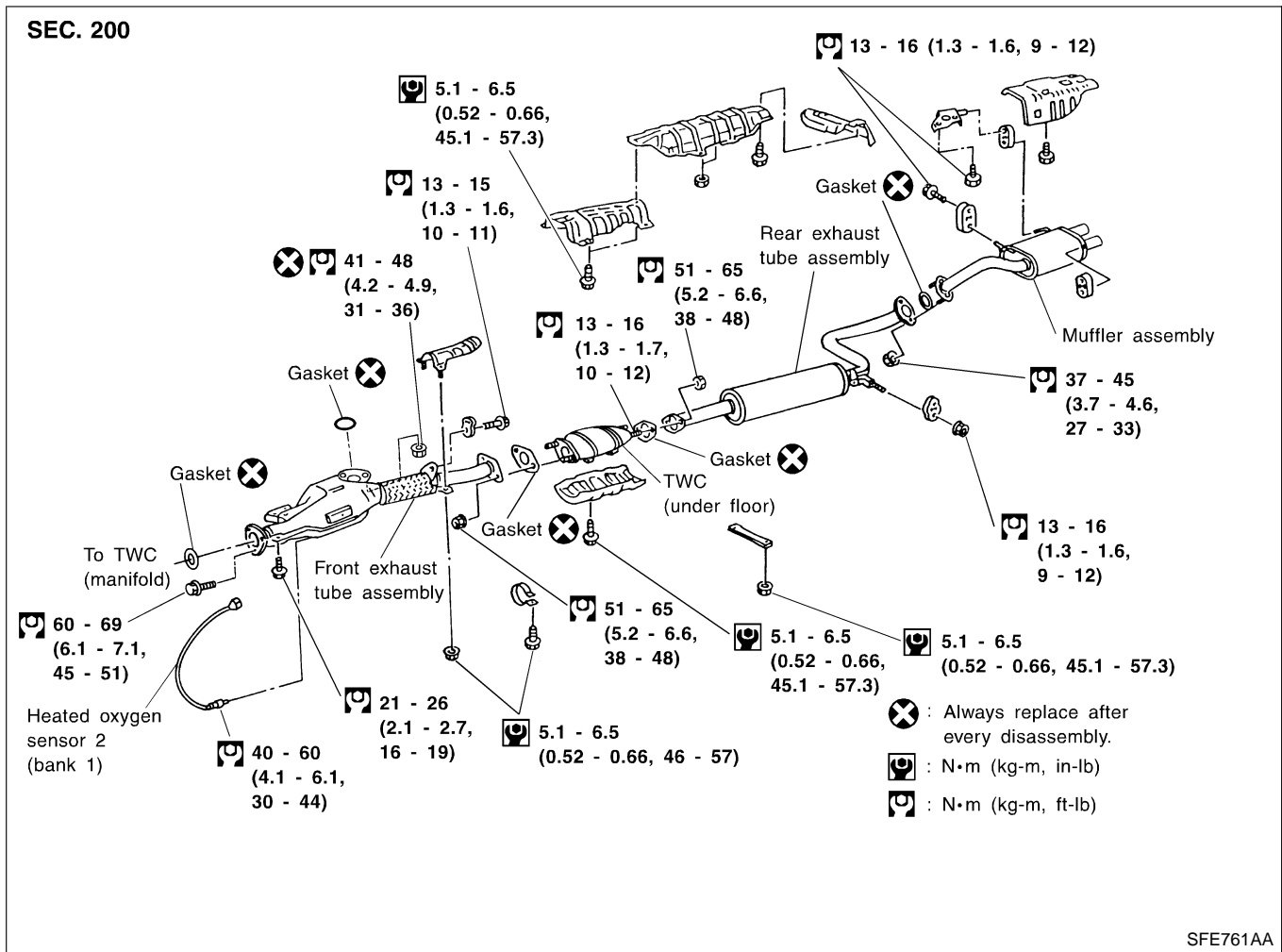
Removal and Installation

## Removal and Installation

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### CAUTION:

- Always replace exhaust gaskets with new ones when reassembling.
- 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 insulators 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 a new heated oxygen sensor, clean exhaust system threads using heated oxygen sensor thread cleaner tool, J-43897-18 or J-43897-12, and apply 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.



## NOTES