

# ACCELERATOR CONTROL, FUEL & EXHAUST SYSTEMS

## SECTION **FE**

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EC  
**FE**  
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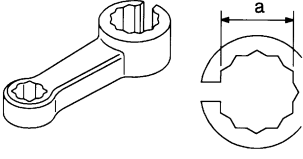
# PREPARATION

Special Service Tool

## Special Service Tool

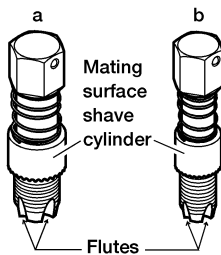
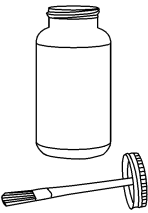
NGFE0001

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="1031 352 1442 436">Loosening or tightening rear heated oxygen sensor <b>a: 22 mm (0.87 in)</b></p> <p data-bbox="402 527 462 548">NT636</p>

## Commercial Service Tool

NGFE0007

Tool name	Description
(J-43897-18) (J-43897-12) Oxygen sensor thread cleaner	 <p data-bbox="1039 1014 1458 1234">Reconditioning the exhaust system threads before installing a new oxygen sensor. Use with anti-seize lubricant shown in Commercial Service Tools. <b>a: J-43897-18 18mm diameter, for Zirconia Oxygen Sensor</b> <b>b: J-43897-12 12mm diameter, for Titania Oxygen Sensor</b></p> <p data-bbox="430 1291 506 1312">AEM488</p>
Anti-seize lubricant Permatex™ 133AR or equivalent meeting MIL specification MIL-A-907	 <p data-bbox="1039 1329 1469 1409">Lubricating oxygen sensor thread cleaning tool when reconditioning exhaust system threads.</p> <p data-bbox="430 1606 506 1627">AEM489</p>

# ACCELERATOR CONTROL SYSTEM

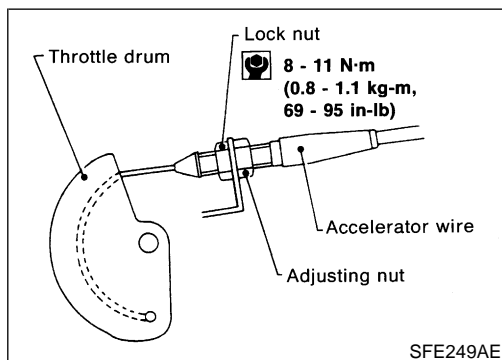
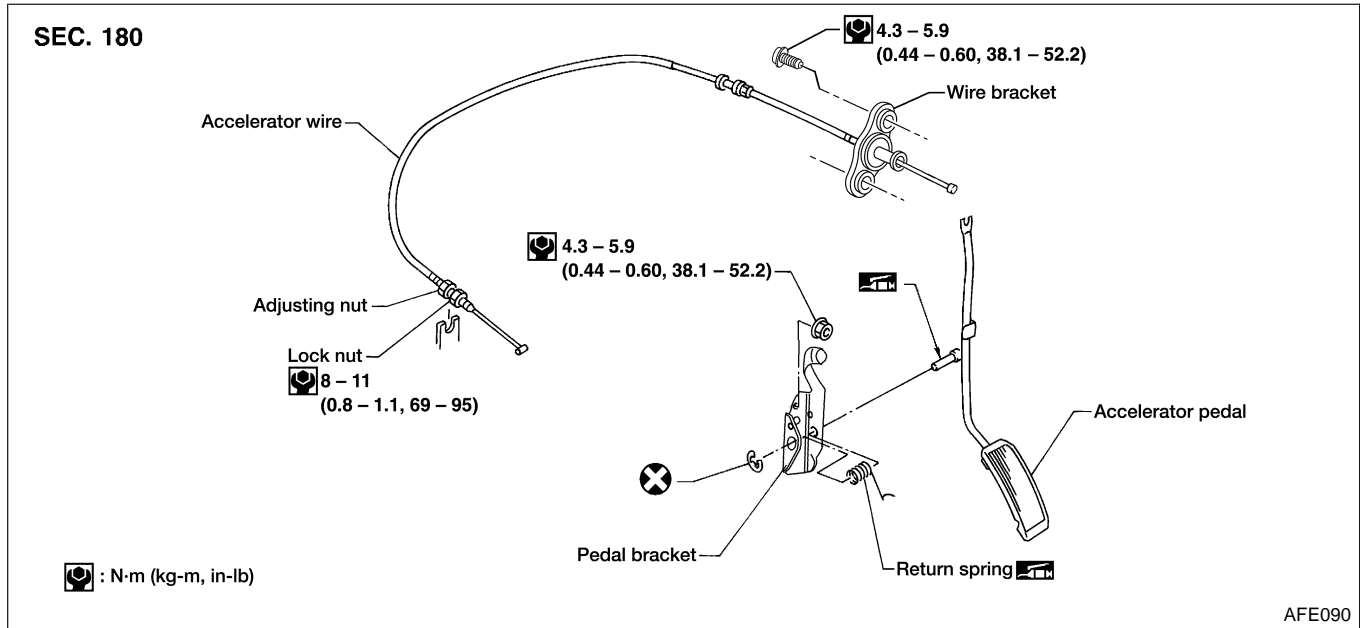
Removal and Installation

## Removal and Installation

NGFE0002

### CAUTION:

- When removing accelerator wire, make a mark to indicate lock nut's initial position.
- Check that throttle valve opens fully when accelerator pedal is fully depressed. Also check that it returns to idle position when pedal is released.
- Check accelerator control parts for improper contact with any adjacent parts.
- When connecting accelerator wire, be careful not to twist or scratch its inner wire.
- Refer to *EL-170* ("AUTOMATIC SPEED CONTROL DEVICE") for ASCD wire adjustment.



## Adjusting Accelerator Wire

NGFE0003

### NOTE:

Adjust accelerator wire with the engine warmed up to normal operating temperature and ignition switch turned to OFF.

1. Loosen lock nut, and tighten adjusting nut until throttle drum starts to move.
2. From that position, turn back adjusting nut 1.5 to 2 turns, and secure lock nut.

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# FUEL SYSTEM

## Removal and Installation

NGFE0004

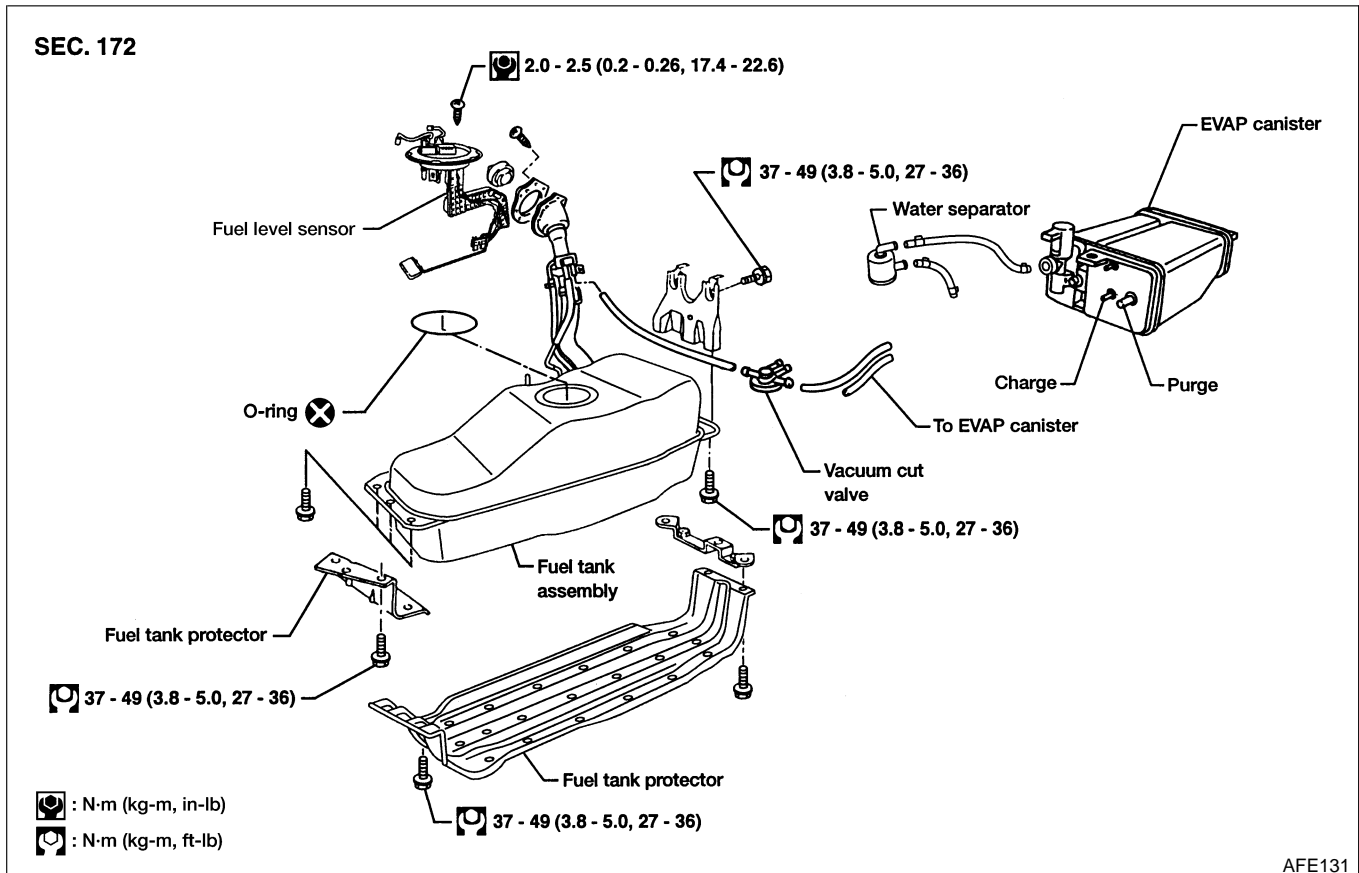
### WARNING:

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

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

### CAUTION:

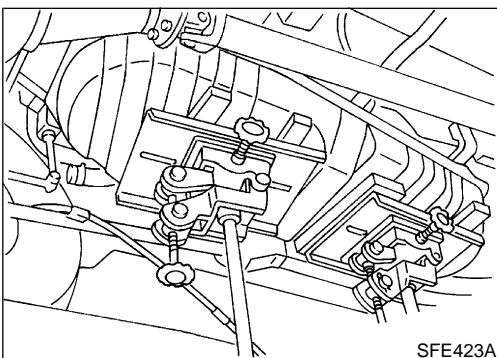
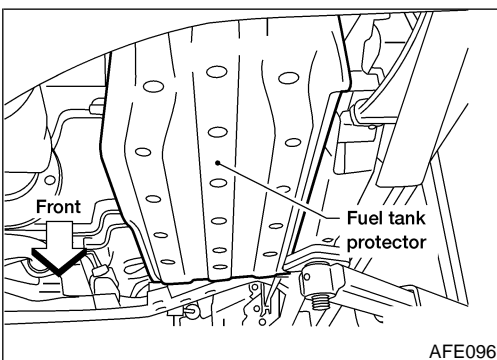
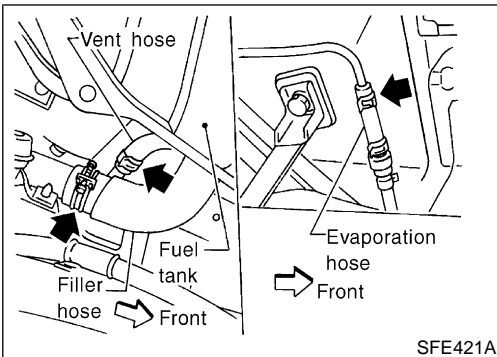
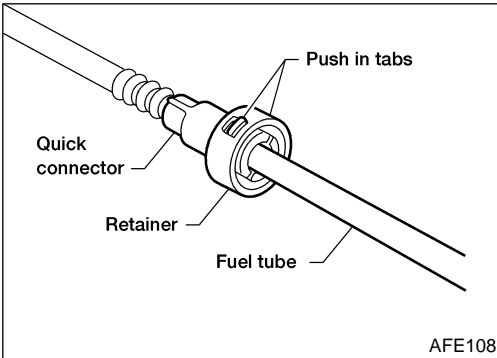
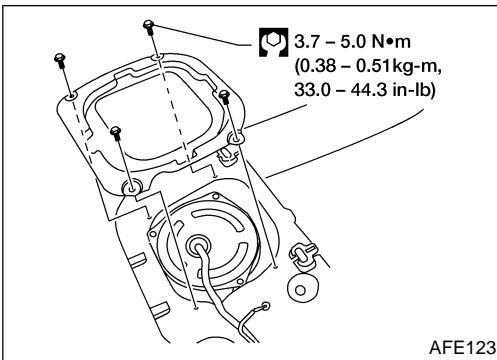
- Before removing fuel line parts, carry out the following procedures:
  - a) Put drained fuel in an explosion-proof container and put lid on securely.
  - b) Release fuel pressure from fuel line. Refer to *MA-20* (KA24DE engine) or *MA-29* (VG33E engine) (“Changing Fuel Filter”).
  - c) Disconnect battery ground cable.
- Always replace O-ring with a new one.
- Do not kink or twist hoses and tubes when installed.
- Do not tighten hose clamps excessively to avoid damaging hoses.
- When installing fuel check valve, be careful of its designated direction. Refer to *EC-34* (“EVAPORATIVE EMISSION SYSTEM”).
- After installation, run engine and check for fuel leaks at connections.



AFE131

# FUEL SYSTEM

Removal and Installation (Cont'd)



## FUEL TANK

NGFE0004S01

1. Release fuel pressure from fuel line.  
Refer to **MA-20** (KA24DE engine) or **MA-29** (VG33E engine) ("Changing Fuel Filter").
2. Disconnect battery ground cable.
3. Remove back seat bottom. Refer to **BT-38**.
4. Remove inspection hole cover located under rear seat.
5. Drain fuel from fuel tank.
6. Disconnect electrical connectors.
7. Remove filler protector.

8. Remove the quick connectors as follows.

- 1) Put mating marks on the connectors for correct installation.
- 2) Hold the sides of the connector, push in tabs, and pull out the tube inserted in the retainer.

### CAUTION:

The tube can be removed when the push in tabs are completely depressed. Do not use any tools to remove the quick connector.

9. Disconnect filler hose, vent and evaporation hose at fuel tank side.

10. Remove fuel tank protector.

11. Remove fuel tank mounting bolts while supporting fuel tank.
12. Remove fuel tank.

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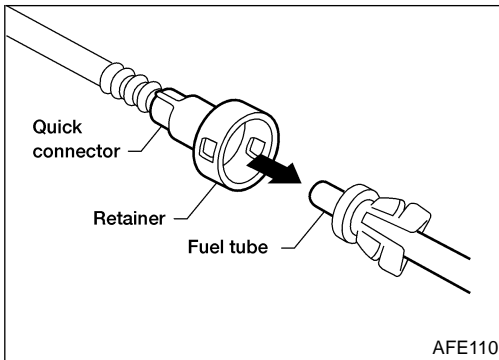
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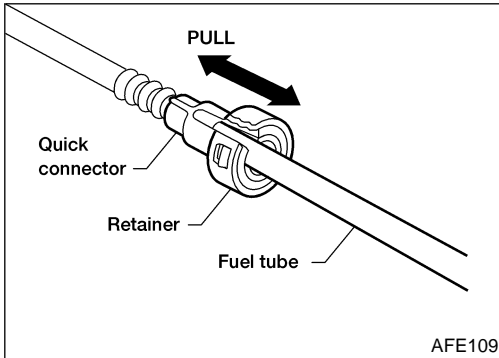
# FUEL SYSTEM

## Removal and Installation (Cont'd)



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

- Align push in tabs with retainer openings.
- Insert tube into the center of the connector until you hear a click.



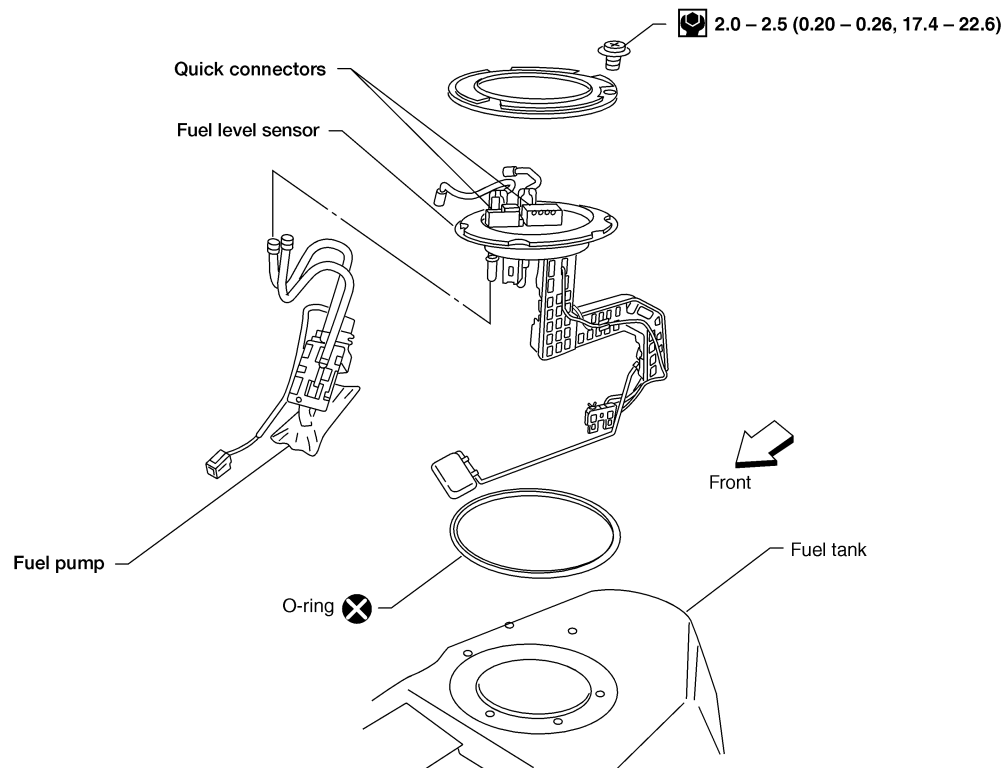
After connecting quick connectors, make sure the connection is firmly made using the following method.

- Pull on the fuel tube and connector to make sure they are firmly connected.
- Start the engine, increase engine speed and verify that there are no leaks.

## FUEL PUMP AND GAUGE

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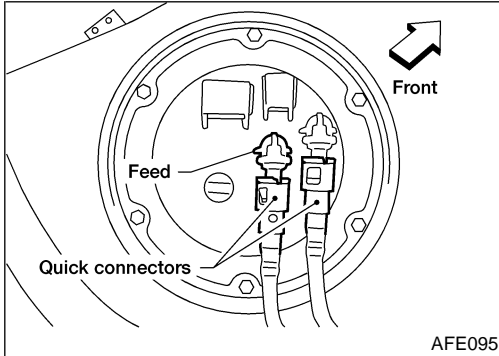
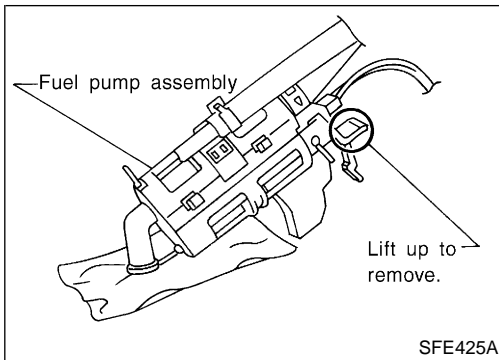
### SEC. 172



AFE132

# FUEL SYSTEM

Removal and Installation (Cont'd)



1. Remove fuel tank. Refer to "FUEL TANK", FE-5.
  - For removal of quick connectors, refer to step 6 of "FUEL TANK", FE-5.
2. Remove the six screws.
3. Remove fuel level sensor retainer and fuel level sensor.
4. Remove fuel pump with bracket while lifting the pawl of the fuel pump bracket upward.

5. Remove fuel level sensor assembly.  
Installation procedure is the reverse order of removal.

- Install fuel level sensor as shown.

### CAUTION:

- **Tighten bolts to specified torque.**
  - 🔧 : 2.0 - 2.5 N·m (0.20 - 0.26 kg·m, 17.4 - 22.6 in·lb)
- Always replace O-ring with a new one.
- After installation, run engine and check for leaks at connections.

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# EXHAUST SYSTEM

*Removal and Installation*

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## Removal and Installation

NGFE0005

### **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.
- Do not overtorque the oxygen sensor. Doing so may cause damage to the oxygen sensor, resulting in the MIL coming on.



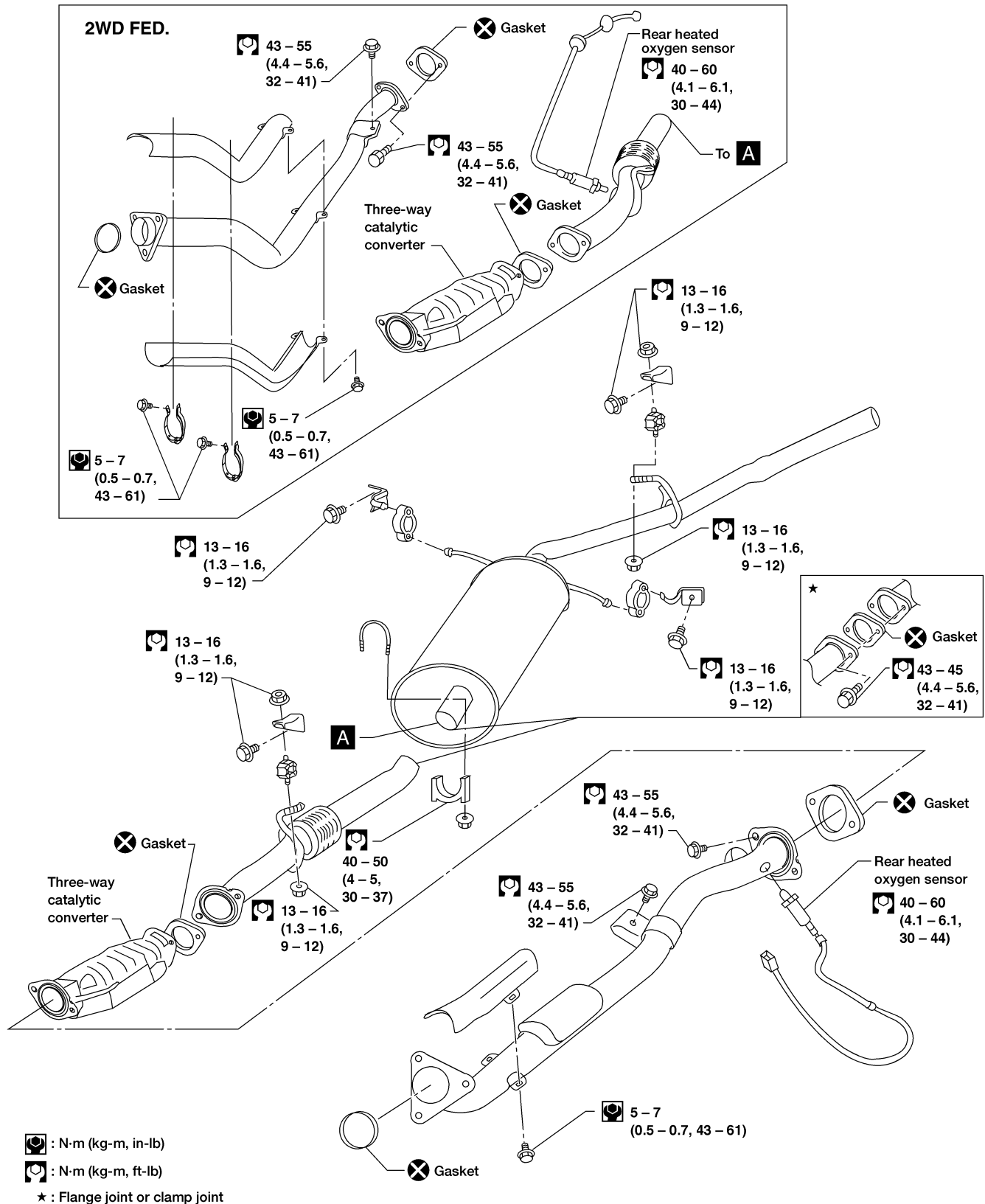
# EXHAUST SYSTEM

Removal and Installation (Cont'd)

## KA24DE Models

2WD model

SEC. 200



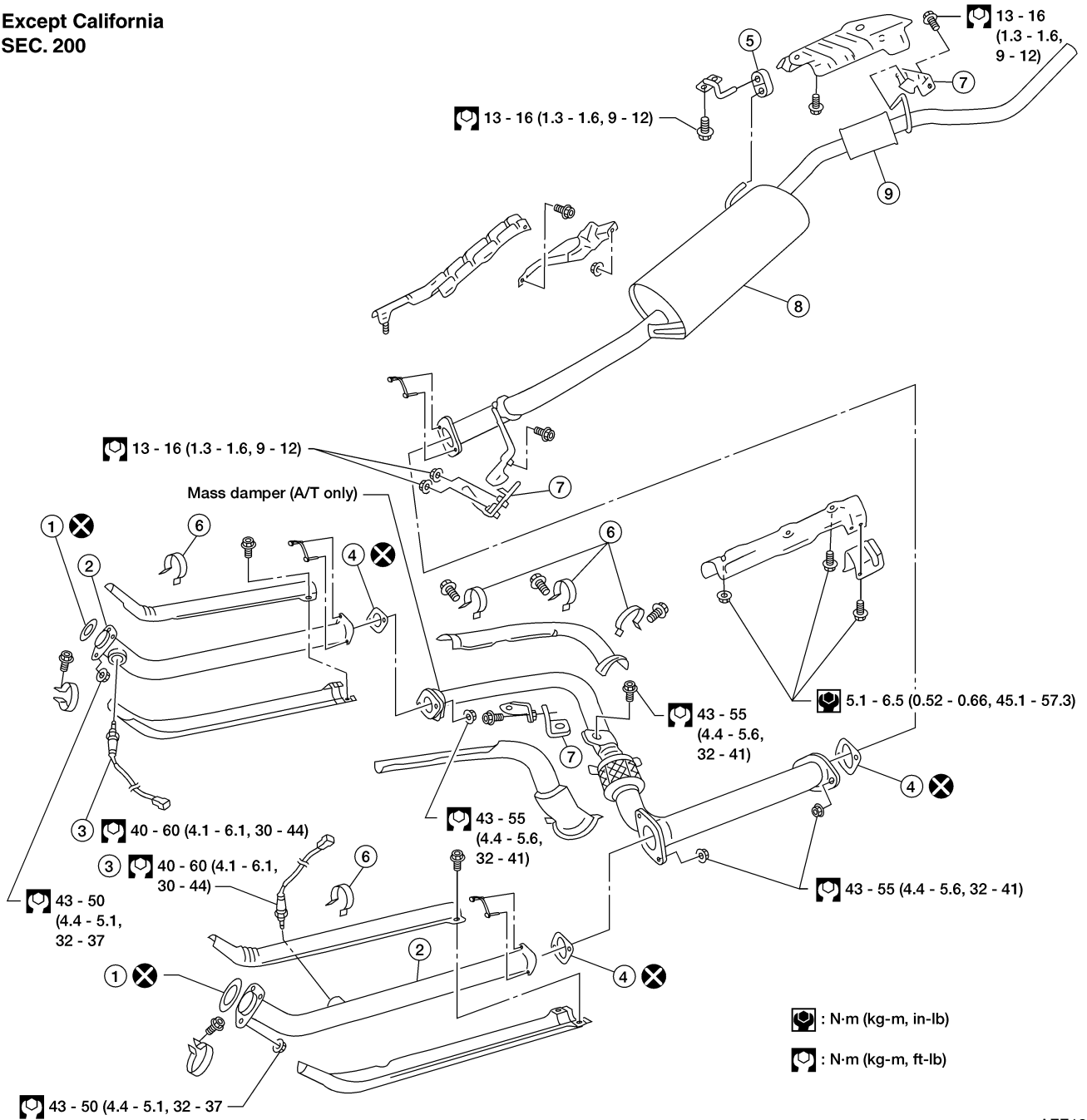
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# EXHAUST SYSTEM

Removal and Installation (Cont'd)

## VG33E Models

Except California  
SEC. 200



AFE129

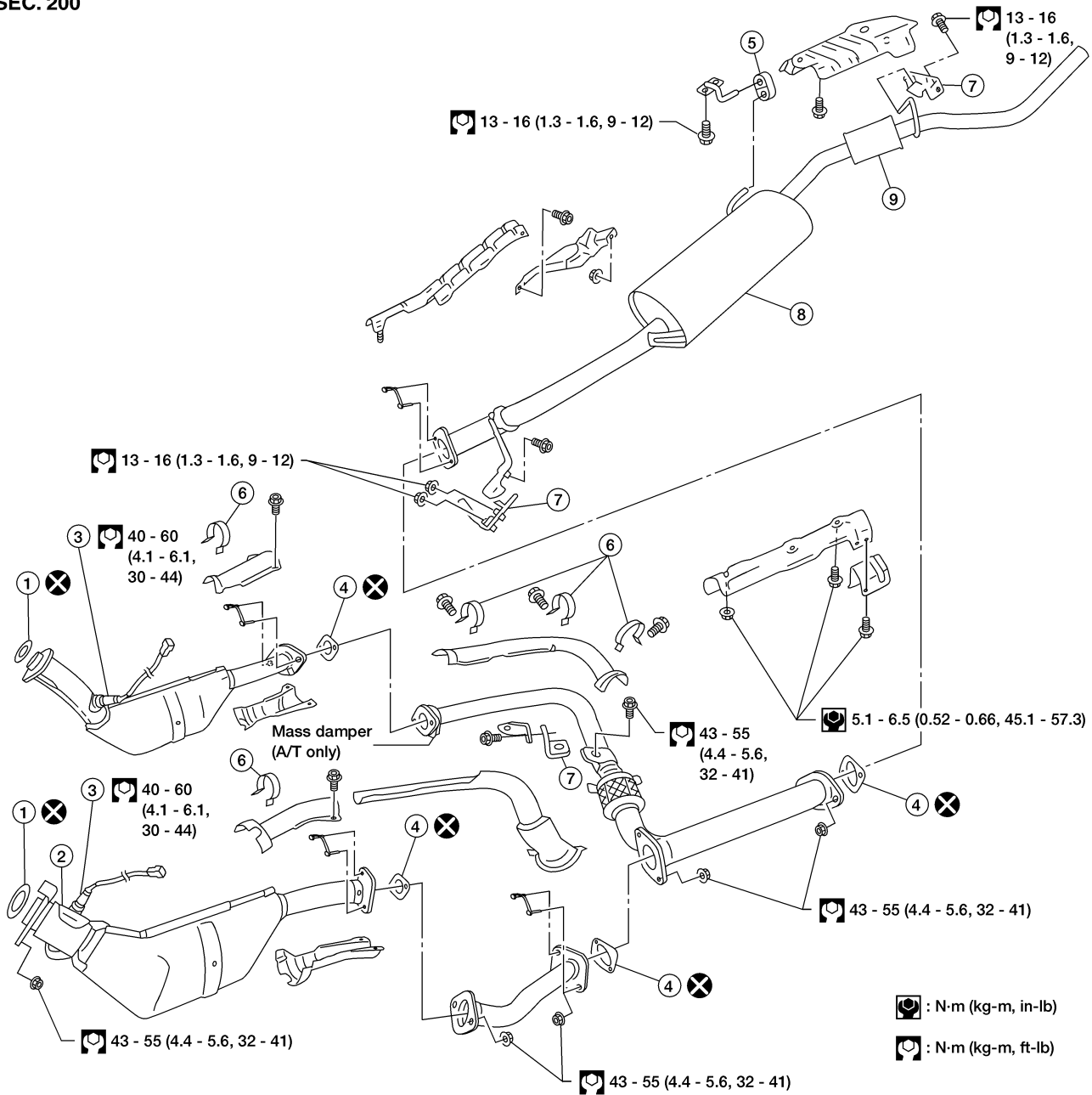
- |                              |                    |                     |
|------------------------------|--------------------|---------------------|
| 1. Gasket-                   | 4. Gasket          | 7. Mounting bracket |
| 2. Front tube                | 5. Mounting rubber | 8. Center muffler   |
| 3. Rear heated oxygen sensor | 6. Clamp           | 9. Rear muffler     |

# EXHAUST SYSTEM

Removal and Installation (Cont'd)

## VG33E Models

California exhaust  
SEC. 200



- 1. Gasket
- 2. Front tube
- 3. Rear heated oxygen sensor

- 4. Gasket
- 5. Mounting rubber
- 6. Clamp

- 7. Mounting bracket
- 8. Center muffler
- 9. Rear muffler

AFE099

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## NOTES