ACCELERATOR CONTROL, FUEL & EXHAUST SYSTEMS

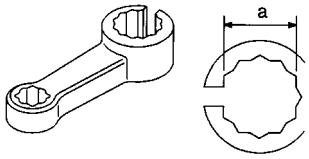
SECTION FE

CONTENTS

Special Service Tool

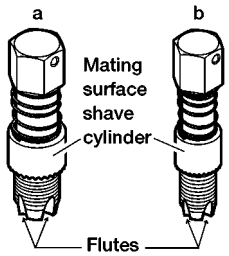
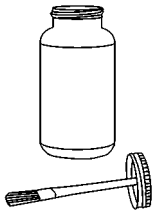
NEFE0001

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	 NT636	Loosening or tightening rear heated oxygen sensor **a: 22 mm (0.87 in)**

Commercial Service Tool

NEFE0007

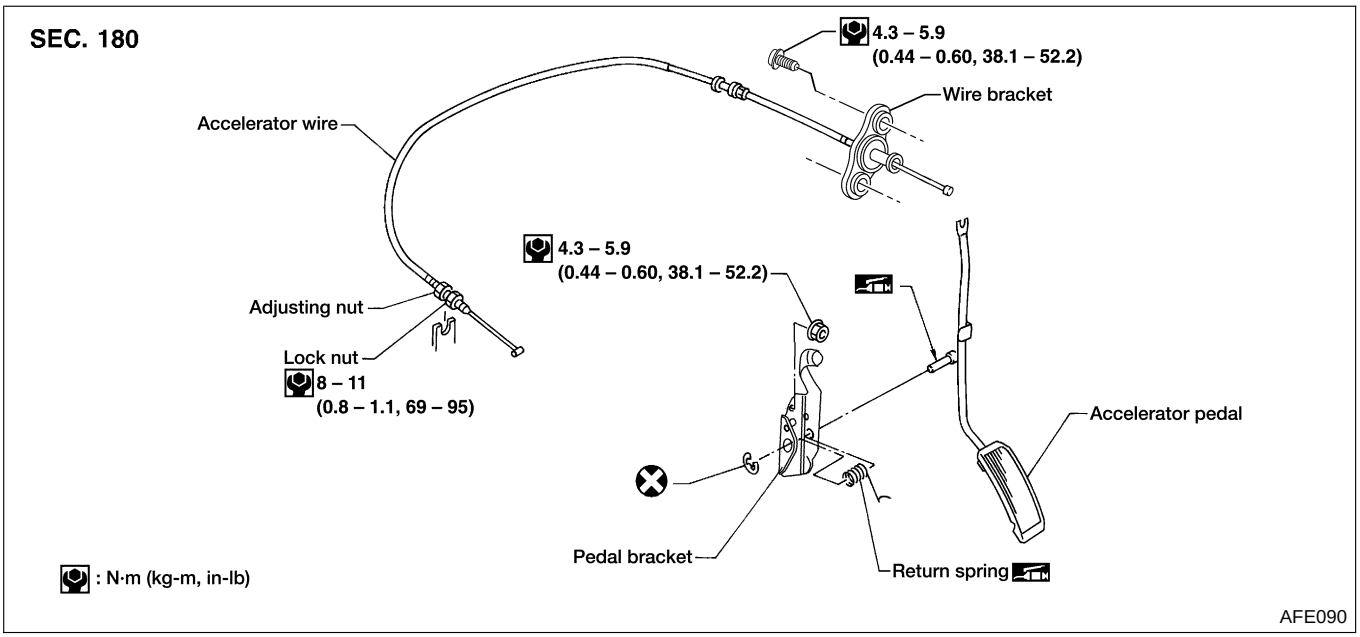
Tool name (Kent-Moore No.)	Description	
Oxygen sensor thread cleaner (J-43897-18) (J-43897-12)	 AEM488	Reconditioning the exhaust system threads before installing a new oxygen sensor. Use with anti-seize lubricant shown in Commercial Service Tools. **a: J-43897-18 18mm diameter, for Zirconia Oxygen Sensor** **b: J-43897-12 12mm diameter, for Titania Oxygen Sensor**
Anti-seize lubricant (Permatex™ 133AR or equivalent meeting MIL specification MIL-A-907)	 AEM489	Lubricating oxygen sensor thread cleaning tool when reconditioning exhaust system threads.

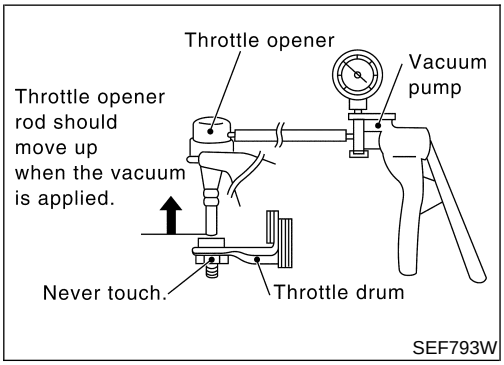
Removal and Installation

NEFE0002

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.**
- **For ASCD wire adjustment refer to *EL-154* ("AUTOMATIC SPEED CONTROL DEVICE").**





Adjusting Accelerator Wire

NEFE0003

NOTE:

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

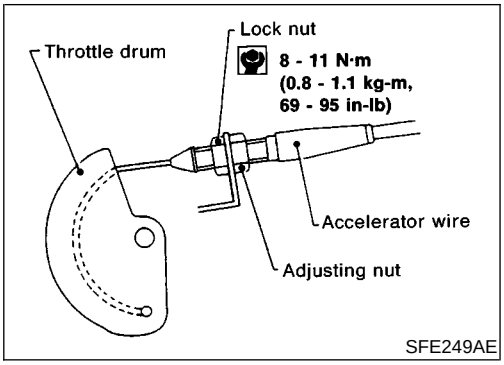
1. Remove the vacuum hose connected to the throttle opener.
2. Connect suitable vacuum hose to vacuum pump as shown left.
3. Apply vacuum [more than – 40.0okPa (– 300mmHg, – 11.81inHg)] until the throttle drum becomes free from the rod of the throttle opener.

Make sure that there is clearance between the throttle drum and rod.

If NG, refer to "Basic Inspection", ***EC-680***.

If OK, go to following steps.

Adjusting Accelerator Wire (Cont'd)



4. Loosen lock nut.
5. Tighten accelerator adjusting nut until throttle drum starts to move.
6. From that position, turn back adjusting nut 1.5 to 2 turns, and secure lock nut.
7. Release vacuum from the throttle opener.
8. Remove vacuum pump and vacuum hose from the throttle opener.
9. Reinstall the original vacuum hose to the throttle opener securely.

Removal and Installation

NEFE0004

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_2 fire extinguisher.**

CAUTION:

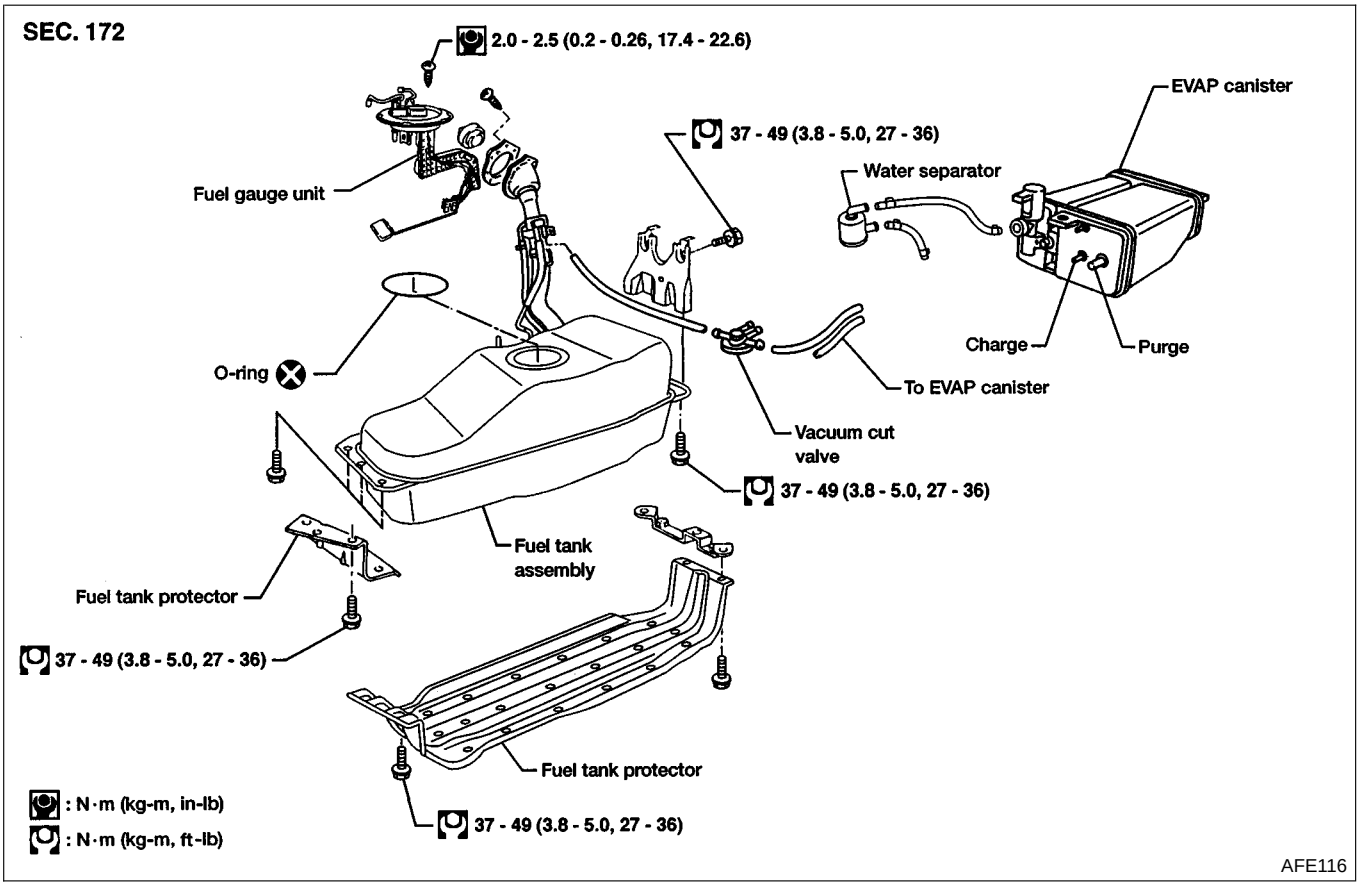
- **Before removing fuel line parts, carry out the following procedures:**

a) **Put drained fuel in an explosion-proof container and put lid on securely.**

b) **Release fuel pressure from fuel line. Refer to *MA-29* ("Changing Fuel Filter").**

c) **Disconnect battery ground cable.**

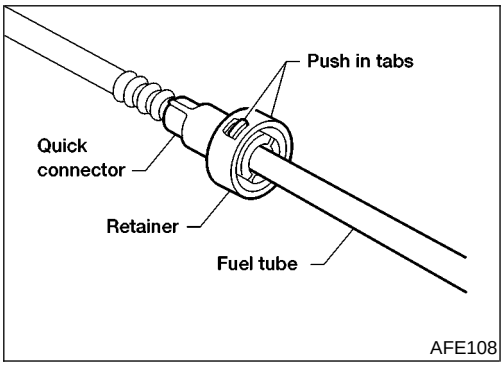
- **Remove quick connectors with Commercial Service Tool.**
- **Always replace O-ring with a new one.**
- **Do not kink or twist hoses and tubes when installed.**
- **Do not tighten hose clamps excessively to avoid damaging hoses.**
- **When installing fuel check valve, be careful of its designated direction. Refer to *EC-613* ("EVAPORATIVE EMISSION SYSTEM").**
- **After installation, run engine and check for fuel leaks at connections.**



FUEL TANK

NEFE0004S01

1. Release fuel pressure from fuel line.
   Refer to ***MA-29*** ("Changing Fuel Filter").
2. Disconnect battery ground cable.
3. Drain fuel from fuel tank.
4. Disconnect electrical connectors.
5. Remove filler protector.

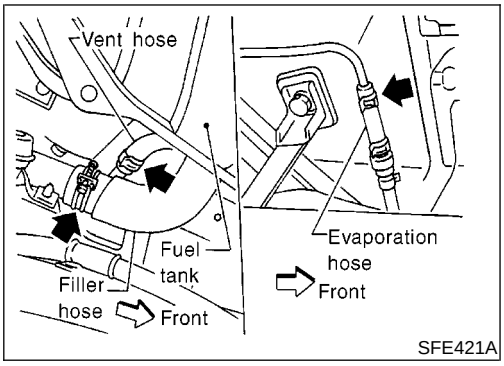


6. Remove the quick connectors as follows.

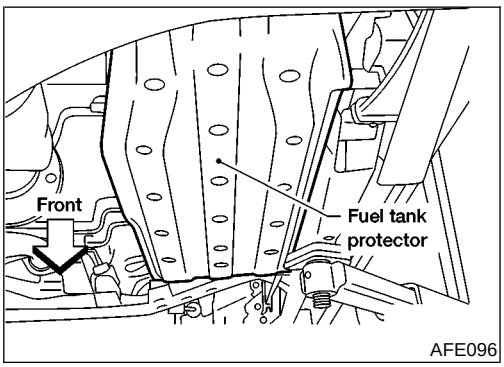
1) Put mating marks on the connectors for correct installation.
2) Hold the sides of the connector, push in tabs, and pull out the tube inserted in the retainer.

CAUTION:

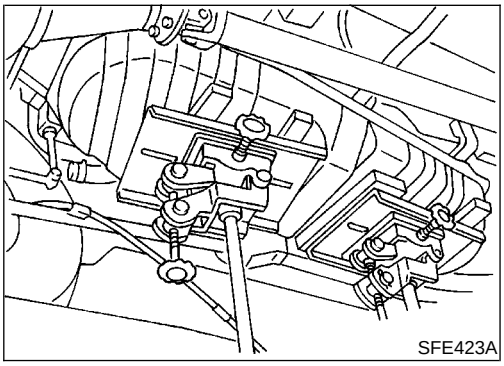
- **The tube can be removed when the push in tabs are completely depressed. Do not use any tolls to remove the quick connector.**
- **Do not use any tools to remove the quick connector.**
- **Keep the connecting portion of the tubes and quick connector clean.**



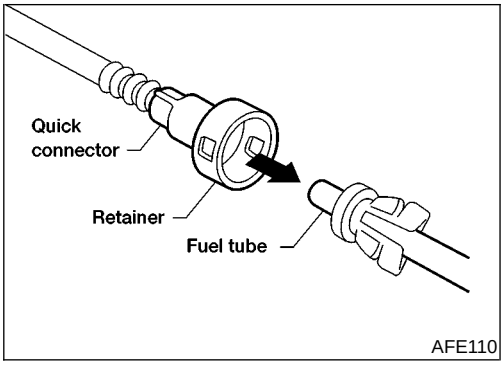
7. Disconnect filler hose, vent and evaporation hose at fuel tank side.



8. Remove fuel tank protector.

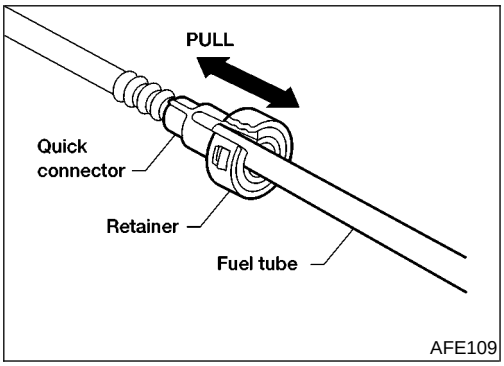


9. Remove fuel tank mounting bolts while supporting fuel tank.
10. Remove fuel tank.



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

- Make sure the connectors are clean and undamaged.
- Align push in tabs with retainer openings.
- Insert tube into the center of the connector until you hear a click.

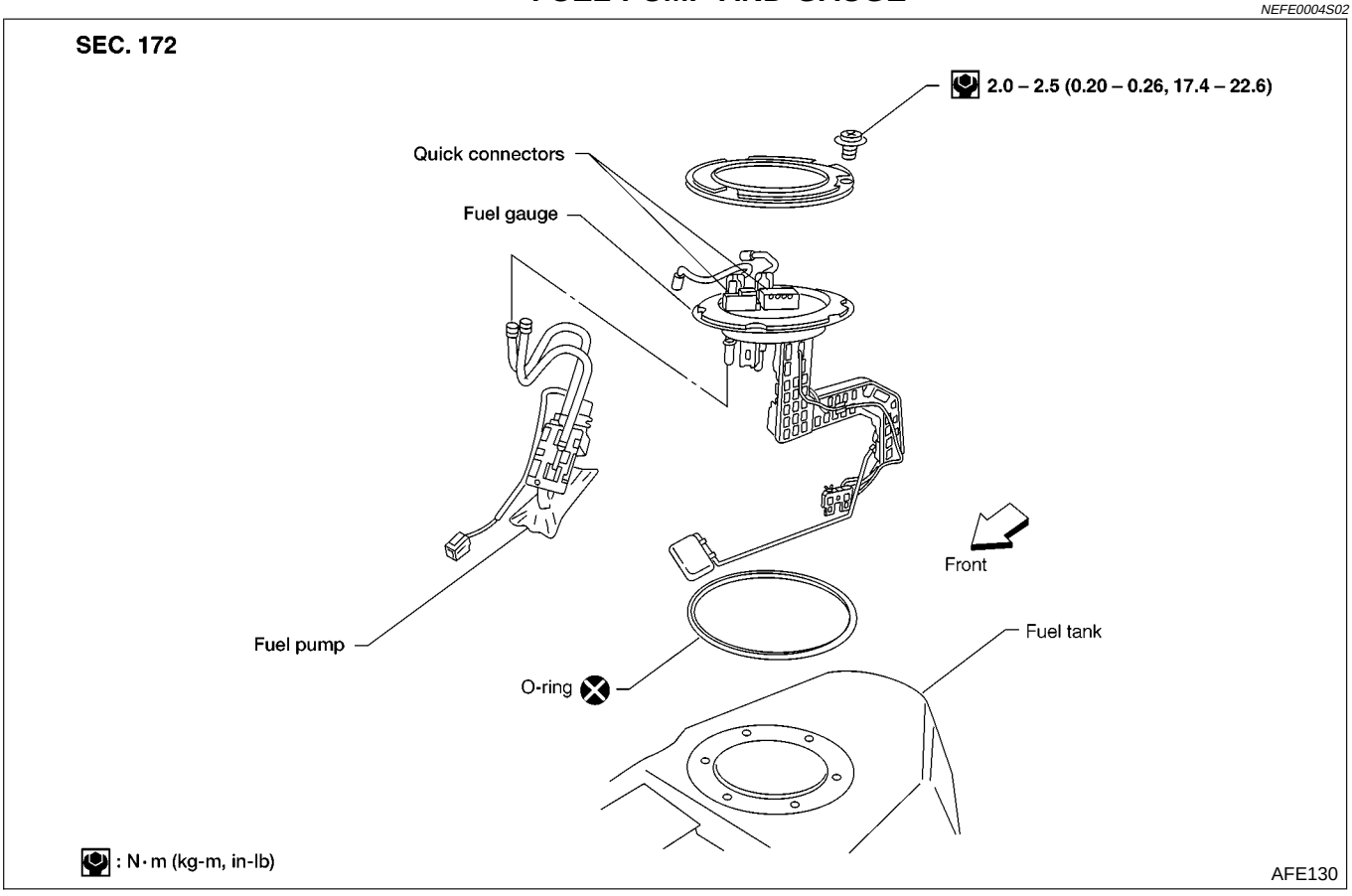


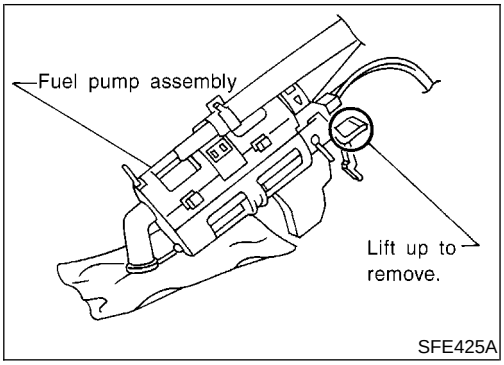
After connecting quick connectors, make sure the connection is firmly made using the following method.

- 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.

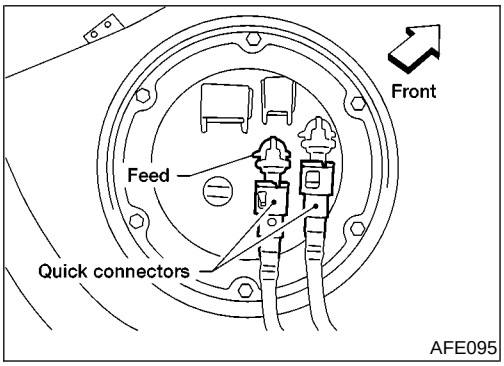
FUEL PUMP AND GAUGE

NEFE0004S02





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



5. Remove fuel gauge assembly.

Installation procedure is the reverse order of removal.

- Install fuel gauge 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.
- Make sure the connectors are clean and undamaged
- After installation, run engine and check for leaks at connections.

Removal and Installation

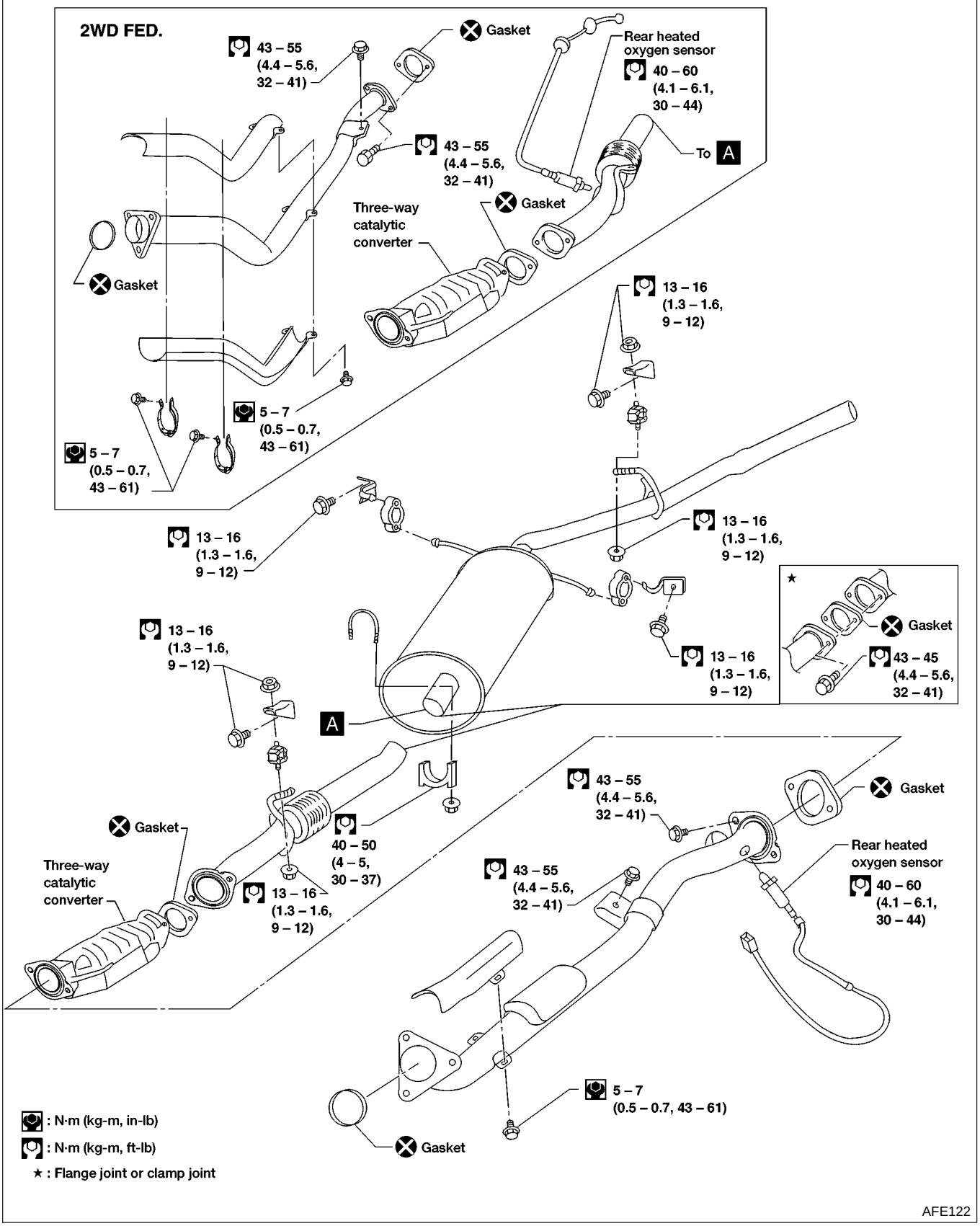
NEFE0005

CAUTION:

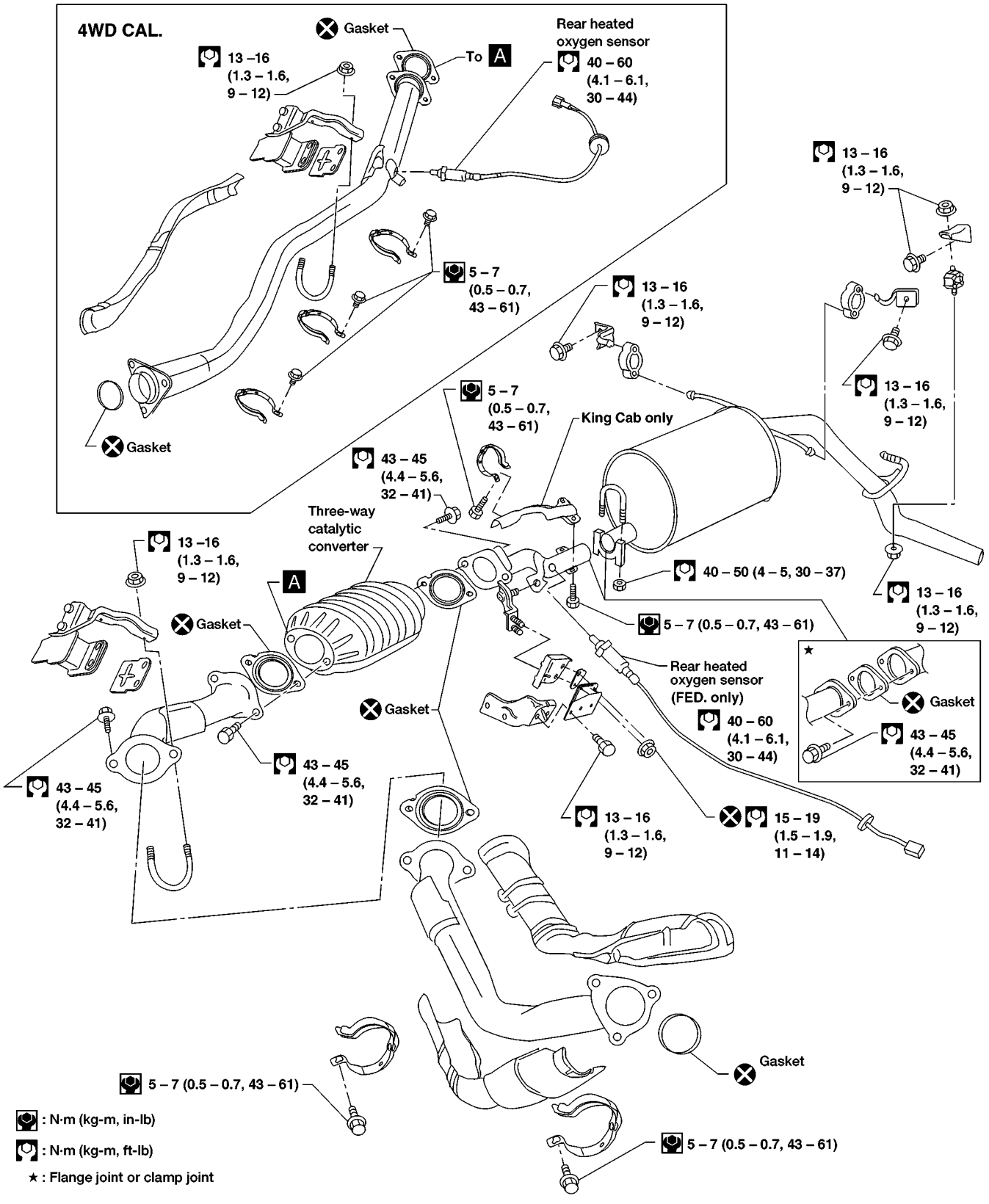
- **Always replace exhaust gaskets with new ones when reassembling.**
- **With engine running, check all tube connections for exhaust gas leaks, and entire system for unusual noises.**
- **Check to ensure that mounting brackets and mounting insulators are installed properly and free from undue stress. 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 new 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 oxygen sensor. Doing so may cause damage to the oxygen sensor, resulting in the MIL coming on.**

KA24DE Models

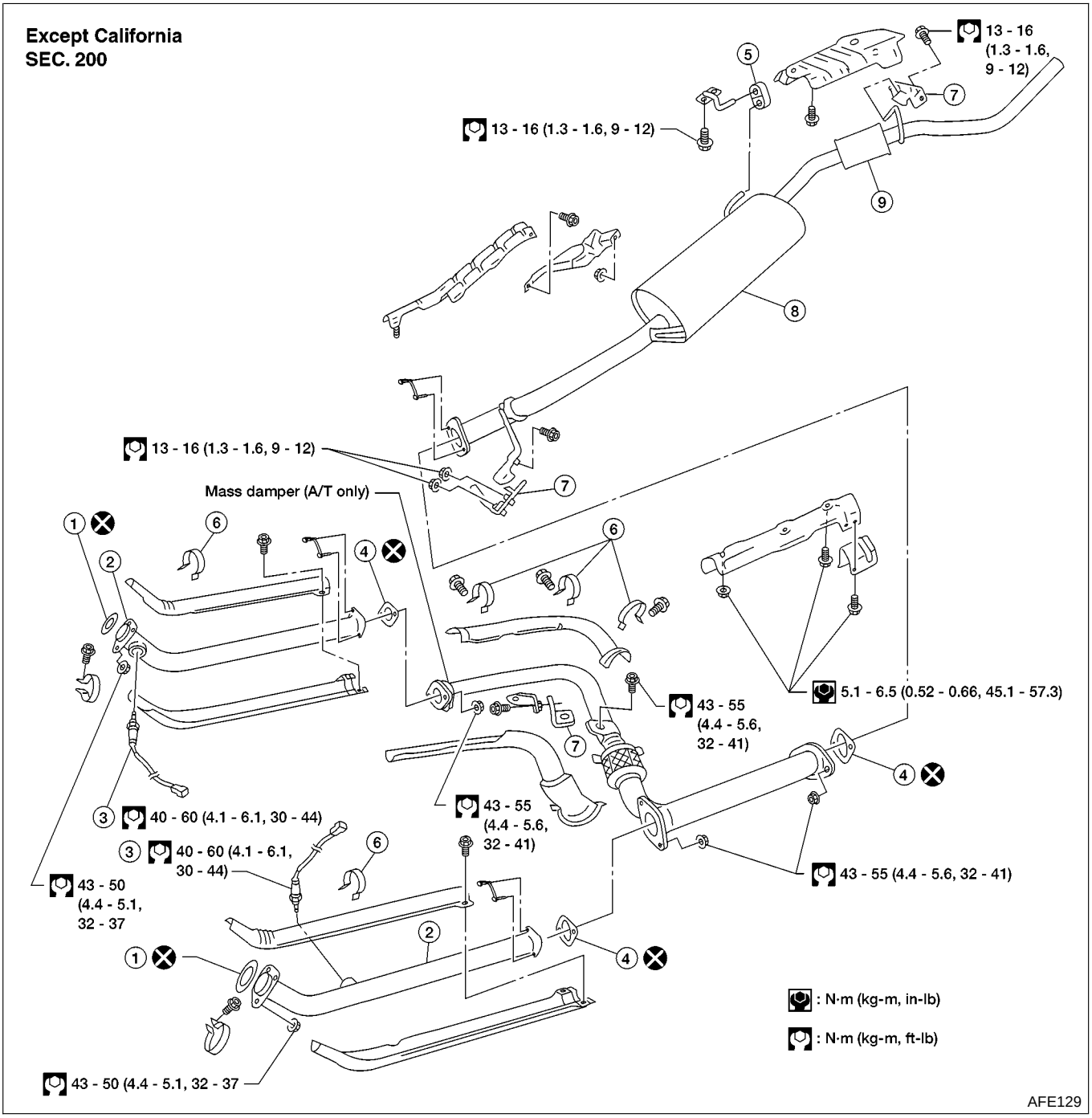
2WD model
SEC. 200



4WD model
SEC. 200

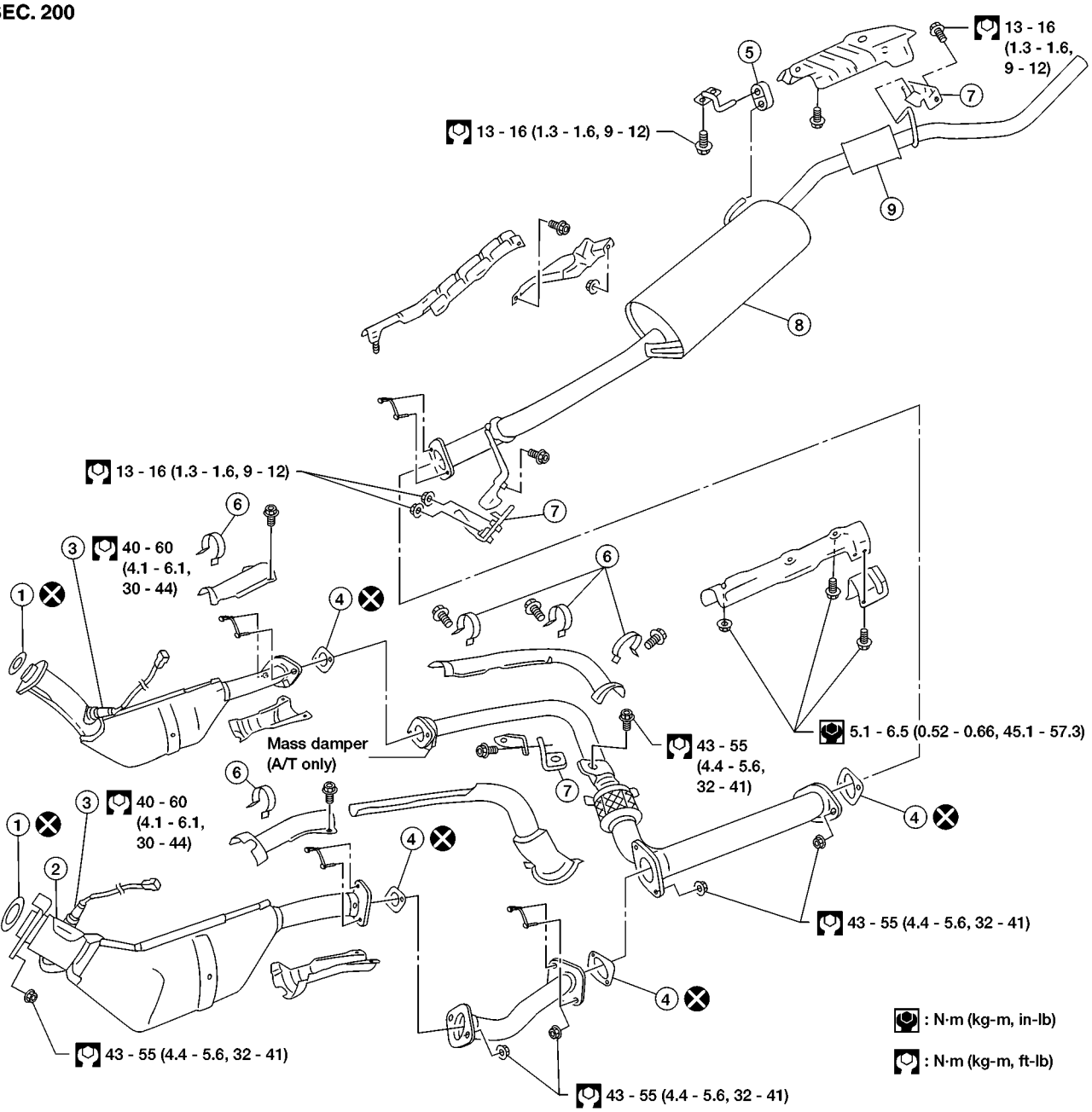


VG33E Models



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

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

NOTES