

SECTION **FL**
FUEL SYSTEM

A
FL
C
D
E
F
G
H
I
J
K
L
M

CONTENTS

FUEL SYSTEM	2	FUEL LEVEL SENSOR UNIT AND FUEL PUMP	F
Checking Fuel Lines	2	ASSEMBLY	6
General Precautions	2	Removal and Installation	6
FUEL TANK	3	SERVICE DATA AND SPECIFICATIONS (SDS)	8
Removal and Installation	3	Standard and Limit	8
FUEL TANK	4	FUEL TANK CAPACITY	8

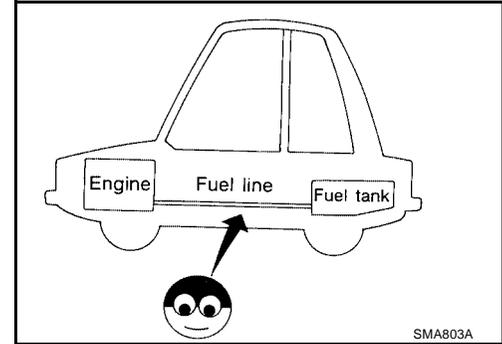
FUEL SYSTEM

PF17503

Checking Fuel Lines

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Inspect the fuel lines, filler cap and tank for improper attachment, leaks, cracks, damage, loose connections, chafing or deterioration. If necessary, repair or replace faulty parts.



General Precautions

EBS00EYE

WARNING:

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

- Put a "CAUTION: FLAMMABLE" 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 CO₂ fire extinguisher.

CAUTION:

- Before removing fuel line parts, carry out the following procedures:
 - Put drained fuel in an explosion-proof container and put lid on securely.
 - Release fuel pressure from fuel line. Refer to [EC-45, "FUEL PRESSURE RELEASE" \(KA24DE\)](#), [EC-619, "FUEL PRESSURE RELEASE" \(VG33E\)](#), [EC-1222, "FUEL PRESSURE RELEASE" \(VG33ER\)](#).
 - Disconnect the battery ground cable.

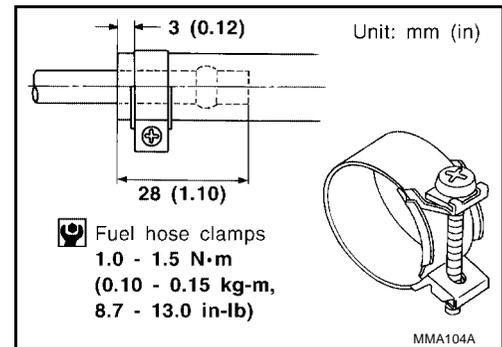
- Always replace O-ring with new ones.
- Do not kink or twist hose and tube while installing.
- Do not tighten hose clamps excessively to avoid damaging hoses.

Tighten high pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end.

Tightening torque specifications are the same for all rubber hose clamps.

Ensure that screw does not contact adjacent parts.

- For inspection and installation of EVAP system parts, refer to [EC-567, "EVAPORATIVE EMISSION SYSTEM" \(KA24DE\)](#), [EC-1169, "EVAPORATIVE EMISSION SYSTEM" \(VG33E\)](#), [EC-1744, "EVAPORATIVE EMISSION SYSTEM" \(VG33ER\)](#).
- For inspection and installation of ORVR system parts, refer to [EC-573, "ON BOARD REFUELING VAPOR RECOVERY \(ORVR\)" \(KA24DE\)](#), [EC-1177, "ON BOARD REFUELING VAPOR RECOVERY \(ORVR\)" \(VG33E\)](#), [EC-1752, "ON BOARD REFUELING VAPOR RECOVERY \(ORVR\)" \(VG33ER\)](#).



- After installing tubes, make sure there is no fuel leakage at connections in the following steps.
 - a) Apply fuel pressure to fuel lines by 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.

FUEL TANK

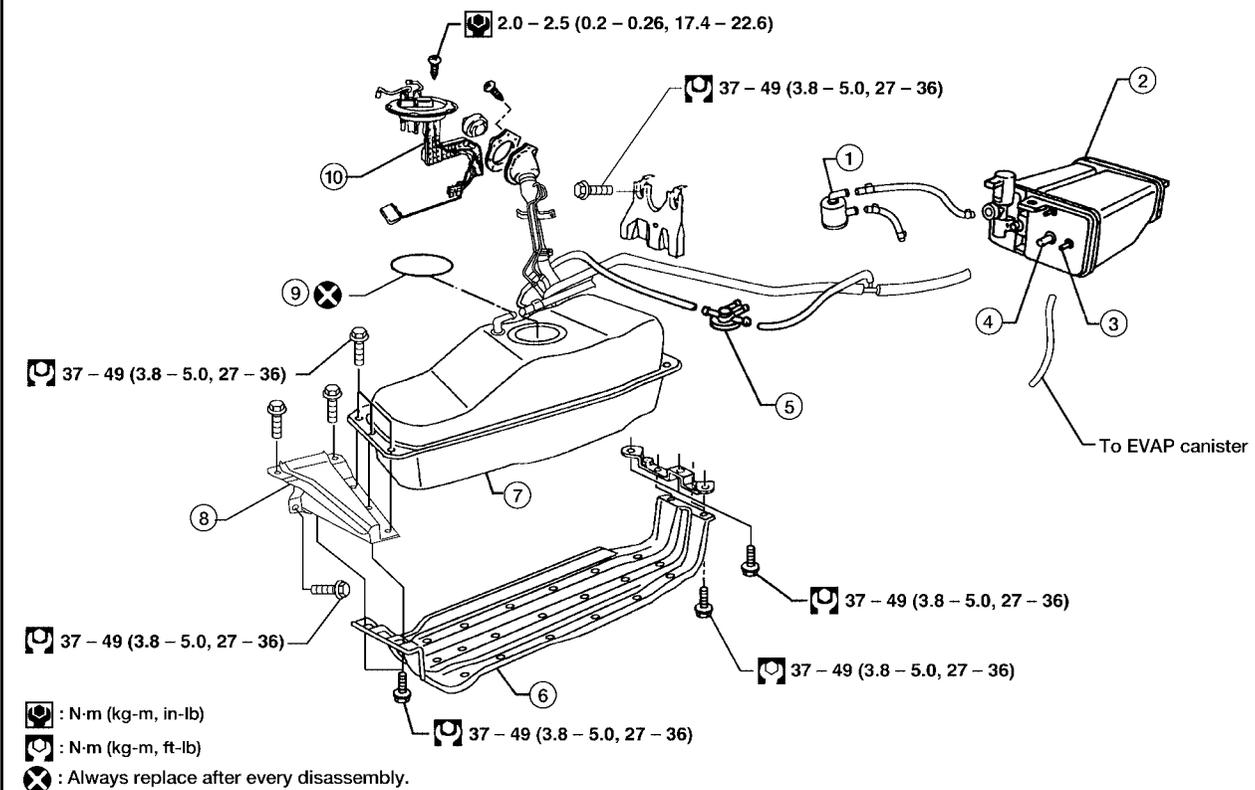
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FUEL TANK

Removal and Installation

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|-----------------------|----------------------|------------------------|
| 1. Water separator | 2. EVAP canister | 3. Purge |
| 4. Charge | 5. Vacuum cut valve | 6. Fuel tank protector |
| 7. Fuel tank assembly | 8. Fuel tank bracket | 9. O-ring |
| 10. Fuel level sensor | | |

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 CO₂ fire extinguisher.

CAUTION:

- Before removing fuel line parts, carry out the following procedures:
 - Put drained fuel in an explosion-proof container and put lid on securely.
 - Release fuel pressure from fuel line. Refer to [EC-45, "FUEL PRESSURE RELEASE"](#) (KA24DE), [EC-619, "FUEL PRESSURE RELEASE"](#) (VG33E), [EC-1222, "FUEL PRESSURE RELEASE"](#) (VG33ER).
 - 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.
- Perform an inspection and installation of EVAP system parts as necessary. Refer to [EC-567, "EVAPORATIVE EMISSION SYSTEM"](#) (KA24DE), [EC-1169, "EVAPORATIVE EMISSION SYSTEM"](#) (VG33E), [EC-1744, "EVAPORATIVE EMISSION SYSTEM"](#) (VG33ER).
- For inspection and installation of ORVR system parts, refer to [EC-573, "ON BOARD REFUELING VAPOR RECOVERY \(ORVR\)"](#) (KA24DE), [EC-1177, "ON BOARD REFUELING VAPOR RECOVERY \(ORVR\)"](#) (VG33E), [EC-1752, "ON BOARD REFUELING VAPOR RECOVERY \(ORVR\)"](#) (VG33ER).

FUEL TANK

- After installation, run engine 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.

FUEL TANK

1. Release fuel pressure from fuel line.
Refer to [EC-45, "FUEL PRESSURE RELEASE"](#) (KA24DE), [EC-619, "FUEL PRESSURE RELEASE"](#) (VG33E), [EC-1222, "FUEL PRESSURE RELEASE"](#) (VG33ER).

2. Disconnect battery ground cable.

3. Drain fuel from fuel tank.

4. Disconnect electrical connectors.

5. Remove filler protector.

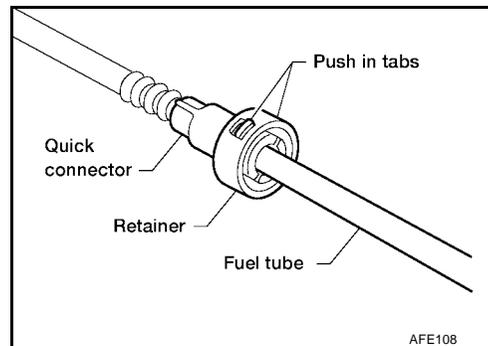
6. Remove the quick connectors as follows:

1. Put mating marks on the connectors for correct installation.

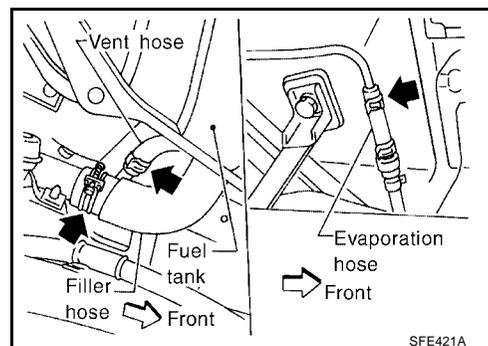
2. Hold the sides of the connector, push in tabs, and pull out the tube inserted in the retainer.

CAUTION:

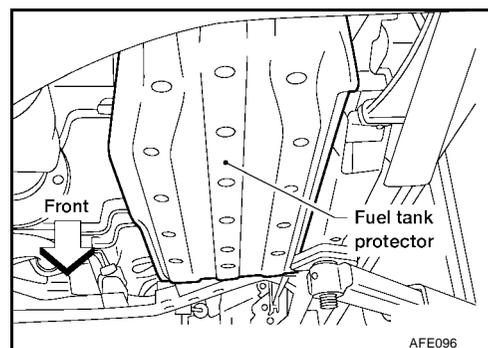
- The tube can be removed when the push in tabs are completely depressed.
- Do not use any tools to remove the quick connector.
- Keep the connecting portion of the tubes and quick connectors clean.



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

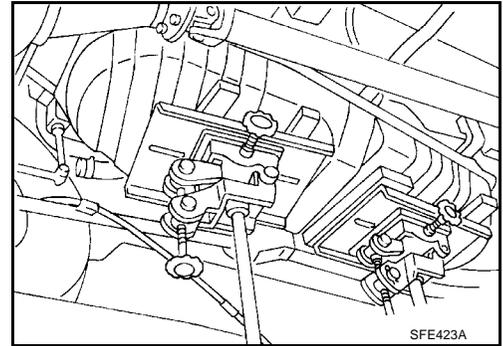


8. Remove fuel tank protector.



FUEL TANK

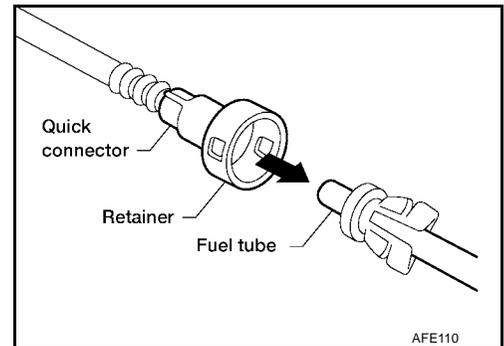
9. Remove fuel tank mounting bolts while supporting fuel tank.



10. Remove fuel tank.

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

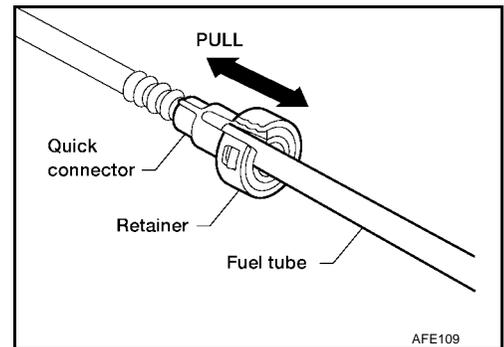
- Make sure the connectors are clean and undamaged.
- Align push in tabs with retainer openings.



- Insert tube into the center of the connector until you hear a click.

After connecting quick connectors, make sure the connection is fully seated and locked in place as follows:

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



FUEL LEVEL SENSOR UNIT AND FUEL PUMP ASSEMBLY

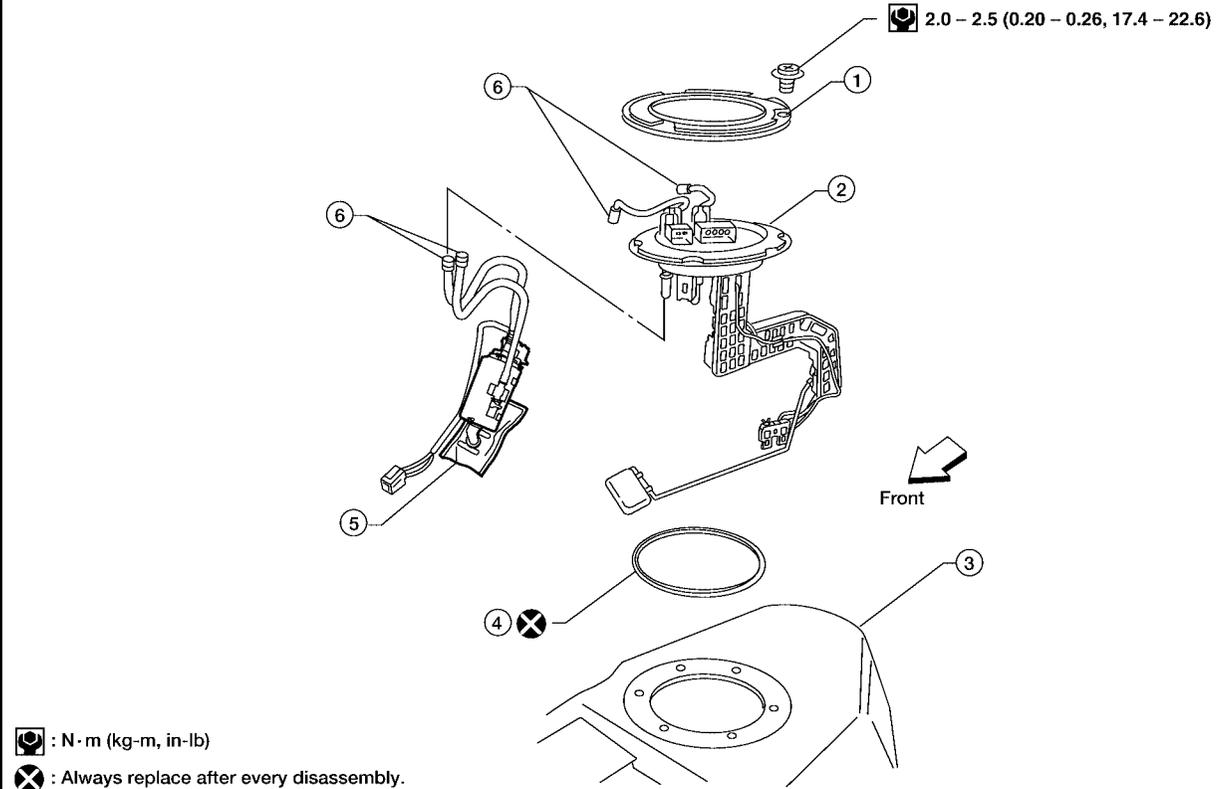
FUEL LEVEL SENSOR UNIT AND FUEL PUMP ASSEMBLY

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Removal and Installation

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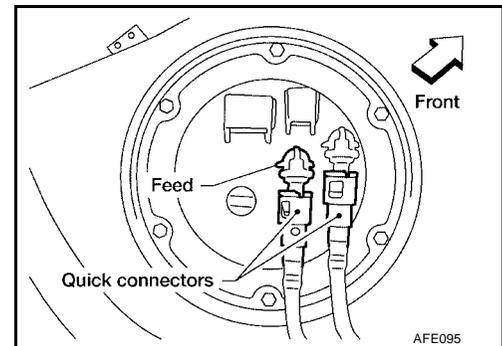
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| 1. Retainer | 2. Fuel level sensor | 3. Fuel tank |
| 4. O-ring | 5. Fuel pump | 6. Quick connectors |

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



FUEL LEVEL SENSOR UNIT AND FUEL PUMP ASSEMBLY

Installation procedure is the reverse order of removal.

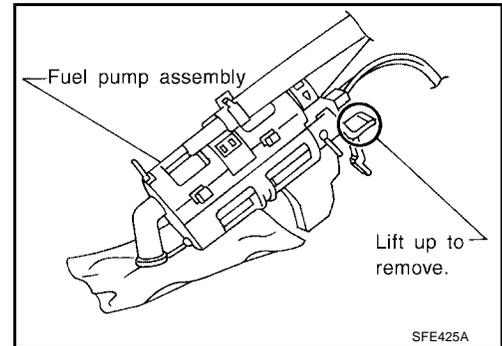
- Install fuel pump and fuel level sensor assembly as shown.

CAUTION:

Tighten the bolts to specified torque.

Fuel pump and fuel level sensor bolts : 2.0 - 2.5 N·m (0.20 - 0.26 kg-m, 17.4 - 22.6 in-lb)

- Always replace the O-ring with a new one.
- Make sure the connectors are clean and undamaged.
- Use the following procedure to check for leaks.
 - 1) Turn ignition switch ON (do not start engine). Then check connections for leaks by applying fuel pressure to fuel piping.
 - 2) Start the engine and let it idle and make sure there are no fuel leaks at the fuel system connections.



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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

PF0:00030

Standard and Limit FUEL TANK CAPACITY

EBS00EYL

KA24DE	60.2 ℓ (15 7/8 US gal, 13 1/4 Imp gal)
VG33E and VG33ER	73.5 ℓ (19 3/8 US gal, 16 1/8 Imp gal)
