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# PREPARATION

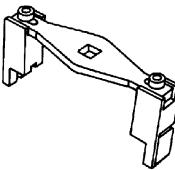
[QR]

## PREPARATION

PFP:00002

### Commercial Service Tools

EBS00KOR

Tool name	Description
Fuel tank lock ring wrench	 ZZA0122D Removing and installing fuel tank lock ring

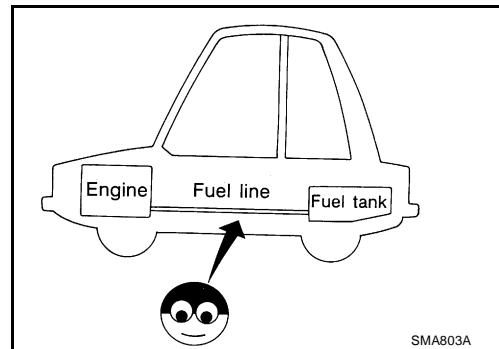
## FUEL SYSTEM

PFP:17503

## Checking Fuel Lines

EBS00KOS

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



EBS011T7

## General Precautions

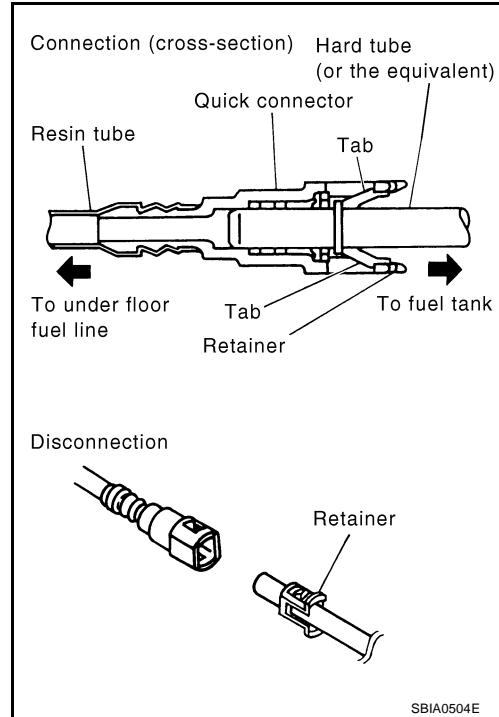
## WARNING:

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

- Put a "CAUTION: INFLAMMABLE" sign in the 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 the work area.

## CAUTION:

- Use gasoline required by the regulations for octane number. Refer to [GI-5, "Precautions for Fuel"](#).
- Before removing fuel line parts, perform the following procedures:
  - Put drained fuel in an explosion-proof container and put the lid on securely. Keep the container in safe area.
  - Release fuel pressure from the fuel lines. Refer to [EC-49, "FUEL PRESSURE RELEASE"](#) (WITH EURO-OBD) or [EC-562, "FUEL PRESSURE RELEASE"](#) (WITHOUT EURO-OBD).
  - Disconnect the battery cable from the negative terminal.
  - Always replace O-rings 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 connecting fuel tube quick connectors, make sure quick connectors are secure.
- Ensure that connector and resin tube do not contact any adjacent parts.
- After installing tubes, check if there are no fuel leaks at connections in the following steps.
  - Apply fuel pressure to fuel lines with turning ignition switch "ON" (with engine stopped). Then check for fuel leaks at connections.
  - Start engine and rev it up and check for fuel leaks at connections.
- For servicing "Evaporative Emission System" parts, refer to [EC-522, "EVAPORATIVE EMISSION SYSTEM"](#) (WITH EURO-ODB) or [EC-962, "EVAPORATIVE EMISSION SYSTEM"](#) (WITHOUT EURO-OBD).

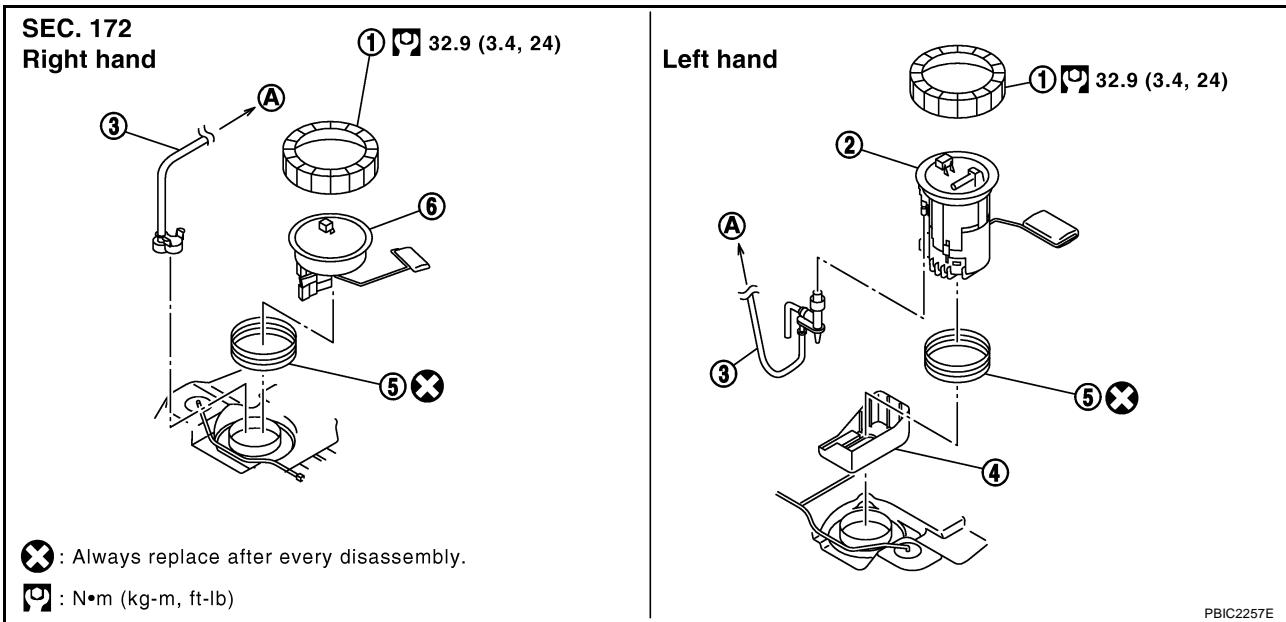


## FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

PFP:17042

## Removal and Installation

EBS00KOU



PBIC2257E

1. Lock ring
2. Main fuel level sensor unit, fuel filter and fuel pump assembly
3. Jet pump, fuel hose and jet pump inlet assembly
4. Chamber
5. Seal packing
6. Sub fuel level sensor unit

## REMOVAL

## WARNING:

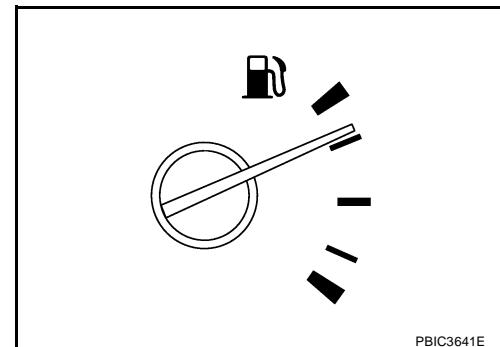
Be sure to read "General Precautions" when working on the fuel system. Refer to [FL-3, "General Precautions"](#).

1. Check fuel level on fuel gauge. If gauge indicates more than the level as shown in the figure (full or almost full), drain fuel from fuel tank until gauge indicates level as shown in the figure or below.

## NOTE:

Fuel will be spilled when removing main and sub fuel level sensor units for the top of the fuel is above the main and sub fuel level sensor units installation surface.

- As a guide, fuel level becomes the position as shown in the figure or below when approximately 15 ℥ (3-1/4 Imp gal) of fuel are drained from fuel tank.
  - In case fuel pump does not operate, perform the following procedure.
- a. Insert fuel tube of less than 25 mm (0.98 in) in diameter into fuel filler tube through fuel filler opening to draw fuel from fuel filler tube.
  - b. Disconnect fuel filler hose from fuel filler tube. Refer to [FL-11, "FUEL TANK"](#).
  - c. Insert fuel tube into fuel tank through fuel filler hose to draw fuel from fuel tank.
2. Release the fuel pressure from the fuel lines. Refer to [EC-49, "FUEL PRESSURE RELEASE"](#) (WITH EURO-OBD) or [EC-562, "FUEL PRESSURE RELEASE"](#) (WITHOUT EURO-OBD).
  3. Open fuel filler lid.
  4. Open fuel filler cap and release the pressure inside fuel tank.
  5. Lift to hold rear seat cushion up. Refer to [SE-32, "REAR SEAT"](#).

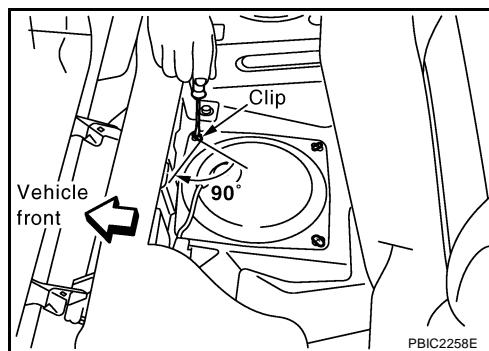


PBIC3641E

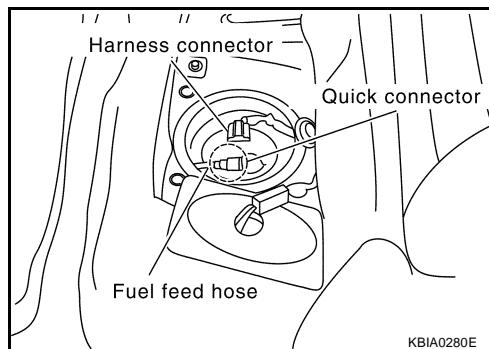
## FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[QR]

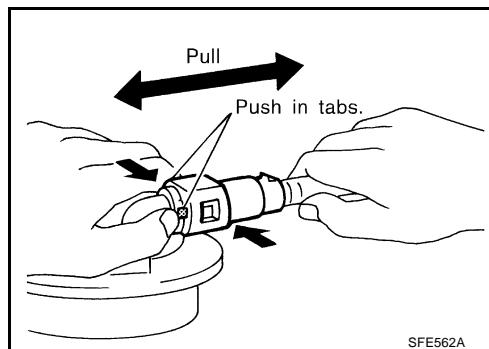
6. Remove inspection hole cover for main and sub fuel level sensor units by turning clips clockwise by 90 degrees.
- Remove cover by pushing it, then by turning clips clockwise by 90 degrees and by matching both cover hole and clip shape.



7. Disconnect harness connector and fuel feed hose.



- Disconnect quick connector as follows:
  - Hold the sides of connector, push in tabs and pull out fuel feed hose.
  - If quick connector sticks to tube of fuel level sensor unit, push and pull quick connector several times until it starts to move. Then disconnect quick connector by pulling.



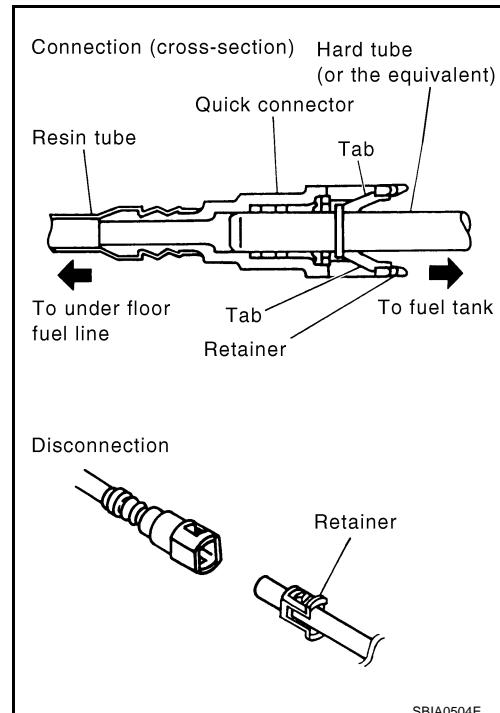
# FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[QR]

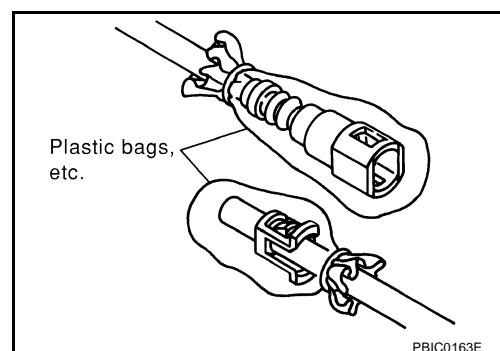
## CAUTION:

- Quick connector can be disconnected when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to disconnect quick connector.
- Keep resin tube away from heat. Be especially careful when welding near the resin tube.
- Prevent acid liquid such as battery electrolyte, etc. from getting on resin tube.
- Do not bend or twist resin tube during installation and disconnection.
- Do not remove the remaining retainer on hard tube (or the equivalent) except when resin tube or retainer is replaced.
- When resin tube or hard tube (or the equivalent) is replaced, also replace retainer with a new one.
- Replace same color retainer as before replacing.

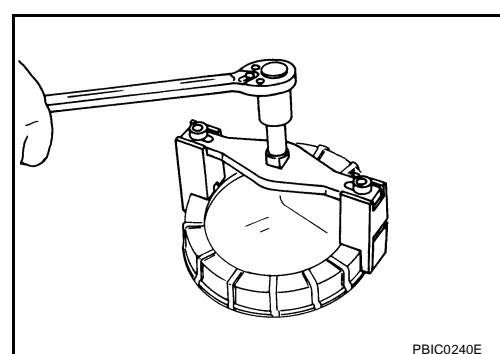
Retainer color: Green



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



8. Using a fuel tank lock ring wrench (commercial service tool), remove lock ring.



9. Remove main fuel level sensor unit, fuel filter and fuel pump assembly, and sub fuel level sensor unit as follows.

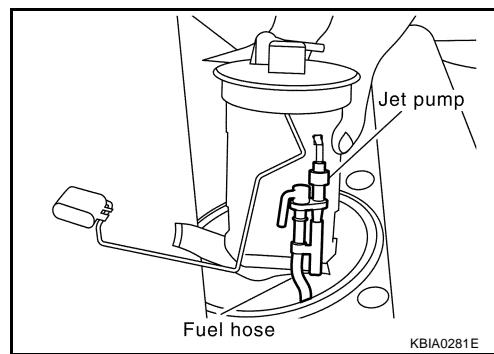
## CAUTION:

- Do not bend float arm during removal.
- Avoid polluting the inside by residue fuel. Draw out with avoiding inclination by supporting with a cloth.
- Avoid impacts such as falling when handling components.

# FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[QR]

- a. Removal of main fuel level sensor unit, fuel filter and fuel pump assembly:
  - i. Raise main fuel level sensor unit, fuel filter and fuel pump assembly, and disconnect jet pump.
  - ii. Leave jet pump on fuel tank with fuel hose.
- CAUTION:**  
**Do not disconnect jet pump and fuel hose.**
- iii. If necessary, remove chamber from the bottom of fuel tank by sliding toward the rear of the vehicle.



- b. Removal of sub fuel level sensor unit:
  - i. Raise and release sub fuel level sensor unit to remove.
  - ii. If necessary, remove jet pump inlet from the bottom of fuel tank by pinching tabs.

**CAUTION:**  
**Do not separate jet pump inlet and fuel hose.**

## INSPECTION AFTER REMOVAL

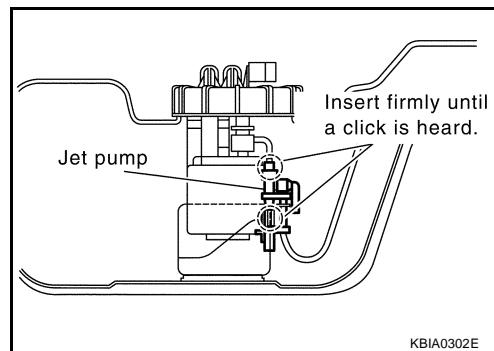
Make sure that fuel pump strainer is free from foreign materials. If any are found, remove them.

## INSTALLATION

Note the following, and install in the reverse order of removal.

### Chamber and Jet Pump

When installing chamber and jet pump, insert them fully until a click sound of full stopper engagement is heard (Ditto for jet pump inlet).



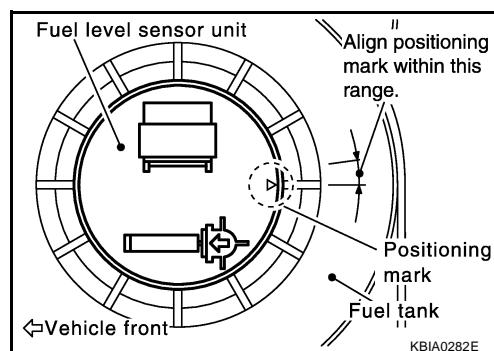
### Main and Sub Fuel Level Sensor Unit

1. Install seal packing to fuel tank without any twist.
2. Face fuel level sensor unit, fuel filter and fuel pump assembly as shown in the figure, and install it to fuel tank. (Figure shows left side of fuel tank.)

**CAUTION:**  
**Do not bend float arm during installing.**

**NOTE:**

On right side of fuel tank, there are three carved lines on fuel tank. Set mating mark between two outer carved lines.



3. Tighten rock ring with rock ring wrench (commercial service tool).

**CAUTION:**  
**Install rock ring horizontally.**

### Quick Connector

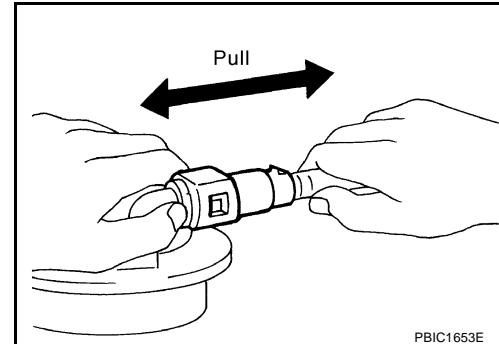
Connect quick connector as follows:

1. Check the connection for damage and foreign materials.

# FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[QR]

2. Align the connector with the tube, then insert the connector straight into the tube until a click sound is heard.
3. After connecting, make sure that the connection is secure by following method.
  - Visually confirm that the two tabs are connected to the connector.
  - Pull the tube and the connector to make sure they are securely connected.



## Inspection Hole Cover

1. Install inspection hole covers with the front mark (arrow) facing front of the vehicle.
2. Lock clips by turning counterclockwise by 90 degrees.

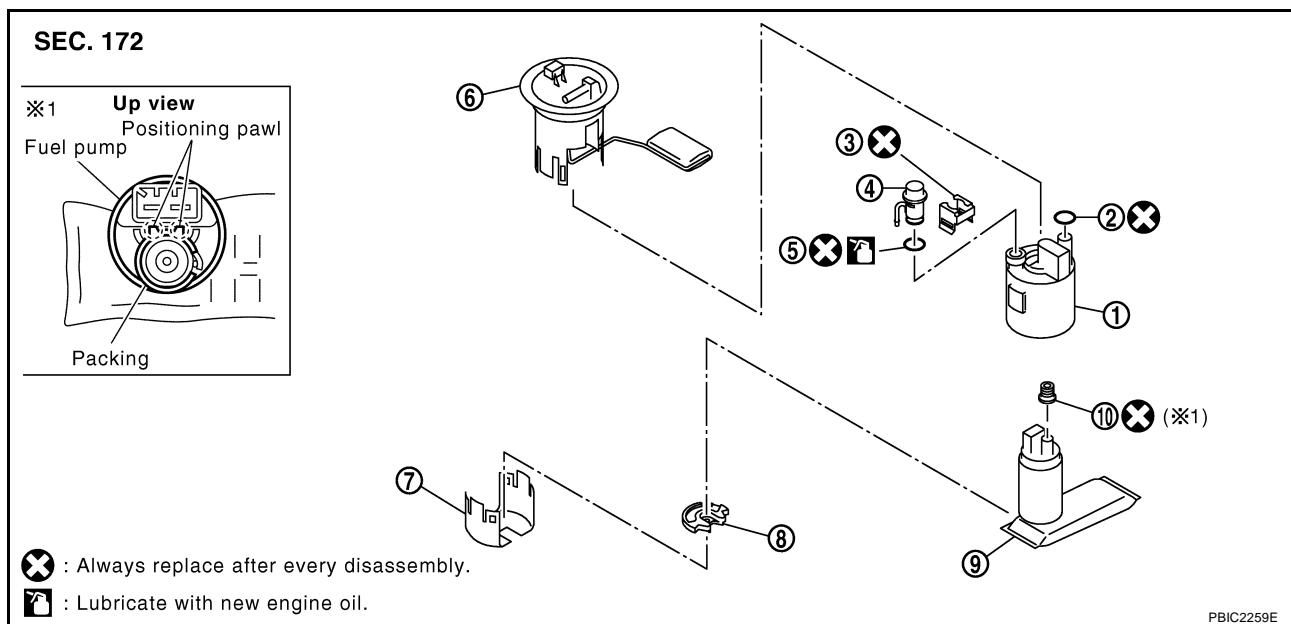
## INSPECTION AFTER INSTALLATION

Use the following procedure to check for fuel leaks.

1. Turn ignition switch "ON" (with engine stopped), then check connections for leaks by applying fuel pressure to fuel piping.
2. Start engine and let it idle and make sure there are no fuel leaks at the fuel system connections.

## Disassembly and Assembly

EBS00KOV



- |                       |           |                           |
|-----------------------|-----------|---------------------------|
| 1. Fuel filter        | 2. O-ring | 3. Clip                   |
| 4. Pressure regulator | 5. O-ring | 6. Fuel level sensor unit |
| 7. Bracket            | 8. Rubber | 9. Fuel pump              |
| 10. Packing           |           |                           |

## CAUTION:

Sub fuel level sensor unit cannot be disassembled and should be replaced as a unit.

## DISASSEMBLY

1. Separate fuel pump and bracket from fuel filter as follows:

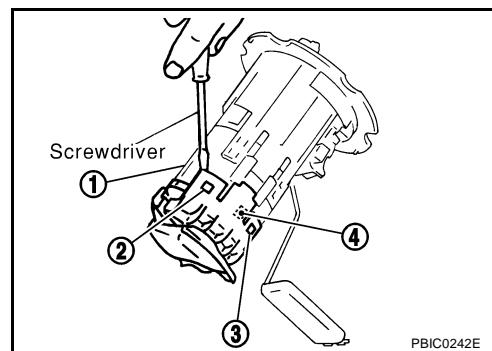
# FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[QR]

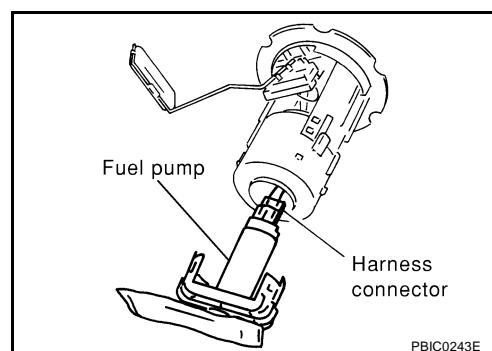
- a. Using a screwdriver, separate the snap fit portion of bracket in numerical order as shown in the figure.

**CAUTION:**

Put cloth or similar one on the edge of screwdriver not to damage the inserted portion.



- b. Pull out fuel pump, and disconnect harness connector.



2. Separate fuel filter and fuel level sensor unit as follows:

- a. Fit a used O-ring into space between fuel level sensor unit and fuel filter to release tabs.

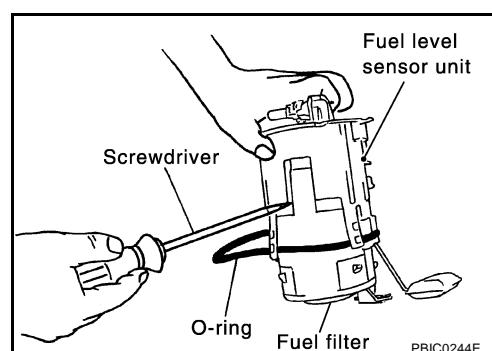
**NOTE:**

For reference when reassembling, put a mating mark on outer edges of fuel level sensor unit and fuel filter with some means which cannot be erased by fuel.

- b. Insert screwdriver to the gap between fuel filter and fuel level sensor unit to separate them.

**CAUTION:**

Put cloth or similar one on the edge of screwdriver not to damage the inserted portion.



3. Remove pressure regulator from fuel filter as follows:

- a. Open and remove the clip.
- b. Pull pressure regulator straight out during removal.

**CAUTION:**

- Avoid impacts such as falling during removal.
- Do not disassemble or adjust.

## ASSEMBLY

Note the following, and assemble in the reverse order of disassembly.

### Fuel Filter and Fuel Pump

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

### Pressure Regulator

Install pressure regulator as follows:

1. Install O-ring.

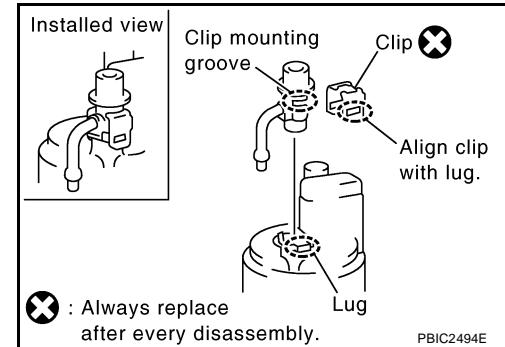
**CAUTION:**

- Do not reuse O-ring. Replace it with a new one.
- Handle O-ring with bare hands. Do not wear gloves.

# FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[QR]

- Visually check O-ring, mounting parts and mating parts for foreign materials and flaws.
  - Before installing, lubricate new engine oil.
  - To avoid damage, do not apply an excessive force (pulling or stretching).
2. Insert the clip to the groove of pressure regulator.



3. With the clip installed, insert pressure regulator straight by matching the fuel filter lug and the clip notch.
4. Make sure that the fuel filter lug and clip notch are securely engaged.

## FUEL TANK

PFP:17202

## Removal and Installation

EBS00KOW

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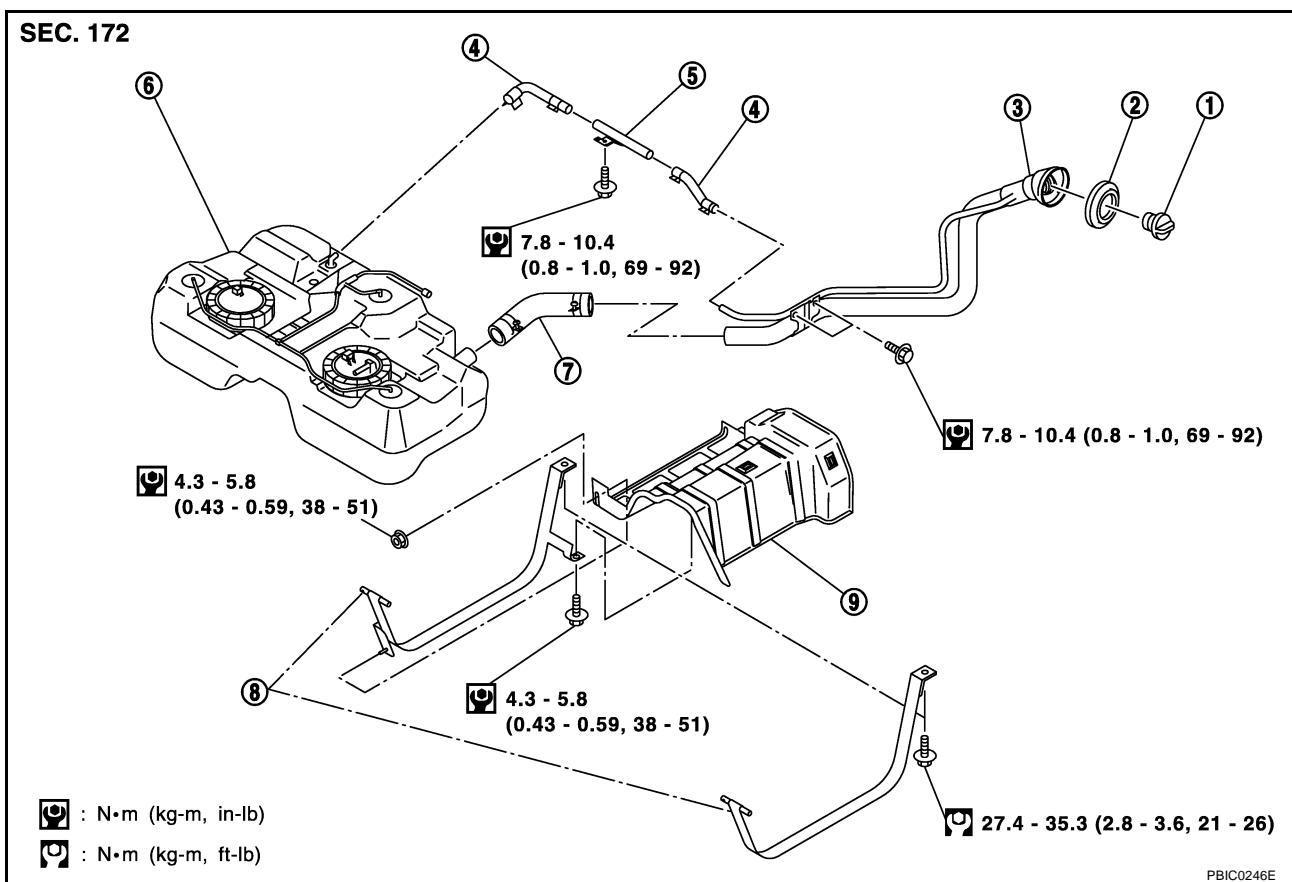
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L

M



1. Fuel filler cap
2. Grommet
3. Fuel filler tube
4. Vent hose
5. Vent tube
6. Fuel tank
7. Fuel filler hose
8. Fuel tank band
9. Fuel tank protector

## REMOVAL

## WARNING:

Be sure to read "General Precautions" when working on the fuel system. Refer to [FL-3, "General Precautions"](#).

1. Perform the steps 1 to 7 of "REMOVAL" in " FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY". Refer to [FL-4, "REMOVAL"](#).
2. Drain fuel more from fuel tank if necessary.

## CAUTION:

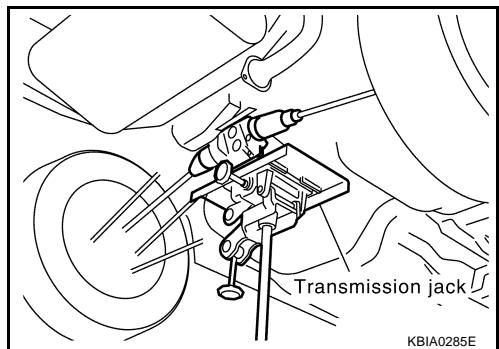
Because fuel tank forwardly inclines and becomes unstable when installing/removing, fuel should be drained if found the remaining quantity.

3. Remove exhaust center tube and insulator. Refer to [EX-2, "EXHAUST SYSTEM"](#).
4. Remove propeller shaft. (4WD models) Refer to [PR-3, "REAR PROPELLER SHAFT"](#).

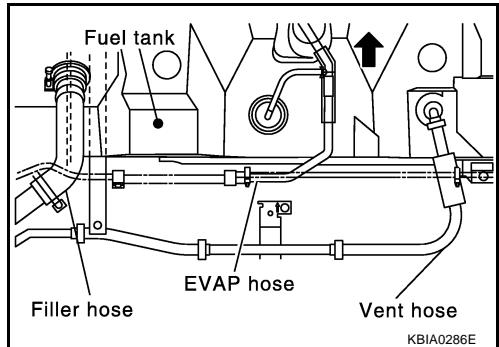
# FUEL TANK

[QR]

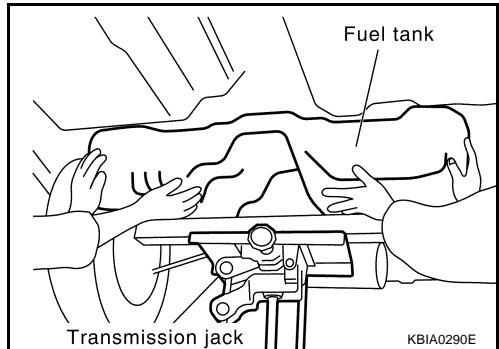
5. Using a transmission jack, support the bottom of final drive assembly (4WD models) or rear suspension member (2WD models).
6. Remove mounting nuts on rear suspension member, and lower the transmission jack carefully until just before rear suspension member is removed from stud bolts on the vehicle. Refer to [RSU-5, "REAR SUSPENSION ASSEMBLY"](#).



7. Disconnect fuel filler hose, EVAP hose and vent hose at fuel tank side.
  - For disconnection procedure of quick connector on EVAP hose, refer to [FL-4, "FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY"](#).



8. Remove fuel tank protector.
9. Remove fuel tank band mounting bolts while supporting fuel tank.
- CAUTION:**  
**Sustain the bottom of fuel tank by using plate or anything same.**
10. Remove fuel tank.
  - After lifting down the front portion of fuel tank, remove fuel tank by pulling it from the upper front of final drive assembly, so that fuel tank can move forwardly.



- CAUTION:**  
**Pay attention not to fall fuel tank because it forwardly inclines and becomes unstable.**
- NOTE:**  
It is desirable that more than two technicians work together.

## INSTALLATION

Note the following, and install in the reverse order of removal.

- Surely clamp fuel hoses and insert hose to the length below.

**Fuel filler hose : 35mm (1.38 in)**

**The other hoses : 25mm (0.98 in)**

- Be sure hose clamp is not placed on swelled area of fuel tube.
  - Tighten fuel hose clamp so that the remaining length of screw thread becomes to the following.
- Fuel tank side : 5 - 9 mm (0.20 - 0.35 in)**
- Fuel filler tube side : 7 - 11 mm (0.28 - 0.43 in)**
- Fit fuel tank band pin to the vehicle side securely.
  - Before fixing fuel tank, temporarily install fuel filler tube.

**CAUTION:**

Use genuine fuel filler tube mounting bolts or equivalent. Make sure to tighten them to the specified torque.

- To connect quick connector, refer to [FL-7, "Quick Connector"](#) .

## INSPECTION AFTER INSTALLATION

Use the following procedure to check for fuel leaks.

1. Turn ignition switch "ON" (with engine stopped), and check connections for leaks by applying fuel pressure to fuel piping.
2. Start engine and let it idle and make sure there are no fuel leaks at the fuel system tube and hose connections.

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# SERVICE DATA AND SPECIFICATIONS (SDS)

[QR]

## SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

### Standard and Limit FUEL TANK

EBS00K0X

Fuel tank capacity	Approx. 60 ℥ (13-1/4 Imp gal)
Fuel recommendation	Refer to <a href="#">GI-5</a>

### Tightening Torque

EBS00K0Y

Unit: N·m (kg-m, ft-lb)

Unit: N·m (kg-m, in-lb)\*

Lock ring	32.9 (3.4, 24)
Fuel tank band	27.4 - 35.3 (2.8 - 3.6, 21 - 26)
Fuel tank protector	4.3 - 5.8 (0.43 - 0.59, 38 - 51)*
Fuel filler tube	7.8 - 10.4 (0.80 - 1.0, 69 - 92)*
Vent tube	7.8 - 10.4 (0.80 - 1.0, 69 - 92)*

# PREPARATION

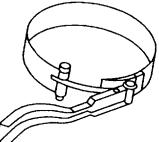
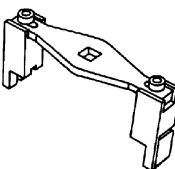
[YD22DDTi]

## PREPARATION

### Commercial Service Tools

PFP:00002

EBS00BKG

Tool name	Description	
Fuel filter wrench	Removing fuel filter	FL
 PBIC0519E		C D E F G H I J K L M
Fuel tank lock ring wrench	Removing and installing fuel tank lock ring	
 ZZA0122D		

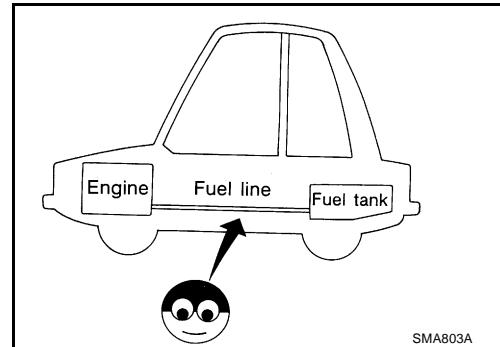
**FUEL SYSTEM**

PFP:17503

**Checking Fuel Lines**

EBS00BKH

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

**General Precautions**

EBS00BKI

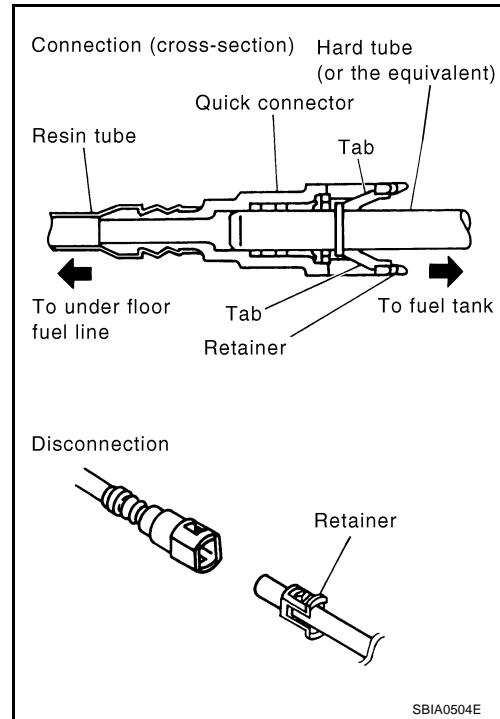
**WARNING:**

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 spark away from work area.

**CAUTION:**

- Use diesel fuel required by the regulations for cetane number. Refer to [GI-5, "Precautions for Fuel"](#)
- Before removing fuel line parts, perform the following procedures:
  - Put drained fuel in an explosion-proof container and put the lid on securely. Keep the container in safe area.
  - Disconnect the battery cable from the negative terminal.
  - 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 connecting fuel tube quick connectors, make sure quick connectors are secure.
- Ensure that connector and resin tube do not contact any adjacent parts.
- After installing tubes, make sure there is no fuel leakage at connections in the following steps.
- Start the engine and rev it up and check for fuel leaks at connections.

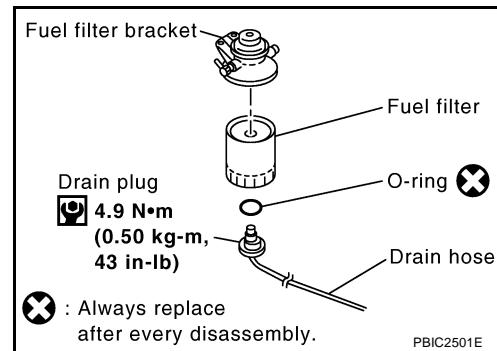


## FUEL FILTER

PFP:16400

## Removal and Installation

EBS00BLA

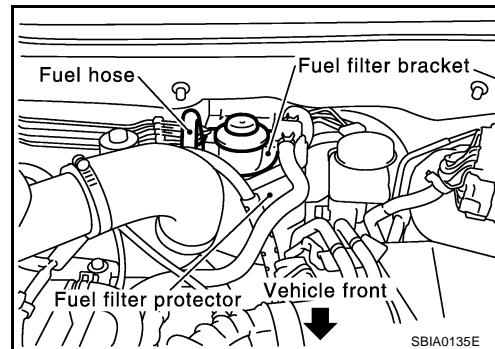


## REMOVAL

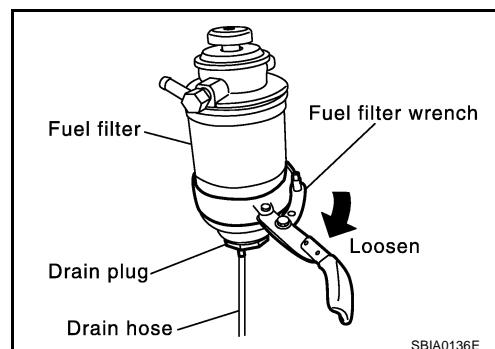
1. Remove air duct, air cleaner case and mass air flow sensor assembly. Refer to [EM-142, "AIR CLEANER AND AIR DUCT"](#).
2. Remove fuel filter protector.
3. Disconnect fuel hoses at fuel filter bracket.

**CAUTION:****Plug the pipe to prevent fuel from draining.**

4. Remove fuel filter with fuel filter bracket.

**CAUTION:****Do not splash fuel during removal. If fuel is splashed, immediately wipe it off.**

5. Using band-type fuel filter wrench (commercial service tool), remove fuel filter.
6. Turn fuel filter upside down to drain fuel.
7. Remove drain plug from fuel filter.



## INSTALLATION

Note the following, and install in the reverse order of removal.

- Replace O-ring on drain plug with new one.

**Drain plug****✖ : 4.9 N·m (0.5 kg·m, 43 in-lb)**

- Screw the fuel filter by hand until packing contacts sealing surface of bracket. Then tighten it by turning approximately 2/3 turn.
- After installation, bleed air from fuel line. Refer to [FL-18, "Air Bleeding"](#).

## INSPECTION AFTER INSTALLATION

Make sure there is no fuel leakage at connections in the following steps.

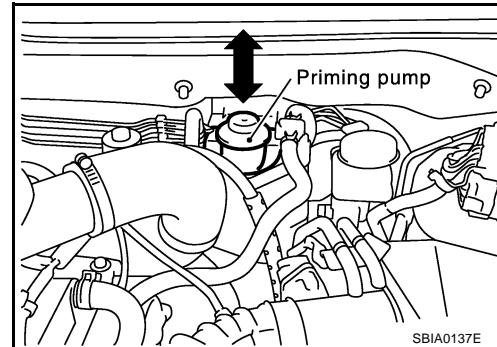
- Start the engine and rev it up and make sure there is no fuel leakage at connections.

## Air Bleeding

EBS00BLB

After fuel filter is replaced and after fuel system components are removed/installed, bleed air from fuel line as follows:

- Move priming pump up and down to bleed air from fuel path.
- When air is bled, pumping of priming pump becomes heavy stop operation at that time.
- Crank engine until it starts. Do not crank engine for more than 30 seconds.
- If engine does not start, stop cranking and repeat step 1 above.
- If engine does not operate smoothly after it has started, race it two or three times.
- If air cannot be bled easily (pumping of priming pump does not become heavy), disconnect feed-side of hose between fuel filter and electronically controlled fuel pump. After that, operate priming pump and confirm that fuel comes out.



SBIA0137E

**CAUTION:**

Prepare a tray to collect fuel. Prevent fuel from adhering to rubber parts, especially the engine mounting insulator.

## Draining Water from Fuel Filter

EBS00MRU

- Prepare a tray at the drain hose open end.
- Loosen drain cock, and operate priming pump to drain water from fuel filter.

**CAUTION:**

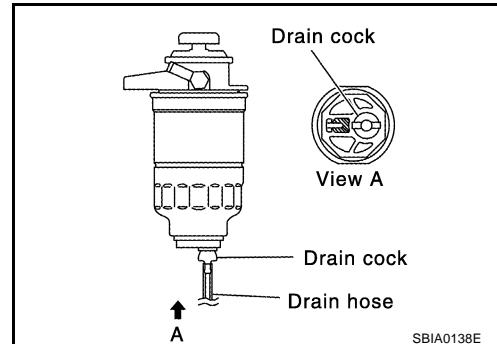
- Water in filter is drained with fuel. Prepare larger capacity pan than fuel filter volume.
- Drained water is mixed with fuel. Prevent fuel from adhering to rubber parts such as engine mounting insulator.

- After draining, close drain cock by hand.

**CAUTION:**

If drain cock is tightened excessively, it may be damaged and fuel will leak. Do not use tools to tighten drain cock.

- Bleed air in fuel piping. Refer to [FL-18, "Air Bleeding"](#).
- Start engine and make sure there is no fuel leakage.



SBIA0138E

## FUEL LEVEL SENSOR UNIT

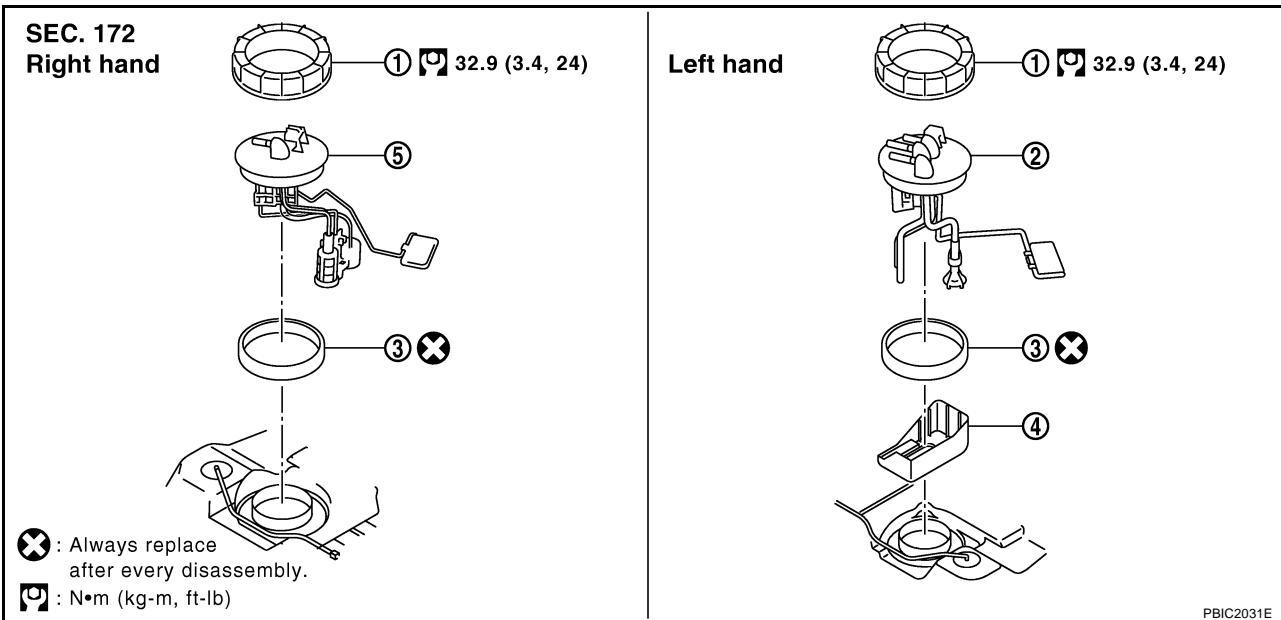
[YD22DDTi]

## **FUEL LEVEL SENSOR UNIT**

PFP:17042

## Removal and Installation

EBS00BLD



PBIC2031E

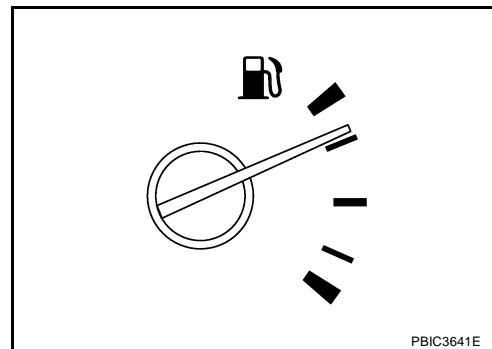
- |              |                                |                 |
|--------------|--------------------------------|-----------------|
| 1. Lock ring | 2. Main fuel level sensor unit | 3. Seal packing |
| 4. Chamber   | 5. Sub fuel level sensor unit  |                 |

## REMOVAL

## **WARNING:**

Be sure to read "General Precautions" When working on fuel system. Refer to [FL-16, "General Precautions"](#).

1. Open fuel filler lid.
  2. Open the fuel filler cap and release the pressure inside fuel tank.
  3. Check fuel level on level place. If gauge indicates more than the level shown in figure (full or almost full), drain fuel from fuel tank until gauge indicates level shown in figure or below.
    - Refer to the following for draining fuel.
  - a. Insert fuel tube of less than 25 mm (0.98 in) in diameter into fuel filler tube through fuel filler opening to draw fuel from fuel filler tube.
  - b. Disconnect fuel filler hose from fuel filler tube.
  - c. Insert fuel tube into fuel tank through fuel filler hose to draw fuel from fuel tank.
    - As a guide, fuel level becomes the position shown in figure or below when approximately 15 liter (3-1/4 Imp qt) of fuel are drawn.



PB|C36

**NOTE-**

Adjusting fuel level is to prevent fuel from spilling, when fuel level sensor unit is removed.

4. Disconnect the battery cable from the negative terminal.
  5. Lift to fold rear seat cushion up. Refer to [SE-32, "REAR SEAT"](#).
  6. Peel off floor carpet, then remove inspection hole cover.

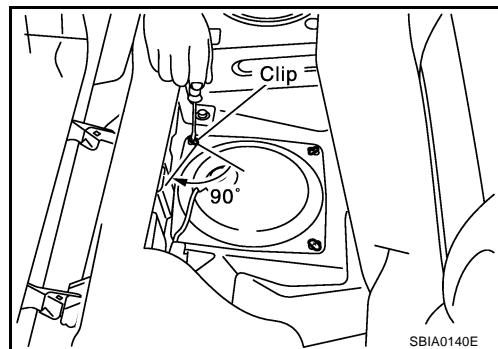
## FUEL LEVEL SENSOR UNIT

[YD22DDTi]

- Remove clip by turning it about 90 degrees clockwise.

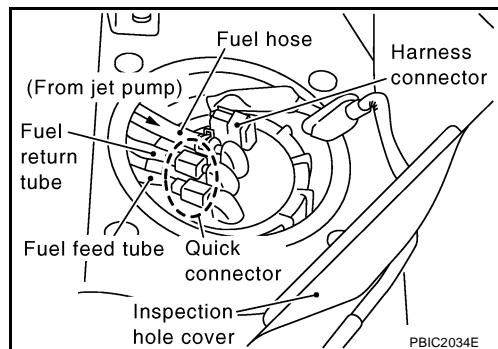
**Left hand** : Main fuel level sensor unit

**Right hand** : Sub fuel level sensor unit



7. Disconnect harness connector, fuel feed tube, fuel return tube and fuel hose. (Figure shows left side of fuel tank.)

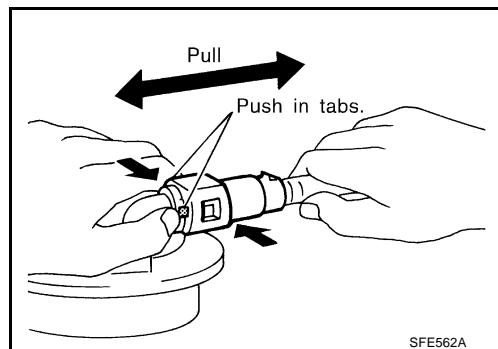
- For the right, disconnect harness connector and fuel hose.



- Disconnect quick connector of fuel feed tube and fuel return tube as follows.

**NOTE:**

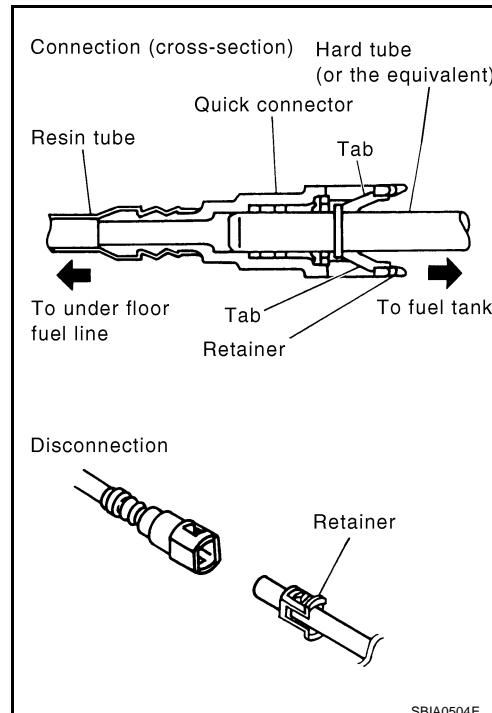
- Hold the sides of the connector, push in tabs and pull out the tube.
- If the connector and the tube are stuck together, push and pull several times until they start to move. Then disconnect them by pulling.



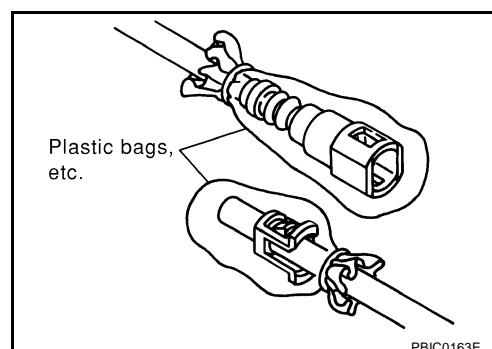
**CAUTION:**

- 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 disconnect 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 resin tube.
- Do not bend or twist the tube during installation and removal.
- Do not remove the remaining retainer on hard tube (or equivalent) except when resin tube or retainer is replaced.
- When resin tube or fuel level sensor unit is replaced, also replace retainer with a new one.

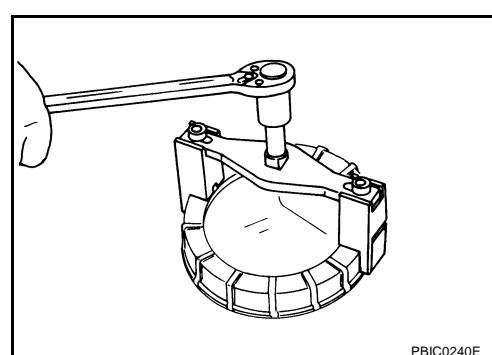
**Retainer color** : Green (Fuel feed tube)  
 : Gray (Fuel return tube)



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



8. Using a fuel tank lock ring wrench (commercial service tool), remove the lock ring.



9. Remove main fuel level sensor unit (Left hand) and sub fuel level sensor unit (Right hand).

**CAUTION:**

- Do not bend the float arm during removal.
- Avoid impacts such as falling when handling components.

Left hand (main fuel level sensor unit):

- If necessary, remove the chamber from the bottom of the fuel tank.
- Remove the chamber by sliding toward the rear of the vehicle.

**INSPECTION AFTER REMOVAL**

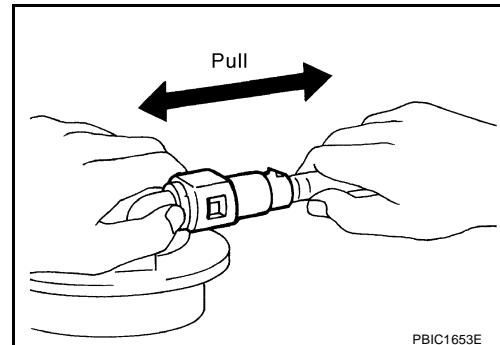
Make sure fuel pump strainer is free from foreign materials. If any are found, remove them.

**INSTALLATION**

Note the following, and install in the reverse order of removal.

- Connect quick connector as follows.

  1. Check connection for damage and foreign materials.
  2. Align the connector with the tube, then insert connector straight into tube until a click is heard.
  3. After connecting, make sure that the connection is secure by following the steps below.
    - Visually confirm that the two tabs are connected to connector.
    - Pull the tube and connector to make sure they are securely connected.

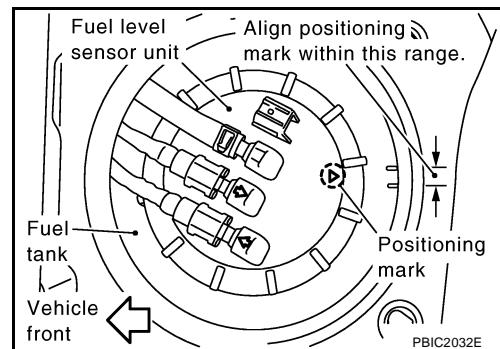


PBIC1653E

- Install fuel level sensor unit with mating mark (triangular protrusion) facing between two carved lines on fuel tank. (Figure shows left side of fuel tank.)

**NOTE:**

On right side of fuel tank, there are three carved lines on fuel tank. Set mating mark between two outer carved lines.



PBIC2032E

- Install inspection hole cover with the front mark (arrow) facing front of vehicle (both for RH and LH).

**INSPECTION AFTER INSTALLATION**

Make sure there is no fuel leakage at connections in the following steps.

- Start engine and rev it up and make sure there is no fuel leakage at connections.

## FUEL TANK

PFP:17202

## Removal and Installation

EBS00BL3

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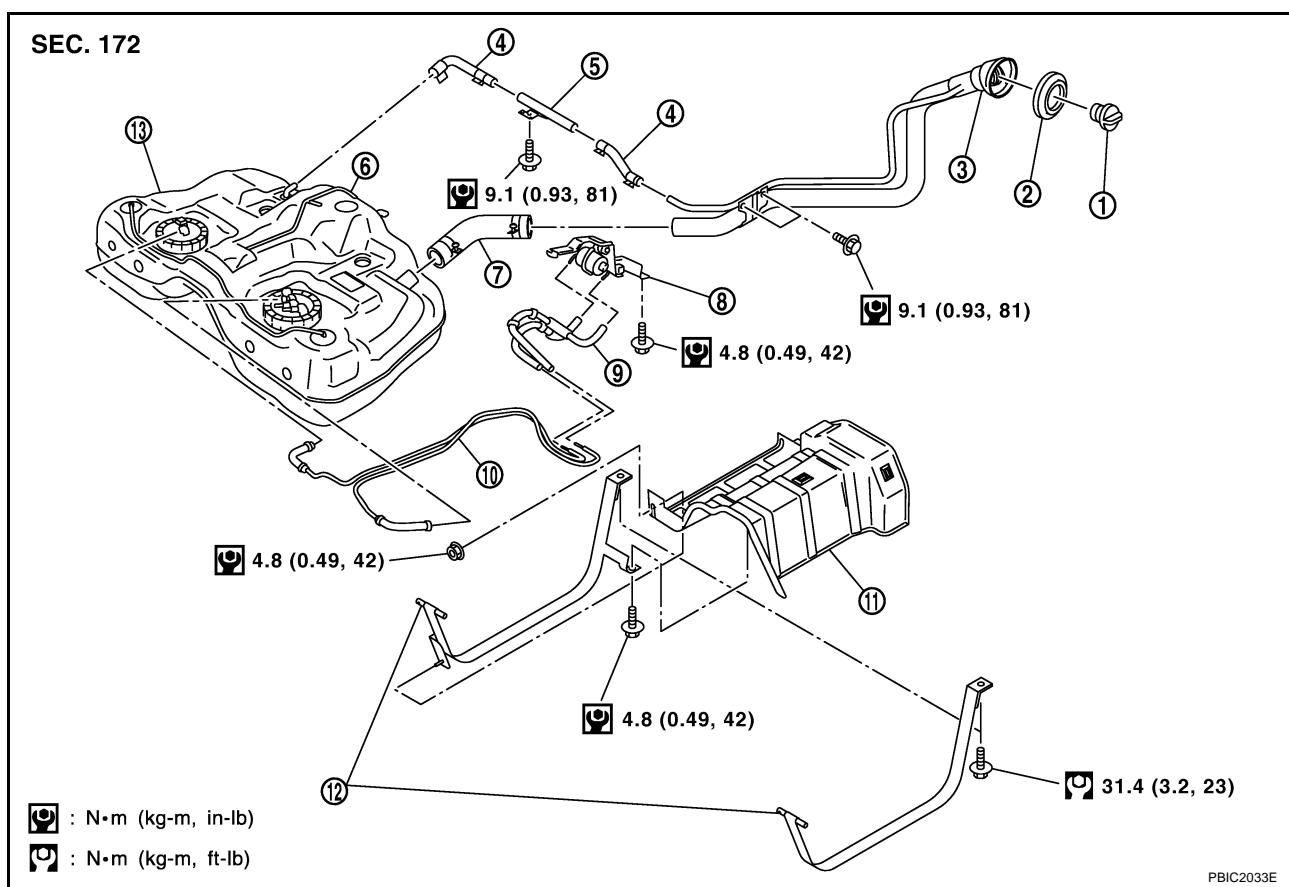
I

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PBIC2033E

- |                     |                         |                     |
|---------------------|-------------------------|---------------------|
| 1. Fuel filler cap  | 2. Grommet              | 3. Fuel filler tube |
| 4. Vent hose        | 5. Vent tube            | 6. EVAP hose        |
| 7. Fuel filler hose | 8. Fuel transport pump  | 9. Fuel hose        |
| 10. Fuel tube       | 11. Fuel tank protector | 12. Fuel tank band  |
| 13. Fuel tank       |                         |                     |

## REMOVAL

## WARNING:

Be sure to read "General Precautions" when working on fuel system. Refer to [FL-16, "General Precautions"](#) .

1. Perform the procedure from 1 to 7 in "removal" of [FL-19, "FUEL LEVEL SENSOR UNIT"](#) .
2. Drain fuel more from fuel tank if necessary.

## CAUTION:

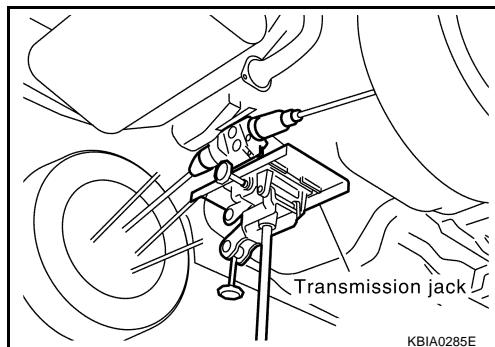
Because fuel tank forwardly inclines and becomes unstable when installing/removing, fuel should be drained if found the remaining quantity.

3. Remove exhaust center tube and insulator. Refer to [EX-2, "EXHAUST SYSTEM"](#) .
4. Remove propeller shaft. (4WD models) Refer to [PR-3, "REAR PROPELLER SHAFT"](#) .

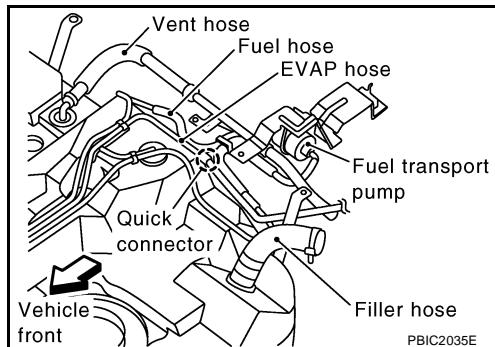
## FUEL TANK

[YD22DDTi]

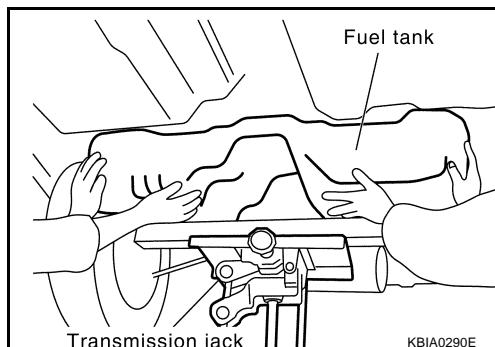
5. Using a transmission jack, support the bottom of final drive assembly (4WD models) or rear suspension member (2WD models).
6. Remove the mounting nuts on the rear suspension member, and lower the transmission jack carefully until just before the rear suspension member is removed from the stud bolts on the vehicle.



7. Disconnect fuel filler hose, EVAP hose and vent hose at fuel tank side.
  - Instruction for quick connector of EVAP hose. Refer to [FL-19, "FUEL LEVEL SENSOR UNIT"](#).
8. Disconnect connector of fuel transport pump and remove bolts for bracket.



9. Remove fuel tank protector.
  10. Remove fuel tank band mounting bolts while supporting fuel tank.
- CAUTION:**  
Sustain the bottom of the tank by using plate or anything same.
11. Remove fuel tank.
- CAUTION:**  
Pay attention not to fall fuel tank because it forwardly inclines and becomes unstable.
- NOTE:**  
It is desirable that more than two technicians work together.
- After lifting down the front portion of fuel tank, remove the fuel tank by pulling it from the upper front of final drive assembly, so that the fuel tank can move forwardly.



## INSTALLATION

- Note the following, and install in the reverse order of removal.
- Surely clamp fuel hoses and insert hose to the length below.

**Fuel filler hose** : 35 mm (1.38 in)

**The other hose** : 25 mm (0.98 in)

- Be sure hose clamp is not positioned on swelled area of fuel tube.
- Tighten fuel hose clamp so that the distance between its lugs becomes to the following.

**Fuel tank side** : 5 - 9 mm (0.20 - 0.35 in)

**Fuel filler tube side** : 7 - 11 mm (0.28 - 0.43 in)

- Fit mounting band pin to the vehicle side securely.
- Before fixing the fuel tank, temporarily install the fuel filler tube.

**CAUTION:**

Use genuine fuel filler tube mounting bolts or equivalent. Make sure to tighten them to the specified torque.

- To connect quick connector. Refer to [FL-19, "FUEL LEVEL SENSOR UNIT"](#).

## INSPECTION AFTER INSTALLATION

Make sure there is no fuel leakage at connections in the following steps.

- Start engine and rev it up and make sure there is no fuel leakage at connections.

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# SERVICE DATA AND SPECIFICATIONS (SDS)

[YD22DDTi]

## SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

### Standard and Limit

EBS00BL5

Fuel tank capacity	Approx. 60 ℥ (13-1/4 Imp gal)
Fuel recommendation	Refer to <a href="#">GI-5</a>

### Tightening Torque

EBS00BL6

Unit: N·m (kg-m, ft-lb)

Unit: N·m (kg-m, in-lb)\*

Fuel filter drain plug	4.9 (0.50, 43)*
Fuel tank band	31.4 (3.2, 23)
Fuel filler tube	9.1 (0.93, 81)*
Vent tube	9.1 (0.93, 81)*
Lock ring	32.9 (3.4, 24)
Fuel transport pump	4.8 (0.49, 42)*