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K9K

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PREPARATION

[CR]

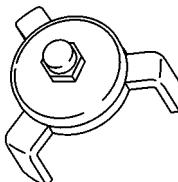
PREPARATION

PFP:00002

Special Service Tools

EBS000J5

Tool number (RENAULT tool number) Tool name	Description
KV993G0010 (Mot. 1397) Lock ring wrench	Removing and Installing lock ring



PBIC1627E

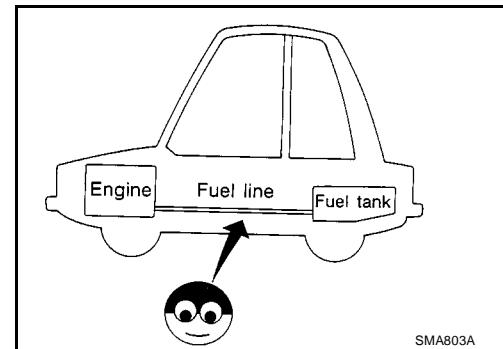
FUEL SYSTEM

PFP:17503

Checking Fuel Lines

EBS000JN

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



EBS000JN

General Precautions**WARNING:**

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

- Put a "CAUTION: IN FLAMMABLE" sign in workshop.
- Be sure to work in a well-ventilated area and furnish workshop with a CO₂ fire extinguisher.
- Do not smoke while servicing fuel system, keep open flames and spark away from work area.

CAUTION:

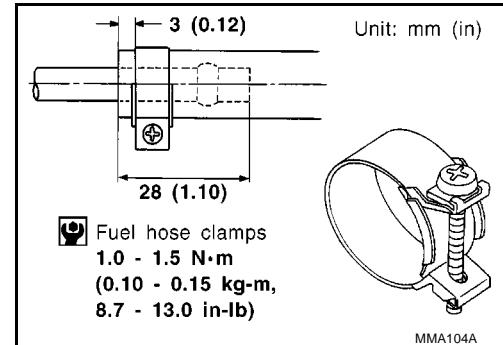
- Before removing fuel line parts, carry out the following procedures.
 - Put drained fuel in an explosion-proof container and put the lid on securely, keep the container in safe area.
 - Release fuel pressure from fuel line. Refer to [EC-44, "FUEL PRESSURE RELEASE"](#) (WITH EURO-OBD), refer to [EC-505, "FUEL PRESSURE RELEASE"](#) (WITHOUT EURO-OBD).
 - Disconnect battery ground cable.
- Always replace O-ring and clamps with new ones.
- Do not tighten hose clamps excessively to avoid damaging hoses.
- Do not kink or twist tubes when they are being installed.
- 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.

- After installing tubes, run engine and check for fuel leaks at connections.
- For servicing "Evaporative Emission System" parts, refer to [EC-464, "EVAPORATIVE EMISSION SYSTEM"](#) (WITH EURO-OBD), [EC-840, "EVAPORATIVE EMISSION SYSTEM"](#) (WITHOUT EURO-OBD).



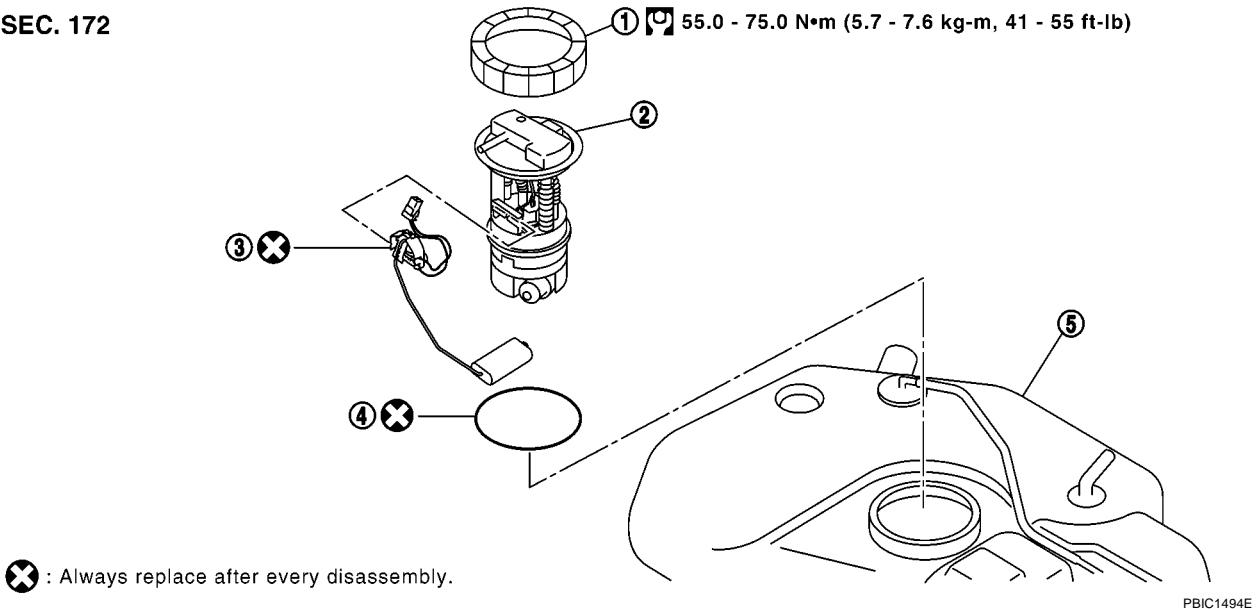
FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

PFP:17042

Removal and Installation

EBS000JH

SEC. 172



1. Lock ring
2. Fuel filter and fuel pump assembly
3. Fuel level sensor unit
4. O-ring
5. Fuel tank

REMOVAL

WARNING:

Read "General Precautions" before working on the fuel system. Refer to [FL-3, "General Precautions"](#).

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

When fuel pump malfunctions, insert hose with outer diameter of 25 mm (0.98 in) or less from fuel filler port. Drain fuel in fuel filler tube. Disconnect connections of fuel filler tube and fuel filler hose to drain fuel from fuel filler hose.

- As guide, fuel amount becomes the level shown in figure or below when approximately 7 liter (1-1/2 Imp gal) of fuel are drained from full.

NOTE:

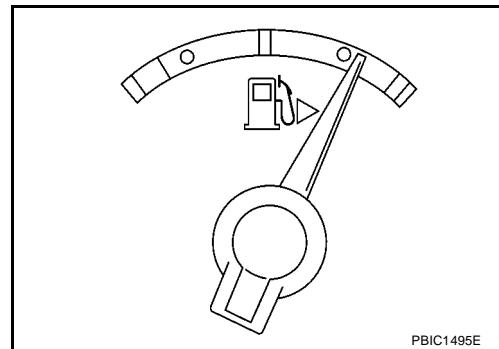
Adjusting fuel level is to prevent fuel from spilling, when fuel level sensor unit, fuel filter and fuel pump assembly are removed.

2. Release fuel pressure. Refer to [EC-44, "Fuel Pressure Check"](#) (WITH EURO-OBD), [EC-505, "Fuel Pressure Check"](#) (WITHOUT EURO-OBD).

NOTE:

If CONSULT-II is not used, release fuel pressure with the following procedures.

- a. Refer to steps 5 to 7 on this page. Remove harness connectors from fuel level sensor unit, fuel filter and fuel pump assembly.
- b. Start the engine. After stopping the engine, crank it two or three times to consume the fuel in the fuel line.
3. Open fuel filler lid.
4. Open the filler cap and release the pressure inside the fuel tank.
5. Remove rear seat. Refer to [SE-11, "REAR SEAT"](#).
6. Remove inspection hole cover.
 - Using a screwdriver, remove it by turning clips clockwise by 90°.



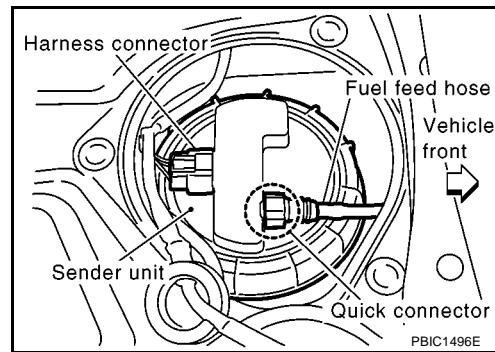
FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[CR]

7. Remove harness connector and fuel feed hose from sender unit.

NOTE:

- Connections of harness connector and fuel feed hose are called sender unit.



- Remove quick connector in the following procedures.

- Pinch quick connector square-parts with your fingers, and pull out the quick connector by hand.
- If quick connector and tube on sender unit are stuck, push and pull several times until they move, and pull out.

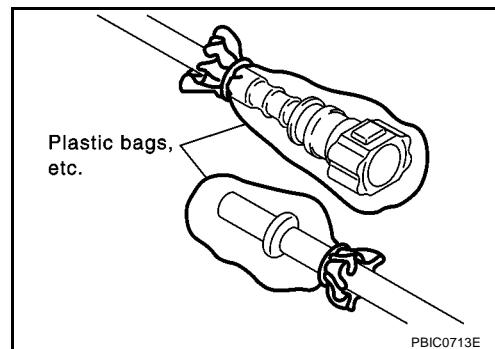
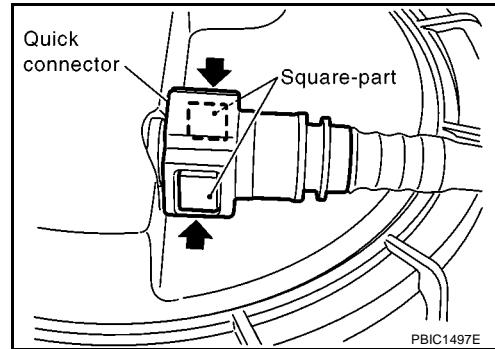
CAUTION:

- The tube can be removed when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to remove the 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 the resin tube.
- Do not bend or twist the tube during installation and removal.

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

CAUTION:

Do not insert plug, preventing damage on O-ring in quick connector.



8. Using lock ring wrench [SST: KV993G0010], remove lock ring.

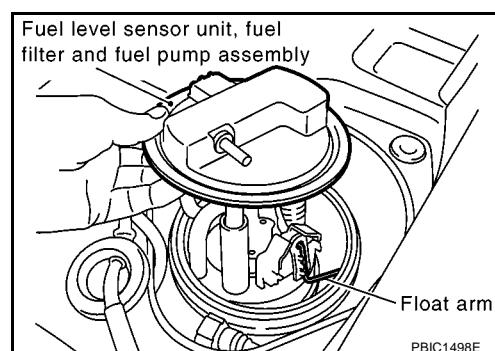
CAUTION:

Rotate SST while pressing fuel level sensor unit, fuel filter and fuel pump assembly as spring reaction force is applied from fuel tank inside to upward.

9. Remove fuel level sensor unit, fuel filter and fuel pump assembly.

CAUTION:

- Be careful not to bend the float arm when removing.
- Handle them carefully without subjecting them to impacts such as dropping.



FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

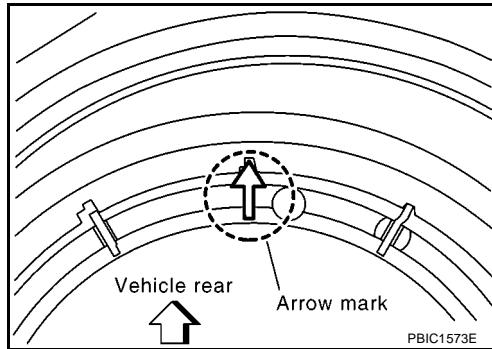
[CR]

10. Install lock ring temporally by hand tightening until it stops with maximum force.

- Direct arrow mark on lock ring to vehicle rear. Then turn clockwise to tighten lock ring.

CAUTION:

Do not remove lock ring until fuel level sensor unit, fuel filter and fuel pump assembly is installed.



11. Remove fuel level sensor unit in the following procedures.

a. Remove harness connector (brown).

- Hold connector with your fingers, because there is no tab for releasing stopper. Pull it out straight downward.

b. Insert a screwdriver into the gap between fuel level sensor unit left side and mounting part. Pry the screwdriver in the direction shown by arrow.

CAUTION:

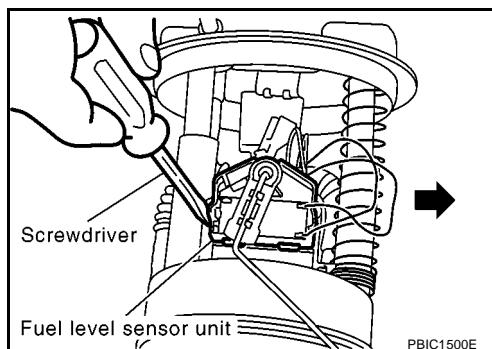
Be careful not to damage anything.

c. When fixing tab comes off, slide fuel level sensor unit in the direction indicated by arrow to remove.

CAUTION:

- Do not reuse removed fuel level sensor unit.

- Do not disassemble fuel filter and fuel tank pump assembly.



INSTALLATION

Install in the reverse order of removal which being careful of the following.

Installation of Fuel Level Sensor Unit

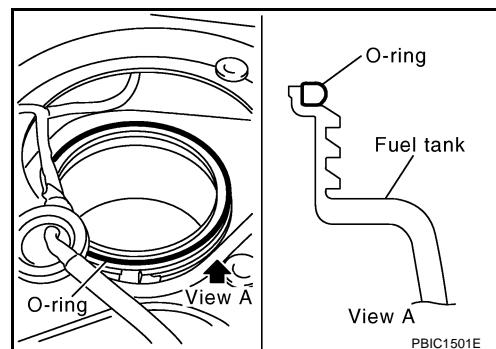
Install it in the following procedures.

1. Check fuel gauge mounting part of fuel filter and fuel pump assembly side for damage.
2. Slide fuel level sensor unit along with mounting groove. Insert new fuel level sensor unit until it contacts the face.
 - After inserting, apply force to the reverse direction (removal direction). Make sure fuel level sensor unit does not come off.
3. Connect harness connector.
 - Insert harness connector securely until it contacts the face.

Installation of Fuel Level Sensor Unit, Fuel Filter and Fuel Pump Assembly

Install it in the following procedures.

1. Remove lock ring.
2. Install O-ring to fuel tank without any twist.



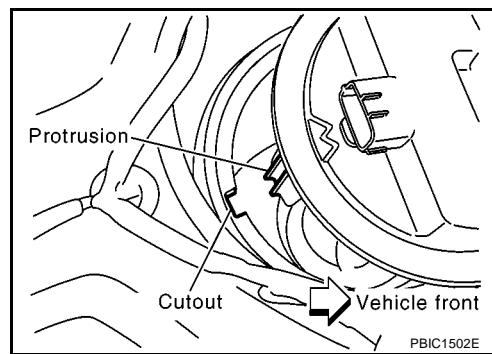
FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

[CR]

3. Install fuel level sensor unit, fuel filter and fuel pump assembly, aligning the sender unit rear side protrusion with the fuel tank opening rear side cutout.

CAUTION:

- Do not allow O-ring to drop.
- Maintain closely jointed status by pressing fuel level sensor unit, fuel filter and fuel pump assembly at an opening of the tank until the end of step 5, in order to prevent the fallout of O-ring (To maintain the O-ring installed status of view A in the figure at step 2).

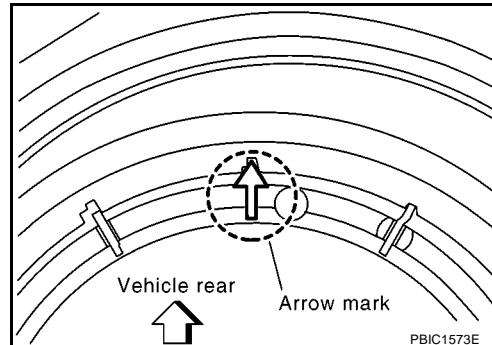


4. Direct arrow mark on lock ring to vehicle rear. Then turn lock ring clockwise by hand until it steps with maximum force.

CAUTION:

Install lock ring horizontally.

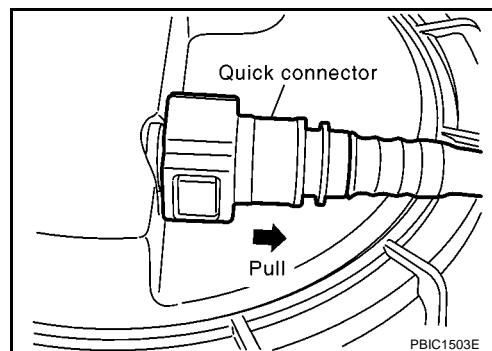
5. Tighten lock ring to the specification with lock ring wrench [SST: KV993G0010].



Fuel Feed Hose Installation

- Connect quick connector in the following procedures.

1. Check connections for damage or foreign material.
2. Align the mating side connection part with the center of shaft on the sender unit, and insert quick connector straight until it clicks.
3. After connecting, pull out quick connector by hand. Make sure connections are secure.



INSPECTION AFTER INSTALLATION

- Check for fuel leak in the following procedures.

1. Turn the ignition switch to ON (do not start engine), and with fuel pressure applied in the fuel line, check to make sure there are no fuel leaks from the connection.
2. Start the engine, and at increased speed, check again to see if there any fuel leaks from the connection.

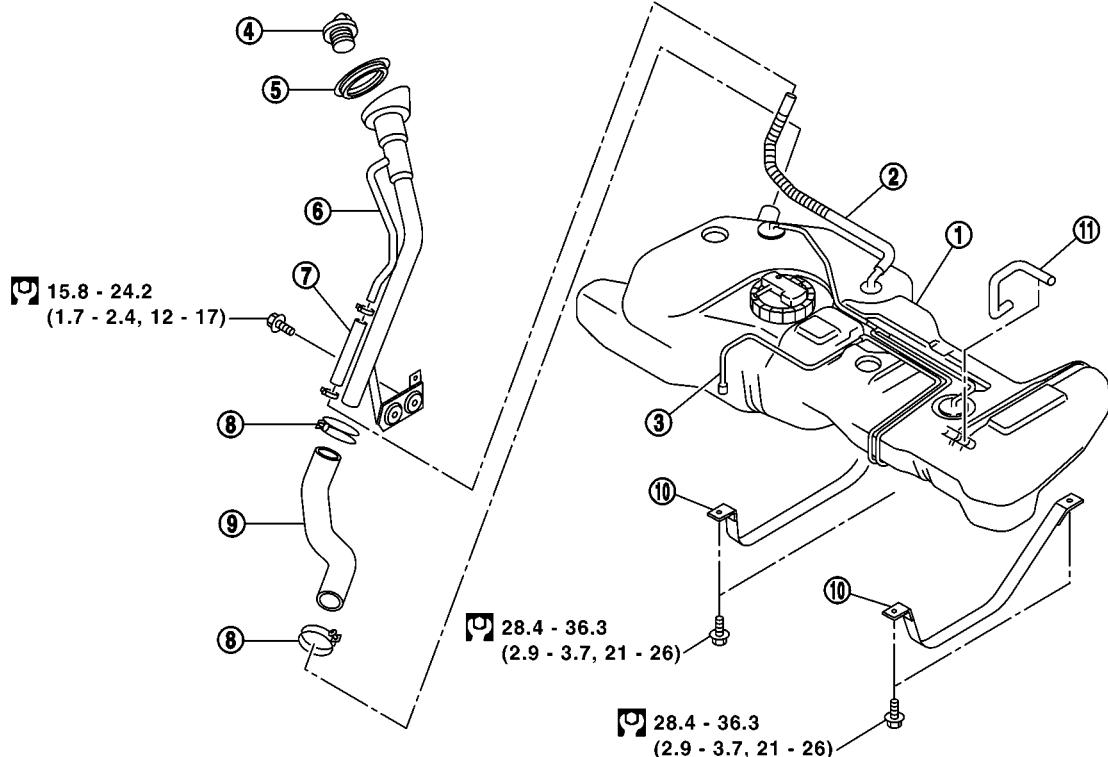
FUEL TANK

PFP:17202

Removal and Installation

EBS000J9

SEC. 172



: N·m (kg·m, ft·lb)

PBIC1504E

1. Fuel tank	2. Vent hose	3. EVAP tube
4. Fuel filler cap	5. Grommet	6. Fuel filler tube
7. Vent hose	8. Clamp	9. Fuel filler hose
10. Mounting band	11. EVAP hose	

REMOVAL

WARNING:

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

1. Remove RH rear wheel.
2. Perform steps 1 to 7 of [FL-4, "REMOVAL"](#) in "FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY".

CAUTION:

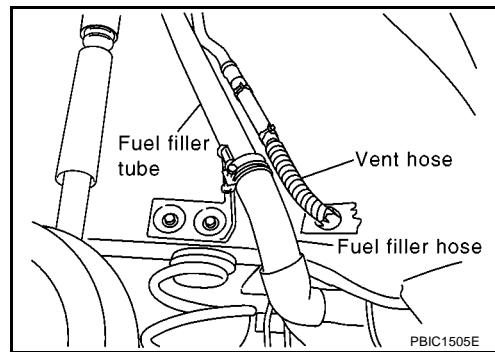
If fuel tank bottom face is not level, and remaining fuel level is high, tank position becomes unstable, causing a danger. Drain fuel further than that in step 1 of the referenced procedure until tank can be held by hand even if the balance is lost.

3. Remove center muffler and main muffler. Refer to [EX-3, "EXHAUST SYSTEM"](#).
4. Remove vehicle side insulator on upper center muffler and main muffler.
5. Move parking brake cable from the lower face of fuel tank. Then remove clips for parking brake cable.

6. Disconnect fuel filler hose on fuel tank side.

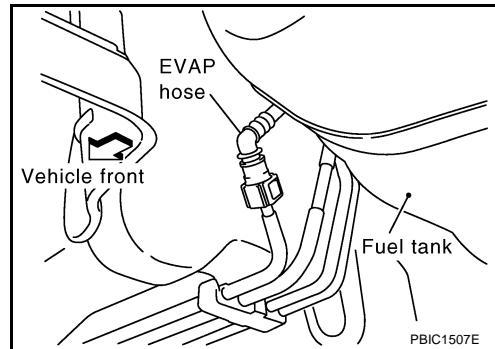
CAUTION:

Do not remove fuel filler hose at fuel filler tube side, preventing to interfere with suspension due to dislocation when installing. When removing at fuel filler tube side necessarily, put mating marks, and remove.



7. Remove vent hose at RH rear wheelwell side.

8. Remove EVAP hose at front side of fuel tank.



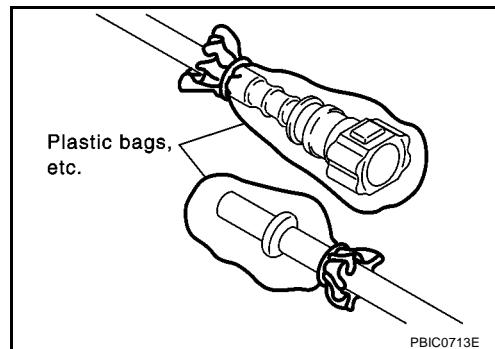
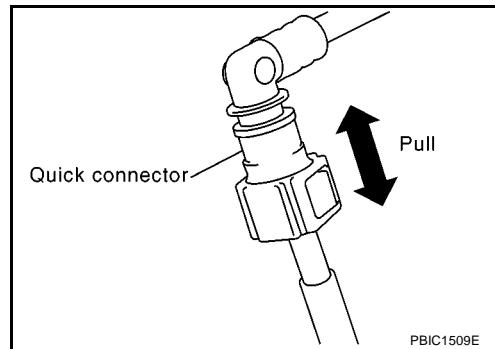
- Remove quick connector in the following procedures.
- Pinch quick connector square-parts with your fingers, and pull out the quick connector by hand.
- If quick connector and tube on vehicle are stuck, push and pull several times until they move, and pull out.

CAUTION:

- The tube can be removed when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to remove the 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 the resin tube.
- Do not bend or twist the tube during installation and removal.
- To keep clean the connecting portion and to avoid damage and foreign materials, cover them completely with plastic bags or something similar.

CAUTION:

Do not insert plug, preventing damage on O-ring in quick connector.



9. Support center of fuel tank with suitable transmission jack.

CAUTION:

Securely support the fuel tank with a piece of wood.

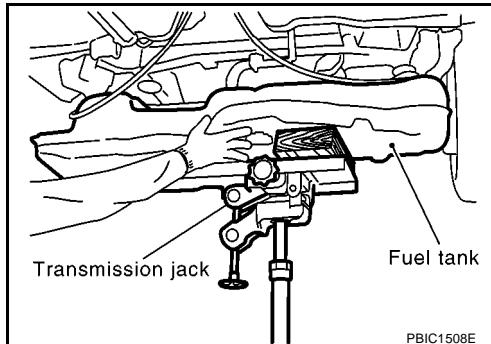
10. Remove RH/LH mounting band.

11. Lower suitable transmission jack carefully to remove fuel tank while holding it by hand. Perform the following works at the same time.

- Pull out vent hose from through hole of vehicle.
- Avoid interference with tank by pulling parking brake cable by hand.

CAUTION:

Tank may be in an unstable condition because of the shape of fuel tank bottom. Do not rely on jack too much. Be sure to hold tank securely.



INSTALLATION

Install in the reverse order of removal which being careful of the following.

Installation of Fuel Tank Mounting Band

- Install it by referring to the identification stamp mark "R" and "L" on the end.

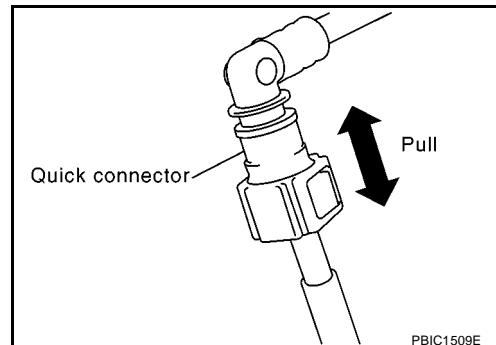
Installation of fuel Filler Hose

- Insert filler hose into mating side part by 35 mm (1.38 in), and secure it with clamp.
- When installing clamp, do not allow clamp to contact the bulge (bump) part of the tube.
- Tighten the clamp of filler hose so that the remaining length becomes 5 - 9 mm (0.20 - 0.35 in) [or tightening torque: 1.3 - 3.7 N·m (0.13 - 0.38 kg-m, 12 - 32 in-lb)].

Installation of EVAP Hose

- Connect quick connector in the following procedures.

1. Check connections for damage or foreign material.
2. Align the mating side connection part with the center of shaft, and insert connector straight until it clicks.
3. After connecting, pull out quick connector by hand. Make sure connections are secure.



INSPECTION AFTER INSTALLATION

- Check for fuel leak in the following procedures.

1. Turn the ignition switch to ON (do not start engine), and with fuel pressure applied in the fuel line, check to make sure there are no fuel leaks from the connection.
2. Start the engine, and at increased speed, check again to see if there any fuel leaks from the connection.

SERVICE DATA AND SPECIFICATIONS (SDS)

[CR]

SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Standard and Limit

EBS000JO

Fuel tank capacity	Approx. 46 ℥ (10-1/8 Imp gal)
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Tightening Torque

EBS000JP

Unit: N·m (kg·m, ft·lb)

Fuel tank mounting band	28.4 - 36.3 (2.9 - 3.7, 21 - 26)
Fuel filler tube	15.8 - 24.2 (1.7 - 2.4, 12 - 17)
Lock ring	55.0 - 75.0 (5.7 - 7.6, 41 - 55)

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PREPARATION

[K9K]

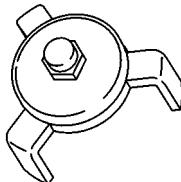
PREPARATION

PFP:00002

Special Service Tool

EBS01C7Y

Tool number (RENAULT tool number) Tool name	Description
KV993G0010 (Mot. 1397) Lock ring wrench	Removing and Installing lock ring



PBIC1627E

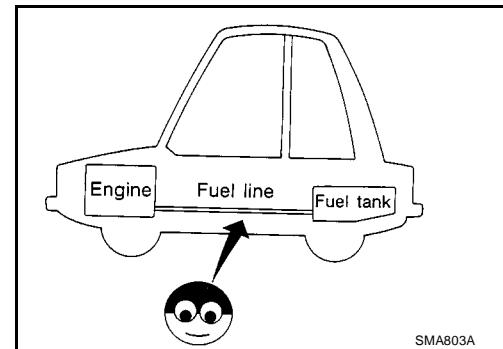
FUEL SYSTEM

PFP:17503

Checking Fuel Lines

EBS01C7Z

Inspect fuel lines and tank for improper attachment, leaks, cracks, damage, chafing and deterioration. If necessary, repair or replace.



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FUEL FILTER

[K9K]

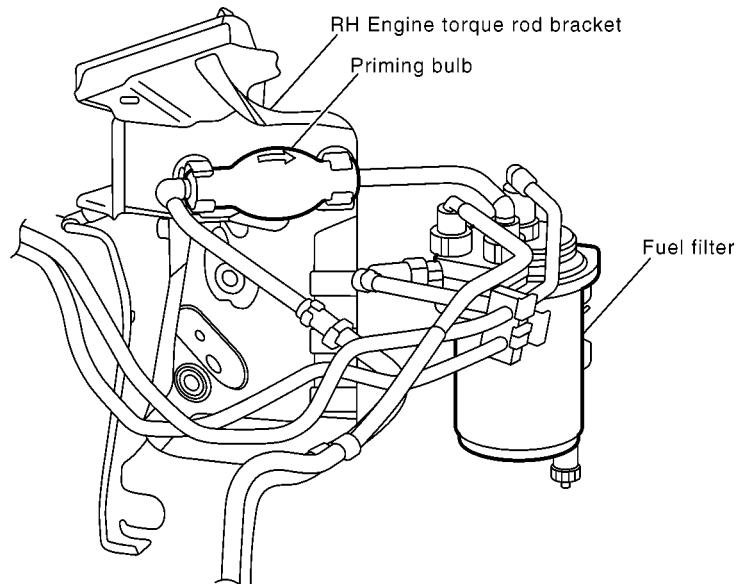
FUEL FILTER

PFP:16400

Removal and Installation

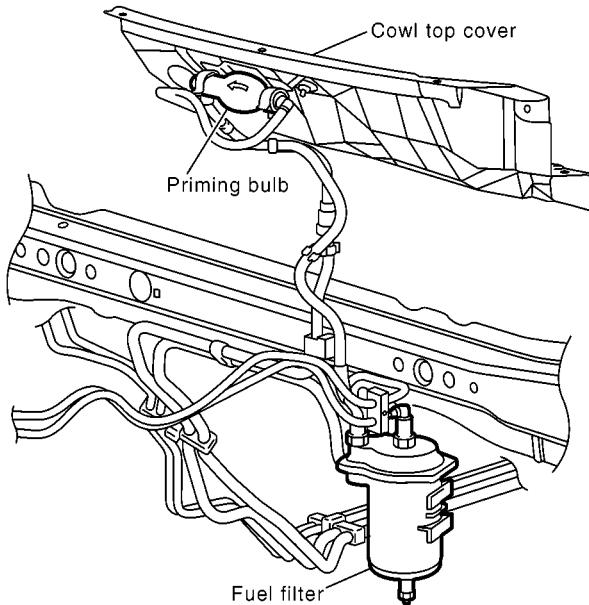
EBS01C80

LHD models



MBIB1064E

RHD models



MBIB1065E

Water Draining from Fuel Filter

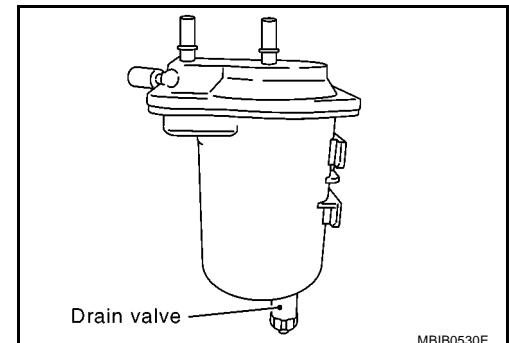
EBS01C81

DRAINING WATER (RHD)

CAUTION:

Before carrying out any work, wait for the fuel temperature is dropped.

Open drain valve at the bottom of fuel filter.



MBIB0530E

DRAINING WATER (LHD)

Refer to [EM-105, "PRECAUTIONS"](#), EC-K9K-2, "DIESEL EQUIPMENT".

1. Remove right fender protector. Refer to [EI-10, "COWL TOP"](#).
2. Remove foam insulator.
3. Open drain valve at the bottom of fuel filter.

CAUTION:

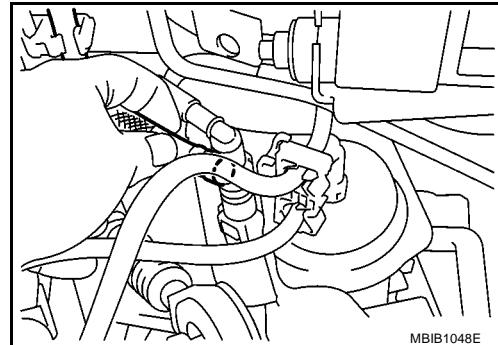
Put a shop cloth under the drain valve, to avoid the water and fuel spill on ABS actuator.

FUEL FILTER CHECK

Check fuel filter for fuel leakage, damage and other abnormal signs.

Changing Fuel Filter**REMOVAL (RHD)**

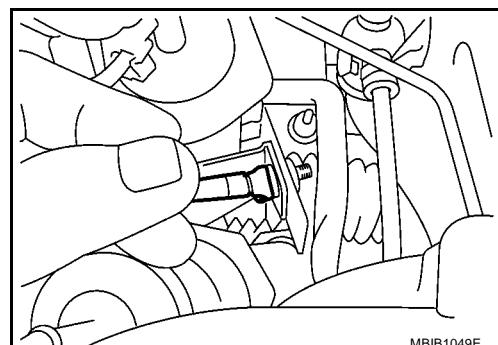
1. Remove quick connectors in the following procedures.
 - Pinch quick connector square-parts with your fingers, and pull out the quick connector by hand.
 - If quick connector and tube on vehicle are stuck, push and pull several times until they move, and pull out.



2. Remove fuel filter from fuel filter bracket.

CAUTION:

Do not spill the fuel during removal. If the fuel is spill, immediately wipe it off. Be especially careful to prevent the fuel from adhering to the insulators of the engine mounts.

**REMOVAL (LHD)**

1. Remove Cowl Top. Refer to [EI-10, "COWL TOP"](#).
2. Remove priming bulb from priming bulb bracket.
3. Remove fuel filter from fuel filter bracket.
4. Remove quick connectors as shown.

CAUTION:

Put a shop cloth under the drain valve, to avoid the water and fuel spill on ABS actuator. Be especially careful to prevent any damage.

INSTALLATION

- Install in the reverse order of removal.

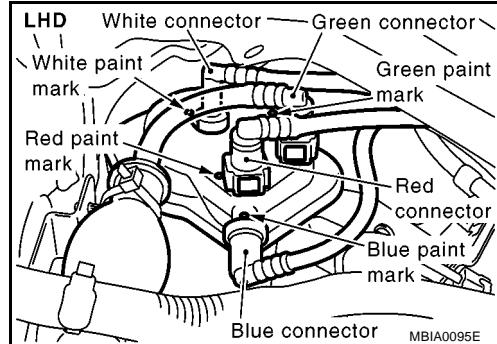
FUEL FILTER

[K9K]

- To install fuel filter connectors, respect paint marks on fuel filter as shown.
- After installation, operate the priming bulb vertically, if it is possible, to perform air bleeding.
Refer to [FL-16, "Bleeding Fuel Filter"](#) .

CAUTION:

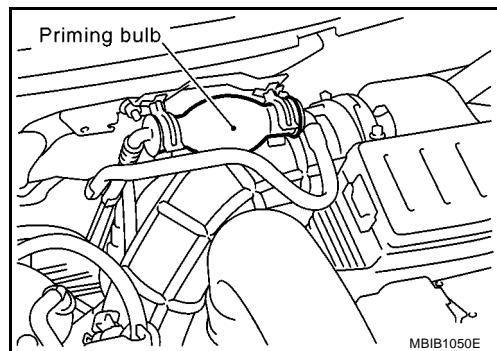
Do not bend or twist the tube during installation and removal.



Bleeding Fuel Filter

EBS01C83

1. Prime the circuit using the priming bulb.
2. Perform engine cranking with repeating several times until engine starting.



FUEL LEVEL SENSOR UNIT

PFP:17042

Removal and Installation

EBS01C84

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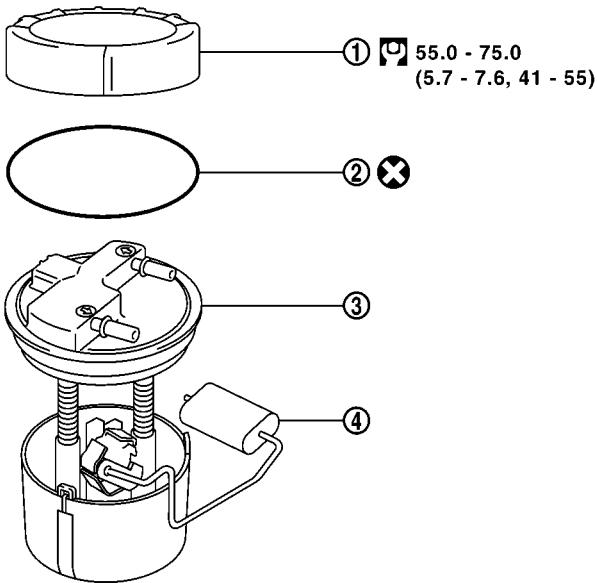
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SEC. 172



: Always replace after every disassembly.

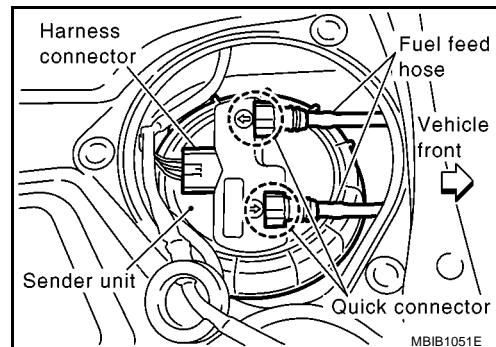
: N•m (kg•m, ft•lb)

MBIB1047E

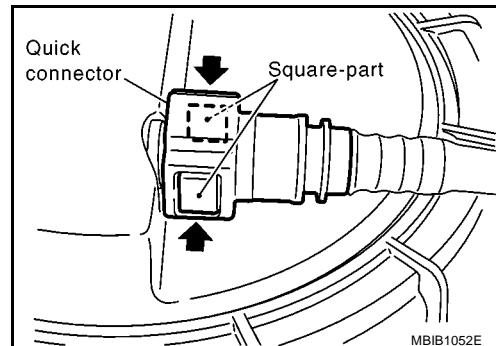
1. Rock ring
2. O-ring
3. Fuel level sensor unit
4. Float arm

REMOVAL

1. Disconnect battery ground cable.
2. Open fuel filler lid and filler cap to release the pressure inside the fuel tank.
3. Remove rear seat cushion. Refer to [SE-11, "REAR SEAT"](#).
4. Remove inspection hole cover under the rear seat.
5. Disconnect electrical connector.
6. Disconnect the quick connectors.



- Hold the connector while pushing in tabs, and pull out the tube.



Disconnected



JFE628A

CAUTION:

- The tube can be removed when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to remove the 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 the resin tube.
- Do not bend or twist the tube during installation and removal.
- Only when the tube is replaced, remove the remaining retainer.
- When the tube is replaced, also replace the retainer with a new one.

Retainer color:**Red (Feed hose side)****White (Return hose side)**

7. Using lock ring wrench [SST: KV993G0010], remove lock ring.

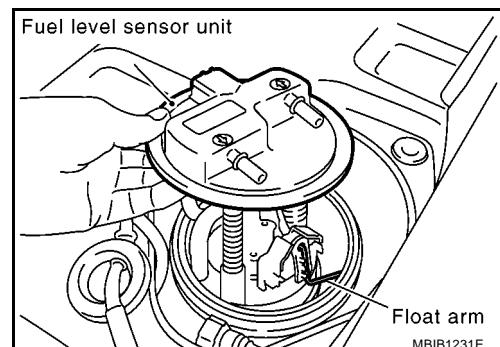
CAUTION:

Rotate SST while pressing fuel level sensor unit as spring reaction force is applied from fuel tank inside to up ward.

8. Remove fuel level sensor unit.

CAUTION:

- Be careful not to bend the float arm when removing.
- Handle them carefully without subjecting them to impacts such as dropping.

**INSTALLATION**

Install in the reverse order of removal.

FUEL TANK

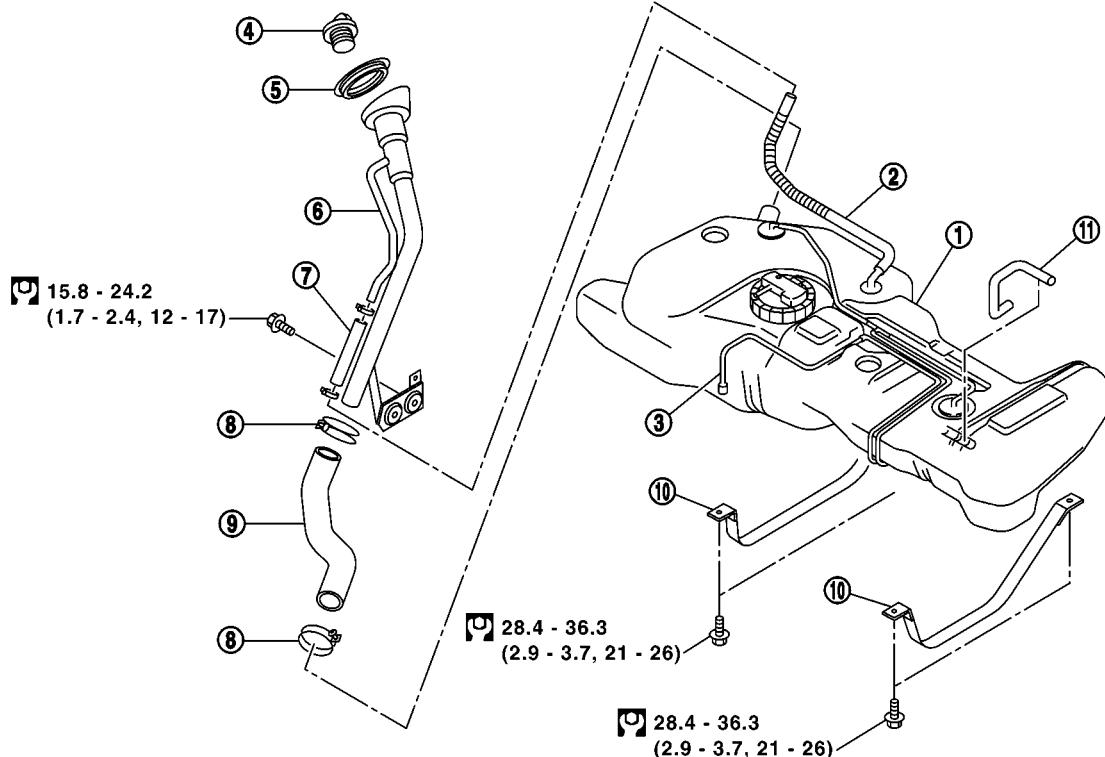
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Removal and Installation

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: N·m (kg·m, ft·lb)

PBIC1504E

1. Fuel tank	2. Vent hose	3. EVAP tube
4. Fuel filler cap	5. Grommet	6. Fuel filler tube
7. Vent hose	8. Clamp	9. Fuel filler hose
10. Mounting band	11. EVAP hose	

REMOVAL

1. Remove RH rear wheel.
2. Perform steps 1 to 7 of [FL-17, "REMOVAL"](#) in "FUEL LEVEL SENSOR UNIT".

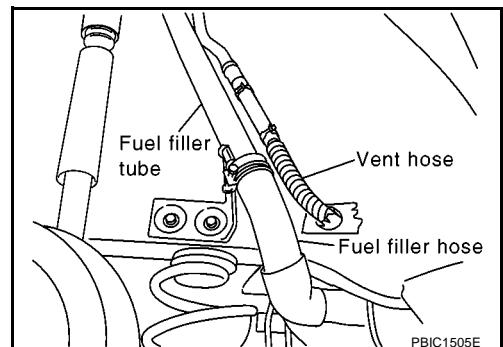
CAUTION:

If fuel tank bottom face is not level, and remaining fuel level is high, tank position becomes unstable, causing a danger. Drain fuel further than that in step 1 of the referenced procedure until tank can be held by hand even if the balance is lost.

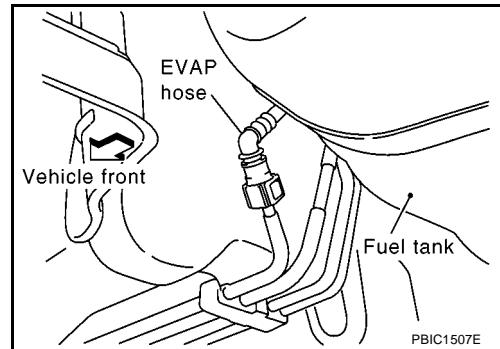
3. Remove center muffler and main muffler. Refer to [EX-3, "EXHAUST SYSTEM"](#).
4. Remove vehicle side insulator on upper center muffler and main muffler.
5. Move parking brake cable from the lower face of fuel tank. Then remove clips for parking brake cable.
6. Disconnect fuel filler hose on fuel tank side.

CAUTION:

Do not remove fuel filler hose at fuel filler tube side, preventing to interfere with suspension due to dislocation when installing. When removing at fuel filler tube side necessarily, put mating marks, and remove.



7. Remove vent hose at RH rear wheelwell side.
8. Remove EVAP hose at front side of fuel tank.



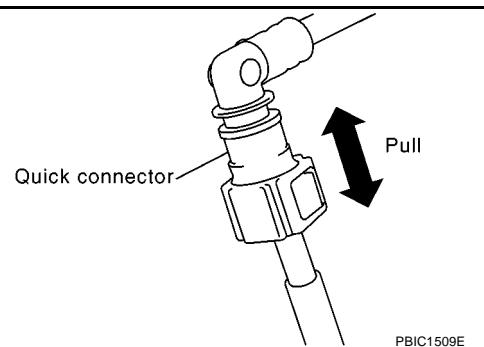
- Remove quick connector in the following procedures.
- Pinch quick connector square-parts with your fingers, and pull out the quick connector by hand.
- If quick connector and tube on vehicle are stuck, push and pull several times until they move, and pull out.

CAUTION:

- The tube can be removed when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to remove the 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 the resin tube.
- Do not bend or twist the tube during installation and removal.
- To keep clean the connecting portion and to avoid damage and foreign materials, cover them completely with plastic bags or something similar.

CAUTION:

Do not insert plug, preventing damage on O-ring in quick connector.



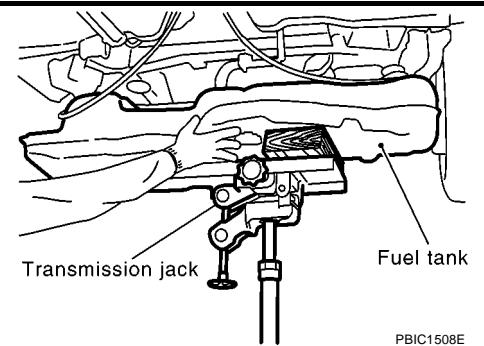
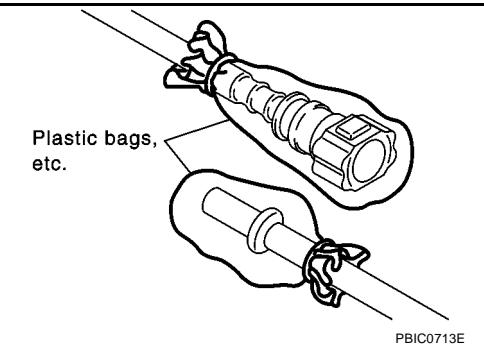
9. Support center of fuel tank with suitable transmission jack.

CAUTION:
Securely support the fuel tank with a piece of wood.

10. Remove RH/LH mounting band.

11. Lower suitable transmission jack carefully to remove fuel tank while holding it by hand. Perform the following works at the same time.

- Pull out vent hose from through hole of vehicle.
- Avoid interference with tank by pulling parking brake cable by hand.



CAUTION:

Tank may be in an unstable condition because of the shape of fuel tank bottom. Do not rely on jack too much. Be sure to hold tank securely.

INSTALLATION

Install in the reverse order of removal which being careful of the following.

Installation of Fuel Tank Mounting Band

- Install it by referring to the identification stamp mark "R" and "L" on the end.

Installation of fuel Filler Hose

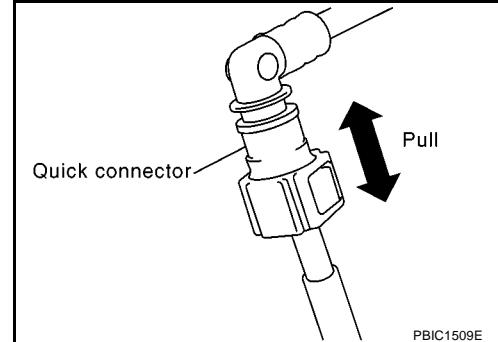
- Insert filler hose into mating side part by 35 mm (1.38 in), and secure it with clamp.
- When installing clamp, do not allow clamp to contact the bulge (bump) part of the tube.
- Tighten the clamp of filler hose so that the remaining length becomes 5 - 9 mm (0.20 - 0.35 in) [or tightening torque: 1.3 - 3.7 N·m (0.13 - 0.38 kg·m, 12 - 32 in-lb)].

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Installation of EVAP Hose

- Connect quick connector in the following procedures.
- 1. Check connections for damage or foreign material.
- 2. Align the mating side connection part with the center of shaft, and insert connector straight until it clicks.
- 3. After connecting, pull out quick connector by hand. Make sure connections are secure.



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Installation of Vent Hose

- Push vent hose into through hole of vehicle.
- Insert vent hose into vent rubber hose, and secure it with clamp.

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INSPECTION AFTER INSTALLATION

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

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

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FUEL TANK

[K9K]
