SECTION FL

FUEL SYSTEM

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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000014808245

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.**

General Precaution

INFOID:0000000014631490

WARNING:

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

- **Put a “CAUTION: FLAMMABLE” sign in the workshop.**
- **Be sure to work in a well ventilated area and furnish workshop with a CO_2 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-25, "Fuel".**
- **Before removing fuel line parts, perform 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 the fuel lines. Refer to EC-162, "Work Procedure".**
- **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 installing tubes, check there is 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.**
- **Use only a genuine NISSAN fuel filler cap as a replacement. If an incorrect fuel filler cap is used, the “MIL” may come on.**

High Voltage Precautions

INFOID:0000000015277205

WARNING:

- **Because hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are han-**

dled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.

- **Be sure to remove the service plug in order to shut off the high voltage circuits before performing inspection or maintenance of high voltage system harnesses and parts.**
- **To prevent the removed service plug from being connected by mistake during the procedure, always carry it in your pocket or put it in the tool box.**
- **Be sure to wear insulating protective equipment consisting of glove, shoes, face shield, and glasses before beginning work on the high voltage system.**
- **Clearly identify the persons responsible for high voltage work and ensure that other persons do not touch the vehicle. When not working, cover high voltage parts with an insulating cover sheet or similar item to prevent other persons from contacting them.**

CAUTION:

There is the possibility of a malfunction occurring if the vehicle is changed to READY status while the service plug is removed. Therefore do not change the vehicle to READY status unless instructed to do so in the Service Manual.

HIGH VOLTAGE HARNESS AND EQUIPMENT IDENTIFICATION

The colors of the high voltage harnesses and connectors are all orange. Orange "High Voltage" labels are applied to the Li-ion battery and other high voltage devices. Do not carelessly touch these harnesses and parts.

HANDLING OF HIGH VOLTAGE HARNESS AND TERMINALS

Immediately insulate disconnected high voltage connectors and terminals with insulating tape.

REGULATIONS ON WORKERS WITH MEDICAL ELECTRONICS

WARNING:

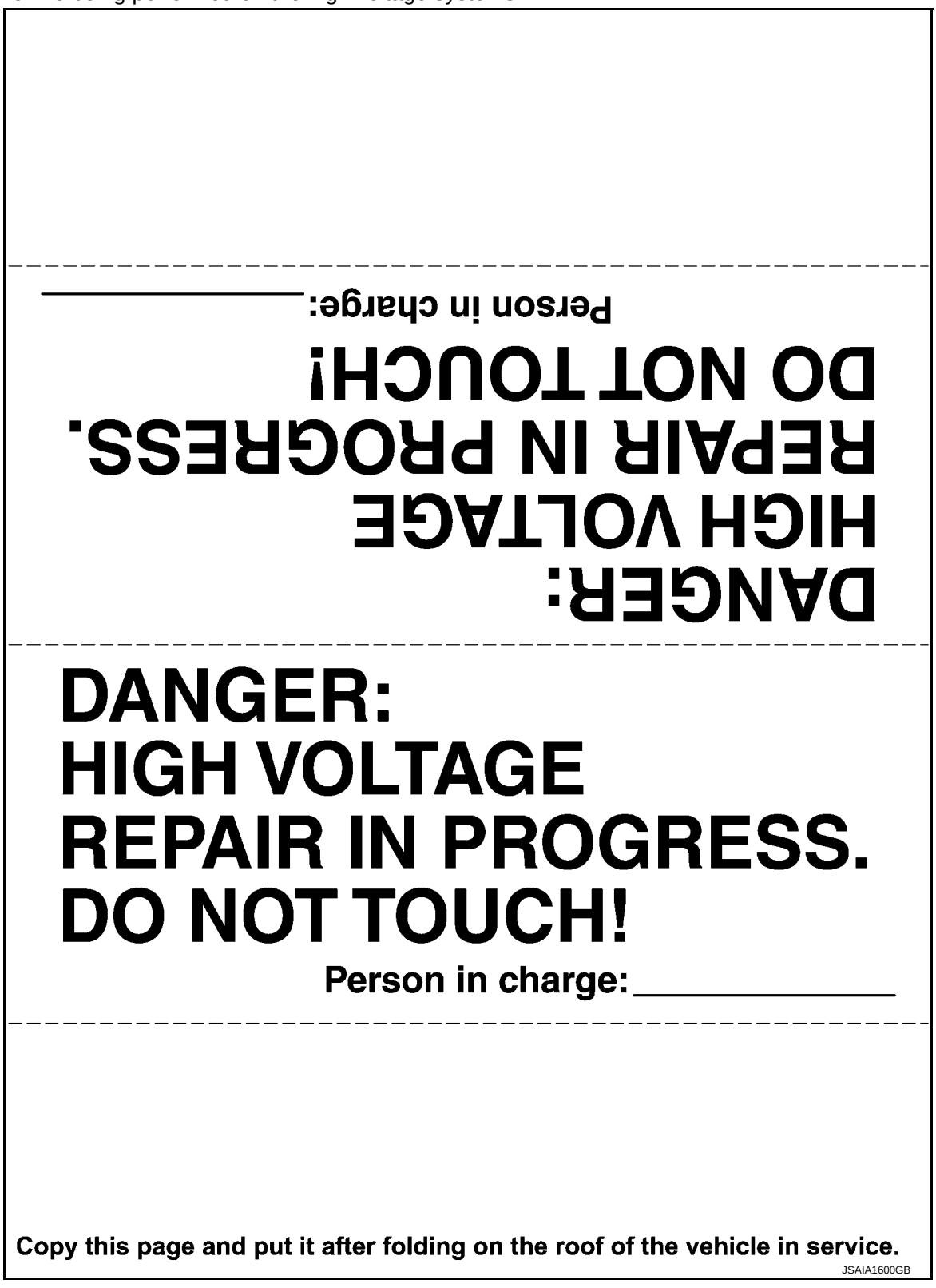
The vehicle contains parts that contain powerful magnets. If a person who is wearing a heart pacemaker or other medical device is close to these parts, the medical device may be affected by the magnets. Such persons must not perform work on the vehicle.

PROHIBITED ITEMS TO CARRY DURING THE WORK

Because this vehicle uses components that contain high voltage and powerful magnetism, do not carry any metal products which may cause short circuits, or any magnetic media (cash cards, prepaid cards, etc.) which may be damaged on your person when working.

POSTING A SIGN OF “DANGER! HIGH VOLTAGE AREA. KEEP OUT”

To call the attention of other workers, indicate "High voltage work in progress. Do not touch!" on vehicles where work is being performed on the high voltage systems.



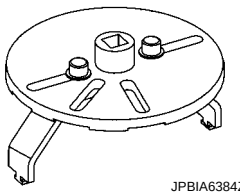
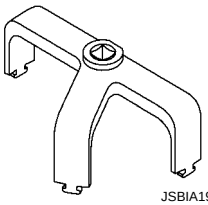
PREPARATION

PREPARATION

Special Service Tool

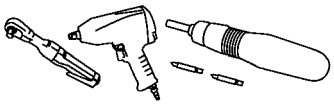
INFOID:0000000014631491

The actual shape of the tools may differ from those illustrated here

Tool number (TechMate No.) Tool name	Description
KV101207S0 (—) Unified fuel lock ring wrench  JPBIA6384ZZ	Removing and installing fuel tank lock ring
— (J-45747) Fuel tank lock ring wrench  JSBIA1952ZZ	

Commercial Service Tools

INFOID:0000000014808246

Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts

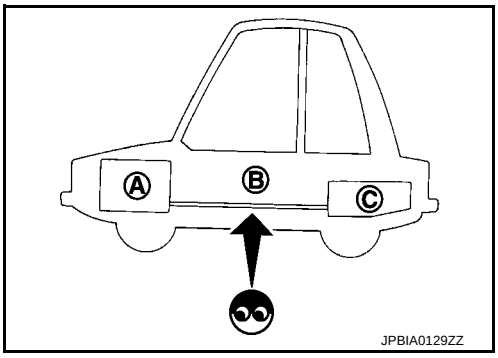
PERIODIC MAINTENANCE

FUEL SYSTEM

Inspection

INFOID:0000000014631492

Inspect fuel lines, fuel filler cap, and fuel tank for improper attachment, leaks, cracks, damage, loose connections, chafing or deterioration.



(A) : Engine
(B) : Fuel line
(C) : Fuel tank

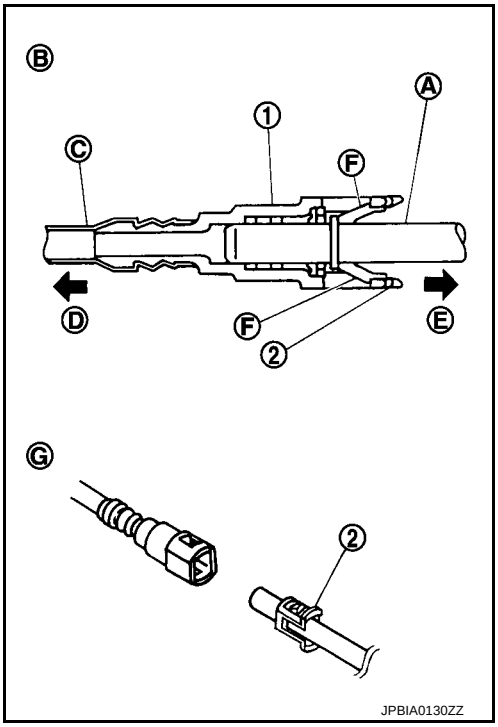
If necessary, repair or replace damaged parts.

Quick Connector

INFOID:0000000014631493

CAUTION:

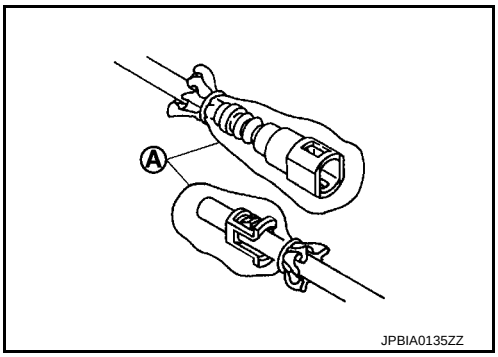
- **After connecting fuel tube quick connectors, check that quick connectors are secure.**
- **Ensure that connector and resin tube never contact any adjacent parts.**
- **Quick connector (1) can be disconnected when the tabs (F) are depressed completely. Do not twist it more than necessary.**



(B) : Connection (cross-section)
(D) : To under floor fuel line
(E) : To fuel tank
(G) : Disconnection

- **Do not use any tools to disconnected quick connector.**
- **Keep resin tube (C) 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 (2) on hard tube (or the equivalent) (A) except when resin tube or retainer is replaced.**
- **When resin tube or hard tube (or the equivalent) is replaced, also replace retainer with new one.**

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

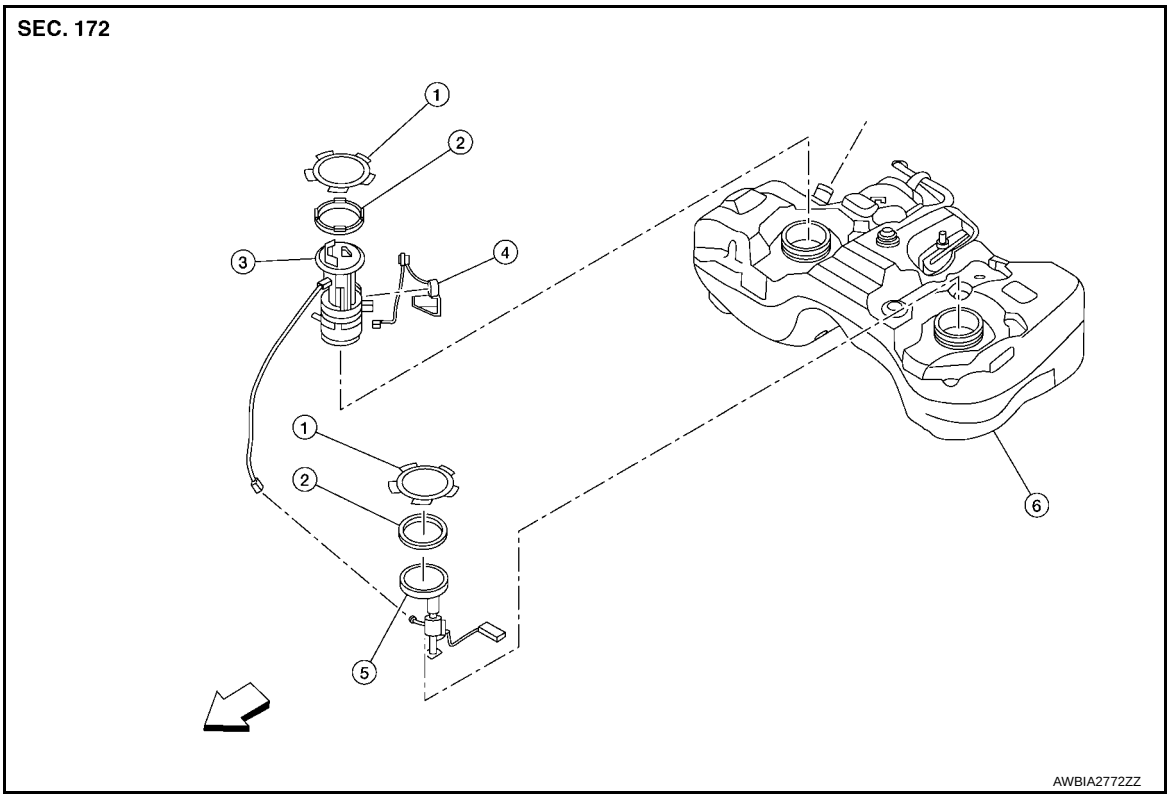


REMOVAL AND INSTALLATION

FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

Exploded View

INFOID:0000000014631494



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

⇦ Front

Removal and Installation

INFOID:0000000014631495

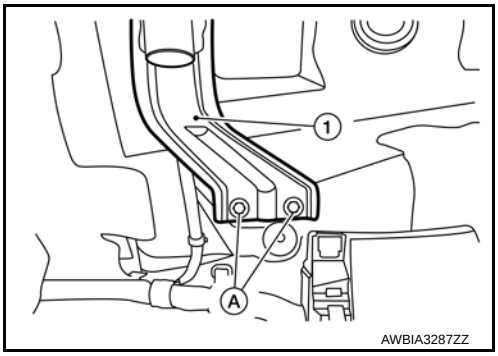
WARNING:
Be sure to read “General Precautions” before working on the fuel system. Refer to GI-24, "General Precautions".
CAUTION:
Do not remove or disassemble parts unless instructed as shown.
NOTE:
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL

Fuel Level Sensor Unit, Fuel Filter And Fuel Pump Assembly

1. Release the fuel pressure from the fuel lines. Refer to EC-162, "Work Procedure".
2. Open fuel filler lid.
3. Open fuel filler cap and release the pressure inside the fuel tank.
4. Disconnect negative battery terminal. Refer to PG-129, "Removal and Installation (Battery)".
5. Remove second row seat. Refer to SE-39, "SEAT CUSHION : Removal and Installation".

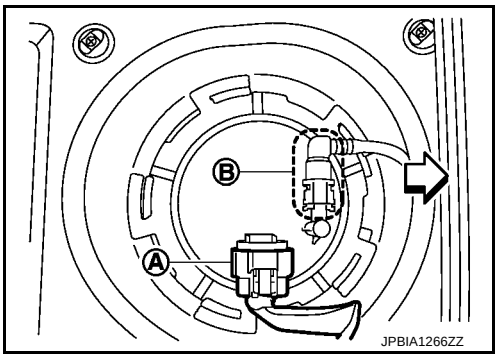
6. Remove bolts (A) and remove rear seat support bar (1).
NOTE:
LH shown, RH similar.



7. Turn the four retainers 90 degrees to disengage the clips and remove the fuel pump inspection hole cover.
CAUTION:
Cover the immediate area surrounding the fuel pump inspection hole cover with plastic to avoid gasoline damage to carpet.

8. Disconnect harness connector (A) and quick connector (B).

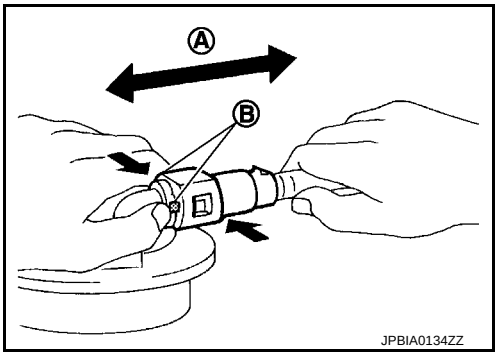
⇦ : Front



Disconnect quick connector as follows:

- Hold the sides of connector, press tabs and pull out fuel feed tube.

(A) : Pull
(B) : Push in tabs



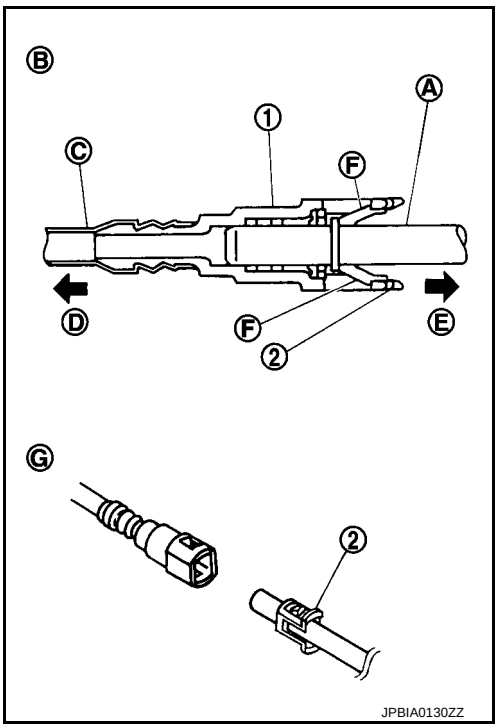
If quick connector sticks to tube of main fuel level sensor unit, push and pull quick connectors several times until they start to move. Then disconnect them by pulling.

CAUTION:

- **Quick connector (1) can be disconnected when the tabs (F) are depressed completely. Do not twist it more than necessary.**

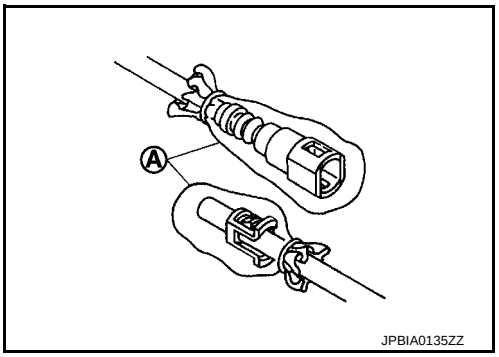
(B) : Connection (cross-section)
(D) : To under floor fuel line
(E) : To fuel tank
(G) : Disconnection

- **Do not use any tools to disconnected quick connector.**
- **Keep resin tube (C) 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 (2) on hard tube (or the equivalent) (A) except when resin tube or retainer is replaced.**
- **When resin tube or hard tube (or the equivalent) is replaced, also replace retainer with new one.**



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

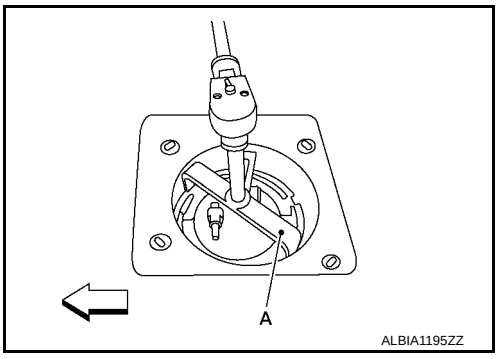


JPBIA0135ZZ

9. Remove the lock ring from the sub fuel level sensor assembly.
   - Remove the lock ring using Tool (A).

Tool number : (—) J-45747 (shown)
: KV101207S0 (—)

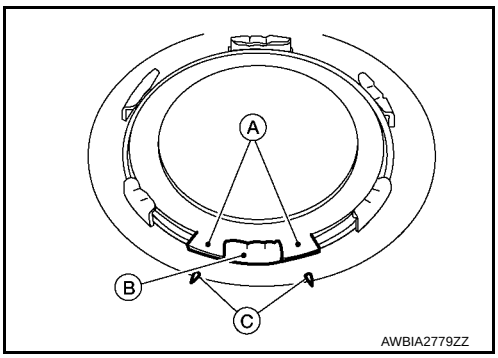
⇦ : Front



ALBIA1195ZZ

- Prior to removal, observe the alignment between the sub fuel level sensor assembly tabs (A) and the matching marks (C) on the fuel tank as shown. This alignment is necessary for proper installation.

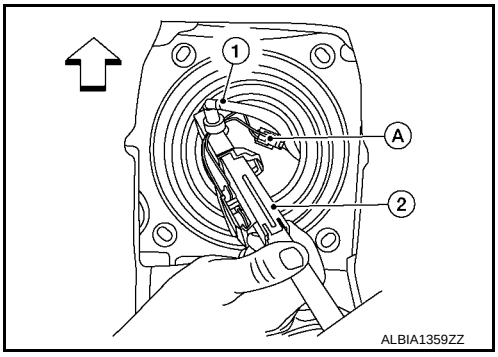
(B) : Retainer mounting pawl



10. Disconnect the fuel tube (1) and the harness connector (A) from the sub fuel level sensor assembly (2) and remove sub fuel level sensor assembly (2).

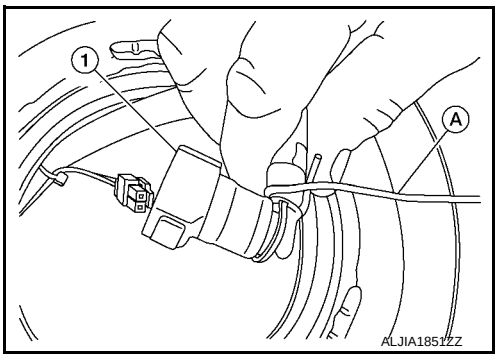
CAUTION:

- **Do not bend float arm during removal.**
- **Do not pollute the inside by residue fuel. Draw out avoiding inclination by supporting with a cloth.**
- **Do not cause impacts (banging or dropping) when handling components.**



NOTE:

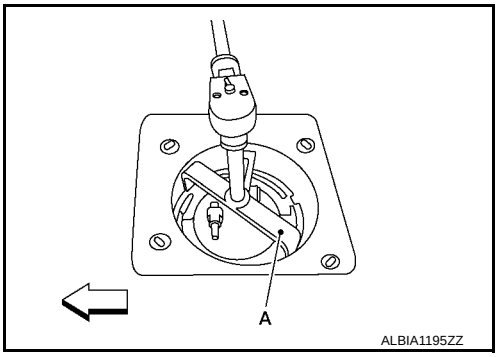
Tie a gasoline resistant rope or wire (A) to the tip of the transfer hose (1) and leave it to the sub fuel level sensor side so that it can be the guide for installation.



11. Remove the lock ring from the fuel level sensor, fuel filter, and fuel pump assembly.
- Remove the lock ring using Tool (A).

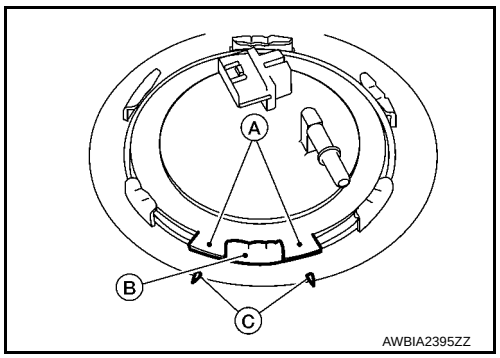
Tool number : (—) J-45747 (shown)
: KV101207S0 (—)

⇦ : Front



- Prior to removal, observe the alignment between the fuel level sensor, fuel filter, and fuel pump assembly tabs (A) and the matching marks (C) on the fuel tank as shown. This alignment is necessary for proper installation.

  (B) : Retainer mounting pawl



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

CAUTION:

- **Do not disassemble fuel tube from fuel level sensor unit, fuel filter, and fuel pump assembly.**
- **Do not bend float arm during removal.**
- **Do not pollute the inside by residue fuel. Draw out avoiding inclination by supporting with a cloth.**
- **Do not cause impacts (banging or dropping) when handling components.**

INSTALLATION

Installation is in the reverse order of removal.

- Install O-ring to fuel tank without any twist.

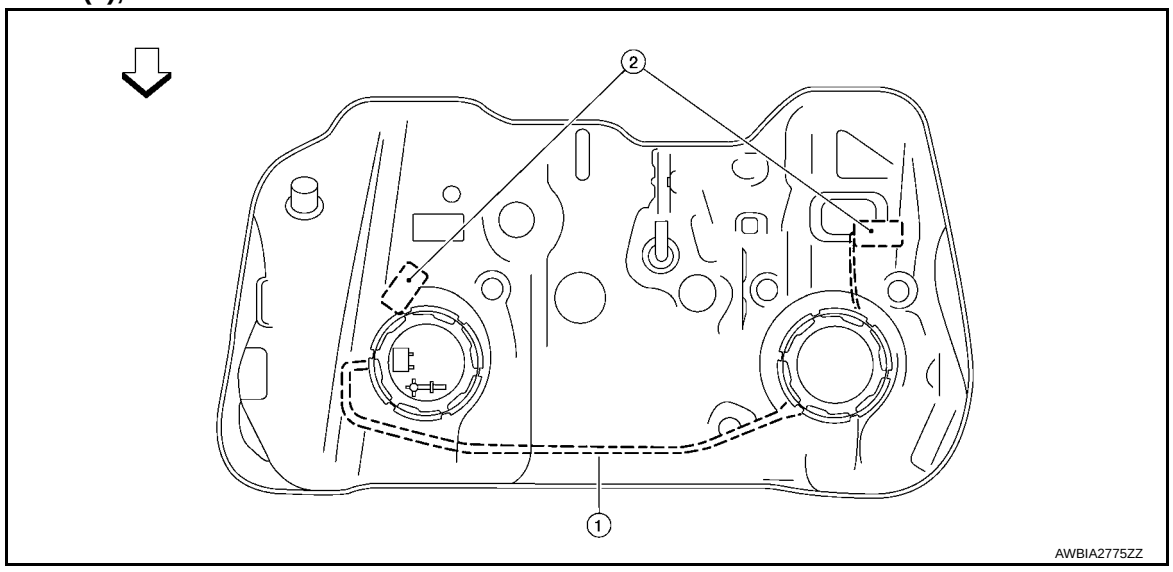
CAUTION:

Do not reuse O-ring.

- Using the rope left on the sub fuel level sensor side at removal, run the fuel tube inside the fuel tank to install the sub fuel level sensor assembly to the fuel tank.

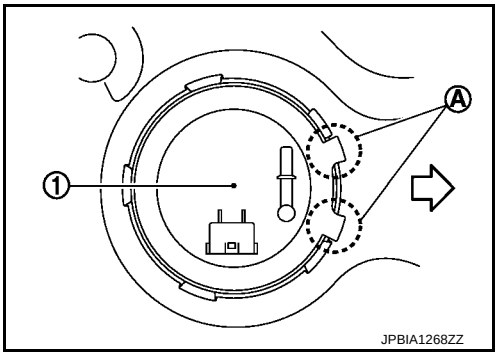
CAUTION:

- **Do not bend float arm during installation.**
- **To install, fuel tube (1) must run to the front (⇦) of the vehicle to avoid the interference with the float arm (2), as shown.**



- Align the tabs (A) of the fuel level sensor unit, fuel filter and fuel pump assembly (1) as shown.

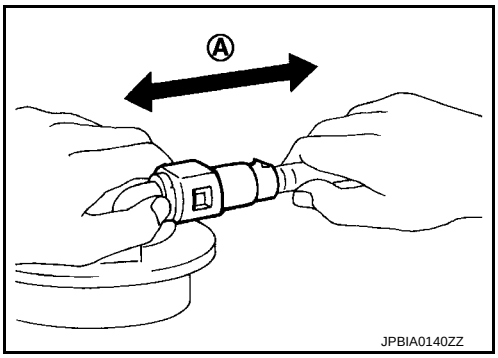
⇦ : Front



- Check the connection for damage or any foreign materials.
- Align the connector with the tube, then insert the connector straight into the tube until a “click” sound is heard.
- After connecting, check that the connection is secured with following procedures.

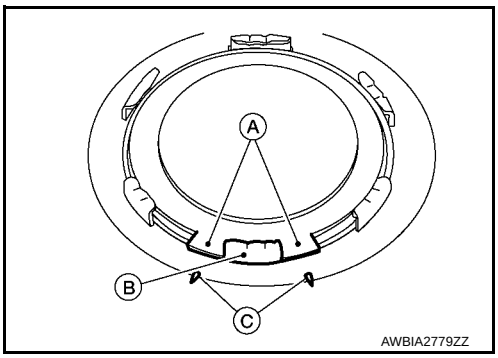
- Visually confirm that the two tabs are connected to the connector.
- Pull (A) the tube and the connector to check that they are securely connected.

- Before installing inspection hole cover, check that the connecting part has no fuel leaks. Refer to FL-6, "Inspection".
- Install inspection hole covers with the front mark (arrow) facing front.
- Lock clips by turning counterclockwise.



- Align the tabs (A) of the sub fuel level sensor as shown.

(B) : Retainer mounting pawl
(C) : Matching marks

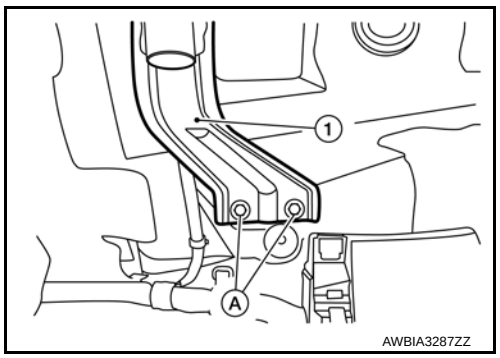


REMOVAL

Sub Fuel Level Sensor Assembly

1. Release the fuel pressure from the fuel lines. Refer to EC-162, "Work Procedure".
2. Open fuel filler lid.
3. Open fuel filler cap and release the pressure inside the fuel tank.
4. Disconnect negative battery terminal. Refer to PG-129, "Removal and Installation (Battery)".
5. Remove second row seat. Refer to SE-39, "SEAT CUSHION : Removal and Installation".

6. Remove bolts (A) and remove crossmember (1).
NOTE:
LH shown, RH similar.

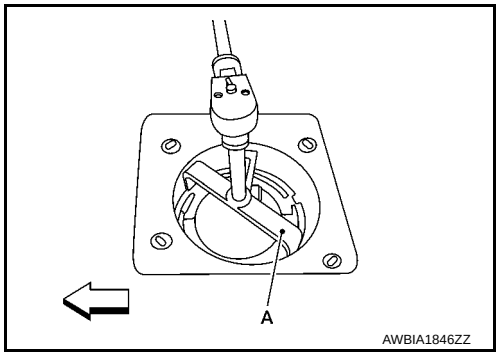


7. Turn the four retainers 90 degrees to disengage the clips and remove the sub fuel level sensor inspection hole cover.
CAUTION:
Cover the immediate area surrounding the fuel pump inspection hole cover with plastic to avoid gasoline damage to carpet.

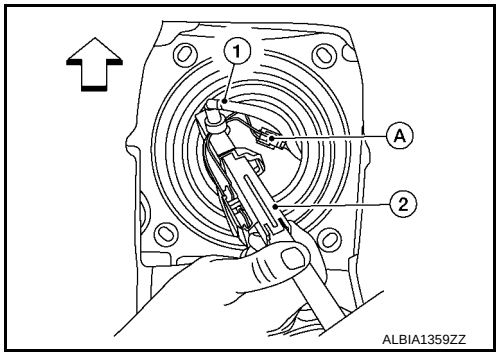
8. Remove the lock ring from the sub fuel level sensor assembly.

Tool number : (—) J-45747 (shown)
: KV101207S0 (—)

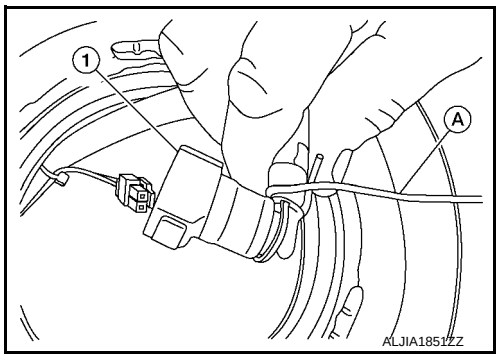
⇦ : Front



9. Disconnect the fuel tube (1) and the harness connector (A) from the sub fuel level sensor assembly (2) and remove sub fuel level sensor assembly (2).
CAUTION:
- **Do not bend float arm during removal.**
- **Do not pollute the inside by residue fuel. Draw out avoiding inclination by supporting with a cloth.**
- **Do not cause impacts (banging or dropping) when handling components.**



NOTE:
Tie a gasoline resistant rope or wire (A) to the tip of the transfer hose and leave it to the sub fuel level sensor side so that it can be the guide for installation.



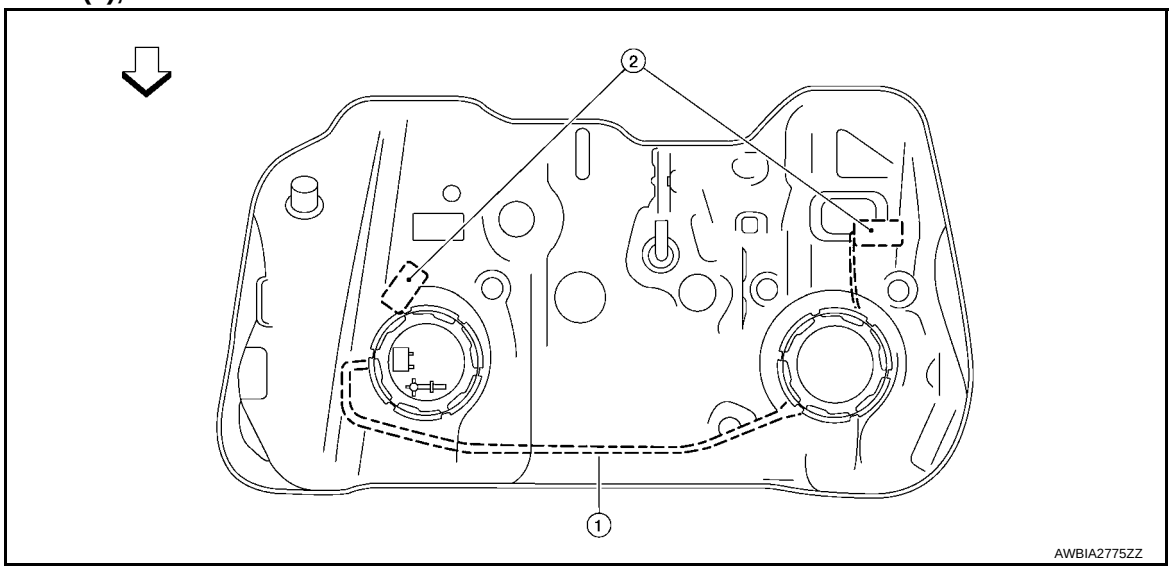
INSTALLATION

Installation is in the reverse order of removal.
- Install O-ring to fuel tank without any twist.
CAUTION:
Do not reuse O-ring.

- Using the rope left on the sub fuel level sensor side at removal, run the fuel tube inside the fuel tank to install the sub fuel level sensor assembly to the fuel tank.

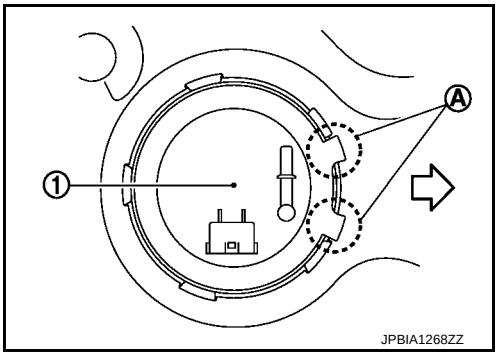
CAUTION:

- **Do not bend float arm during installation.**
- **To install, fuel tube (1) must run to the front (⇦) of the vehicle to avoid the interference with the float arm (2), as shown.**



- Align the tabs (A) of the fuel level sensor unit, fuel filter and fuel pump assembly (1) as shown.

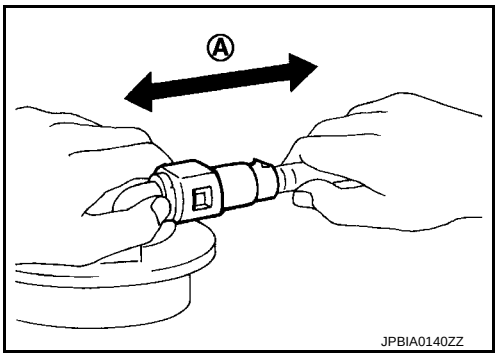
⇦ : Front



- Check the connection for damage or any foreign materials.
- Align the connector with the tube, then insert the connector straight into the tube until a “click” sound is heard.
- After connecting, check that the connection is secured with following procedures.

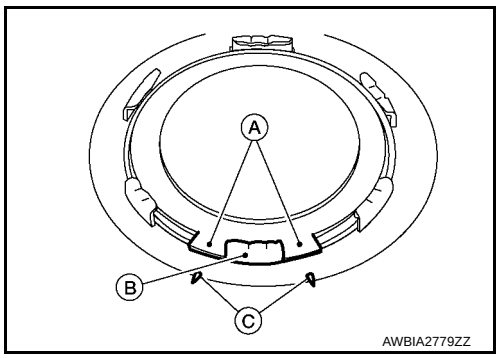
- Visually confirm that the two tabs are connected to the connector.
- Pull (A) the tube and the connector to check that they are securely connected.

- Before installing inspection hole cover, check that the connecting part has no fuel leaks. Refer to FL-6, "Inspection".
- Install inspection hole covers with the front mark (arrow) facing front.
- Lock clips by turning counterclockwise.



- Align the tabs (A) of the sub fuel level sensor as shown.

(B) : Retainer mounting pawl
(C) : Matching marks



Inspection

INFOID:0000000014631496

INSPECTION AFTER INSTALLATION

Use the following procedure to check for fuel leaks.

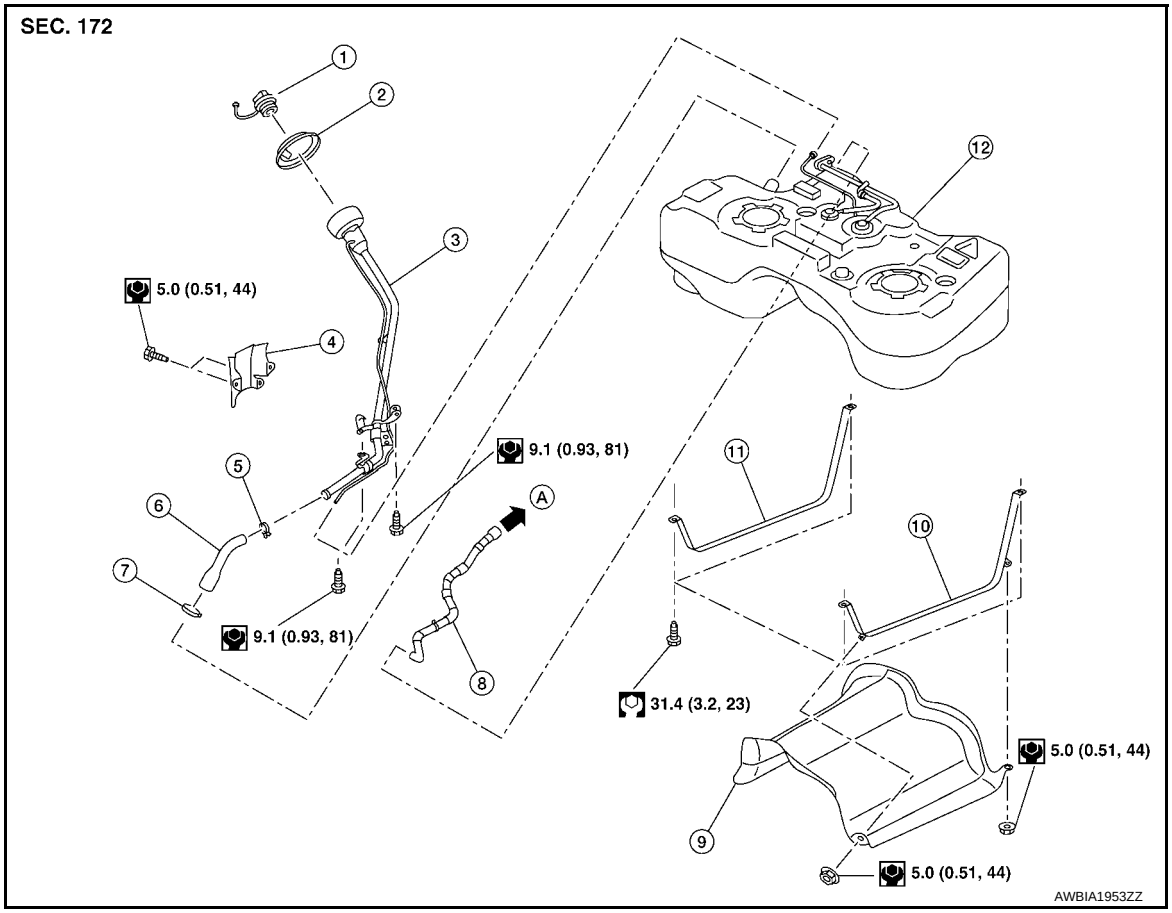
1. Turn ignition switch “ON” (with engine stopped), then check connections for leaks by applying fuel pressure to fuel piping.
2. Start engine. Then let it idle and check that there is no fuel leaks at the fuel system connections.

FUEL TANK

2WD

2WD : Exploded View

INFOID:0000000014631497



1. Fuel filler cap
2. Grommet
3. Fuel filler tube
4. Cover
5. Clamp
6. Fuel filler hose
7. Clamp
8. Vent hose
9. Fuel tank protector
10. Fuel tank strap (LH)
11. Fuel tank strap (RH)
12. Fuel tank

A. To EVAP canister

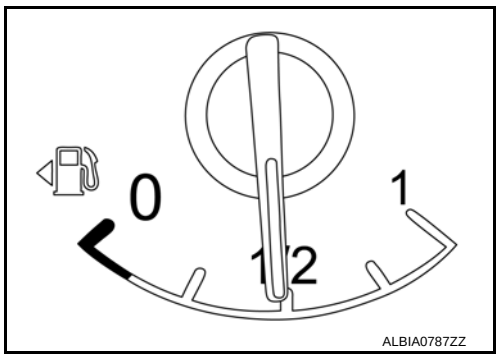
2WD : Removal and Installation

INFOID:0000000014631498

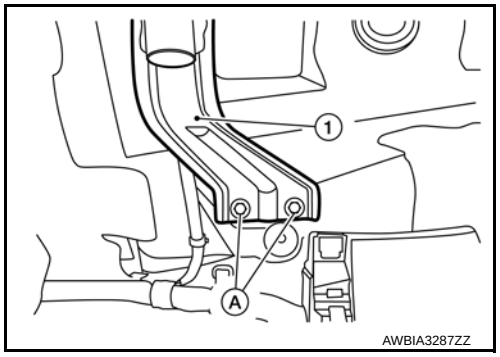
WARNING:
Be sure to read “General Precautions” when working on the fuel system. Refer to GI-24, "General Precautions".
NOTE:
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL

1. Check the fuel level with the vehicle on a level surface. If the fuel gauge indicates more than the level as shown (1/2 full), drain the fuel from the fuel tank until the fuel gauge indicates a level at or below as shown (1/2 full).
   - In case the fuel pump does not operate, use the following procedure.

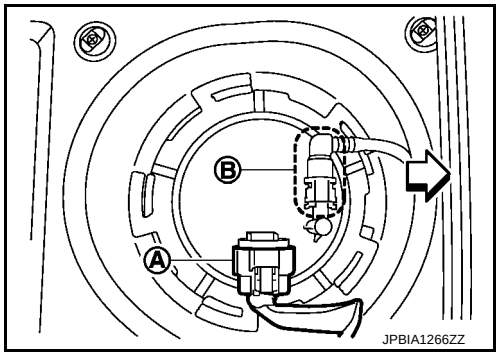


a. Insert fuel tubing of less than 25mm (0.98in) diameter into the fuel filler tube through the fuel filler opening to drain fuel from the fuel filler tube.
b. Disconnect the fuel filler hose from the fuel filler tube.
c. Insert fuel tubing into the fuel tank through the fuel filler hose to drain fuel from the fuel tank.
   - As a guide, the fuel level reaches or is less than the level on the fuel gauge as shown, when approximately 27.5 ℓ (7-1/4 US gal, 6 Imp gal) of fuel is drained from a full fuel tank.
2. Release the fuel pressure from the fuel lines. Refer to EC-162, "Work Procedure".
3. Disconnect negative battery terminal. Refer to PG-129, "Removal and Installation (Battery)".
4. Unscrew the fuel filler cap to release the pressure inside the fuel tank.
5. Remove second row seat. Refer to SE-39, "SEAT CUSHION : Removal and Installation".
6. Remove bolts (A) and remove rear seat support bar (1).
   NOTE:
   LH shown, RH similar.



7. Turn the four retainers 90 degrees to disengage the clips and remove the fuel pump inspection hole cover.
   CAUTION:
   Cover the immediate area surrounding the fuel pump inspection hole cover with plastic to avoid gasoline damage to carpet.
8. Disconnect harness connector (A) and quick connector (B).

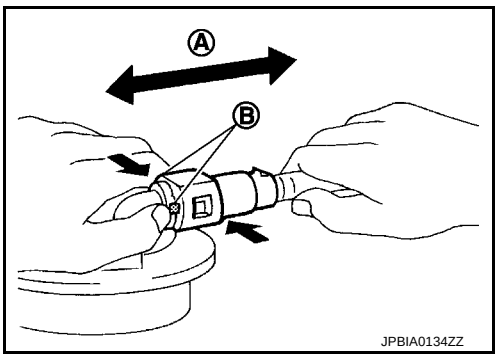
   ⇦ : Front



Disconnect quick connector as follows:

- Hold the sides of connector, press tabs and pull out fuel feed tube.

(A) : Pull
(B) : Push in tabs



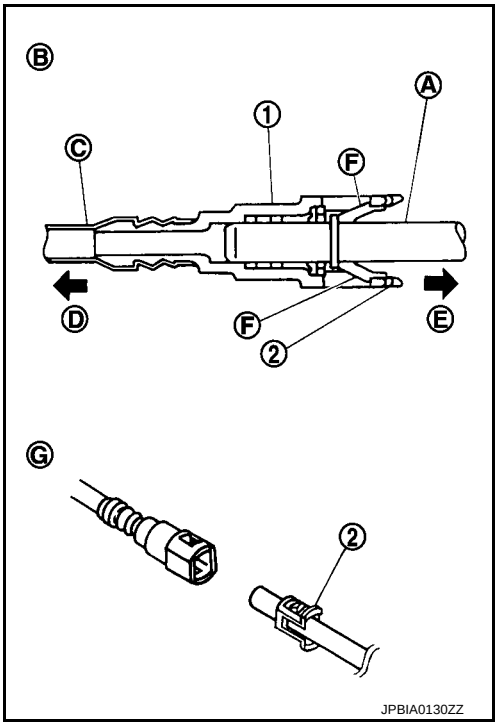
- If quick connector sticks to tube of main fuel level sensor unit, push and pull quick connectors several times until they start to move. Then disconnect them by pulling.

CAUTION:

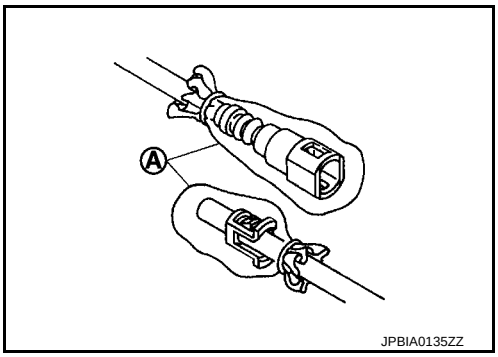
- **Quick connector (1) can be disconnected when the tabs (F) are depressed completely. Do not twist it more than necessary.**

(B) : Connection (cross-section)
(D) : To under floor fuel line
(E) : To fuel tank
(G) : Disconnection

- **Do not use any tools to disconnected quick connector.**
- **Keep resin tube (C) 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 (2) on hard tube (or the equivalent) (A) except when resin tube or retainer is replaced.**
- **When resin tube or hard tube (or the equivalent) is replaced, also replace retainer with new one.**



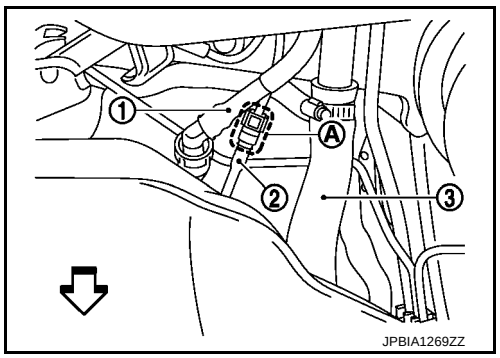
- **To keep the connecting portion clean and to avoid damage and foreign materials, cover them completely with plastic bags (A) or something similar.**



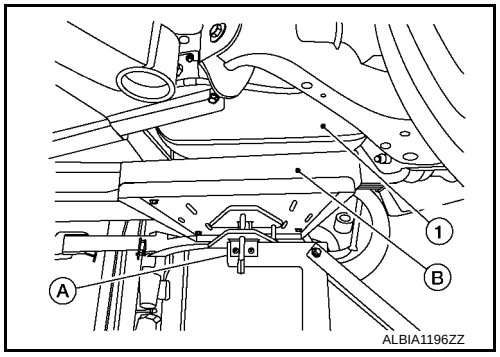
9. Remove center exhaust tube and muffler assembly. Refer to EX-7, "Exploded View".
10. Remove protector from fuel tank.

11. Remove vent hose (1) at rear side of fuel tank.
12. Disconnect EVAP tube (2) at rear side of fuel tank.
    - Instruction for quick connector (A) of EVAP tube. Refer to FL-6, "Quick Connector".
13. Remove fuel filler hose (3) at fuel filler tube side.

⇦: Front



14. Remove parking brake cable bolts and separate parking brake cable from suspension arm. Refer to PB-11, "Exploded View".
15. Remove lower link deflector. Refer to RSU-17, "Exploded View".
16. Support center of fuel tank (1) with suitable jack (A).
    CAUTION:
    Securely support the fuel tank with a piece of wood (B).



17. Remove fuel tank bands.
18. Lower suitable jack carefully to remove fuel tank while holding it by hand.
    CAUTION:
    Fuel tank may be in an unstable condition because of the shape of fuel tank bottom. Be sure to secure fuel tank at all times.
19. If replacing the fuel tank, remove the fuel level sensor unit, fuel filter and fuel pump assembly to transfer to the new fuel tank. Remove and discard the O-ring. Refer to FL-7, "Removal and Installation".

INSTALLATION

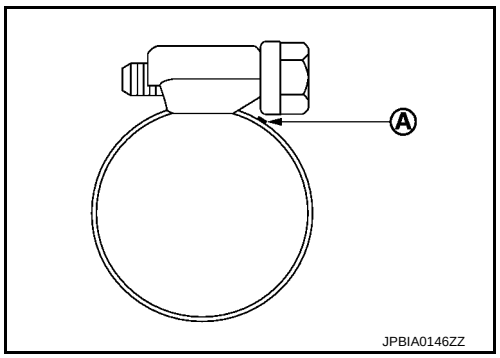
Installation is in the reverse order of removal.

Fuel Filler Hose

- Insert fuel filler hose to the length below.

: 35 mm (1.38 in)

- Be sure hose clamp is not placed on swelled area of fuel filler tube.
- Tighten the clamp hand with the top mark (A) until the mark is on the bolt head flange.



2WD : Inspection

INFOID:0000000014631499

INSPECTION AFTER INSTALLATION

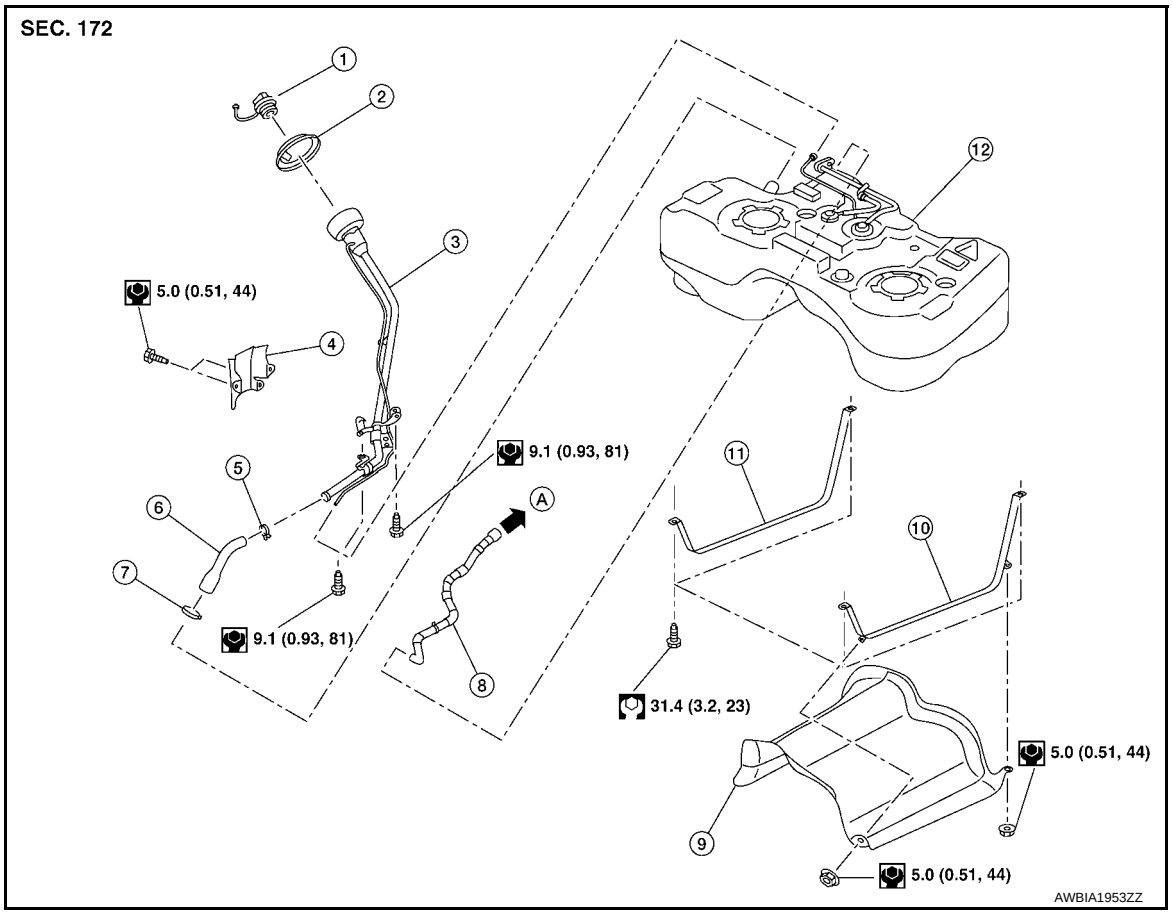
Use the following procedure to check for fuel leaks.

1. Turn the ignition switch ON (without starting the engine). Then check the connections for fuel leaks by applying fuel pressure to the fuel piping.
2. Start engine, raise idle and verify there are no leaks at the fuel system connections.

4WD

4WD : Exploded View

INFOID:0000000014631500



1. Fuel filler cap	2. Grommet	3. Fuel filler tube
4. Cover	5. Clamp	6. Fuel filler hose
7. Clamp	8. Vent hose	9. Fuel tank protector
10. Fuel tank strap (LH)	11. Fuel tank strap (RH)	12. Fuel tank
A. To EVAP canister		

4WD : Removal and Installation

INFOID:0000000014631501

WARNING:

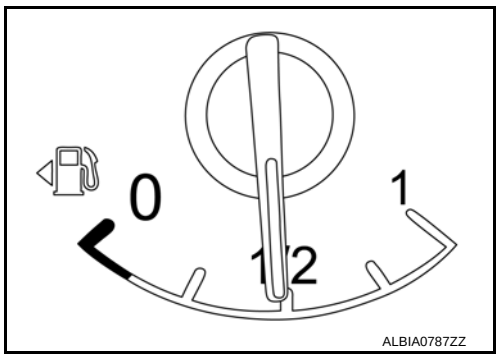
Be sure to read “General Precautions” when working on the fuel system. Refer to GI-24, "General Precautions".

NOTE:

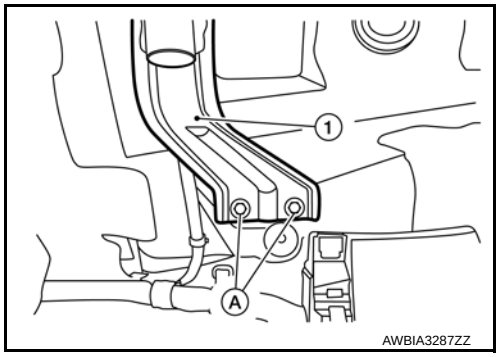
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL

1. Check the fuel level with the vehicle on a level surface. If the fuel gauge indicates more than the level as shown (1/2 full), drain the fuel from the fuel tank until the fuel gauge indicates a level at or below as shown (1/2 full).
   - In case the fuel pump does not operate, use the following procedure.

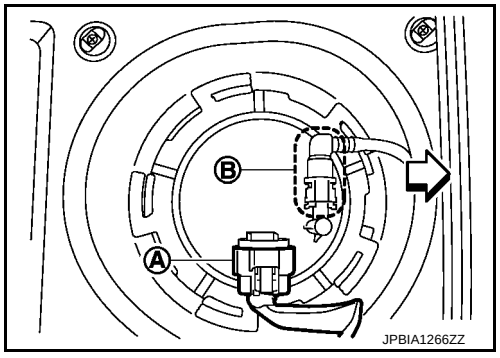


a. Insert fuel tubing of less than 25mm (0.98in) diameter into the fuel filler tube through the fuel filler opening to drain fuel from the fuel filler tube.
b. Disconnect the fuel filler hose from the fuel filler tube.
c. Insert fuel tubing into the fuel tank through the fuel filler hose to drain fuel from the fuel tank.
   - As a guide, the fuel level reaches or is less than the level on the fuel gauge as shown, when approximately 27.5 ℓ (7-1/4 US gal, 6 Imp gal) of fuel is drained from a full fuel tank.
2. Release the fuel pressure from the fuel lines. Refer to EC-162, "Work Procedure".
3. Disconnect negative battery terminal. Refer to PG-129, "Removal and Installation (Battery)".
4. Unscrew the fuel filler cap to release the pressure inside the fuel tank.
5. Remove second row seat. Refer to SE-39, "SEAT CUSHION : Removal and Installation".
6. Remove bolts (A) and remove rear seat support bar (1).
   NOTE:
   LH shown, RH similar.



7. Turn the four retainers 90 degrees to disengage the clips and remove the fuel pump inspection hole cover.
   CAUTION:
   Cover the immediate area surrounding the fuel pump inspection hole cover with plastic to avoid gasoline damage to carpet.
8. Disconnect harness connector (A) and quick connector (B).

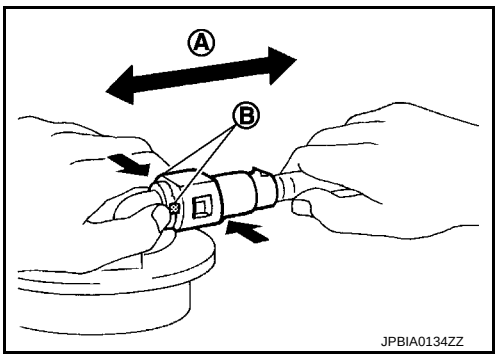
   ⇦ : Front



Disconnect quick connector as follows:

- Hold the sides of connector, press tabs and pull out fuel feed tube.

(A) : Pull
(B) : Push in tabs



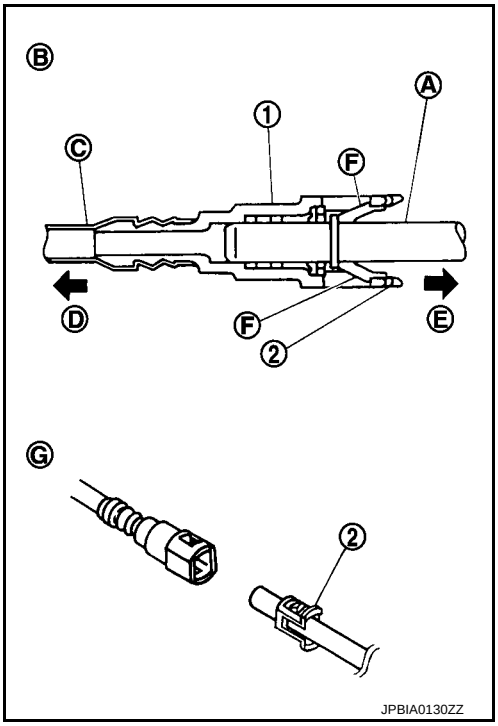
- If quick connector sticks to tube of main fuel level sensor unit, push and pull quick connectors several times until they start to move. Then disconnect them by pulling.

CAUTION:

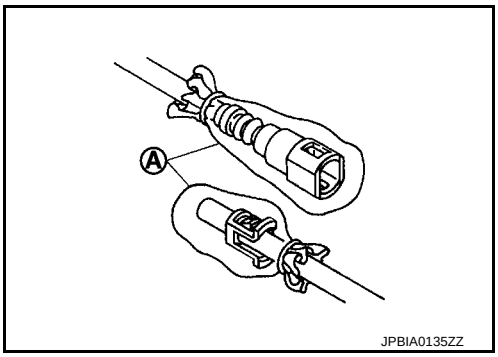
- **Quick connector (1) can be disconnected when the tabs (F) are depressed completely. Do not twist it more than necessary.**

(B) : Connection (cross-section)
(D) : To under floor fuel line
(E) : To fuel tank
(G) : Disconnection

- **Do not use any tools to disconnected quick connector.**
- **Keep resin tube (C) 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 (2) on hard tube (or the equivalent) (A) except when resin tube or retainer is replaced.**
- **When resin tube or hard tube (or the equivalent) is replaced, also replace retainer with new one.**



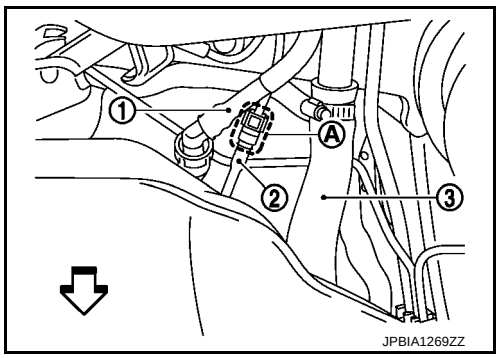
- **To keep the connecting portion clean and to avoid damage and foreign materials, cover them completely with plastic bags (A) or something similar.**



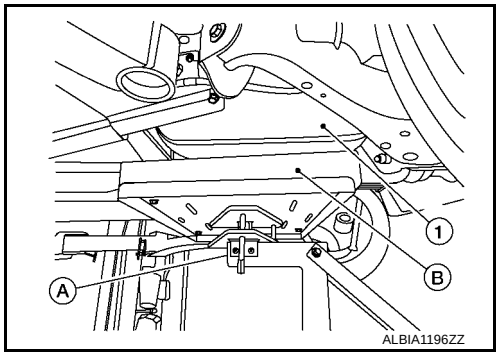
9. Remove center exhaust tube and muffler assembly. Refer to EX-7, "Exploded View".
10. Remove propeller shaft. Refer to DLN-106, "Removal and Installation".
11. Remove protector from fuel tank.

12. Remove vent hose (1) at rear side of fuel tank.
13. Disconnect EVAP tube (2) at rear side of fuel tank.
    - Instruction for quick connector (A) of EVAP tube. Refer to FL-6, "Quick Connector".
14. Remove fuel filler hose (3) at fuel filler tube side.

⇦: Front



15. Remove parking brake cable bolts and separate parking brake cable from suspension arm. Refer to PB-11, "Exploded View".
16. Remove lower link deflector. Refer to RSU-17, "Exploded View".
17. Support center of fuel tank (1) with suitable jack (A).
    CAUTION:
    Securely support the fuel tank with a piece of wood (B).



18. Remove fuel tank bands.
19. Lower suitable jack carefully to remove fuel tank while holding it by hand.
    CAUTION:
    Fuel tank may be in an unstable condition, due to the shape of the fuel tank bottom. Be sure to secure tank at all times.
20. If replacing the fuel tank, remove the fuel level sensor unit, fuel filter and fuel pump assembly to transfer to the new fuel tank. Remove and discard the O-ring. Refer to FL-7, "Removal and Installation".

INSTALLATION

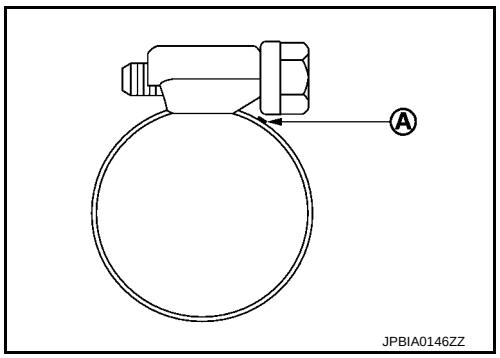
Installation is in the reverse order of removal.

Fuel Filler Hose

- Insert fuel filler hose to the length below.

: 35 mm (1.38 in)

- Be sure hose clamp is not placed on swelled area of fuel filler tube.
- Tighten the clamp hand with the top mark (A) until the mark is on the bolt head flange.



4WD : Inspection

INFOID:0000000014631502

INSPECTION AFTER INSTALLATION

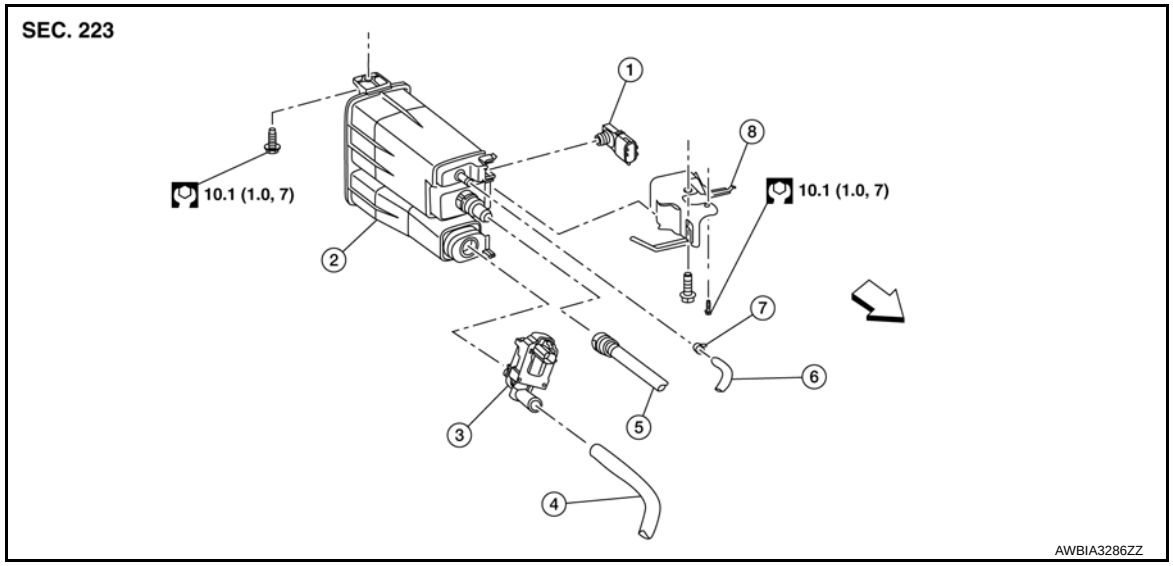
Use the following procedure to check for fuel leaks.

1. Turn the ignition switch ON (without starting the engine). Then check the connections for fuel leaks by applying fuel pressure to the fuel piping.
2. Start engine, raise idle and verify there are no leaks at the fuel system connections.

EVAP CANISTER

Exploded View

INFOID:0000000014631503



1. EVAP control system pressure sensor (with O-ring)
2. EVAP canister
3. EVAP canister vent control valve (with O-ring)
4. EVAP canister vent control valve hose
5. EVAP vent line
6. EVAP canister purge hose
7. Clamp
8. EVAP canister protector

⇦ Front

Removal and Installation

INFOID:0000000014631504

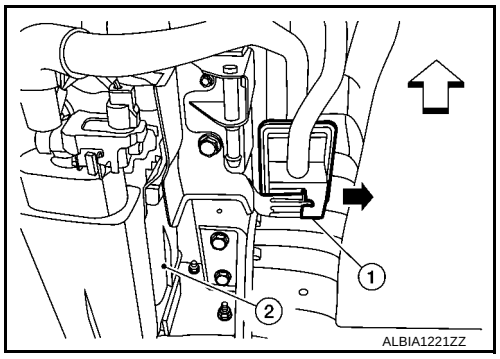
NOTE:
The EVAP canister vent control valve and EVAP control system pressure sensor can be removed without removing the EVAP canister.

REMOVAL

1. Disconnect the harness connector from the EVAP control system pressure sensor and the EVAP canister vent control valve.
2. Remove EVAP canister filter (1) and place aside (⬅).

(2) : EVAP canister

⇦ : Front



3. Disconnect the EVAP canister purge hose, the EVAP vent line, and the EVAP canister vent control valve hose.
4. Remove the EVAP canister bolt.
5. Remove the EVAP canister from the vehicle.
6. Remove EVAP control system pressure sensor and EVAP canister vent control valve (if necessary).

INSTALLATION

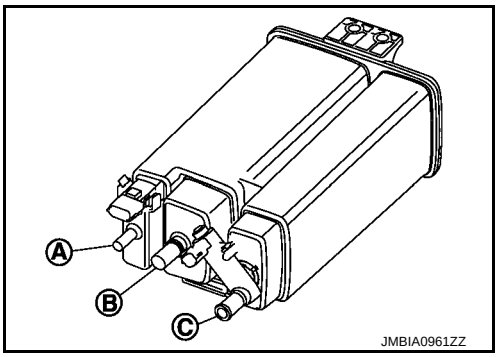
Installation is in the reverse order of removal.

Inspection

INFOID:0000000014631505

Check EVAP canister as follows:

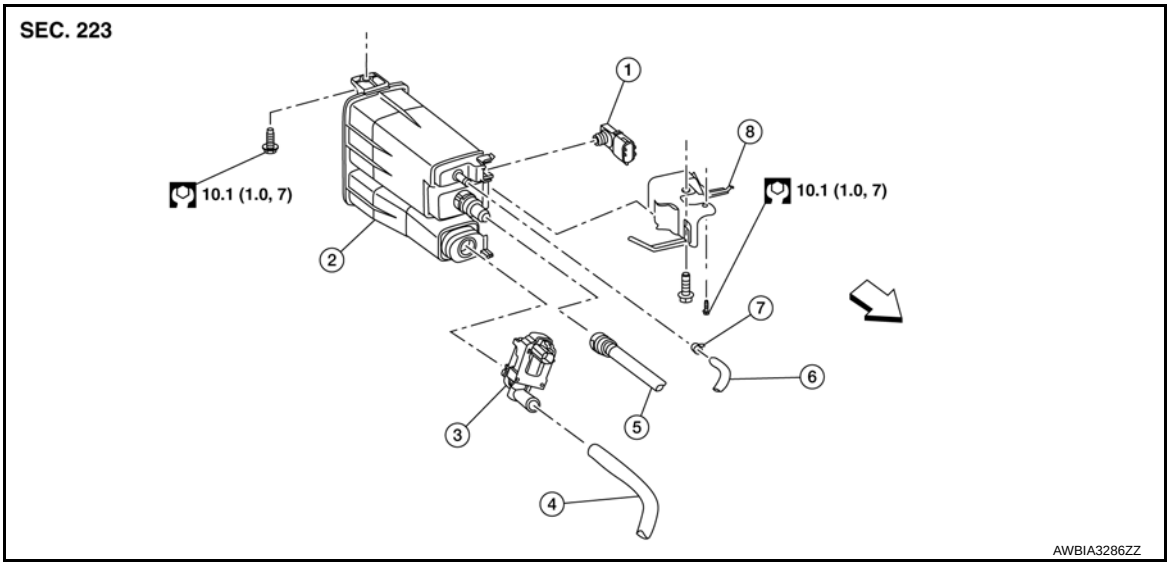
1. Block port (B).
2. Blow air into port (A) and check that it flows freely out of port (C).
3. Release blocked port (B).
4. Apply vacuum pressure to port (B) and check that vacuum pressure exists at the ports (A) and (C).
5. Block port (A) and (B).
6. Apply pressure to port (C) and check that there are no leaks.



EVAP CANISTER VENT CONTROL VALVE

Exploded View

INFOID:0000000014631506



1. EVAP control system pressure sensor (with O-ring)
2. EVAP canister
3. EVAP canister vent control valve (with O-ring)
4. EVAP canister vent control valve hose
5. EVAP vent line
6. EVAP canister purge hose
7. Clamp
8. EVAP canister protector

⇦ Front

Removal and Installation

INFOID:0000000014631507

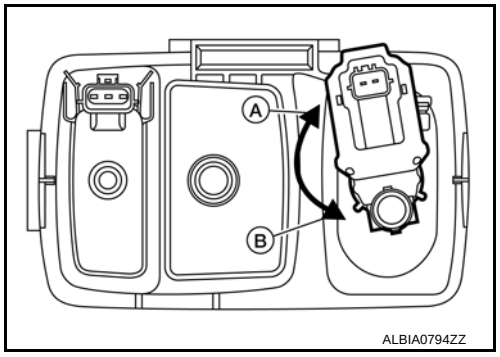
NOTE:
The EVAP canister vent control valve can be removed without removing the EVAP canister.

REMOVAL

1. Disconnect EVAP canister vent control valve hose from EVAP canister vent control valve.
2. Disconnect the harness connector from the EVAP canister vent control valve.
3. Turn EVAP canister vent control valve counterclockwise.

   (A) : Lock
   (B) : Unlock

4. Remove the EVAP canister vent control valve and O-ring.



INSTALLATION

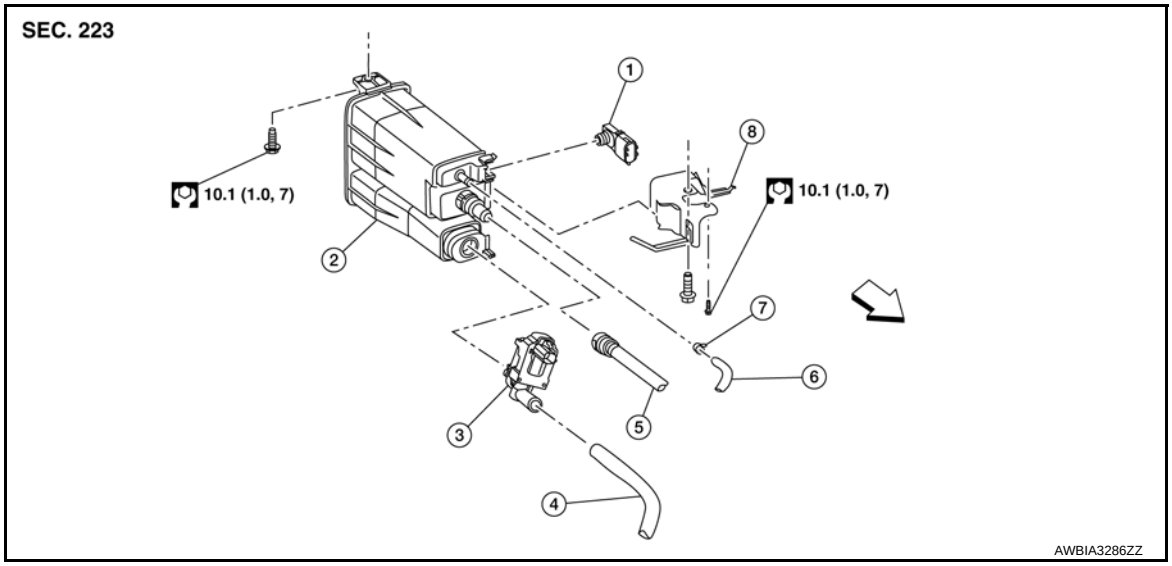
Installation is in the reverse order of removal.

CAUTION:
Do not reuse O-ring.

EVAP CONTROL SYSTEM PRESSURE SENSOR

Exploded View

INFOID:0000000014631508



1. EVAP control system pressure sensor (with O-ring)
2. EVAP canister
3. EVAP canister vent control valve (with O-ring)
4. EVAP canister vent control valve hose
5. EVAP vent line
6. EVAP canister purge hose
7. Clamp
8. EVAP canister protector

⇦ Front

Removal and Installation

INFOID:0000000014631509

NOTE:
The EVAP canister system pressure sensor can be removed without removing the EVAP canister.

REMOVAL

1. Disconnect EVAP canister purge hose from EVAP canister.
2. Disconnect the harness connector from the EVAP control system pressure sensor.
3. Remove EVAP control system pressure sensor and O-ring.

INSTALLATION

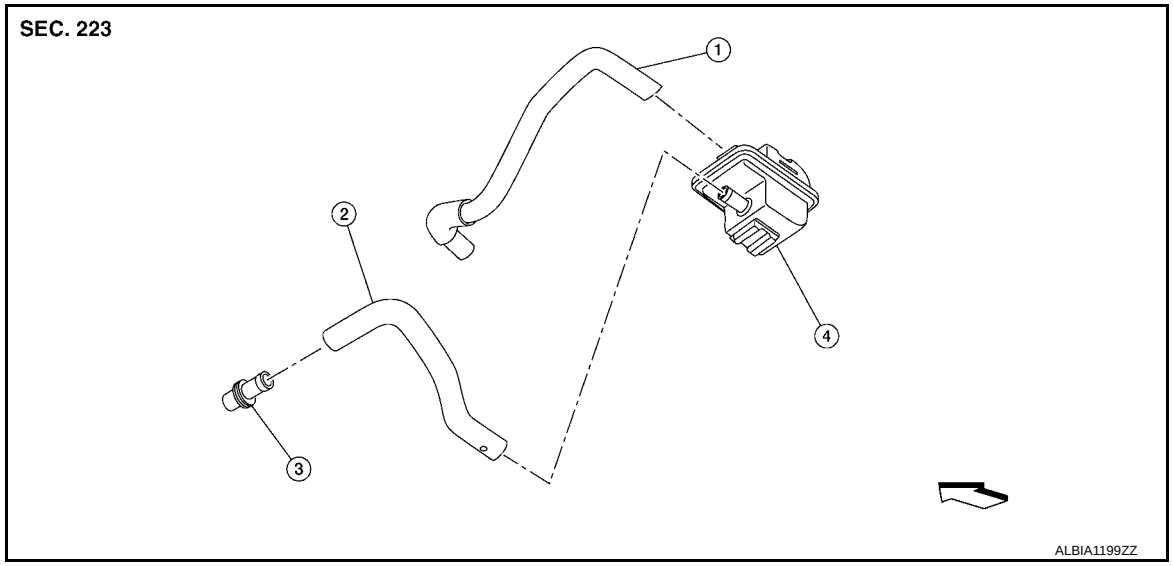
Installation is in the reverse order of removal.

CAUTION:
Do not reuse O-ring.

EVAP CANISTER FILTER

Exploded View

INFOID:0000000014631510



1. EVAP canister vent control valve hose
2. Canister drain hose
3. Plug
4. EVAP canister filter
⇦ Front

Removal and Installation

INFOID:0000000014631511

REMOVAL

1. Disconnect EVAP canister vent control valve hose from EVAP canister filter.
2. Disconnect canister drain hose from EVAP canister filter.
3. Remove the bolt and the EVAP canister filter.

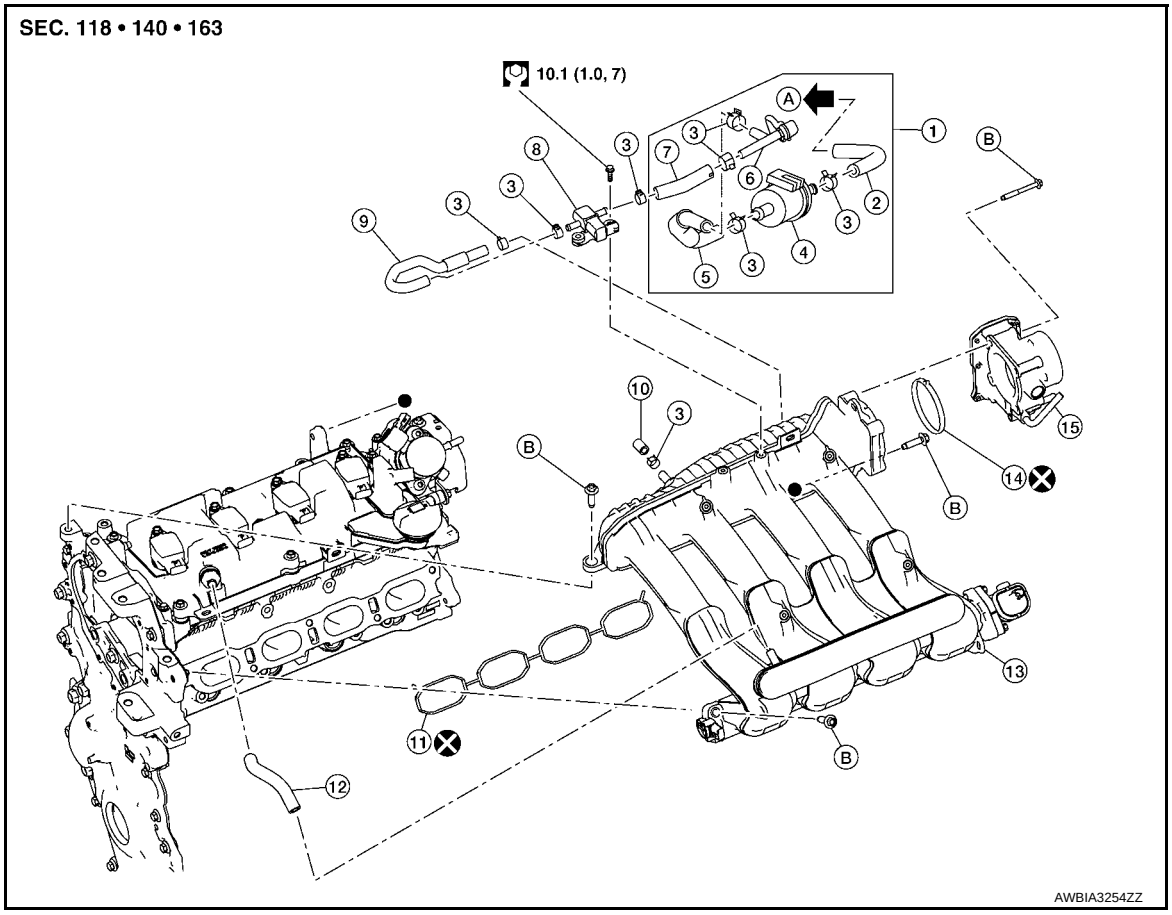
INSTALLATION

Installation is in the reverse order of removal.

EVAP CANISTER PURGE VOLUME CONTROL SOLENOID VALVE

Exploded View

INFOID:0000000014791181



1. EVAP hose assembly	2. EVAP hose A	3. Clamp
4. Vacuum delay hose valve connector	5. EVAP hose B	6. EVAP service port
7. EVAP hose C	8. EVAP canister purge volume control solenoid valve	9. EVAP hose D
10. Blind hose	11. Intake manifold gasket	12. PCV hose
13. Intake manifold	14. Electric throttle control actuator gasket	15. Electric throttle control actuator
A. To EVAP canister	B. Refer to INSTALLATION	

● : Indicates that the part is connected at points with same symbol in actual vehicle.

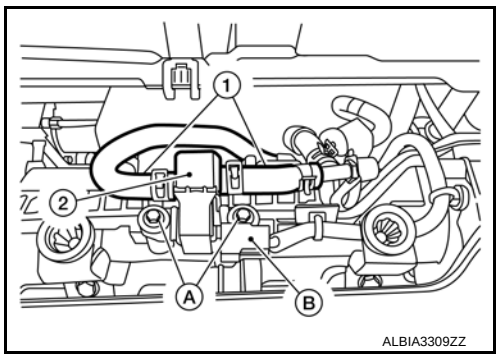
Removal and Installation

INFOID:0000000014773465

REMOVAL

1. Rermove engine cover. Refer to EM-28, "Removal and Installation".

2. Disconnect the EVAP hoses (1) and harness connector (B) from the EVAP canister purge volume control solenoid valve (2).
3. Remove bolts (A).



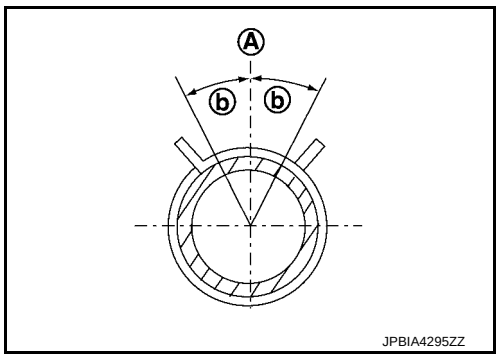
4. Remove EVAP canister purge volume control solenoid valve.

INSTALLATION

Installation is in the reverse order of removal.

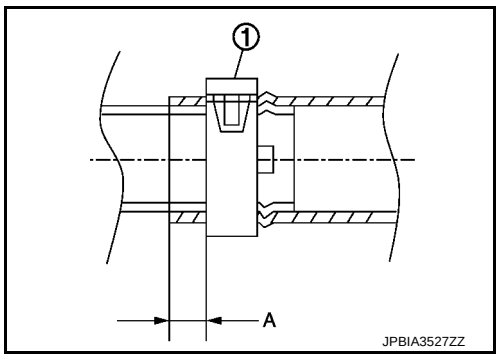
NOTE:

- Install hoses with marks and hose clamp pawls facing up.
- The angle (b) created by the hose clamp pawl and the specified line (A) must be within ±15° as shown in the figure.



- To install hose clamps (1), check that the dimension (A) from the end of the radiator hose to the hose clamp is within the reference value.

(A) : 5 ± 2 mm (0.20 ± 0.08 in)



SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Fuel Tank

INFOID:0000000014631512

Standard and Limit

Fuel tank capacity	Approx. 55 ℓ (14-1/2 US gal, 12-1/8 Imp gal)
Fuel recommendation	Refer to MA-11, "Fluids and Lubricants".