SECTION FL

FUEL SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

General Precautions

INFOID:0000000006289679

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.**
- **Never smoke while servicing fuel system. Keep open flames and sparks away from the work area.**

CAUTION:

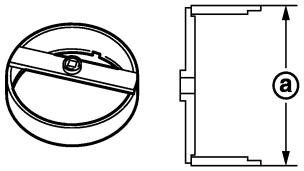
- **Use gasoline required by the regulations for octane number. Refer to GI-31, "Fuel".**
- **Before removing fuel line parts, perform out the following procedures:**
  - **Put drained fuel in an explosion-proof container and put the lid on securely. Keep the container in safe area.**
  - **Release fuel pressure from the fuel lines. Refer to EC-153, "Work Procedure".**
  - **Disconnect the battery cable from the negative terminal.**
- **Always replace O-rings with new ones.**
- **Never kink or twist tubes when they are being installed.**
- **Never tighten hose clamps excessively to avoid damaging hoses.**
- **After installing tubes, check there is no fuel leakage at connections in the following steps.**
  - **Apply fuel pressure to fuel lines with turning ignition switch “ON” (with engine stopped). Then check for fuel leakage at connections.**
  - **Start engine and rev it up and check for fuel leakage 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.**
- **For servicing “Evaporative Emission System” parts.**
  Refer to EC-16, "Component Parts Location".

PREPARATION

PREPARATION

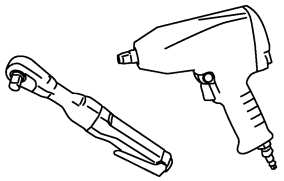
Special Service Tool

INFOID:0000000006289680

Tool number (Kent-Moore No.) Tool name	Description
KV10119800 (J-45722) Fuel tank lock ring wrench  JSBIA0383ZZ	Removing and installing fuel tank rock ring a: 187 mm (7.36 in) **NOTE:** The actual shapes of Kent-Moore No. tools may differ from those of the special tools illustrated here.

Commercial Service Tools

INFOID:0000000006289681

Tool name	Description
Power tool  PBIC0190E	Loosening bolts and nuts

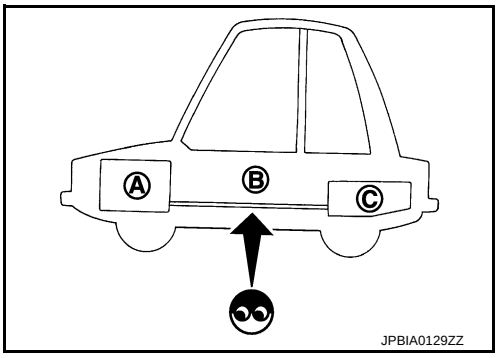
PERIODIC MAINTENANCE

FUEL SYSTEM

Inspection

INFOID:0000000006289682

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



  - A : Engine
  - B : Fuel line
  - C : Fuel tank

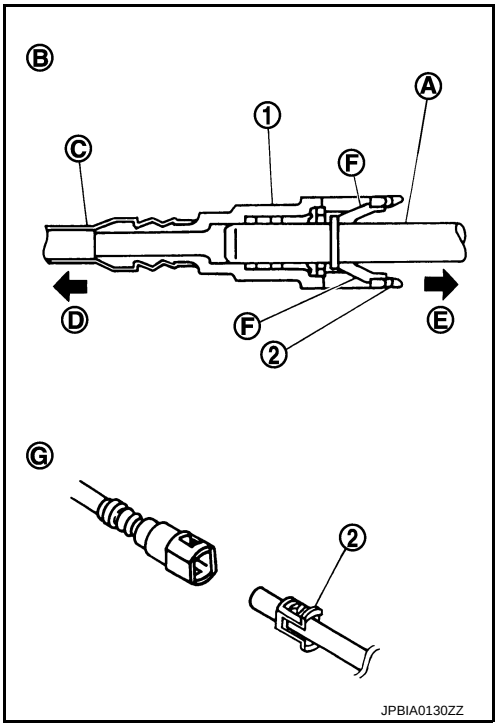
- If necessary, repair or replace damaged parts.

Quick Connector

INFOID:0000000006289683

CAUTION:

- **After connecting fuel tube quick connectors, check quick connectors are secure.**



  - 1 : Quick connector
  - 2 : Retainer
  - A : Hard tube (or the equivalent)
  - B : Connection (cross-section)
  - C : Resin tube
  - D : To under floor fuel line
  - E : To fuel tank
  - F : Tab
  - G : Disconnection

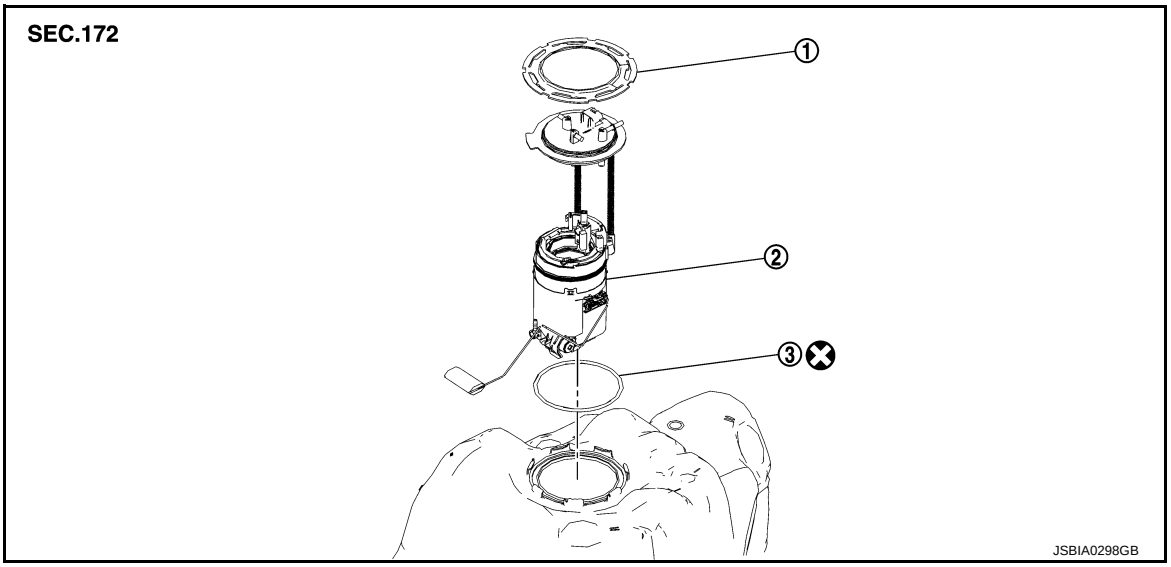
- **Ensure that connector and resin tube never contact any adjacent parts.**

REMOVAL AND INSTALLATION

FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

Exploded View

INFOID:0000000006289684



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

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000006289685

WARNING:
Be sure to read “General Precautions” when working on the fuel system. Refer to FL-2, "General Precautions".

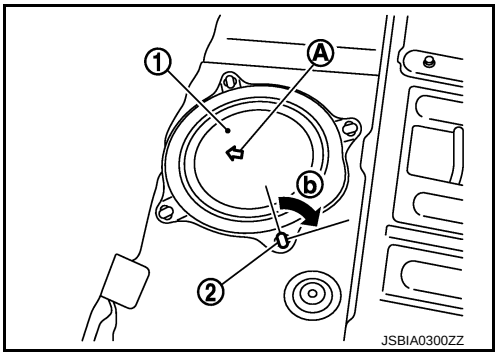
REMOVAL

1. Check fuel level on a level ground. If the fuel level is 7/8 of the fuel tank (full or nearly full), draw appropriate amount of fuel from the fuel tank.

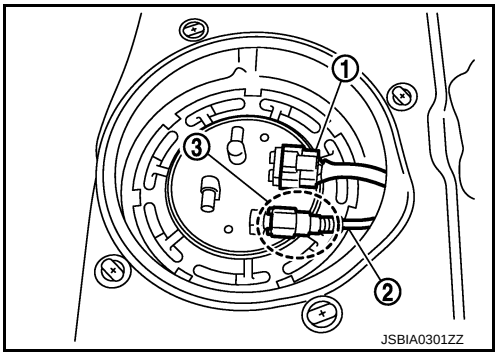
   Guideline : Draw approximately 20 liters from a full-tank condition.

   - In the event of malfunction in fuel pump, insert a hose measuring 20mm (0.79 in) in diameter into the filler opening to draw approximately 20 liters fuel.
2. Release the fuel pressure from the fuel lines. Refer to EC-153, "Work Procedure".
3. Open fuel filler lid.
4. Open filler cap and release the pressure inside fuel tank.
5. Tilt the second seat toward the front of the vehicle.
6. Peel off floor carpet, then remove inspection hole cover (1) by turning clips (2) clockwise by 90 degrees (b).

   A : Direction mark



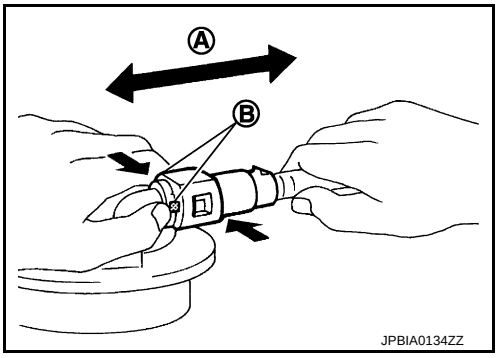
7. Disconnect harness connector (1) and all the fuel tube.



2 : Fuel feed tube
3 : Quick connector

Disconnect quick connector as follows:

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

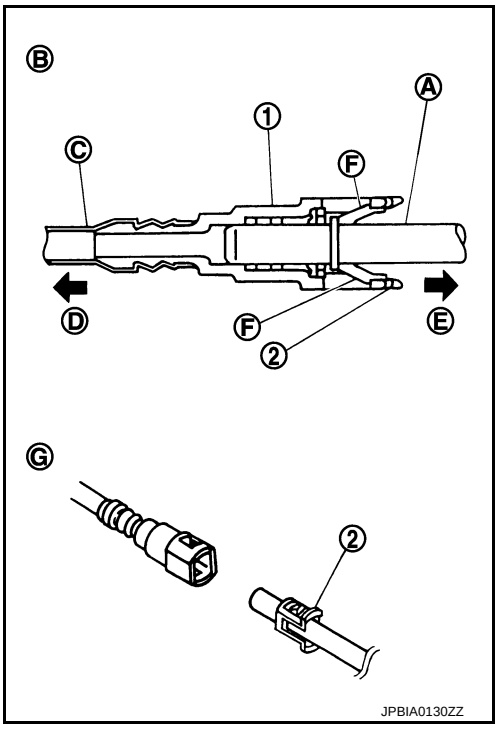


A : Pull
B : Push in tabs

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

CAUTION:

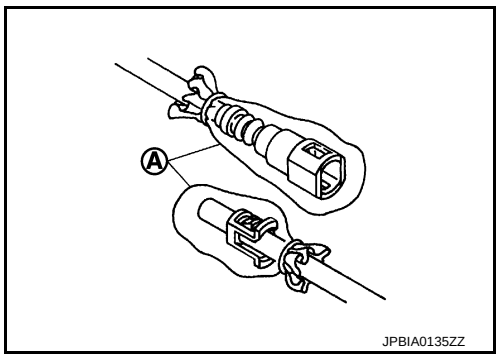
- **Quick connector (1) can be disconnected when the tabs (F) are completely depressed. Never twist it more than necessary.**



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

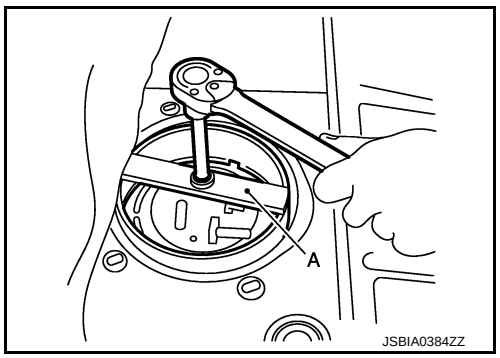
- **Never use any tools to disconnected quick connector.**
- **Keep resin tube (C) away from heat. Be especially careful when welding near the resin tube.**
- **Prevent acid liquid such as battery electrolyte, etc. from getting on resin tube.**
- **Never bend or twist resin tube during installation and disconnection.**
- **Never 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.**



8. Remove lock ring for fuel level sensor unit, fuel filter and fuel pump assembly with fuel tank lock ring wrench [SST: KV10119800 (J-45722)] (A) by turning counterclockwise.
9. Remove fuel level sensor unit, fuel filter and fuel pump assembly.

CAUTION:
- **Never bend float arm during removal.**
- **Avoid impacts such as falling when handling components.**



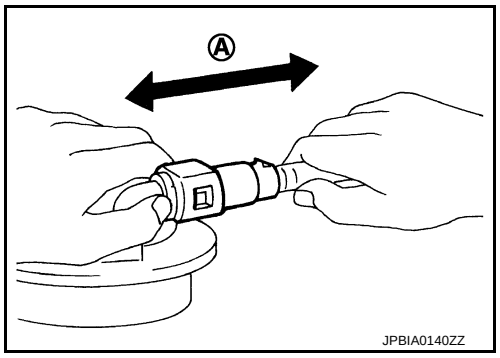
INSTALLATION

Note to the following, and install in the reverse order of removal.
- For installation, use a new O-ring.

Quick Connector
- Connect quick connector as follows:

1. Check the connection for damage or any foreign materials.
2. Align the connector with the tube, then insert the connector straight into the tube until a click sound is heard.
3. After connecting, check that the connection is secure by following method.
   - Pull the tube and the connector to check they are securely connected.

     A : Pull
   - Visually confirm that the two retainer tabs are connected to the connector.



Inspection

INFOID:0000000006289686

INSPECTION AFTER INSTALLATION

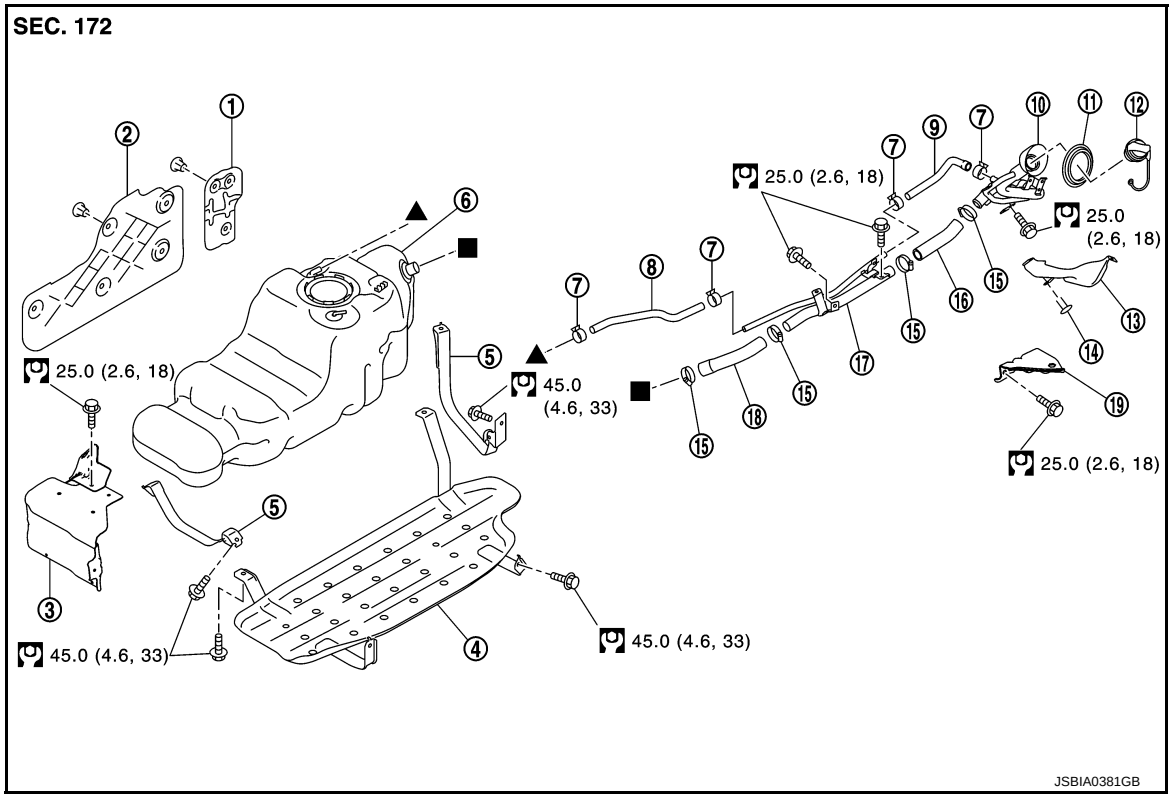
Use the following procedure to check for fuel leakage.

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

FUEL TANK

Exploded View

INFOID:0000000006289687



1. Fuel tank side protector
2. Fuel tank side protector
3. Fuel tank front protector
4. Fuel tank protector
5. Fuel tank mounting band
6. Fuel tank
7. Clamp
8. Vent hose
9. Vent hose
10. Fuel filler tube
11. Grommet
12. Fuel filler cap
13. Fuel filler tube protector
14. Clip
15. Clamp
16. Fuel filler hose
17. Fuel filler tube
18. Fuel filler hose
19. Fuel filler tube protector

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000006289688

WARNING:

Be sure to read “General Precautions” when working on the fuel system. Refer to FL-2, "General Precautions".

REMOVAL

CAUTION:

Perform work on level place.

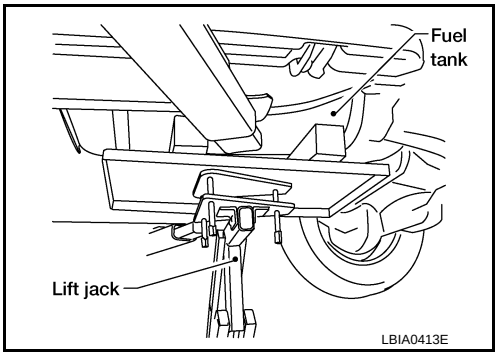
1. Check fuel level on a level ground. If the fuel level is 7/8 of the fuel tank (full or nearly full), draw appropriate amount of fuel from the fuel tank.

   Guideline : Draw approximately 20 liters from a full-tank condition.

   - In the event of malfunction in fuel pump, insert a hose measuring 20mm (0.79 in) in diameter into the filler opening to draw approximately 20 liters fuel.

2. Perform steps 2 to 7 of “REMOVAL” in “ FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY” on fuel level sensor unit, fuel filter and fuel pump assembly. Refer to FL-5, "Removal and Installation".

3. Remove LH rear wheel and tire.
4. Disconnect fuel filler hose, vent hose and EVAP hose at fuel tank side.
5. Remove fuel tank protector.
6. Remove the fuel tank mounting band bolts while supporting the fuel tank with a suitable lift jack.
   CAUTION:
   Support the position that fuel tank mounting bands never engage.



7. Supporting with hands, descend suitable jack carefully, and remove fuel tank.
   CAUTION:
   - **Check that all connection points have been disconnected.**
   - **Confirm there is no interference with vehicle.**

Inspection

INFOID:0000000006289689

INSPECTION AFTER INSTALLATION

Use the following procedure to check for fuel leakage.

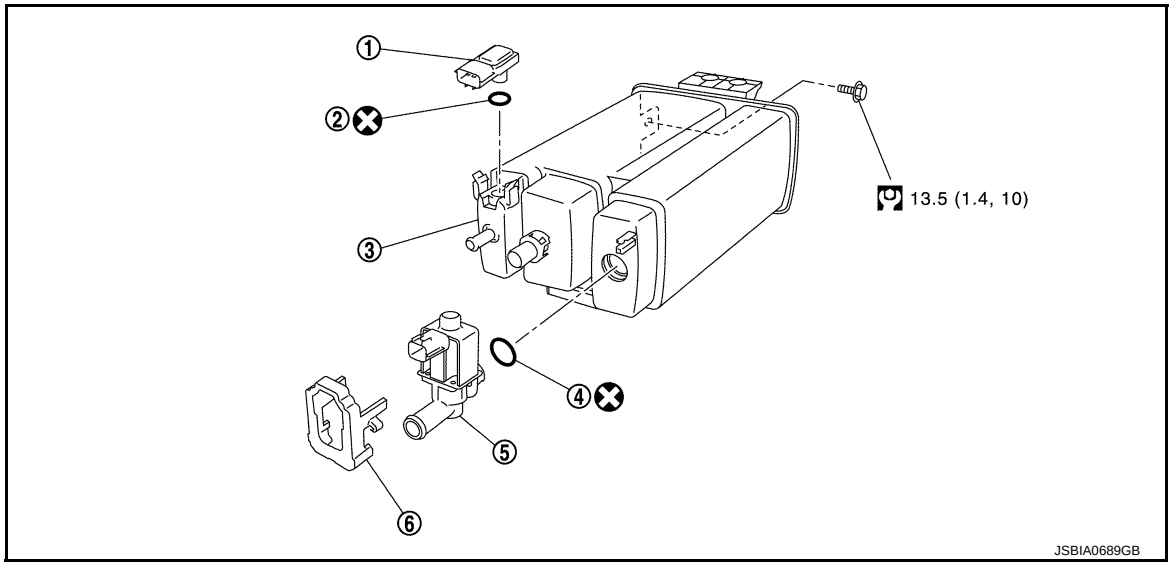
1. Turn ignition switch “ON” (with engine stopped), and check connections for leakage by applying fuel pressure to fuel piping.
2. Start engine and rev it up and check there are no fuel leakage at the fuel system tube and hose connections.

- After removing/installing rear suspension assembly, check to adjust wheel alignment. Refer to RSU-6, "Inspection".

EVAP CANISTER

Exploded View

INFOID:0000000006414452



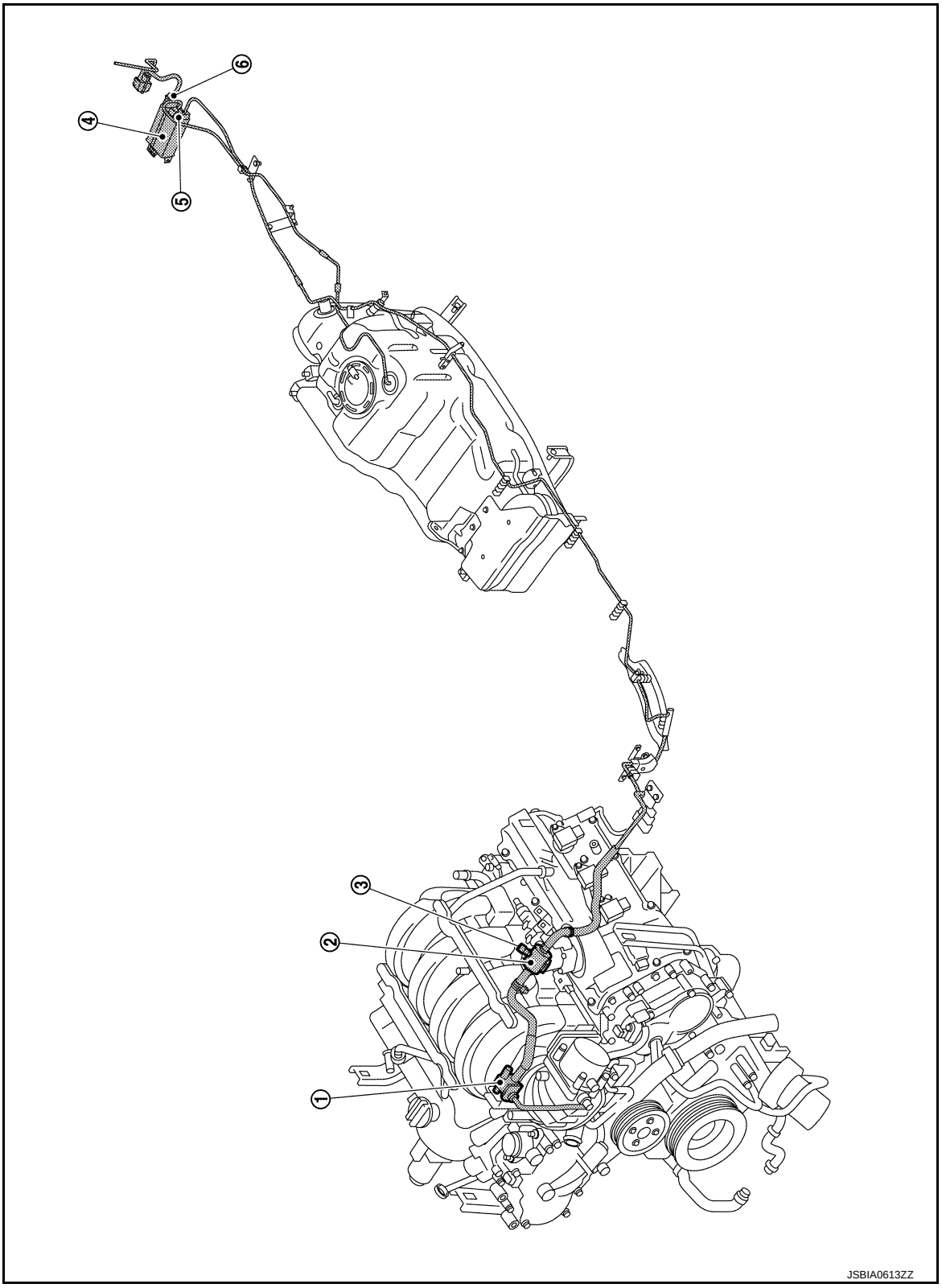
1. EVAP control system pressure sensor
2. O-ring
3. EVAP canister
4. O-ring
5. EVAP canister vent control valve
6. EVAP canister vent control valve cover

Refer to GI-4, "Components" for symbols not described on the above.

Hydraulic Layout

INFOID:0000000006414453

EVAPORATIVE EMISSION LINE DRAWING



1. EVAP canister purge volume control solenoid valve
2. EVAP purge resonator
3. EVAP service port
4. EVAP canister
5. EVAP control system pressure sensor
6. EVAP canister vent control valve

NOTE:
Do not use soapy water or any type of solvent while installing vacuum hose or purge hoses.

Removal and Installation

INFOID:0000000006414454

REMOVAL

1. Remove the spare tire.
2. Disconnect harness connectors and hoses.
3. Remove EVAP canister fixing bolt.
4. Remove EVAP canister.

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

INSTALLATION

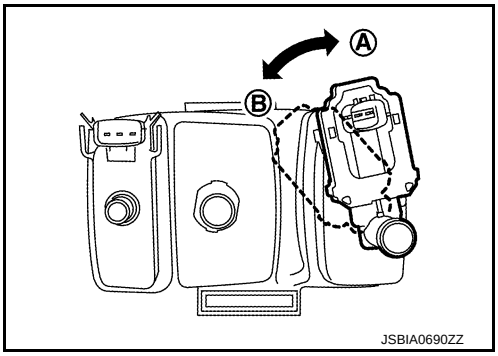
Install in the reverse order of removal.
NOTE:
Tighten EVAP canister fixing bolt to the specified torque.

Disassembly and Assembly

INFOID:0000000006414455

DISASSEMBLY

1. Disengage the pawl and turn EVAP canister vent control valve counterclockwise.
   - Lock (A)
   - Unlock (B)
2. Remove the EVAP canister vent control valve.



ASSEMBLY

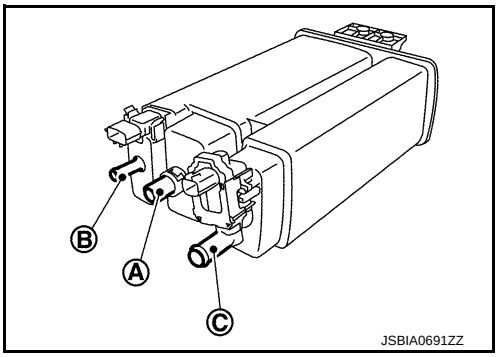
Assemble in the reverse order of disassembly.
CAUTION:
Always replace O-ring with a new one.

Inspection

INFOID:0000000006414456

Check EVAP canister as per the following:

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 is no leakage.



SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Fuel Tank

INFOID:0000000006289690

Standard and Limit

Fuel tank capacity	Approx. 98.4 ℓ (26 US gal)
Fuel recommendation	Refer to GI-31, "Fuel"