

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

SECTION FL
FUEL SYSTEM

CONTENTS

HR12DE	REMOVAL AND INSTALLATION 5
PRECAUTION 2	FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY 5
PRECAUTIONS 2	Exploded View 5
General Precautions 2	Removal and Installation 5
PREPARATION 3	Inspection 8
PREPARATION 3	FUEL TANK 9
Special Service Tool 3	Exploded View 9
Commercial Service Tools 3	Removal and Installation 9
PERIODIC MAINTENANCE 4	Inspection 11
FUEL SYSTEM 4	SERVICE DATA AND SPECIFICATIONS (SDS) 12
Inspection 4	SERVICE DATA AND SPECIFICATIONS (SDS) 12
Quick Connector 4	Fuel Tank 12

< PRECAUTION >

PRECAUTION

PRECAUTIONS

General Precautions

INFOID:000000005988482

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 CO2 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-27, "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-113, "Work Procedure"](#).
 - Disconnect the battery cable from the negative terminal.
- Always replace O-ring and clamps 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 “MI” may come on.
- For servicing “EVAPORATIVE EMISSION SYSTEM” parts, refer to [EC-313, "Hydraulic Layout"](#).

PREPARATION

< PREPARATION >

[HR12DE]

PREPARATION

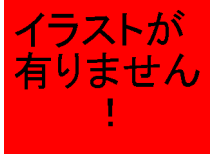
PREPARATION

Special Service Tool

INFOID:000000005988483

A

FL

Tool number Tool name	Description
KV99104700 Lock ring wrench  JPBIA3555ZZ	Removing and Installing lock ring

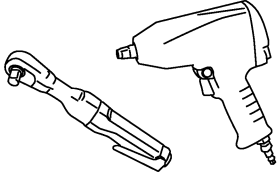
C

D

E

Commercial Service Tools

INFOID:000000005988484

Tool name	Description
Power tool  PBIC0190E	Loosening bolts and nuts

F

G

H

I

J

K

L

M

N

O

P

PERIODIC MAINTENANCE

FUEL SYSTEM

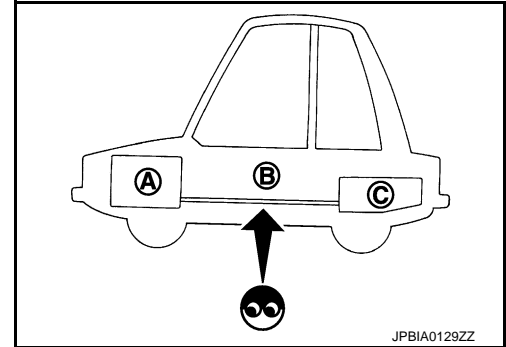
Inspection

INFOID:000000005988485

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.



JPBIA0129ZZ

Quick Connector

INFOID:000000005988486

CAUTION:

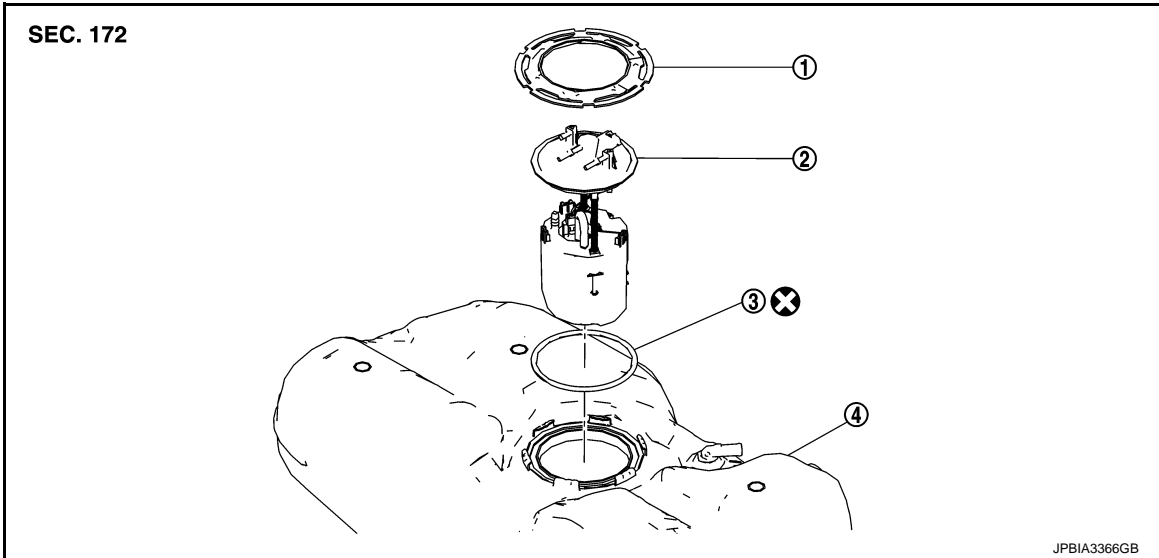
- After connecting fuel tube quick connectors, check quick connectors are secure.
- Ensure that connector and resin tube never contact any adjacent parts.

REMOVAL AND INSTALLATION

FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

Exploded View

INFOID:000000005988487



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

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000005988488

WARNING:

Read "General Precautions" when working on the fuel system. Refer to [FL-2, "General Precautions"](#).

REMOVAL

1. Release the fuel pressure from the fuel lines. Refer to following;
 - HR12DE (TYPE1): [EC-113, "Work Procedure"](#)
 - HR12DE (TYPE2): [EC-386, "Work Procedure"](#)
2. Check fuel level on fuel gauge. If fuel gauge indicates more than 7/8 (full or nearly full), drain appropriate amount of fuel from fuel tank.
 - In the event of malfunction in fuel pump, insert a hose measuring approximately 20 mm in diameter into the filler opening to draw fuel from the filler tube. In addition to that, disconnect the fuel tube from the fuel tube from the from the fuel hose to draw fuel from the fuel hose.

NOTE:

Guideline: Drawing approximately 10 liters from the full-tank condition brings the fuel level into 7/8 of the tank.

3. Open fuel filler lid.
4. Open filler cap and release the pressure inside fuel tank.
5. Remove rear seat. Refer to [SE-19, "Exploded View"](#).
6. Remove inspection hole cover.

FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

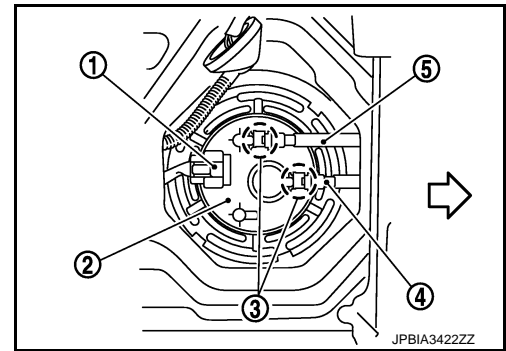
< REMOVAL AND INSTALLATION >

[HR12DE]

7. Disconnect harness connector (1), fuel feed tube (5), EVAP tube (4) and quick connector (3).

2 : Fuel level sensor unit, fuel filter and fuel pump assembly

↔ : Vehicle front

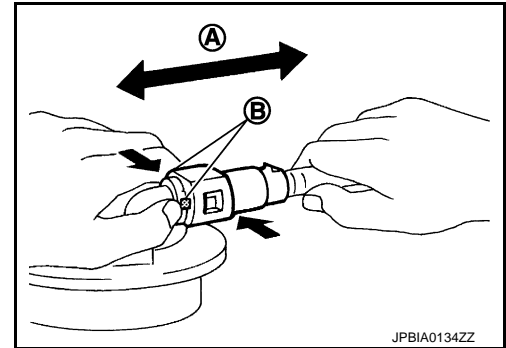


- Remove quick connector in the following procedures.
- Hold the sides of connector, press tabs and pull out fuel feed tube.

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. Never twist it more than necessary.

B : Connection (cross-section)

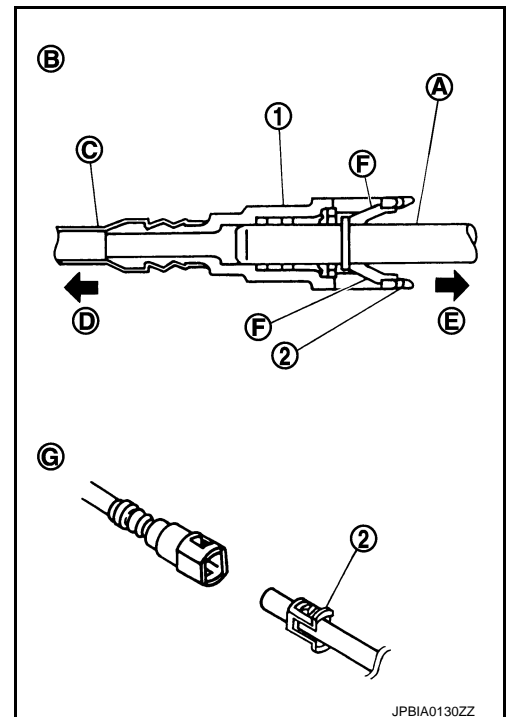
D : To under floor fuel line

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.

Retainer color : White

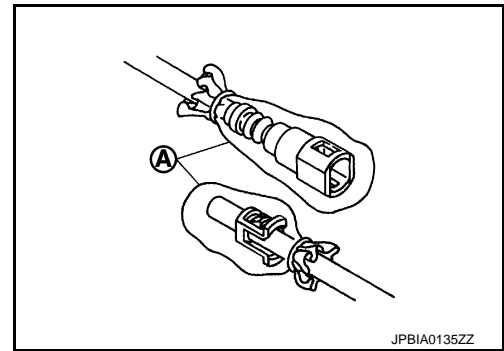


FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

< REMOVAL AND INSTALLATION >

[HR12DE]

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

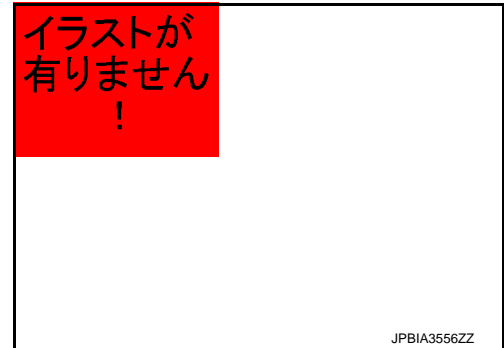


8. Use lock ring wrench [SST: KV10119900] (A) to remove lock ring.

⇐ : Vehicle front

NOTE:

For reference when installing, put a matching mark on lock ring, fuel pump assembly and fuel tank.



9. Remove fuel level sensor unit, fuel filter and fuel pump assembly (1).

CAUTION:

- Never bend float arm (2) during removal.
- Never pollute the inside by residue fuel. Draw out avoiding inclination by supporting with a cloth.
- Never cause impacts such by dropping when handling components.



INSTALLATION

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

Fuel Level Sensor Unit

1. Install new O-ring to fuel tank without any twist.
2. フューエルゲージ上面の(A)が車両後方になるようにフューエルタンクに取り付ける。

⇐ : Vehicle front

CAUTION:

- Never allow O-ring to drop.
- Never bend float arm during installing.



3. Install lock ring for fuel level sensor unit, fuel filter and fuel pump assembly with lock ring wrench [SST: KV10119900] by turning clockwise.

CAUTION:

- Install lock ring horizontally.

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

FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY

< REMOVAL AND INSTALLATION >

[HR12DE]

- 図のようにロックリングがフューエルタンク側にあるツメに噛み合うまでまわす。

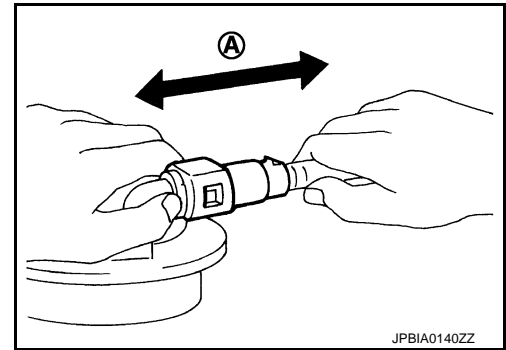
イラストが
ありません
!

JPBIA3559ZZ

Quick Connector

Connect quick connector as follows:

1. Connect quick connector of fuel feed tube as per following procedures.
 - a. Check the connection for damage or any foreign materials.
 - b. Align the connector with the tube, then insert the connector straight into the tube until a “click” sound is heard.
 - c. 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.



JPBIA0140ZZ

Inspection

INFOID:000000005988489

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

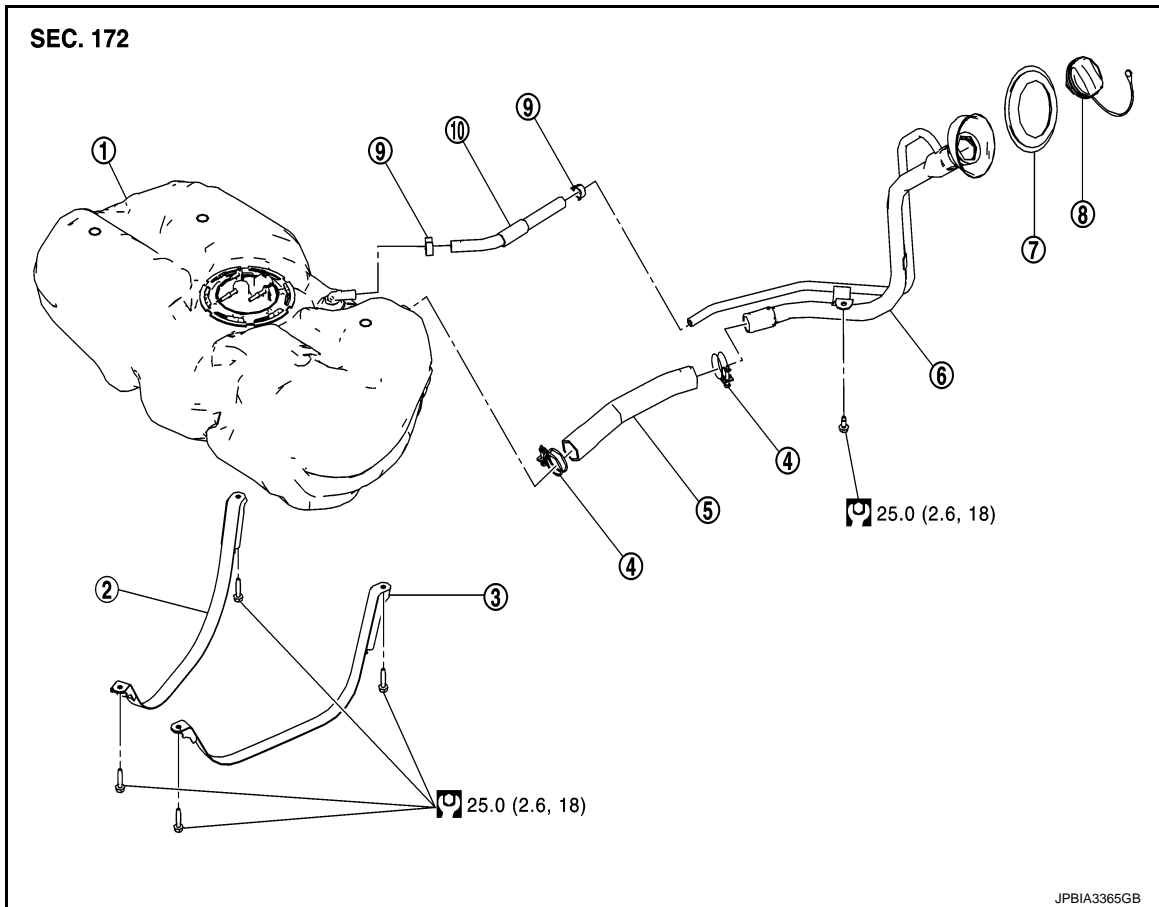
< REMOVAL AND INSTALLATION >

[HR12DE]

FUEL TANK

Exploded View

INFOID:000000005988490



- | | | |
|---------------|---------------------------------|---------------------------------|
| 1. Fuel tank | 2. Fuel tank mounting band (RH) | 3. Fuel tank mounting band (LH) |
| 4. Clamp | 5. Fuel filler hose | 6. Fuel filler tube |
| 7. Grommet | 8. Fuel filler cap | 9. Clamp |
| 10. Vent hose | | |

Refer to [GI-4. "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000005988491

WARNING:

Be sure to read "General Precautions" when working on the fuel system. Refer to [FL-2. "General Precautions"](#).

REMOVAL

- Drain fuel from fuel tank if necessary. Refer to [FL-5. "Removal and Installation"](#).
 - Perform work on level place.
1. 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"](#).
 2. Remove center muffler. Refer to [EX-5. "Exploded View"](#).
 3. Remove insulator on vehicle side located above center and main mufflers.
 4. Remove brake tube protector. Refer to [BR-20. "REAR : Exploded View"](#).

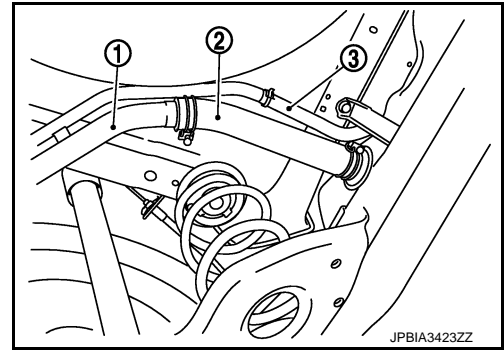
FUEL TANK

< REMOVAL AND INSTALLATION >

[HR12DE]

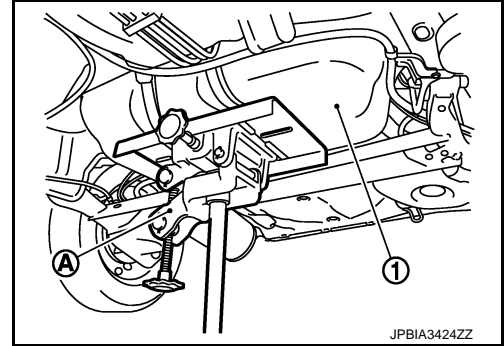
5. Disconnect fuel filler hose at fuel tank side.

- 1 : Filler tube
- 2 : Filler hose
- 3 : Vent hose



6. Remove vent hose.

7. Support the center part of fuel tank (1) with transmission jack (A).



8. Remove fuel tank mounting bands (RH and LH).

9. Lower transmission 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. Never rely on jack too much. Be sure to hold tank securely.

INSTALLATION

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

Fuel Filler Hose

- Surely clamp fuel hose insert fuel filler hose to the length below.

Fuel filler hose : 35 mm (1.38 in)

The other hose : 25 mm (0.98 in)

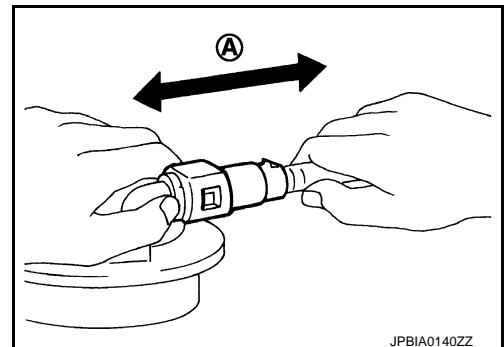
- Be sure hose clamp is not placed on swelled area of fuel filler tube.
- Install fuel filler hose to fuel tank, paying attention to install mark.
- Tighten fuel filler hose clamp so that the remaining length of screw thread becomes to the following.

Hose clamp : 7 - 11 mm (0.28 - 0.43 in)

EVAP Hose and Vent Tube

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

A : Pull



FUEL TANK

< REMOVAL AND INSTALLATION >

[HR12DE]

Inspection

INFOID:000000005988492

A

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.

FL

C

D

E

F

G

H

I

J

K

L

M

N

O

P

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HR12DE]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Fuel Tank

INFOID:000000005988493

Standard and Limit

Fuel tank capacity	Approx. 41.0 ℓ (9.0 Imp gal)
Fuel recommendation	Refer to G1-27, "Fuel"