

# ACCELERATOR CONTROL, FUEL AND EXHAUST SYSTEMS

## SECTION FE

GI  
EM  
LC  
EC  
**FE**  
RS  
AC  
AV  
EL  
WH  
CL  
MT  
AT  
FA  
RA  
BR  
ST  
BT

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### Precaution

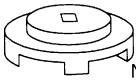
#### SRS Airbag • Pretensioner Seatbelt

##### WARNING:

- To install/remove the SRS airbag, pretensioner seatbelt system related components and harness, turn the ignition switch “OFF”, disconnect the battery terminals and wait over 3 minutes. (This is to discharge all the remaining electricity in the airbag sensor unit’s auxiliary power circuit.)
- Do not use air impact or electrical tools when installing/removing the components.
- Do not use any hand-held tools for harness used in SRS airbag and pretensioner seatbelt systems. Be careful with the harness not to tangle with or interfere with other components.
- Do not use any electrical test equipments such as circuit tester when inspecting the SRS airbag and pretensioner seatbelt circuit while installed unless the Service Manual instructs to do so. (The weak current in the tester can cause the SRS airbag to operate.)
- Do not insert any foreign materials such as a screwdriver in the airbag module and pretensioner seatbelt connector in order to prevent unintended operation due to static electricity.
- The harnesses used in SRS airbag and pretensioner are covered with yellow insulation for easy identification.
- Refer to “RS Restraint System” in this Service Manual for safe airbag system service information.

### Preparation

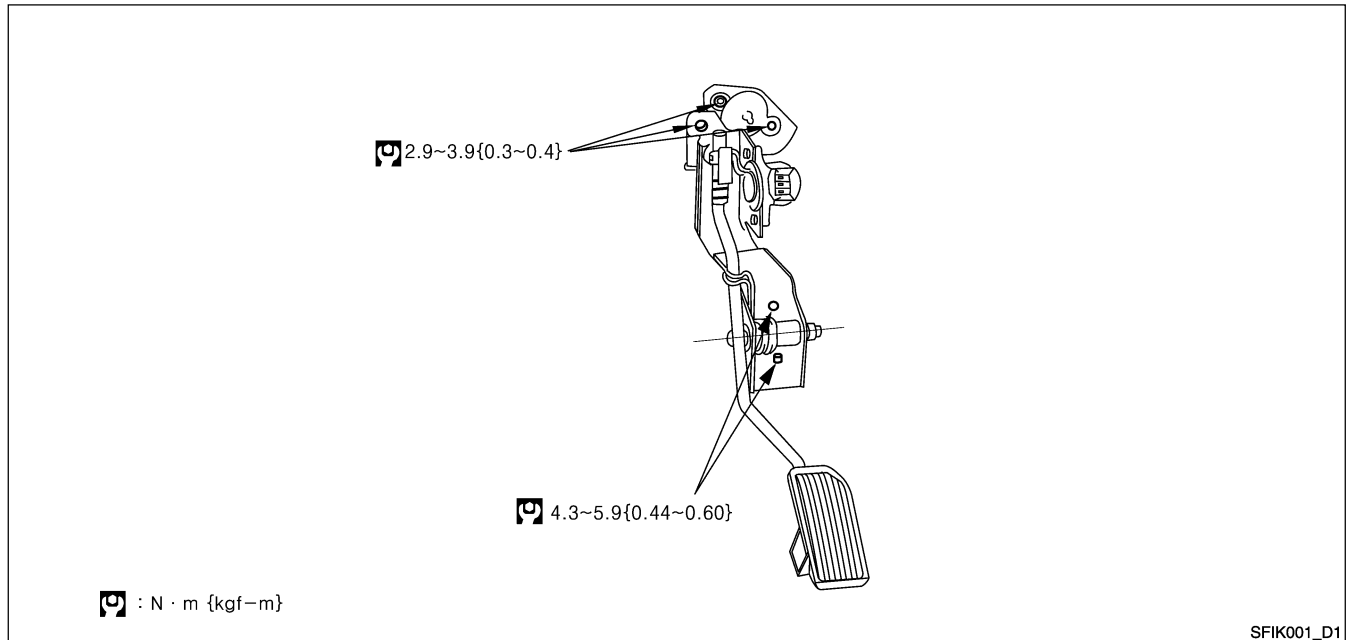
#### Special Service Tool

Item	Description
KV999G0010 Fuel tank lock ring socket	 NT057 Removing/installing fuel tank

## Removal • Installation

## WARNING:

- Make sure that throttle valve opens when depressing accelerator pedal. Also, make sure that throttle valve returns to the idle position when releasing accelerator pedal while the ignition switch is ON.
- Make sure that the accelerator control system is interfered with various parts.



## Removal

1. Disconnect accelerator pedal position sensor harness connector.
2. Remove the mounting nuts and remove the accelerator pedal assembly.

## WARNING:

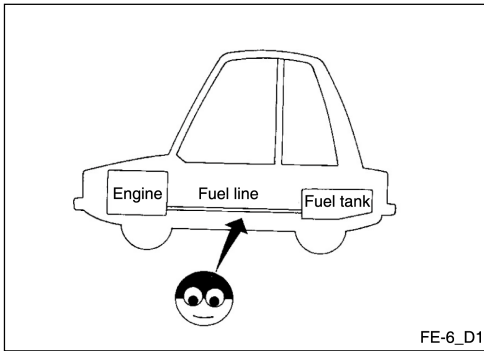
- Do not disassemble accelerator pedal assembly. Do not remove accelerator pedal position sensor from accelerator pedal assembly.
- Avoid impact from dropping etc. during handling.
- Be careful to keep accelerator pedal assembly away from water.

## Installation

Install in the reverse order of removal.

## Inspection after Installation

- Make sure that accelerator pedal moves smoothly within the whole operation range.
- Make sure that accelerator pedal securely returns to the original position.
- If harness connector of accelerator pedal position sensor is disconnected, perform "Accelerator Pedal Released Position Learning" (QG16: EC-23).
- For electric inspection of the accelerator pedal assembly, refer to "DTC P2138 APP Sensor" (QG16: EC-201).



## Fuel Line Inspection

Make sure that fuel line, fuel filler cap and fuel tank are attached correctly. If there is tremble or dir, repair or replace them.

## Removal • Installation

### WARNING:

When replacing the fuel line part, observe the followings:

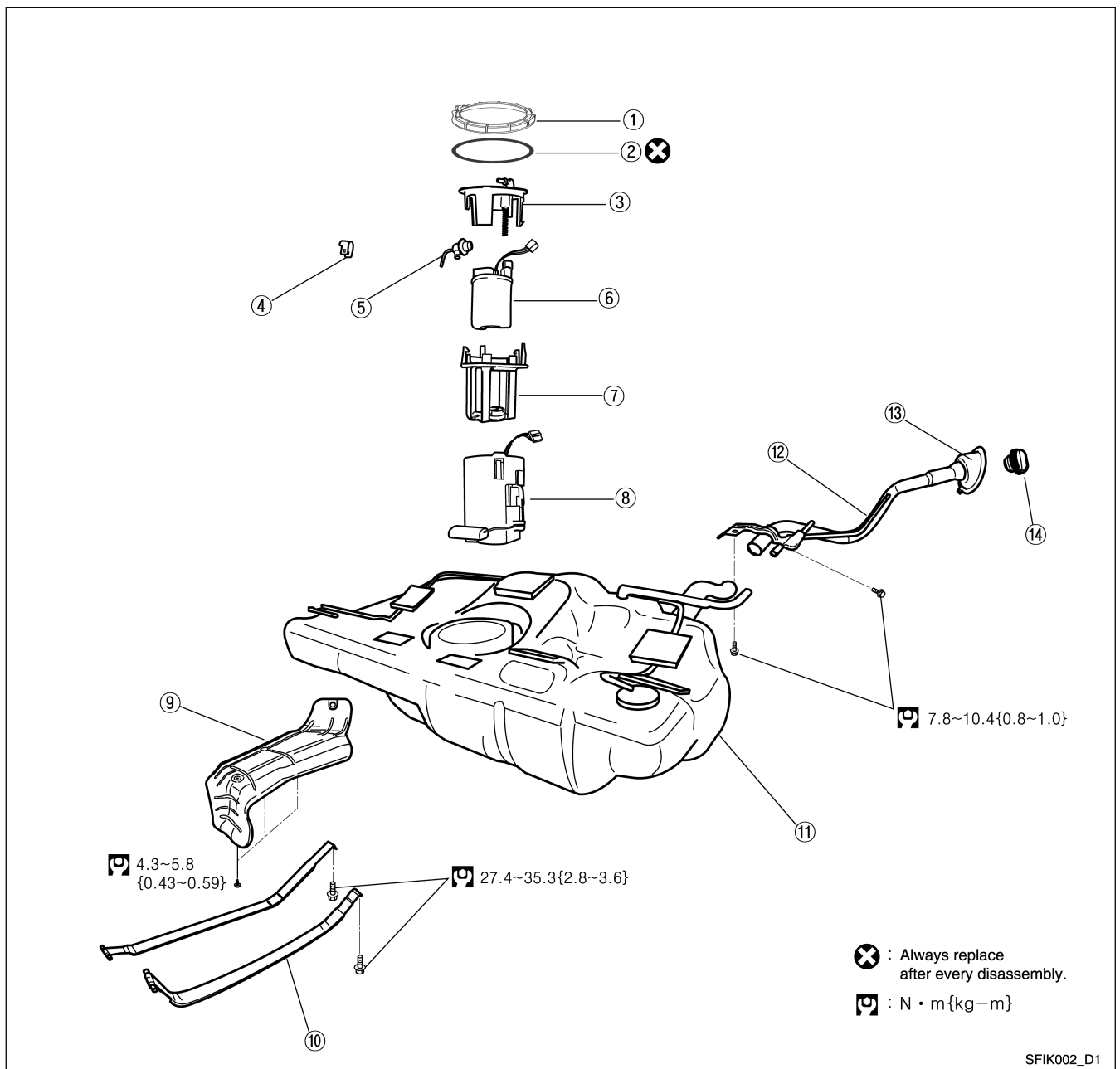
- Put a “CAUTION: INFLAMMABLE” sign in the workshop.
- Be sure to work in a well ventilated area and to furnish workshop with a CO2 fire extinguisher.
- Do not smoke while working on the fuel system. Also, work in location without any fire.

### WARNING:

- Use the following procedure before removing the fuel line parts.
  - a) Drain engine oil to the anti-explosible container and close it tight.
  - b) Release fuel pressure from the fuel line. Refer to “FUEL PRESSURE RELEASE” (QG16: EC-26).
  - c) Disconnect the battery negative cable.
- Always replace O-ring with a new one.
- Do not install the fuel tube twisted.
- Do not tighten the hose clamp excessively. The fuel hose can be damaged.
- Make sure that there are no fuel leaks at the fuel system connections while the engine is running after installing the fuel tube.
  - a) Turn the ignition switch ON (engine not running) and generate the fuel pressure in the fuel line.
 

Also, make sure that are no fuel leaks at the connections.
  - b) Start engine, rev it up and make sure there are no fuel leaks at the fuel system connections.
- Use only NISSAN Geunuine part when replacing the fuel filler cap.

## Fuel Tank

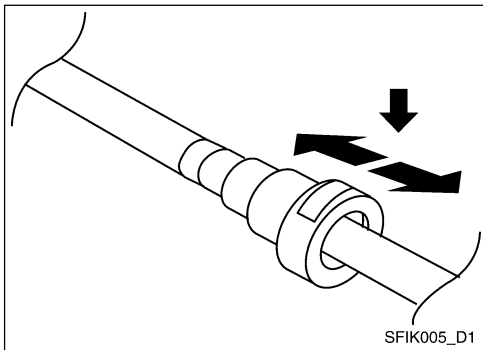
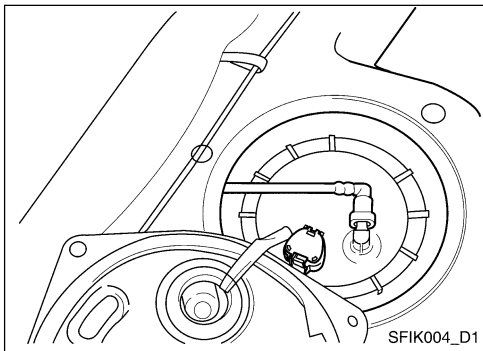
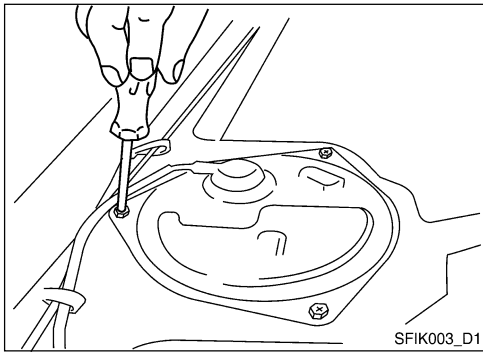


- |  |                              |                           |
|--|------------------------------|---------------------------|
| ① Fuel pump cover                        | ⑤ Fuel pressure regulator    | ⑩ Fuel tank mounting band |
| ② O-ring                                 | ⑥ Fuel pump                  | ⑪ Fuel tank               |
| ③ Fuel pump upper bracket                | ⑦ Fuel pump mounting bracket | ⑫ Filler tube             |
| ④ Fuel pressure regulator fixing bracket | ⑧ Fuel level sensor unit     | ⑬ Grommet                 |
|  | ⑨ Fuel tank protector        | ⑭ Filler cap              |

## Removal

## Removal

1. Release fuel pressure in the fuel line. Refer to “FUEL PRESSURE RELEASE” (EC-26).
2. Disconnect negative battery cable.
3. Open the fuel filler lid and cap.
4. Remove the rear seat cushion. Refer to “Removal • Installation” (BT-52).
5. Remove the inspection hole cover under the rear seat.

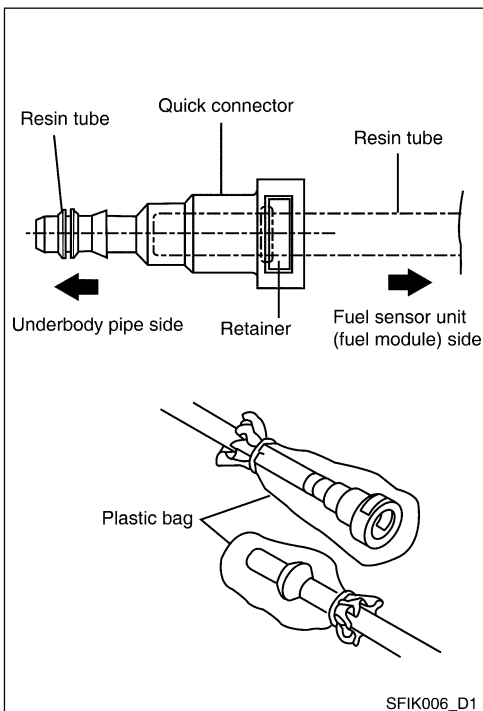


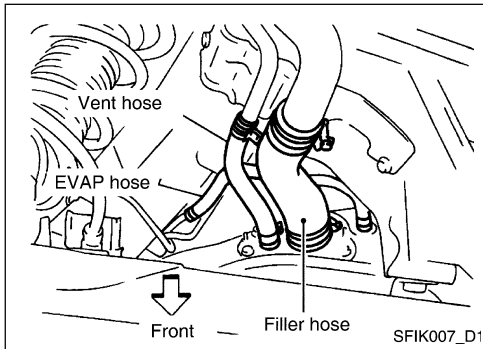
6. Disconnect electric connector.
7. Disconnect quick connector as follows.
  - a) Align the mating marks of the connector and the tube.

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

## WARNING:

- Quick connector can be disconnected when the tabs are completely depressed. Do not twist it more than necessary.
- Do not use any tools to disconnected quick connector.
- Keep resin tube away from heat. Be especially careful when welding near the resin tube.
- Prevent acid liquid such as battery electrolyte, etc. from getting on resin tube.
- Do not bend or twist resin tube during installation and disconnection.
- Do not remove the remaining retainer on hard tube (or the equivalent) except when resin tube or retainer is replaced.
- When resin tube or hard tube (or the equivalent) is replaced, also replace retainer with new one.
- To keep the connecting portion clean and to avoid damage and foreign materials, cover them completely with plastic bags or something similar.



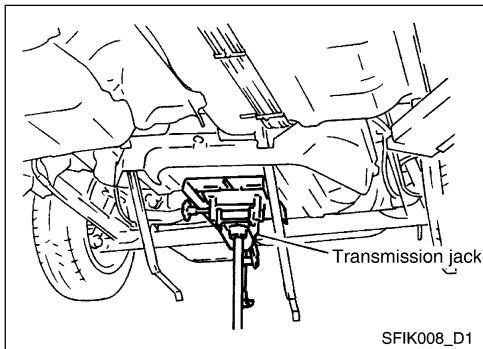
**Removal (Cont'd)**

8. Remove the exhaust center tube.
9. Disconnect fuel filler hose, vent hose and EVAP purge hose from the left side of the fuel tank rear side.

GI

EM

LC



10. Install the transmission jack under the fuel tank.
11. Remove the fuel tank mounting band bolts while supporting the fuel tank by the jack.
12. Remove the fuel tank mounting band.
13. Remove the fuel tank by lowering the transmission jack while the paying attention to the interference with other parts.

EC

FE

RS

AC

**Installation**

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

AV

EL

WH

CL

MT

AT

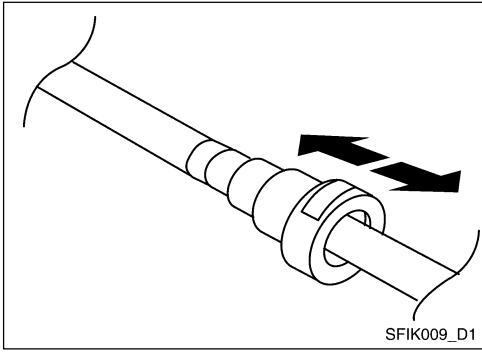
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**Installation (Cont'd)**

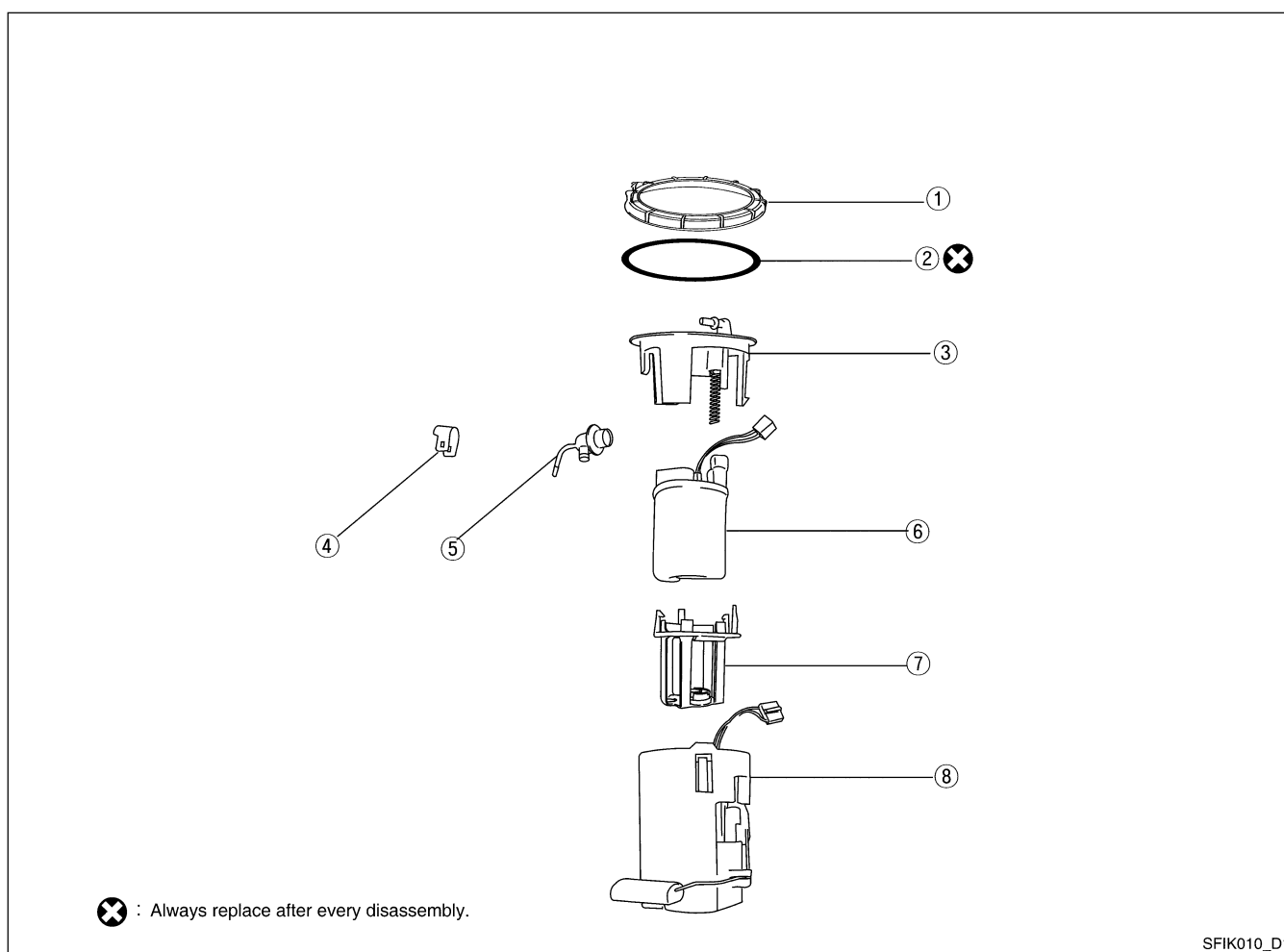
- Connect the quick connector as follows:
  - a) Check the connection for damage or any foreign materials.
  - b) Align the connector with the tube, then insert the connector straight into the tube until a click sound is heard.
  - c) After connecting, make sure that the connection is secure by following method.
  - d) Pull the tube and the connector to make sure they are securely connected.

**Inspection after Installation**

- Use the following procedure to check for fuel leaks.
  - a) Turn ignition switch "ON" (with engine stopped), then check connections for leaks by applying fuel pressure to fuel piping.
  - b) Start engine and rev it up and make sure there are no fuel leaks at the fuel system connections.



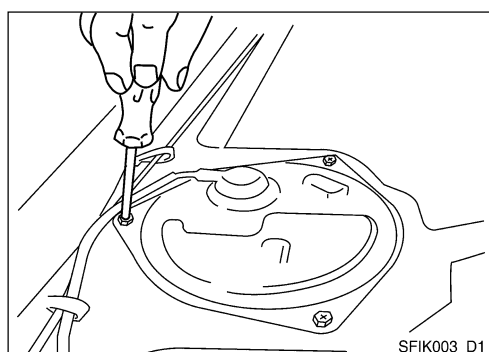
## Fuel Level Sensor Unit, Fuel Filter and Fuel Pump Assembly



- ① Fuel pump cover
- ② O-ring
- ③ Fuel pump upper bracket

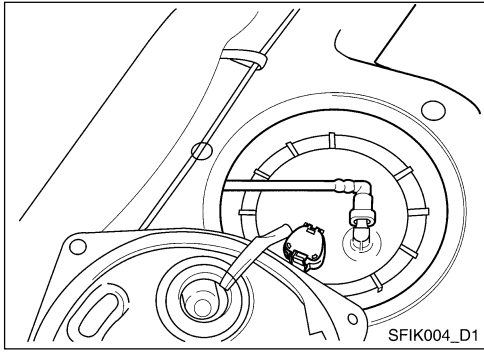
- ④ Fuel pressure regulator fixing bracket
- ⑤ Fuel pressure regulator

- ⑥ Fuel pump
- ⑦ Fuel pump mounting bracket
- ⑧ Fuel level sensor unit

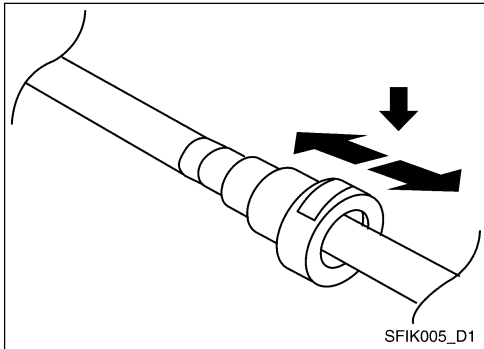
**Removal**

1. Release fuel pressure in the fuel line. Refer to "FUEL PRESSURE RELEASE" (EC-26).
2. Disconnect negative battery cable.
3. Open the fuel filler lid and cap.
4. Remove the rear seat cushion. Refer to "Removal • Installation" (BT-52).
5. Remove the inspection hole cover under the rear seat.

## Removal (Cont'd)

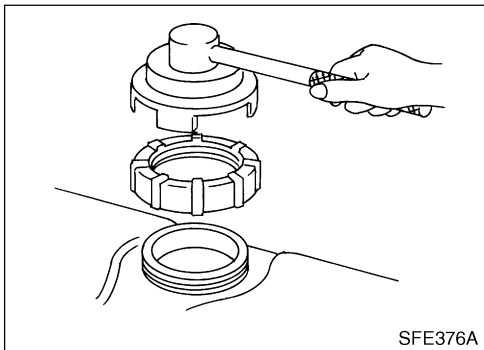


6. Disconnect electric connector.



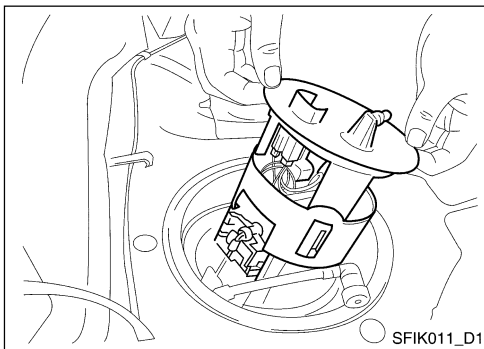
7. Disconnect quick connector as follows.

- a) Align the mating marks of the connector and the tube.
- b) Hold the sides of connector, push in tabs and pull out fuel feed tube.



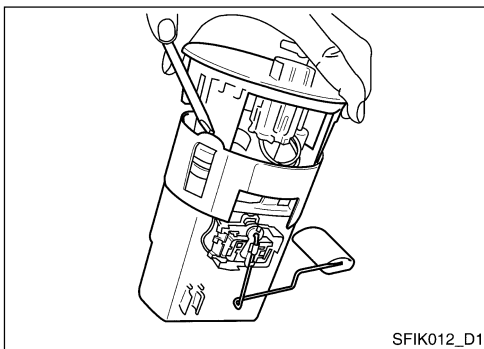
8. Remove it using the fuel tank lock ring socket (SST: KV999G0010).

- Be careful not to damage the arm of the fuel level sensor unit.

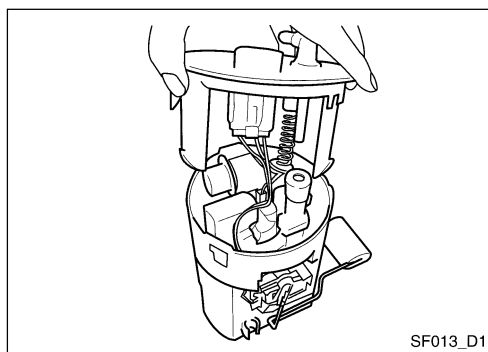


9. Remove the fuel level sensor unit, fuel filter and fuel pump assembly from the fuel tank.

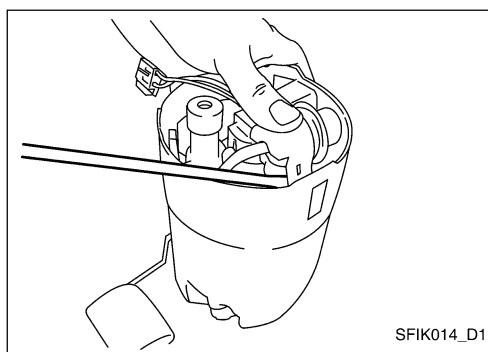
- Be careful not to damage the arm of the fuel level sensor unit.



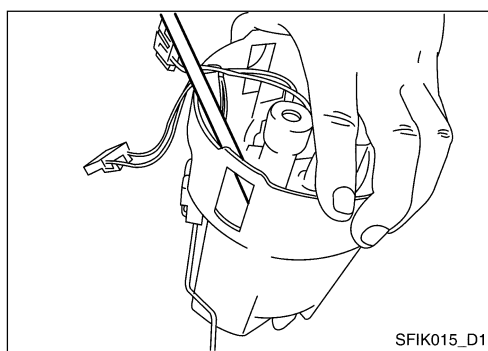
10. Remove the fuel pump upper bracket as shown in the figure.

**Fuel Level Sensor Unit, Fuel Filter and Fuel Pump Assembly**

11. Disconnect the fuel pump and fuel level sensor harness connectors.



12. Remove the mounting bracket of the fuel pressure regulator.



13. Remove the fuel pump.

**Installation**

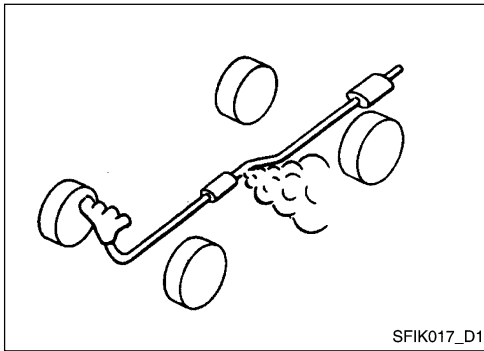
Install in the reverse order of removal with following cares.

- Align the bracket connection parts, then insert the connector straight until a click sound is heard. Make sure that the connector is installed securely.
- Connect the harness connector of the fuel pump securely.
- When installing O-ring, note the followings.

**WARNING:**

- Always replace O-ring with a new one.
- Do not handle O-ring with bare hands.
- Make sure there are not damage and dirt on the O-ring and O-ring installation part.
- Before installing O-ring, apply engine oil to O-ring.
- Be careful not to apply excessive force when pulling or extending O-ring.

## Exhaust System Inspection



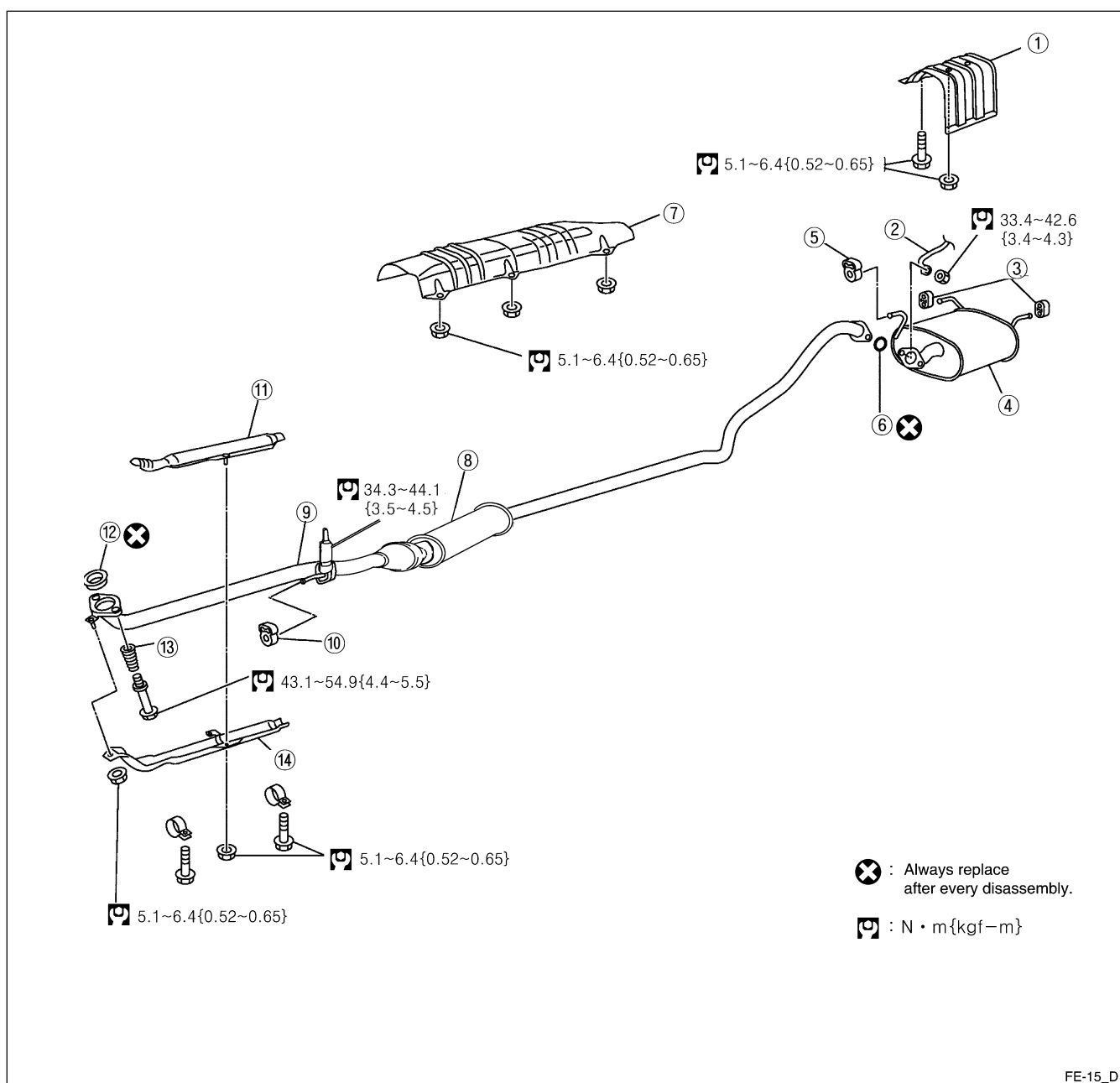
### Inspection

Check the exhaust pipe, muffler and mounting for improper installation, gas leak, crack, damage, rattle or contamination.

### Removal • Installation

#### WARNING:

- Replace gasket to a new one when reassembling the exhaust system.
- Check exhaust system for improper attachment such as exhaust gas leaks and noise while the engine is running..
- Make sure that the mounting bracket and the mounting insulator are installed properly and there is no excessive stress. It can result in noise and vibration.
- Discard any heated oxygen sensor which has been dropped from a height of more than 0.5 m (19.7 in) onto a hard surface such as a concrete floor; use a new one.
- Before installing new oxygen sensor, clean exhaust system threads using oxygen sensor thread cleaner and approved anti-seize lubricant.
- Do not tighten the heated oxygen sensor excessively. It can damage the heated oxygen sensor resulting in warning light blinking.
- Be sure to use genuine exhaust system parts or equivalents which are specially designed for heat resistance, corrosion resistance, and shape.
- Do not work on the exhaust system right after engine stops since it is still hot.
- Be careful not to hurt by the heat resistant material.



- ① Heat insulator
- ② Ground wire
- ③ Mounting rubber
- ④ Main muffler
- ⑤ Mounting rubber

- ⑥ Gasket
- ⑦ Heat insulator
- ⑧ Free muffler
- ⑨ Exhaust front tube
- ⑩ Mounting rubber

- ⑪ Heat insulator
- ⑫ Seal bearing
- ⑬ Spring
- ⑭ Heat insulator

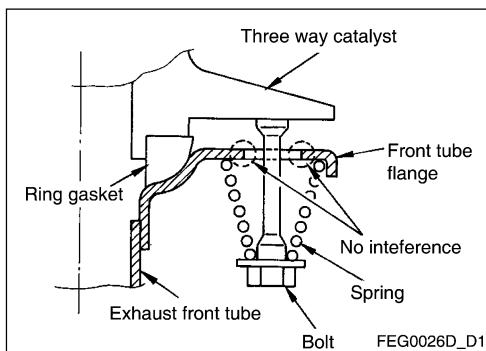
## Removal

- Remove the joints and mountings on exhaust system.

## Installation

Install in the reverse order of removal with following cares.

- Remove old gasket on mating surface of connections.
- When installing the exhaust pipe assembly, temporarily tighten the mounting nut (vehicle side) and the bolt on the exhaust manifold. Make sure that there is not tensile force on each part and then tighten nuts and bolts to the specified torque.
- Do not apply excessive tensile force on the mounting rubber or do not twist it when installing it.
- Install the seal bearing unit according to the following procedures.



### Exhaust Front Tube to Three Way Catalyst (Exhaust Manifold)

1. Insert the seal bearing to the three way catalyst to the direction as shown in the figure.

#### WARNING:

- Be careful not to damage the seal bearing surface when installing.
2. Tighten the bolt while the spring side with bigger diameter faces the flange.
  - Tighten the mounting bolt and make sure no part interferes with the bolt.

## Inspection after Installation

Check if there is exhaust gas leak and noise from the exhaust tube joint while engine is running.

## Service Data

## Accelerator Control System

Unit: N•m (kgf-m)

Accelerator pedal bracket	4.3 ~ 5.9 (0.44 ~ 0.6)	GI
Dynamic Damper	4.4 ~ 5.9 (0.45 ~ 0.6)	

EM

LC

## Fuel Tank

EC

Fuel tank capacity (L)	55	
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FE

RS

AC

## Tightening Torque

Unit: N•m (kgf-m)

Fuel pump module	6 ~ 7 (58.8 ~ 68.6)	AV
Fuel tank mounting band	3.8 ~ 5.0 (37 ~ 49)	EL
Filler tube	1.3 ~ 3.7 (0.13 ~ 0.38)	
Fuel tank protector	2 ~ 2.9 (0.2 ~ 0.3)	WH

CL

## Exhaust System

Unit: N•m (kgf-m)

Exhaust system		MT
Catalytic converter in manifold~ Exhaust sub muffler ~ Assembly	43.1 ~ 54.9 (4.4 ~ 5.6)	AT
Exhaust sub muffler assembly ~ Main muffler	33.3 ~ 43.1 (3.4 ~ 4.4)	
Exhaust muffler assembly ~ Heated oxygen sensor	34.3 ~ 44.1 (3.5 ~ 4.5)	FA

RA

BR

ST

BT

