

**DATSUN**

**Model S110 Series**

# SECTION **FE**

## **ENGINE CONTROL, FUEL & EXHAUST SYSTEMS**

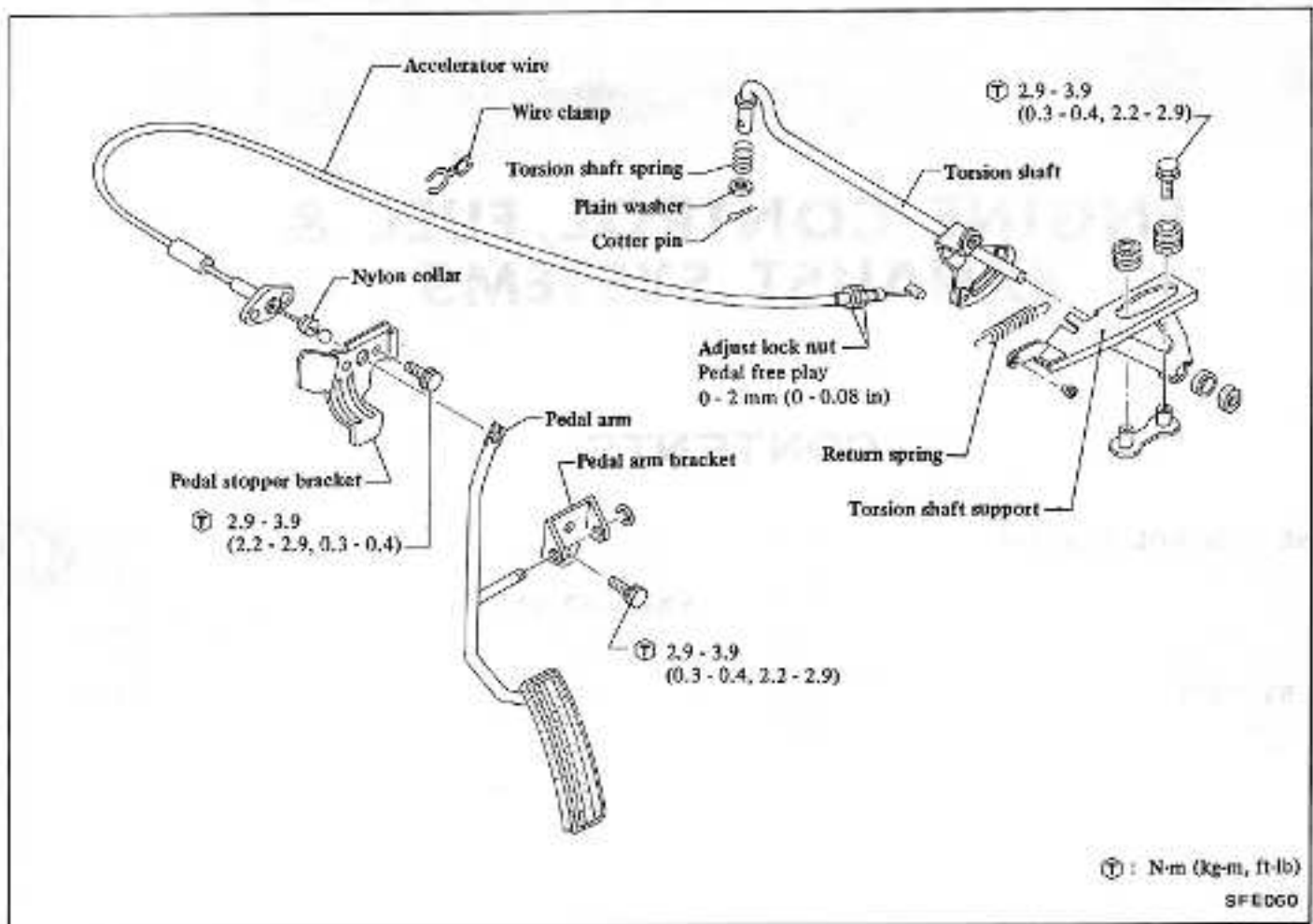
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**FE**

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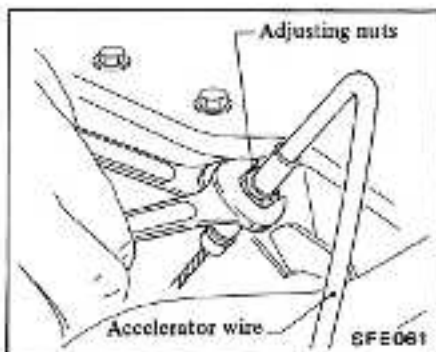
## ENGINE CONTROL SYSTEM



### ADJUSTMENT

#### ACCELERATOR WIRE

Adjust accelerator pedal free play to specification, using adjusting nuts.

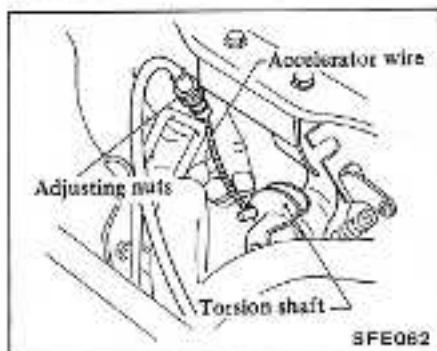


- Depress accelerator pedal to make sure its linkage moves smoothly without jamming or dragging; release pedal to make sure it returns to its original position smoothly.
- Check to see if throttle valve fully opens when accelerator pedal is completely depressed and if it returns to idle when released.
- Pedal height adjustment is not necessary, since its height is determined by stopper.

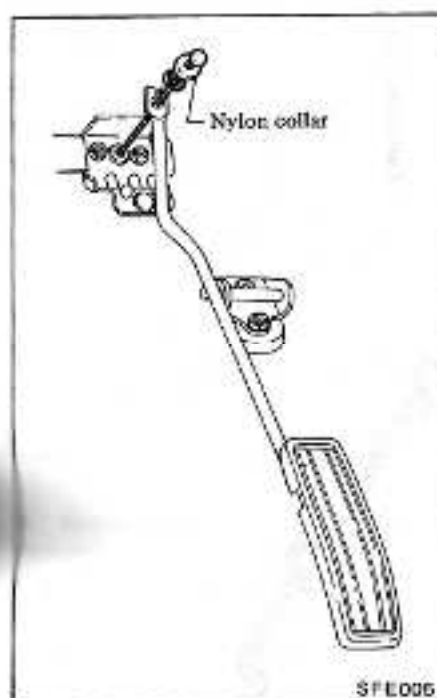
## REMOVAL

### ACCELERATOR WIRE

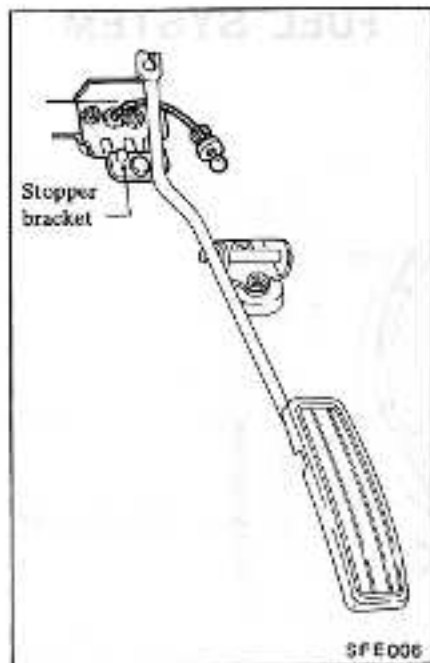
1. Loosen adjusting lock nuts and disconnect accelerator wire from torsion shaft.



2. Remove nylon collar by pushing it toward wire end and disconnect accelerator wire from pedal arm.

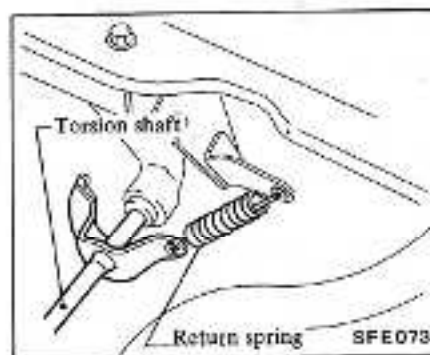


3. Remove pedal stopper bracket, and extract accelerator wire toward passenger compartment.

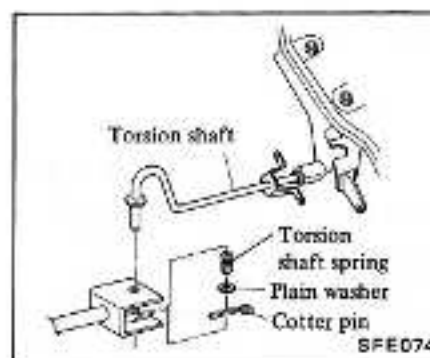


### TORSION SHAFT AND TORSION SHAFT SUPPORT

1. Disconnect accelerator wire by referring to Accelerator Wire.
2. Remove return spring.



3. Remove cotter pin, plain washer and torsion shaft spring. Then, remove torsion shaft.

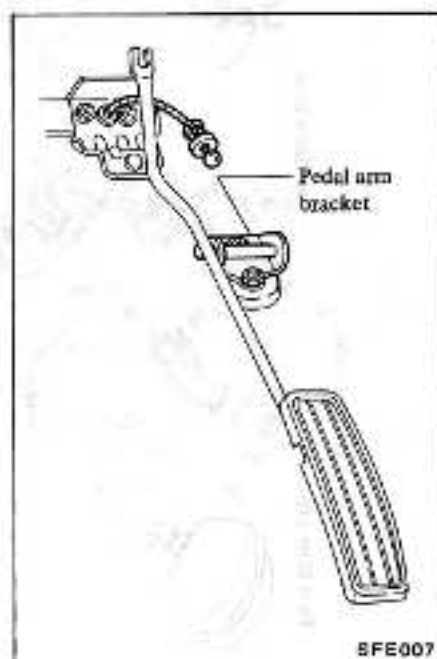


4. Remove torsion shaft support.

### ACCELERATOR PEDAL

Remove nylon collar, and disconnect accelerator wire from tip of pedal arm.

Then remove pedal arm assembly by removing pedal arm bracket retaining bolts.



## INSPECTION

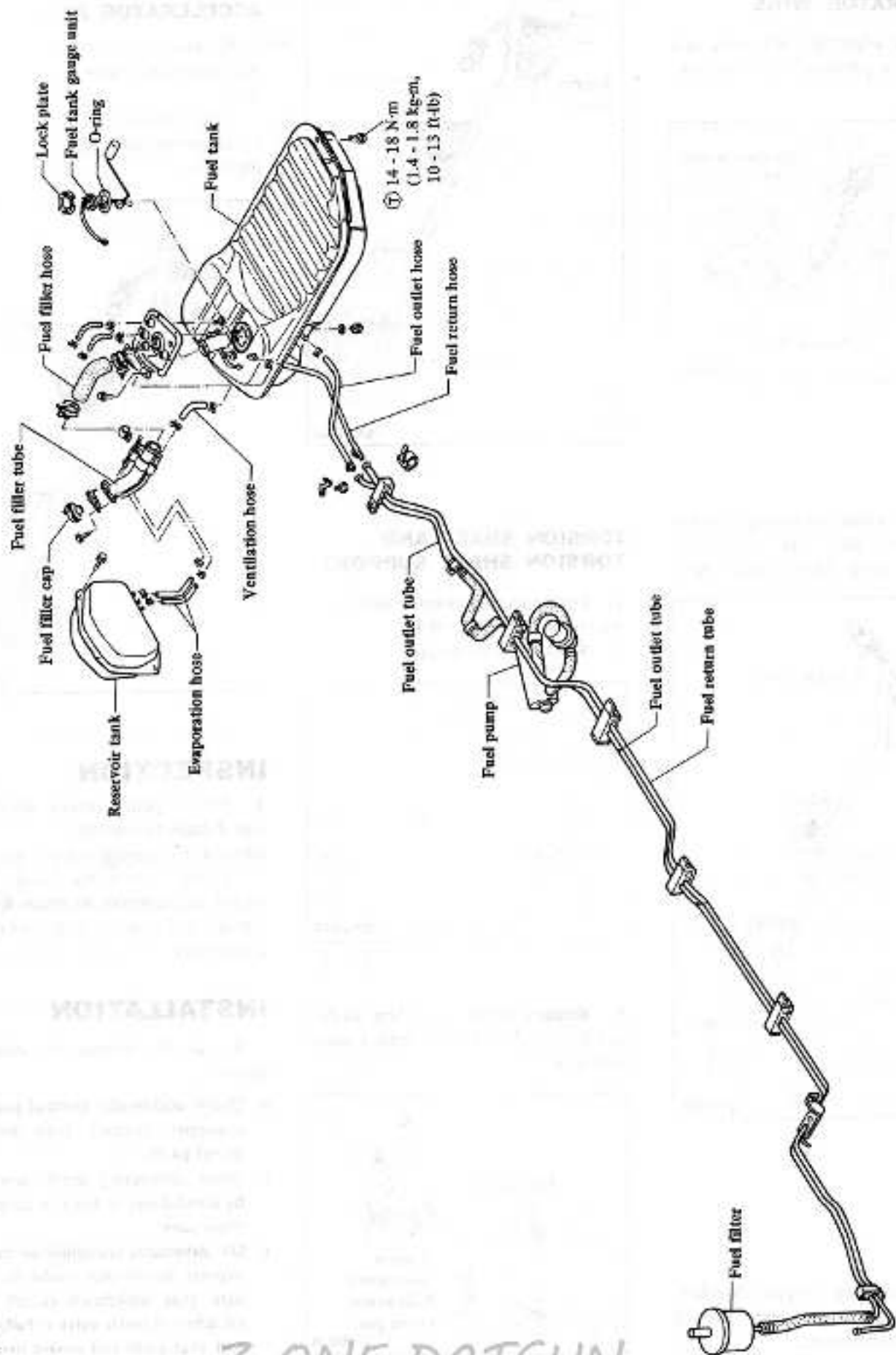
1. Check pedal return spring for rust, fatigue or damage. Replace if necessary.
2. Check accelerator wire, cases, socket and fastening locations for rust, damage or looseness. Repair or replace if necessary.

## INSTALLATION

To install, reverse the order of removal.

- a. Check accelerator control parts for improper contact with any adjacent parts.
- b. When connecting accelerator wire, be careful not to twist or scratch its inner wire.
- c. On automatic transmission models, depress accelerator pedal to make sure that kickdown switch turns on when throttle valve is fully open and that push rod moves properly.

# FUEL SYSTEM



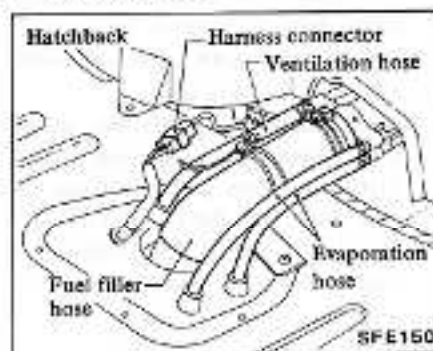
**REMOVAL****WARNING:**

- When replacing fuel line parts, be sure to observe the following:
- put a "CAUTION: INFLAMMABLE" sign in workshop.
  - Be sure to furnish workshop with an asphyxiator.
  - Be sure to disconnect battery ground cable before conducting operations.
  - Put drained fuel in an explosion-proof container and put on lid securely.

**FUEL TANK**

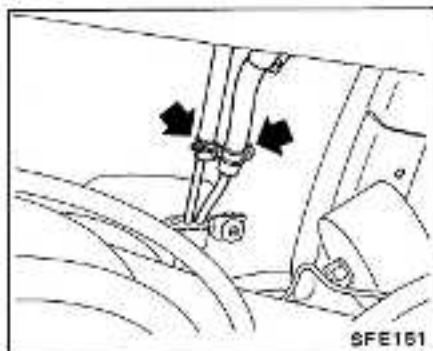
- Remove battery ground cable.
- Drain fuel from fuel tank.
- Remove protector from luggage compartment, and then remove the following parts:

- Harness connector for fuel tank gauge unit
- Ventilation hose
- Evaporation hoses
- Fuel filler hose

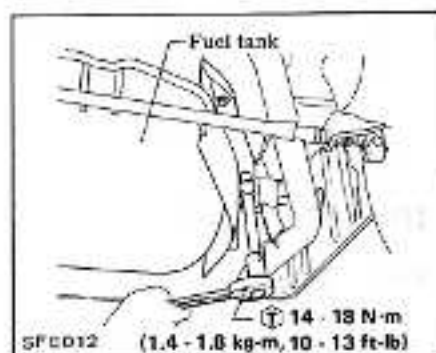


- Remove the following parts from underside of floor.

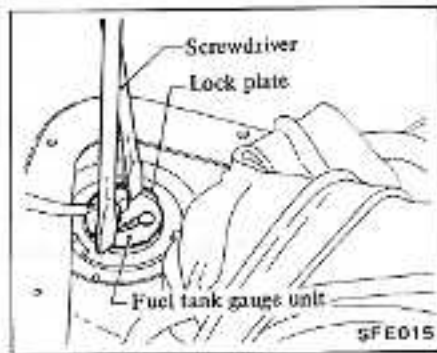
- Fuel outlet hose
- Fuel return hose



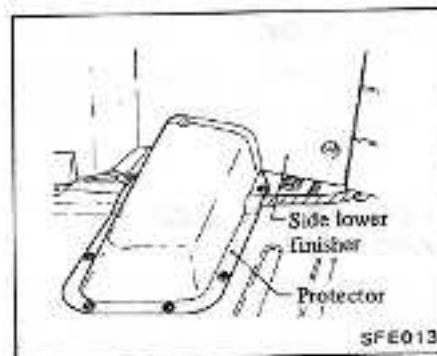
- Remove bolts which secure fuel tank in place, and dismount fuel tank.



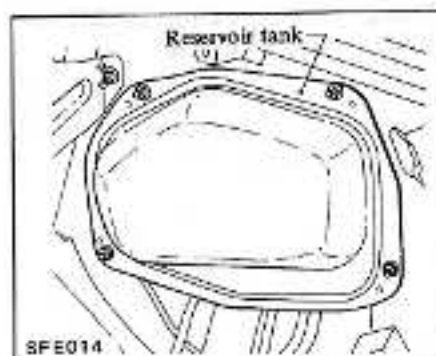
- Turn lock plate counterclockwise and extract fuel tank gauge unit.

**RESERVOIR TANK**

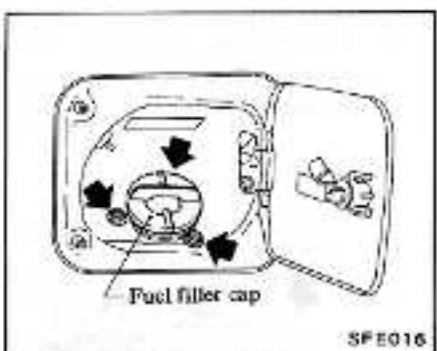
- Remove battery ground cable.
- Remove protector from luggage compartment. Also remove R.H. speaker and side lower finisher.



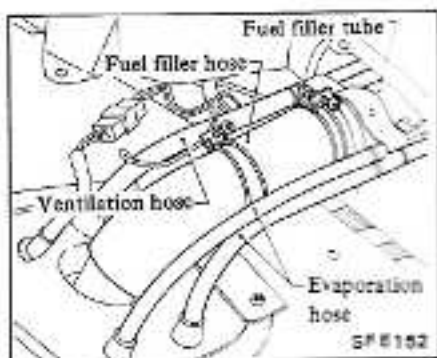
- Remove evaporation hoses, and then remove reservoir tank.

**FUEL FILLER TUBE AND HOSE**

- Disconnect battery ground cable.
- Drain fuel if fuel overflows when disconnecting both fuel filler tube and hose.
- Open fuel filler lid, remove fuel filler cap, and remove fuel filler attaching bolt.



- Remove protectors from luggage compartment. Also remove rear speaker and side lower finisher from right side of luggage compartment. Disconnect ventilation hose and fuel filler hose from fuel tank, and then remove fuel filler tube and hose.

**FUEL TANK GAUGE UNIT**

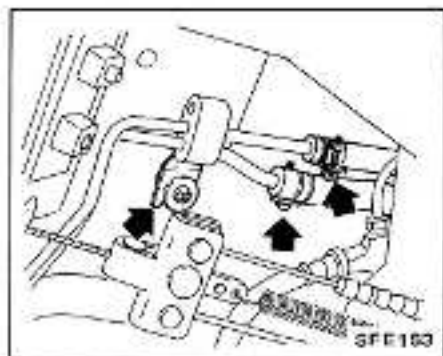
- Disconnect battery ground cable.
- Remove protector from luggage compartment, and disconnect harness for fuel tank gauge unit. Also remove rubber grommet.

## FUEL TUBE

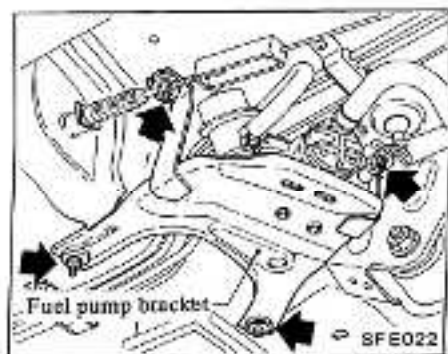
Fuel tubes are serviced as an assembly. Do not disconnect any fuel line unless absolutely necessary.

1. Disconnect battery ground cable.
2. Drain fuel from fuel tank.
3. Loosen fuel hose clamps and disconnect fuel tube at each end.

Plug hose and tube openings to prevent entry of dust or dirt while removing.



4. Remove fuel tube clamps and fuel pump bracket from underbody. Remove fuel tubes and fuel pump as an assembly. Leave brake tube on underbody.



## FUEL PUMP, DAMPER AND FILTER

Refer to Section EF.

## INSPECTION

### FUEL TANK

Check fuel tank for cracks or deformation. If necessary, replace.

### FUEL TANK GAUGE UNIT

Refer to Fuel Tank Gauge Unit for inspection (Section EL).

### FUEL TUBE

Replace any fuel tube that is cracked, rusted, collapsed or deformed.

### FUEL FILLER TUBE AND HOSE

Inspect all hoses and tubes for cracks, fatigue, sweating or deterioration.

Replace any hose or tube that is damaged.

### FUEL PUMP, FUEL DAMPER AND FUEL FILTER

Refer to Fuel Pump, Fuel Damper and Fuel Filter for component parts inspection (Section EF).

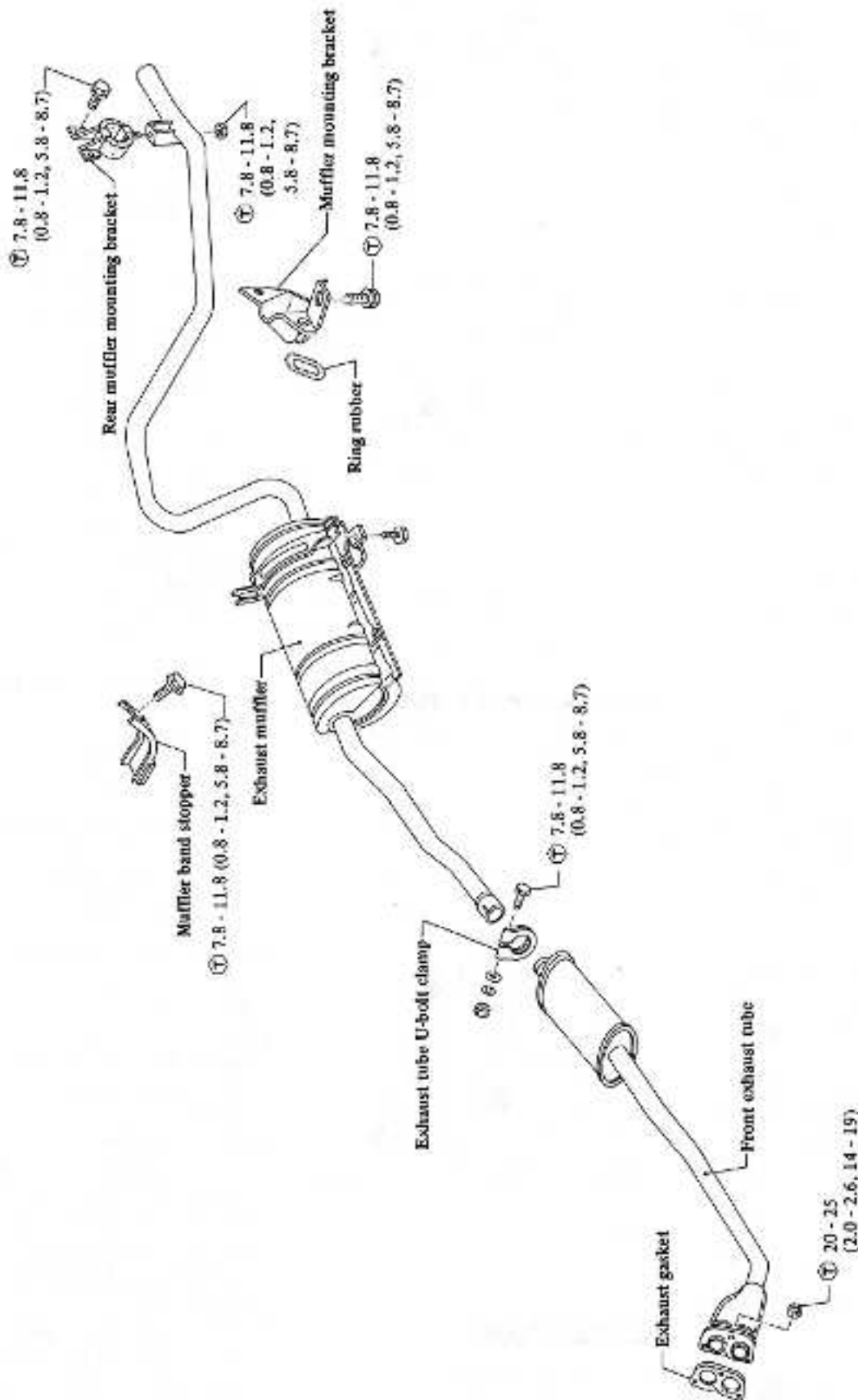
## INSTALLATION

Install any parts of the fuel system in the reverse order of removal. Observe the following notes and refer to Fuel Filter, Fuel Pump, Fuel Damper and Fuel Hose for removal and installation (Section EF).

Ⓣ : Fuel tank retaining bolt  
 14 - 18 N·m  
 (1.4 - 1.8 kg·m,  
 10 - 13 ft·lb)

- a. Install hose clamps securely. Do not tighten excessively to avoid damaging hoses.
- b. Fasten fuel tube clamps on underbody securely. Failure to follow this caution could result in damage to the surface of fuel tube.
- c. Do not kink or twist hose and tube when they are routed.
- d. Run the engine and check for leaks at connections.
- e. Fuel tank  
 Install fuel filler hose after fuel tank has been mounted in place. Failure to follow this rule could result in leakage from around hose connections. Do not twist or smash ventilation and evaporation hoses when they are routed. Be sure to retain them with clips securely.
- f. Fuel tank gauge unit  
 When installing fuel tank gauge unit, align the projection of fuel tank gauge unit with the notch in fuel tank and tighten it securely. Be sure to install fuel tank gauge unit with O-ring in place.

## EXHAUST SYSTEM



⊕ : N·m (kg·m, ft·lb)

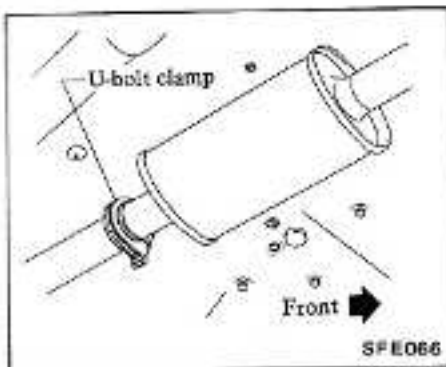
## REMOVAL

### EXHAUST MUFFLER

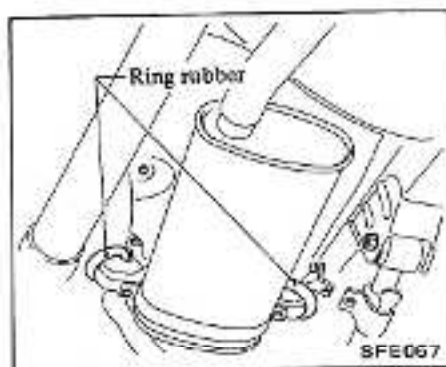
1. Lift up car body at underbody with frame hoist.

Refer to GI section for supporting points.

2. Remove exhaust tube U-bolt clamp.

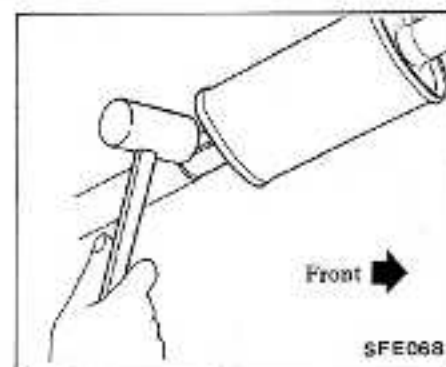


3. Remove exhaust muffler mounting nut at rear end and ring rubbers.

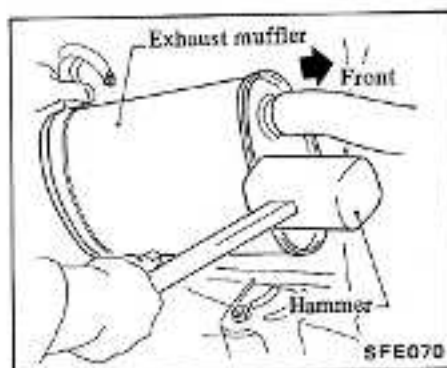


4. Break sealant at the front exhaust tube-to-exhaust muffler connection and take out exhaust muffler as follows.

(1) Break old sealant at the connection by tapping around the tube with a hammer and twisting muffler.



(2) With a rubber hammer, tap on the front end of the exhaust muffler while pushing it toward rear.



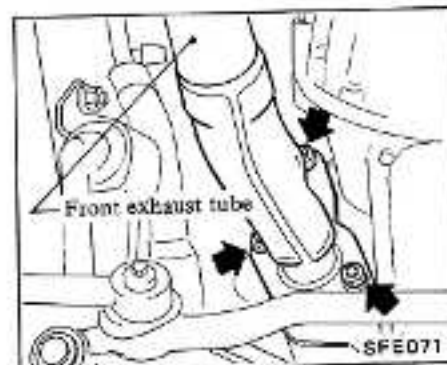
### FRONT EXHAUST TUBE

1. Disconnect exhaust muffler from front exhaust tube.

Refer to Exhaust Muffler.

2. Remove nuts attaching front exhaust manifold.

Then take out front exhaust tube.



### INSPECTION

1. Check exhaust muffler and front exhaust tube for cracks or damage.

Replace any part that is damaged beyond repair.

2. Replace any bracket or hanger rubber parts that are cracked, fatigued, or sweated.

## INSTALLATION

Install the exhaust system parts in the reverse order of removal.

⊕ : Exhaust manifold to front exhaust tube nut

20 - 25 N·m

(2.0 - 2.6 kg-m,

14 - 19 ft-lb)

U-bolt securing nut

7.8 - 11.8 N·m

(0.8 - 1.2 kg-m,

5.8 - 8.7 ft-lb)

Rear muffler mounting bracket nut and bolt

7.8 - 11.8 N·m

(0.8 - 1.2 kg-m,

5.8 - 8.7 ft-lb)

Muffler band stopper attaching bolts

7.8 - 11.8 N·m

(0.8 - 1.2 kg-m,

5.8 - 8.7 ft-lb)

Muffler mounting bracket B

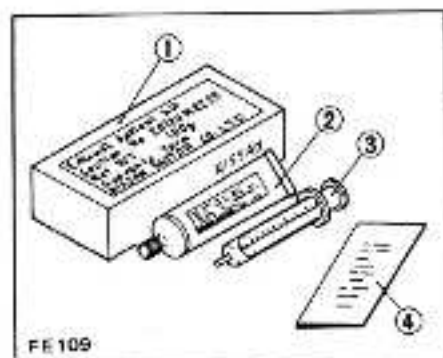
7.8 - 11.8 N·m

(0.8 - 1.2 kg-m,

5.8 - 8.7 ft-lb)

- Keep a sufficient clearance between exhaust system parts and underbody or adjacent parts.
- Check all tube connections for exhaust gas leaks, and entire system for unusual noise, with engine running.
- After installation, check that mounting brackets and mounting rubbers are free from undue stress. If any of the above parts is not installed properly, excessive noises or vibrations may be transmitted to the car body.
- When connecting exhaust tubes, use the genuine Nissan Sealant "Exhaust Kit 20720-N2225" to eliminate gas leakage at the joint. Be sure to observe the following procedures.



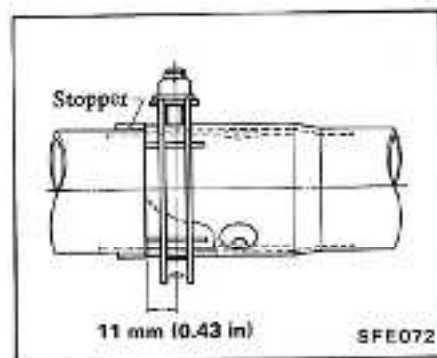


- 1 Case
- 2 Sealant tube (polyethylene)
- 3 Injector
- 4 Instruction sheet

1. Wipe clean all the contact portions of tube joints; allow them to dry thoroughly.

2. Temporarily mount in place exhaust muffler and front exhaust tube on the car.

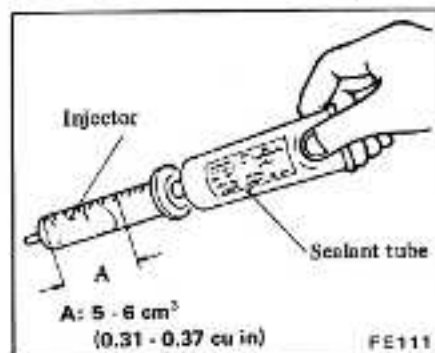
3. Insert the male tube into the female tube fully until the front end of the female tube touches the stopper on the male tube.



4. Tighten nuts at exhaust manifold and rear muffler mounting bracket and U-bolt securing nuts to the specified torque.

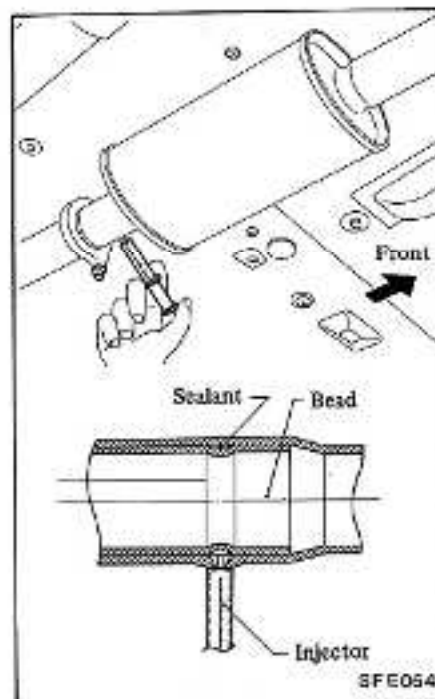
5. Squeeze 5 to 6 cm<sup>3</sup> (0.31 to 0.37 cu in) of sealant into injector from the sealant tube.

Be sure to place the cap back to the sealant tube since sealant will dry.



6. Position the nozzle of injector to the guide and press it there firmly. Inject sealant slowly until sealant begins to flow out of the slit of the tube. This indicates that the head requires no further sealant. Excessive sealant can cause a clogged tube.

After injecting, wash injector thoroughly in clean water to remove all traces of sealant.



7. Start the engine and let it idle slowly for ten minutes (minimum) to harden sealant with the heat of exhaust gas.

8. Check the condition of sealant before driving the car. It is also essential that the car should not be accelerated sharply for 20 to 30 minutes subsequent to this operation.

- a. The sealant should be used within guaranty term indicated on the kit case.
- b. Exposure of sealant to the skin may cause a rash. Wash sealant off the skin with water.
- c. Do not keep the sealant tube in a place where the ambient temperature is 40°C (104°F) or above. A sealant hardened at 40°C (104°F) or above cannot be used. The most suitable storage temperature is from 15 to 35°C (59 to 95°F). If sealant becomes hardened because of low temperatures, warm the sealant tube with lukewarm water until the sealant is softened. Do not warm the tube at a temperature of over 40°C (104°F) for a long period of time.
- d. Thoroughly read the instruction sheet furnished with the kit before using the sealant.

