SERVICE MANUAL

DATSUN 260Z
MODEL S30 SERIES

NISSAN

NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

SECTION FE

ENGINE CONTROL FUEL AND EXHAUST PIPING

FE

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ENGINE CONTROL SYSTEM

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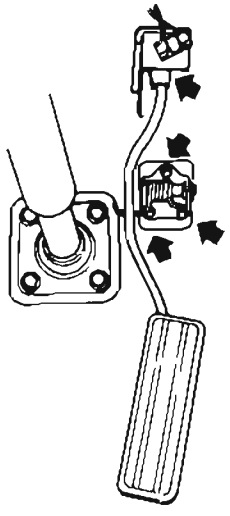
ACCELERATOR SYSTEM

DESCRIPTION

The accelerator linkage has been constructed with minimized weight so that it will not be affected by engine vibration and will operate smoothly at all times.

REMOVAL

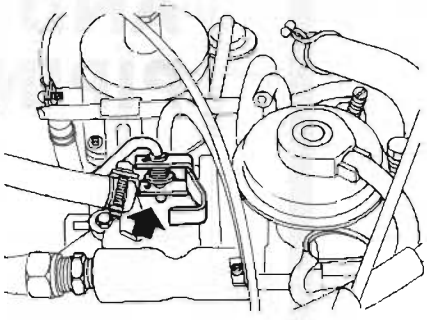
1. Remove three screws from accelerator pedal bracket.
2. Separate accelerator rod from pedal arm at ball joint. See Figure FE-1.



FE164

Fig. FE-1 Removing accelerator pedal arm

3. Remove two bolts from torsion shaft support in engine compartment, disconnect linkage at accelerator shaft connection, and remove accelerator linkage. See Figure FE-2.



ER187

Fig. FE-2 Disconnecting linkage at accelerator shaft connection

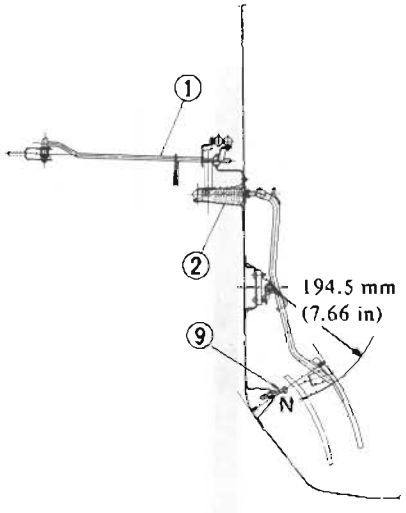
INSPECTION

1. Check accelerator pedal return spring for rust, fatigue or damage.
   Replace if necessary.
2. Check accelerator linkages for rust, damage or looseness.
   Repair or replace if necessary.

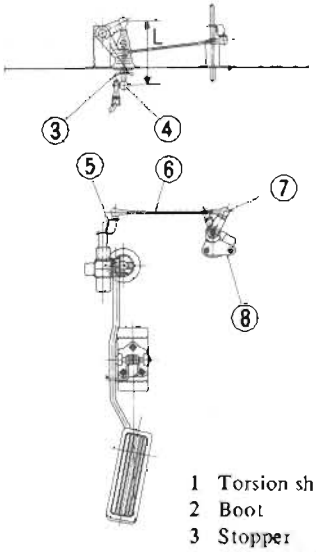
INSTALLATION

To install, reverse the order of removal.

ADJUSTMENT



FE165



1 Torsion shaft
2 Boot
3 Stopper
4 Ball joint No. 1
5 Bell crank
6 Tension rod
7 Ball joint No. 2
8 Torsion shaft support
9 Pedal stopper and nut

Fig. FE-3 Accelerator linkage setting

1. Properly adjust screw on ball joint No. 1 so that the dimension "L" is correctly aligned to 111 mm (4.37 in).
2. Adjust screw on ball joint No. 2 so that the length of tension rod (length between both end ball joint centers) is correctly aligned to 156 mm (6.14 in).
3. Install accelerator linkage on car, and readjust the tension rod length so that carburetor throttle shaft is correctly positioned in "Fully Close" position. In this adjustment, the tension rod length adjusting range is 156±5 mm (6.142±0.197 in) and the size "N" should be 161 mm (6.34 in). (The free height is adjusted automatically by stopper shown in Figure FE-3.)
4. Upon completion of the above adjustment, depress accelerator pedal, and adjust stopper bolt properly so that it comes into contact with pedal when throttle shaft is in "Fully Open" position. Now, turn stopper bolt clockwise one full turn and lock stopper bolt with lock nut.

Kickdown switch

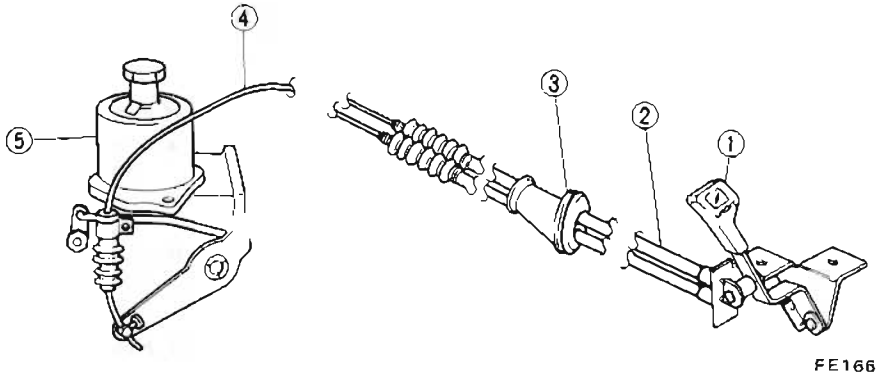
On the automatic transmission models, it is necessary to adjust kickdown switch. The kickdown switch adjustment is correct if it is actuated by kickdown switch striker when accelerator pedal is fully depressed.

Always tighten stopper nut securely after the proper adjustment is obtained.

CHOKE CONTROL SYSTEM

DESCRIPTION

The choke control system is of a manual-operated cable type. See Figure FE-4.



1 Choke knob
2 Choke wire outer case
3 Grommet rubber
4 Choke wire
5 Carburetor

Fig. FE-4 Choke control system

REMOVAL

1. Remove air cleaner.
2. Disconnect choke control wire from carburetor.
3. Remove choke knob.
4. Disconnect choke wire at connection.
5. Disconnect grommet rubber from dash panel.
6. Pull choke control assembly out under instrument panel.

INSTALLATION

To install, reverse the order of removal.

Note: When installing choke control wire assembly, use care not to twist or warp it.

ADJUSTMENT

1. Pull choke control knob out to see that choke lever moves fully.
2. Push choke control knob in to check that choke lever returns to its original position.

FUEL AND EXHAUST SYSTEM

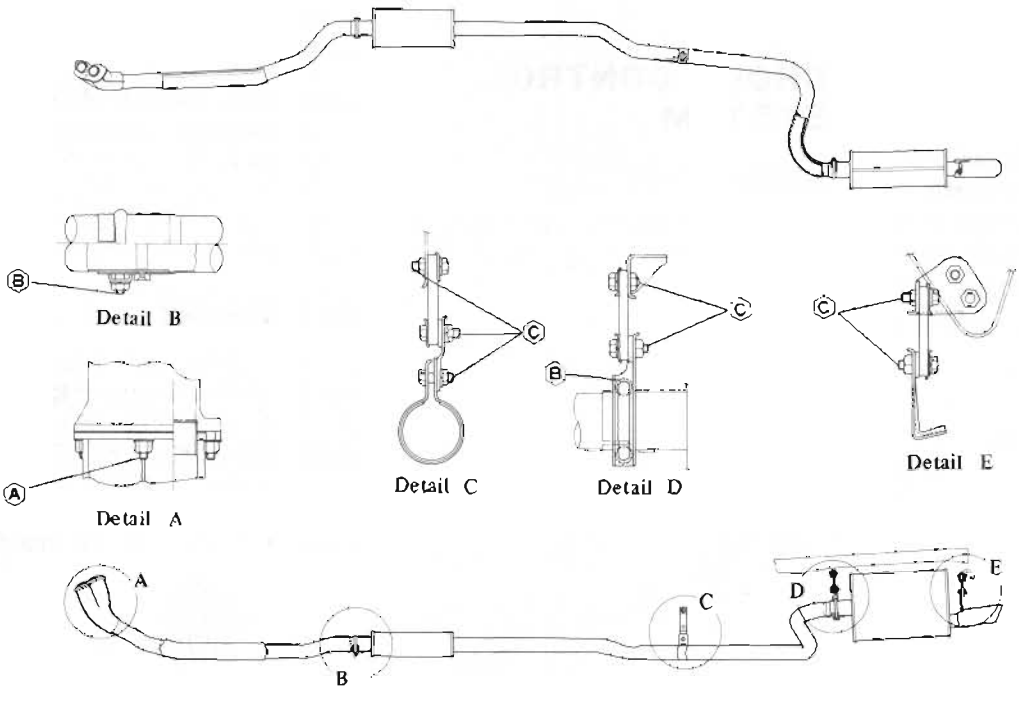
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EXHAUST SYSTEM

DESCRIPTION



Tightening torque:
Ⓐ 2.0 to 2.5 kg-m (14 to 18 ft-lb)
Ⓑ 1.6 to 2.1 kg-m (12 to 15 ft-lb)
Ⓒ 0.8 to 1.3 kg-m (5.8 to 9.4 ft-lb)

FE167

Fig. FE-5 Exhaust system

The exhaust system consists of three units: front tube, pre-muffler and center tube, and main muffler and tail pipe. They are coupled with exhaust tube clip and a special sealant at the muffler inlet. Use of this sealant eliminates the possible leakage of exhaust gases.

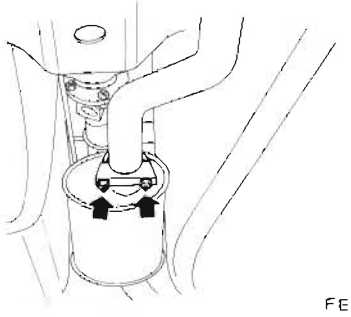
Therefore, when replacing muffler or disconnecting exhaust tubes in two or three pieces, special service procedures are required.

As shown in Figure FE-5, the exhaust system is mounted at points "C", "D" and "E" and clamped at points "B" and "D" with U-bolts.

REMOVAL

1. Remove exhaust tube clamp nuts. (U-bolt)

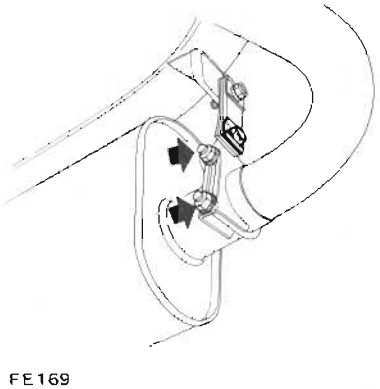
See Figures FE-6 and FE-7.



FE168

Tightening torque:
1.6 to 2.1 kg-m (12 to 15 ft-lb)

Fig. FE-6 Removing U-bolt (front)



FE169

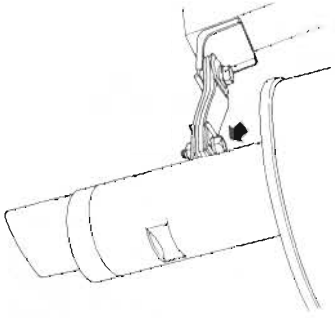
Tightening torque:
1.6 to 2.1 kg-m (12 to 15 ft-lb)

Fig. FE-7 Removing U-bolt (rear)

2. Break sealant off at the front-to-pre-muffler and center-to-main muffler connections.

Note: A sealant is applied to the tube connections to eliminate leakage of exhaust gases.
Observe the procedures outlined later in this section as a guide.

3. Hang front tube end with a suitable thread or a wire to prevent tube from falling.
4. Remove rear tube mounting bolt and main muffler assembly. See Figure FE-8.

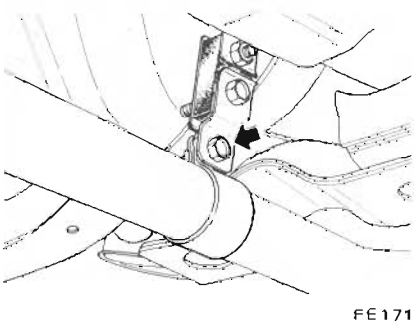


FE170

Tightenig torque:
0.8 to 1.3 kg-m (5.8 to 9.4 ft-lb)

Fig. FE-8 Removing rear tube mounting bolt

5. Remove center tube mounting clamp bolt, and center tube assembly. See Figure FE-9.

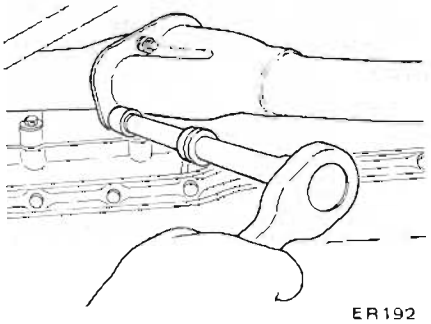


FE171

Tightening torque:
0.8 to 1.3 kg-m (5.8 to 9.4 ft-lb)

Fig. FE-9 Removing center

6. Remove nuts securing front tube to exhaust manifold, and remove front tube. See Figure FE-10.



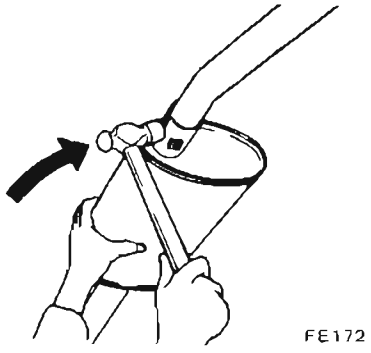
ER192

Tightening torque:
2.0 to 2.5 kg-m (14 to 18 ft-lb)

Fig. FE-10 Removing front tube

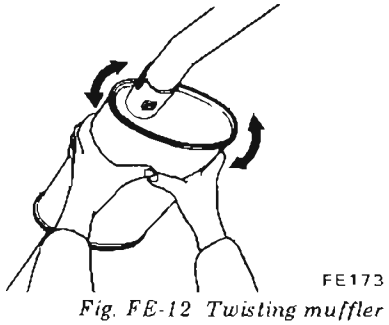
When disconnecting exhaust tube connections, observe the following:

(1) Break old sealant off at the connection by lightly tapping around tube with a hammer and twisting muffler. See Figures FE-11 and FE-12.



FE172

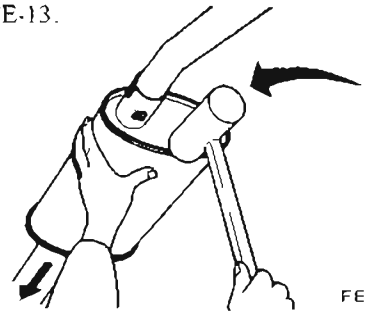
Fig. FE-11 Breaking sealant



FE173

Fig. FE-12 Twisting muffler

(2) Using a rubber hammer, tap on the front end of muffler while pushing it toward rear. The muffler assembly can then be taken out. See Figure FE-13.



FE174

Fig. FE-13 Tapping muffler with a rubber hammer

INSPECTION

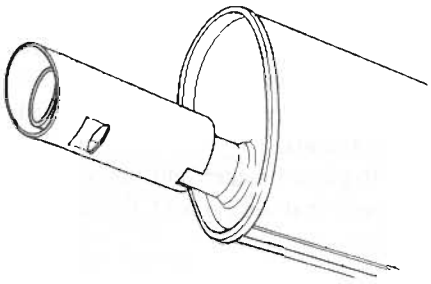
1. Check muffler and tubes for cracks or damage.
Replace any part that is damaged beyond limits.
2. Replace bracket and hanger rubber parts that are cracked, fatigued, or sweated.

INSTALLATION

Install the exhaust system assembly in the reverse order of removal. Observe the following:

Notes:

a. Muffler tube inserting depth is approximately 65 mm (2.56 in).
b. When there is no clearance between tube and floor or propeller shaft, turn tube along center line of tube in the manifold connecting unit, and obtain proper clearance.
c. Check all tube connections for exhaust gas leaks, and entire system for unusual noises, with engine running.
d. 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 car body.
e. Tightening torque:
   - Exhaust manifold to front tube nuts:
     2.0 to 2.5 kg-m
     (14 to 18 ft-lb)
   - Front tube and pre-muffler securing nuts:
     1.6 to 2.1 kg-m
     (12 to 15 ft-lb)
   - Center tube mounting bolts:
     0.8 to 1.3 kg-m
     (5.8 to 9.4 ft-lb)
   - Center tube and main muffler securing nuts:
     1.6 to 2.1 kg-m
     (12 to 15 ft-lb)
   - Rear tube mounting bolts: (front and rear)
     0.8 to 1.3 kg-m
     (5.8 to 9.4 ft-lb)
f. Since exhaust finisher is a tubular design, be careful not to make air invade into it when making a gas sampling.



FE175

Fig. FE-14 Finisher

If exhaust tubes are separated at connection to renew muffler assembly, etc., use the Genuine Nissan Sealant "Exhaust Sealant Kit 20720-N2225" (See Figure FE-15) to eliminate gas leakage at joint.

Be sure to observe the following:

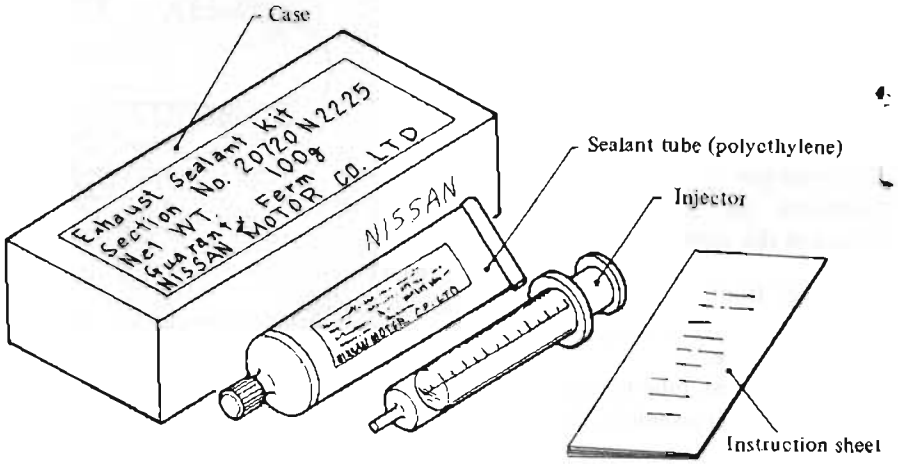
1. Wipe clean all the contact portions of tube joints; allow them to dry thoroughly.
2. Temporarily mount in place muffler assembly as an assembled unit on the car.
3. Insert male tube into female tube approximately 65 mm (2.56 in). See Figure FE-16.
4. Torque nut securing male and female tubes at the connection. Tightening torque is 1.6 to 2.1 kg-m (12 to 15 ft-lb).
5. Squeeze approximately 5 cc (0.31 cu in) of sealant into injection from sealant tube. See Figure FE-17.

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

6. Position nozzle of injector to the guide and press it there firmly. Inject sealant slowly until sealant begins to flow out of the slit of tube. This indicates that the bead requires no further sealant. Excessive sealant can cause a clogged tube. See Figure FE-18.

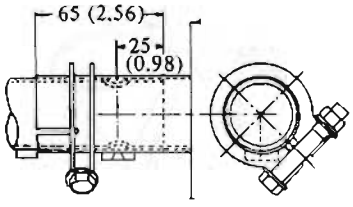
After injecting, wash injector thoroughly in clean water to remove all traces of sealant.

7. Start 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.



FE109

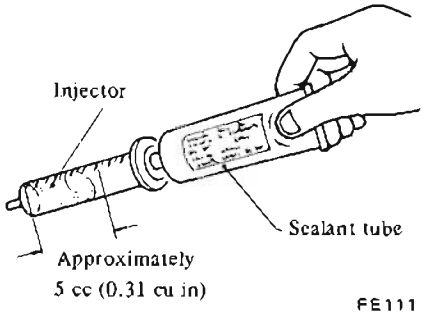
Fig. FE-15 Exhaust sealant kit



Unit: mm (in)

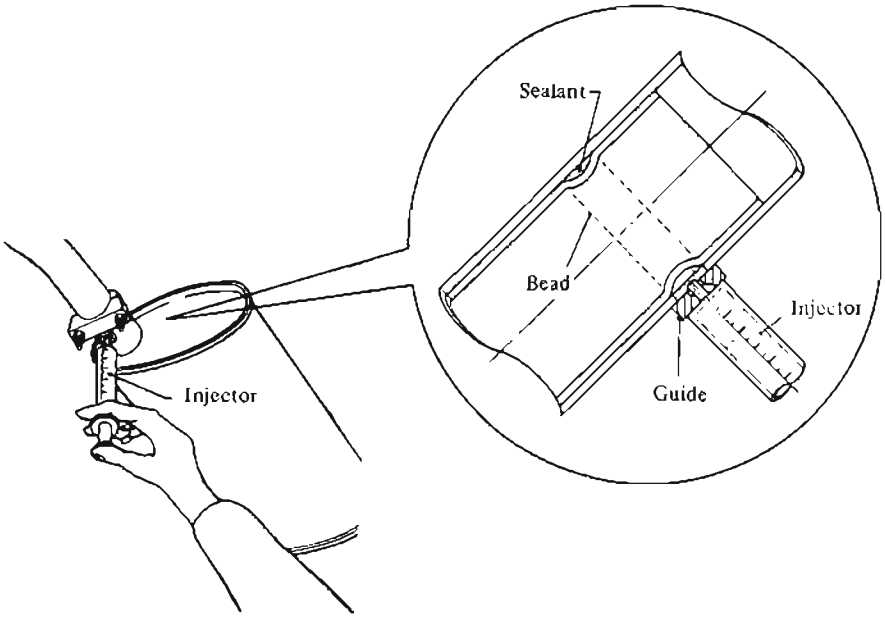
FE176

Fig. FE-16 Exhaust tube connection



FE111

Fig. FE-17 Squeezing sealant to injector



FE178

Fig. FE-18 Injecting sealant

Notes:

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 above 40°C (104°F). A sealant hardened above 40°C (104°F) 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 tube at a temperature over 40°C (104°F) for a long time.
d. Thoroughly read the instruction sheet furnished with the kit before using the sealant.

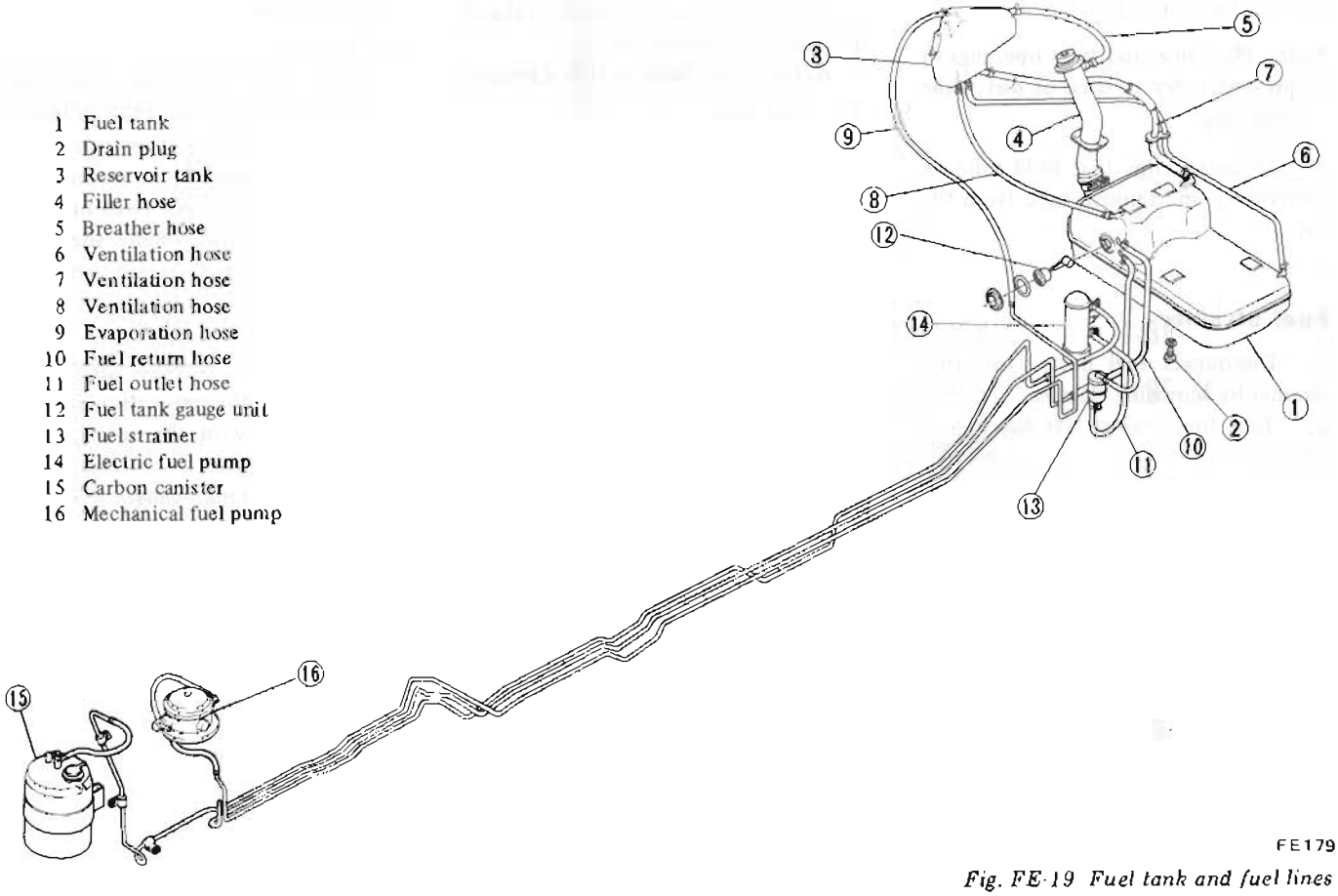
FUEL SYSTEM

DESCRIPTION

The fuel tank is installed beneath the rear floor with two bands; approximately half of it is located beneath the spare tire housing. The fuel tank capacity is 60 liters (15 ⅞ U.S.gal.).

The fuel inlet is in the filler lid located in the rear right side panel, and the filler cap is a hermetic type. The bayonet type gauge unit is installed on the front surface of the tank. A reservoir as shown in Figure FE-19 is provided so as to relieve expansion and bubbles due to heating.

1 Fuel tank
2 Drain plug
3 Reservoir tank
4 Filler hose
5 Breather hose
6 Ventilation hose
7 Ventilation hose
8 Ventilation hose
9 Evaporation hose
10 Fuel return hose
11 Fuel outlet hose
12 Fuel tank gauge unit
13 Fuel strainer
14 Electric fuel pump
15 Carbon canister
16 Mechanical fuel pump



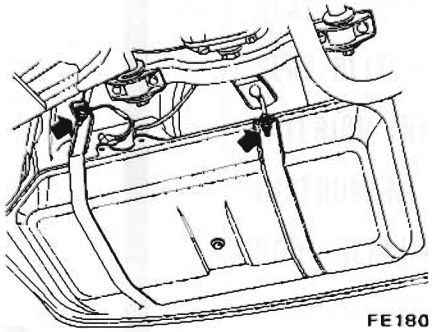
FE179

Fig. FE-19 Fuel tank and fuel lines

REMOVAL

Fuel tank

1. Disconnect battery ground cable.
2. Remove drain plug from tank bottom, and drain fuel completely.
3. Disconnect gauge unit cable, outlet hose and return hose from tank.
4. Remove nuts from two tank securing bands, and slightly lower the tank. See Figure FE-20.



FE180

Fig. FE-20 Removing nuts from tank securing bands

5. Disconnect three ventilation hoses (used to connect the reservoir to tank) and filler hose from tank, and dismount tank.
6. Disconnect breather hose (used to connect the filler hose to reservoir), remove reservoir installation bolts, and remove reservoir.

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

Fuel line

The fuel line between mechanical pump and fuel tank is a single molded unit, a construction which completely eliminates fuel leakage. Moreover, the fuel line is equipped with a fuel return pipe, which prevents vapor lock and similar phenomena.

Fuel tubes are serviced as an assembly, so that the replacement of fuel tube can be easily done. However, do not disconnect any fuel line unless absolutely necessary.

1. Drain fuel from fuel tank.
2. Loosen fuel hose clamps and disconnect fuel tube at each end.

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

3. Unfasten clips that hold tube on underbody and remove tube from the car.

Fuel strainer

1. Disconnect fuel hoses from fuel strainer by removing clamps.
2. Take fuel strainer out. See Figure FE-21.

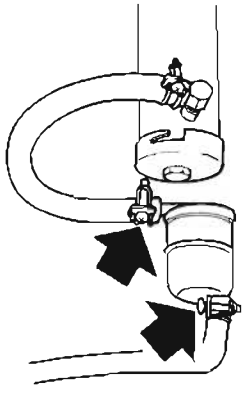


Fig. FE-21 Taking fuel strainer out

Fuel tank gauge unit

1. Disconnect battery ground cable. (Sedan only)
2. Disconnect wires from fuel tank gauge unit.
3. Gauge unit is of a bayonet type and can be removed by turning it counterclockwise with screwdriver.

INSPECTION

1. Fuel tank

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

2. Fuel hose

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

Replace any hose that is damaged.

3. Fuel tube

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

Note: Inspect hoses and tubes according to the periodical maintenance schedule.

4. Fuel strainer

Replace fuel strainer according to the periodical maintenance schedule or when it is clogged or restricted.

Fuel strainer is of a cartridge type and cannot be cleaned. Always replace with a new one.

INSTALLATION

Install any parts of the fuel system in reverse order of removal. Observe the following:

Notes:

a. Install hose clamps securely. Do not tighten excessively to avoid damaging hoses.
b. Fasten clips holding fuel tube 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 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 breather 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 tank gauge unit with the notch in fuel tank and tighten it securely. Be sure to install tank gauge unit with O-ring place.