

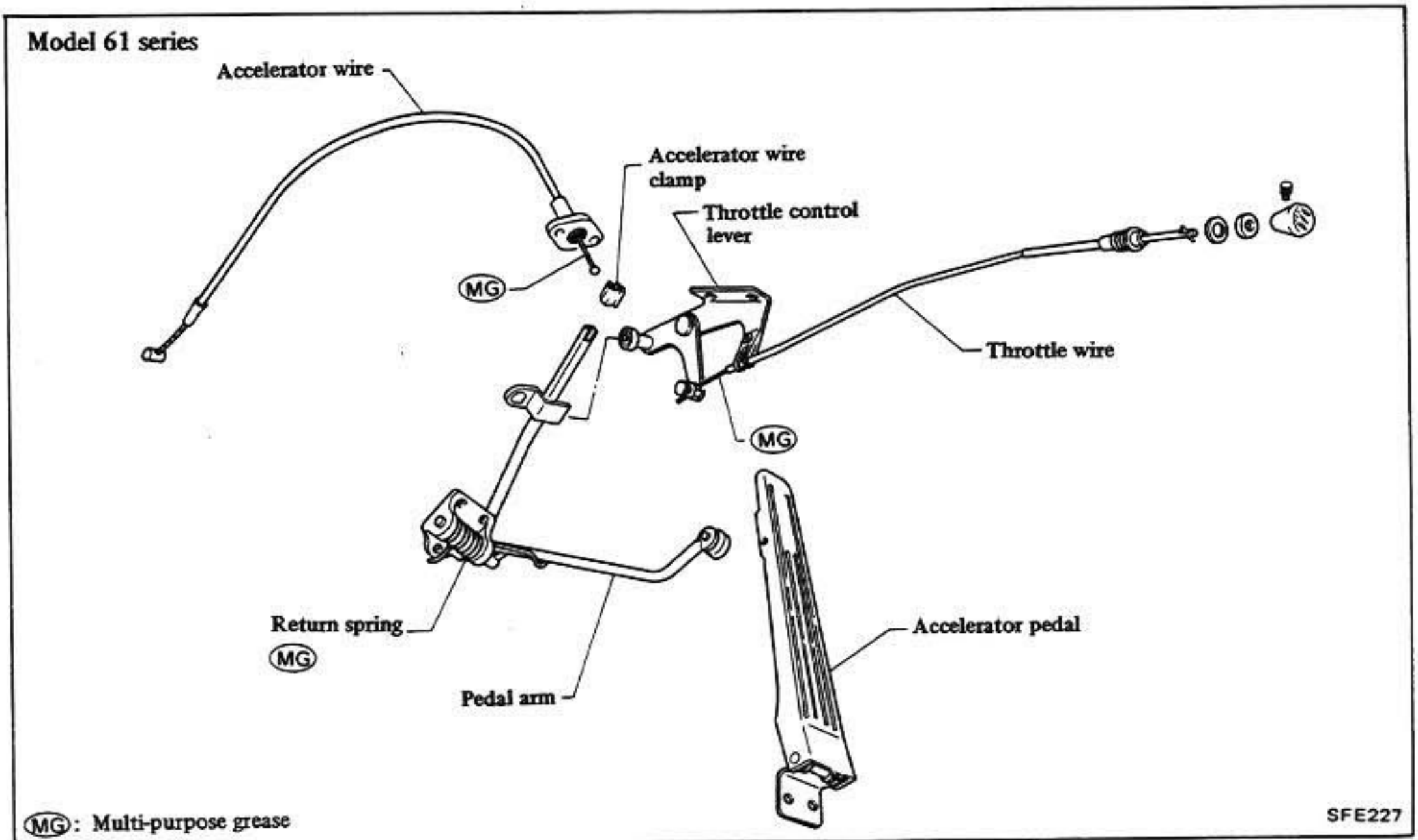
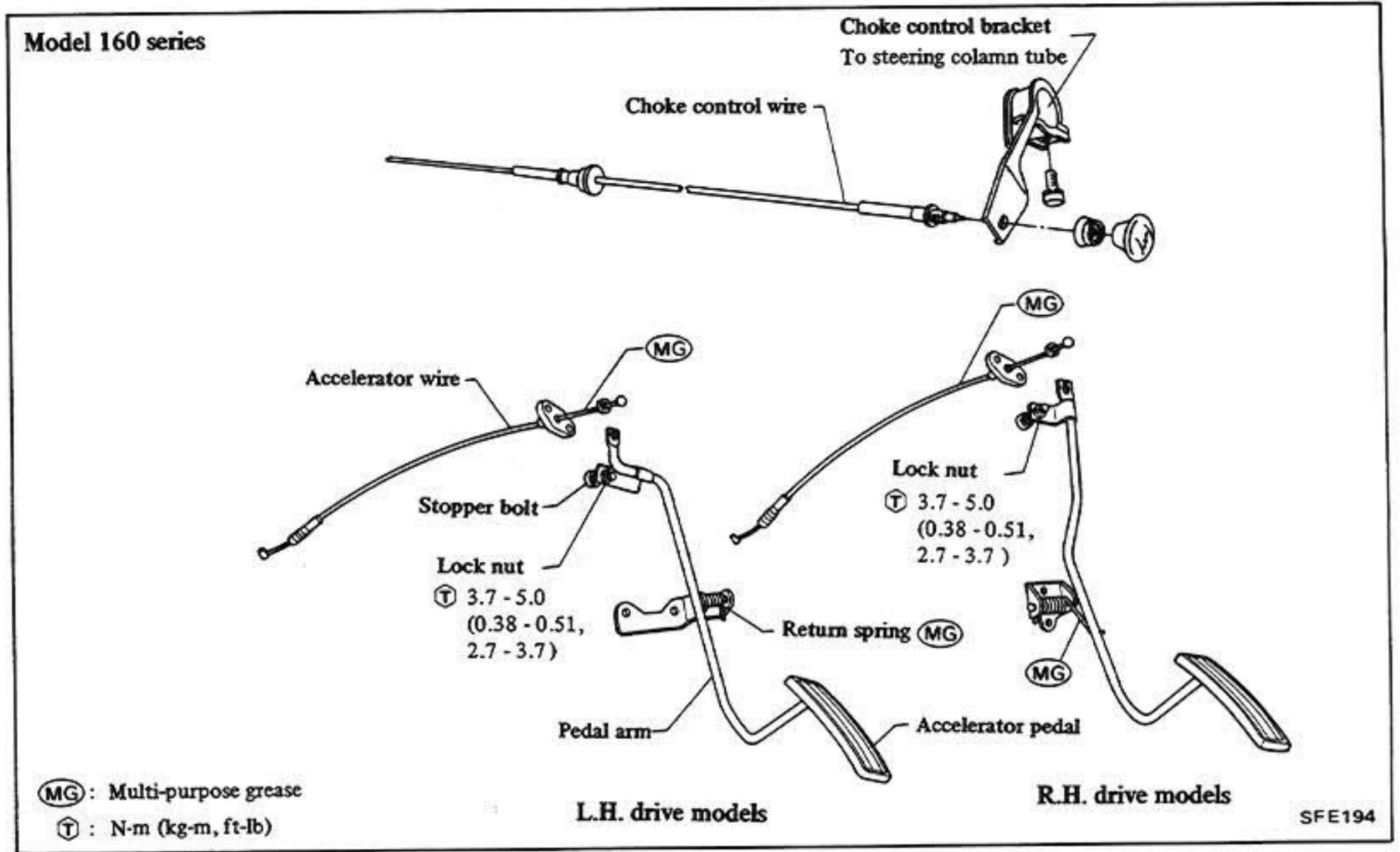
ENGINE CONTROL, FUEL & EXHAUST SYSTEMS

CONTENTS

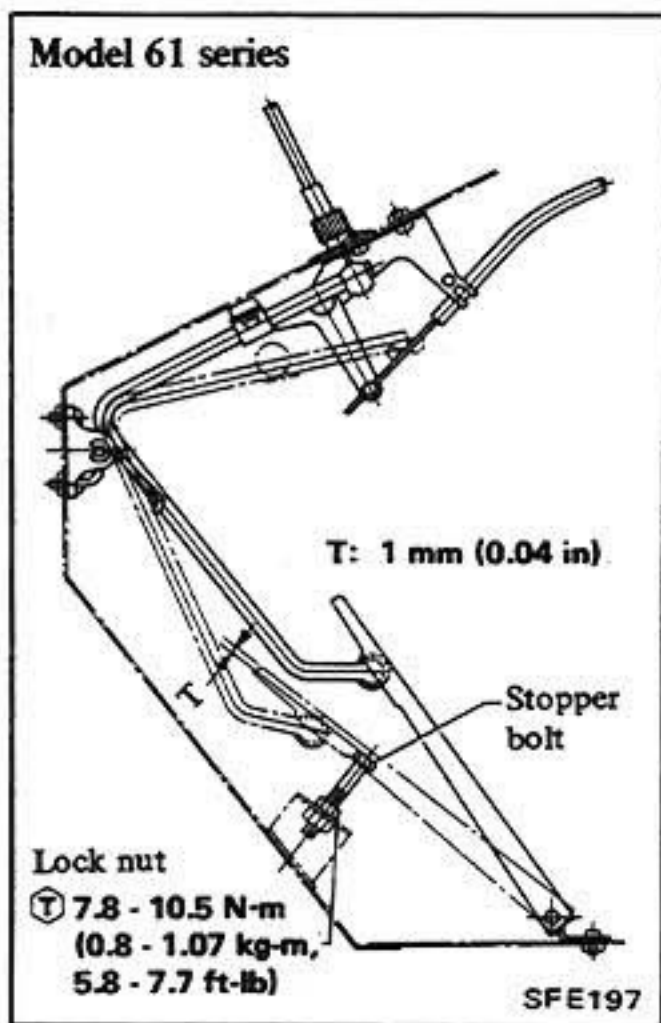
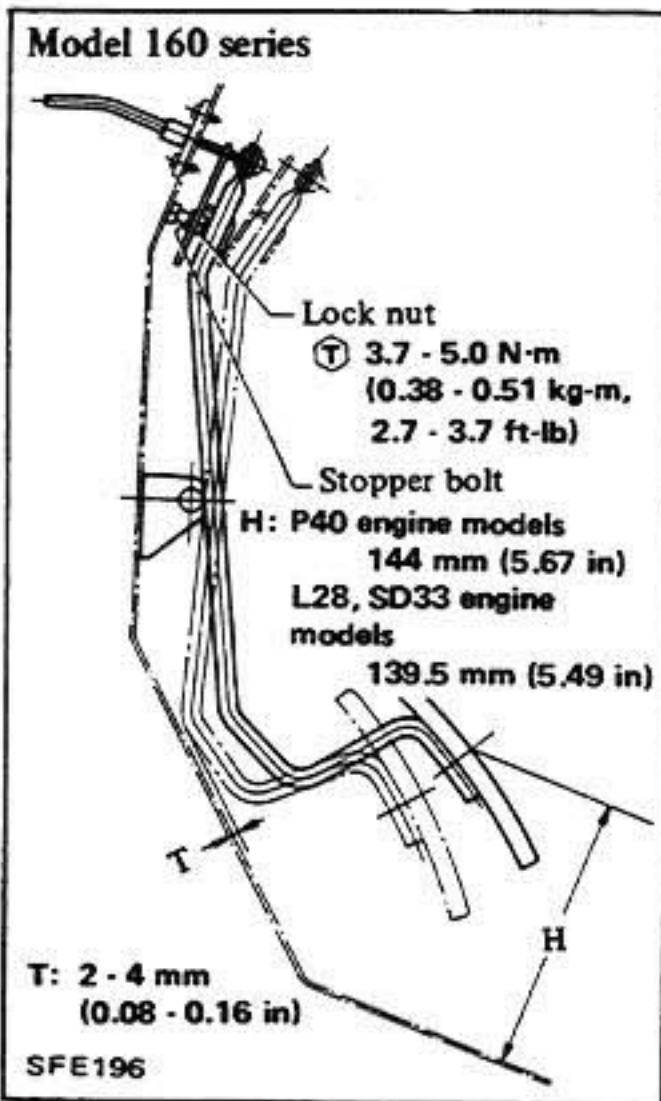
ENGINE CONTROL SYSTEM	FE- 2	FUEL SYSTEM	FE- 8
ACCELERATOR AND WIRE	FE- 2	REMOVAL	FE- 9
CHOKE CONTROL WIRE		INSPECTION	FE-10
(Gasoline engine)	FE- 4	INSTALLATION	FE-10
THROTTLE CONTROL WIRE	FE- 5	EXHAUST SYSTEM	FE-11
INJECTION PUMP CONTROL		REMOVAL	FE-12
MECHANISM (Diesel engine)	FE- 7	INSPECTION	FE-13
INJECTION PUMP CONTROL		INSTALLATION	FE-14
UNIT (D.P.C. module)	FE- 7		

ENGINE CONTROL SYSTEM

ACCELERATOR AND WIRE



ADJUSTMENT



1. Adjust accelerator pedal height "H" with pedal stopper bolt. Then tighten lock nut (Model 160 series).

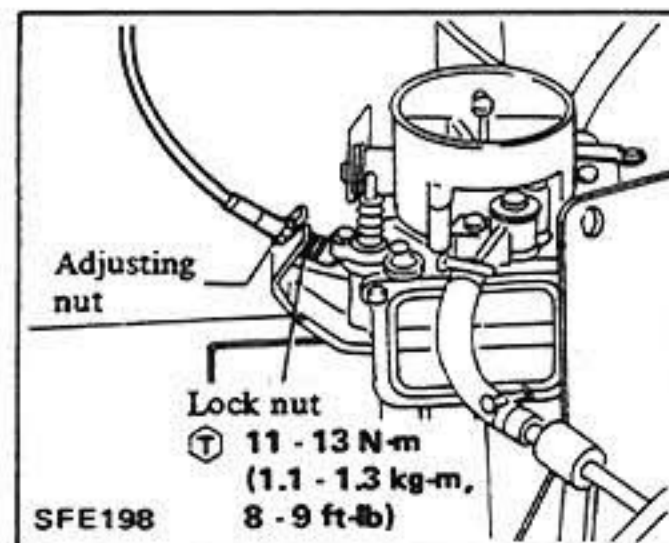
Pedal height "H":

- Except Canvas Top
- P40 engine models
144 mm (5.67 in)
- L28, SD33 engine models
139.5 mm (5.49 in)

- Ⓣ : Stopper lock nut
- Model 160 series
3.7 - 5.0 N-m
(0.38 - 0.51 kg-m,
2.7 - 3.7 ft-lb)
 - Model 61 series
7.8 - 10.5 N-m
(0.8 - 1.07 kg-m,
5.8 - 7.7 ft-lb)

2. Adjust accelerator wire play as follows:

- (1) Set throttle valve to completely closed position, with wire sufficiently slackened.
- (2) Tighten adjusting nut up to such an extent that throttle lever is about to move (play is zero at the time).
- (3) Unscrew adjusting nut one to two turns so that accelerator wire play is 1.0 to 2.5 mm (0.039 to 0.098 in). Tighten lock nut.



3. After completing the adjustment as previously explained, check the following:

- (1) Make sure the accelerator system functions smoothly and quietly without disturbing any adjacent parts.
- (2) **Model 160 series:**
Depress accelerator pedal down until throttle valve fully opens. Make sure that the clearance "T" between accelerator pedal reverse side and dash floor is 2 to 4 mm (0.08 to 0.16 in) without floor mat. Adjust pedal stopper bolt and lock nut if beyond limits.

Model 61 series:

Depress accelerator pedal down until throttle valve fully opens. Make sure that the clearance "T" between accelerator pedal and pedal stopper bolt is 1 mm (0.04 in). Adjust pedal stopper bolt and lock nut if beyond limits.

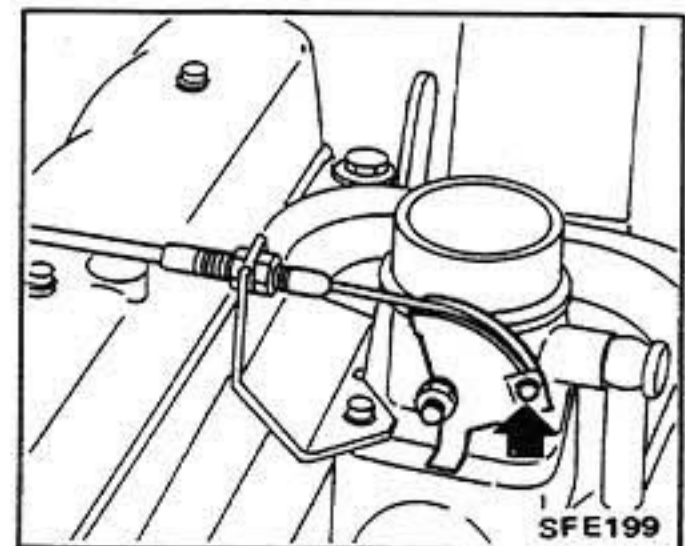
(3) Check throttle lever if it returns to the original position as soon as accelerator pedal is released.

(4) Apply a small amount of recommended multi-purpose grease as shown on page FE-2.

REMOVAL

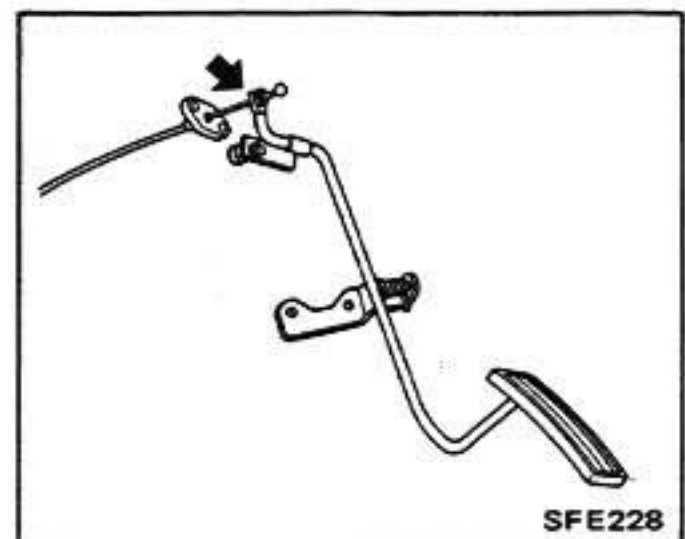
Accelerator wire

1. Remove air cleaner assembly.
2. Disconnect accelerator wire from carburetor.



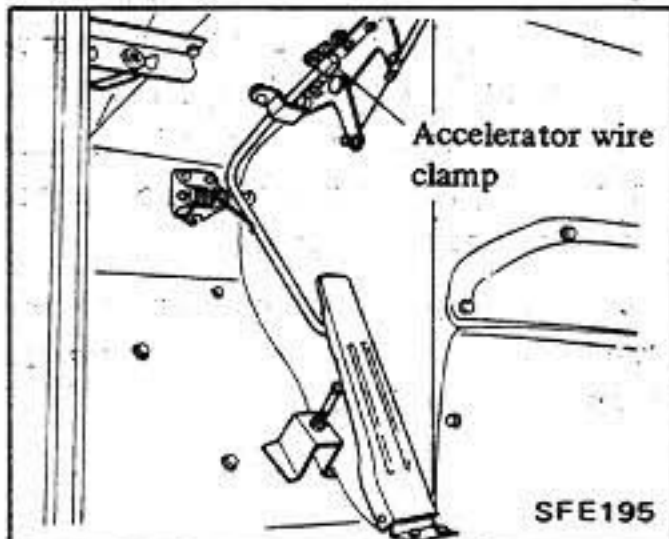
3. **Model 160 series:**

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

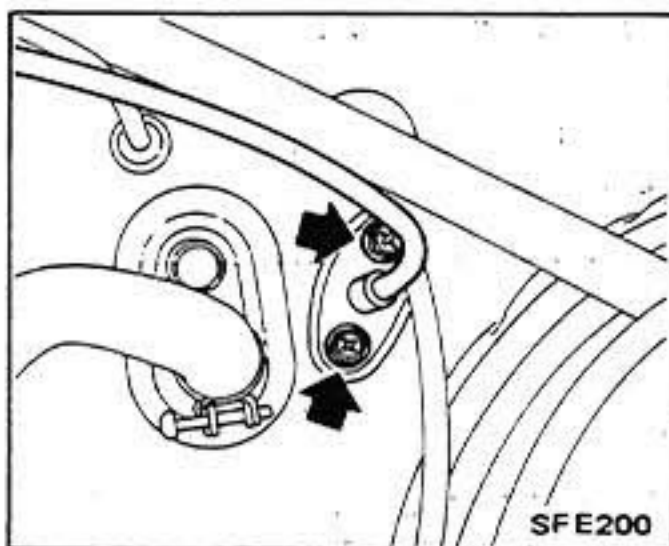


Model 61 series:

Remove accelerator wire clamp by pulling it and disconnect accelerator wire from accelerator pedal arm.

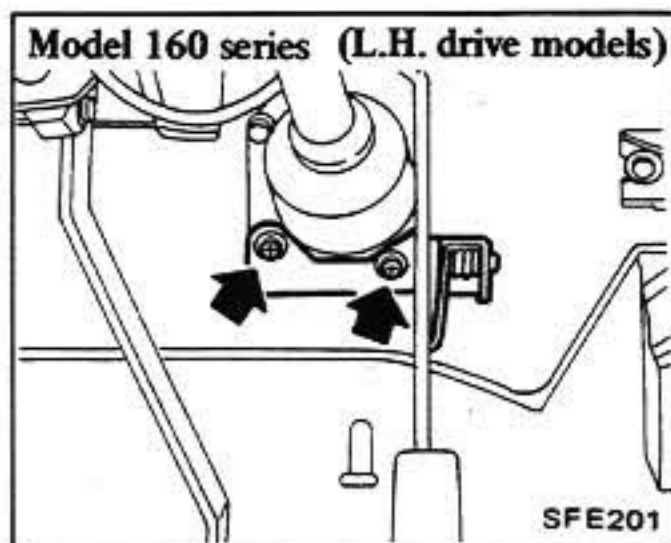


4. Remove outer case of the accelerator wire from the body, and detach accelerator wire.

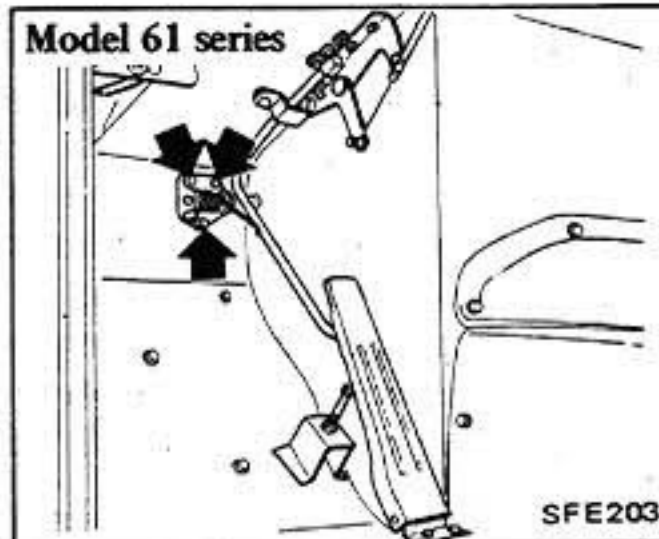
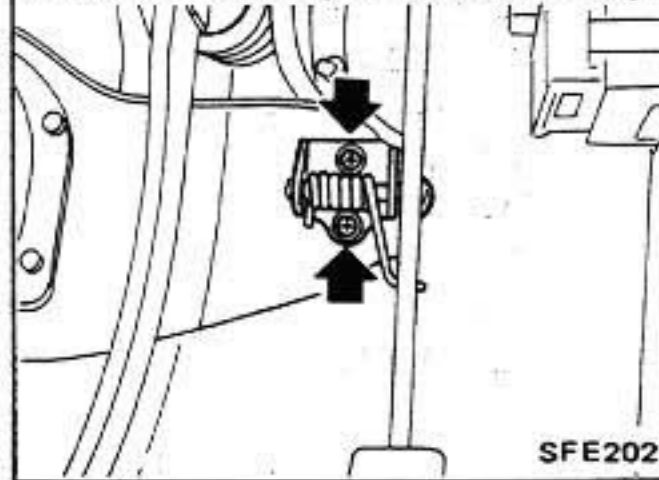


Accelerator pedal

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



Model 160 series (R.H. drive models).



INSPECTION

Accelerator pedal and wire

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

INSTALLATION

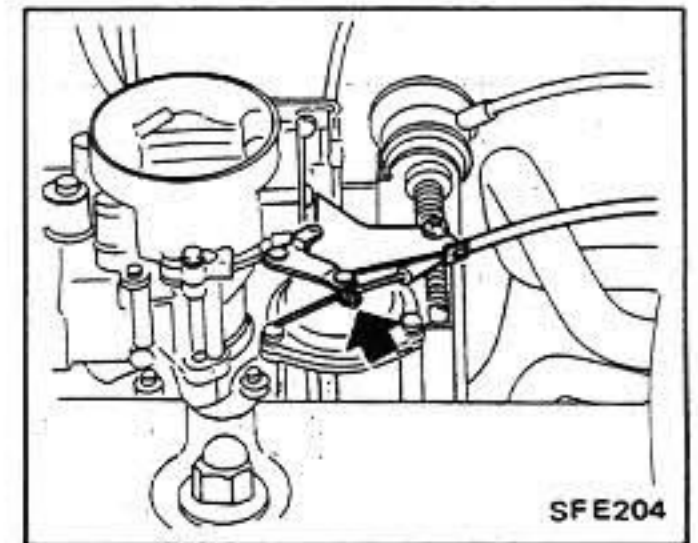
To install, reverse the order of removal.

Apply a small amount of recommended multi-purpose grease to portion (MG) as shown on page FE-2.

CHOKE CONTROL WIRE (Gasoline engine)

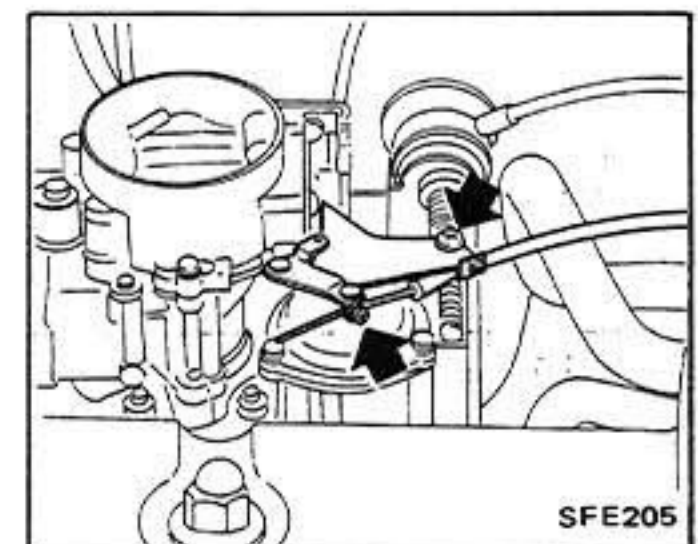
ADJUSTMENT

The choke control adjustment is accomplished when carburetor choke valve returns to its original position as choke knob is fully pushed in. The wire should be slack when it is securely connected to carburetor.

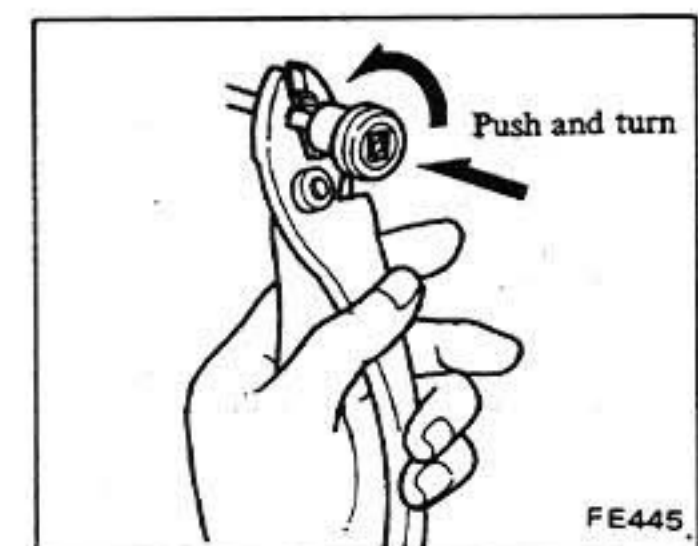


REMOVAL

1. Remove air cleaner assembly.
2. Disconnect choke wire from choke control lever of carburetor.



3. Remove choke knob. Pull out knob, hold wire with pliers, and then rotate knob 90° counterclockwise while pushing on knob. Wrap wire with rags to avoid damaging wire.

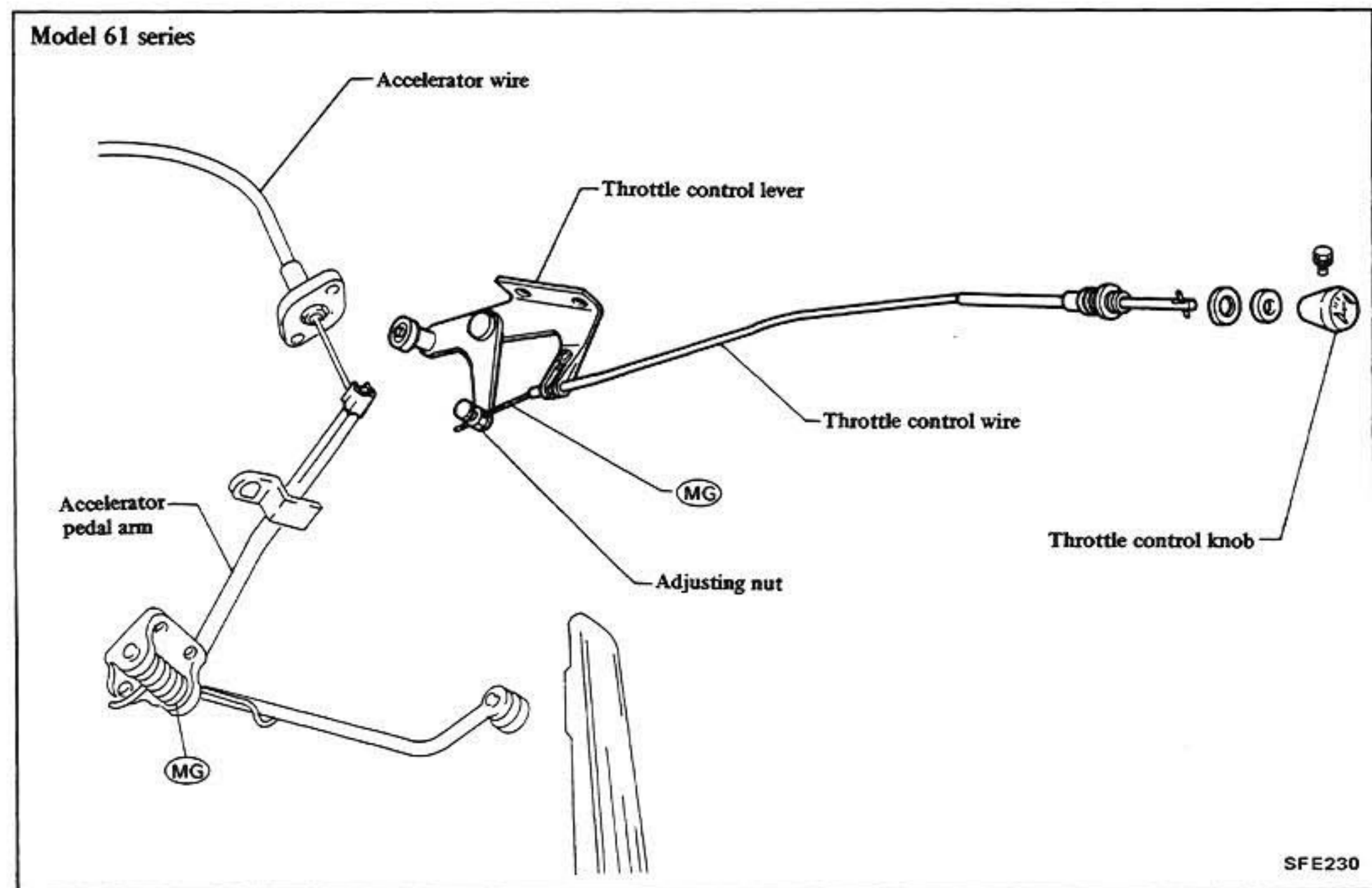
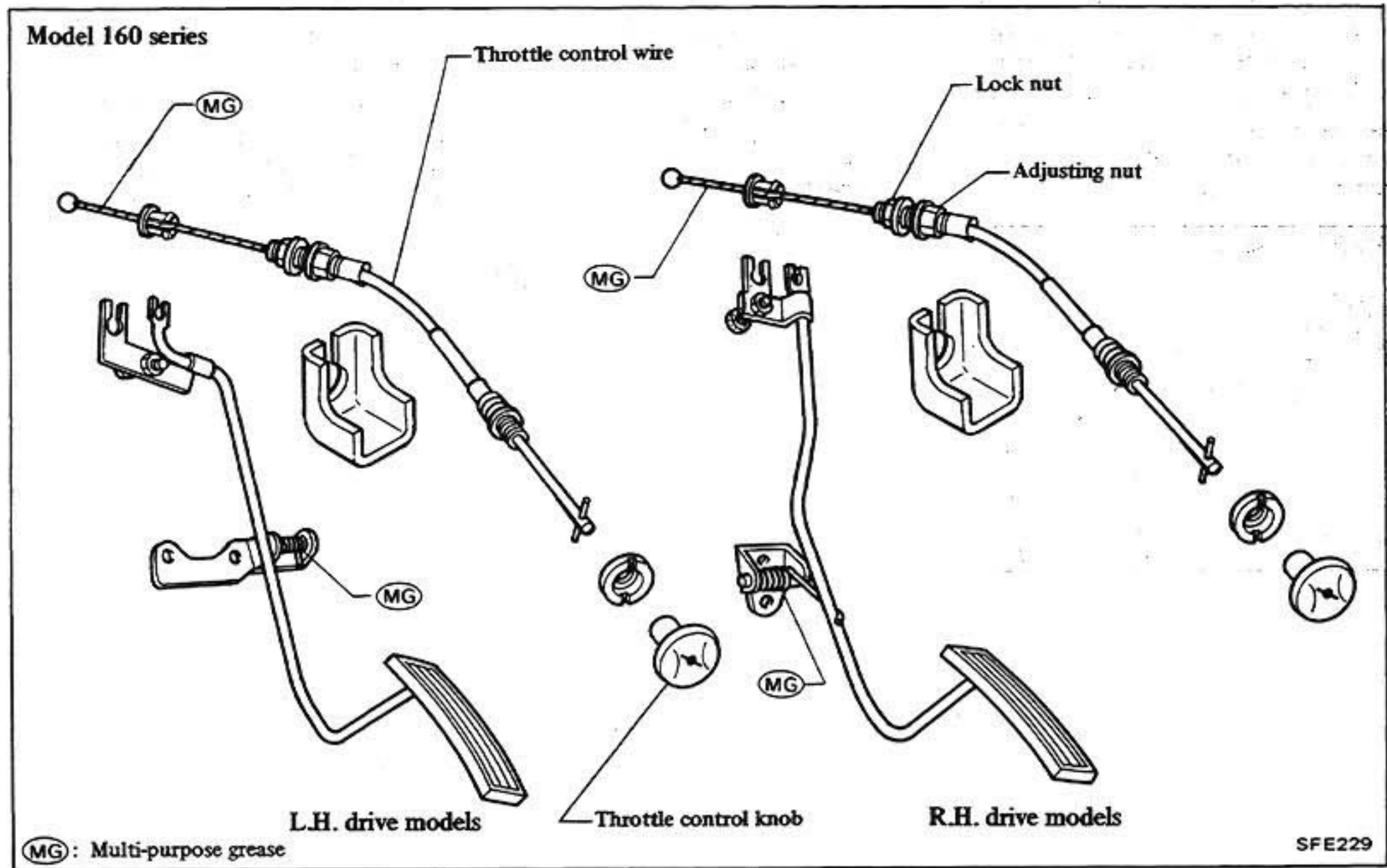


4. Remove lock nut securing wire to instrument panel and take out choke control wire as an assembly.

INSTALLATION

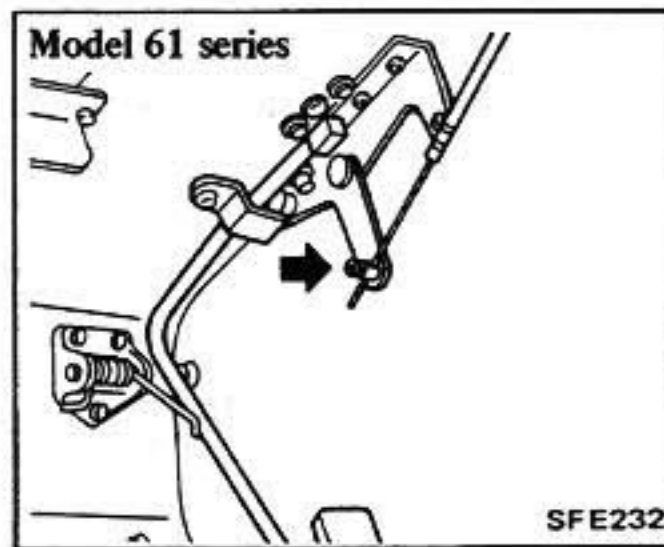
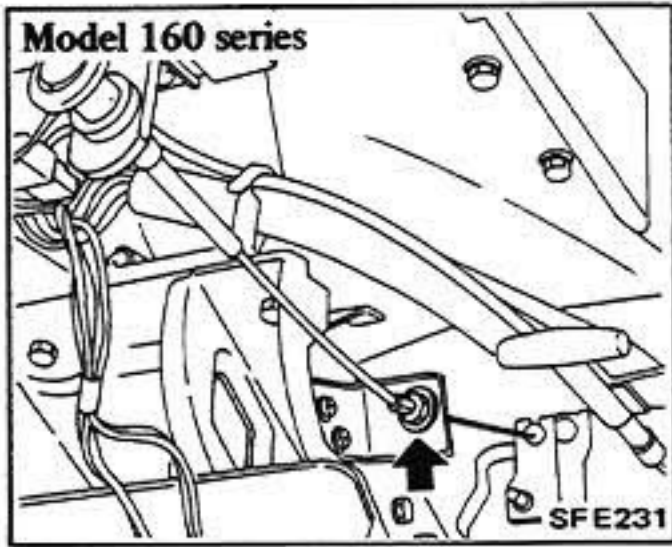
To install, reverse the order of removal.

THROTTLE CONTROL WIRE



ADJUSTMENT

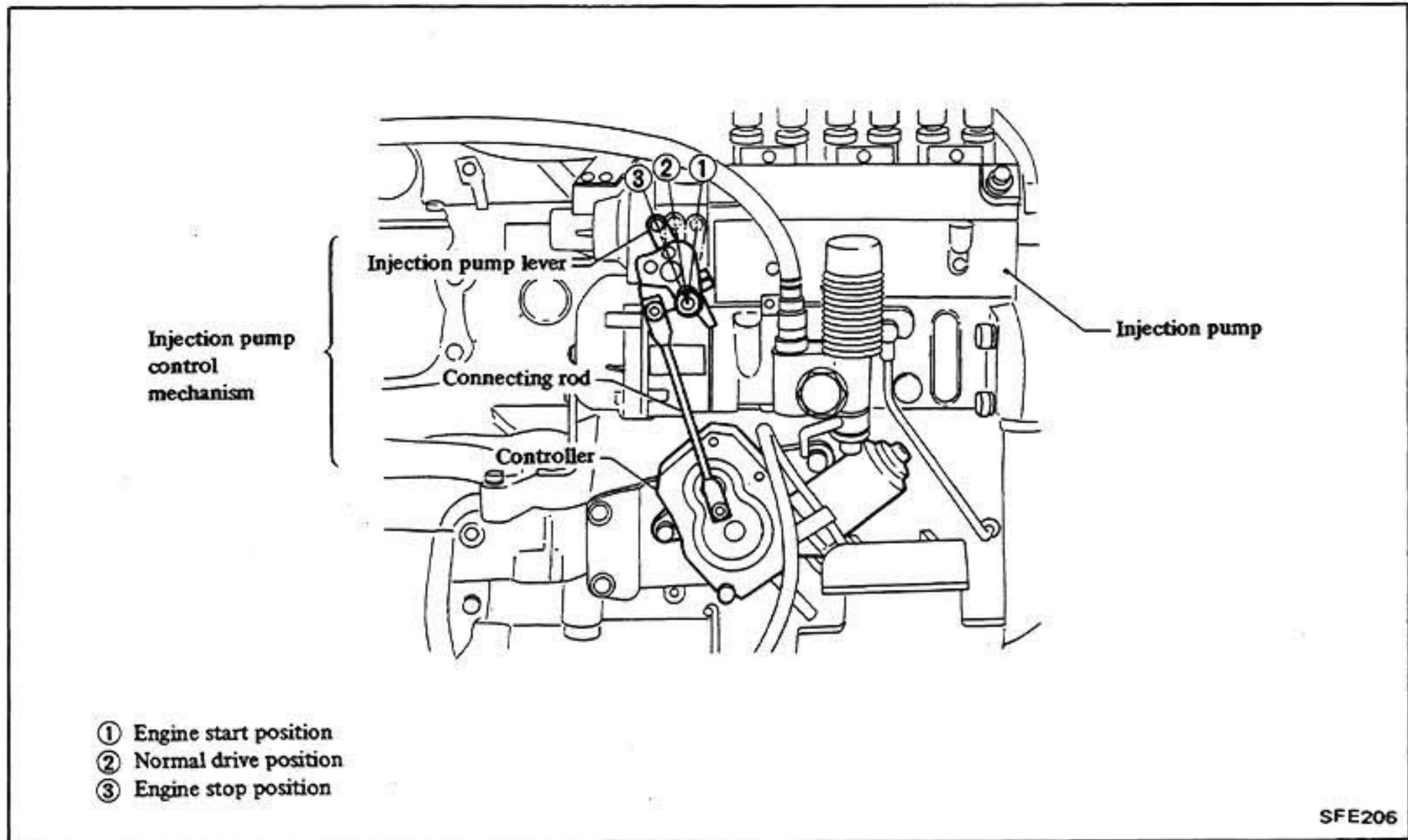
After adjusting accelerator wire length and accelerator pedal height, adjust throttle control wire length with adjusting nut at bracket so that accelerator pedal keeps its original position when pushing in throttle control knob completely.



REMOVAL AND INSTALLATION

1. Disconnect throttle control wire from pedal arm.
2. Disconnect throttle control wire from throttle control wire bracket.
3. Pull out throttle control knob.
4. To install, reverse the order of removal.

INJECTION PUMP CONTROL MECHANISM (Diesel engine)



DESCRIPTION

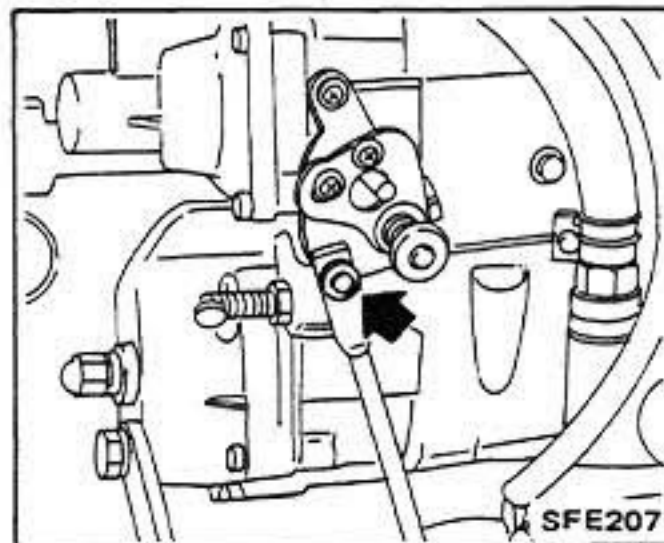
The injection pump control system is controlled by the ignition key in order to start, operate or stop the fuel injection pump.

The injection pump control mechanism is controlled by the injection pump control unit (D.P.C. module), thereby controlling the amount of fuel injection by operating the injection pump lever.

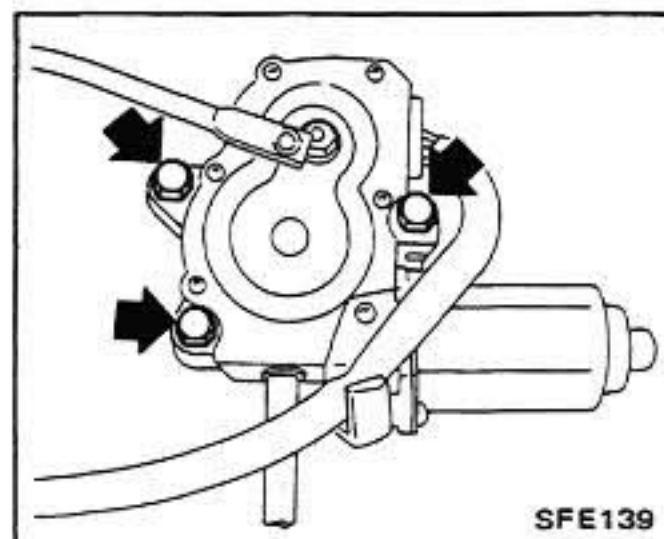
When the ignition key is in the "START" position, the injection pump lever is set at position ①, thereby increasing the fuel causing the engine to start. After starting the engine (with the ignition key in the "ON" position), the injection pump lever moves to position ②. When the ignition key is in the "OFF" position, the injection pump lever moves to position ③, thereby cutting off the fuel injection causing the engine to stop.

REMOVAL

1. Remove connecting rod.



2. Remove controller.



INSTALLATION

To install, reverse the order of removal.

Prior to assembling, ensure that controller and injection pump lever are positioned at STOP.

INSPECTION

Refer to Injection Pump Control System (Section EL).

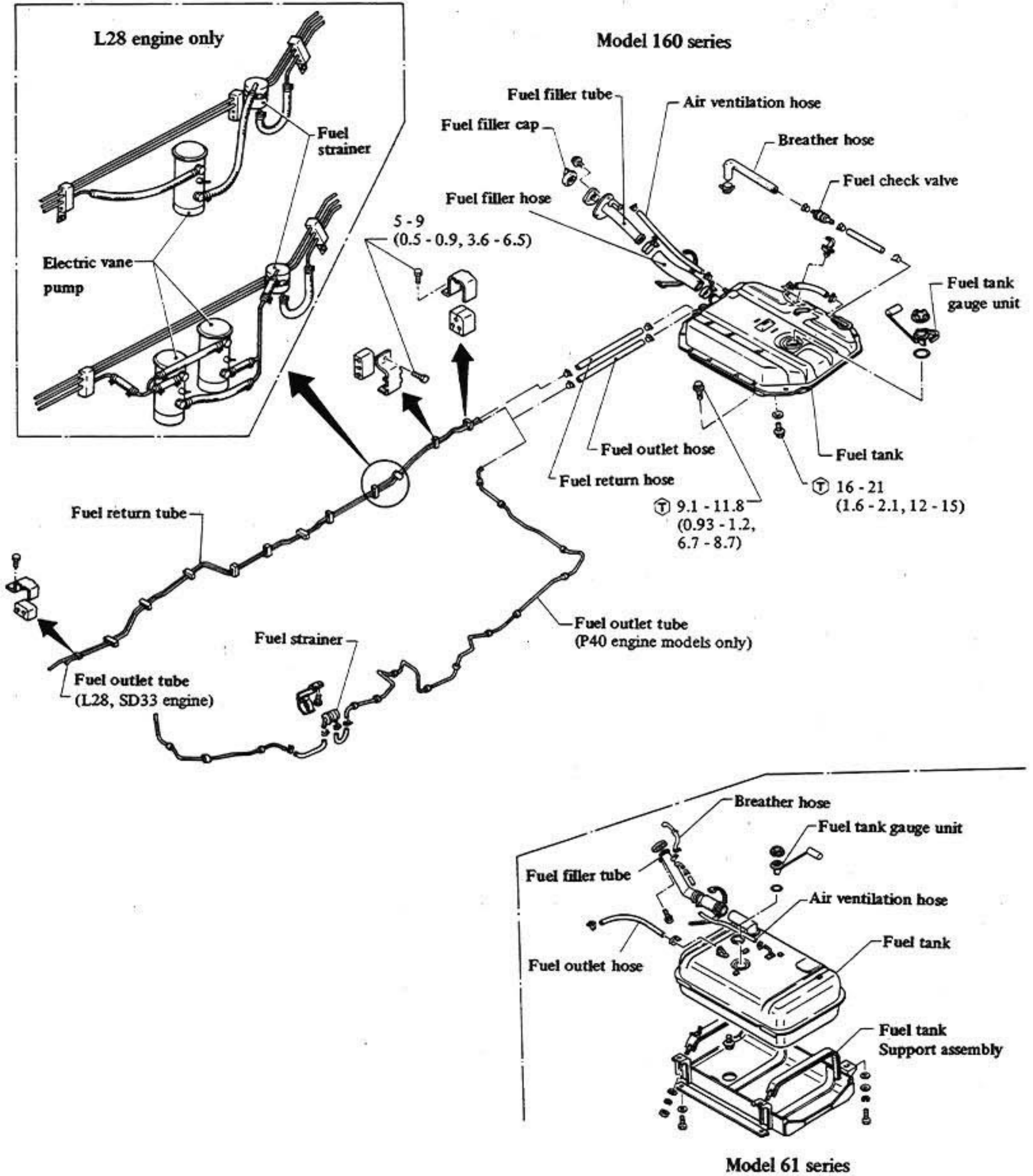
TROUBLE-SHOOTING

Refer to Injection Pump Control System (Section EL).

INJECTION PUMP CONTROL UNIT (D.P.C. module)

Refer to Injection Pump Control Unit (Section EL).

FUEL SYSTEM



Ⓣ : N-m (kg-m, ft-lb)

SFE241

REMOVAL

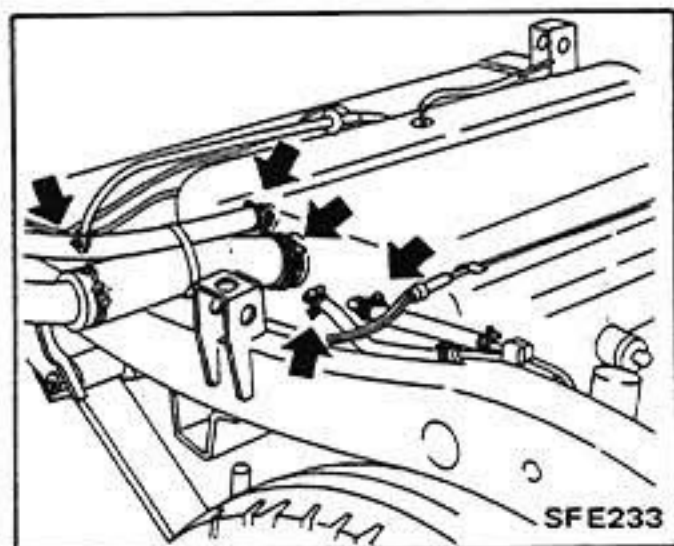
WARNING:

When replacing fuel line parts, be sure to observe the following:

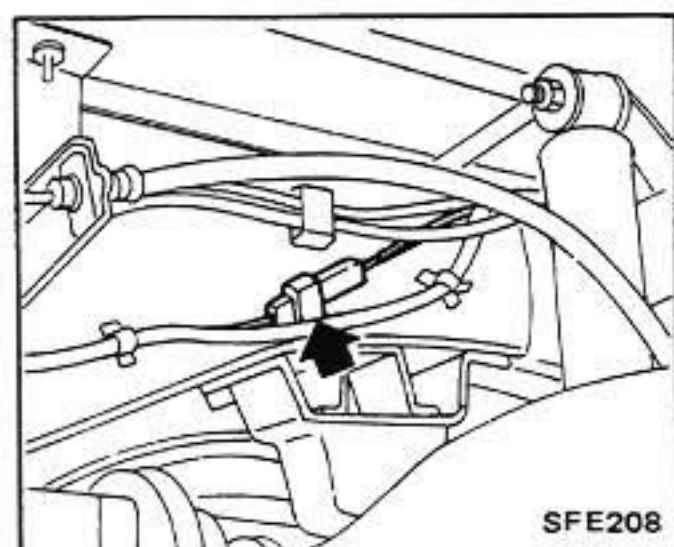
- Put a "CAUTION: INFLAMMABLE" sign in workshop.
- Be sure to furnish workshop with an asphyxiator.
- Be sure to disconnect battery ground cable before conducting operations.
- Put drained fuel in an explosion-proof container and put on lid securely.

FUEL TANK

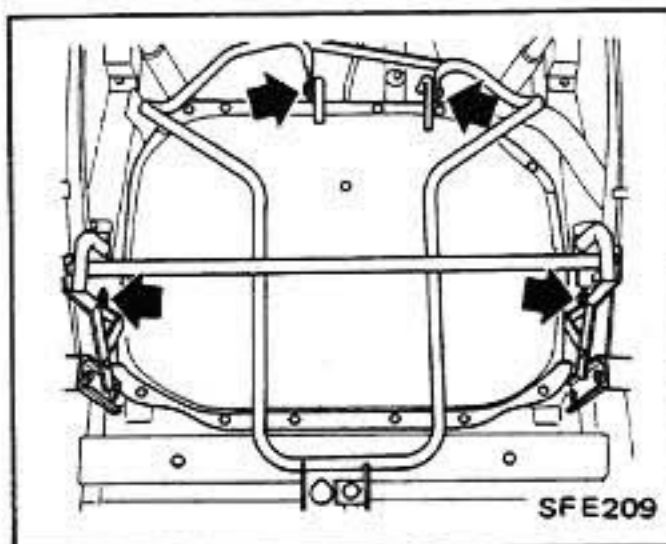
- Disconnect battery ground cable.
- Drain fuel from fuel tank.
- Disconnect following parts.
 - Fuel filler hose
 - Air ventilation hose
 - Fuel outlet hose
 - Fuel return hose
 - Breather hose



- Fuel tank gauge unit wire connector

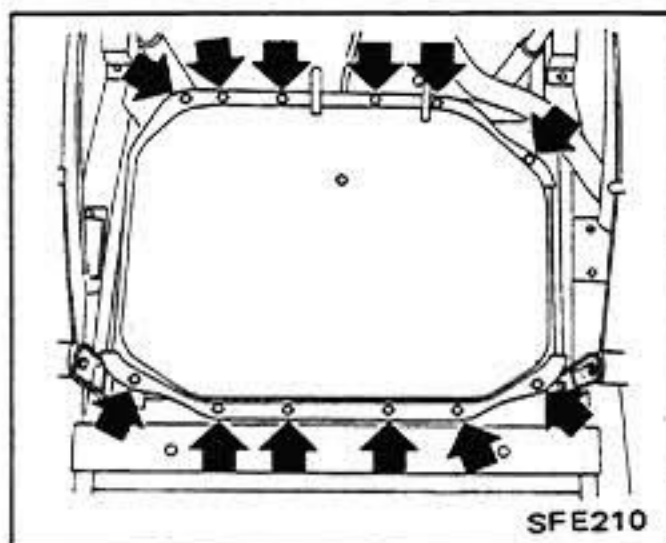


- Remove spare tire and spare tire carrier.



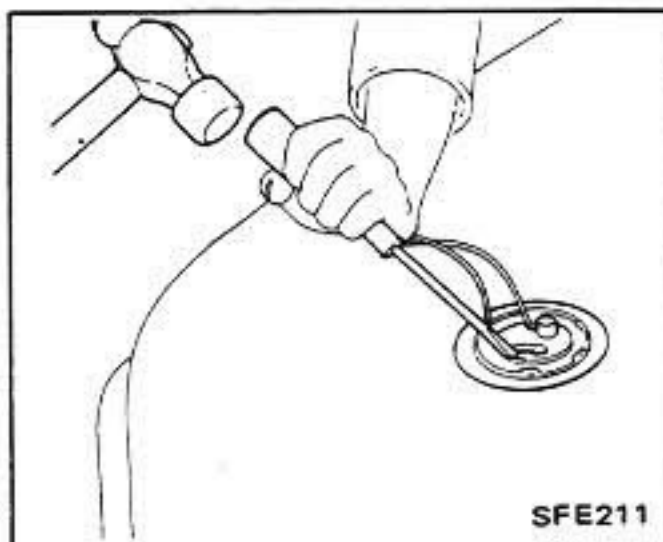
- Remove fuel tank.

Plug hose and pipe opening to prevent entry of dust or dirt during removal.

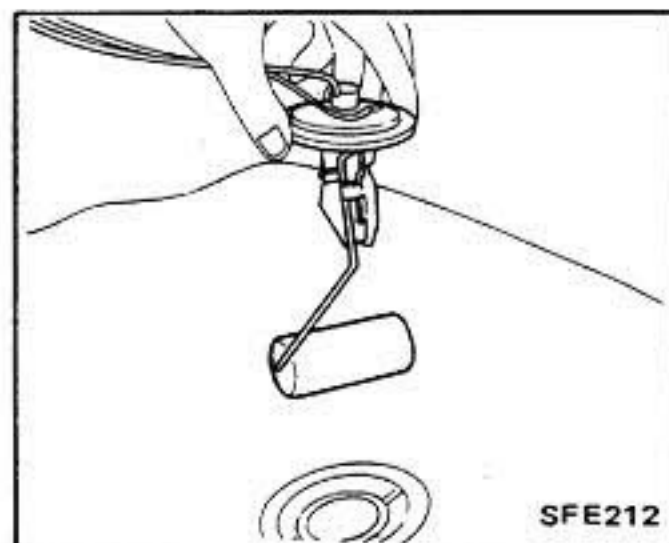


FUEL TANK GAUGE UNIT

- Disconnect battery ground cable.
- Disconnect wires from fuel tank gauge unit.
- Remove fuel tank. Refer to Fuel Tank for removal.
- Remove lock plate, turning it counterclockwise with a suitable drift and a hammer.

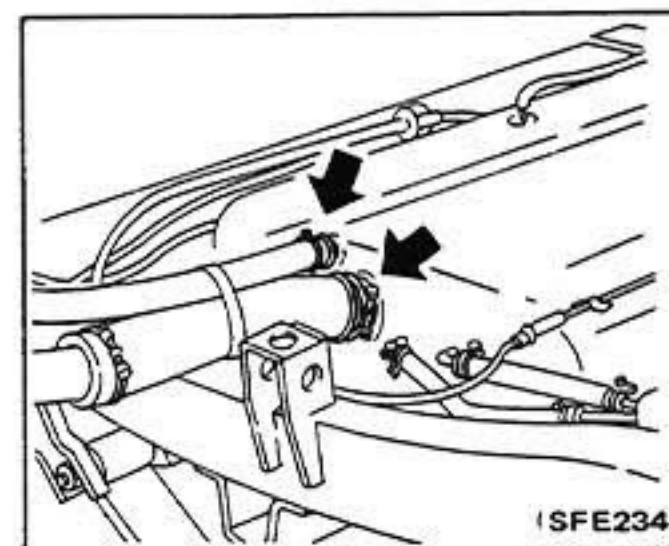


- Remove fuel tank gauge unit from tank. Plug tank unit opening to prevent entry of dust or dirt.

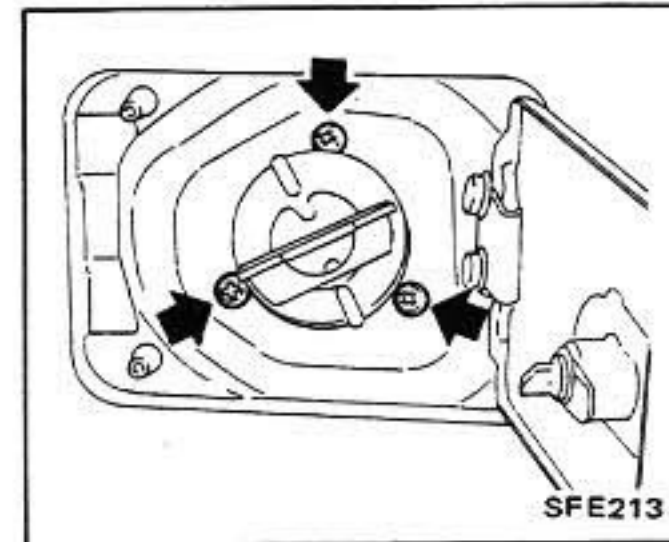


FUEL FILLER TUBE AND HOSE

- Disconnect battery ground cable.
- Drain fuel from fuel tank.
- Disconnect fuel filler hose and air ventilation hose from fuel tank.

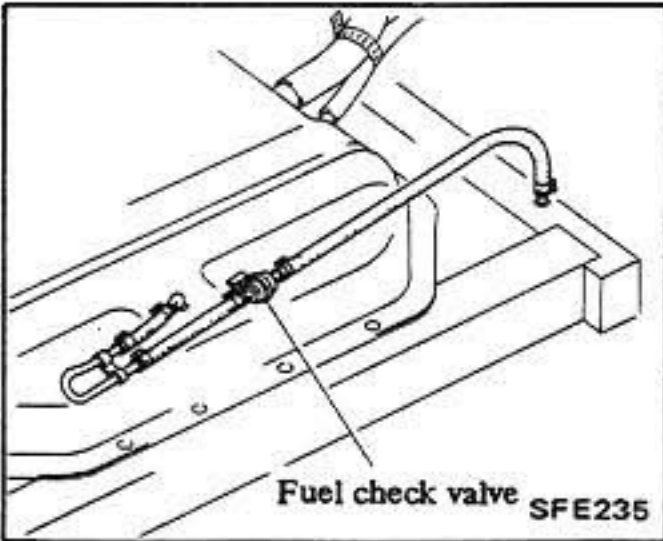


- Remove fuel filler neck attaching bolts and remove fuel filler hose and tube.



FUEL CHECK VALVE

1. Remove fuel tank.
2. Remove fuel check valve.



FUEL TANK GAUGE UNIT

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

FUEL FILTER

Refer to Fuel Filter (Section EF) for inspection.

FUEL HOSE

Inspect all hoses for cracks, fatigue, sweating or deterioration. Replace any hose that is damaged.

FUEL TUBE

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

FUEL CHECK VALVE

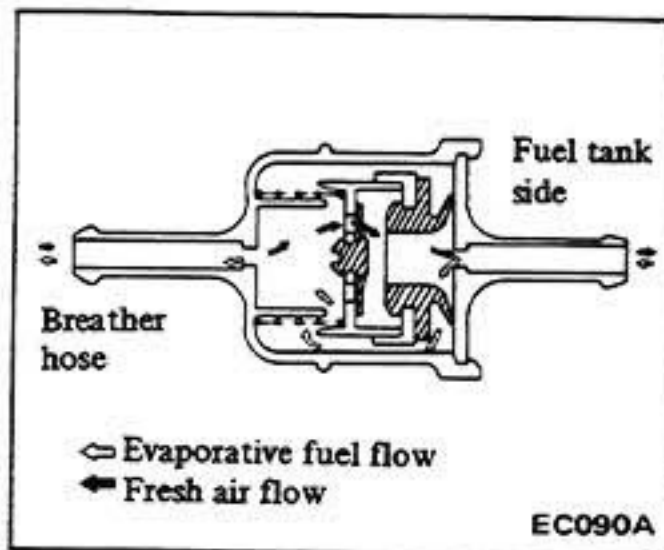
1. Blow air through connector on fuel tank side.

A considerable resistance should be felt at the mouth and a portion of air flow be directed toward the engine.

2. Blow air through connector on breather hose.

Air flow should be smoothly directed toward fuel tank.

3. If fuel check valve is suspected of not being properly functioning in steps 1 and 2 above, replace.



INSTALLATION

To install, reverse the order of removal. Observe the following:

- 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. Install fuel filler hose after fuel tank has been mounted in place. Failure to follow this caution could result in leakage from around hose connections.
- e. Always connect the fuel filler hose with the arrow facing the fuel tank and up.
- f. 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 gauge unit with O-ring in place.
- g. Run engine and check for leaks at connections.

- ⊕ : Drain plug
 16 - 21 N·m
 (1.6 - 2.1 kg·m,
 12 - 15 ft·lb)
 Fuel tank securing bolt
 9.1 - 11.8 N·m
 (0.93 - 1.20 kg·m,
 6.7 - 8.7 ft·lb)

FUEL TUBE

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

1. Drain fuel from fuel tank.
2. Loosen fuel hose clamps and disconnect fuel tubes on each end.

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

3. Unfasten clips that hold tube on underbody. Do not remove brake tube from clip.
4. Remove tube from the vehicle.

FUEL PUMP AND FUEL FILTER

Refer to Section EF.

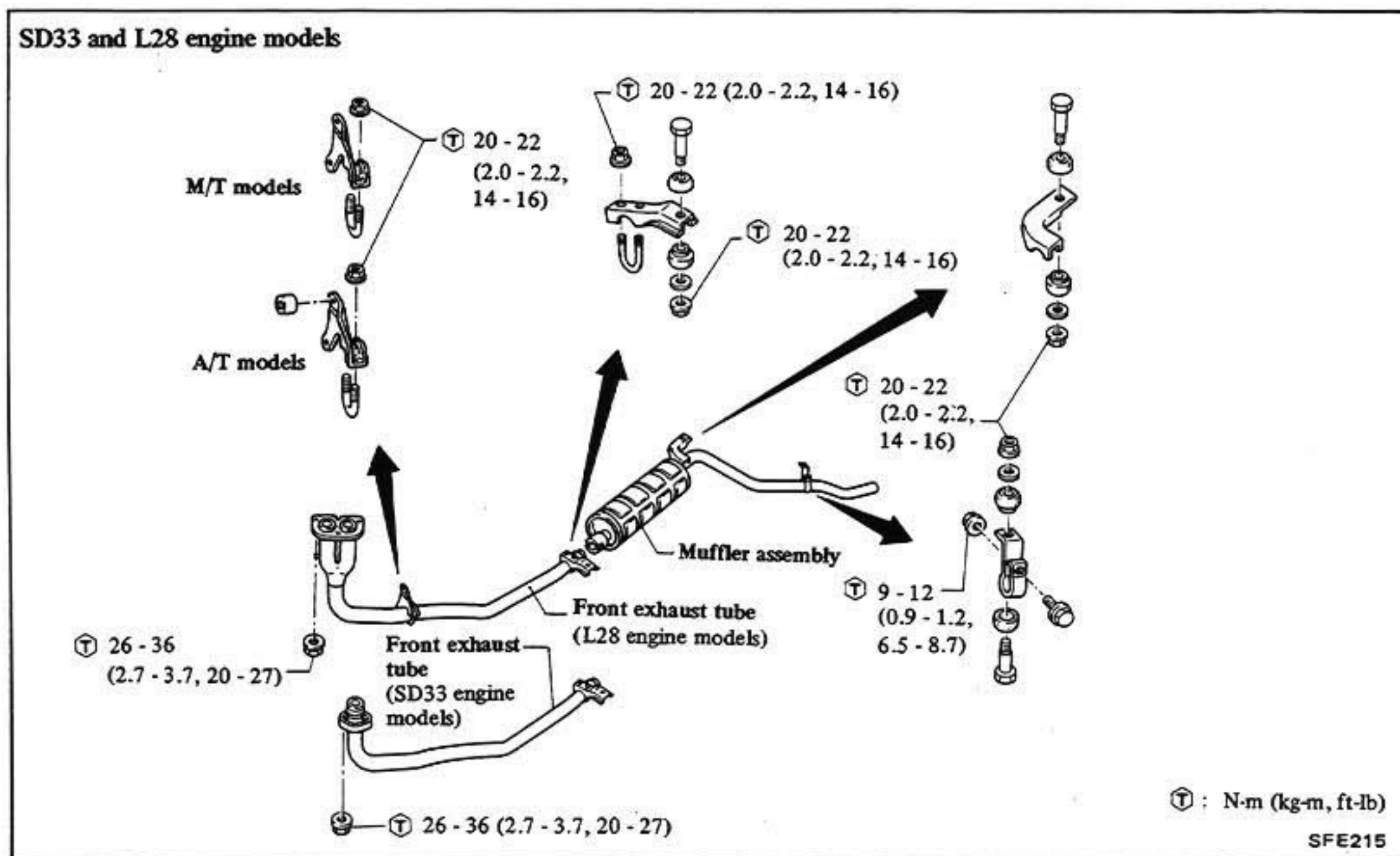
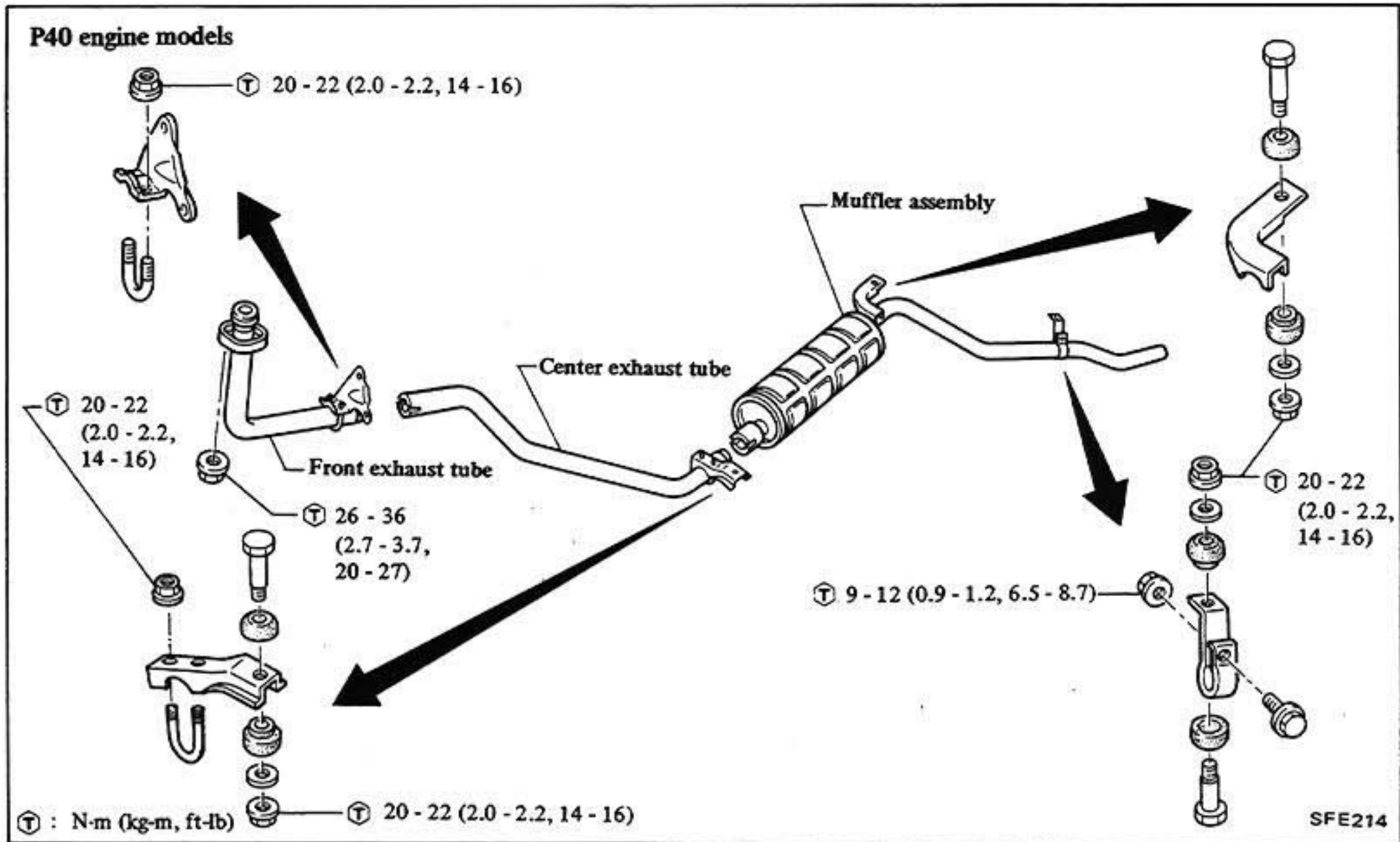
INSPECTION

FUEL TANK

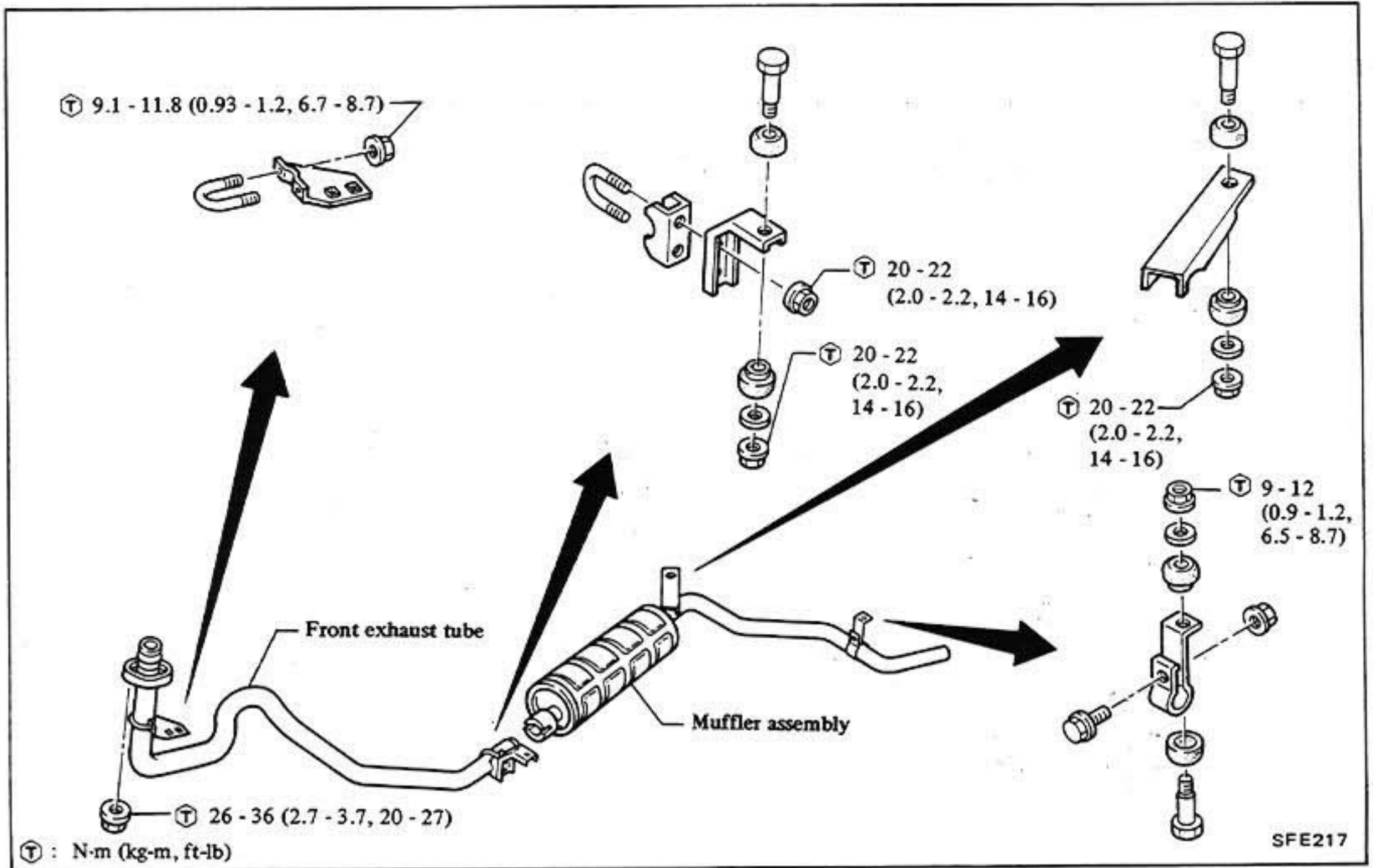
Check fuel tank for cracks or deformation. If necessary, replace.

EXHAUST SYSTEM

Model 160 series



Model 61 series

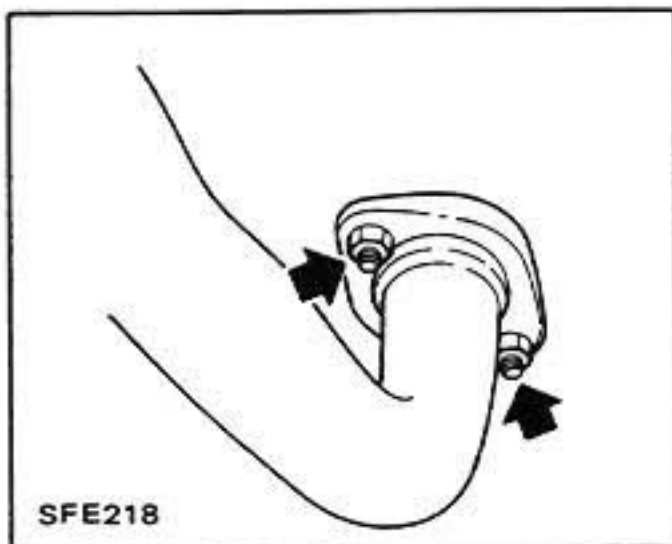


REMOVAL

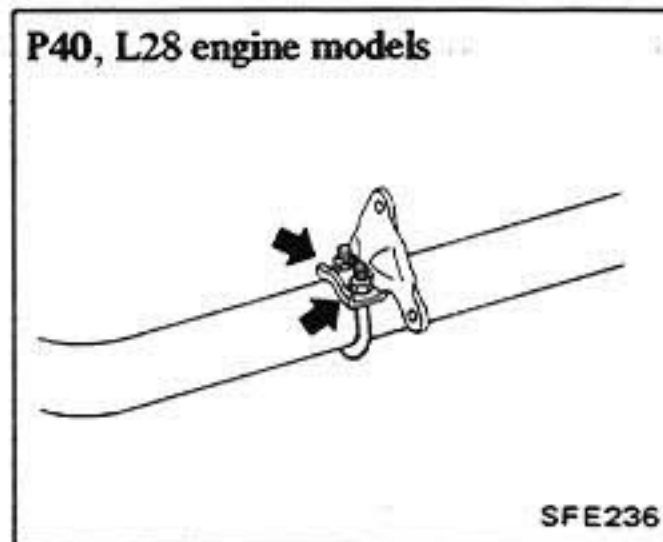
FRONT TUBE

Model 160 series

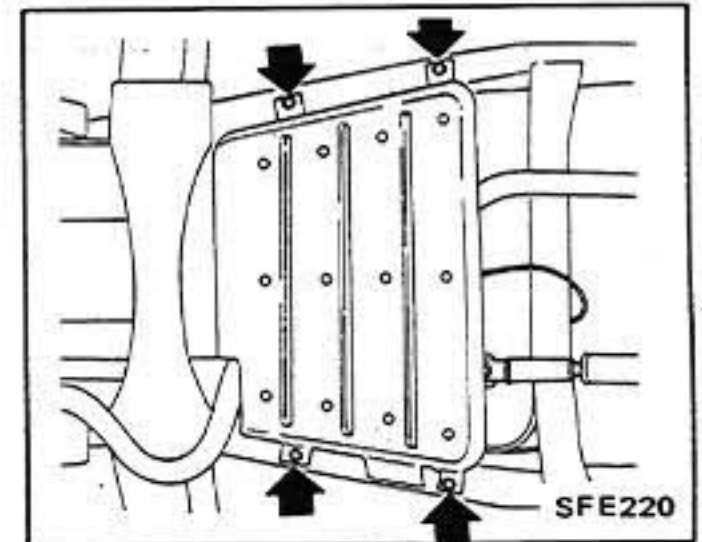
1. Remove muffler assembly. Refer to Muffler and Tail Tube for removal.
2. Remove nuts attaching front exhaust tube to exhaust manifold.



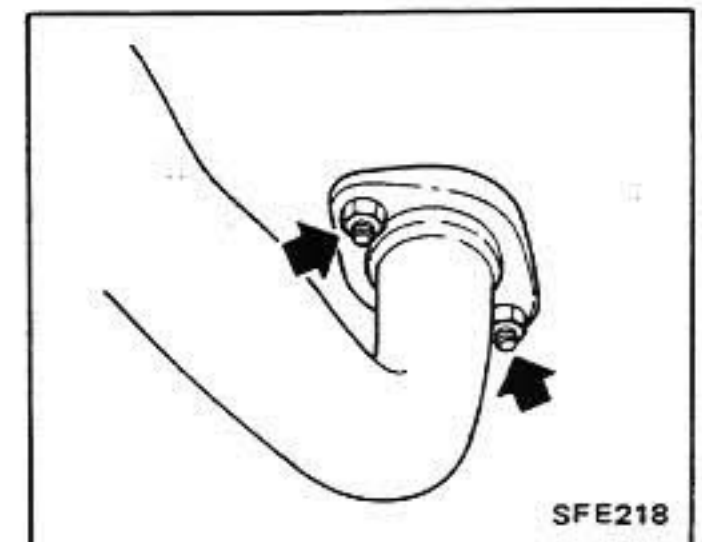
3. Remove exhaust mounting bracket to clutch housing (P40, L28 engine models).



4. Front exhaust tube can then be taken out.



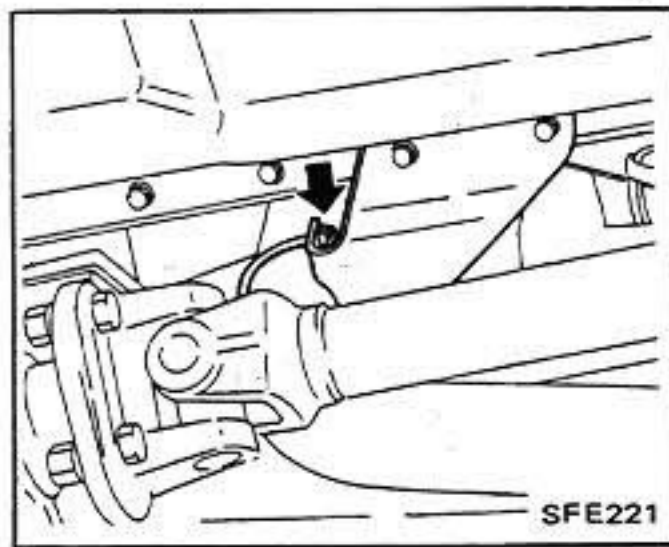
2. Remove muffler assembly. Refer to Muffler and Tail Tube for removal.
3. Remove nuts attaching front exhaust tube to exhaust manifold.



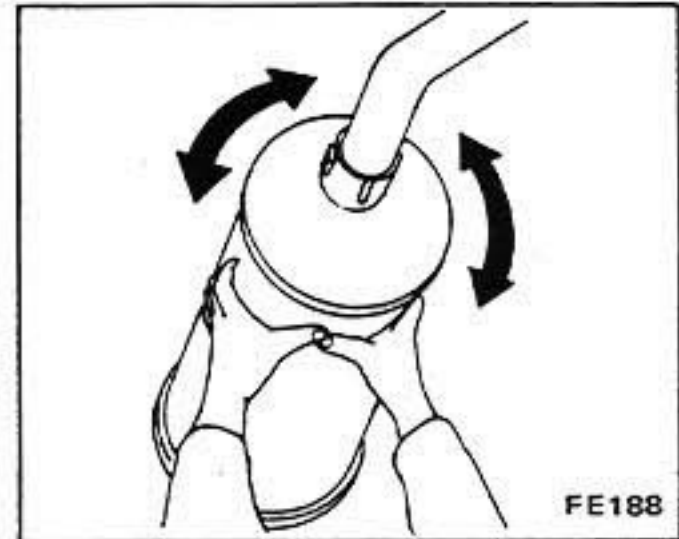
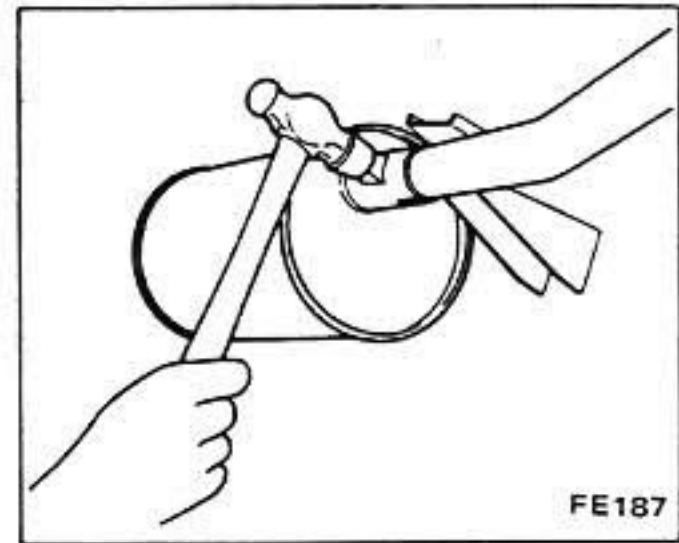
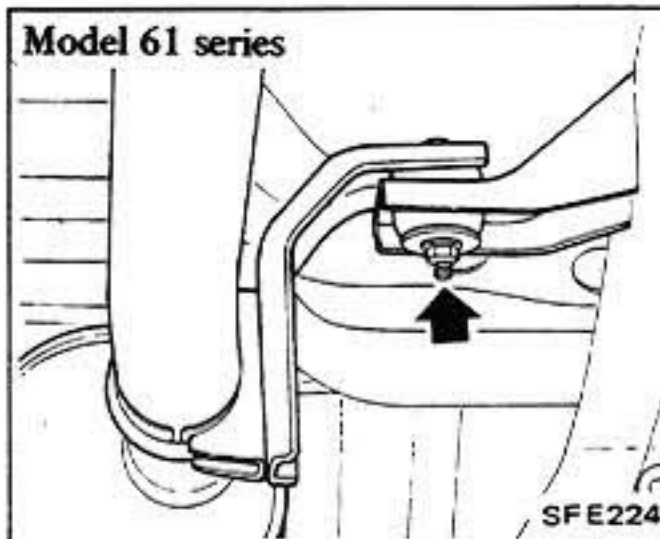
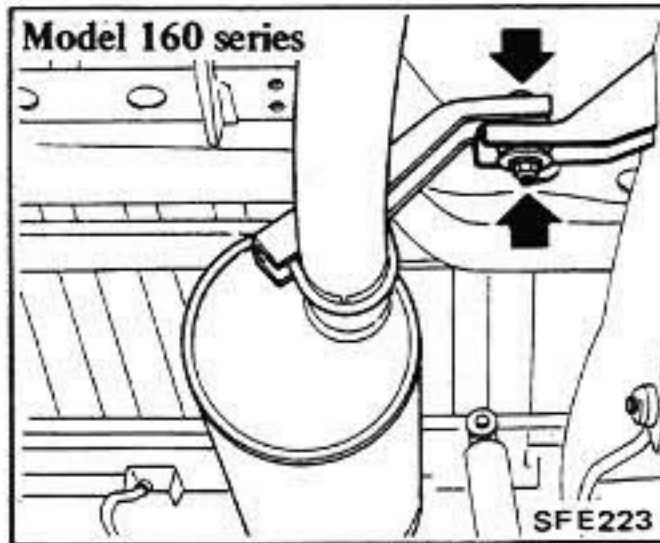
Model 61 series

1. Remove gear box protector.

4. Remove front exhaust tube bracket.

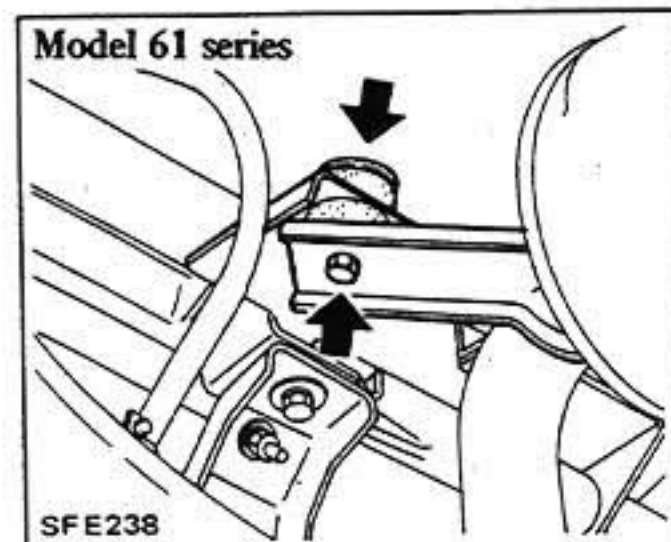
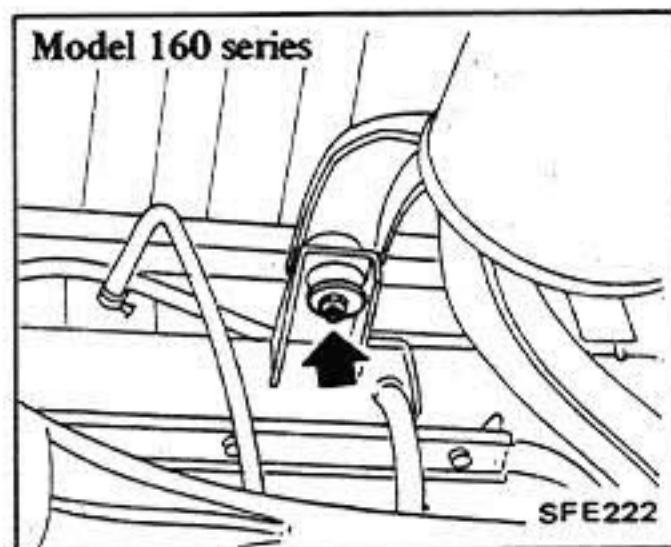


5. Front exhaust tube can then be taken out.



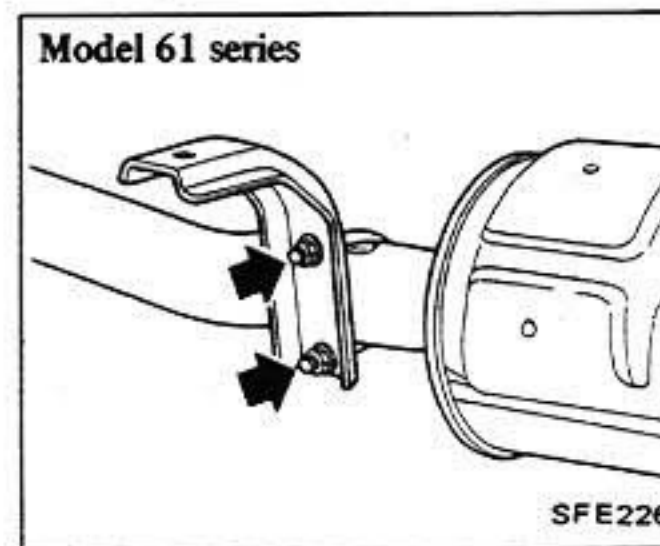
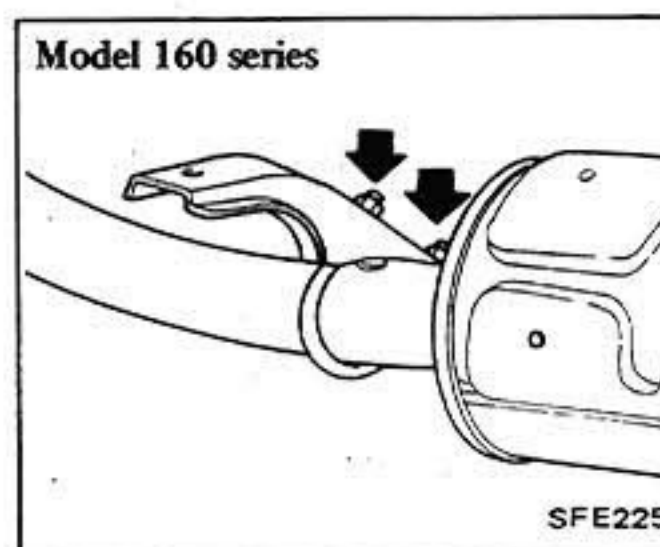
MUFFLER AND TAIL TUBE

1. Remove muffler rear mounting bracket.



2. Remove muffler front mounting bracket.

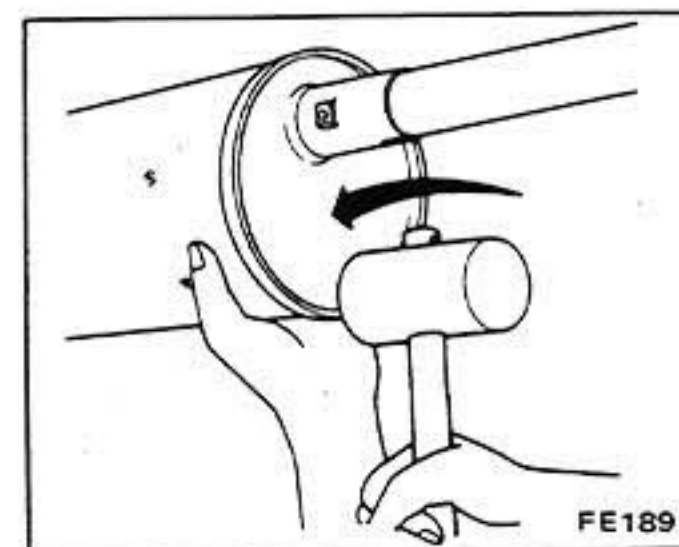
3. Remove exhaust tube U-bolt clamp.



4. Break sealant off at front tube to main muffler connection.

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



5. Remove rear tube mounting bolt, and remove muffler assembly with rear tube.

INSPECTION

1. Check muffler and tubes for cracks, damage or corrosion.

Replace any part that is damaged beyond limits.

2. Replace bracket and mounting insulator that are cracked, fatigued, or sweated.

INSTALLATION

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

Ⓣ : Exhaust manifold to

front tube nut:

26 - 36 N-m
(2.7 - 3.7 kg-m,
20 - 27 ft-lb)

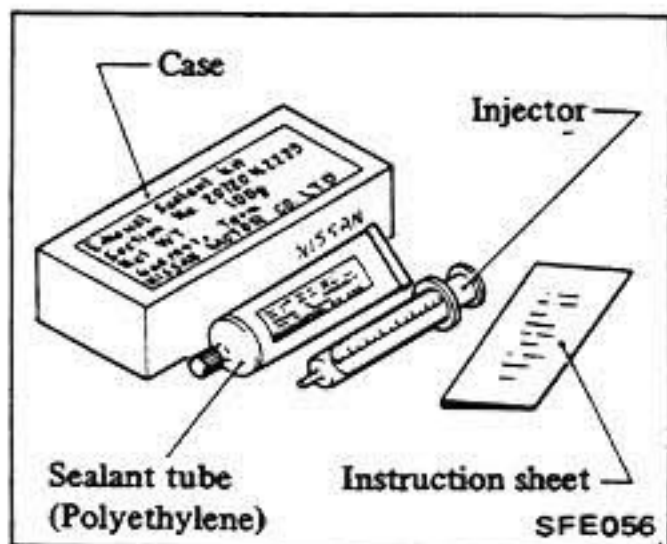
U-bolt securing nut:

20 - 22 N-m
(2.0 - 2.2 kg-m,
14 - 16 ft-lb)

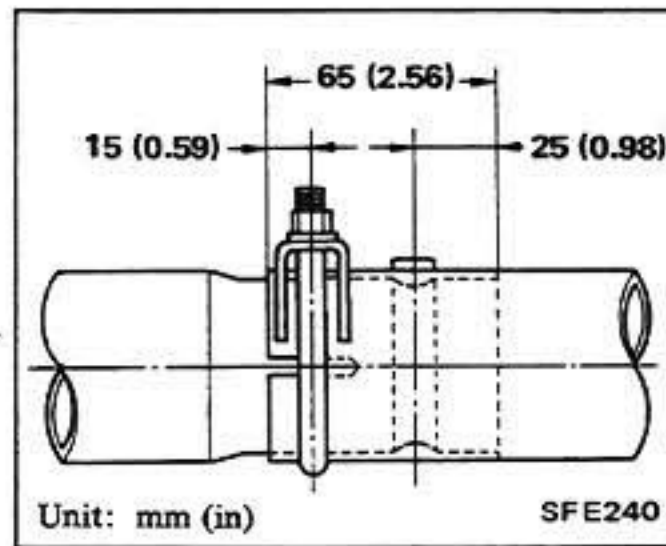
Muffler mounting bracket bolt:

20 - 22 N-m
(2.0 - 2.2 kg-m,
14 - 16 ft-lb)

- Keep a sufficient clearance between exhaust system components and underbody or adjacent parts.
- 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 vehicle body.
- Check all tube connections for exhaust gas leaks, and entire system for unusual noises, with engine running.
- When connecting exhaust tubes, use the Genuine Nissan Sealant "Exhaust Sealant Kit 20720-N2225" to eliminate gas leakage at the joint. Be sure to observe the following procedures.

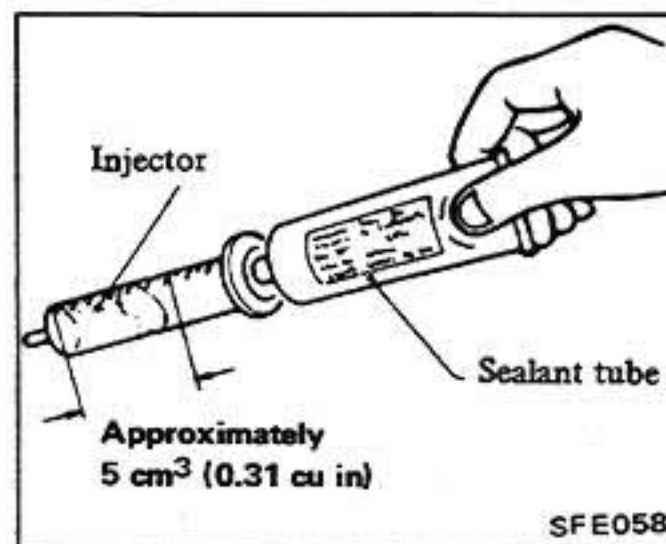


- Wipe clean all the contact portions of tube joints; allow them to dry thoroughly.
- Temporarily mount in place exhaust muffler and exhaust tube on the vehicle.
- Connect front tube, center tube and tail tube referring to illustration below.



- Tighten following bolts and nuts to specified torque.
 - Exhaust manifold securing nut
 - Muffler mounting bracket bolt
 - Rear tube mounting bolt
- Squeeze approximately 5 cm³ (0.31 cu in) of sealant into injection from sealant tube.

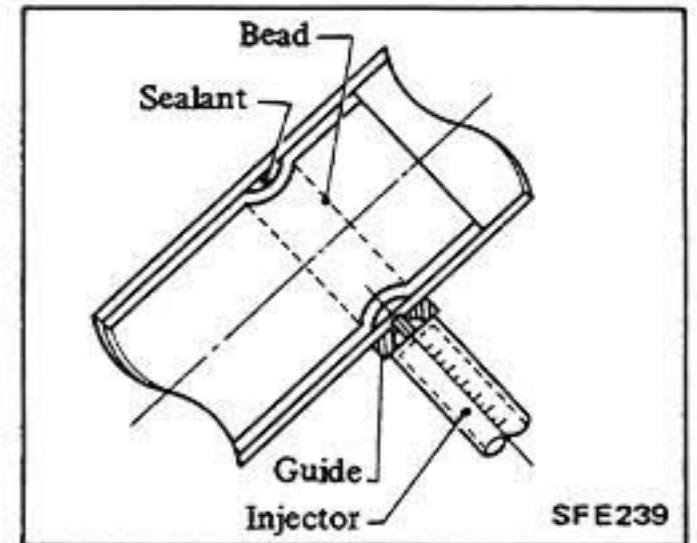
Be sure to place cap back to sealant tube since sealant will dry.



- 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.

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



- Start engine and let it idle slowly for ten minutes (minimum) to harden sealant with the heat of exhaust gas.
- Check the condition of sealant before driving the vehicle. It is also essential that the vehicle should not be accelerated sharply for 20 to 30 minutes subsequent to this operation.
 - The sealant should be used within guaranty term indicated on the kit case.
 - Exposure of sealant to the skin may cause a rash. Wash sealant off the skin with water.
 - Do not keep the sealant tube in a place where the ambient temperature is above 40°C (104°F). A sealant is hardened above 40°C (104°F) and 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.
 - Thoroughly read the instruction sheet furnished with the kit before using the sealant.