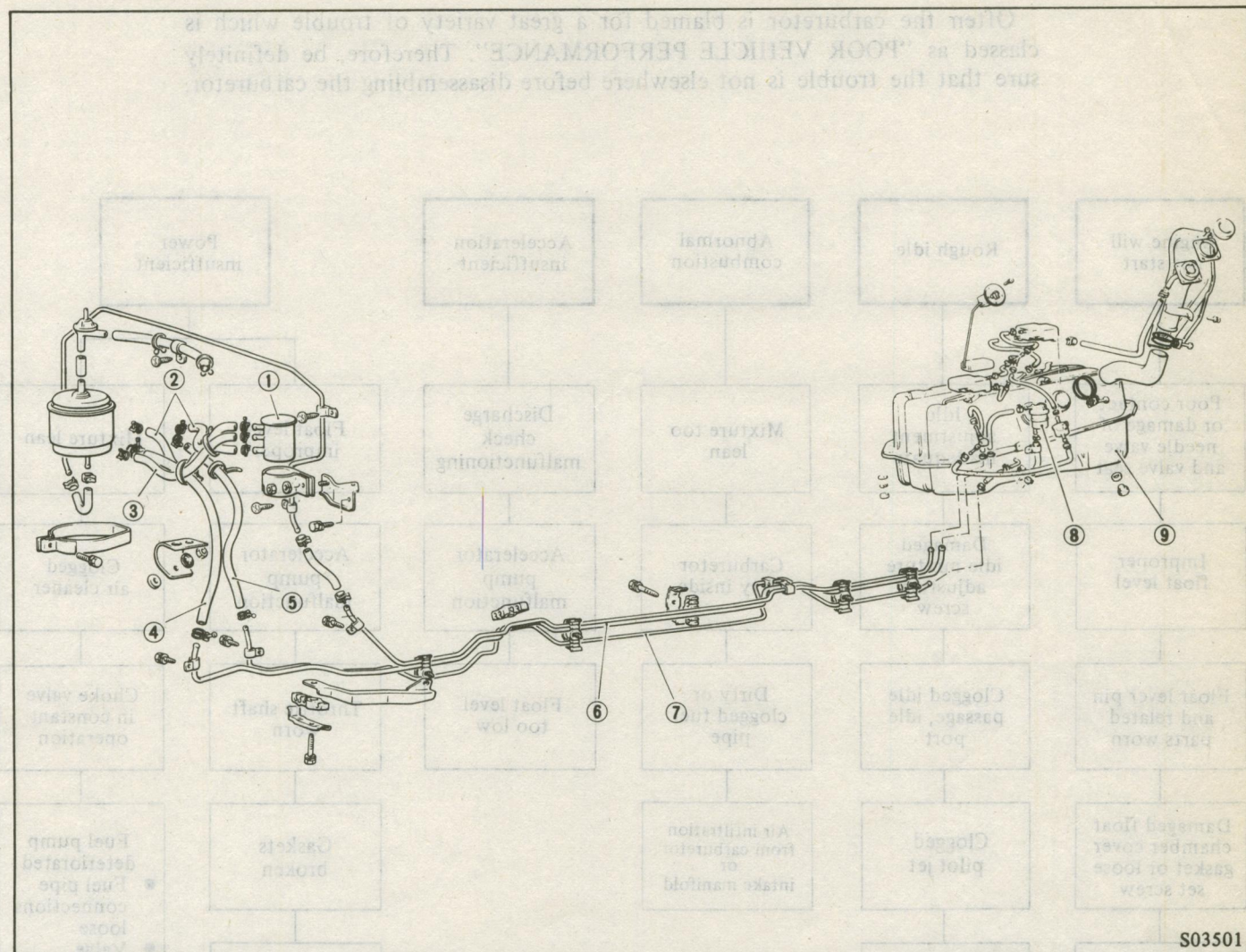


FUEL SYSTEM

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GENERAL INFORMATION

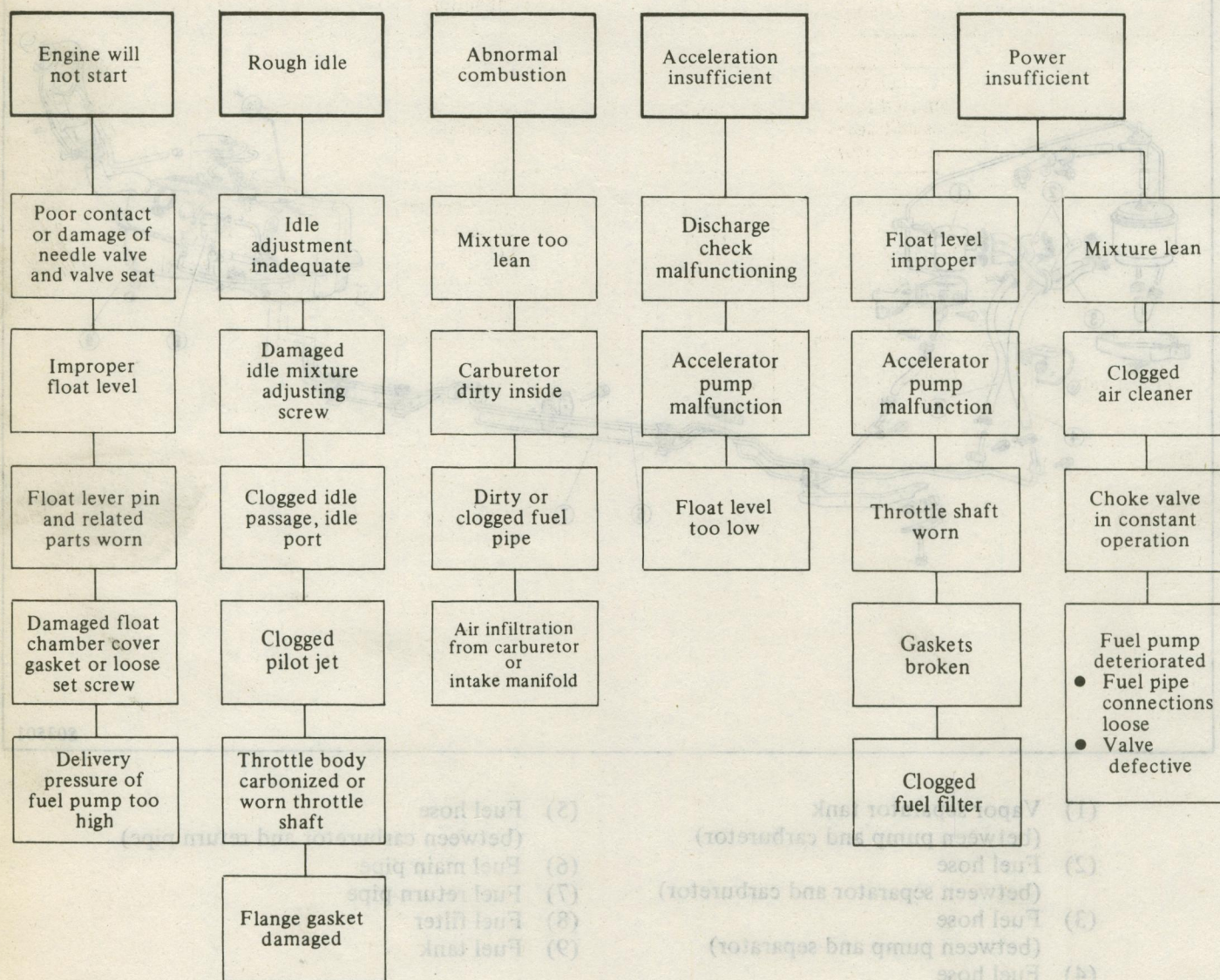


- | | |
|---|---|
| (1) Vapor separator tank
(between pump and carburetor) | (5) Fuel hose
(between carburetor and return pipe) |
| (2) Fuel hose
(between separator and carburetor) | (6) Fuel main pipe |
| (3) Fuel hose
(between pump and separator) | (7) Fuel return pipe |
| (4) Fuel hose
(between main pipe and pump) | (8) Fuel filter |
| | (9) Fuel tank |

Fig. 1 Details of Fuel System

TROUBLE SHOOTING

Often the carburetor is blamed for a great variety of trouble which is classed as "POOR VEHICLE PERFORMANCE". Therefore, be definitely sure that the trouble is not elsewhere before disassembling the carburetor.



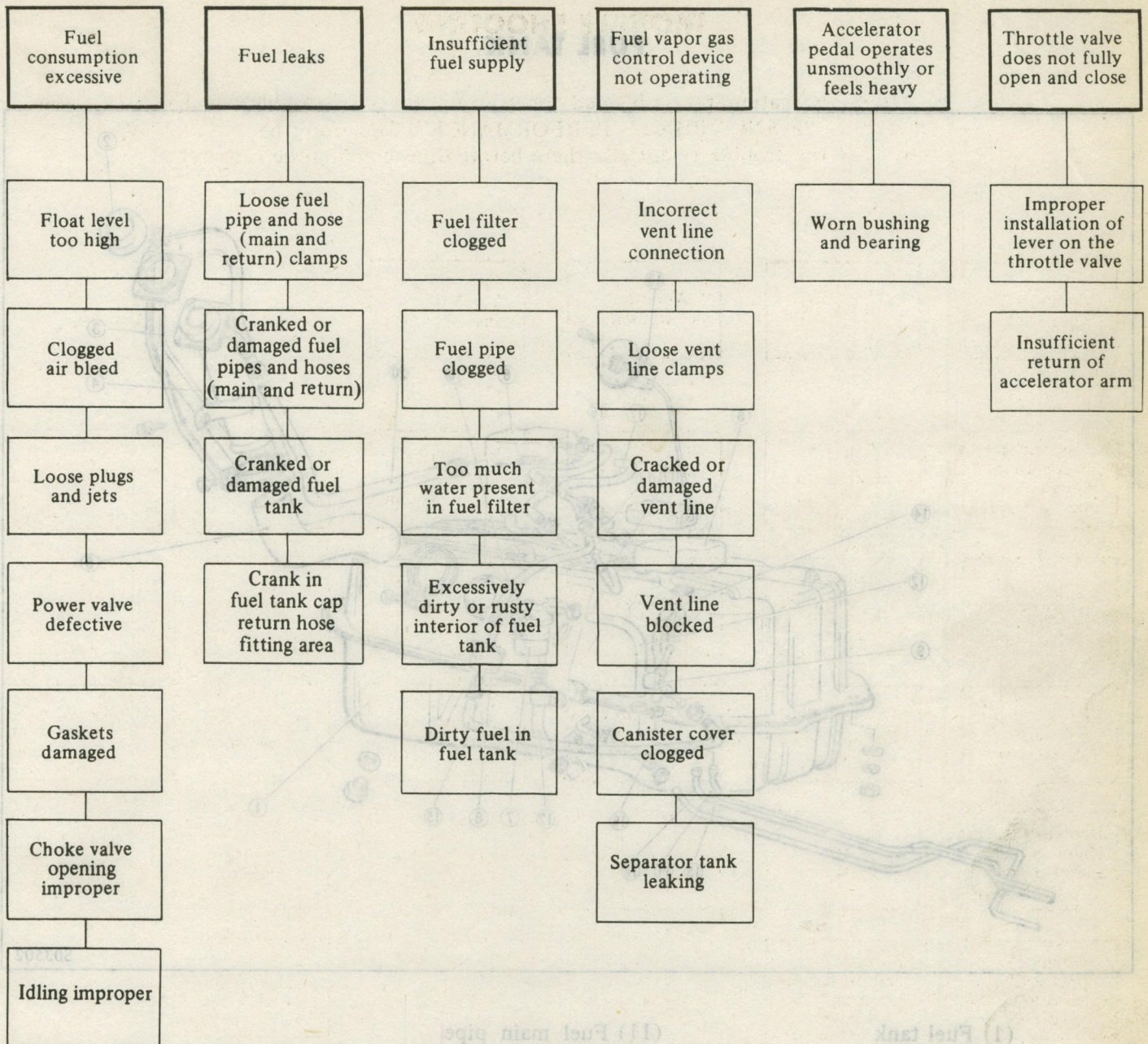
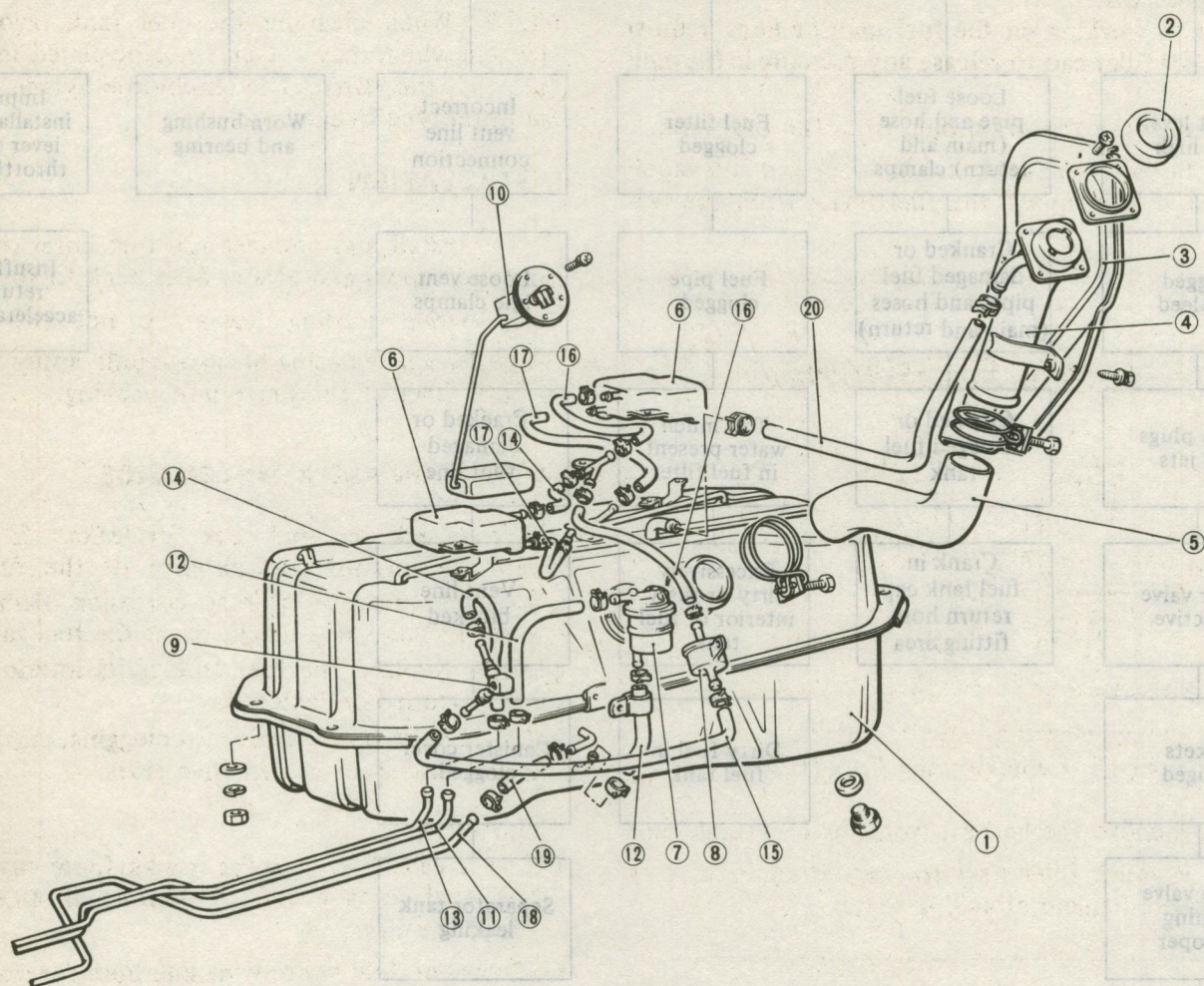


Fig. 2 Exploded View of Fuel Tank

- (1) Fuel tank
- (2) Fuel filter cap
- (3) Filter hose protector
- (4) Filter neck
- (5) Connecting hose
- (6) Separator tank (2 pieces)
- (7) Fuel filter
- (8) Two-way valve
- (9) Check valve
- (10) Fuel gauge unit

- (11) Fuel main pipe
- (12) Soft vinyl tube [89 x 180 mm (3 1/2 x 7 1/8 in.)]
- (13) Fuel vapor pipe
- (14) Vapor hose [66 x 180 mm (2 1/2 x 7 1/8 in.)]
- (15) Vapor hose [66 x 260 mm (2 1/2 x 10 2/5 in.)]
- (16) Vapor hose [66 x 230 mm (2 1/2 x 9 1/8 in.)]
- (17) Vapor hose [66 x 160 mm (2 1/2 x 6 3/8 in.)]
- (18) Fuel return pipe
- (19) Soft vinyl tube [66 x 160 mm (2 1/2 x 6 3/8 in.)]
- (20) Breather hose [104 x 480 mm (4 1/8 x 18 9/16 in.)]

FUEL TANK



S03502

- | | |
|-------------------------------|--|
| (1) Fuel tank | (11) Fuel main pipe |
| (2) Fuel filler cap | (12) Soft vinyl tube [8φ x 180 mm (.31 x 7.1 in.)] |
| (3) Filler hose protector | (13) Fuel vapor pipe |
| (4) Filler neck | (14) Vapor hose [6φ x 180 mm (.24 x 7.1 in.)] |
| (5) Connecting hose | (15) Vapor hose [6φ x 260 mm (.24 x 10.2 in.)] |
| (6) Separator tank (2 pieces) | (16) Vapor hose [6φ x 230 mm (.24 x 9.1 in.)] |
| (7) Fuel filter | (17) Vapor hose [6φ x 160 mm (.24 x 6.3 in.)] |
| (8) Two-way valve | (18) Fuel return pipe |
| (9) Check valve | (19) Soft vinyl tube [6φ x 160 mm (.24 x 6.3 in.)] |
| (10) Fuel gauge unit | (20) Breather hose [10φ x 480 mm (.39 x 18.9 in.)] |

Fig. 2 Exploded View of Fuel Tank

REMOVAL

CAUTIONS:

- When working on fuel tank, be sure the ignition is switched off.
- Prior to working on the fuel tank or lines, remove the fuel filler cap to release any pressure in the tank.

(1) Remove the drain plug from the fuel tank.

(2) Loosen the fuel hose (main, return and vapor) clamp and disconnect the fuel hoses from the fuel tank.

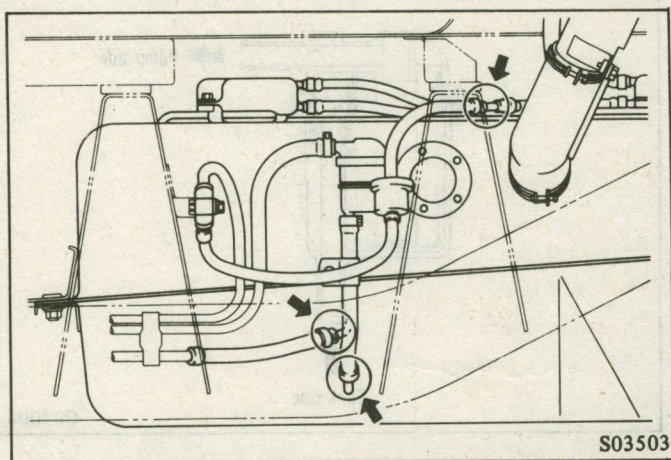


Fig. 3 Removing the Fuel Hoses

(3) Remove the harness from the fuel gauge unit.

(4) Remove filler neck-to-body attaching screws. Remove mud shield attaching bolts.

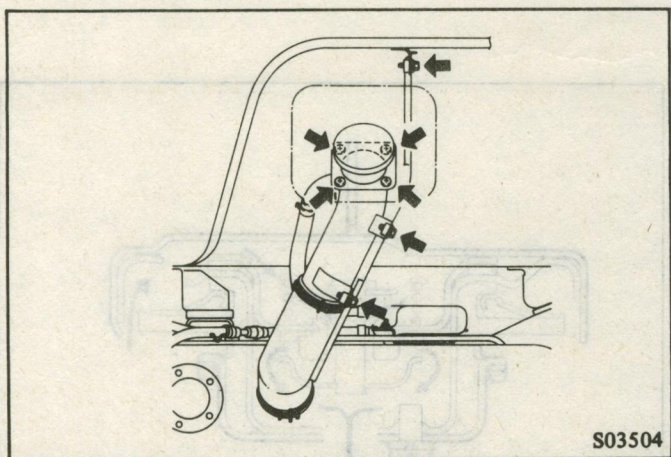


Fig. 4 Removing the Filler Neck

(5) Support fuel tank with jack. Remove nuts fastening the fuel tank. Take the tank out.

(6) Remove the separator from the tank.

NOTE: When cleaning the fuel tank, avoid using cleaners which may act on the zinc-plated inside surface of the tank. Use trichloroethylene, neutral emulsion type cleaner, etc.

INSTALLATION

(1) Install and connect the fuel hoses (main, return and vapor) and attach filler neck to the body.

(2) When routing hoses, do not twist them.

(3) When replacing the gauge unit, apply a sealant to both faces of the gauge unit packing.

INSPECTION AND MAINTENANCE

(1) Check the fuel tank for leaks. If it leaks, clean the interior and exterior of the fuel tank. Check for presence of rust, corrosion, damage and cracks. In case of a crack, drain the fuel tank completely. Replace the fuel tank if its interior is seriously corroded or damaged.

(2) Check the fuel pipe for clogging, cracks, damage and rust. Replace defective pipes.

CAUTIONS:

- Check each fuel hose for cracks, loose connection and fuel leaks every 24 months or 48,000 km (30,000 miles).
- Check the fuel vapor vent line hose for cracks and loose connection every 24 months or every 48,000 km (30,000 miles).

VAPOR SEPARATOR

GENERAL INFORMATION

Fuel from the fuel pump enters the vapor separator through the nipple provided at its middle section or lower part and flows out of the separator through the nipple at the bottom to the carburetor. Vapors separated from the fuel are held in the upper section of the separator. These vapors pass through the nipple at the top of the vapor separator to the carburetor accelerator pump. After cooling the accelerator pump, they return to the fuel tank.

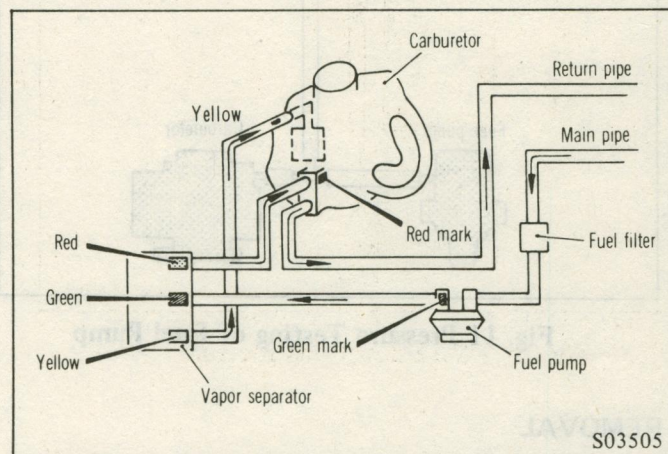


Fig. 8 Vapor Control System

REMOVAL AND INSTALLATION

(1) When installing the vapor separator, position it with the red fitting upward.

(2) Connect fuel hoses properly by referring to Fig. 8. To eliminate the possibility of wrong connection, each fitting on the fuel pump, carburetor, and vapor separator is identified by a color code. All hoses should be connected between fittings of the same color.

- | | | |
|-----------------------------|---|---|
| Red fitting on separator | ↔ | Fitting (with red mark) at the bottom of accelerator pump of carburetor |
| Green fitting on separator | ↔ | Fitting (with hexagon portion painted green) at outlet of fuel pump |
| Yellow fitting on separator | ↔ | Fitting (with yellow mark) at inlet of carburetor |

(3) Connect each fuel hose to the fitting and tighten all hose clamps securely.

CAUTION:

Be sure to make the proper clearance between the fuel hose and brake pipe.

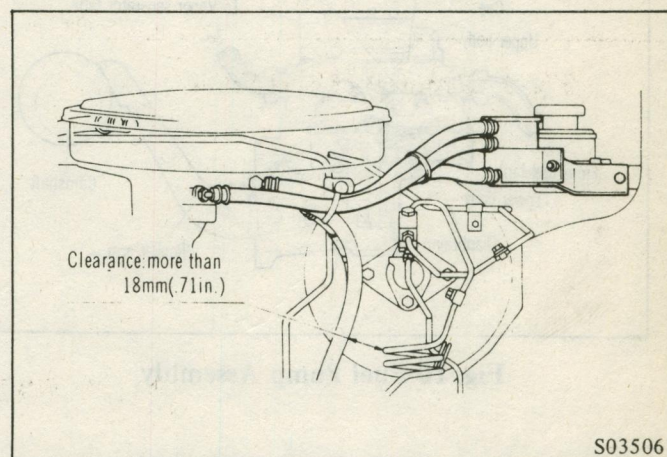


Fig. 9 Vapor Separator

INSPECTION

- (1) Inspect all hose connections for fuel leaks.
- (2) Check each fuel hose for cracks and damage due to deterioration. Replace if necessary.

FUEL FILTER

REMOVAL

The fuel filter is a cartridge type, which can be replaced quite easily and normally requires no cleaning.

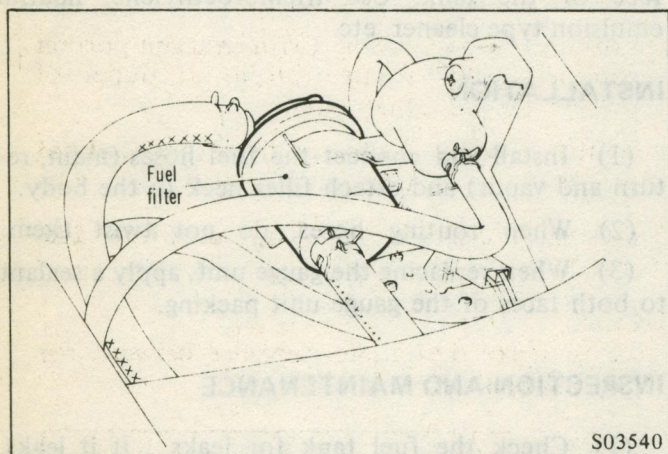


Fig. 5 Removal of Fuel Filter

INSPECTION AND MAINTENANCE

It should be replaced at specified period of travel or when damaged or clogged with dirt or water. If the amount of water inside is slight and no clogging is noticed, clean the filter as follows.

- (1) Remove the filter.
- (2) With the outlet directed down, apply compressed air into the intake.

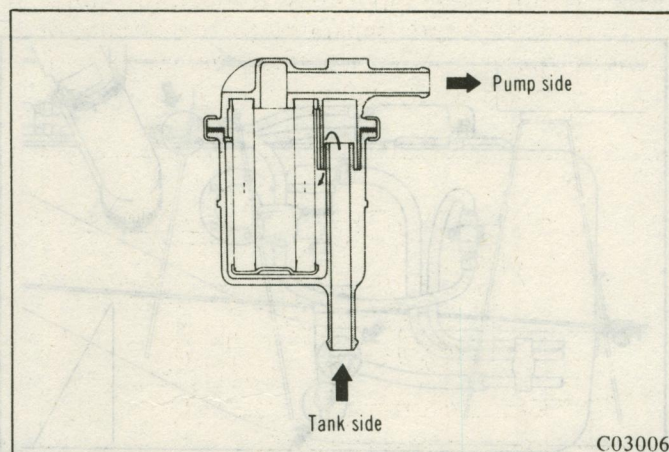


Fig. 6 Fuel Filter Construction

FUEL FILLER CAP

If the pressure in the tank drops below the specified negative pressure, the valve will open to adjust the pressure.

Negative-pressure valve performance

Valve opening pressure	-4.413 ± 1.275 kPa ($-.640 \pm .185$ psi.)
Open valve flow (at -33.1 mm Hg)	1 liter/min. minimum (1 US.qt./min. minimum) (.88 Imp.qt./min. minimum)

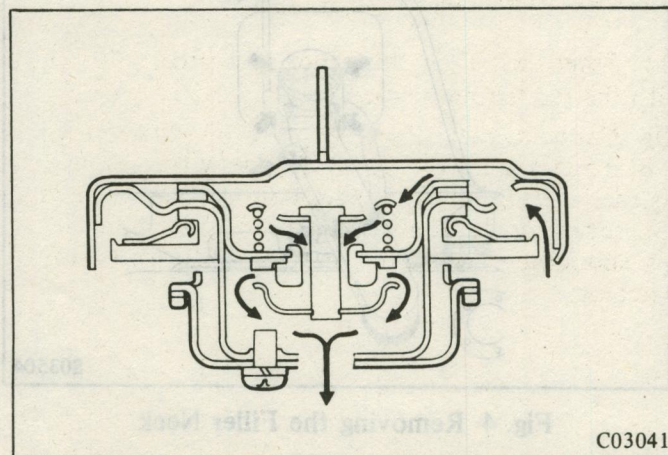


Fig. 7 Fuel Filler Cap

FUEL PUMP

GENERAL INFORMATION

The fuel pump is a mechanical diaphragm type driven by an eccentric cam on the camshaft. As the camshaft rotates, the eccentric cam causes the pump rocker arm to pull the diaphragm downwards against the fuel pump main spring. This creates a vacuum in the valve housing and opens the inlet valve to draw fuel into the valve housing chamber. On the return stroke, the main spring forces the diaphragm to the up position. This action closes the inlet valve and expels the fuel in the valve housing chamber through the outlet valve, to the fuel filter and the vapor separator tank. (Fig. 10)

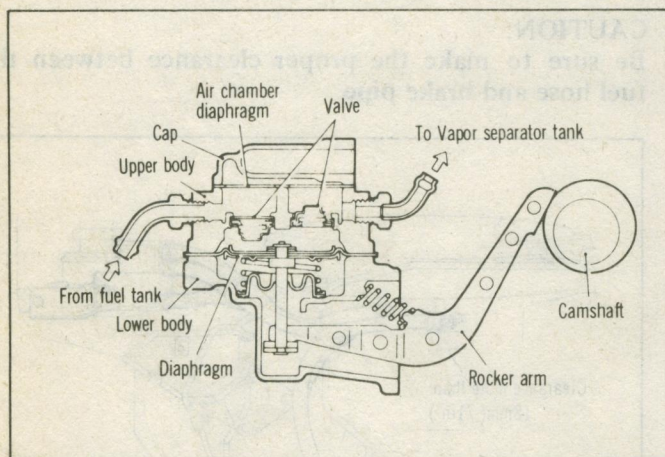


Fig. 10 Fuel Pump Assembly

TESTING FUEL PUMP (ON VEHICLE)

If the fuel pump fails to supply fuel properly to the carburetor, the following tests should be made before removing the fuel pump from the vehicle.

Pressure Test

(1) Insert a "T" fitting in fuel line at carburetor (Fig. 11).

(2) Connect a 150 mm (6 in.) in length of hose between "T" fitting and gauge. On vehicles with fuel return system, plug the hose to prevent returning fuel to tank.

(3) Vent pump for a few seconds (this relieves air trapped in fuel chamber). If this is not done, pump will not operate at full capacity and low pressure reading will result.

(4) Connect a tachometer, then start engine and run at idle. The reading should be as shown in specifications (depending on pump) and remain constant or return to zero slowly when engine is stopped. An instant drop to zero indicates a leaky outlet valve. If pressure is too low a weak diaphragm main spring, or improper assembly of diaphragm may be the cause. If pressure is too high, main spring is too strong or the air vent is plugged.

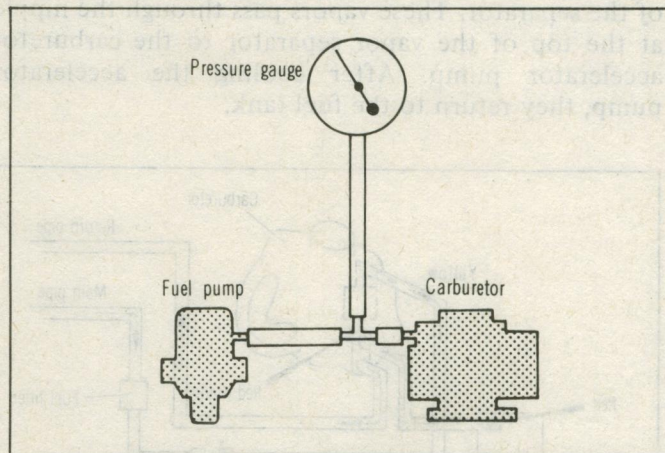


Fig. 11 Pressure Testing of Fuel Pump

REMOVAL

(1) Place the piston in the No. 1 cylinder at top dead center. When piston is placed in this position, the lift of the fuel pump drive eccentric cam will be reduced to a minimum and the fuel pump will be easier to remove.

(2) Disconnect the fuel hoses from fuel pump.

(3) Remove the fuel pump mounting nuts or bolts and remove the fuel pump assembly.

(4) Remove the insulator and gaskets.

DISASSEMBLY

(1) Remove the cap and the air chamber diaphragm from the upper body.

(2) Remove the upper body (from the lower body).

NOTE: The valve has been staked to the body and should not be removed if so constructed.

Do not remove the inlet and outlet nipples, diaphragms and rocker arms.

INSPECTION

Each disassembled part should be cleaned and checked for the following items. Any part that is defective should be replaced.

- (1) Check the diaphragm for crack, failure, and deterioration.
- (2) Check the valve for motion and closed condition.
- (3) Check for wear of the rocker arm end where the camshaft eccentric cam was rotating.
- (4) Move the rocker arm to check for spring deterioration and check pin section for wear.
- (5) Check the pump body and the cover for cracks and damage.

ASSEMBLY

Reassembly of the fuel pump can be done by reversing the order of disassembly. When reassembling, observe the following items.

- (1) The diaphragm assembly should be assembled with the diaphragm pushed down at the center. Do not fold or bend the diaphragm.

- (2) After reassembly, check the rocker arm for motion. It should move smoothly without distortion.

- (3) Tighten the cap and upper body screws to the specified torque.

Parts to be tightened	Torque Nm (ft-lbs.)
Cap screws	0.7 to 2.0 (.5 to 1.5)
Upper body screws	2.0 to 4.9 (1.5 to 3.6)

INSTALLATION

- (1) Place the piston in the No. 1 cylinder at top dead center on compression stroke.
- (2) Install new gaskets and insulator.
- (3) Install the fuel pump assembly and tighten the bolts or nuts.
- (4) Connect the fuel hoses to the fuel pump. Firmly tighten the hoses with hose clamps. Make certain that the fuel hoses are not broken or cracked.
- (5) Make a trial run to check for fuel leaks or oil leaks.

CARBURETOR

CARBURETOR APPLICATION

		○ Applicable × Not applicable						
Requirement	Engine model	Transmission	Sub-EGR valve	C.A.V.	Fuel cut off solenoid	A.S.V.	Dash pot	Carburetor model
49-states	U	M/T	○	○	×	○	×	30-32DIDTA-85
	U	A/T	○	○	×	○	×	30-32DIDTA-86
	W	M/T	○	○	○	○	×	30-32DIDTA-185
	W	A/T	○	○	○	○	×	30-32DIDTA-186
California	U	M/T	○	○	×	○	×	30-32DIDTA-83
	U	A/T	○	○	×	○	×	30-32DIDTA-84
	W	M/T	○	○	○	○	×	30-32DIDTA-183
	W	A/T	○	○	○	○	×	30-32DIDTA-184
Canada	U	M/T	×	×	○	×	○	30-32DIDTA-132
	U	A/T	×	×	○	×	×	30-32DIDTA-133
	W	M/T	×	×	○	×	○	30-32DIDTA-136
	W	A/T	×	×	○	×	×	30-32DIDTA-137

U:2.0 liter (121.7 CID), W:2.6 liter (155.9 CID) engine, M/T:Manual Transmission, A/T:Automatic Transmission.

C.A.V. : Coasting Air Valve, A.S.V. : Air Switching Valve

GENERAL INFORMATION

All vehicles are equipped with a conventional downdraft twin-barrel compound type carburetor which incorporates automatic choke, accelerator pump, and enrichment system. In addition, a deceleration device is provided. For information on the deceleration device, refer to GROUP 25.

The method of operation of each system is briefly summarized as follows:

Fuel Inlet System

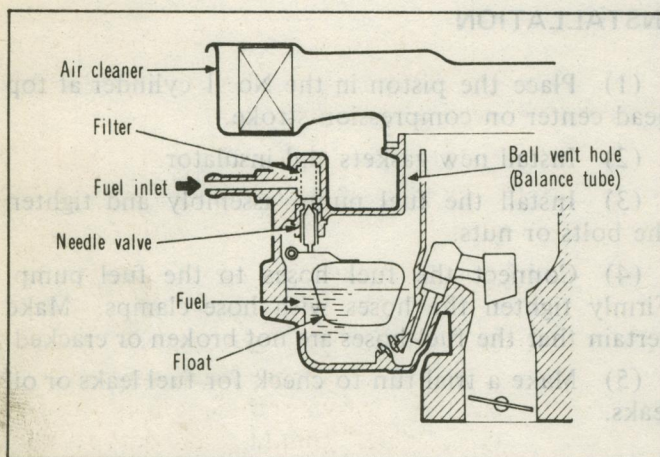


Fig. 12 Fuel Inlet System

The fuel inlet system constantly maintains the fuel at a prescribed level within the carburetor during operation. Fuel from the fuel tank flows through the fuel pump, fuel filter, and through a needle valve into the carburetor float chamber.

As fuel enters the float chamber, the float moves upward and closes the needle valve when the fuel is at the prescribed level. With the consumption of fuel, the float moves down to open the needle valve, permitting fuel to flow once more into the float chamber. This operation is repeated to maintain a constant level of fuel within the carburetor.

Anti-overfill Device

The float chamber contains a device which prevents fuel leaks in the event of vehicle roll-over. The device holds down the float to close the needle valve when the vehicle rolls over, thereby preventing fuel from entering the float chamber. (Fig. 13)

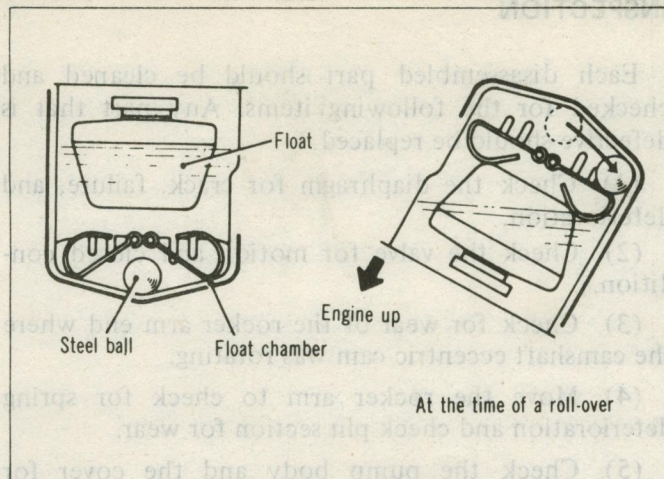


Fig. 13 Anti-overfill Device

Primary Metering System (See Fig. 14)

The primary metering system consists of the primary main jet, primary pilot jet, off-idle mixture adjusting screw, idle mixture adjusting screw and primary main nozzle. It provides a fuel mixture for idling, light load and cruising at part throttle, and also for full throttle operation at low speeds.

At idling, mixture from the primary pilot jet and air bleed is led down the vertical channel to the pilot outlet with its idle mixture adjusting screw. Bypass holes continue the flow of idle mixture, at light load running, which is fine-adjusted by the off-idle mixture adjusting screw. When the primary throttle is further opened to bring the main metering system into operation, fuel from the primary main jet is drawn into the emulsion well and discharged from the nozzle into the venturi.

Fuel Cut-off Device (See Fig. 14) — Provided on W-engine for U.S.A.

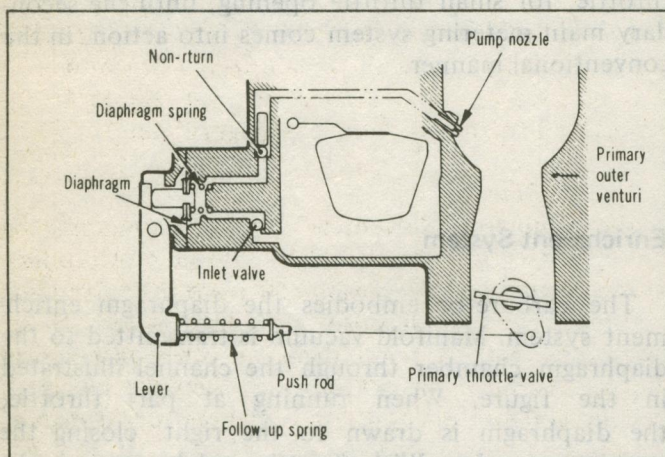
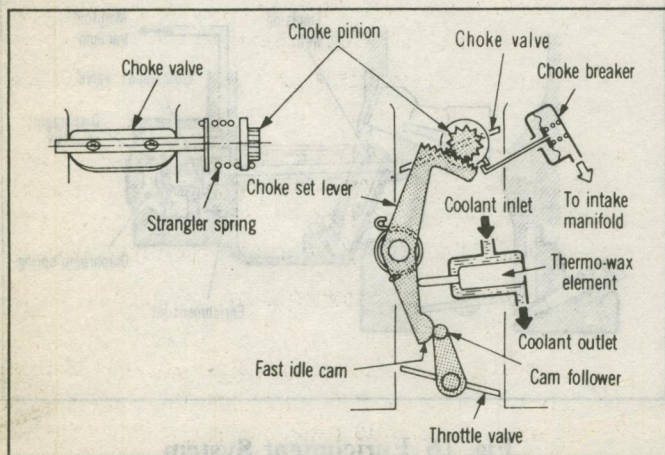
When the ignition key is turned off, the spring-loaded needle valve cuts off the fuel flow to prevent engine "run-on" (dieseling).

Under normal engine operation, the needle valve is drawn by the solenoid to provide the necessary fuel flow for smooth engine operation.

Accelerating Pump (See Fig. 17)

A conventional mechanical type accelerating pump is used. It consists of the flexible diaphragm actuated by a lever, link rod and follow-up spring. The pump is charged with fuel through an inlet valve when the throttle is closed.

On opening the throttle, the spring-loaded push rod is moved to the left, compressing the diaphragm spring. This forces fuel up the vertical passage and out into the primary venturi through the non-return valve and pump nozzle. The follow-up spring prolongs the pump discharge.

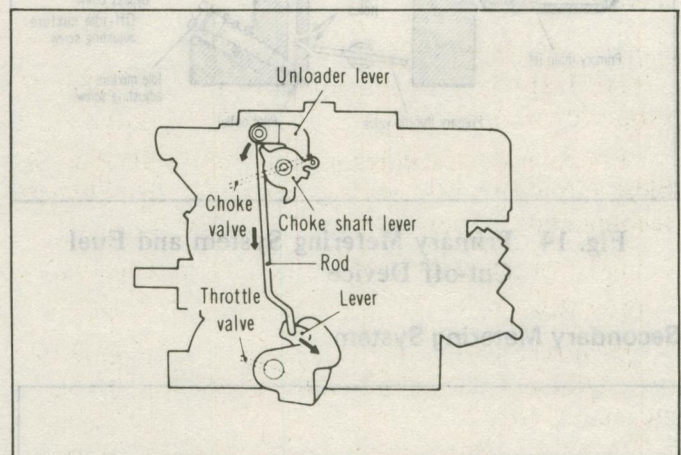
**Fig. 17 Accelerating Pump****Automatic Choke (See Fig. 18)****Fig. 18 Automatic Choke System**

The choke valve is automatically operated by a thermo-wax element which senses the coolant temperature. The sensing element closes the choke valve at low coolant temperature and opens it as the coolant temperature increases.

To prevent an over-rich mixture during cold starts, the choke valve is set initially to the partially open position by the choke breaker, which is actuated by the intake manifold vacuum.

A fast idle cam is provided on the choke set lever, and the cam controls the throttle valve opening.

When the truck is operated (the throttle valve opened) immediately after cold starting (the choke closed), the choke valve is forced to open by the choke unloader to prevent an over-rich mixture. (Fig. 19)

**Fig. 19 Choke Unloader****SERVICING THE CARBURETOR**

A thorough road test and check of minor carburetor adjustments should precede major carburetor service. Specifications for some adjustments are listed on the Vehicle Emission Control Information Label found in the engine compartment.

Some performance complaints directed at the carburetor are actually a result of loose, misadjusted or malfunctioning engine or electrical components. Others develop when vacuum hoses become disconnected or are improperly routed. The proper approach to analyzing carburetor complaints should include a routine check of such areas.

(1) Inspect all vacuum hoses and actuators for leaks. See "Emission Control Systems", Group 25, for proper vacuum hose routing.

- (2) Tighten intake manifold nuts and carburetor mounting nuts to specifications.
 - (3) Perform cylinder compression test.
 - (4) Clean or replace spark plugs as necessary.
 - (5) Test resistance of spark plug cables. Refer to "Ignition System Inspection", Electrical Section.
 - (6) Inspect ignition primary wire and vacuum advance operation. Test coil output voltage and primary and secondary resistance. Replace parts as necessary. Refer to "Ignition System" and make necessary adjustment.
 - (7) Reset ignition timing with vacuum advance line disconnected.
 - (8) Set carburetor idle mixture adjustment. Refer to Emission Control Label in engine compartment.
 - (9) Test fuel pump for pressure.
 - (10) Inspect heat control valve in air cleaner for proper operation.
 - (11) Remove carburetor air filter element and blow out dirt gently with an air hose. Install a new recommended filter element if necessary.
 - (12) Inspect crankcase ventilation system.
 - (13) Road test vehicle as a final test.
- Diagnosing carburetor complaints may require that the engine be started and run with the air cleaner removed.

CAUTION:

While running the engine in this mode it is possible that the engine could backfire. A backfiring situation is likely to occur if the carburetor is malfunctioning, but removal of the air cleaner alone can lean the air fuel ratio in the carburetor to the point of producing an engine backfire.

Removal

The battery cable should be removed from the positive terminal of the battery before any fuel system component is removed. This precaution will prevent the possibility of ignition of fuel during servicing.

CAUTION:

Do not attempt to remove the carburetor from the engine of a vehicle that has just been road tested. Allow the engine to cool sufficiently to prevent accidental fuel ignition or personal injury.

- (1) Disconnect battery ground cable.
- (2) Remove air cleaner.
- (3) Place a container under fuel inlet fitting to catch any fuel that may be trapped in fuel line and disconnect fuel hose from the carburetor inlet nipple.

- (4) Disconnect throttle cable.

- (5) Remove carburetor mounting nuts and carefully remove carburetor from engine compartment. Hold carburetor level to avoid spilling fuel from fuel bowl.

Cleaning Carburetor Parts

There are many commercial carburetor cleaning solvents available which can be used with good results.

The diaphragms and some plastic parts of the carburetor can be damaged by solvents. Avoid placing these parts in any liquid. Clean the external surfaces of these parts with a clean cloth or a soft brush. Shake dirt or other foreign material from the stem (plunger) side of the diaphragm. Compressed air can be used to remove loose dirt but should not be connected to the vacuum diaphragm fitting.

IMPORTANT:

If the commercial solvent or cleaner recommends the use of water as a rinse, "HOT" water will produce better results. After rinsing, all trace of water must be blown from the passages with air pressure. Never clean jets with a wire, drill, or other mechanical means, because the orifices may become enlarged, making the mixture too rich for proper performance.

When checking parts removed from the carburetor, it is at times difficult to be sure they are satisfactory for further service. It is therefore recommended that in such cases, new parts be installed.

Installation

Inspect the mating surfaces of carburetor and intake manifold. Be sure both surfaces are clean and free of nicks, burrs or other damage.

Place a new carburetor gasket on intake manifold surface.

The carburetor gasket can be installed upside down or backwards. To prevent this, match holes in the carburetor gasket to holes on bottom of carburetor, then place gasket properly on intake manifold surface.

- (1) Carefully place carburetor on intake manifold.
- (2) Install carburetor mounting nuts and tighten alternately, a little at a time, to compress carburetor gasket evenly. The nuts must be drawn down tightly to prevent vacuum leakage between carburetor and intake manifold.
- (3) Connect throttle cable and fuel inlet hose.

(4) Check carefully for worn or loose vacuum hose connections. Refer to the "Emission Control" Section, Group 25 of this manual and install all vacuum hoses accordingly.

(5) Check to be sure the choke plate opens and closes fully when operated.

(6) Check to see that full throttle travel is obtained.

(7) Install air cleaner. The air cleaner should be cleaned or replaced at this time to insure proper carburetor performance.

(8) Connect battery cable.

CAUTION:

The practice of priming an engine by pouring gasoline into the carburetor air horn for starting after servicing the fuel system, should be strictly avoided. Cranking the engine, and then priming by depressing the accelerator pedal several times should be adequate.

(9) Set carburetor idle mixture adjustment. Refer to Emission Control Information Label in engine compartment.

DISASSEMBLY

- (1) Disconnect the water hose.
- (2) Remove the throttle return spring and damper spring. (Fig. 20)
- (3) Remove the throttle adjuster lever spring and secondary return spring. (Fig. 20)

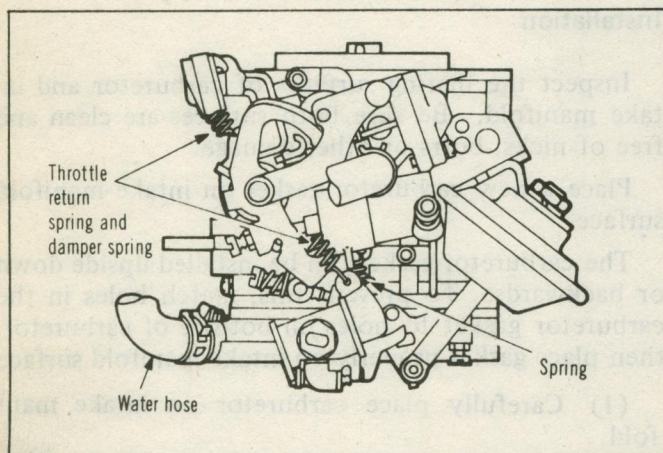


Fig. 20 Removing Springs

(4) Remove the choke unloader link retaining clip and disconnect the choke unloader link. (Fig. 21)

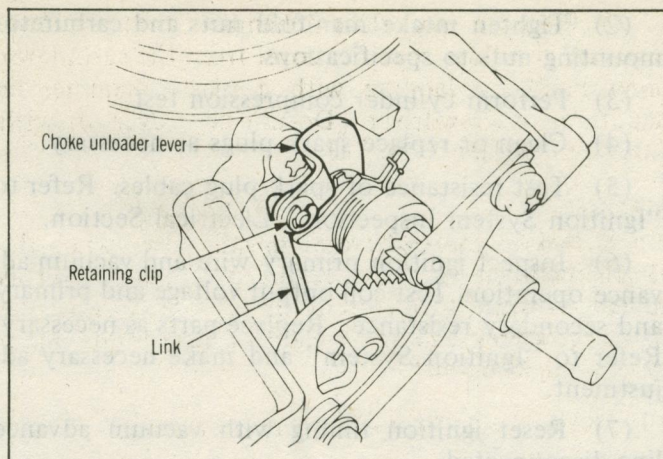


Fig. 21 Removing Choke Unloader Link

(5) Disconnect the vacuum hose.

(6) Disconnect lower end of diaphragm chamber link and remove the diaphragm chamber. Do not immerse the diaphragm chamber assembly in cleaner. (Fig. 22)

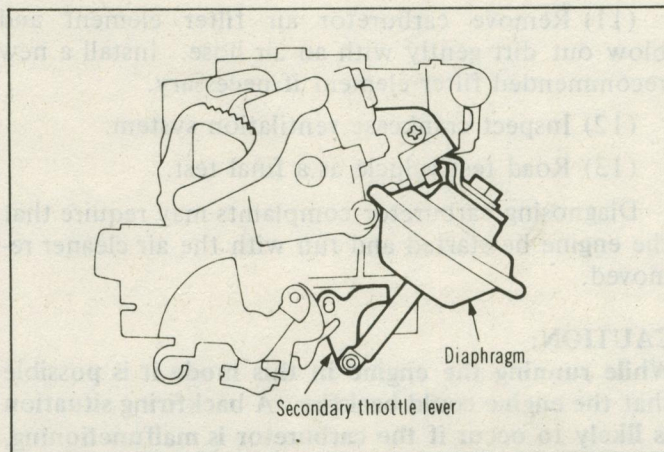


Fig. 22 Removing Diaphragm Chamber

(7) Remove the two screws and remove air switching valve (ASV). (Fig. 23)

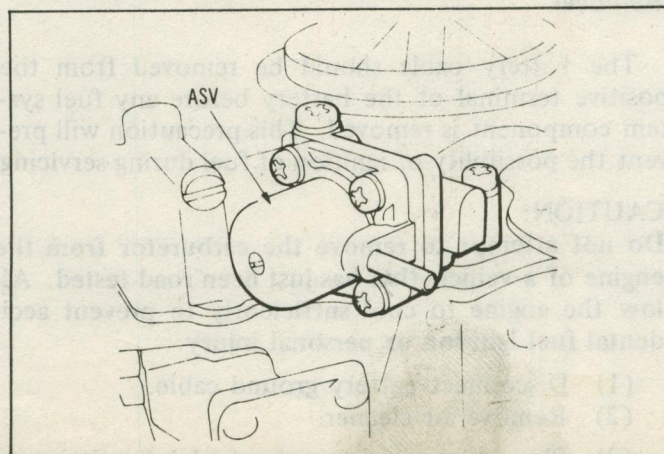


Fig. 23 Removing ASV

(8) Remove six float chamber cover screws. Separate the float chamber cover from the carburetor main body by tapping with a plastic hammer or handle of a screwdriver. Do not pry cover off with screwdriver blade. (Fig. 24)

CAUTION:

Do not place the carburetor upside down when the float chamber cover is removed. If the cover is removed with the carburetor upside down, the discharge check ball and weight of accelerator pump system might be lost.

(9) Remove the float chamber cover gasket.

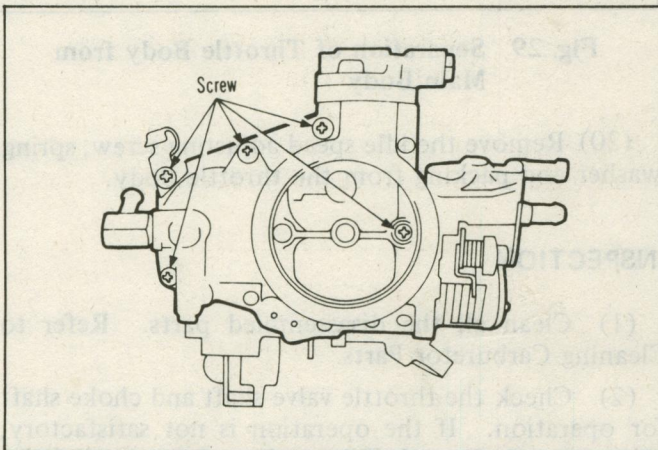


Fig. 24 Removing Float Chamber Cover

(10) Remove the float lever pin and the float. (Fig. 25)

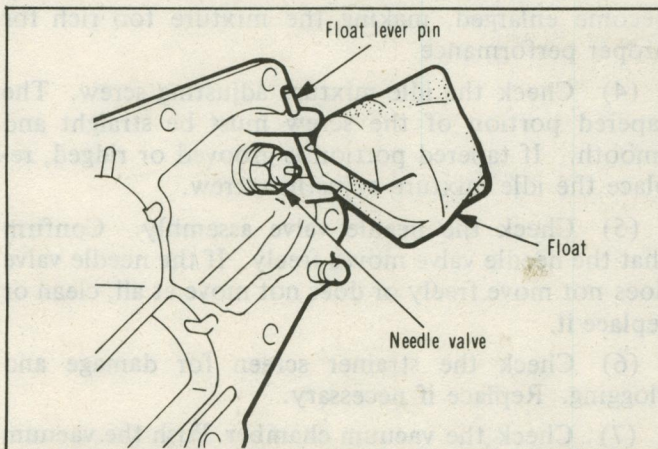


Fig. 25 Removing Float

(11) Remove the needle valve assembly, gasket and filter.

(12) Do not remove the automatic choke system because the factory setting is affected. If the system is removed, the steel ball of the anti-overfill device should also be removed.

(13) Turn the main body upside down and remove the pump discharge check ball and weight.

(14) Remove the fuel cut-off solenoid.

(15) Remove the main jets and pilot jets. To remove the jets, use a screwdriver having a blade suitable for the groove of the jets. Do not tamper with the factory-set bypass screw and adjusting screw shown in Fig. 26. The heads of these screws are coated with white paint.

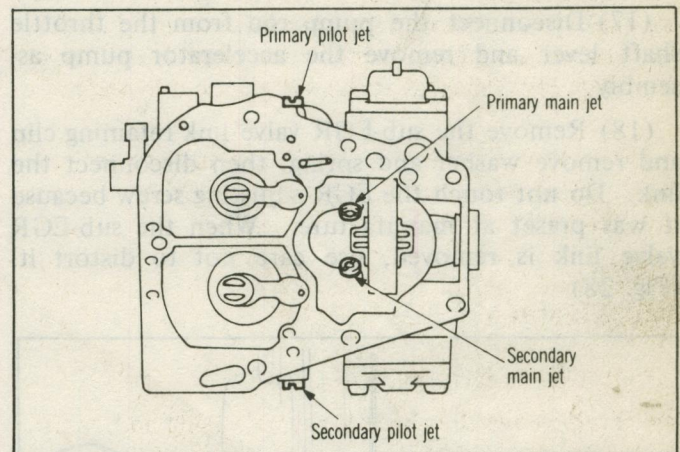


Fig. 26 Jets Location

(16) Remove the enrichment assembly.

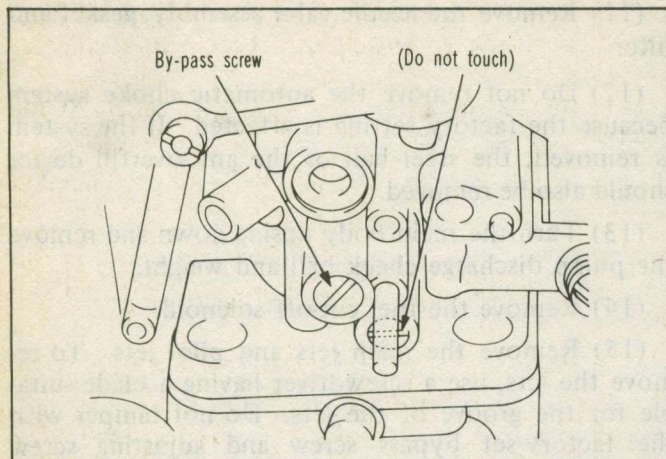


Fig. 27 Adjusting Screw

(17) Disconnect the pump rod from the throttle shaft lever and remove the accelerator pump assembly.

(18) Remove the sub-EGR valve link retaining clip and remove washer and spring, then disconnect the link. Do not touch the EGR adjusting screw because it was preset at manufacture. When the sub-EGR valve link is removed, use care not to distort it. (Fig. 28)

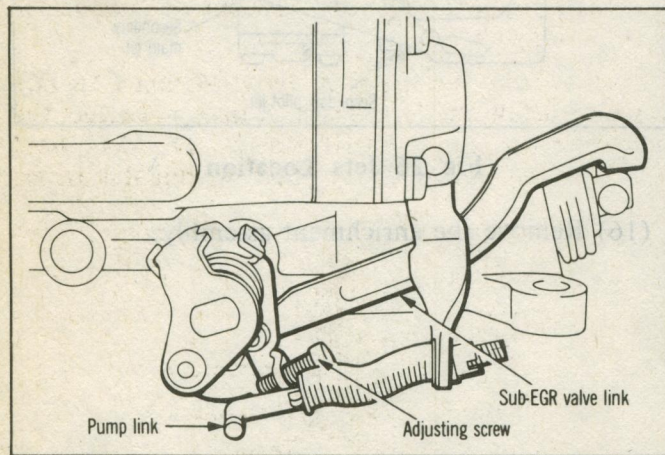


Fig. 28 Removing Pump Link and Sub-EGR Valve Link

(19) Remove the two main body-to-throttle body screws. Separate the throttle body from the main body and remove the gasket. (Fig. 29)

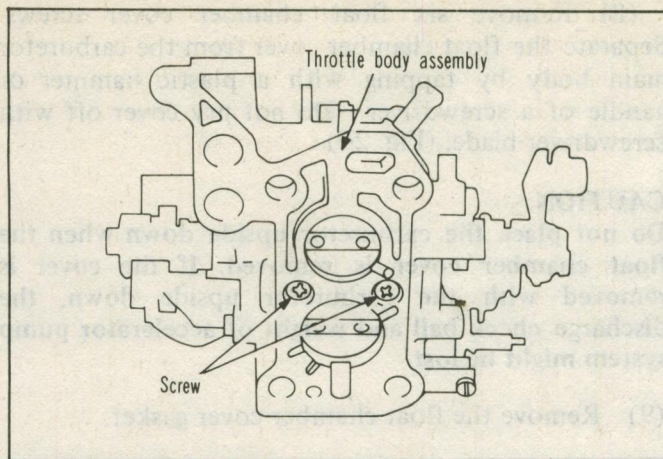


Fig. 29 Separation of Throttle Body from Main Body

(20) Remove the idle speed adjusting screw, spring, washer and packing from the throttle body.

INSPECTION

(1) Clean all the disassembled parts. Refer to Cleaning Carburetor Parts.

(2) Check the throttle valve shaft and choke shaft for operation. If the operation is not satisfactory, clean the shaft and linkage in solvent and lubricate it with engine oil.

(3) Check the jets for damage or clogging. Replace if necessary. Never clean jets with a wire, drill, or other mechanical means, because the orifices may become enlarged, making the mixture too rich for proper performance.

(4) Check the idle mixture adjusting screw. The tapered portion of the screw must be straight and smooth. If tapered portion is grooved or ridged, replace the idle mixture adjusting screw.

(5) Check the needle valve assembly. Confirm that the needle valve moves freely. If the needle valve does not move freely or does not move at all, clean or replace it.

(6) Check the strainer screen for damage and clogging. Replace if necessary.

(7) Check the vacuum chamber. Push the vacuum chamber rod in, seal off the nipple, and release the rod. If the rod does not return, the vacuum chamber is good. If the rod returns when released, it means that the diaphragm is defective. Replace the vacuum chamber.

(8) Check the fuel cut-off solenoid. Connect positive (+) terminal of a 12-Volt battery to the coupler side and negative (-) terminal to the other lead wire (ring terminal side). Check to see if the needle moves in toward the solenoid. If the needle moves out when the battery is disconnected, the fuel cut-off solenoid is good.

ASSEMBLY

(1) Install the idle mixture adjusting screw, spring, washer and packing in throttle body. Turn screw lightly against its seat with fingers. **DO NOT USE A SCREWDRIVER.** Turn the idle mixture adjusting screw 3/4 turn counterclockwise as a starting point.

(2) Using a new gasket, install throttle body to main body and tighten screws. (Fig. 29)

(3) Connect the sub-EGR valve link to lever and install spring, washer and retaining clip. (Fig. 28)

(4) Connect the accelerator pump rod to the throttle shaft lever. (Fig. 28)

(5) Install the main jets and the pilot jets. (Fig. 26)

(6) Install the fuel cut-off solenoid.

(7) Using a new gasket, install the enrichment to the main body.

(8) Install the accelerator pump assembly.

(9) Install the accelerator pump discharge check ball and weight. (Fig. 30)

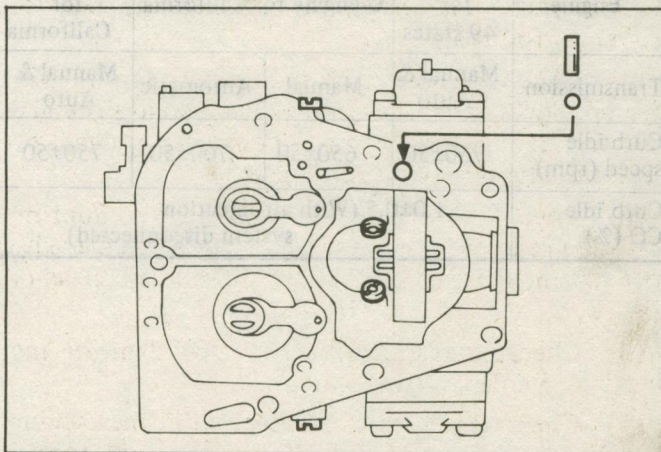


Fig. 30 Accelerator Pump Discharge Check Ball and Weight Location

(10) Install the steel ball in the bottom of float chamber. Check to ensure that brass blade is facing downward.

(11) Install the filter and gasket, then install the needle valve assembly.

(12) Install the float assembly to the float chamber cover.

(13) Place a new gasket on the main body, install the float chamber cover assembly, and tighten the screws.

(14) Place a new gasket on the float chamber cover and install the mixture control valve.

(15) Install a new gasket on the air switching valve, then install the air switching valve on the float chamber cover.

(16) Install the return springs.

(17) Connect the water hose.

FLOAT ADJUSTMENT (See Fig. 31)

Check the sight glass on the float chamber to observe the fuel level. Normal fuel level is indicated by the level mark on the sight glass.

To correct a faulty fuel level, the float level can be adjusted by increasing or decreasing the number of needle valve packings.

Even if the fuel level is about 4 mm (.16 in.) above or below the level mark, it does not affect the carburetor or engine performance. The fuel level need not be adjusted if it stays within this range.

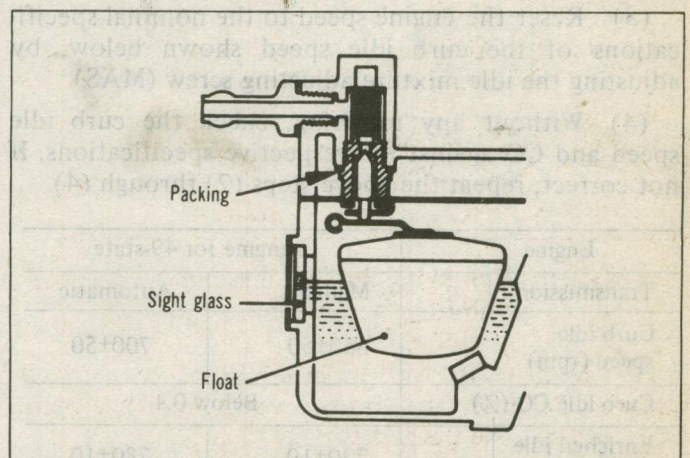


Fig. 31 Float Adjustment

IDLE SPEED AND MIXTURE SETTING PROCEDURE — U-engine for 49-state only

Setting condition:

- Place the transmission in "N" (neutral) position and set the parking brake.
- The air conditioner, lights and all accessories must be off.

(1) Run the cold engine at idle until the coolant temperature is raised to 80 to 90°C (170 to 190°F).

(2) Set the engine speed and idle CO concentration to the enriched idle speed and enriched idle CO, as specified below, by adjusting the idle speed adjusting screw (SAS) and the idle mixture adjusting screw (MAS). (Fig. 32)

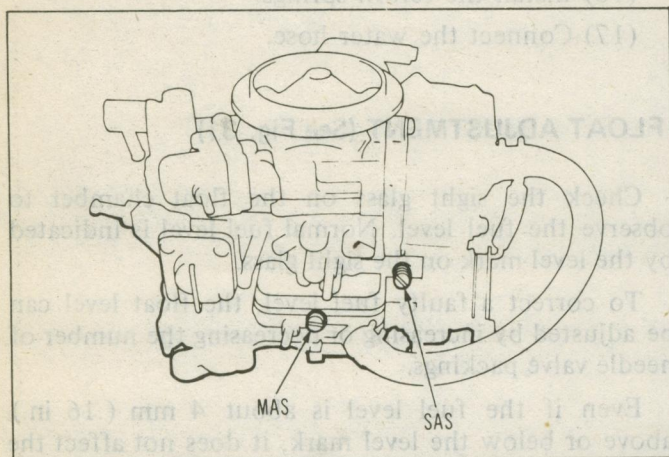


Fig. 32 Adjusting Screw

(3) Reset the engine speed to the nominal specifications of the curb idle speed shown below, by adjusting the idle mixture adjusting screw (MAS).

(4) Without any misfiring, check the curb idle speed and CO against the respective specifications. If not correct, repeat the above steps (2) through (4).

Engine	U-engine for 49-state	
	Manual	Automatic
Curb idle speed (rpm)	650±50	700±50
Curb idle CO (%)	Below 0.1	
Enriched idle speed (rpm)	730±10	780±10
Enriched idle CO (%)	1.0±0.1	1.0

IDLE SPEED AND MIXTURE SETTING PROCEDURE — U-engine for California and W-engine

Setting condition:

- Place the transmission in "N" (neutral) position and set the parking brake.
- The air conditioner, light and all accessories must be off.

(1) Run the cold engine at idle until the coolant temperature is raised to 80 to 90°C (170 to 190°F).

(2) Remove the air hose, running between the reed valve and the air cleaner, from the reed valve, and plug the air inlet of the reed valve.

Or, clamp the air hose running between the reed valve and the air cleaner, with a special hose clamp, so as not to cause any secondary air flow into the reed valve.

(3) Set the engine speed and the idle CO concentration to the respective values specified below, by adjusting the idle speed adjusting screw (SAS) and the idle mixture adjusting screw (MAS). (Fig. 32)

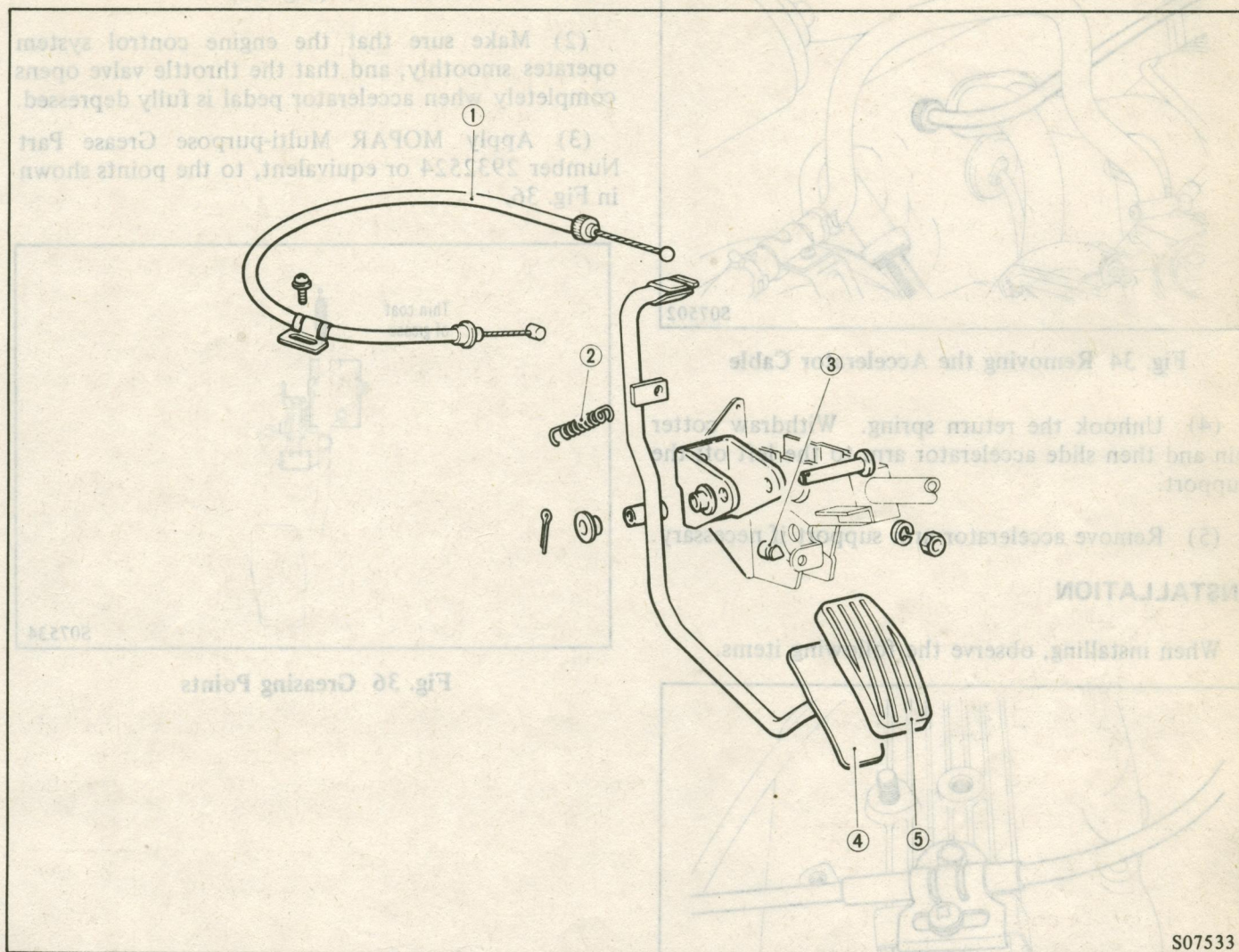
(4) Unplug the air inlet of the reed valve, and reconnect the air hose to the reed valve.

Or, take off the special hose clamp from the air hose.

(5) Reset the engine speed to the specified idle speed by adjusting the idle speed adjusting screw (SAS), if the engine speed is out of the specified speed range.

Engine	W-engine for 49 states	U-engine for California		W-engine for California
	Manual & Auto	Manual	Automatic	Manual & Auto
Curb idle speed (rpm)	750±50	650±50	700±50	750±50
Curb idle CO (%)	1.0±0.5 (With air injection system disconnected)			

ENGINE CONTROL



S07533

- (1) Accelerator cable
- (2) Return spring
- (3) Accelerator arm stopper

- (4) Accelerator arm assembly
- (5) Pedal pad

Fig. 33 Engine Control Components

REMOVAL

- (1) Remove air cleaner.
- (2) Remove clamp from outer cable. Disconnect inner cable from throttle lever.

- (3) Disconnect inner cable from accelerator arm. Remove cable guide from toeboard in the engine compartment. Remove cable from truck. (Fig. 34)

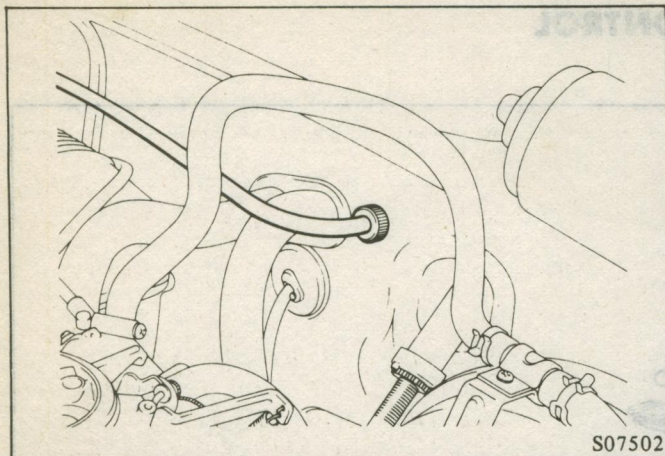


Fig. 34 Removing the Accelerator Cable

(4) Unhook the return spring. Withdraw cotter pin and then slide accelerator arm to the left off the support.

(5) Remove accelerator arm support if necessary.

INSTALLATION

When installing, observe the following items.

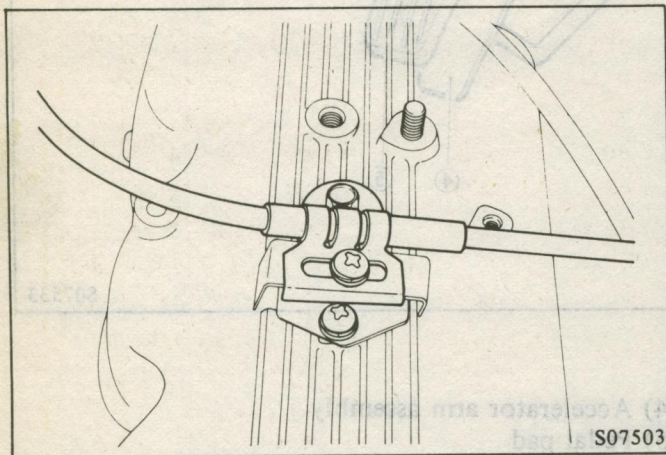


Fig. 35 Adjusting the Accelerator Cable

(1) Connect cable to accelerator arm. Adjust the cable holder to limit free play of accelerator pedal to within 1 mm (.04 in.). (Fig. 35)

(2) Make sure that the engine control system operates smoothly, and that the throttle valve opens completely when accelerator pedal is fully depressed.

(3) Apply MOPAR Multi-purpose Grease Part Number 2932524 or equivalent, to the points shown in Fig. 36.

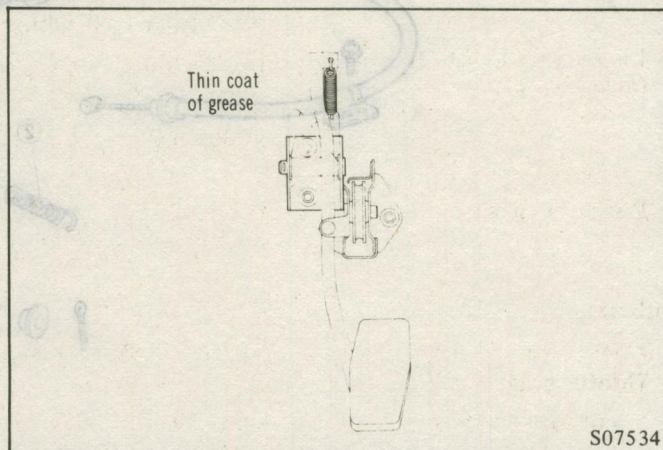


Fig. 36 Greasing Points

SPECIFICATIONS

Description	Specification					
	U-engine			W-engine		
	Calif.	49 states	Canada	Calif.	49-states	Canada
Fuel pump						
Type	Mechanical diaphragm	Mechanical diaphragm	Mechanical diaphragm	Mechanical diaphragm	Mechanical diaphragm	Mechanical diaphragm
Discharge rate (at engine speed)	Over 2 lit. (0.53 U.S.gal) (0.44 Imp.gal) (5000 rpm)	Over 2 lit. (0.53 U.S.gal) (0.44 Imp.gal) (5000 rpm)	Over 2 lit. (0.53 U.S.gal) (0.44 Imp.gal) (5000 rpm)	Over 2 lit. (0.53 U.S.gal) (0.44 Imp.gal) (5000 rpm)	Over 2 lit. (0.53 U.S.gal) (0.44 Imp.gal) (5000 rpm)	Over 2 lit. (0.53 U.S.gal) (0.44 Imp.gal) (5000 rpm)
Discharge pressure	32 to 42 kPa (4.6 to 6 psi.)	32 to 42 kPa (4.6 to 6 psi.)	32 to 42 kPa (4.6 to 6 psi.)	32 to 42 kPa (4.6 to 6 psi.)	32 to 42 kPa (4.6 to 6 psi.)	32 to 42 kPa (4.6 to 6 psi.)
Carburetor						
Type	Downdraft twin-barrel compound type					
Throttle bore						
Primary mm(in.)	30 (1.181)	30 (1.181)	30 (1.181)	30 (1.181)	30 (1.181)	30 (1.181)
Secondary mm (in.)	32 (1.260)	32 (1.260)	32 (1.260)	32 (1.260)	32 (1.260)	32 (1.260)
Main jet						
Primary	# 106.3-M/T	# 106.3	# 106.3	# 108.8	# 108.8	# 107.5
Secondary	# 107.5-A/T	# 190	# 190	# 185	# 185	# 185
Pilot jet						
Primary	# 52.5	# 52.5	# 60	# 60	# 60	# 55
Secondary	# 60	# 60	# 60	# 60	# 60	# 60
Enrichment jet	# 40	# 40	# 40	# 45	# 45	# 55
First idle opening	12° - M/T *	12° - M/T	15° - M/T	13° - M/T	13° - M/T	14° - M/T
at 23°C (734°F)	13° - A/T *	13° - A/T	16° - A/T	14° - A/T	14° - A/T	15° - A/T
Vacuum kick opening	1.3/-10 or less	1.3/-10 or less	1.3 (0.051)	1.4/-10 or less	1.4/-10 or less	1.4
mm/°C (in./°F)	(.015/14) or less	(.015/14) or less		(.055/14) or less	(.055/14) or less	(0.055)
	0.9/0 or more	0.9/0 or more		1.0/0 or more	1.0/0 or more	
	(.035/32) or more	(.035/32) or less		(.039/32) or more	(.039/32) or less	

* M/T Manual Transmission

A/T Automatic Transmission

TIGHTENING TORQUE

Description	Torque Nm (ft-lbs.)
Fuel pump.	
Cap screw	0.7 to 2.0 (.5 to 1.5)
Upper body screw	2.0 to 4.9 (1.5 to 3.6)