

FUEL SYSTEM

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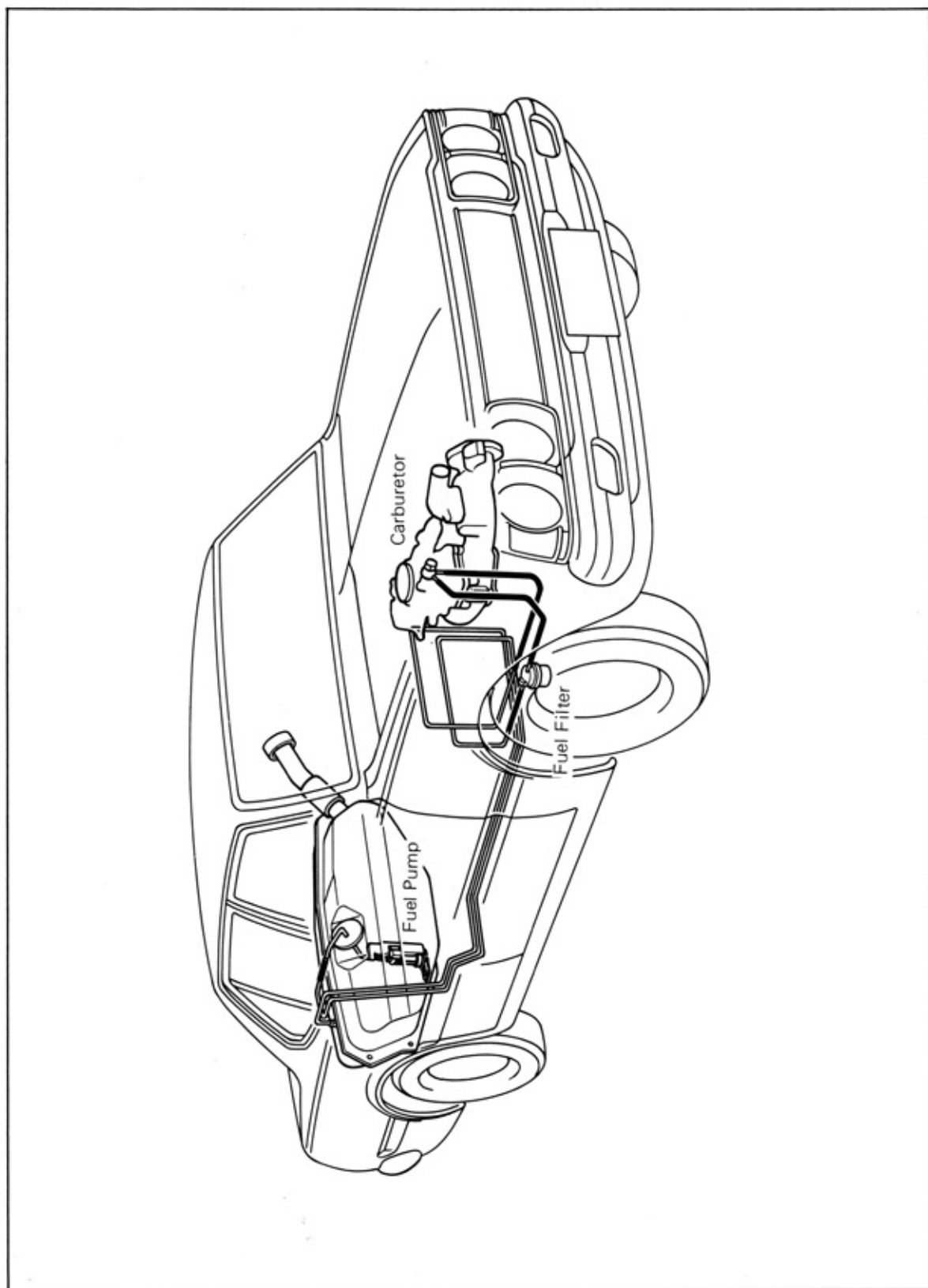
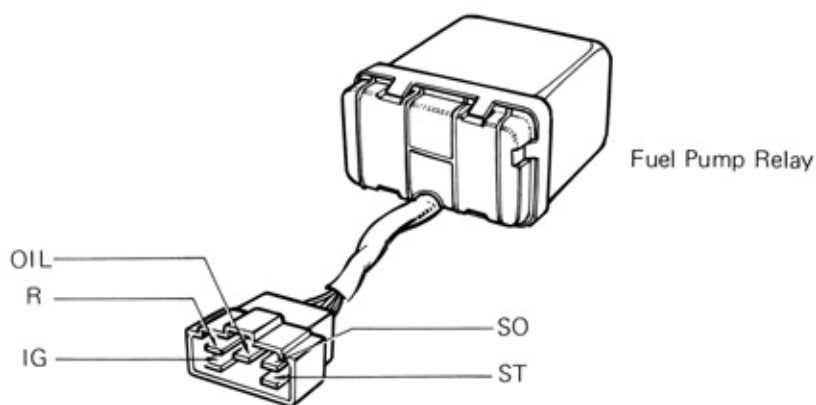
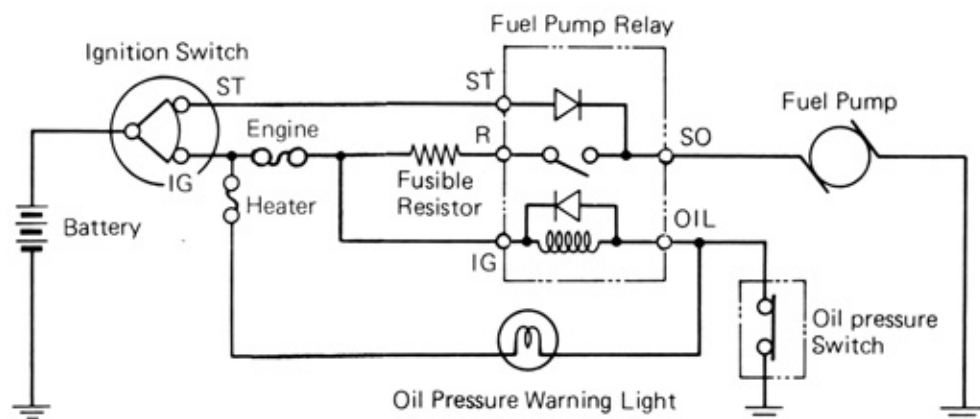


Fig. 4-1 Fuel Flow Circuit (CORONA)

FUEL PUMP



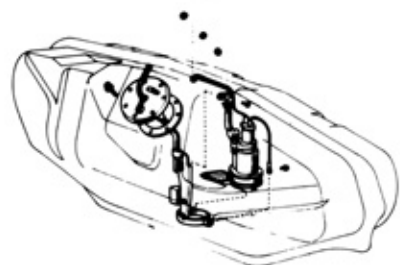
Fuel pump turns:

- While starter is turning
- Engine oil pressure is present

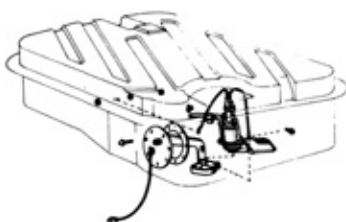
**NEVER OPERATE THE FUEL PUMP UNLESS IT IS IMMERSSED IN THE GASOLINE.
DO NOT TEST THE PUMP WITHOUT THE RESISTOR.**

Fig. 4-2 Fuel Pump Control System Circuit

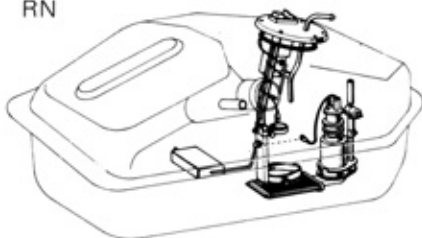
RT Sedan, Hardtop



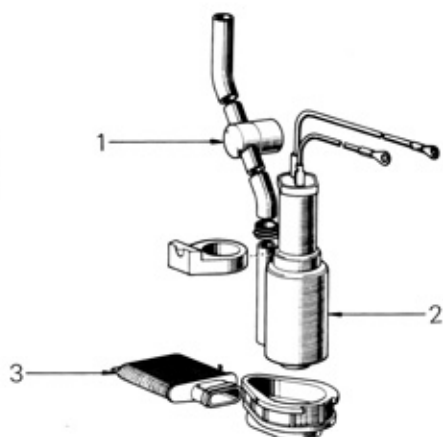
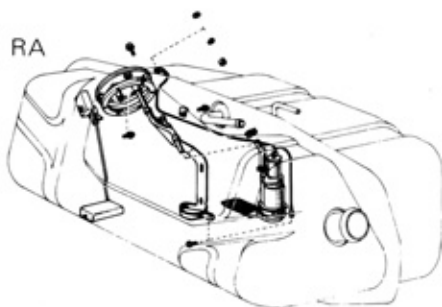
RT Wagon



RN



RA



1. Relief valve
2. Fuel pump
3. Filter

Fig. 4-3 Components Parts

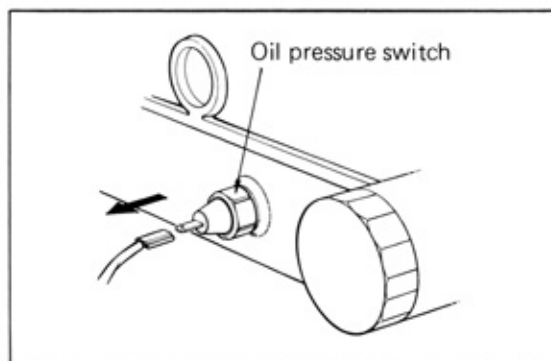


Fig. 4-4 Disconnect Connector From Pressure Switch

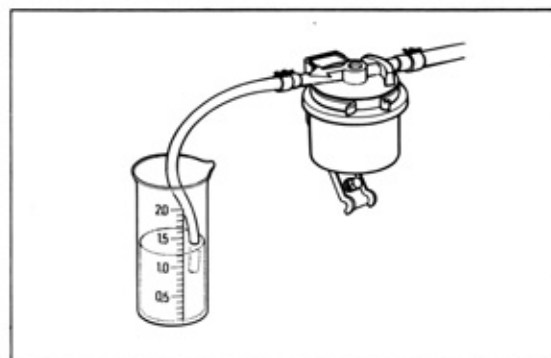


Fig. 4-5 Measure Discharge Capacity

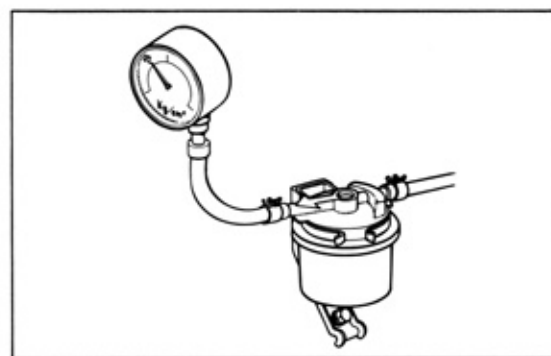


Fig. 4-6 Measure Discharge Pressure

PUMP OPERATION CHECK

Before performing this test, check the oil pressure switch operation.

1. Disconnect connector from oil pressure switch to operate fuel pump relay.
2. Turn ignition key to ON position.
3. Check the pump for smooth and steady rotation. If abnormal noise is present, replace fuel pump.

If the pump does not run, check the pump resistor, relay and/or the pump.

DISCHARGE CAPACITY MEASUREMENT

1. Connect fabricated hose to fuel filter outlet.
2. Turn on ignition key and measure discharge capacity. If below specification, check fuel tubes, hoses and filter for clog and replace fuel pump, if necessary.

Discharge capacity Over 1.2 liter/min.
(1.3 USqt.)

DISCHARGE PRESSURE MEASUREMENT

1. Connect pressure gauge to fuel filter outlet.
2. Turn on ignition key and measure discharge pressure. If not within specification, check for fuel. Replace the pump, if necessary.

Discharge pressure 0.15 to 0.3kg/cm²
(2.1 to 4.3 psi)

After checking fuel pump, turn off the ignition key and reconnect fuel hose and oil pressure switch lead.

REMOVAL

Remove fuel pump from fuel tank. (On Hi-Lux, remove fuel tank.)

Remove battery negative cable from battery terminal before attempting fuel pump removal.

INSTALLATION

Install fuel pump into tank over new gasket and connect lead and hose.

After installation, check for leaks.

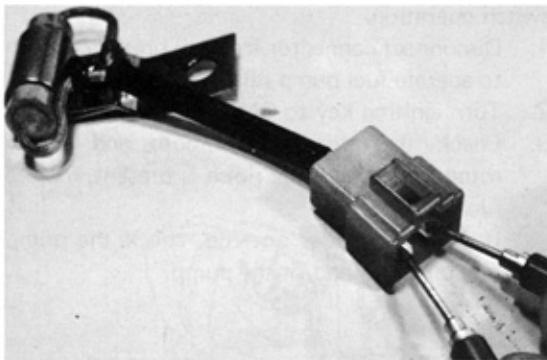


Fig. 4-7 Inspect Continuity

FUEL PUMP RESISTOR (Fusible Type)

Inspect for continuity between two terminals. If no continuity, replace the resistor and check fuel pump.

Resistance

1.4Ω (Reference only)

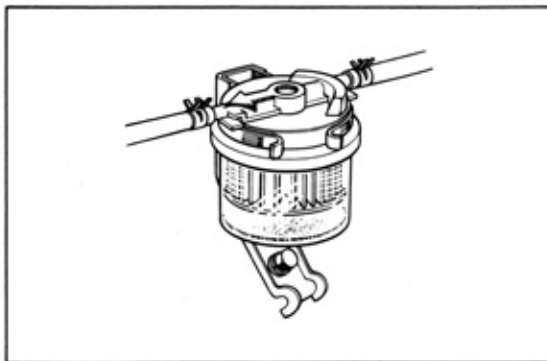


Fig. 4-8 Inspect Fuel Filter

FUEL FILTER

1. Check fuel filter case for crack and deformation. Replace if necessary.
2. Replace fuel filter if excessively dirty.

CARBURETOR

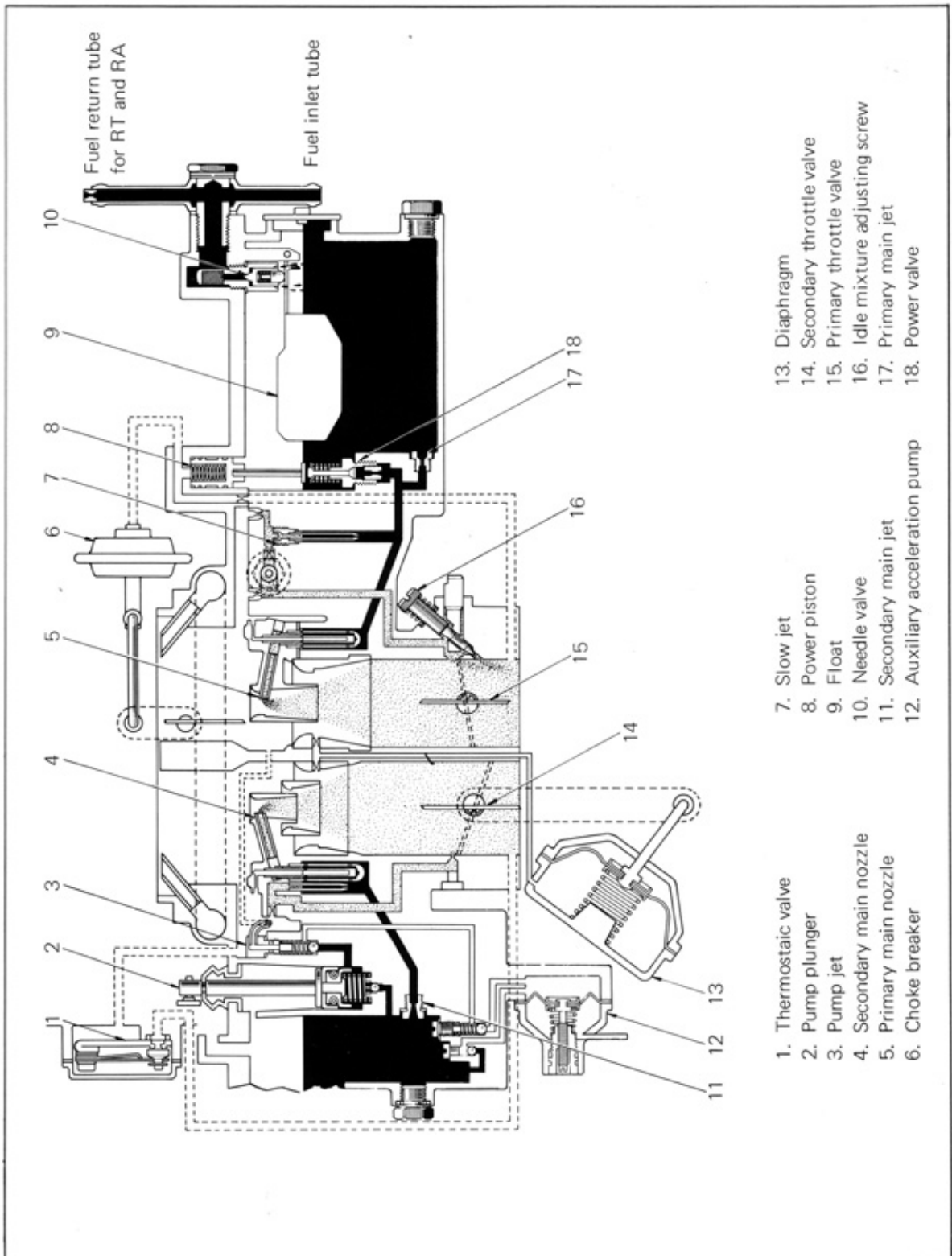
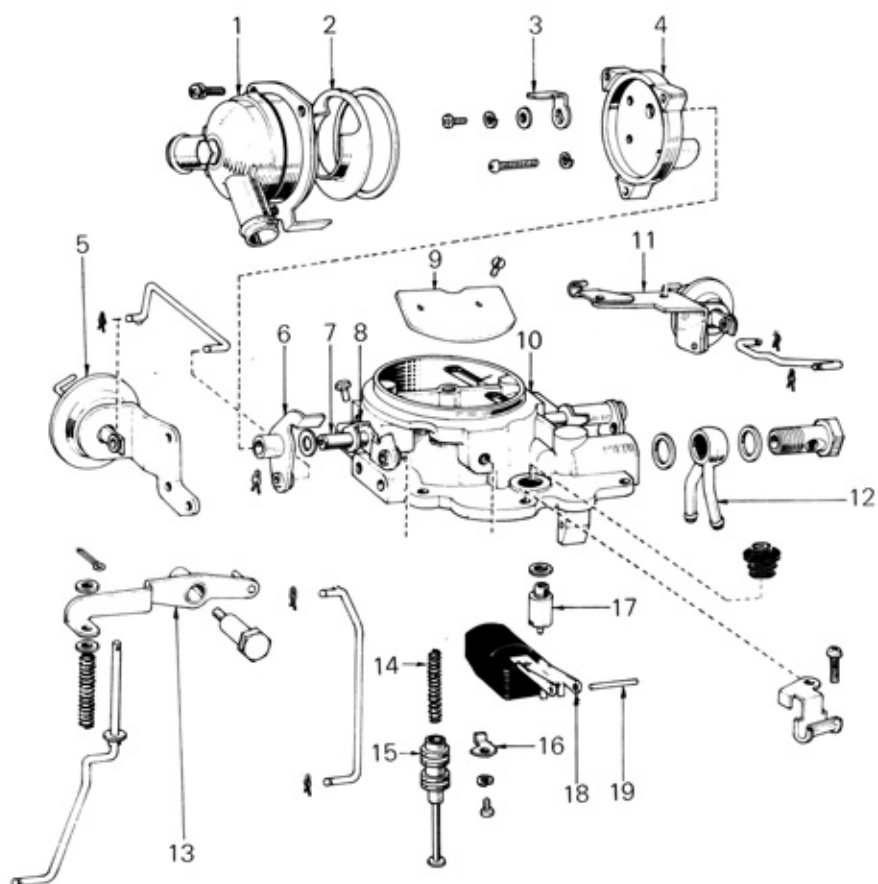
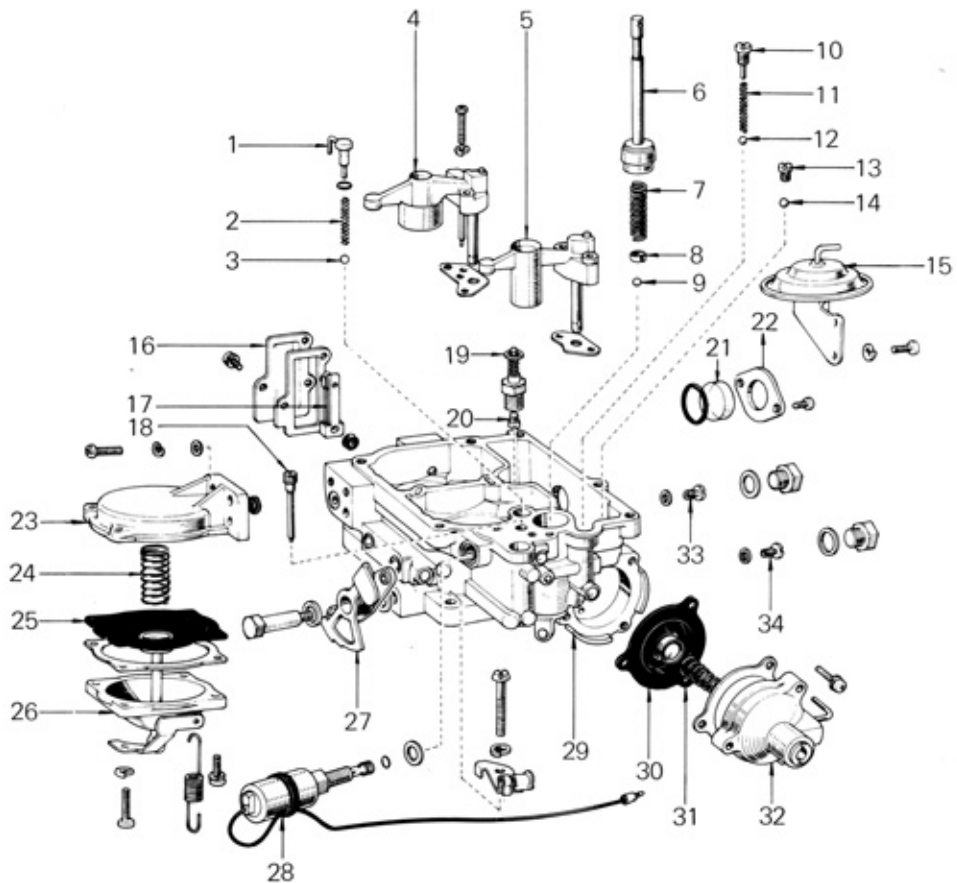


Fig. 4-9 Carburetor Circuits



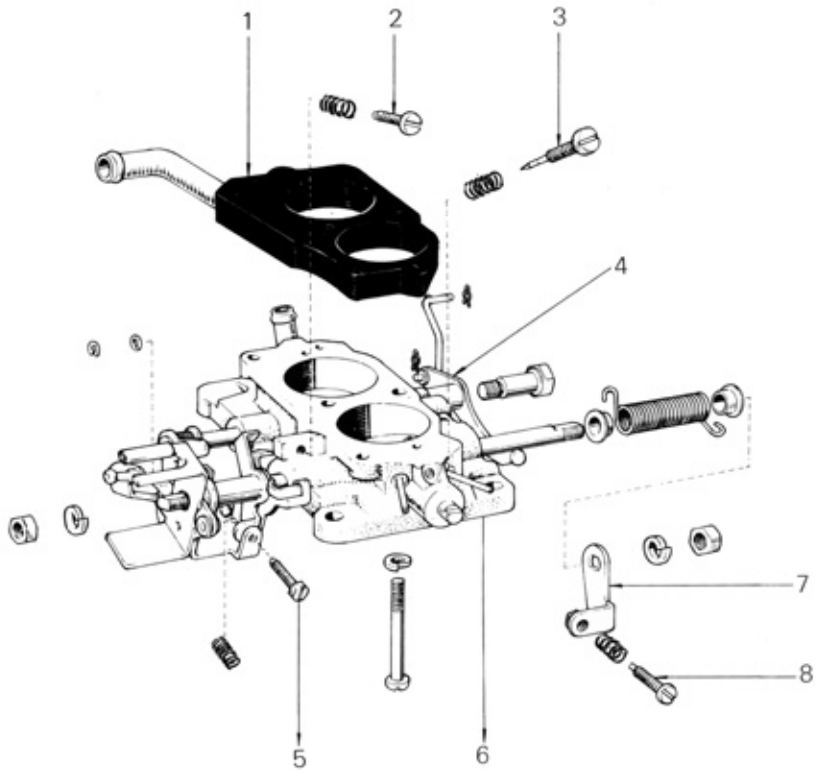
- | | |
|---------------------------|----------------------|
| 1. Water and coil housing | 11. Choke opener |
| 2. Coil housing plate | 12. Union |
| 3. Choke lever | 13. Pump arm |
| 4. Coil housing body | 14. Spring |
| 5. Choke breaker | 15. Power piston |
| 6. Relief lever | 16. Piston retainer |
| 7. Choke shaft | 17. Needle valve set |
| 8. Connecting lever | 18. Float |
| 9. Choke valve | 19. Float pivot pin |
| 10. Air horn | |

Fig. 4-10 Air Horn Component Parts



- | | | |
|----------------------------|------------------------------|------------------------|
| 1. Pump jet | 13. Plug | 25. Diaphragm |
| 2. Spring | 14. AAP inlet check ball | 26. Housing |
| 3. Outlet check ball | 15. Throttle positioner | 27. Fast idle cam |
| 4. Secondary small venturi | 16. Thermostatic valve cover | 28. Solenoid valve |
| 5. Primary small venturi | 17. Thermostatic valve | 29. Carburetor body |
| 6. Pump plunger | 18. Primary slow jet | 30. Diaphragm |
| 7. Spring | 19. Power valve | 31. Spring |
| 8. Ball retainer | 20. Power jet | 32. AAP housing |
| 9. Inlet check ball | 21. Sight glass | 33. Secondary main jet |
| 10. Plug | 22. Glass retainer | 34. Primary main jet |
| 11. Spring | 23. Diaphragm housing cap | |
| 12. AAP outlet check ball | 24. Spring | |

Fig. 4-11 Body Component Parts



- | | |
|---------------------------------|--|
| 1. Insulator | 5. Fast idle adjusting screw |
| 2. Idle speed adjusting screw | 6. Carburetor flange |
| 3. Idle mixture adjusting screw | 7. Throttle lever |
| 4. Positioner lever | 8. Throttle positioner adjusting screw |

Fig. 4-12 Flange Component Parts

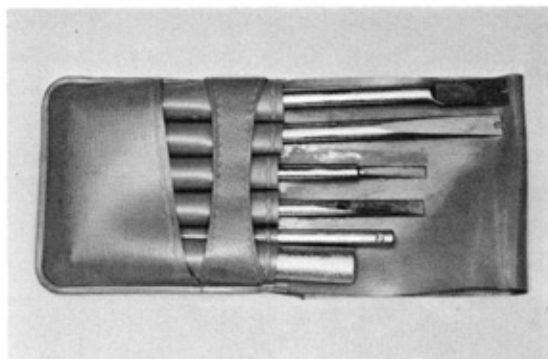


Fig. 4-13 Carburetor Driver Set

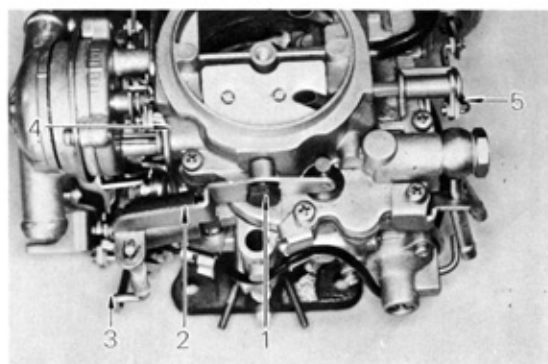


Fig. 4-14 Remove Air Horn

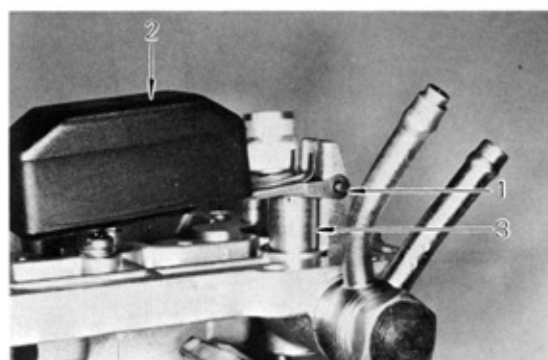


Fig. 4-15 Remove Float

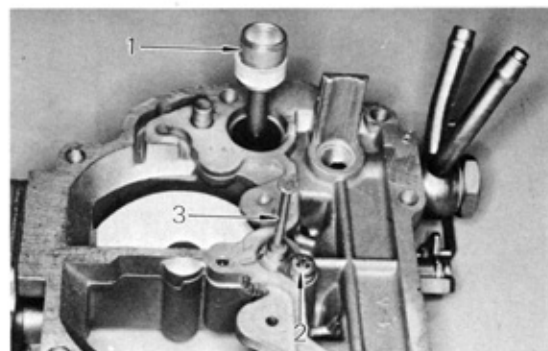


Fig. 4-16 Remove Power Piston

DISASSEMBLY

For Carburetor service you will need:

- Carburetor driver set SST [09860-11010].
- Gauge set SST [09240-00011].
- Parts trays to keep all parts in order.

— Note —

Drain coolant approx. 2 liters (2.1 USqts.) before removing carburetor.

Air Horn Parts

1. Remove pump arm pivot screw (1) and pump arm (2) with connecting rod (3).
2. Remove connecting links (4) and (5) and seven air horn screws.
3. Remove choke opener and lift air horn and gasket out from body.

4. Remove float pivot pin (1) and float (2).
5. Remove needle valve, spring, plunger and seat (3).

6. Pull out pump plunger (1).
7. Remove power piston retainer (2), power piston (3) and spring.

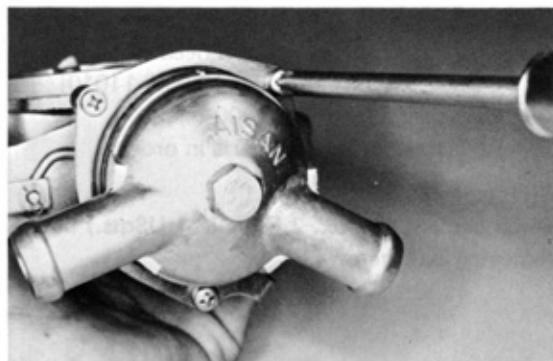


Fig. 4-17 Remove Water Housing

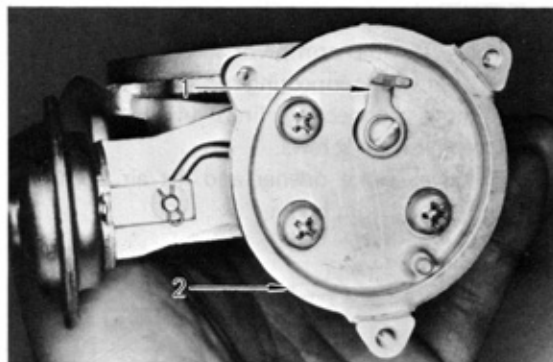


Fig. 4-18 Remove Choke Lever

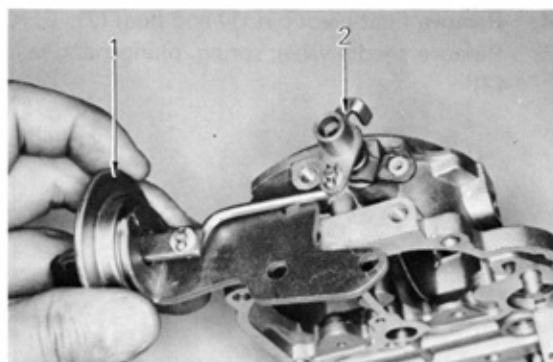


Fig. 4-19 Remove Choke Breaker

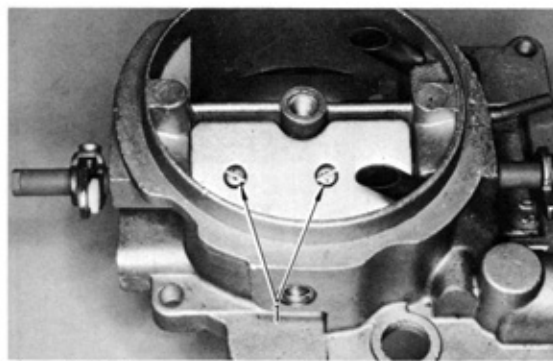


Fig. 4-20 Remove Choke Valve

Automatic Choke

1. Loosen three housing set screws, remove water and coil housing, housing plate and gasket.
2. Loosen shaft and body screws and take off choke lever (1) and coil housing body (2).
3. Remove choke breaker (1) with relief lever (2) and link.

— Note —

Remove following parts only if it is necessary to replace choke shaft.

4. File off peened parts of choke valve set screws (1) and remove valve.

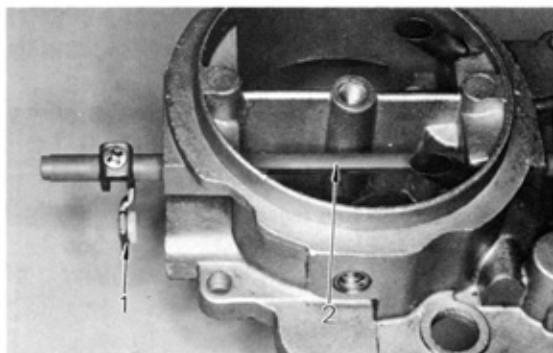


Fig. 4-21 Pull Out Choke Shaft

5. Remove connecting lever (1) and pull out choke shaft (2).

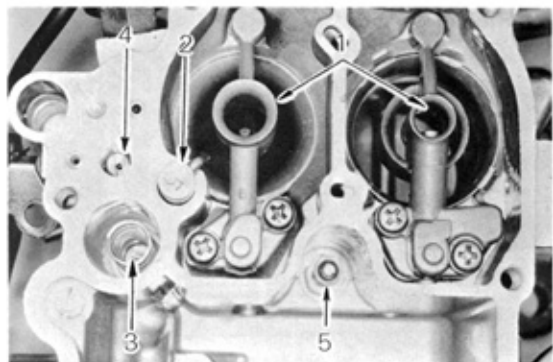


Fig. 4-22 Remove Jets and Venturis

Body Parts

1. Remove venturis (1).
2. Take out pump jet (2), O ring, spring and ball.
3. Take out pump damping spring (3). Using tweezers, take out retainer and ball.
4. Remove slow jet (4) and power valve (5).

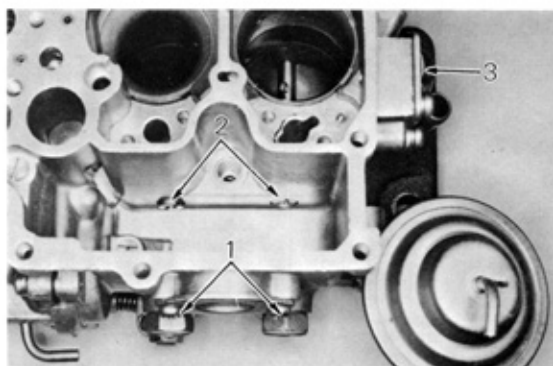


Fig. 4-23 Remove Jets and Thermostatic Valve

5. Remove plugs (1) and main jets (2).
6. Remove cover (3) and take out thermostatic valve and O ring.

— Note —

Do not disassemble the thermostatic valve.

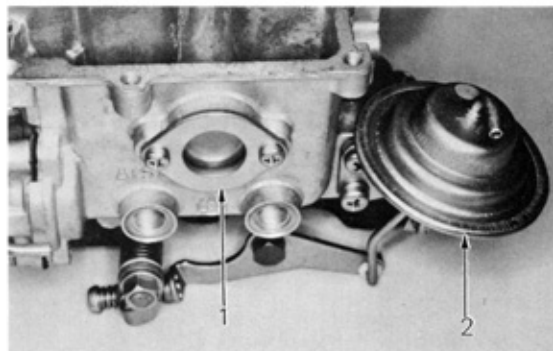


Fig. 4-24 Remove Throttle Positioner

7. Remove sight glass retainer (1), sight glass and O ring.
8. Remove throttle positioner (2) and link.

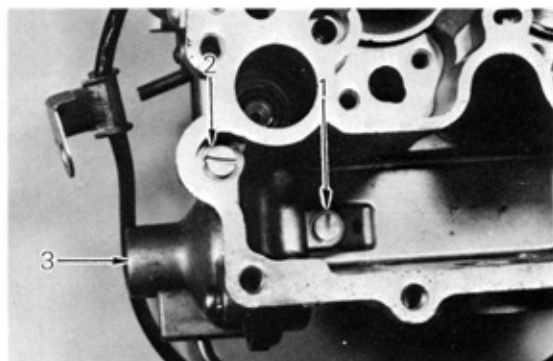


Fig. 4-25 Remove AAP

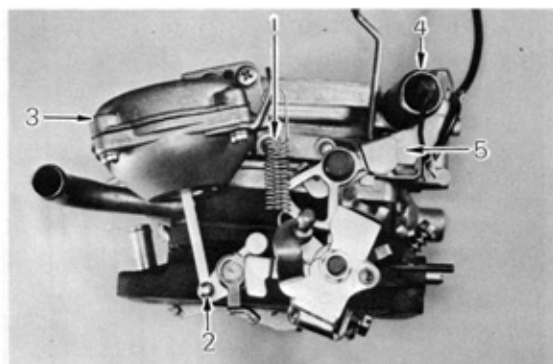


Fig. 4-26 Remove Diaphragm and Solenoid

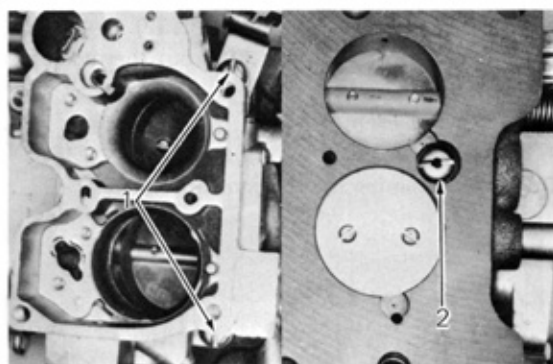


Fig. 4-27 Separate Body and Flange

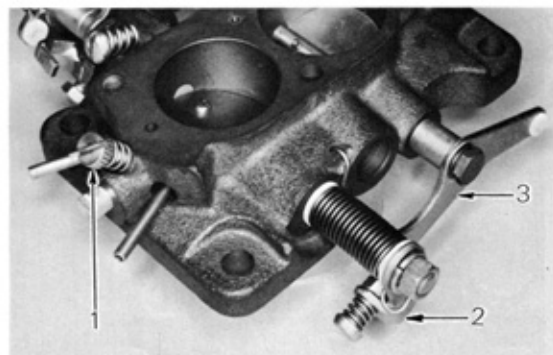


Fig. 4-28 Remove Levers

9. Remove AAP (Auxiliary Acceleration Pump) inlet plug (1) and ball. Remove outlet plug (2), spring and ball.
10. Remove AAP housing (3), diaphragm, spring and gasket.

11. Remove spring (1).
12. Disconnect link (2) and remove diaphragm assembly (3) and O ring.
13. Remove solenoid valve (4) and fast idle cam (5).

14. Loosen three body screws (1) and (2) and remove carburetor body and insulator from flange.

Flange Parts

1. Remove idle mixture adjusting screw (1).
2. Remove throttle lever (2), spring and collars.
3. Remove throttle positioner lever (3).

INSPECTION**— Precaution —**

1. Before inspecting the parts, wash them thoroughly in carburetor cleaner. Using compressed air, blow all dirt and other foreign matter from the jets and similar parts, and from the fuel passages and restrictions in the body.
2. Wash and clean the cast parts with a soft

brush.

3. Clean off carbon adhering around the throttle valve.
4. Never clean the jets or orifices with wire or a drill. This could enlarge the openings and result in excessive fuel consumption.

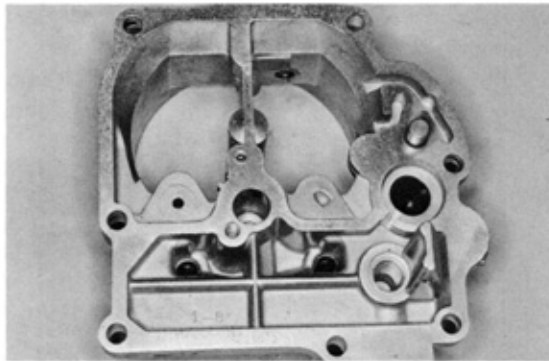


Fig. 4-29 Inspect Air Horn

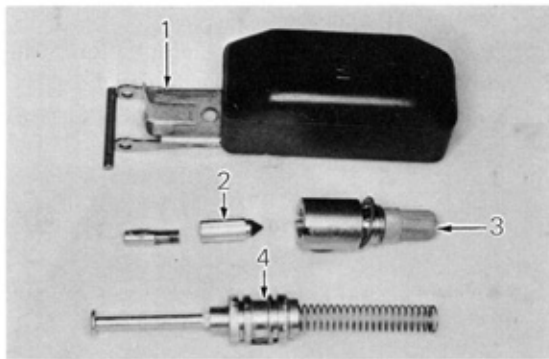


Fig. 4-30 Inspect Air Horn Parts

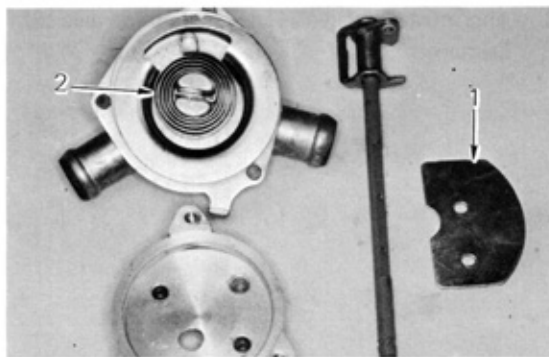


Fig. 4-31 Inspect Choke Parts

Inspect the following parts and replace any part found defective.

Air Horn Parts

1. Air horn: Cracks, damaged threads, and wear on choke shaft bores.
2. Float (1): Broken lip, wear in float pivot pin holes.
3. Needle valve (2) surface contacting valve seat.
4. Strainer (3): Rust, breaks.
5. Power piston (4): Scratches, excessive wear. Power piston spring broken or deformed.
6. Choke valve (1): Deformation. Choke shaft worn, bent, or not fitting properly into housing.
7. Coil housing: Cracks, thermostatic bi-metal coil (2) deformed.

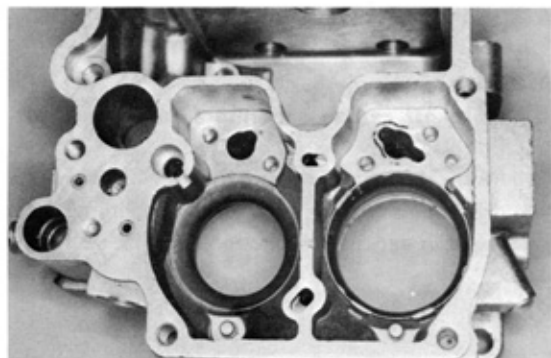


Fig. 4-32 Inspect Body

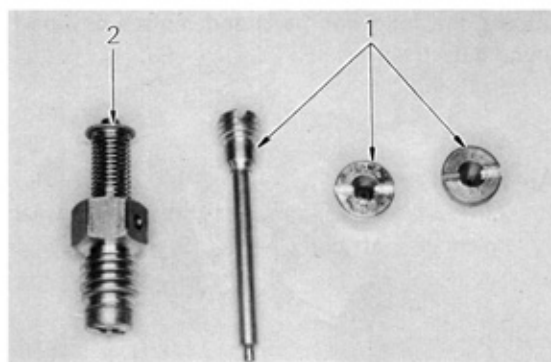


Fig. 4-33 Inspect Jets

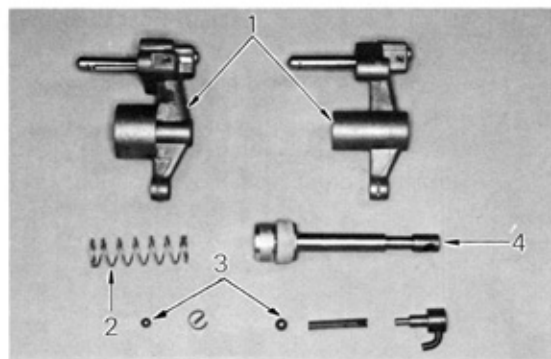


Fig. 4-34 Inspect Venturi and Pump Parts

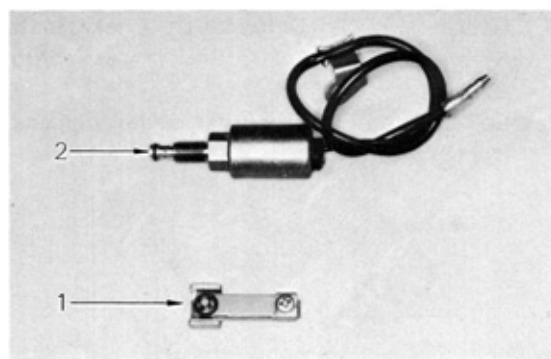


Fig. 4-35 Inspect Valves

Body Parts

1. Body: Cracks, scored mounting surfaces, damaged threads.
2. Jets (1): Damaged contacting surface, damaged threads and screwdriver slots.
3. Power valve (2): Faulty opening and closing action, damaged contacting surface and threads.
4. Venturi (1): Damaged.
5. Pump damping spring (2): Deformation, rust.
6. Pump check ball (3): Damaged; rusted.
7. Pump plunger (4): Wear at sliding surface, deformed or damaged leather.
8. Thermostatic valve (1) and solenoid valve (2): Damaged.

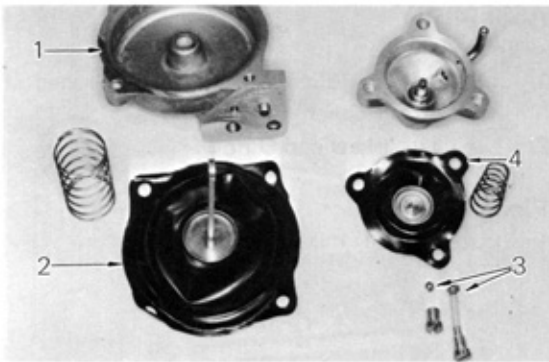


Fig. 4-36 Inspect AAP and Diaphragm

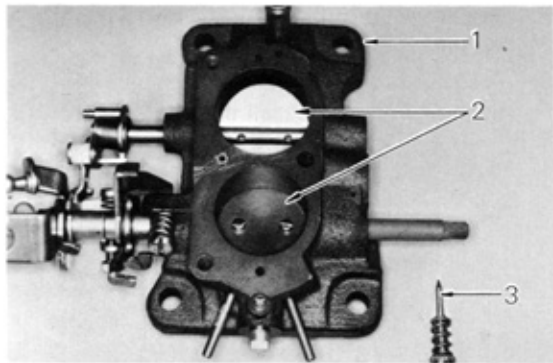


Fig. 4-37 Inspect Flange Parts

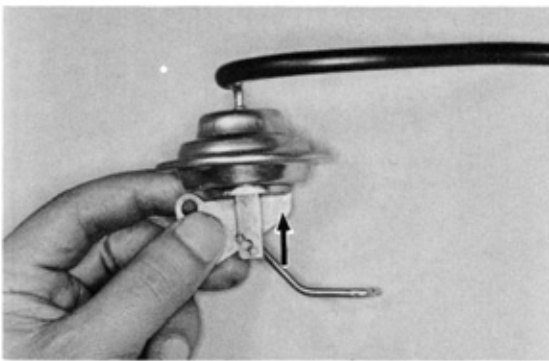


Fig. 4-38 Inspect Diaphragm

9. Housing (1): Cracks. Diaphragm (2): Damaged.
10. AAP check ball (3): Faulty opening and closing action or damaged diaphragm (4).

Flange Parts

1. Flange (1): Cracks, injured mounting surfaces, damaged threads, wear at throttle shaft bearings.
2. Throttle valves (2): Wear or deformation in valves. Wear, bending, twisting, or faulty movement inside housing of shaft.
3. Idle mixture adjusting screw (3): Damage at tapered tip or threads.

Diaphragms

Connect hose to each diaphragm (choke opener, choke breaker and throttle positioner) and suck the hose with mouth. The diaphragm should move. If not, replace it.

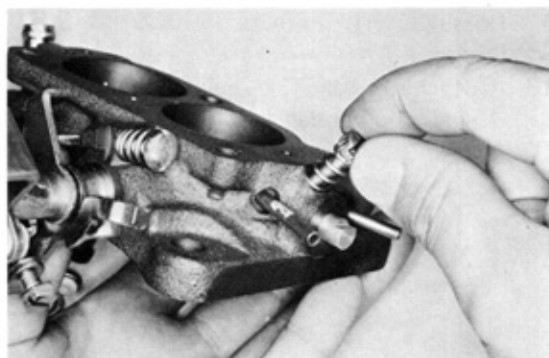


Fig. 4-39 Install Idle Mixture Adjusting Screw.

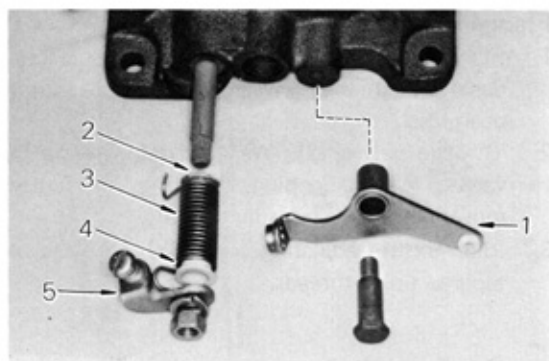


Fig. 4-40 Install Levers

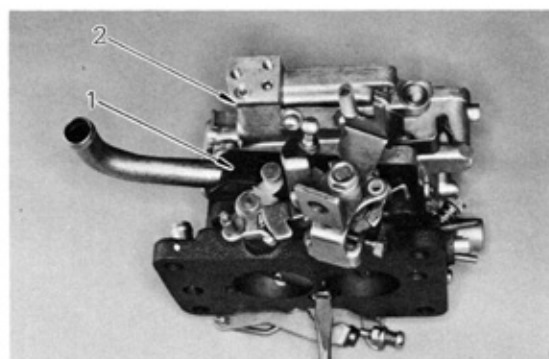


Fig. 4-41 Assemble Body and Flange

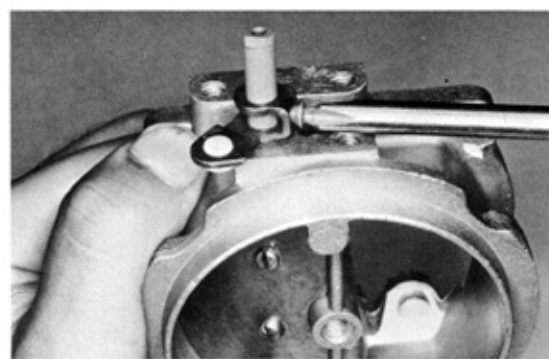


Fig. 4-42 Install Connecting Lever

ASSEMBLY

— Note —

1. All parts should already have been cleaned in carburetor cleaner.
2. Use new gaskets and O rings.

Flange Parts

1. Install idle mixture adjusting screw over spring.
2. Install throttle positioner lever (1) to the flange.
3. Assemble collar (2), spring (3), collar (4) onto throttle shaft and install throttle lever (5).
4. Install insulator (1) and body (2) onto flange and secure with three screws.

Automatic Choke

1. Insert choke shaft into air horn and install choke valve with two screws, then peen screws.
2. Install connecting lever in direction as shown.

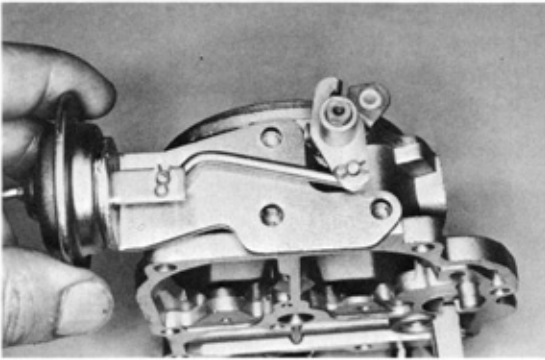


Fig. 4-43 Install Choke Breaker

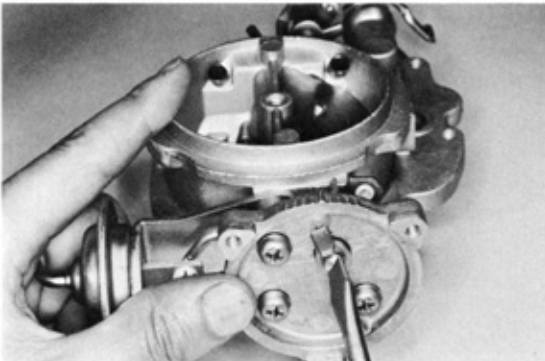


Fig. 4-44 Install Choke Lever

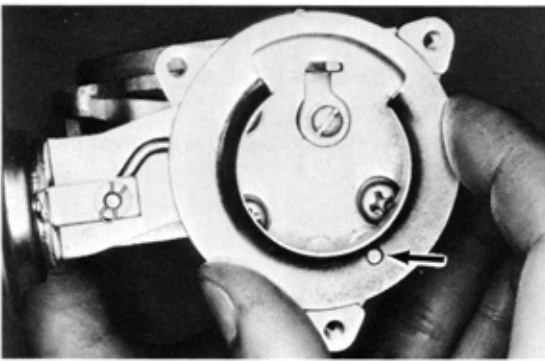


Fig. 4-45 Install Choke Housing Plate

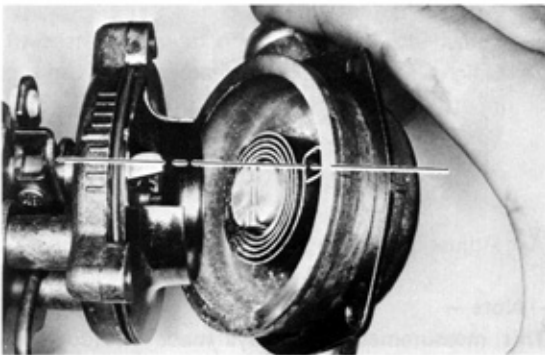


Fig. 4-46 Align Bi-metal with Lever

3. Install choke breaker and relief lever as shown.

4. Install coil housing body and choke lever in direction as shown.

5. Install choke housing plate over gasket, aligning its hole with pin of body.

6. Align bi-metal spring with choke lever, install coil housing.

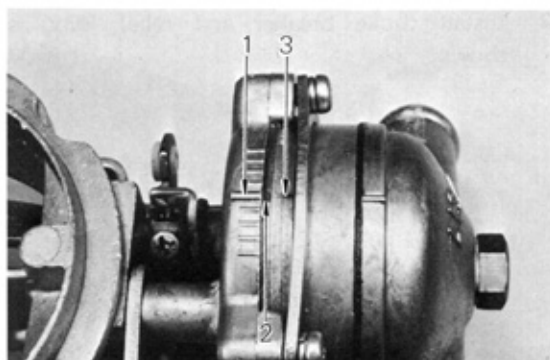


Fig. 4-47 Align Marks

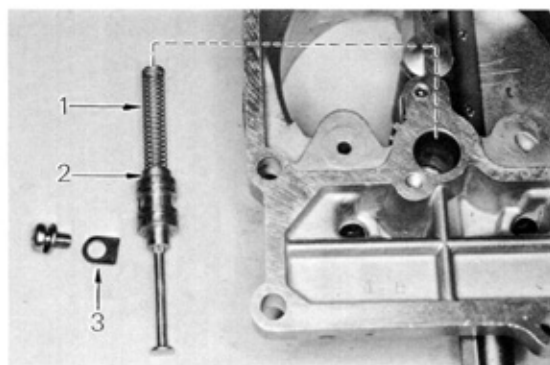


Fig. 4-48 Assemble Power Piston

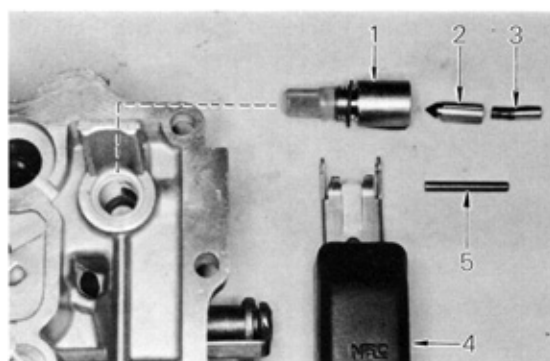


Fig. 4-49 Assemble Needle Valve and Float

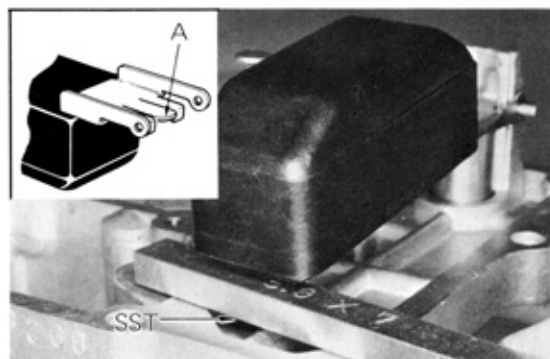


Fig. 4-50 Float Level Position

- Align body scale center line (1), V notch of plate (2) and coil housing line (3) and tighten three screws.

Air Horn Parts

- Place power piston spring (1) and piston (2) into bore.
- Install retainer (3) with screw.

- Install valve seat (1) over gasket into fuel inlet.
- Install needle valve (2), spring and plunger (3) into seat.
- Install float (4) and secure with pivot pin (5).

- Adjust float level.
Allow the float to hang down by its own weight. Then check the clearance between the float tip and air horn with SST [09240-00011].

Standard

5mm (0.20 in)

Adjust by bending the (A) part of float lip.

— Note —

This measurement is always made without any gasket on air horn.

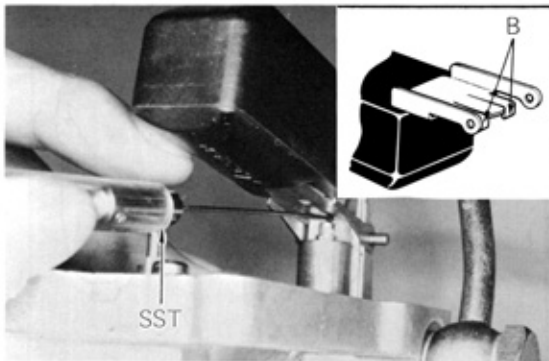


Fig. 4-51 Float Lowered Position

- Adjust lowered position.
Lift up the float and check the clearance between the needle valve plunger and float lip with SST [09240-00011].

Standard**1mm (0.04 in)**

Adjust by bending the (B) part of float lip.

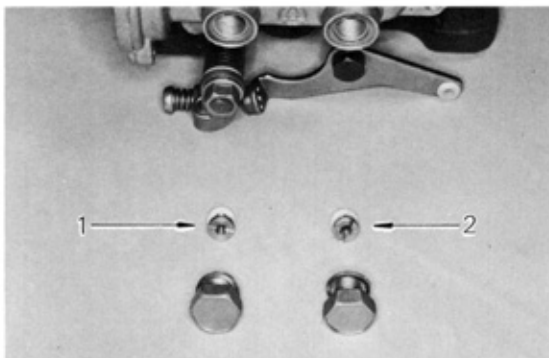


Fig. 4-52 Install Main Jets

Body Parts

- Install primary main jet (1) (Brass colored) and secondary main jet (2) (Chrome colored) over new gaskets.
- Install bowl plugs over new gaskets.

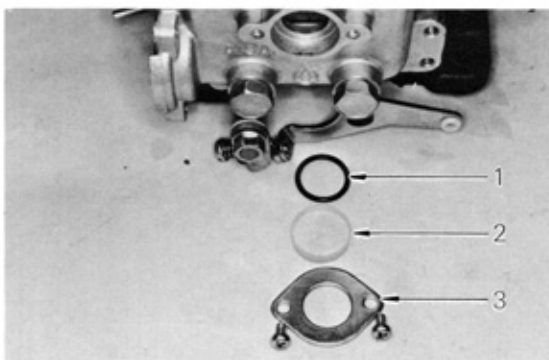


Fig. 4-53 Install Sight Glass

- Install O ring (1), sight glass (2) and retainer (3) in sequence shown.

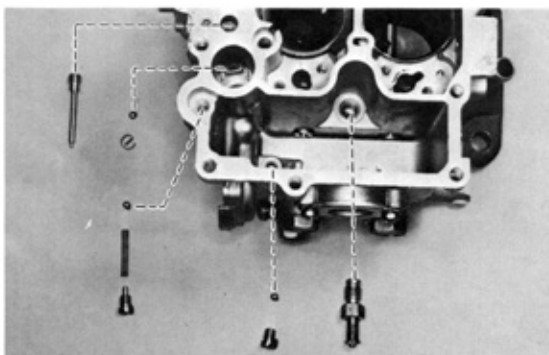


Fig. 4-54 Install Jets and Valves

- Install following parts as shown.
 - Slow jet
 - AAP outlet ball, spring and plug
 - AAP inlet ball and plug
 - Pump inlet ball and retainer
 - Power valve

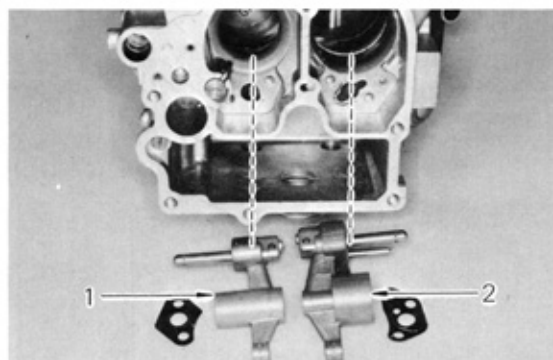


Fig. 4-55 Install Venturis

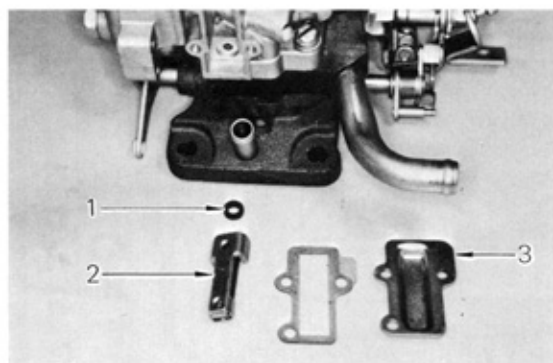


Fig. 4-56 Install Thermostatic Valve

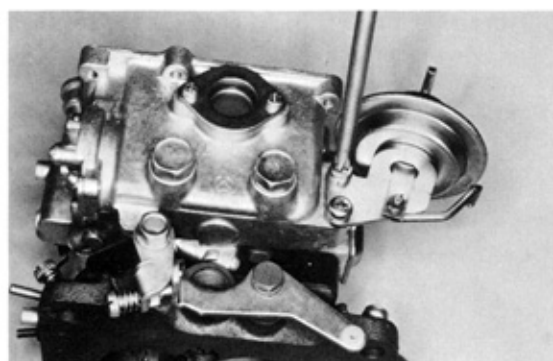


Fig. 4-57 Install Throttle Positioner

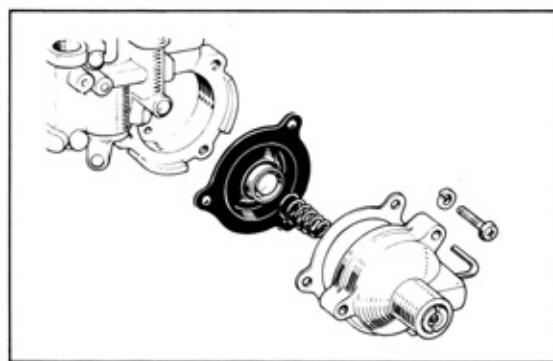


Fig. 4-58 Assemble AAP

5. Install primary (1) and secondary (2) venturis over gaskets.

6. Install O ring (1), thermostatic valve (2) and cover (3) over gasket.

7. Install throttle positioner and connect the link.

8. Assemble AAP in order as shown.

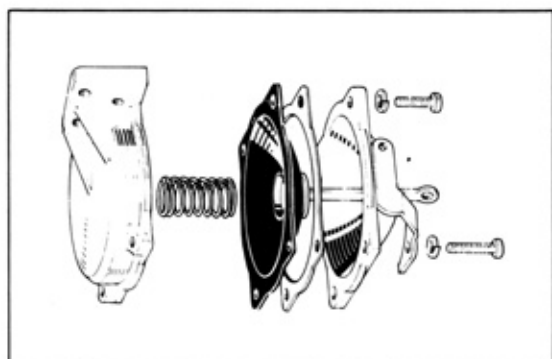


Fig. 4-59 Assemble Diaphragm

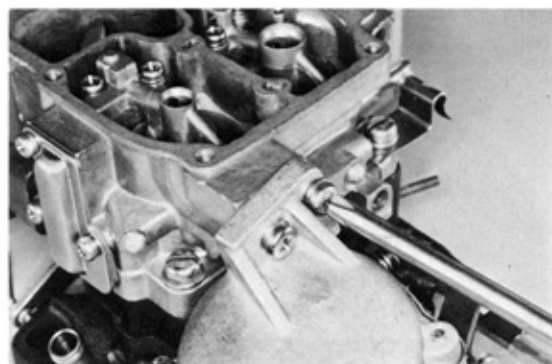


Fig. 4-60 Install Diaphragm

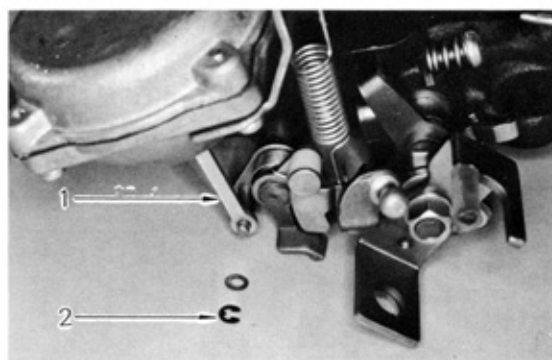


Fig. 4-61 Connect Diaphragm Rod



Fig. 4-62 Install Fast Idle Cam

9. Assemble secondary diaphragm in order as shown.

10. Position O ring and install the diaphragm assembly.

11. Slide diaphragm rod (1) and washer onto diaphragm lever and lock with E ring (2).

12. Install return spring (3).

13. Install fast idle cam as shown and screw in solenoid valve over new gasket.

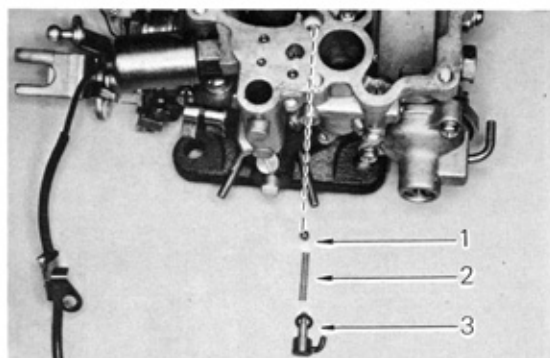


Fig. 4-63 Install Pump Jet

14. Insert pump outlet ball (1), spring (2) and pump jet (3) with O ring.

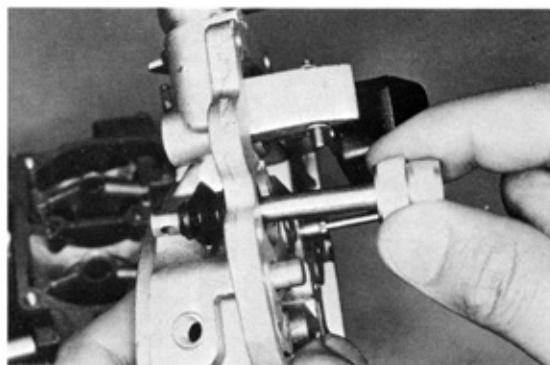


Fig. 4-64 Install Pump Plunger

15. Insert pump damping spring into body hole and assemble pump plunger and boot to air horn.

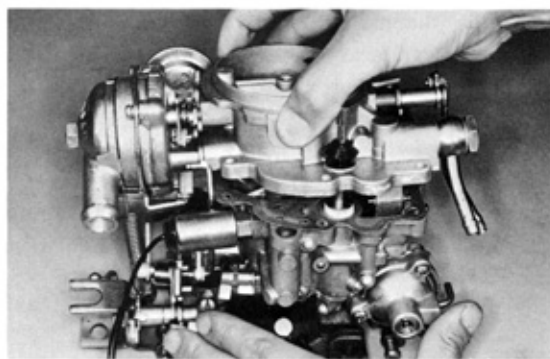


Fig. 4-65 Assemble Air Horn and Body

16. Assemble body and air horn over new gasket.

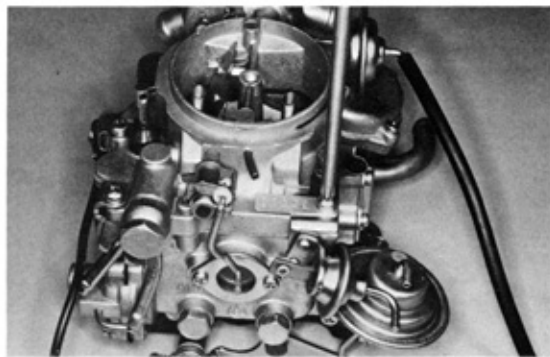


Fig. 4-66 Install Choke Opener

17. Install choke opener and fuel inlet bracket.

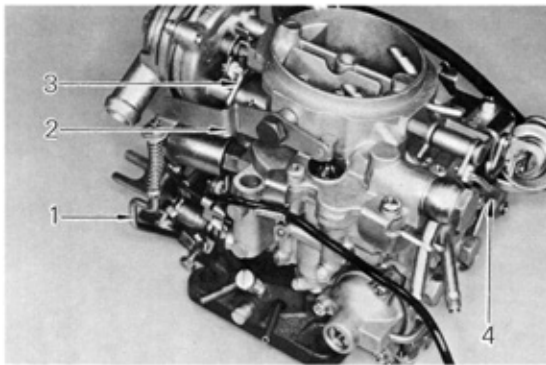


Fig. 4-67 Connect Links

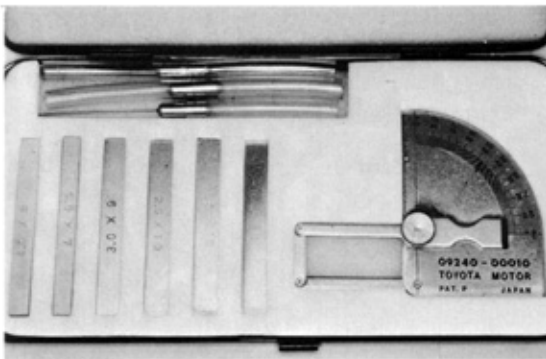


Fig. 4-68 Gauge Set

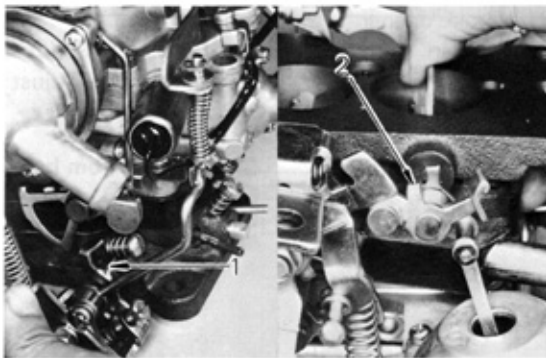


Fig. 4-69 Adjust Throttle Valve Opening

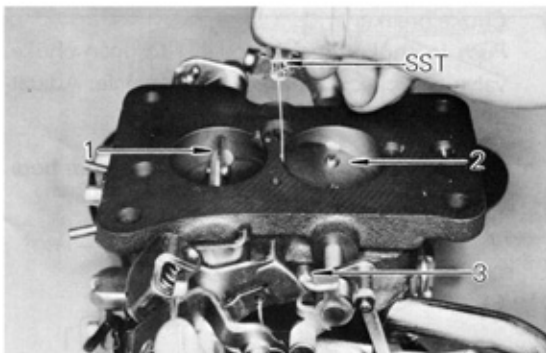


Fig. 4-70 Adjust Kick Up

18. Connect pump connecting link (1) to throttle lever and install pump arm (2).
19. Connect fast idle (3) and choke opener (4) links.

Adjustment

Use SST [09240-00011] to make adjustments.

1. Throttle valve openings
Open the primary and secondary throttle valves separately and check if the throttle valves will be perpendicular to the flange surface when fully opened. Adjust by bending the respective throttle lever stoppers at the primary (1) and secondary sides (2).
2. Kick up
With the primary throttle valve (1) fully opened, check the secondary throttle valve (2) opening. Adjust by bending secondary throttle lever (3).

Standard clearance 0.2mm (0.008 in)

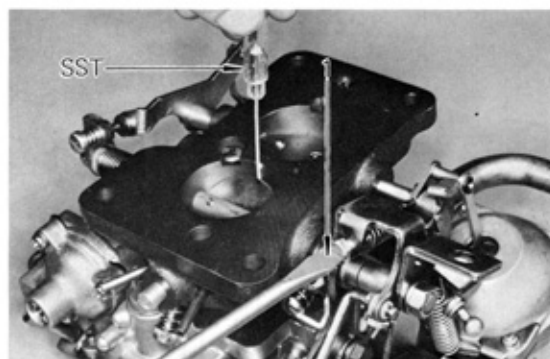


Fig. 4-71 Adjust Fast Idle

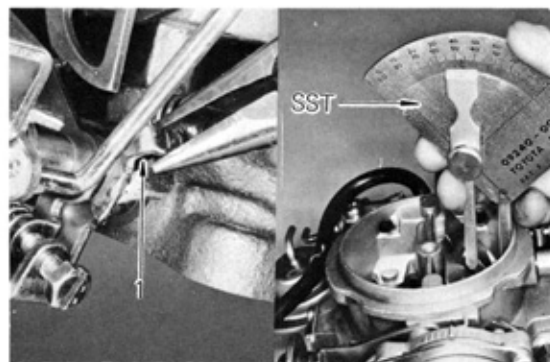


Fig. 4-72 Adjust Unloader

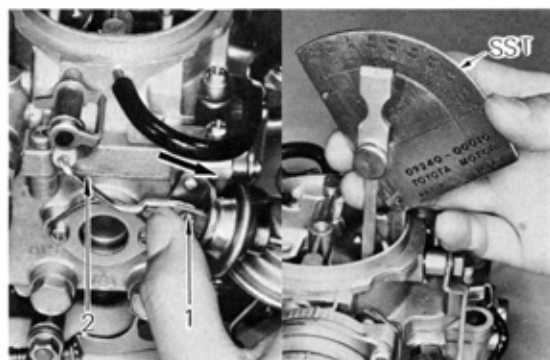


Fig. 4-73 Adjust Choke Opener

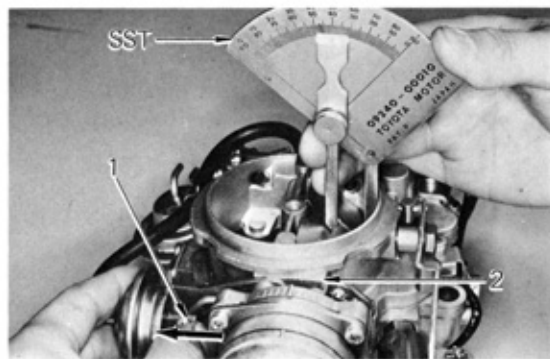


Fig. 4-74 Adjust Choke Breaker

- Fast idle
With choke valve fully closed, check the clearance between bore and primary throttle valve. Adjust by turning fast idle adjusting screw (1).

Standard clearance **1.2mm (0.047 in)**

- Unloader
With primary throttle valve fully opened, check the choke valve angle. Adjust by bending the fast idle lever (1).

Standard **50° from bore**

- Choke opener
Push in choke opener rod (1) to open choke valve and check the choke valve angle. Adjust by bending the choke opener link (2).

Standard **55° from bore**

- Choke breaker
Push in choke breaker rod (1) to open choke valve and check the choke valve angle. Adjust by bending the relief lever (2).

Standard **40° from bore**

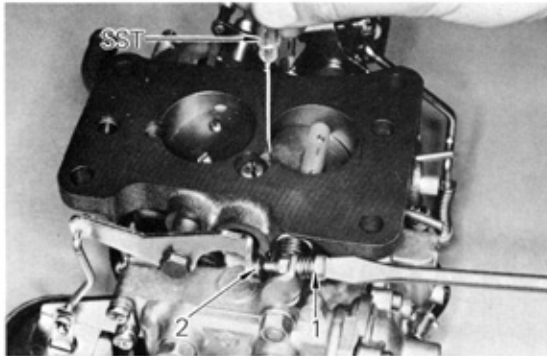


Fig. 4-75 Adjust Throttle Positioner

7. Throttle positioner
Contact throttle positioner adjusting screw (1) to throttle lever tab (2), check the clearance between bore and primary throttle valve. Adjust by turning the adjusting screw.

Standard clearance M/T 0.6mm (0.024 in)
A/T 0.5mm (0.020 in)

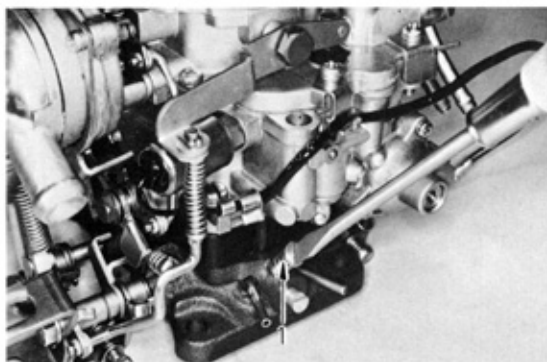


Fig. 4-76 Set Idle Mixture Adjusting Screw

8. Idle mixture adjusting screw
Screw in the idle mixture adjusting screw (1) and then unscrew it by the following amount.

Standard
Returned about 1¾ turns from full closed

— Caution —

Use care not to screw in too tightly and damage the screw tip.

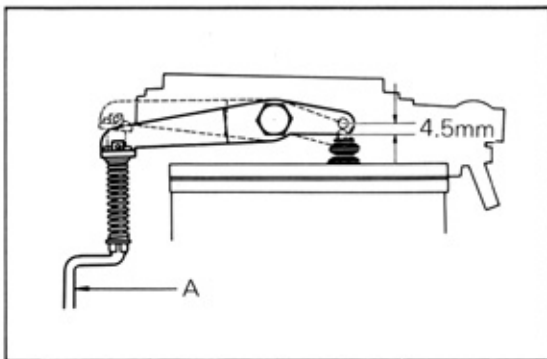


Fig. 4-77 Adjust Pump Stroke

9. Accelerating pump
Adjust the pump stroke by bending part A.

Standard **4.5mm (0.177 in)**

— Note —

After adjustment is made, be sure to check the linkage to see that it operates smoothly.

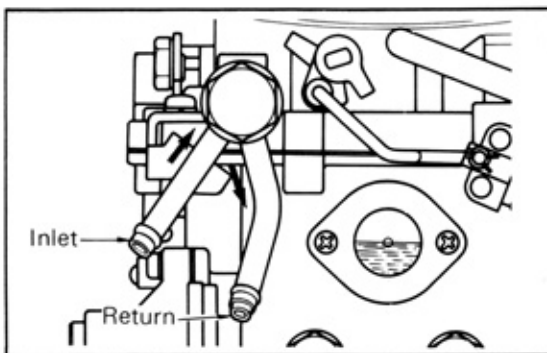


Fig. 4-78 Fuel Hose Connection

THE ARROW MARKS ARE STAMPED AT THE CLAMP PLATE. WHEN CONNECTING THE FUEL HOSES TO THE TUBE, BE CAREFUL NOT TO CONNECT THEM REVERSELY EACH OTHER

Return tube is equipped only for RT and RA models.

MEMO

MEMO
