

FUEL SYSTEM

	Page
FUEL PUMP.....	8-2
CARBURETOR	8-4
SOLEX CARBURETOR.....	8-42

FUEL PUMP

DISASSEMBLY

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-1

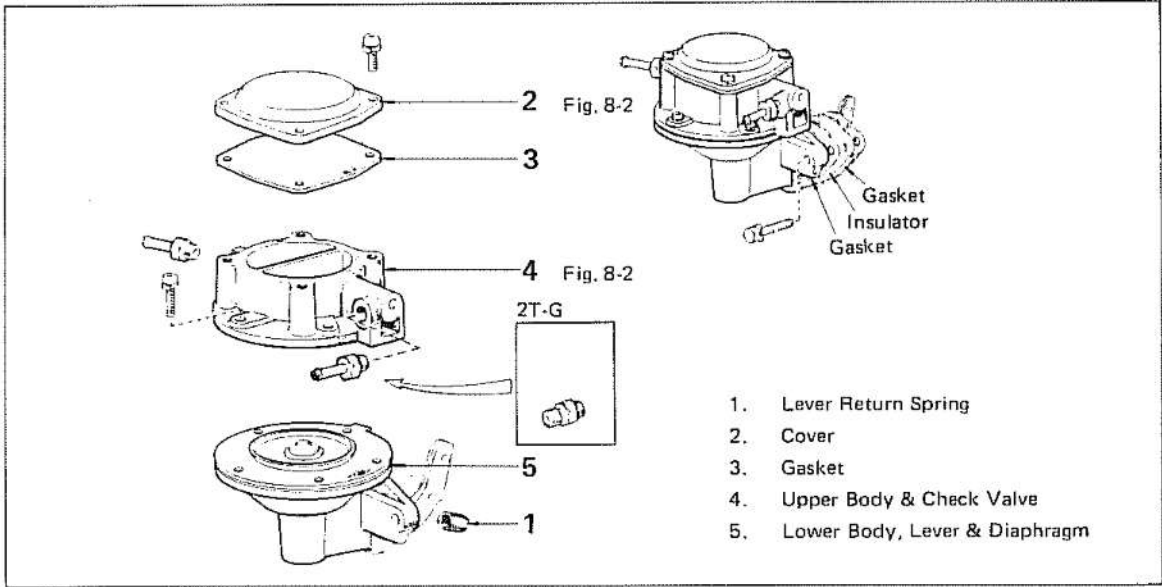
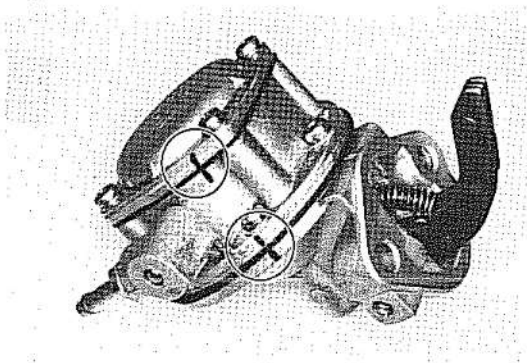
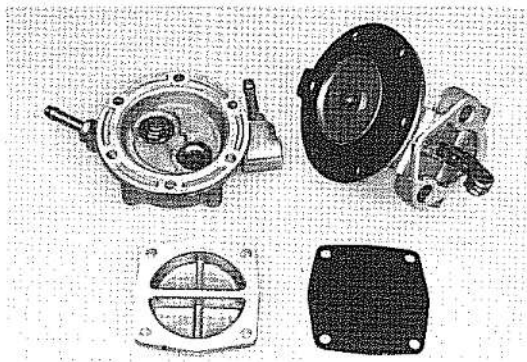


Fig. 8-2



Mark the position of the pump cover and upper body.

Fig. 8-3



INSPECTION



Inspect the diaphragms for tear and check valves for defective operation. Replace if damaged.

ASSEMBLY

Assmeble the parts in the numerical order shown in the figure.

Fig. 8-4

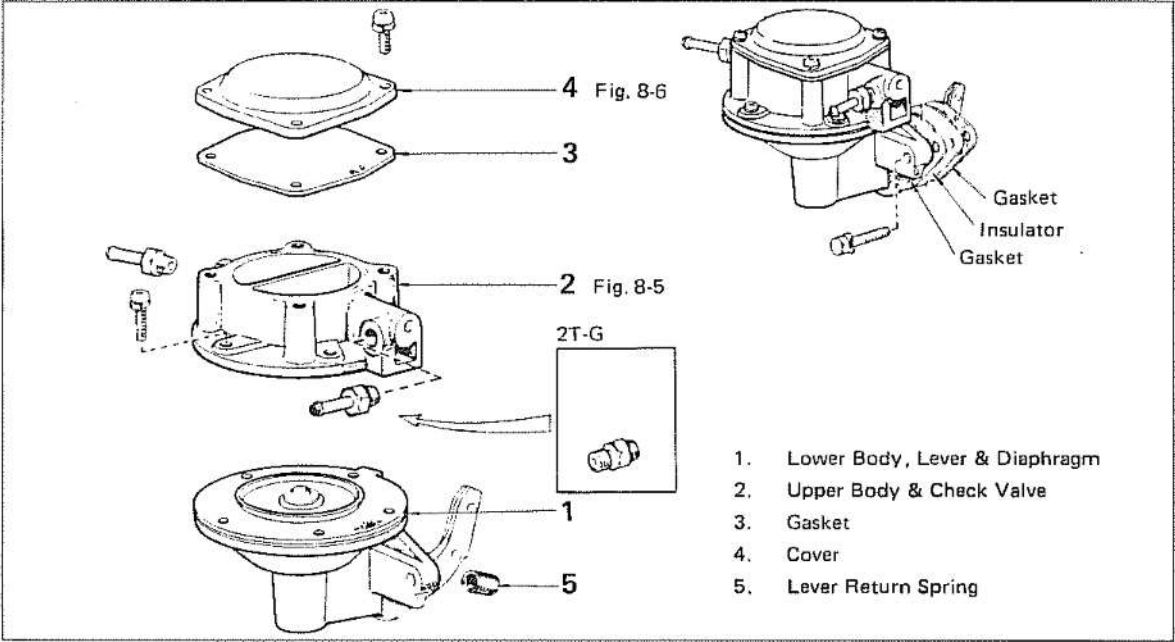
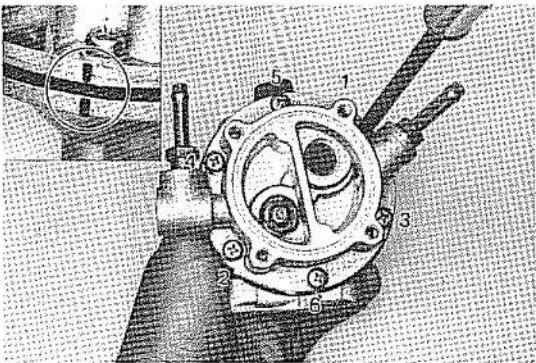
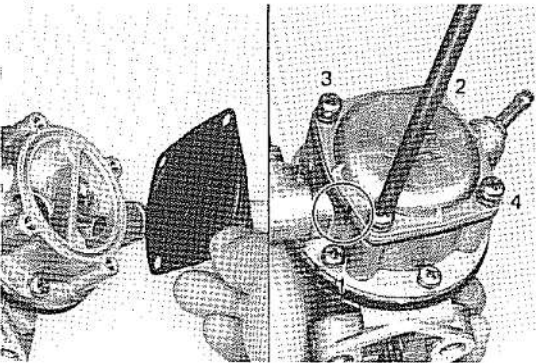


Fig. 8-5



Assemble the lower and upper body in the direction shown in the figure.

Fig. 8-6



Assemble the upper body and cover over the diaphragm. Inlet and outlet chamber separating walls should be aligned.

8-4 FUEL SYSTEM – Carburetor

CARBURETOR

CARBURETOR CIRCUIT

Fig. 8-7

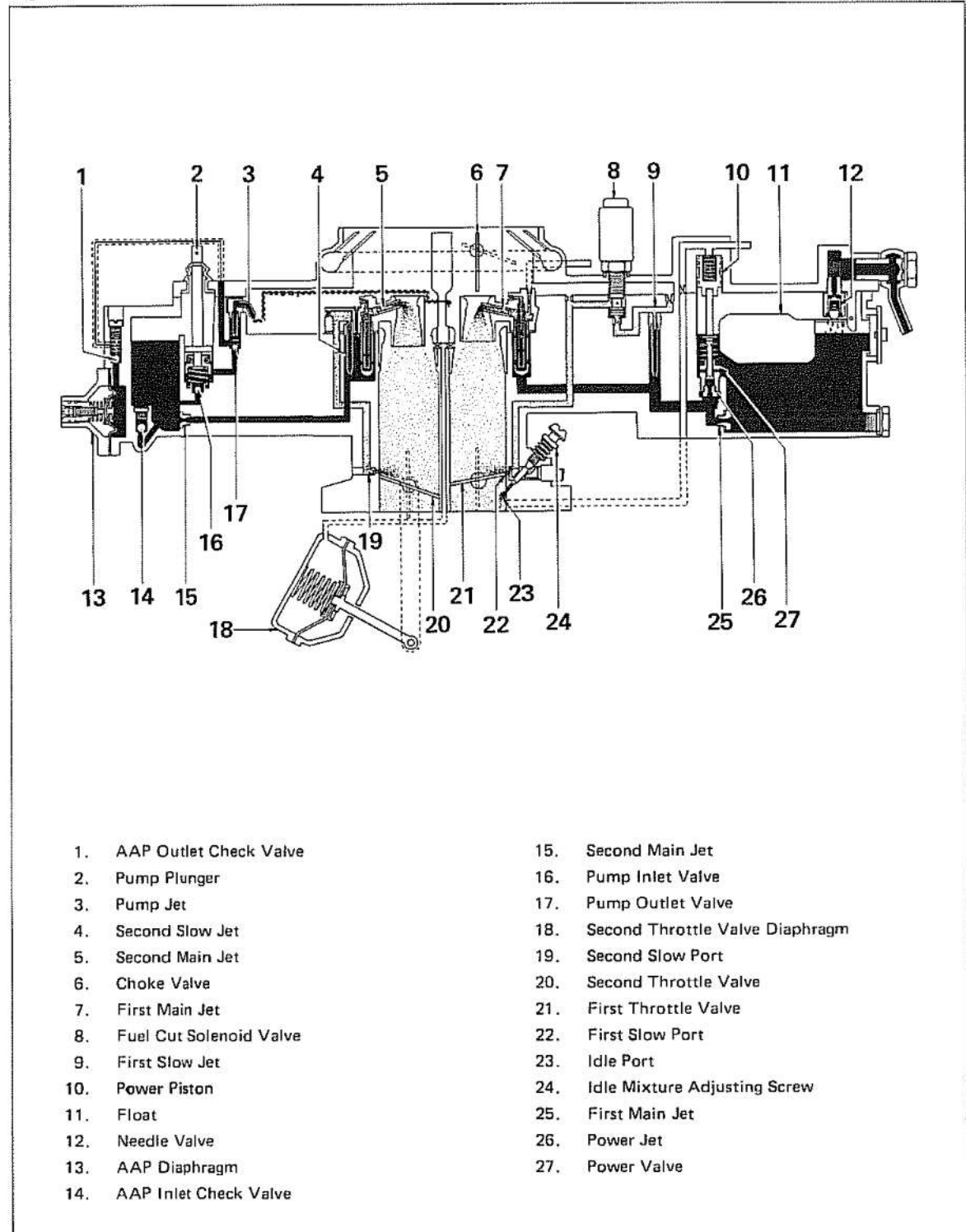
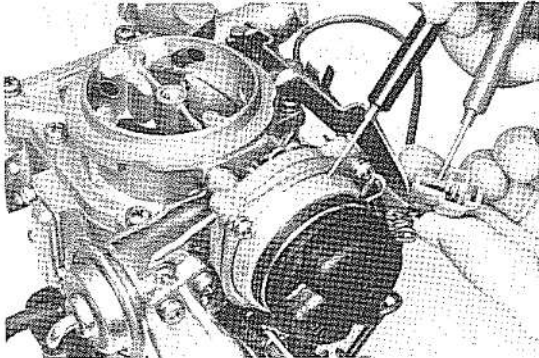


Fig. 8-8

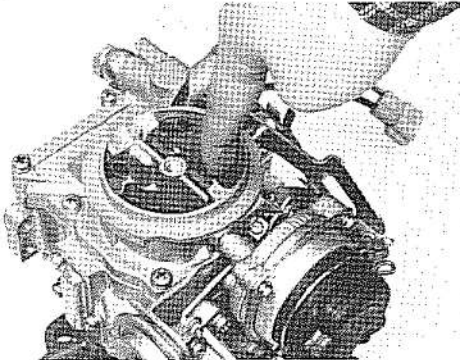
**DISASSEMBLY****Air Horn**

Before disassembling, check following items.

1. Measure the heating coil resistance with an ohmmeter.

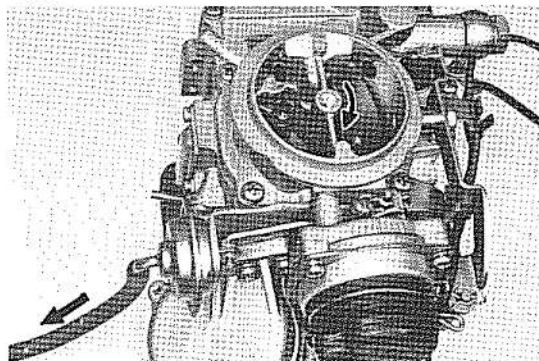
Resistance: 7.5 – 10.0 Ω

Fig. 8-9



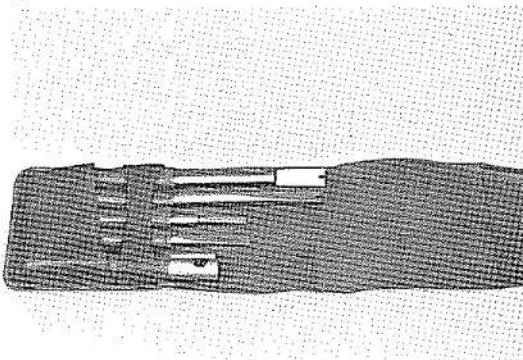
2. Check the choke valve action.

Fig. 8-10



3. Check the choke breaker diaphragm action.
Automatic choke.

Fig. 8-11



Use SST for carburetor servicing.
SST [09860-11011]

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-12

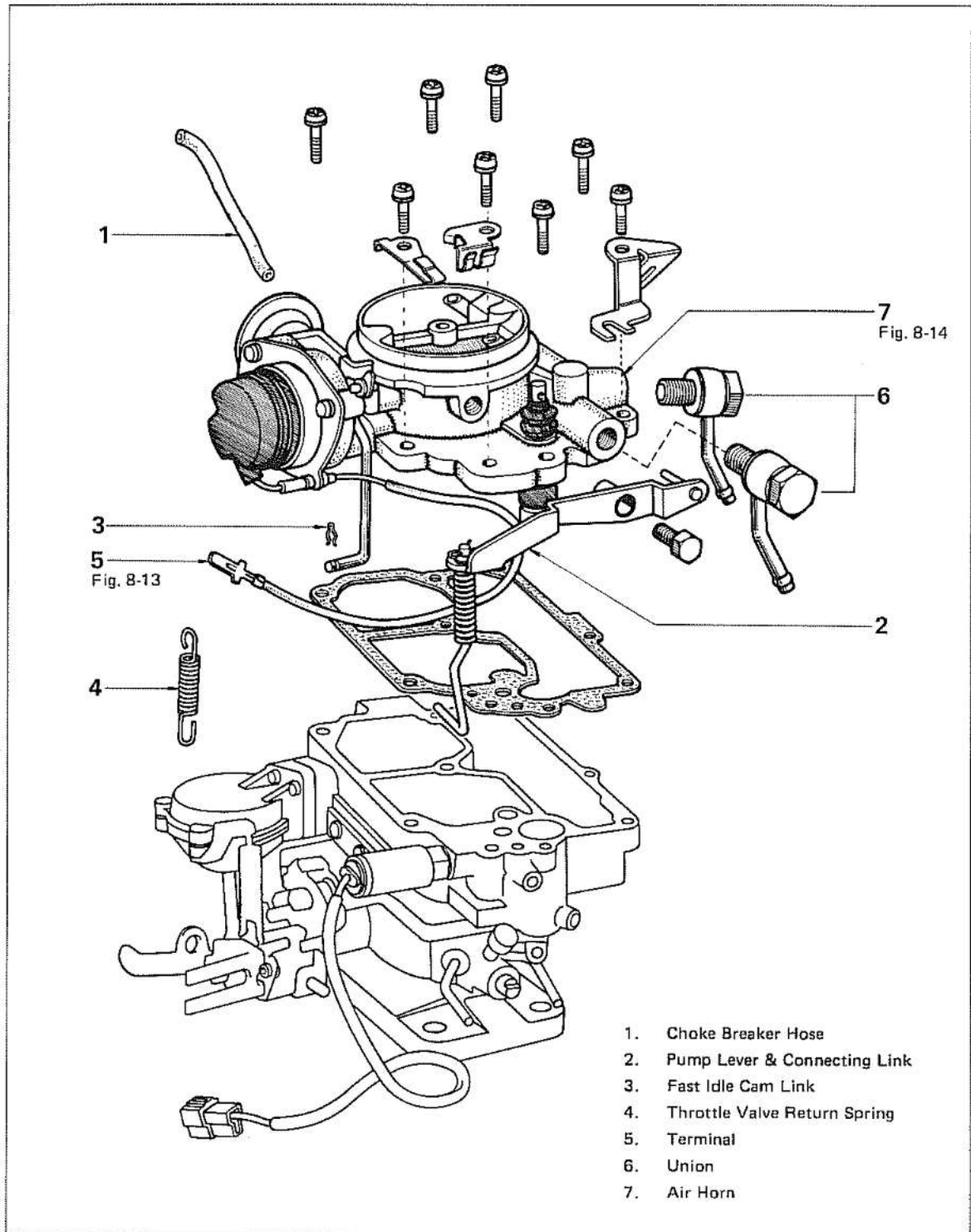
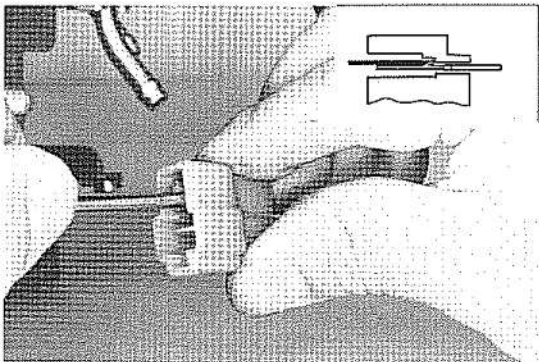
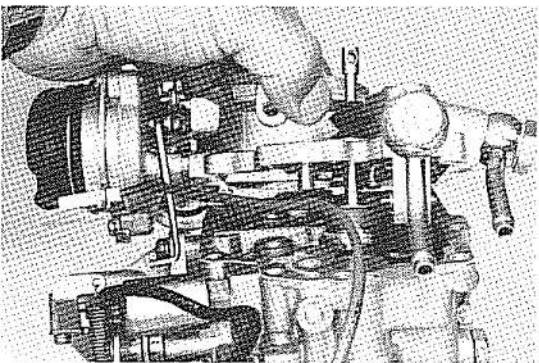


Fig. 8-13



Remove the terminal from the connector.

Fig. 8-14



Lift out the air horn.

8-8 FUEL SYSTEM – Carburetor

Float

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-15

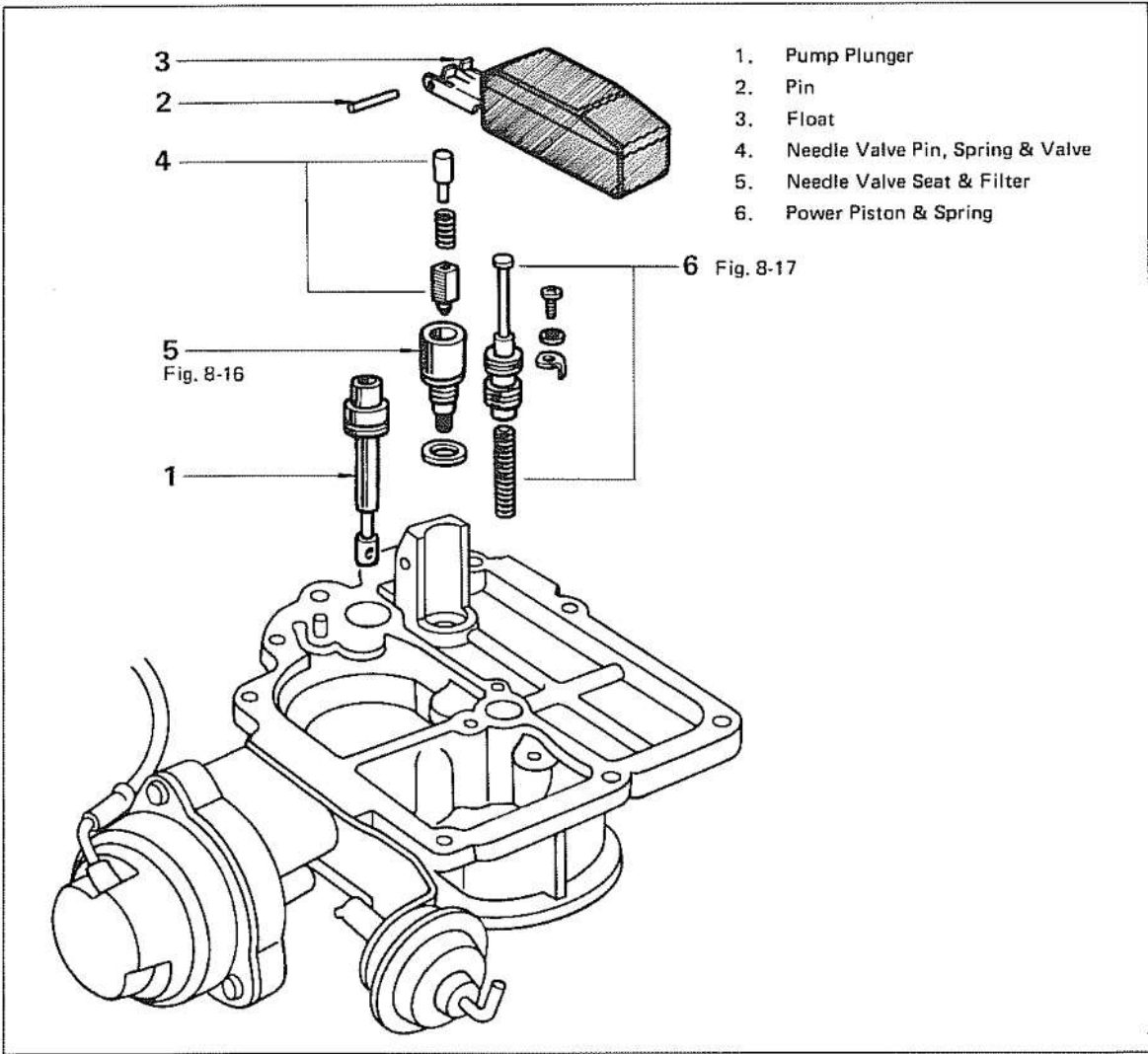
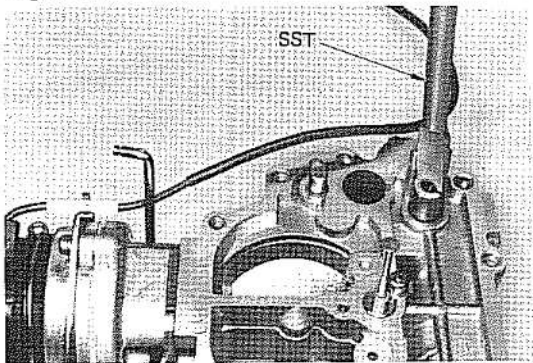
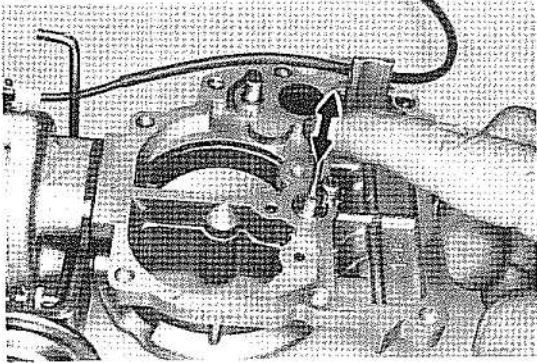


Fig. 8-16



Remove the needle valve seat with SST.
SST[09860-11011]

FUEL SYSTEM – Carburetor**8-9****Fig. 8-17**

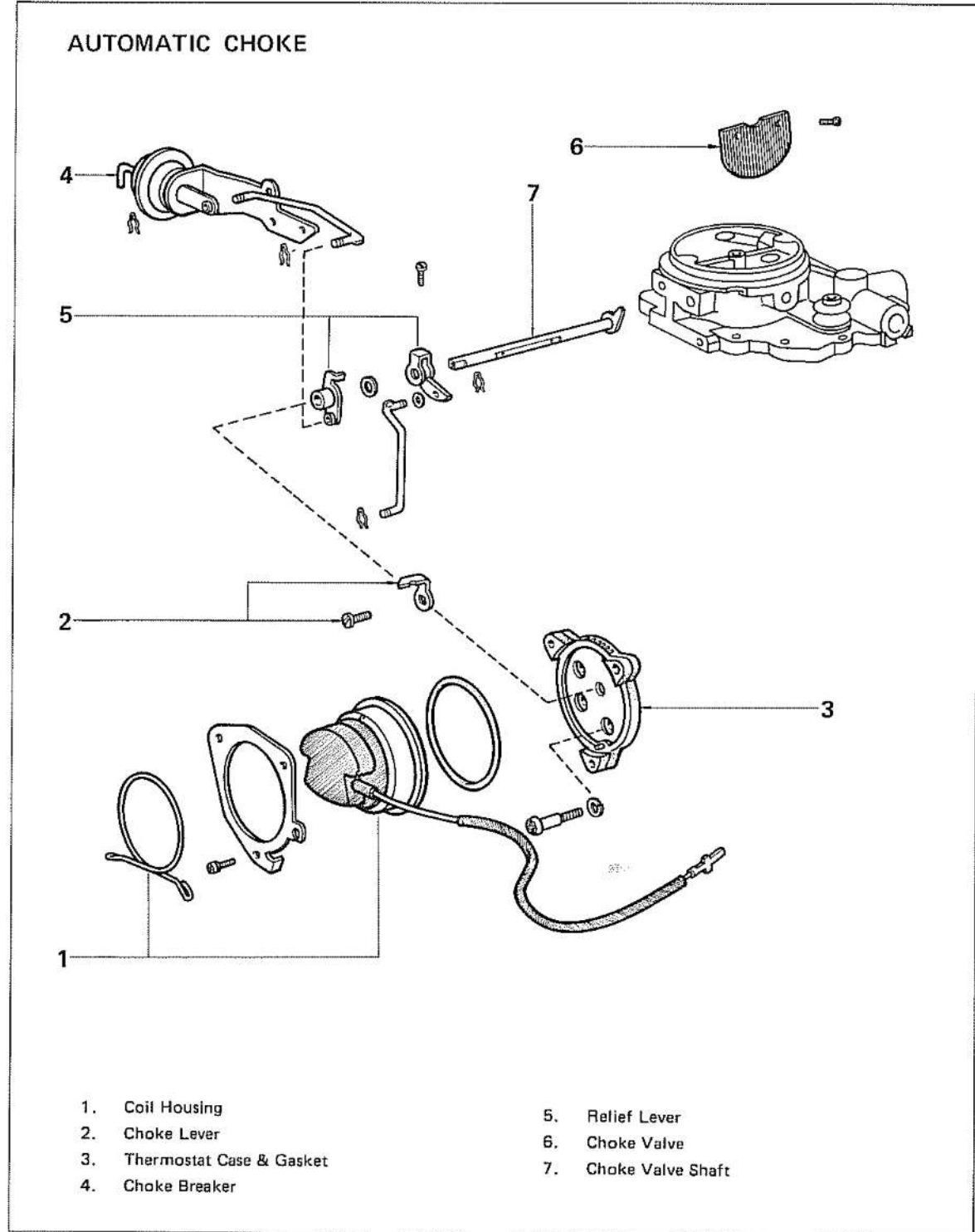
Check the power piston movement.

8-10 FUEL SYSTEM – Carburetor

Choke System

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-18

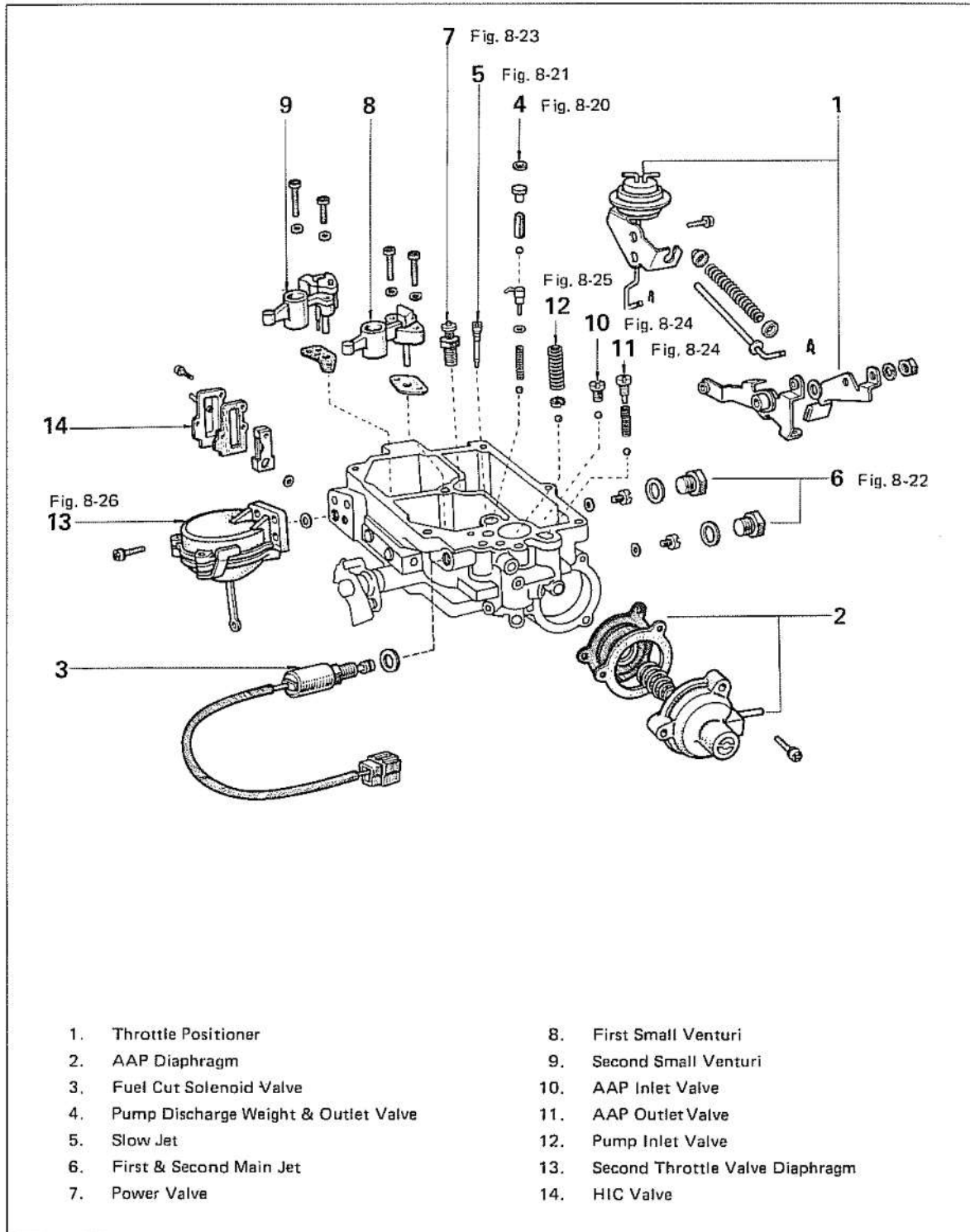


FUEL SYSTEM – Carburetor

8-11

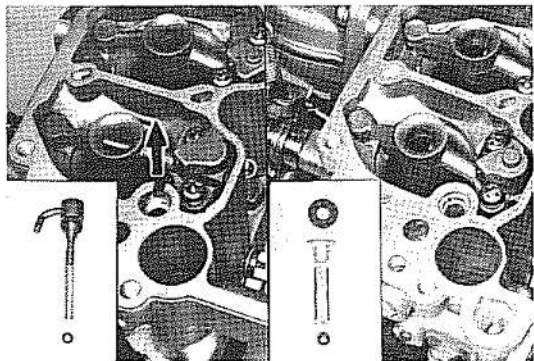
Body

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-19

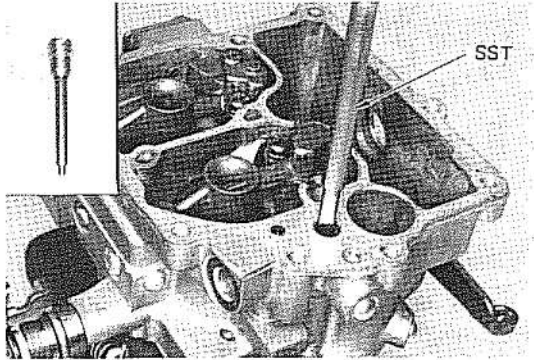
8-12 FUEL SYSTEM – Carburetor

Fig. 8-20



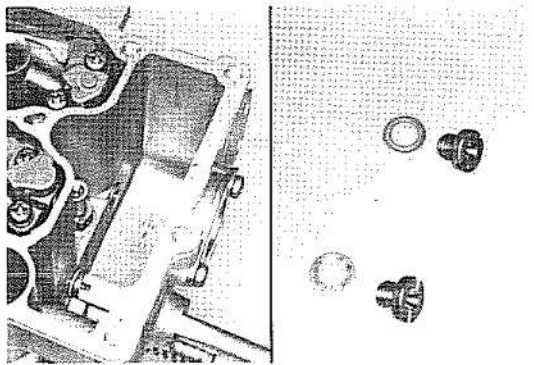
Arrange the acceleration pump nozzle, spring and pump discharge weight.

Fig. 8-21



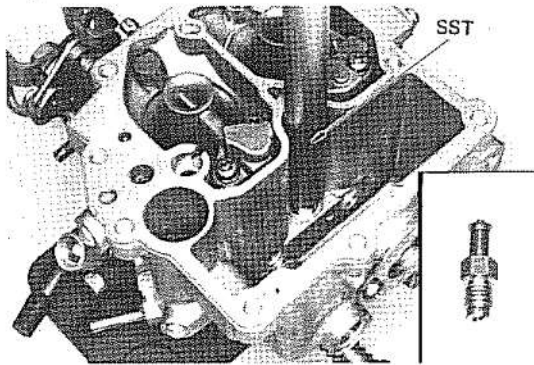
Remove the slow jet with SST.
SST[09860-11011]

Fig. 8-22



Remove the first and second main jets and gaskets.

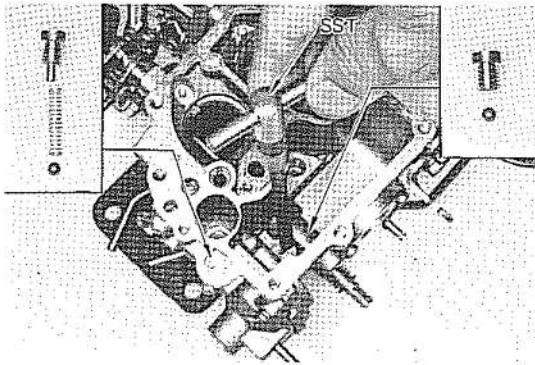
Fig. 8-23



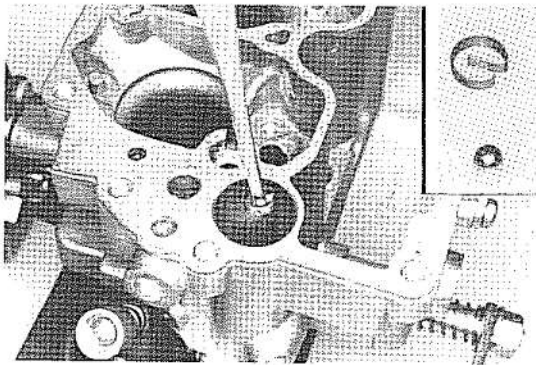
Remove the power valve with SST.
SST[09860-11011]

FUEL SYSTEM – Carburetor

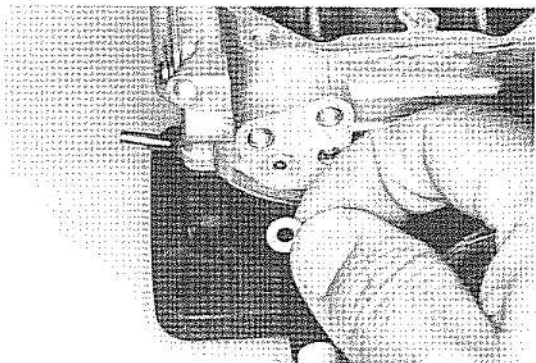
8-13

Fig. 8-24

Remove the AAP outlet valve plug with SST.
Then remove the spring and outlet check valve.
SST[09860-11011]

Fig. 8-25

Remove the retainer with a tweezers and then
remove the inlet check ball.

Fig. 8-26

After removing the diaphragm housing, arrange
the gasket.

Flange

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-27

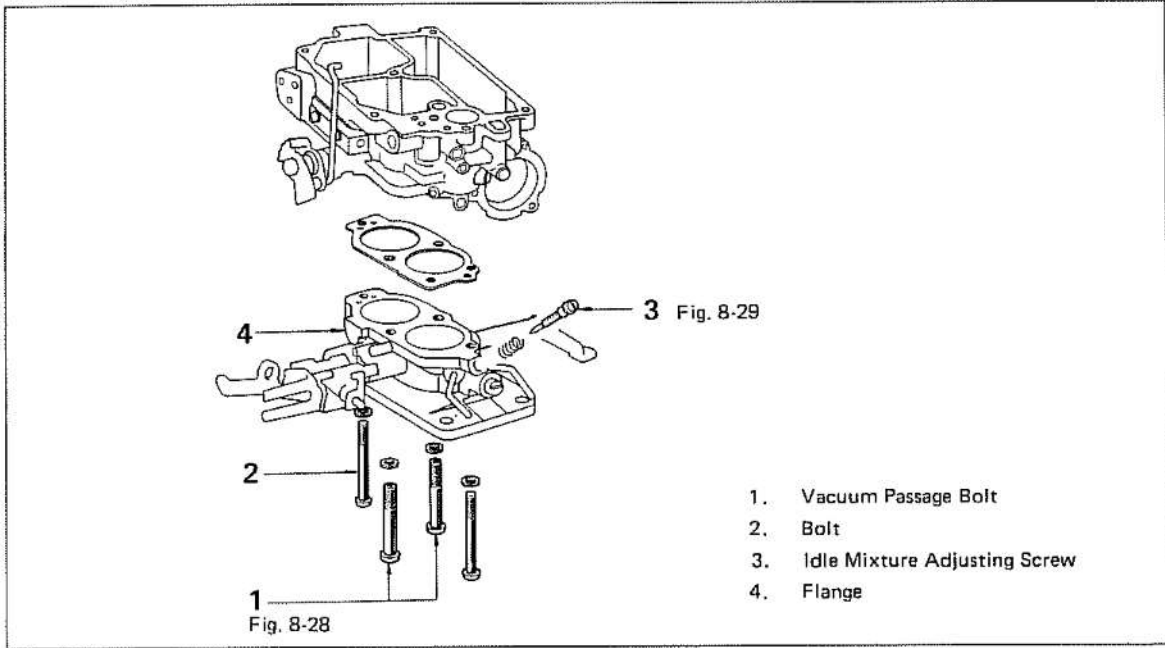
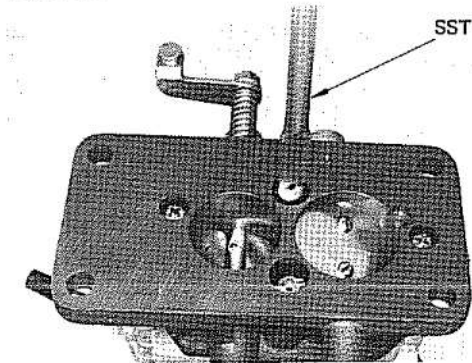
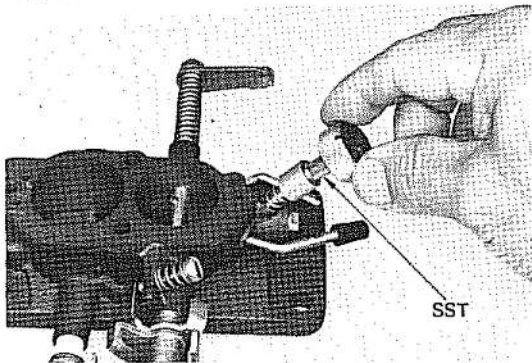


Fig. 8-28



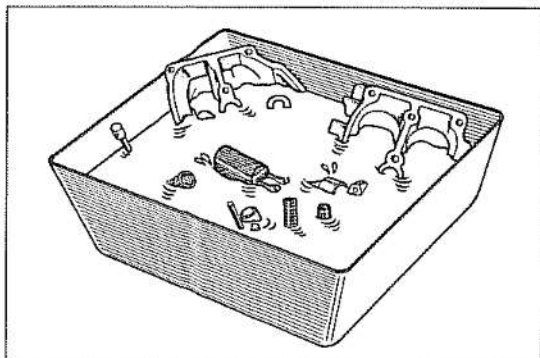
Remove the two bolts with SST.
SST [09860-11011]

Fig. 8-29



Remove the idle mixture adjusting screw with SST.
SST [09243-00010] or
[09243-00020]

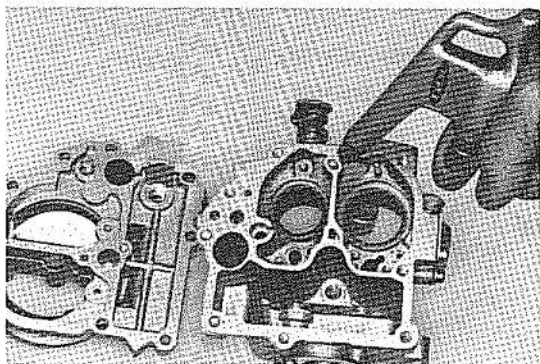
Fig. 8-30

**INSPECTION**

– Precaution –

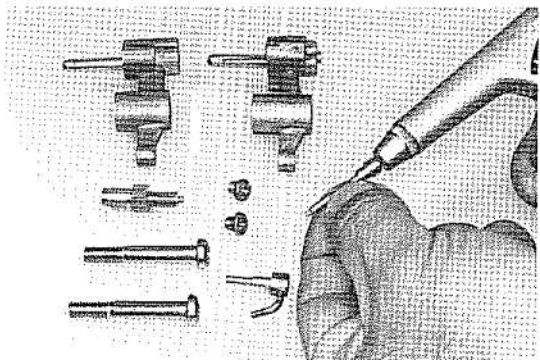
1. Before inspecting the parts, wash them thoroughly in gasoline.

Fig. 8-31



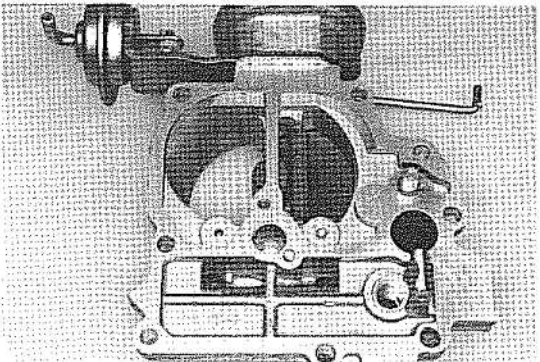
2. Using compressed air, blow all dirt and other foreign matter from the jets and similar parts, and from the fuel passages and apertures in the body.

Fig. 8-32



3. Never clean the jets or orifices with wire or a drill. This could enlarge the openings and result in excessive fuel consumption.

Fig. 8-33



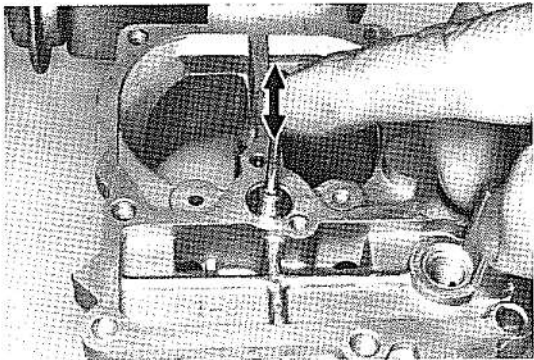
Inspect the following parts and replace any part damaged.

Air Horn Parts

1. Air horn: Cracks, damaged threads, and wear on choke shaft bores.

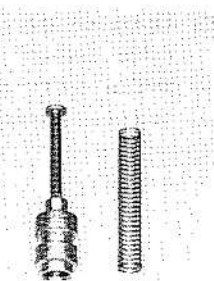
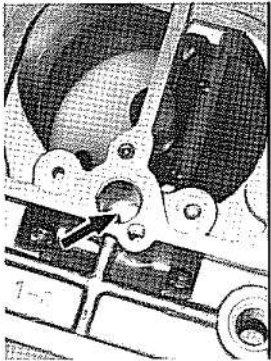
8-16 FUEL SYSTEM – Carburetor

Fig. 8-34



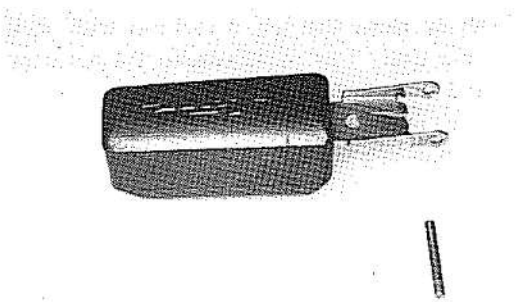
2. Make sure that power piston moves smoothly.

Fig. 8-35



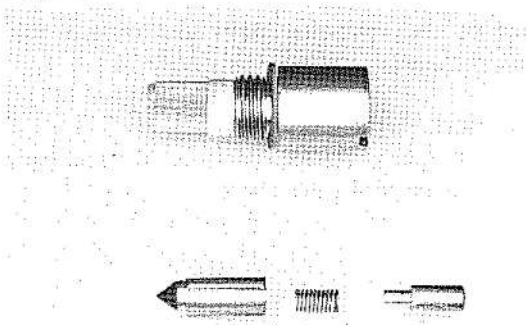
3. Power piston: Damaged.
Spring: Deformation and rust.

Fig. 8-36



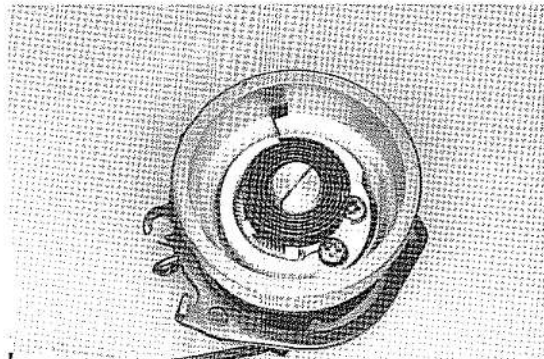
4. Check float and pivot pin for wear or breaks.

Fig. 8-37



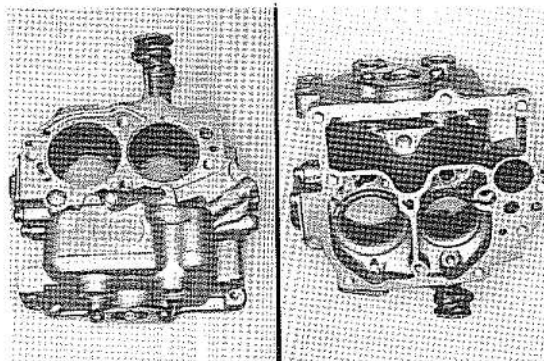
5. Strainer: Rust, breaks.
6. Needle valve surface.
7. Needle valve seat.

Fig. 8-38



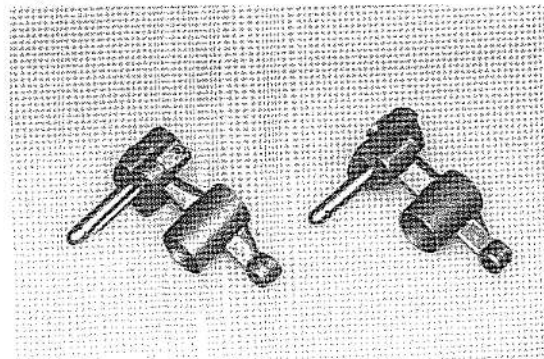
8. Choke valve: Deformation. Choke shaft worn, bent, or not fitting properly into the housing.
9. Coil housing: Cracks, thermostatic bimetal coil deformed.

Fig. 8-39

**Body Parts**

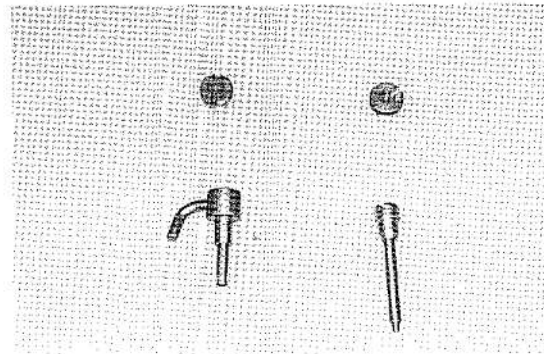
1. Body
Cracks, scored mounting surfaces, damaged threads.

Fig. 8-40



2. Venturi
Damaged or clogged.

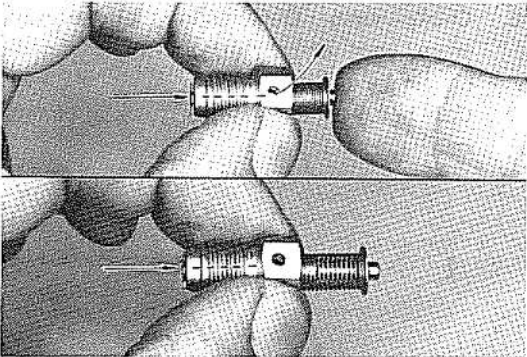
Fig. 8-41



3. Jets
Damaged or clogged.
Damaged contact surface or threads.
Screwdriver slots.

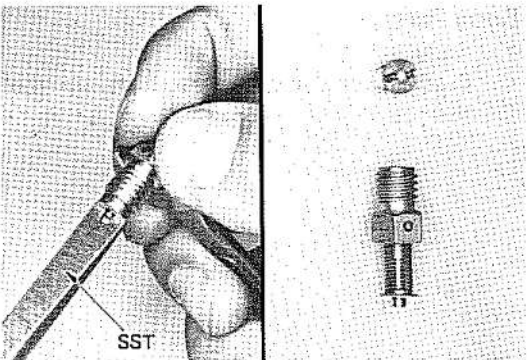
8-18 FUEL SYSTEM – Carburetor

Fig. 8-42



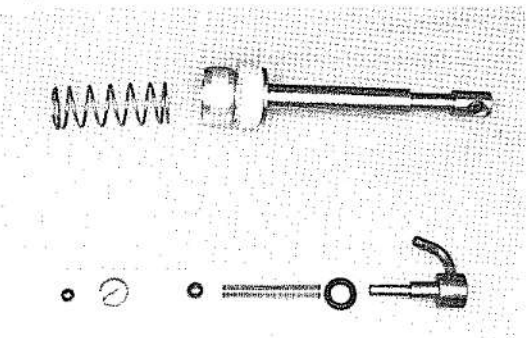
4. Power valve
Faulty opening and closing action.
Clogged.
Damaged contact surface or threads.

Fig. 8-43



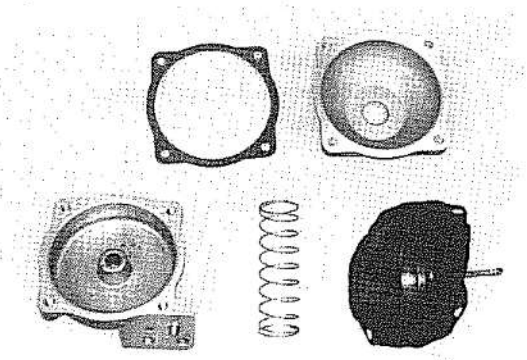
5. Use a spanner wrench and SST to remove the jet.
SST[09860-11011]

Fig. 8-44



6. Acceleration pump
Pump damping spring: Deformation, rust.
Pump check ball: Damaged, rusted.
Pump plunger: Wear on sliding surface, deformed or damaged leather.

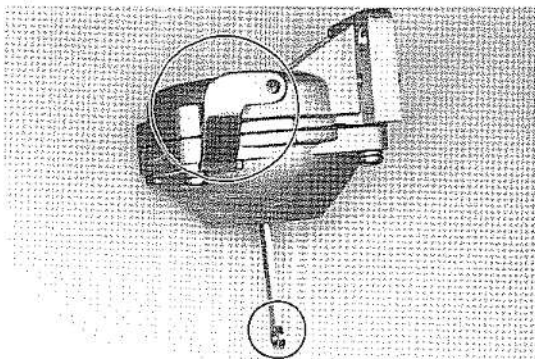
Fig. 8-45



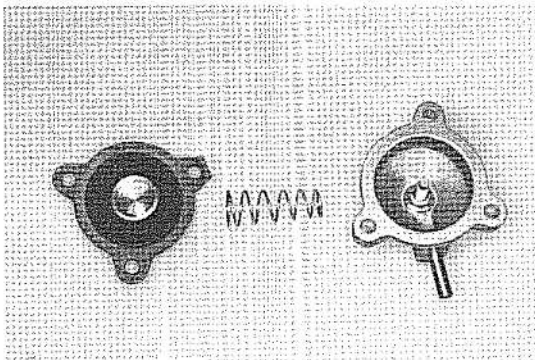
7. Secondary diaphragm
Damaged

FUEL SYSTEM – Carburetor

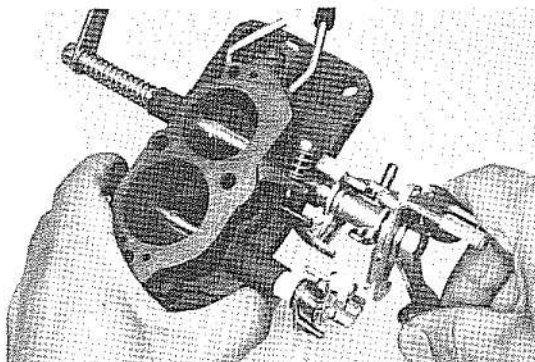
8-19

Fig. 8-46

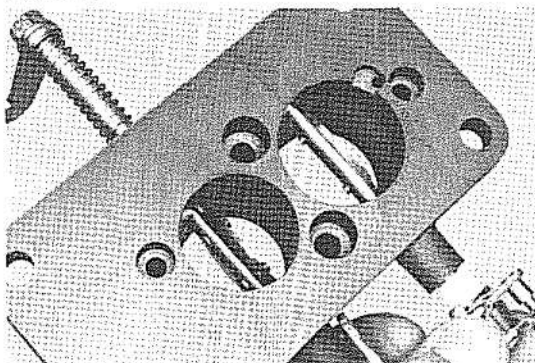
8. Install the diaphragm as shown in the figure.

Fig. 8-47

9. Auxiliary acceleration pump
Diaphragm damaged

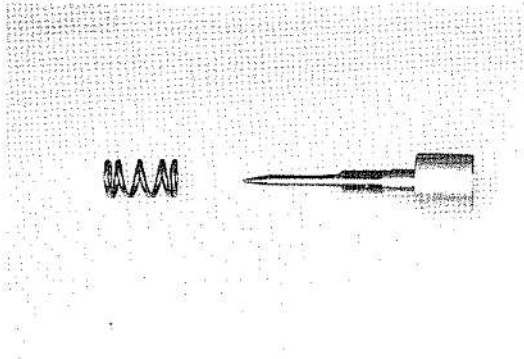
Fig. 8-48**Flange Parts**

1. Flange: Cracks, injured mounting surfaces, damaged threads, wear at throttle shaft bearings.

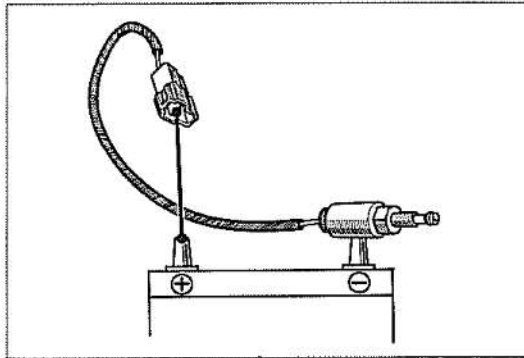
Fig. 8-49

2. Throttle valves: Worn or deformed valves. Wear, bending, twisting, or faulty movement inside housing of shaft.

8-20

FUEL SYSTEM – Carburetor**Fig. 8-50**

3. Idle mixture adjusting screw: Damage tapered tip or threads.

Fig. 8-51**Solenoid Valve**

Check operation of the solenoid valve.

Connect wiring to the battery positive terminal and ground the body. The needle valve should be pulled in.

ASSEMBLY

Flange

Assemble the parts in the numerical order shown in the figure.

Fig. 8-52

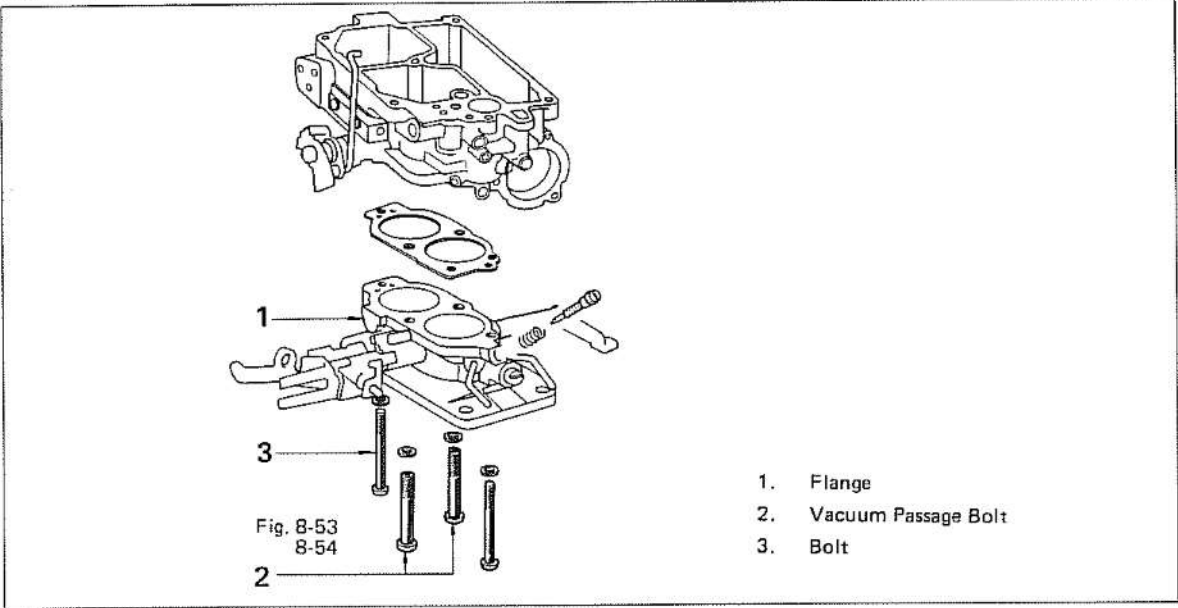
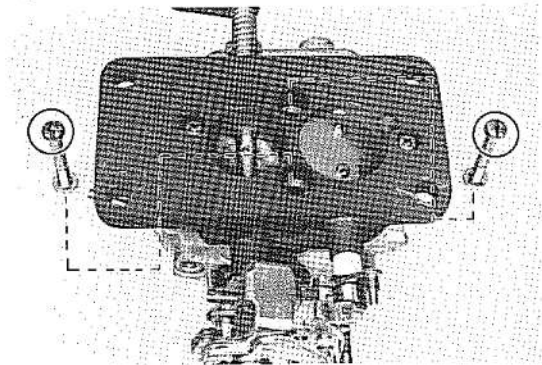
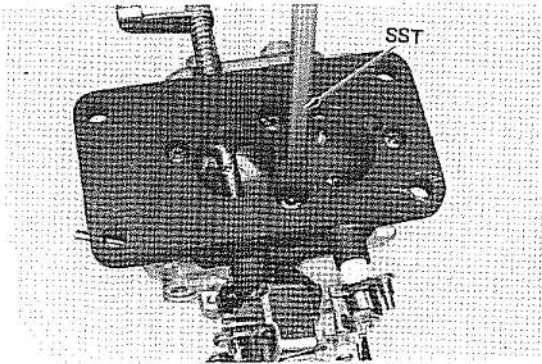


Fig. 8-53



Assemble the vacuum passage bolt in the position shown in the figure.

Fig. 8-54



First finger tighten all bolts and then tighten them down.

8-22

FUEL SYSTEM – Carburetor**Body**

Assemble the parts in the numerical order shown in the figure.

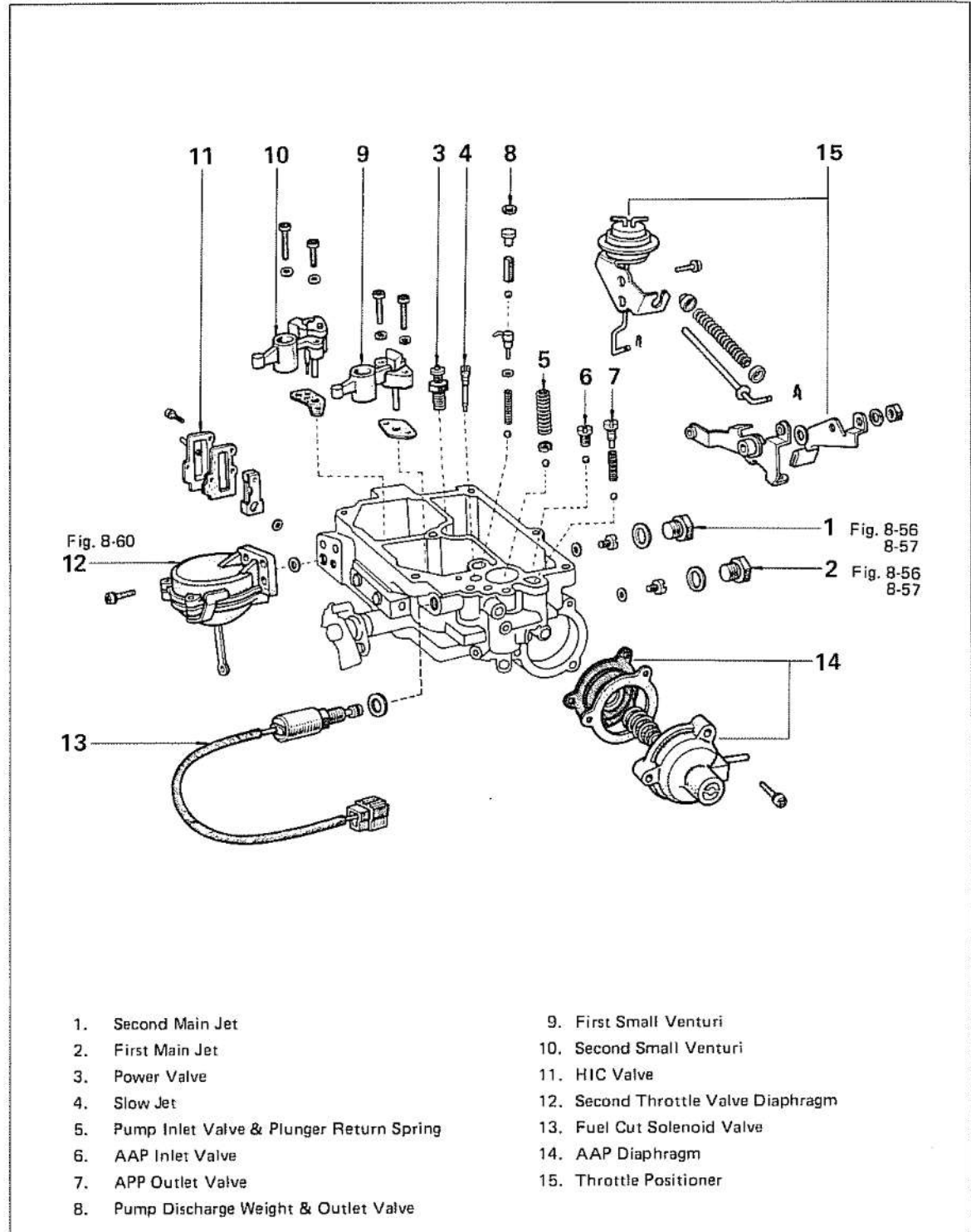
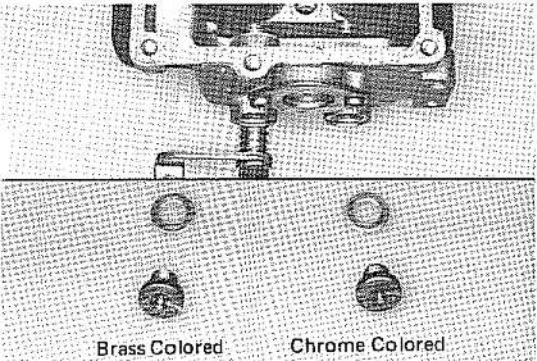
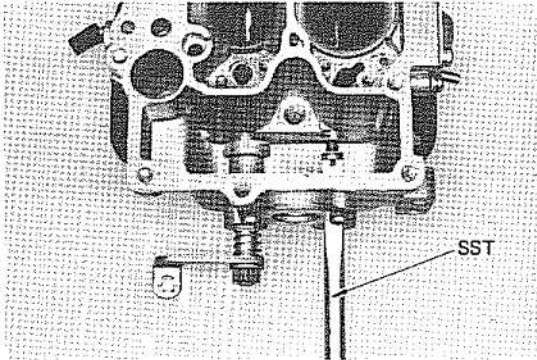
Fig. 8-55

Fig. 8-56



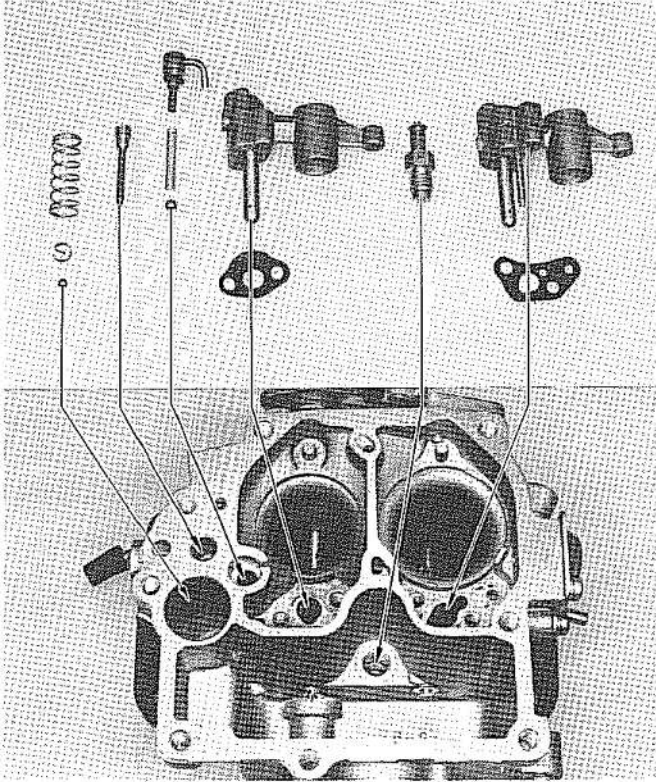
Install the main jets over gaskets.
First jet: Brass colored
Second jet: Chrome colored

Fig. 8-57



Tighten the first and second main jets with SST.
SST{09860-11011}

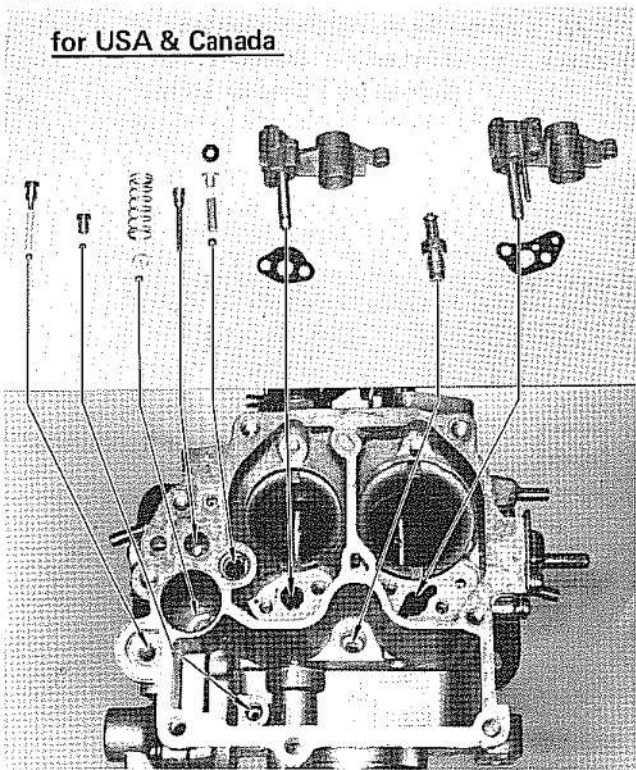
Fig. 8-58



Install the jets, air bleed, valve and
plugs as shown in the figure.

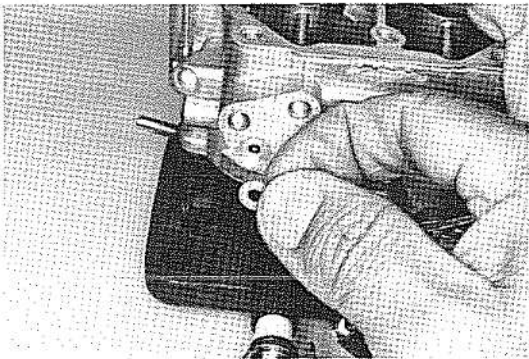
8-24 FUEL SYSTEM – Carburetor

Fig. 8-59



Install the jets, bleed, valve, venturi and plugs as shown in the figure.

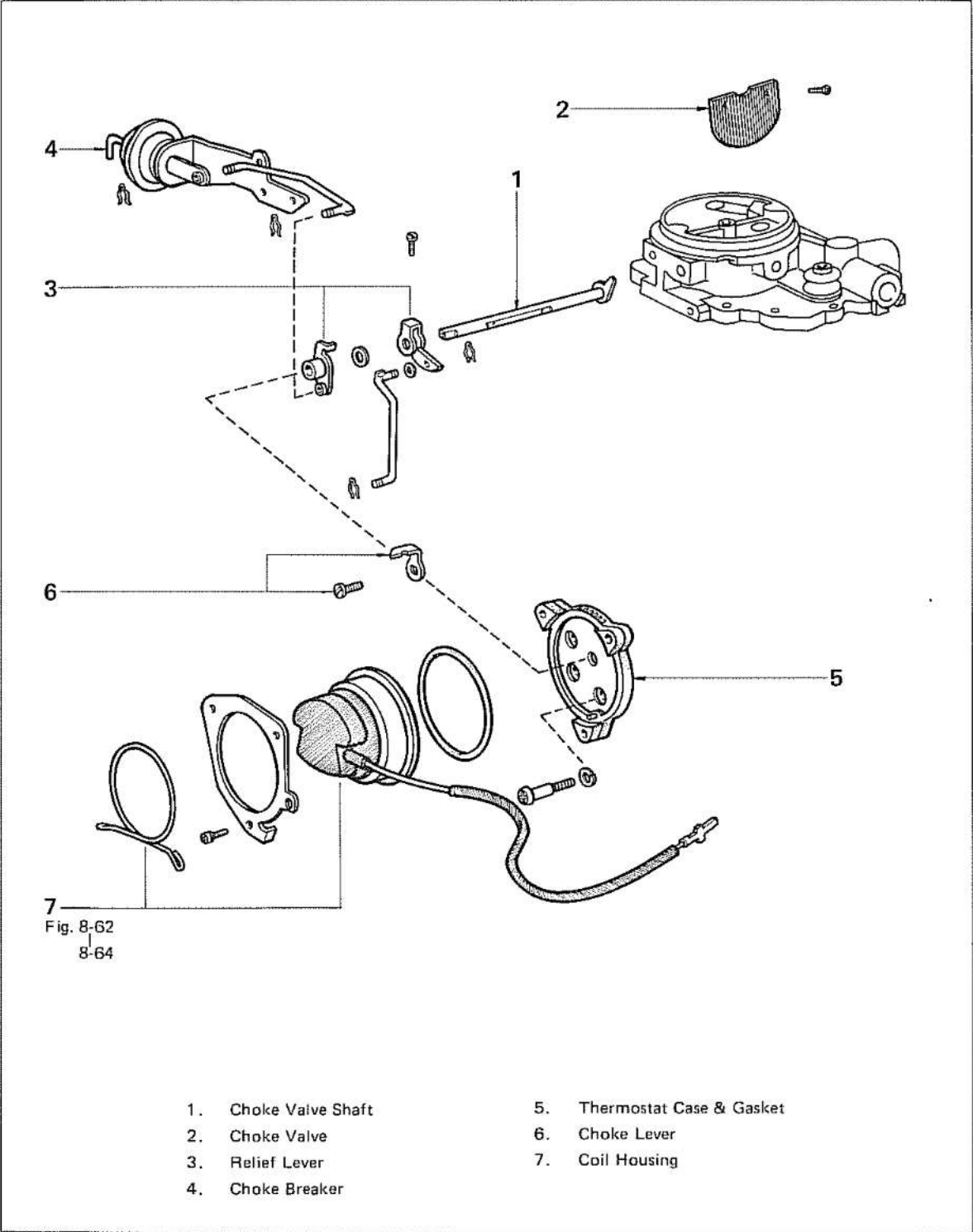
Fig. 8-60



Install the gasket and diaphragm housing.

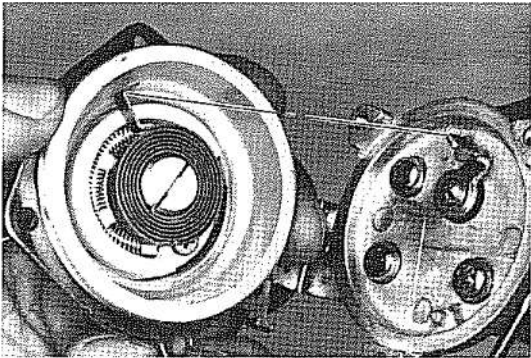
Choke System
Assemble the parts in the numerical order shown in the figure.

Fig. 8-61



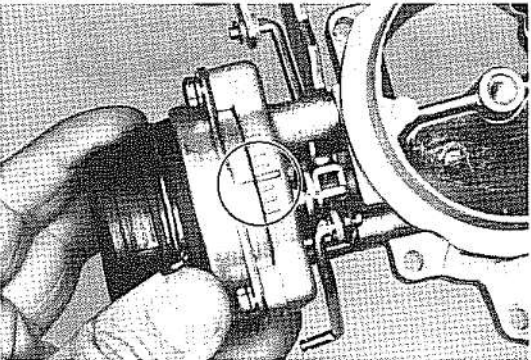
8-26 **FUEL SYSTEM – Carburetor**

Fig. 8-62



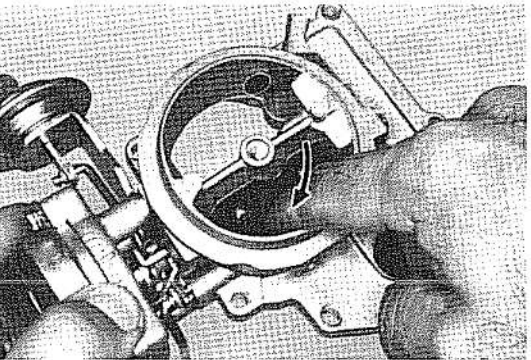
Hook the lever to the bimetal spring.

Fig. 8-63



Align the case scale standard line against the housing scale line.

Fig. 8-64



Check the choke valve action.

Float
Assemble the parts in the numerical order shown in the figure.

Fig. 8-65

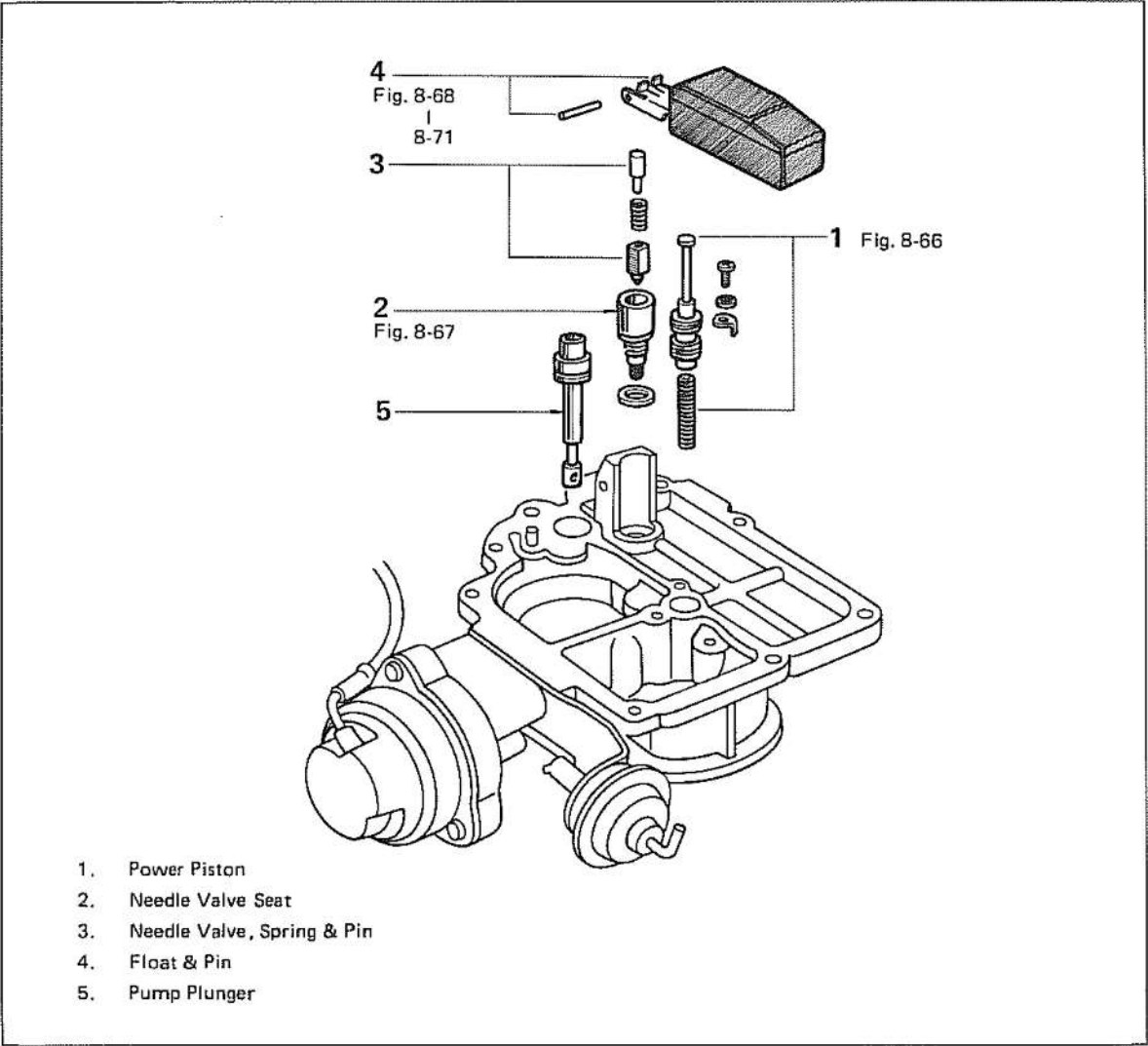
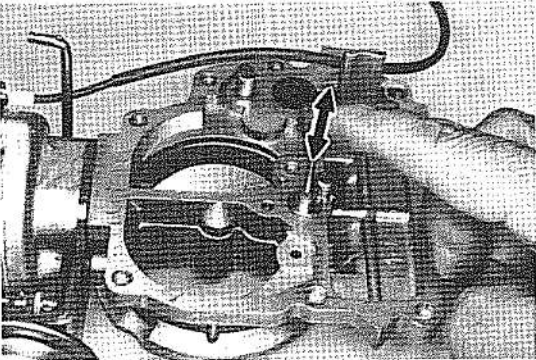


Fig. 8-66

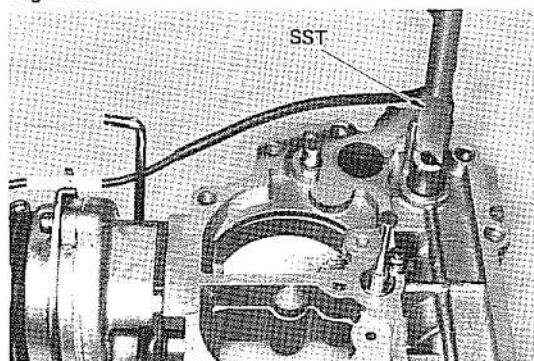


After installing, insure that power piston moves smoothly.

8-28

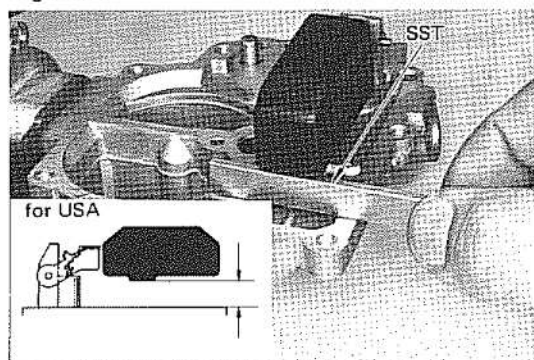
FUEL SYSTEM – Carburetor

Fig. 8-67



Install the needle valve seat with SST.
SST[09860-11011]

Fig. 8-68



Adjust float level.
Allow the float to hang down by its own weight.
Then check the clearance between the float
and air horn with SST.
SST[09240-00014]

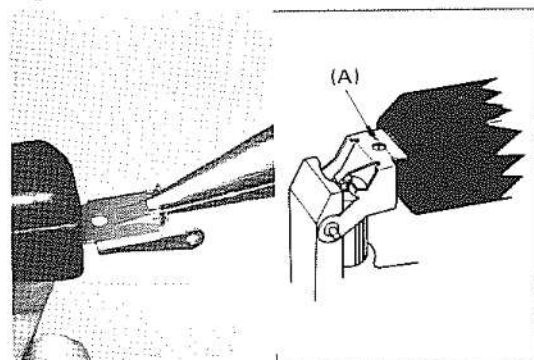
Float upper level:

STD	3T	6.5 mm (0.26 in.)
	3T-C	4.5 mm (0.18 in.)
	2T & 2T-B	4.0 mm (0.16 in.)

— Note —

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

Fig. 8-69

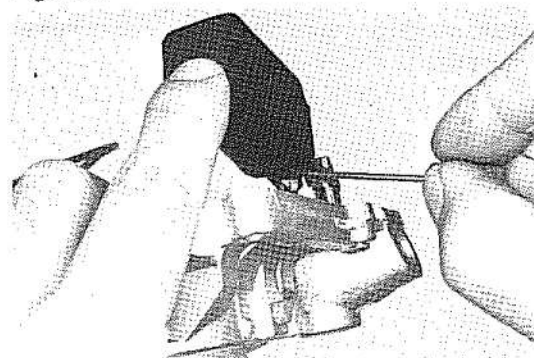


Adjust by bending float lip as shown in the
figure.

[for USA]

Adjust the clearance by bending at point (A) of
the float as shown in the figure.

Fig. 8-70



Adjust lowered position.

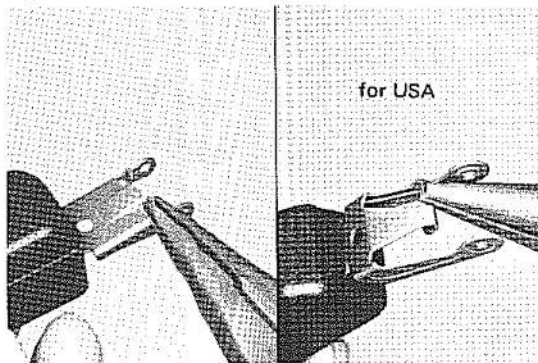
Lift up the float and check the clearance be-
tween the needle valve plunger and float lip
with SST.

SST[09240-00020]

Float lower level:

STD	1.0 – 1.2 mm (0.04 – 0.05 in.)
-----	-----------------------------------

Fig. 8-71

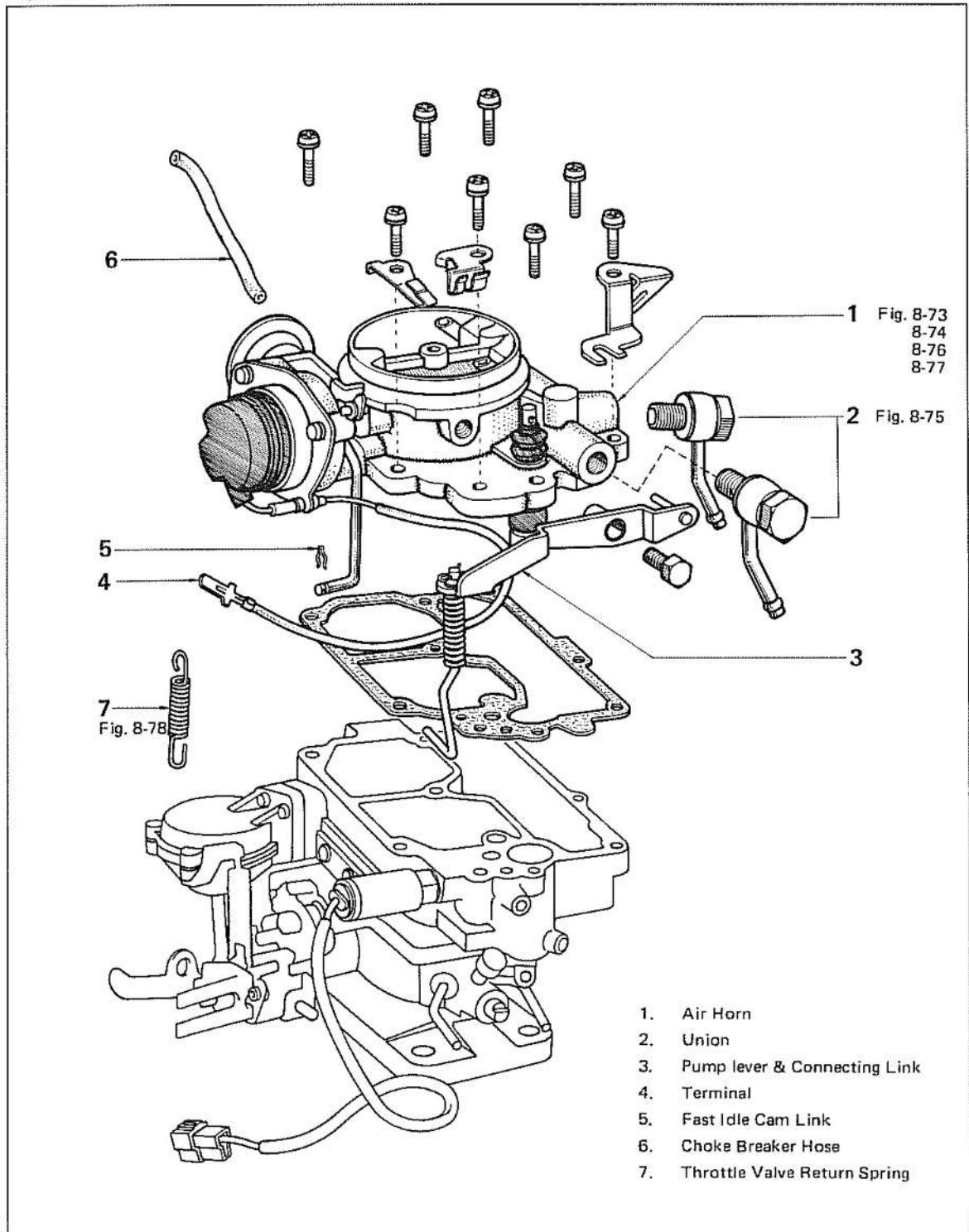


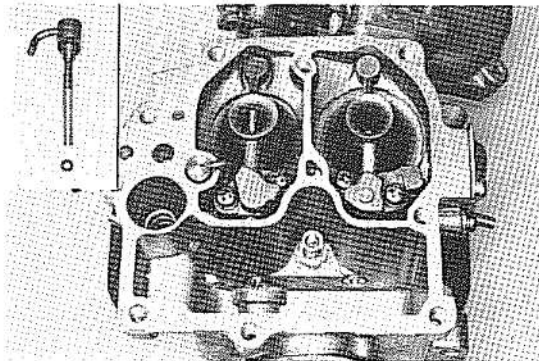
Adjust by bending the float lip as shown in the figure.

8-30

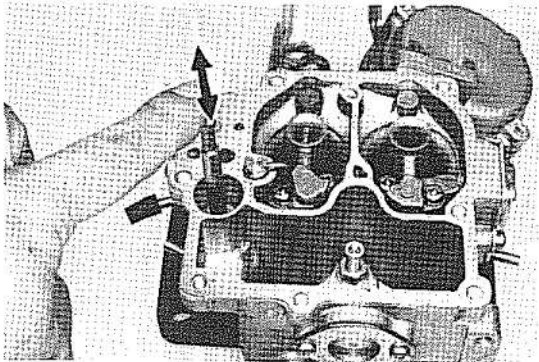
FUEL SYSTEM – Carburetor**Body & Air Horn**

Assemble the parts in the numerical order shown in the figure.

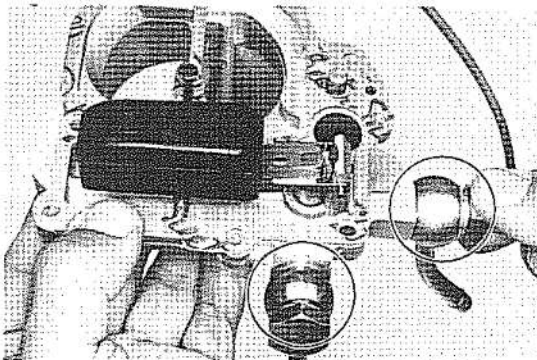
Fig. 8-72

FUEL SYSTEM – Carburetor**8-31****Fig. 8-73**

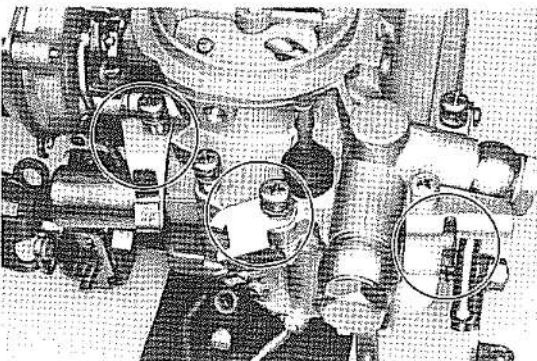
Before assembling the air horn, insure that the pump jet is properly assembled.

Fig. 8-74

Before assembling the air horn, insure that pump plunger moves smoothly.

Fig. 8-75

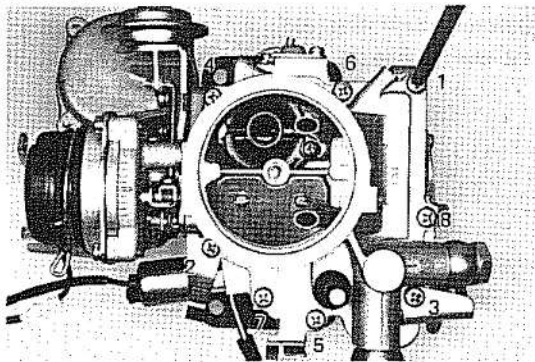
Temporarily install the fuel unions.

Fig. 8-76

Install the clamps in the position shown in the figure.

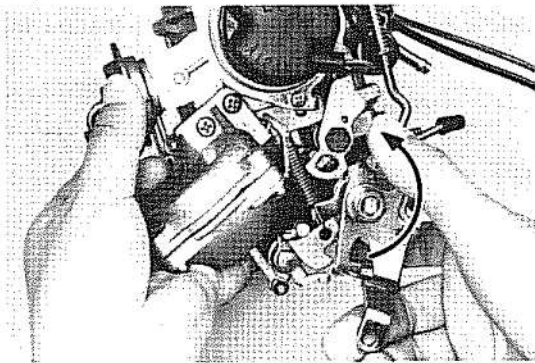
8-32 FUEL SYSTEM – Carburetor

Fig. 8-77



Tighten the air horn set screws at little at a time in diagonal order.

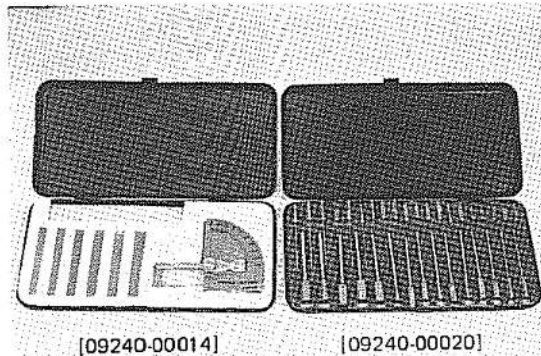
Fig. 8-78



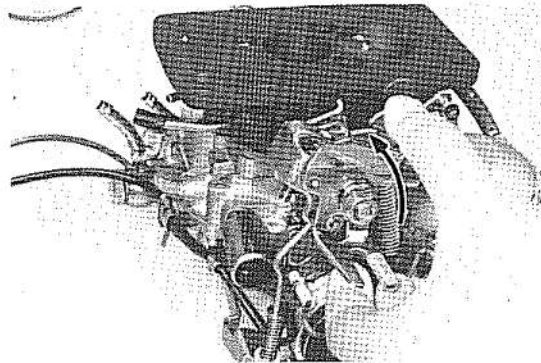
After assembling, make sure that each link moves smoothly.

FUEL SYSTEM – Carburetor

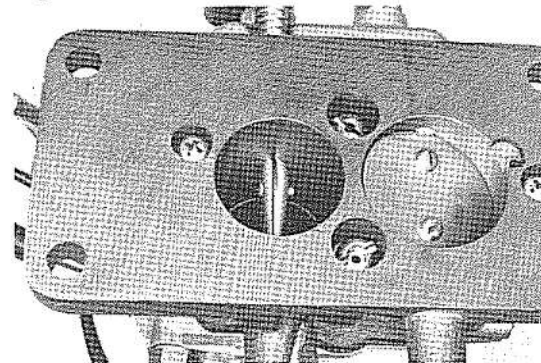
8-33

Fig. 8-79**ADJUSTMENT**

Make adjustments with SST.
SST[09240-00014]
[09240-00020]

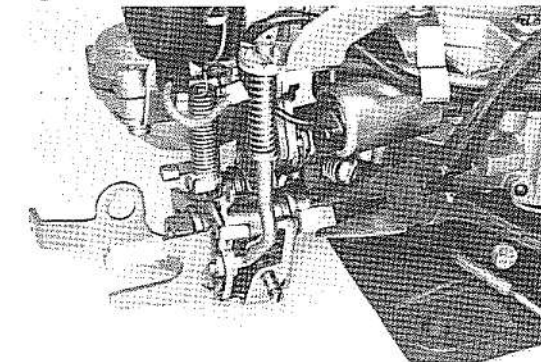
Fig. 8-80

1. First throttle valve opening.
(1) Fully open the first throttle valve.

Fig. 8-81

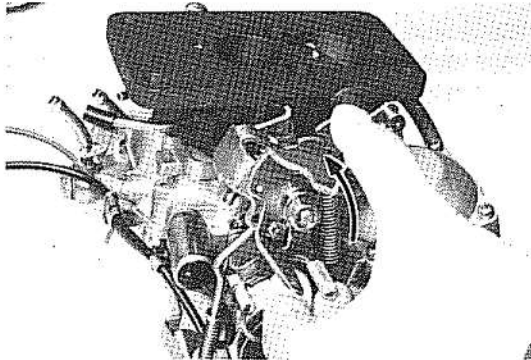
- (2) Check the first throttle valve opening angle.

Opening angle: 90°

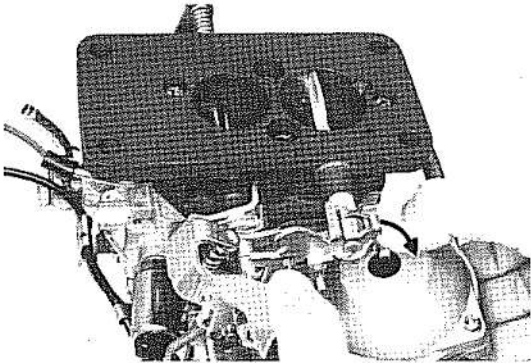
Fig. 8-82

- (3) Adjust by bending the throttle lever stopper.

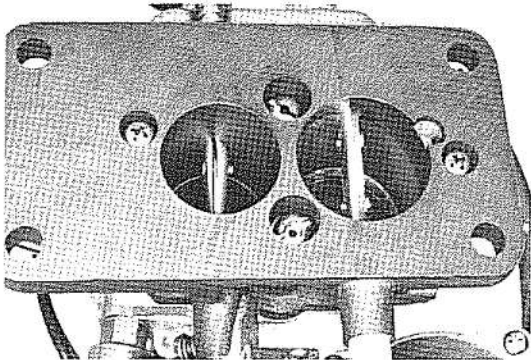
8-34

FUEL SYSTEM – Carburetor**Fig. 8-83**

2. Second throttle valve opening.
 (1) Fully open the first throttle valve.

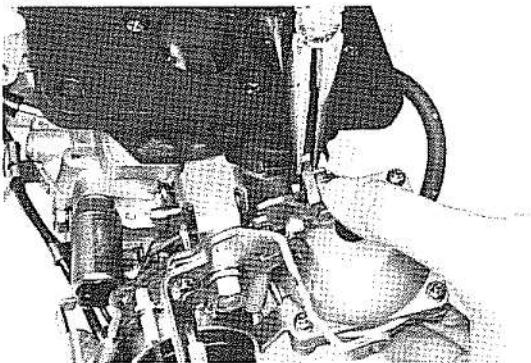
Fig. 8-84

- (2) Fully open the second throttle valve lever.

Fig. 8-85

- (3) Check the throttle valve opening angle.

Opening angle: 80°

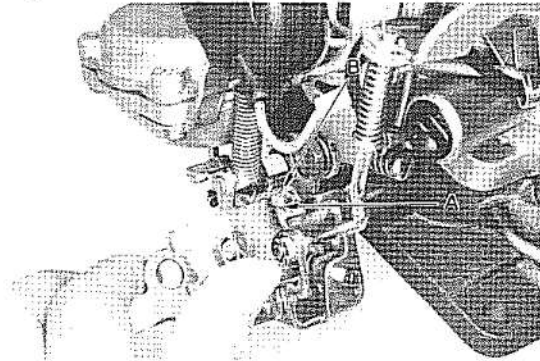
Fig. 8-86

- (4) Adjust by bending the throttle lever stopper.

FUEL SYSTEM – Carburetor

8-35

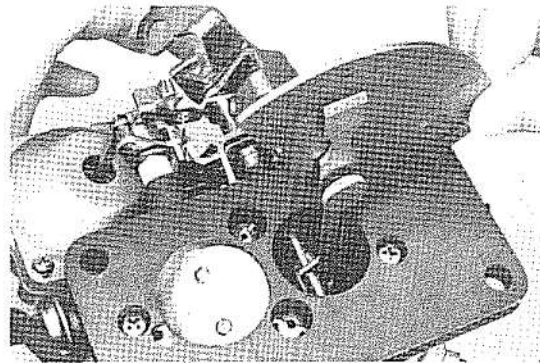
Fig. 8-87



3. Secondary touch angle.

- (1) Open the first throttle valve until the throttle valve lever (A) part touch (B) part.

Fig. 8-88

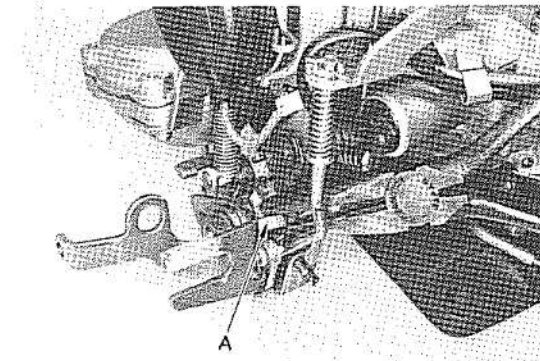


- (2) At this time, check the first throttle valve opening angle.

Secondary touch angle:

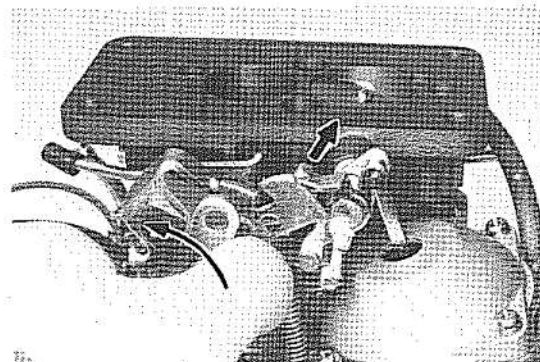
57° – 61°

Fig. 8-89



- (3) Adjust by bending (A) part.

Fig. 8-90

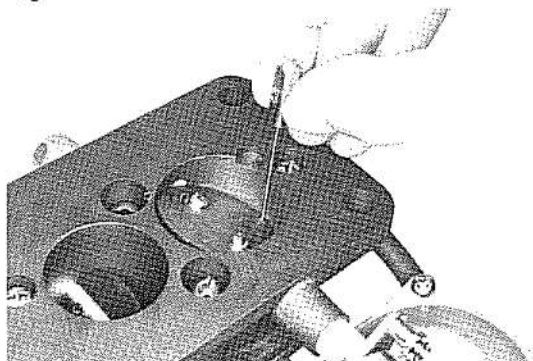


4. Kick up

- (1) Open the first throttle valve until the kick arm slightly opens the second throttle valve.

8-36 FUEL SYSTEM — Carburetor

Fig. 8-91

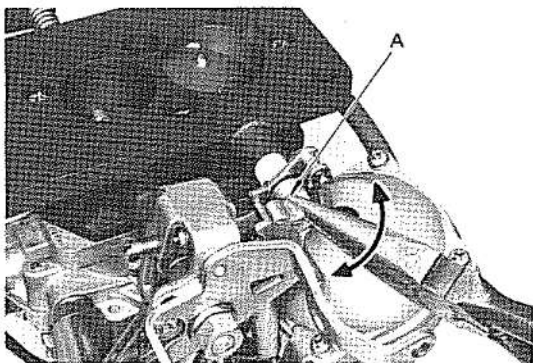


- (2) Check the clearance between the second throttle valve and body.

Kick up clearance:

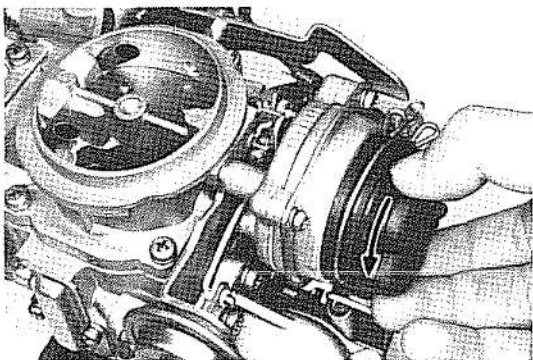
**0.2 mm
(0.008 in.)**

Fig. 8-92



- (3) Adjust by bending (A) part.

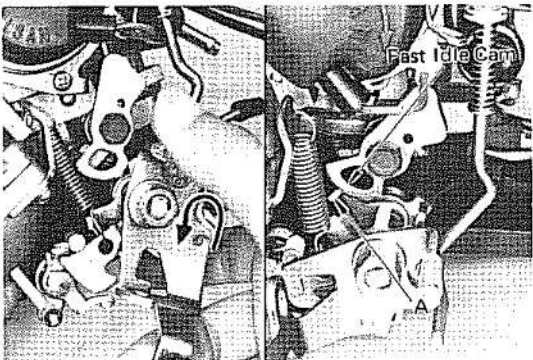
Fig. 8-93



5-1. Fast idle (automatic choke only)

- (1) Fully close the choke valve by turning the coil housing.

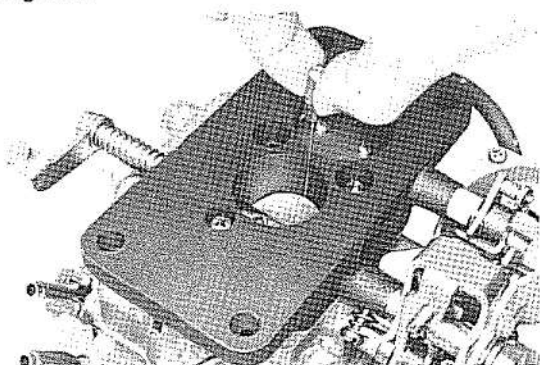
Fig. 8-94



- (2) Slightly open the first throttle valve and then close it. Insure that the throttle lever (A) part hooks to the fast idle cam.

FUEL SYSTEM – Carburetor

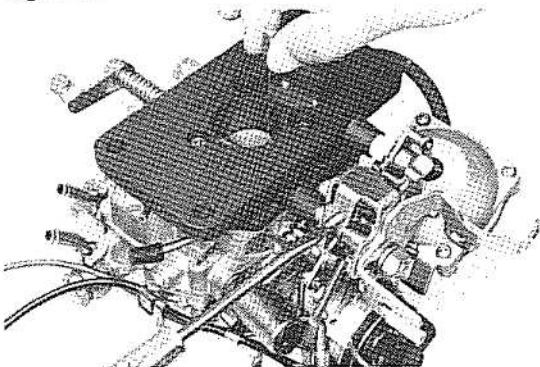
8-37

Fig. 8-95

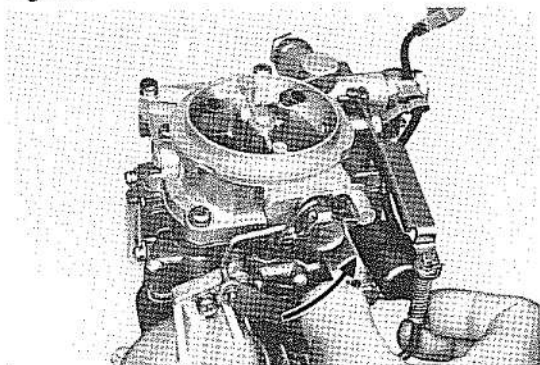
- (3) Check the clearance between the first throttle valve and bore.

Fast idle clearance:

**0.81 mm
(0.032 in.)**

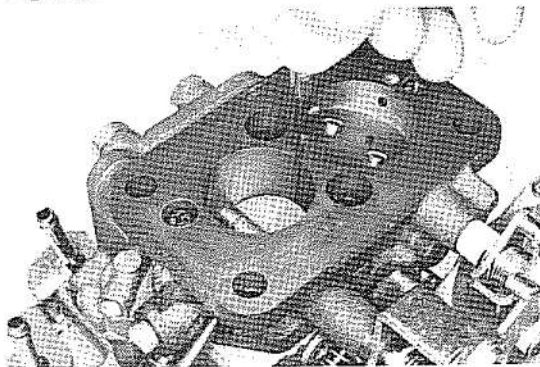
Fig. 8-96

- (4) Adjust by turning the fast idle adjusting screw.

Fig. 8-97

5-2. Fast idle (manual choke only)

- (1) Fully close the choke valve by turning the choke shaft lever.

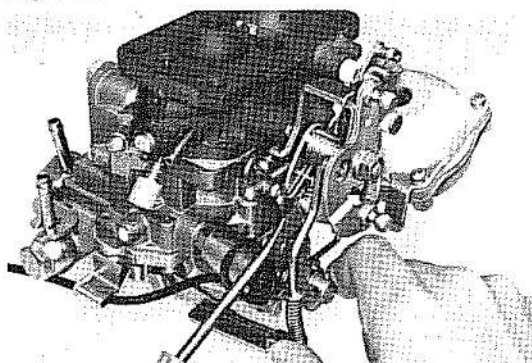
Fig. 8-98

- (2) Check the clearance between the first throttle valve and bore.

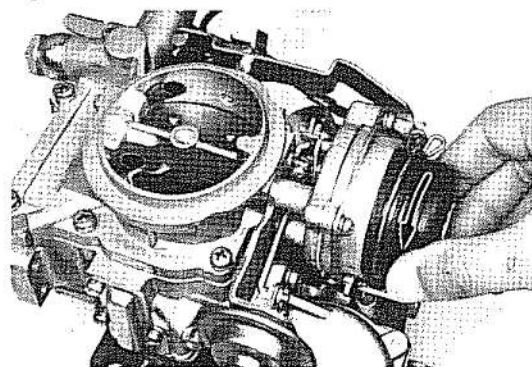
Fast idle clearance:

**1.01 mm
(0.040 in.)**

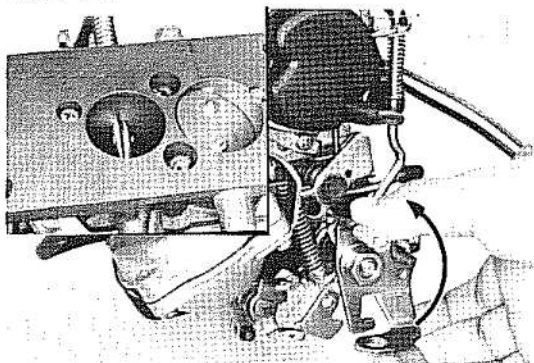
8-38

FUEL SYSTEM – Carburetor**Fig. 8-99**

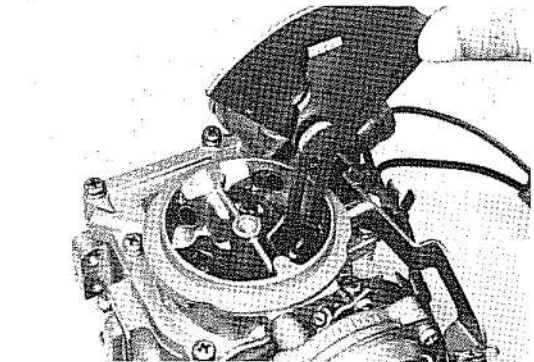
- (3) Adjust by turning the fast idle adjusting screw.

Fig. 8-100

6. Unloader (only automatic choke)
(1) Fully close the choke valve by turning the coil housing.

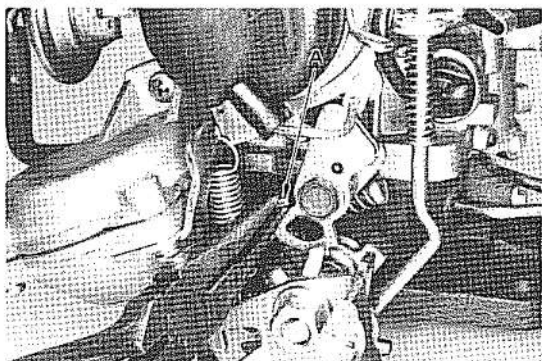
Fig. 8-101

- (2) Fully open the first throttle valve.

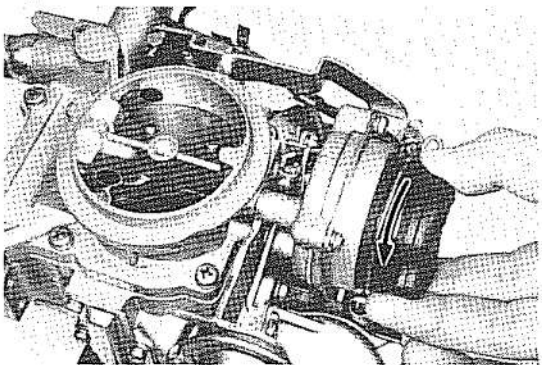
Fig. 8-102

- (3) At this time, check the choke valve opening angle.

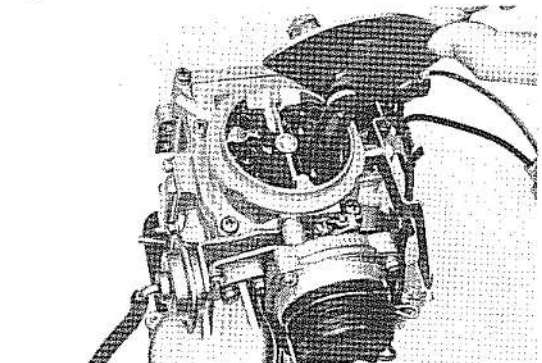
Unloader angle: 47°

FUEL SYSTEM – Carburetor**8-39****Fig. 8-103**

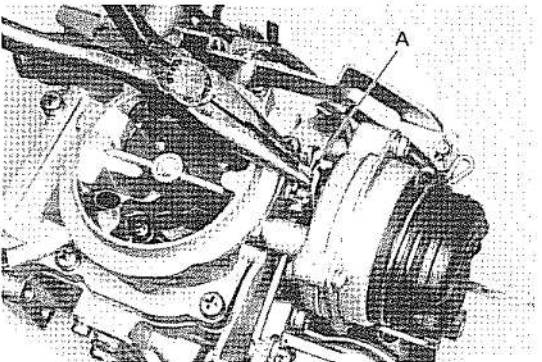
- (4) Adjust by bending (A) part.

Fig. 8-104

7. Choke breaker (automatic choke only)
 (1) Fully close the choke valve by turning the coil housing.

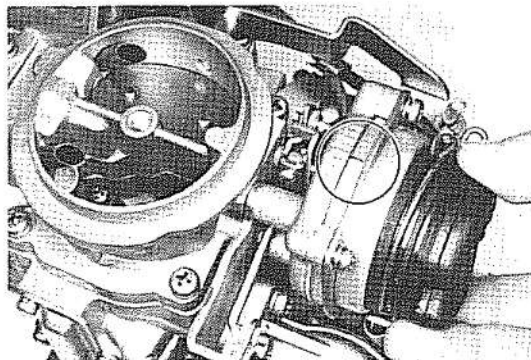
Fig. 8-105

- (2) Connect a hose to the diaphragm and suck on the hose with your mouth.
 (3) At this time, check the clearance between the choke valve and bore.

Fig. 8-106

- (4) Adjust by bending (A) part.

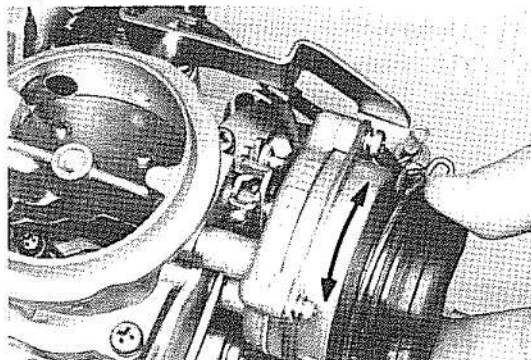
8-40

FUEL SYSTEM – Carburetor**Fig. 8-107****8. Automatic choke**

- (1) Set the coil housing scale mark so that it will be aligned with the center line of the thermostat case.

— Note —

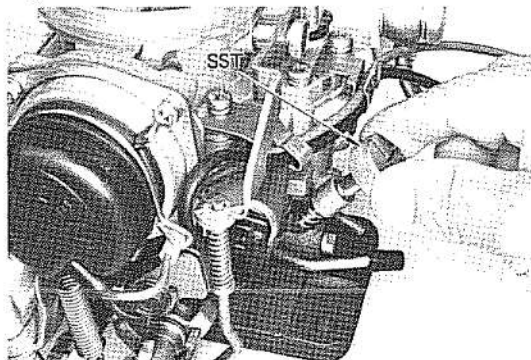
The choke valve becomes fully closed when the atmospheric temperature reaches 25°C (77°F).

Fig. 8-108

- (2) Depending on vehicle operating conditions, turn the coil housing and adjust the engine starting mixture.

If too rich Turn clockwise.

If too lean Turn counter-clockwise.

Fig. 8-109**9. Idle mixture adjusting screw**

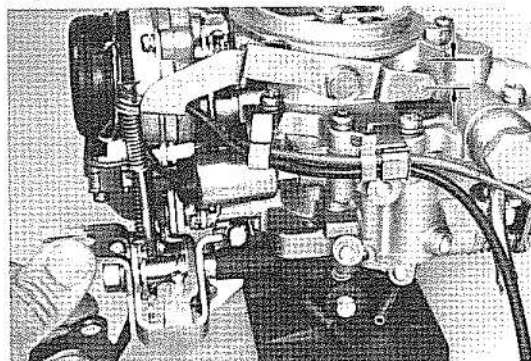
Tighten the idle mixture adjusting screw and then unscrew it about three turns.

STD (Reference only):

Returned about 3 turns from full closed.

— Note —

Be careful not to damage the screw tip by tightening the screw too tightly.

Fig. 8-110**10. Accelerating pump**

Adjust the pump stroke by vending part (A).

STD: 2T, 3T & 3T-C 5.0 mm (0.20 in.)

2T-B 3.0 mm (0.12 in.)

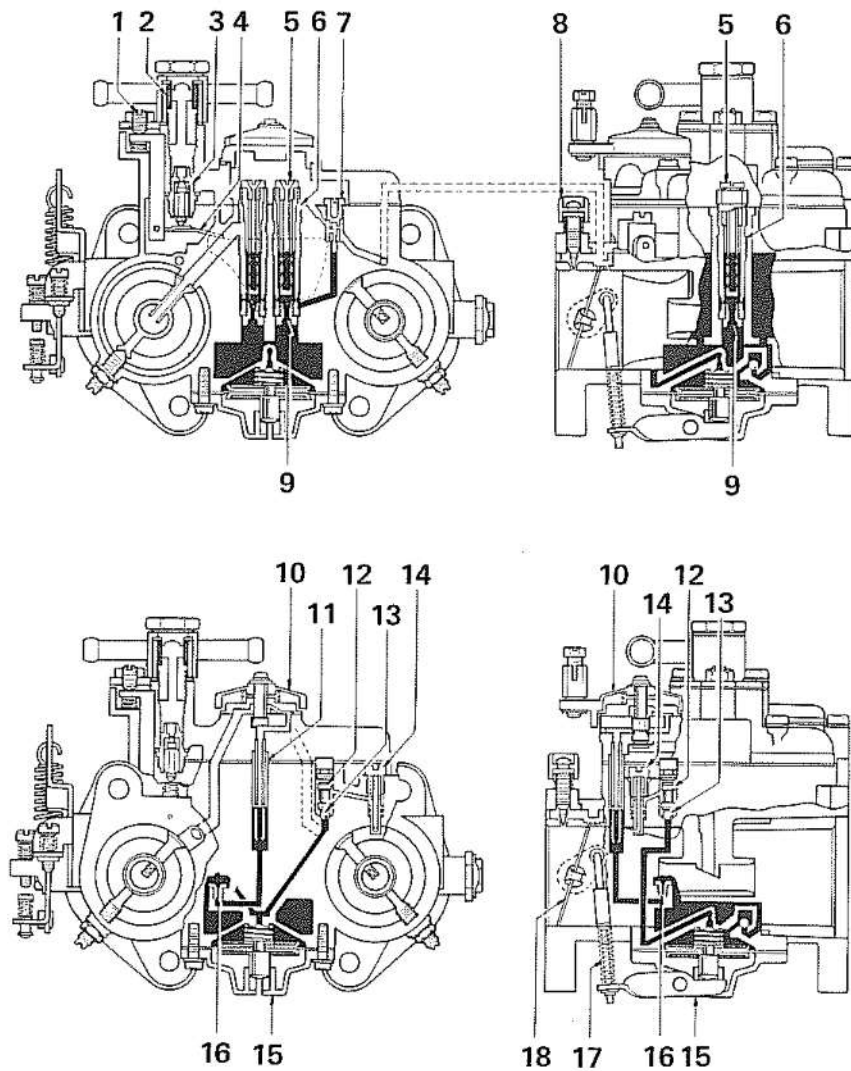
— Note —

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

SOLEX CARBURETOR

CARBURETOR CIRCUIT

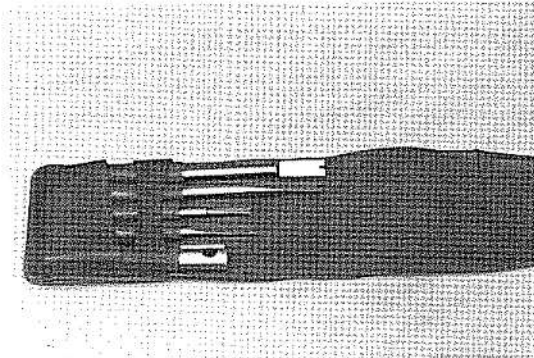
Fig 8-114



1. Float Level Adjusting Screw
2. Fuel Strainer
3. Needle Valve
4. Float
5. Main Air Bleet Jet
6. Main Jet Holder
7. Slow Jet
8. Idle Mixture Adjusting Screw
9. Main Jet

10. Starter Disc
11. Air Bleed Tube
12. Pump Discharge Weight
13. Pump Outlet Valve
14. Pump Jet
15. Accelerating Pump Diaphragm
16. Starter Jet
17. Pump Connecting Rod
18. Throttle Valve

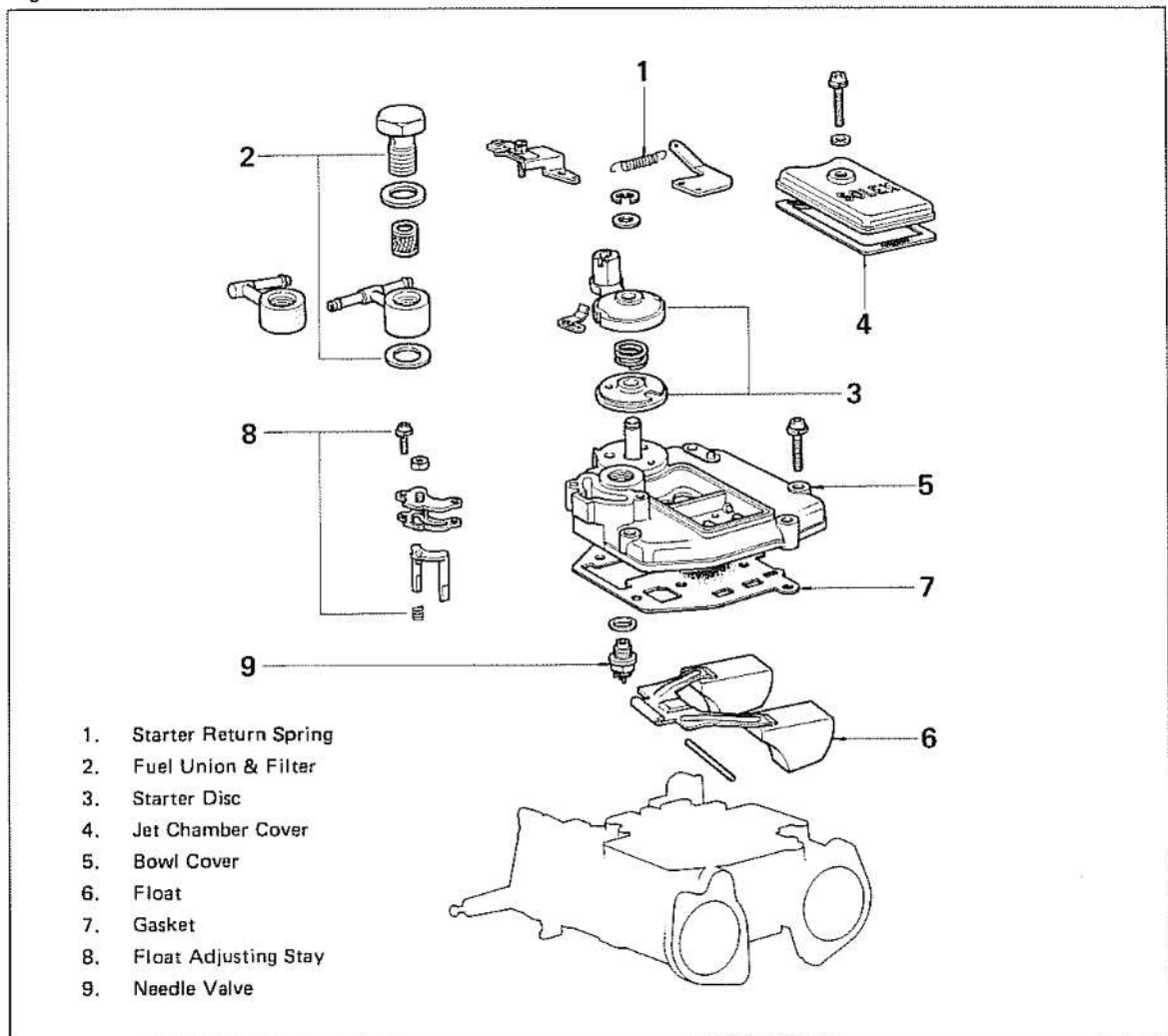
8-42

FUEL SYSTEM – Solex Carburetor**Fig. 8-115**

Use SST for carburetor servicing.
SST[09860-11011]

DISASSEMBLY**Bowl Cover**

Disassemble the parts in the numerical order shown in the figure.

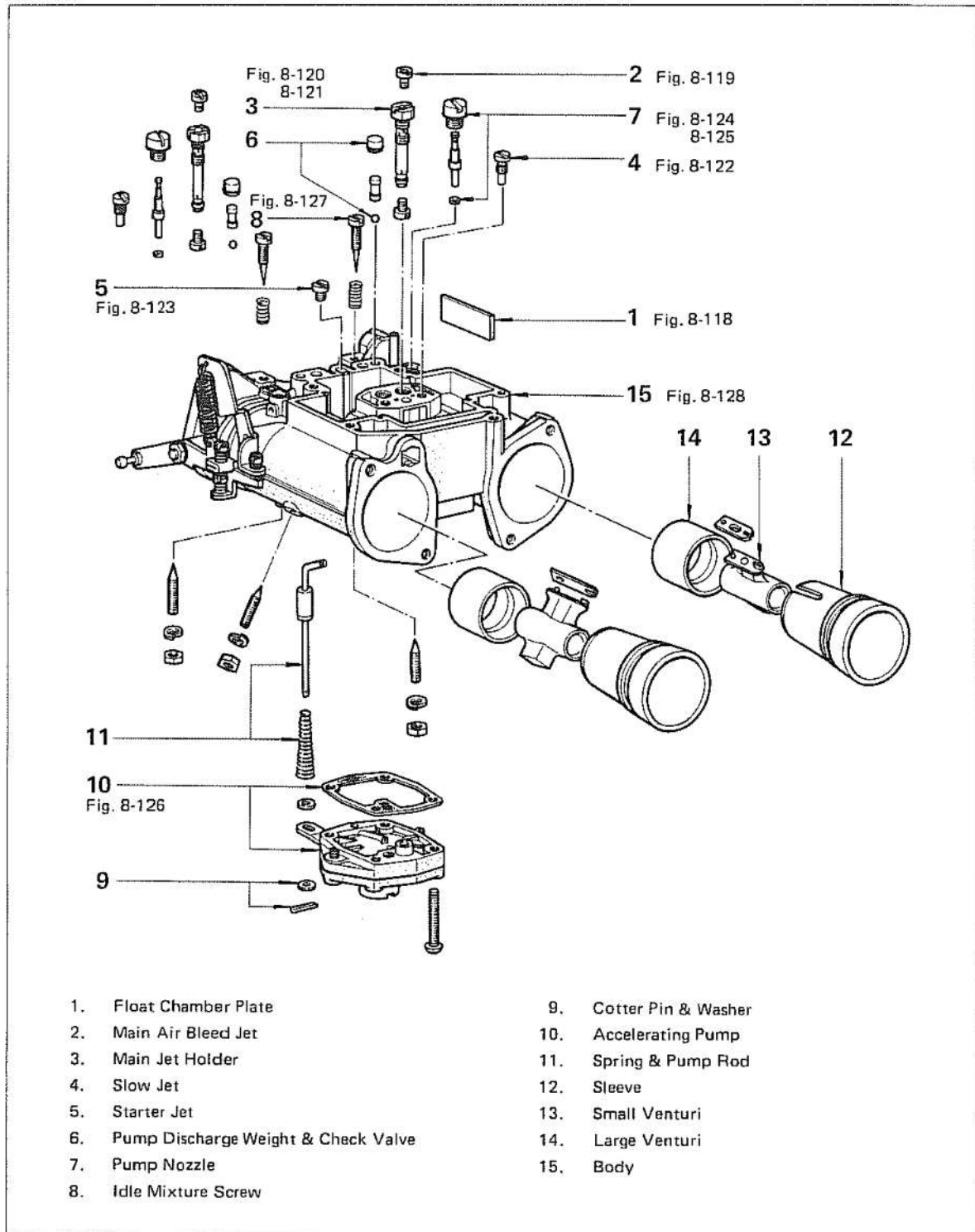
Fig. 8-116

FUEL SYSTEM – Solex Carburetor

8-43

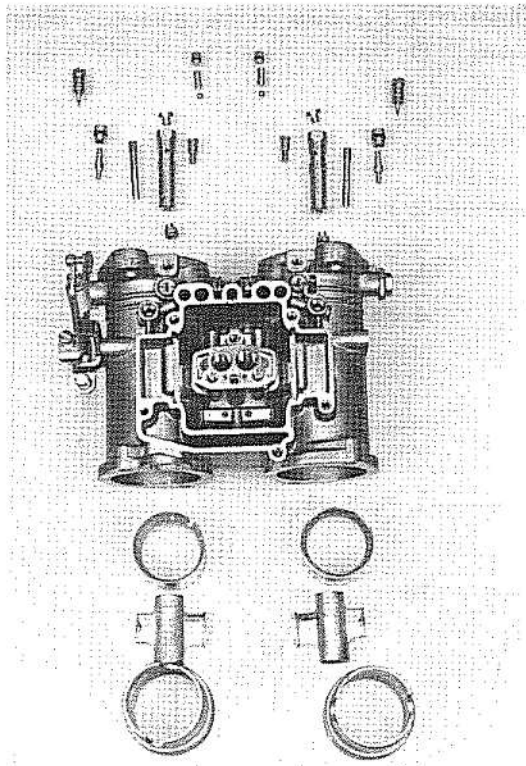
Body

Disassemble the parts in the numerical order shown in the figure.

Fig. 8-117

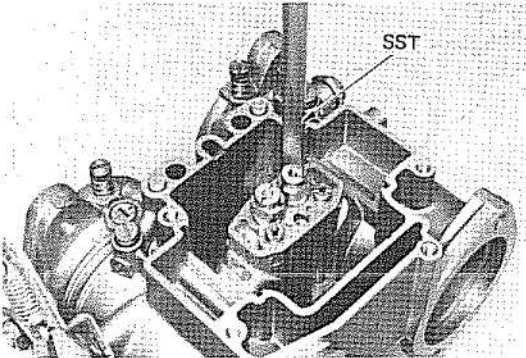
8-44 FUEL SYSTEM – Solex Carburetor

Fig. 8-118



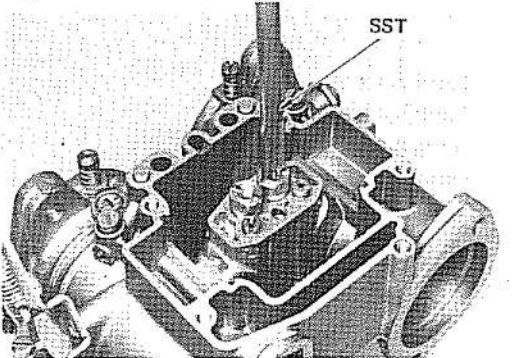
Arrange the parts for the right and left sides in respective order.

Fig. 8-119

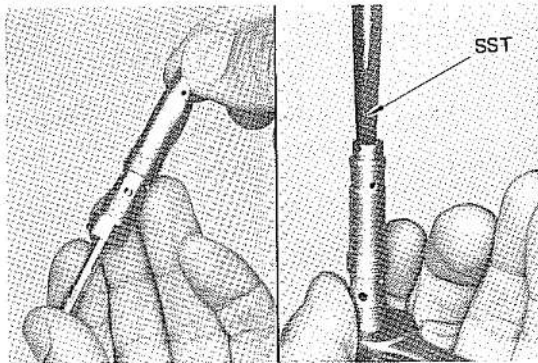


Remove the main air bleed jet with SST.
SST [09860-11011]

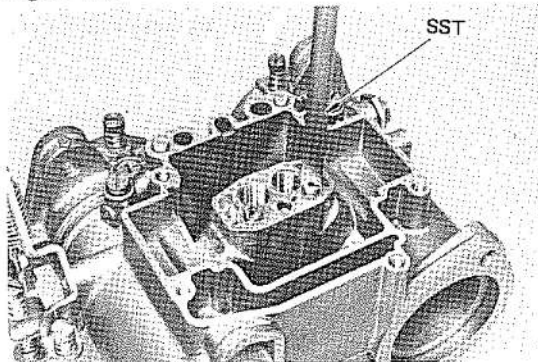
Fig. 8-120



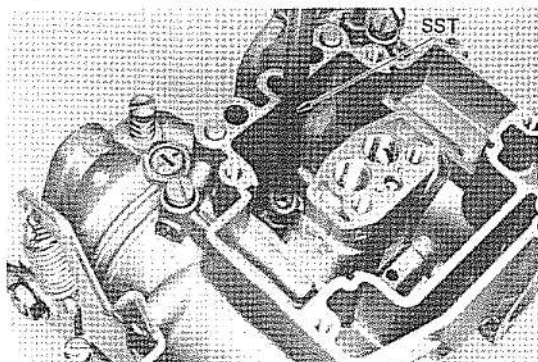
Remove the main jet holder with SST.
SST [09860-11011]

FUEL SYSTEM – Solex Carburetor**8-45****Fig. 8-121**

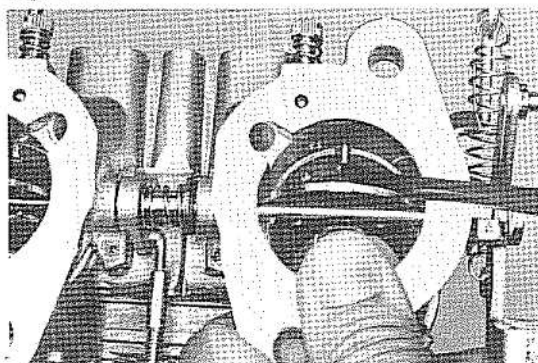
Remove the tube from the main jet holder.
Remove the main jet with SST.
SST[09860-11011]

Fig. 8-122

Remove the slow jet with SST.
SST[09860-11011]

Fig. 8-123

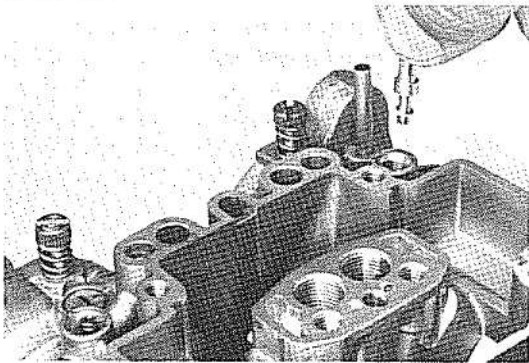
Remove the starter jet with SST.
SST[09860-11011]

Fig. 8-124

If the starter jet is difficult to remove, push up from the bottom with a screw driver.

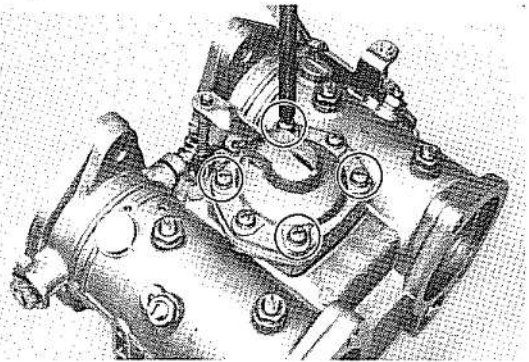
8-46 **FUEL SYSTEM – Solex Carburetor**

Fig. 8-125



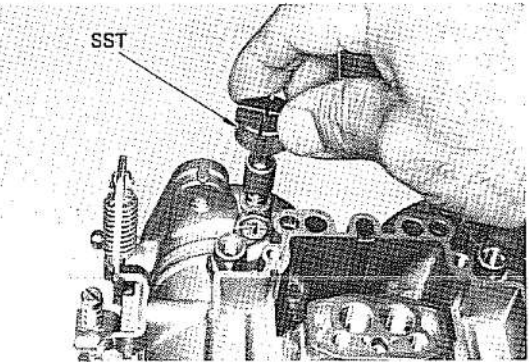
Remove the jet and gasket.

Fig. 8-126



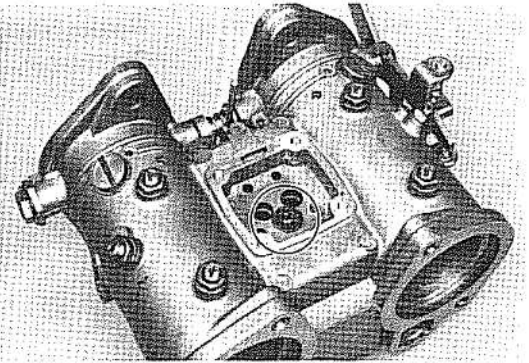
After removing 4 screws, remove the accelerating pump.

Fig. 8-127



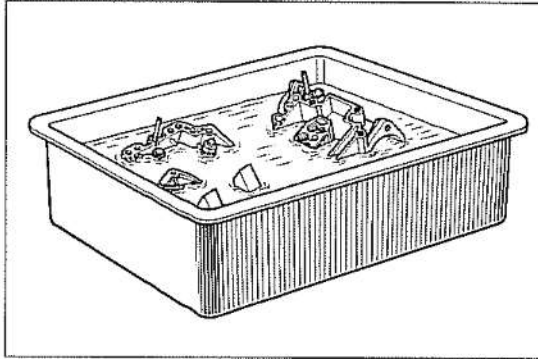
Remove the idle mixture adjusting screw with SST.
SST[09243-00010] or
[09243-00020]

Fig. 8-128



Do not remove the screw.

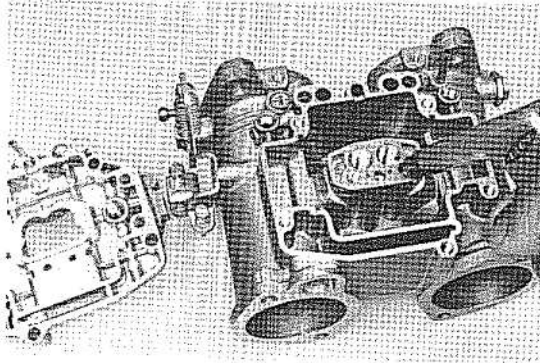
Fig. 8-129

**INSPECTION**

— Precaution —

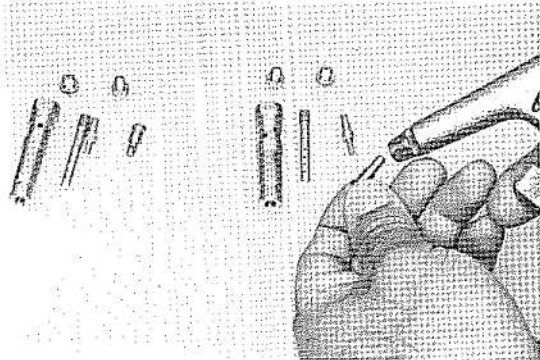
1. Before inspecting the parts, wash them thoroughly in gasoline.

Fig. 8-130



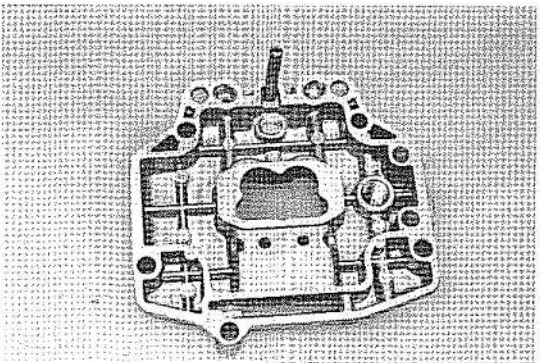
2. Using compressed air, blow all dirt and other foreign matter from the jets and similar parts, and from the fuel passages and apertures in the body.

Fig. 8-131



3. Never clean the jets or orifices with wire or a drill. This could enlarge the openings and result in excessive fuel consumption.

Fig. 8-132



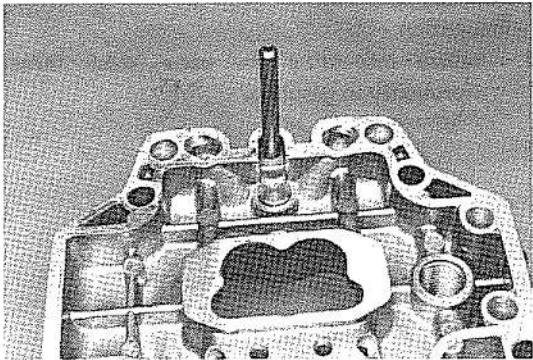
Inspect the following parts and replace any part damaged.

Bowl Cover Parts

1. Bowl cover: Cracks, damaged threads.

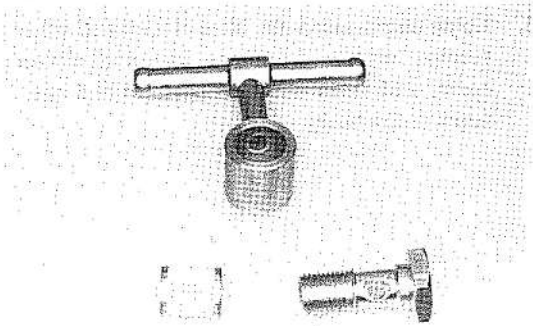
8-48 FUEL SYSTEM – Solex Carburetor

Fig. 8-133



2. Starter pipe: Damaged and/or clogged.

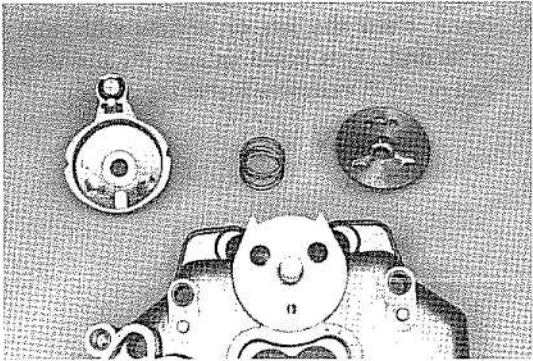
Fig. 8-134



3. Filter: Clogged, rusted, or damaged.

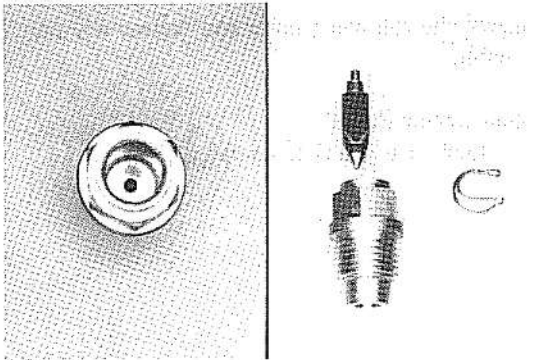
— Note —
New gasket must always be used whenever the union is removed.

Fig. 8-135



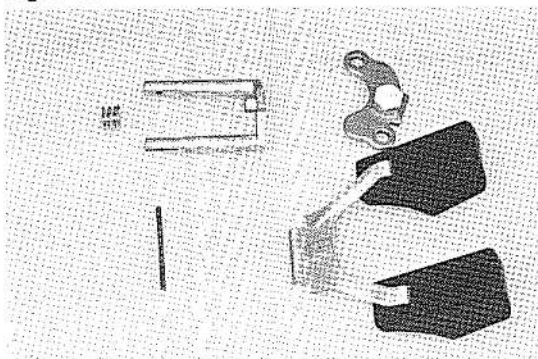
4. Starter disc: Damaged or worn sliding surface.

Fig. 8-136



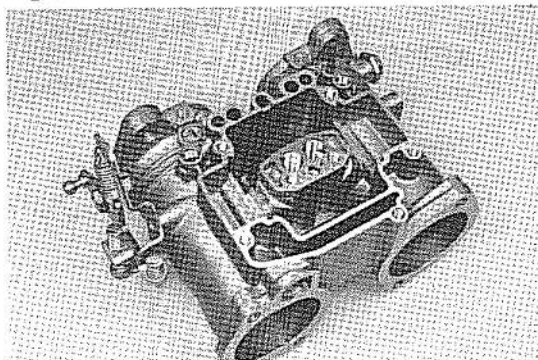
5. Needle valve: Contacting valve seat.

Fig. 8-137



6. Float: Deformed, wear in float lever pin holes, bent float arms.

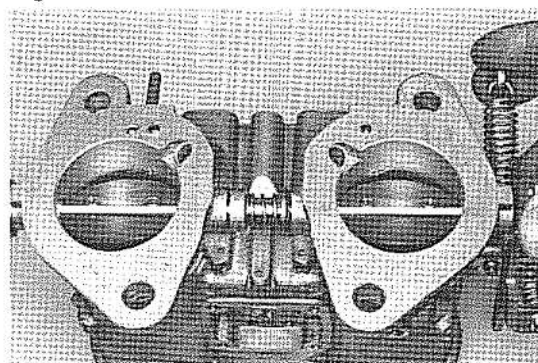
Fig. 8-138



Body Parts

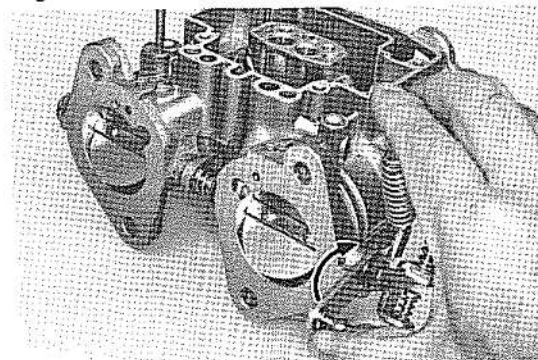
1. Body: Cracks, damaged mounting surfaces and threads, wear on throttle shaft bearings, and carbon adherence.

Fig. 8-139



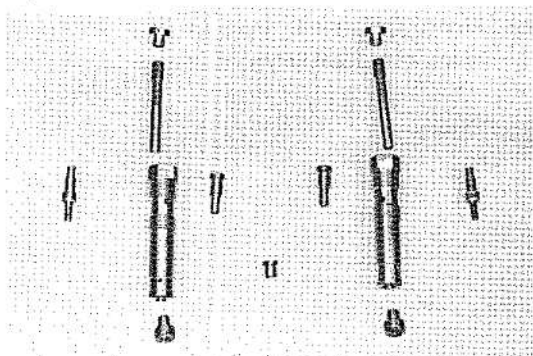
2. Bore: Wear on the throttle valve contacting surface.

Fig. 8-140

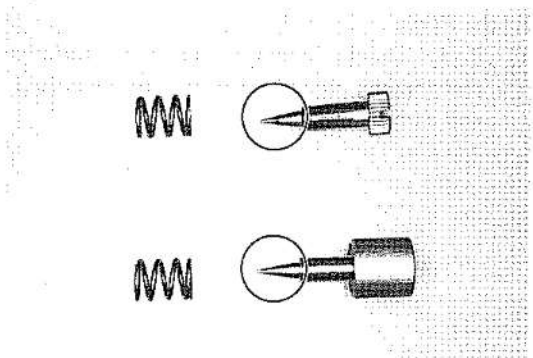


3. Throttle valve movement.

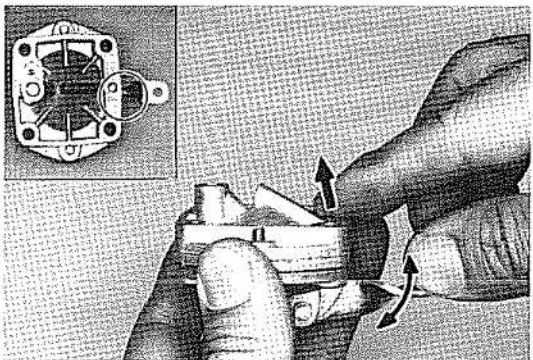
8-50

FUEL SYSTEM – Solex Carburetor**Fig. 8-141**

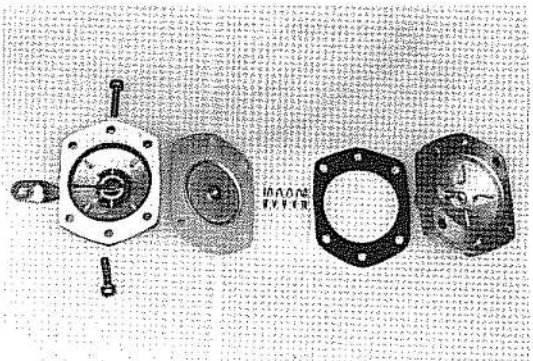
4. Jet: Clogging, damage to contacting surface, threads and screwdriver slots.

Fig. 8-142

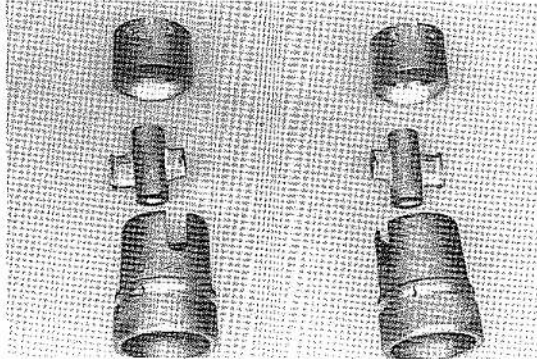
5. Idle mixture adjusting screw: Damage to tapered tip or threads.
6. Pump nozzle: Clogged and/or damaged.

Fig. 8-143

7. With the pump level, work the lever and insure that air is forced through the outlet hole.

Fig. 8-144

8. Pump diaphragm: Damaged.
9. Pump body: Cracks, damaged mounting surfaces.

FUEL SYSTEM – Solex Carburetor**8—51****Fig. 8-145**

10. Venturi
Damaged
Small venturi
Damaged or clogged

8-52

FUEL SYSTEM – Solex Carburetor**Body**

Assemble the parts in the numerical order shown in the figure.

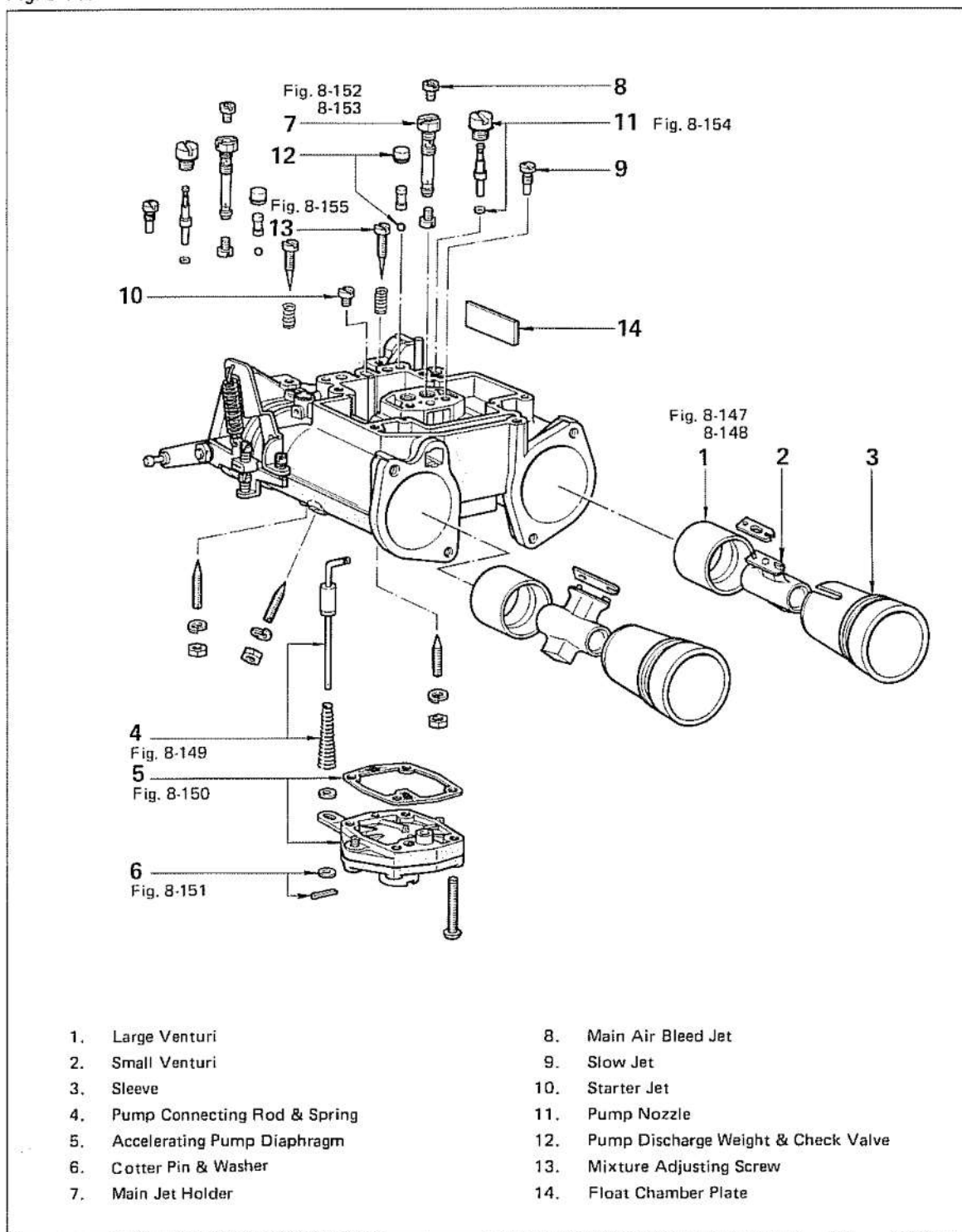
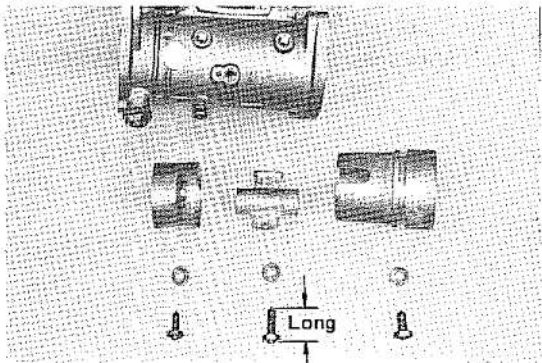
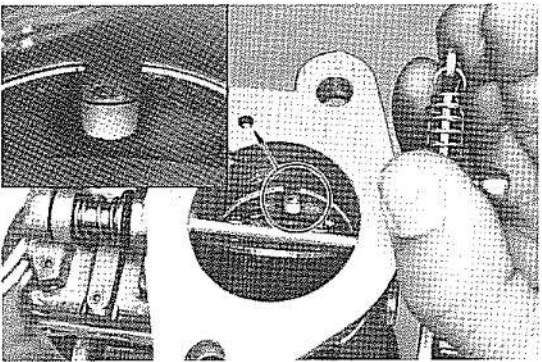
Fig. 8-146

Fig. 8-147



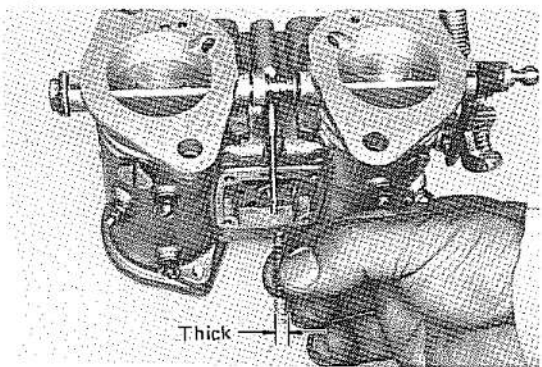
Assemble the small venturi with the long screw.

Fig. 8-148



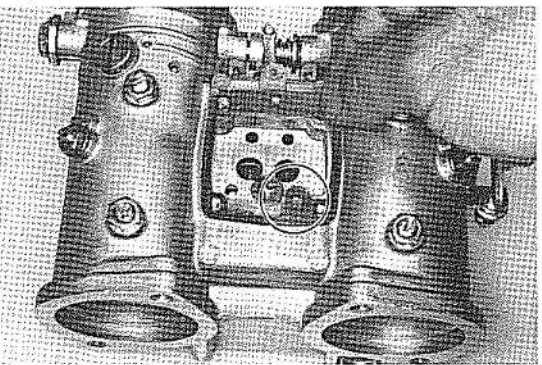
Install the venturi with the accelerator pump nozzle hole in the center of the venturi slit.

Fig. 8-149



Install the spring in the direction shown in the figure.

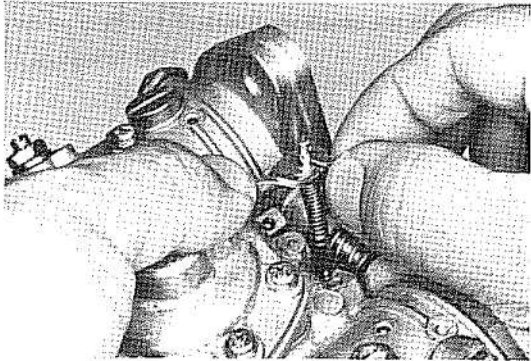
Fig. 8-150



Install the gasket as shown in the figure.

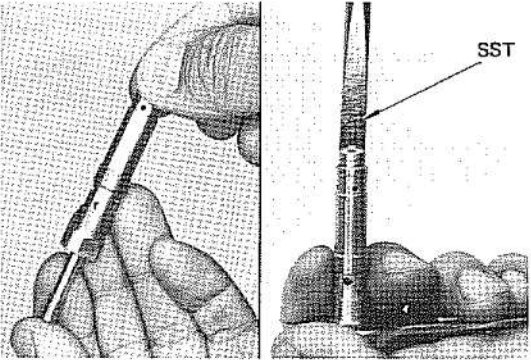
8-54 FUEL SYSTEM – Solex Carburetor

Fig. 8-151



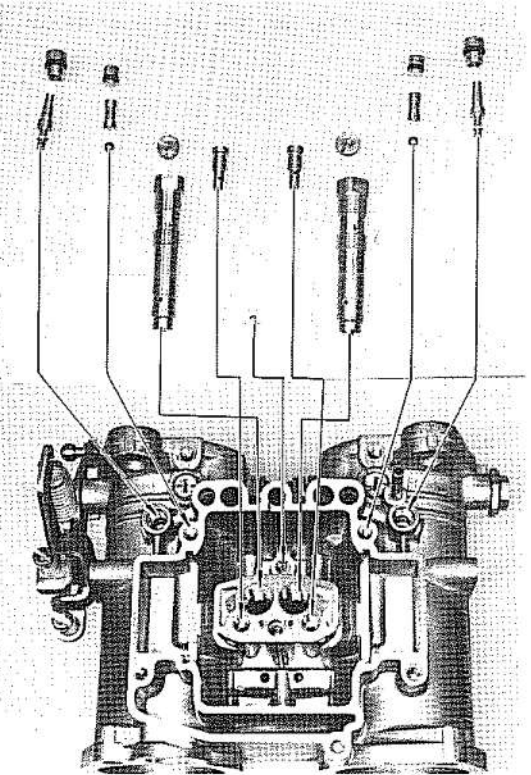
Install the cotter pin in the third hole from the tip of the pump rod.

Fig. 8-152

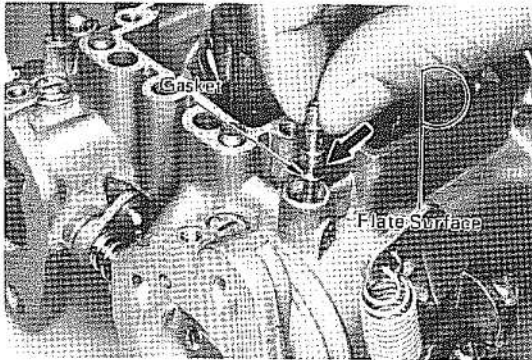


Before installing the main jet holder, assemble the sleeve and main jet into the holder with SST.
SST[09860-11011]

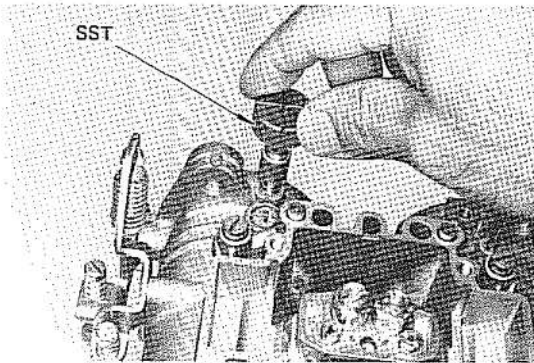
Fig. 8-153



Install the jets, air bleeds, valves and plugs as shown in the figure.

FUEL SYSTEM – Solex Carburetor**8-55****Fig. 8-154**

Install the accelerator nozzle with the flat surface facing the intake manifold and with a gasket.

Fig. 8-155

Screw out 1-1/2 turns from the fully closed position.

— Note —

Take care not to mistake the left and right sides.

8-56

FUEL SYSTEM – Carburetor**Bowl Cover**

Assemble the parts in the numerical order shown in the figure.

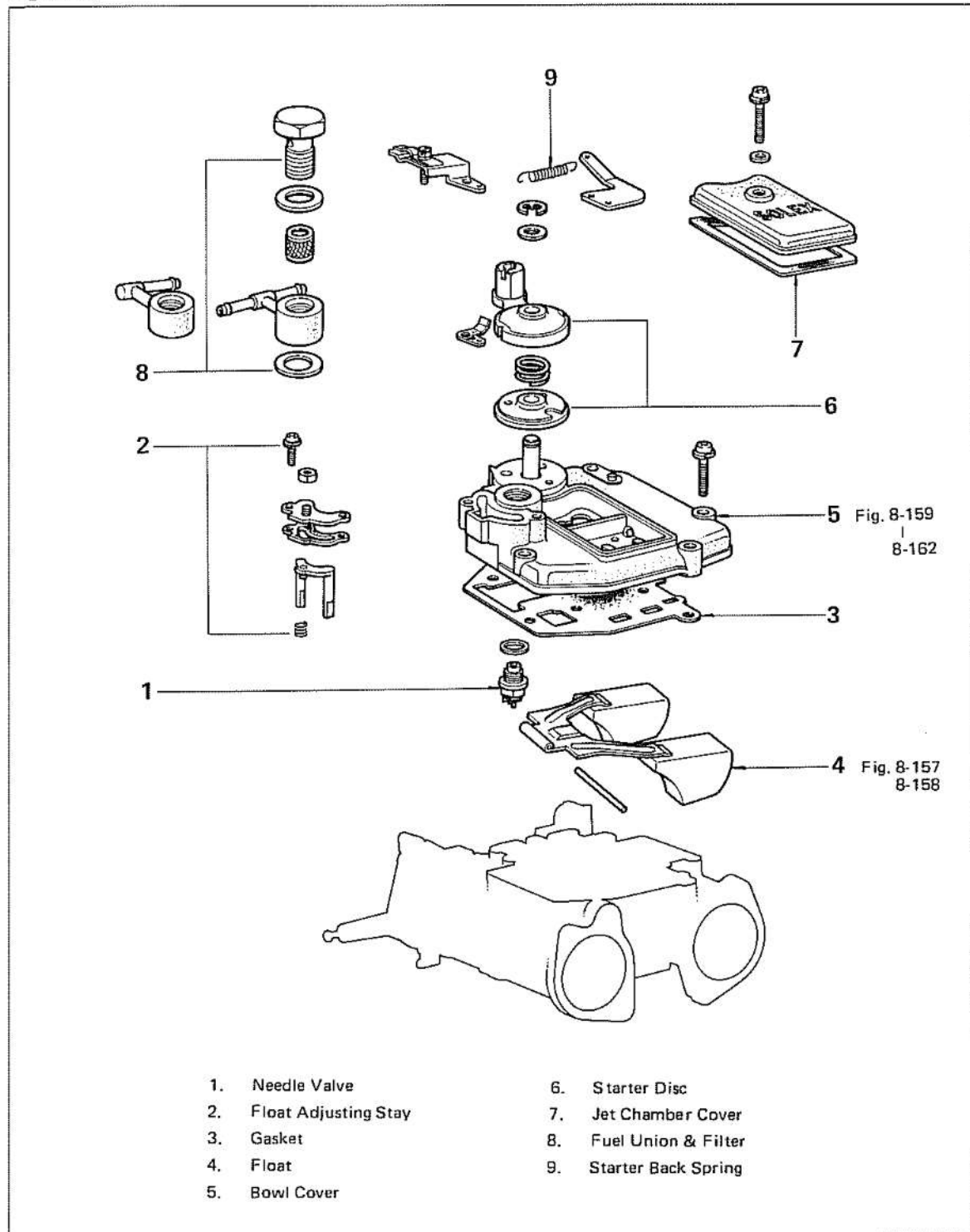
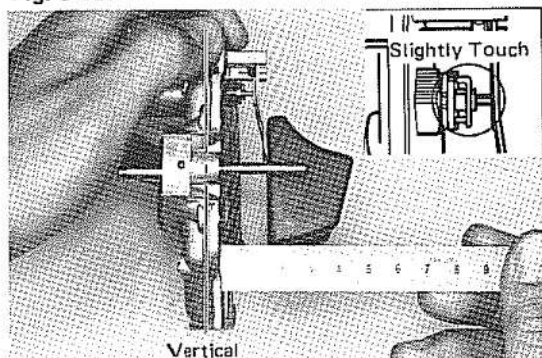
Fig. 8-156

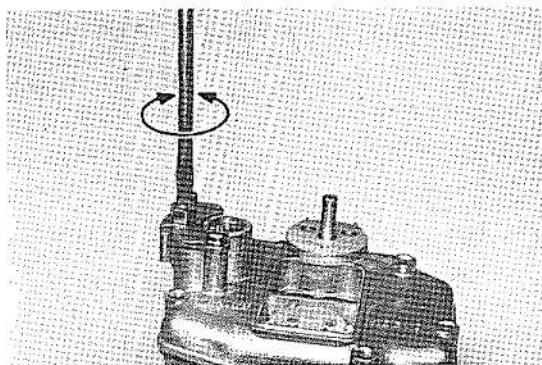
Fig. 8-157



Measure the float position.

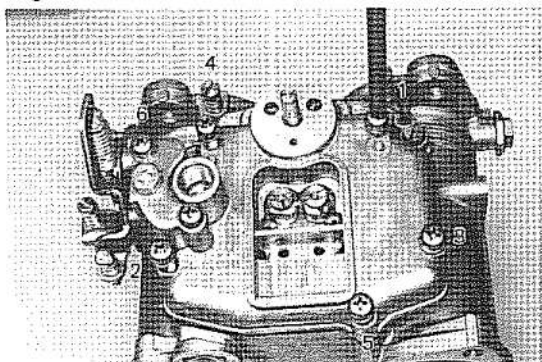
It should be about 16 mm (0.6 in.) from bowl cover lower surface.

Fig. 8-158



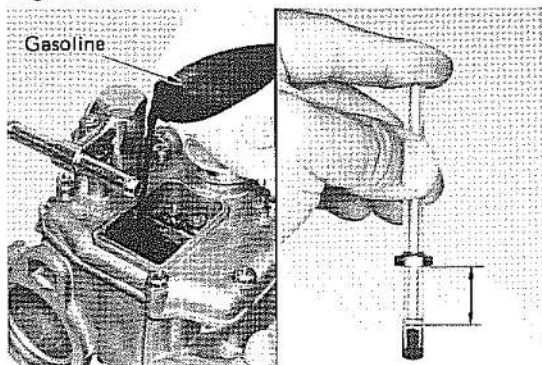
Adjust the float position as shown in the figure, if necessary.

Fig. 8-159



Tighten the screws a little at a time and in diagonal order.

Fig. 8-160



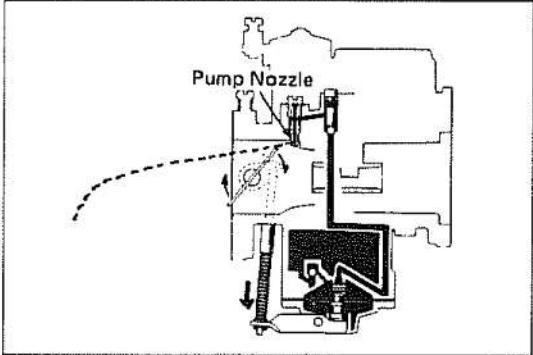
After assembling, check the acceleration pump

1. Remove the bowl cover.
2. Pour gasoline into the carburetor up to the correct level.

Fuel level: 20 – 21 mm
(0.79 – 0.83 in.)

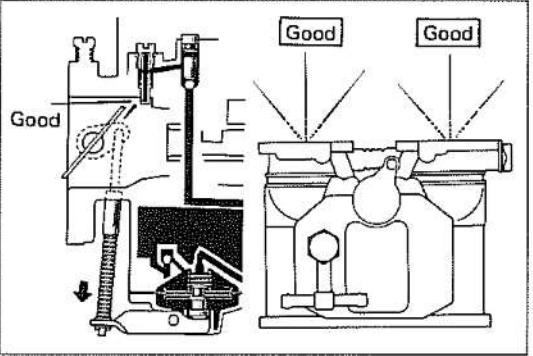
8-58 FUEL SYSTEM – Solex Carburetor

Fig. 8-161



3. Check the fuel discharging time.
Discharging time:
1.1 – 1.7 second

Fig. 8-162



4. Check the fuel injection direction.

