FUEL SYSTEM

FUEL PUMP

DISASSEMBLY

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

Fig. 8-1

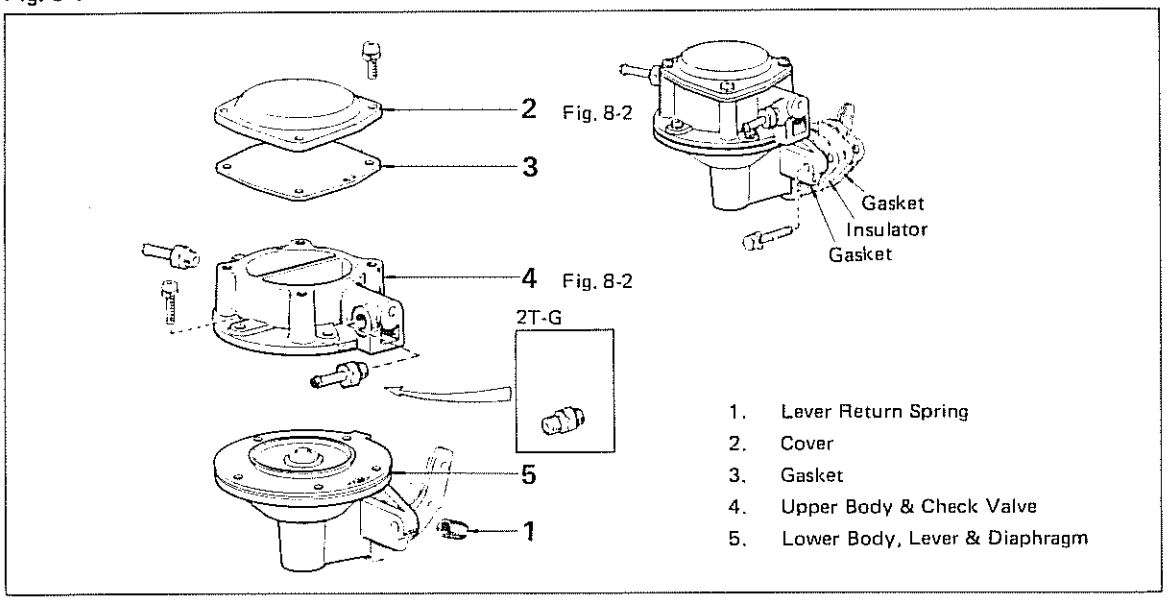
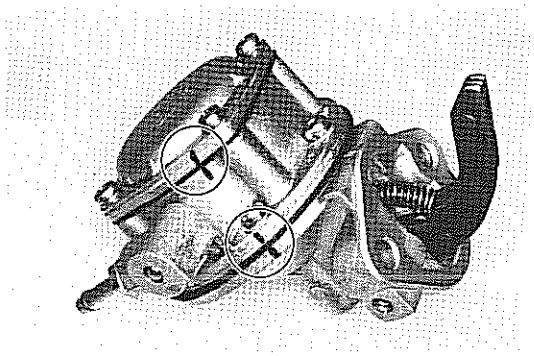
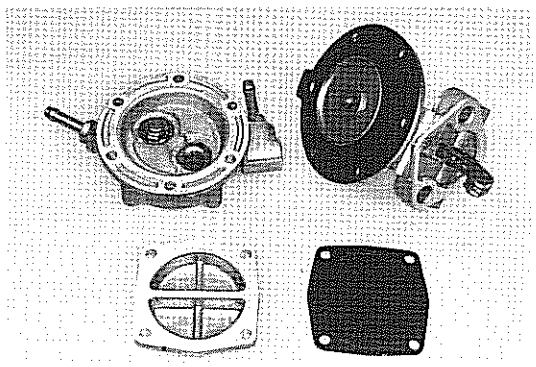


Fig. 8-2



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

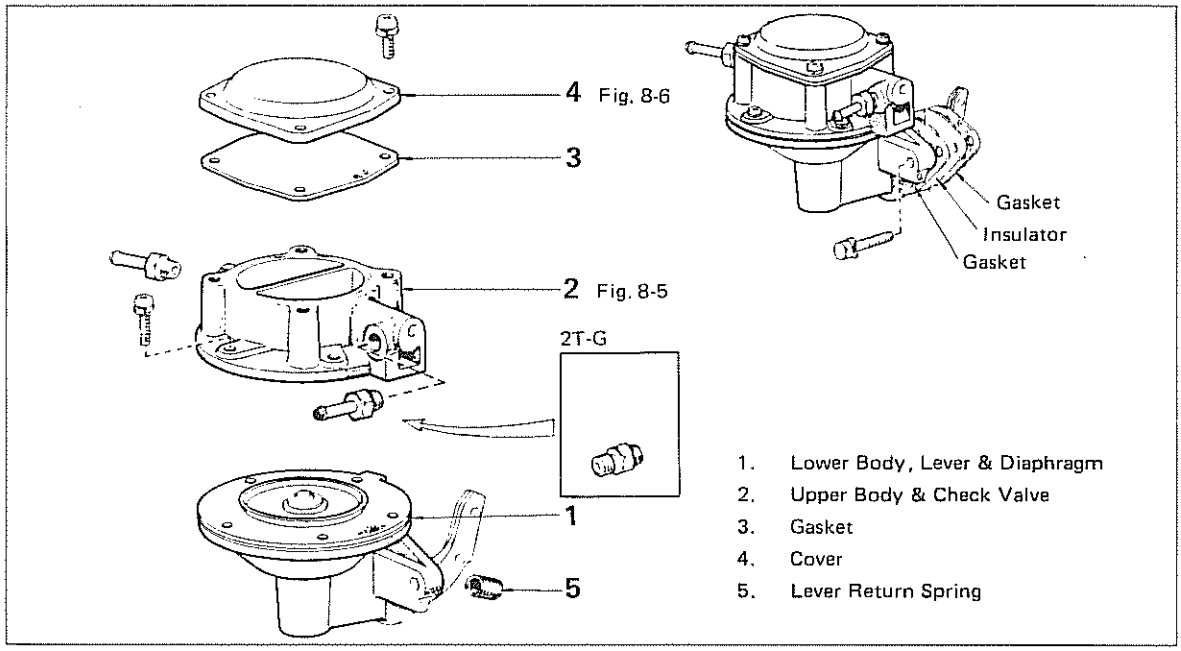
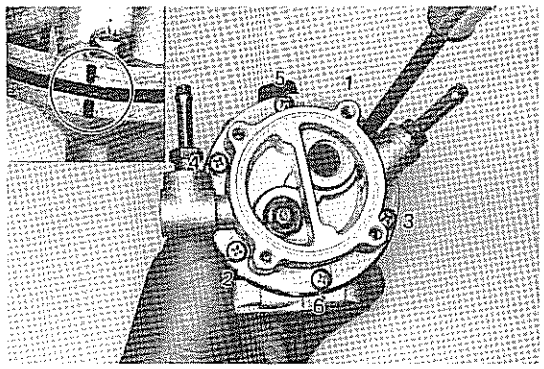
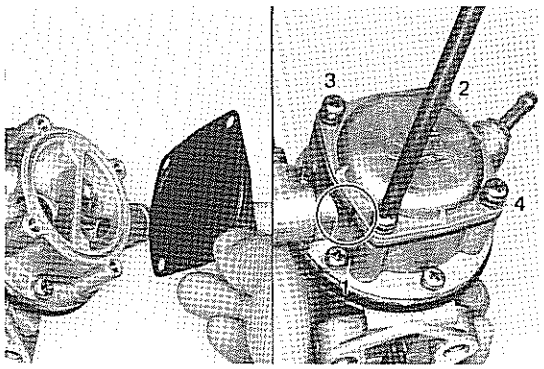


Fig. 8-5



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

Fig. 8-6

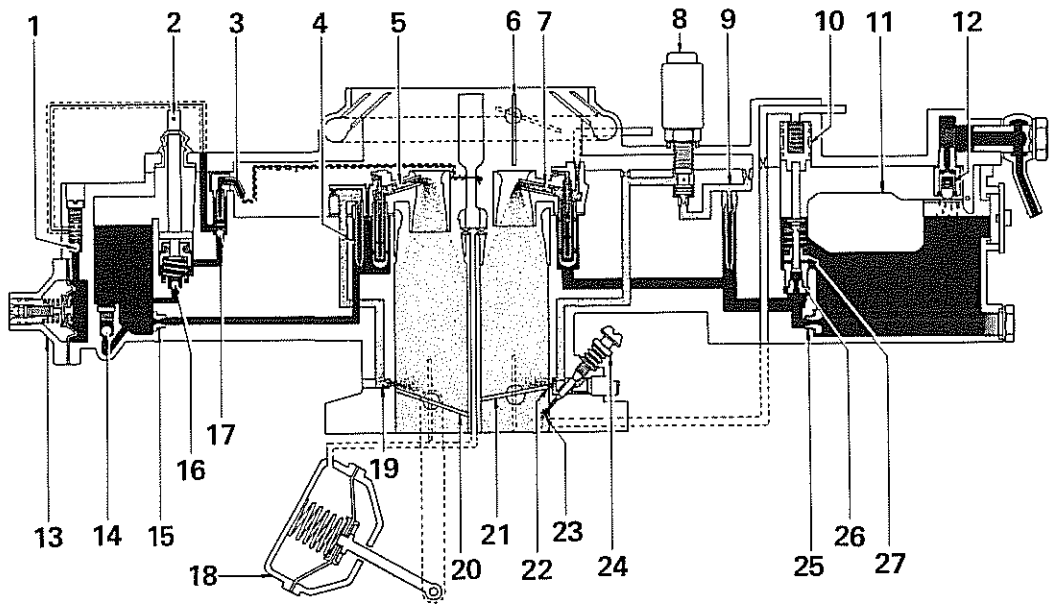


Assemble the upper body and cover over the diaphragm.
Inlet and outlet chamber separating walls should be aligned.

CARBURETOR

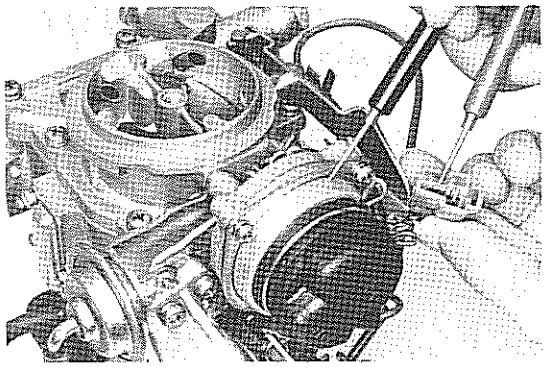
CARBURETOR CIRCUIT

Fig. 8-7



1. AAP Outlet Check Valve
2. Pump Plunger
3. Pump Jet
4. Second Slow Jet
5. Second Main Jet
6. Choke Valve
7. First Main Jet
8. Fuel Cut Solenoid Valve
9. First Slow Jet
10. Power Piston
11. Float
12. Needle Valve
13. AAP Diaphragm
14. AAP Inlet Check Valve
15. Second Main Jet
16. Pump Inlet Valve
17. Pump Outlet Valve
18. Second Throttle Valve Diaphragm
19. Second Slow Port
20. Second Throttle Valve
21. First Throttle Valve
22. First Slow Port
23. Idle Port
24. Idle Mixture Adjusting Screw
25. First Main Jet
26. Power Jet
27. Power Valve

Fig. 8-8



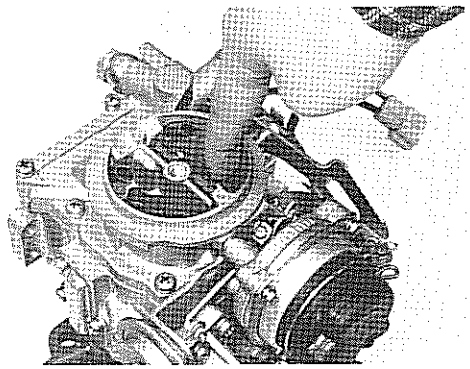
DISASSEMBLY

Air Horn

Before disassembling, check following items.

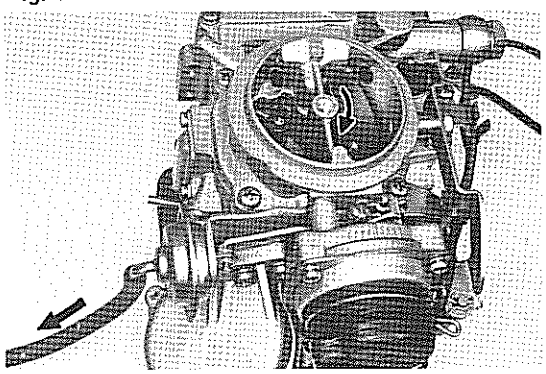
1. Measure the heating coil resistance with an ohmmeter.
   Resistance: 7.5 – 10.0 Ω

Fig. 8-9



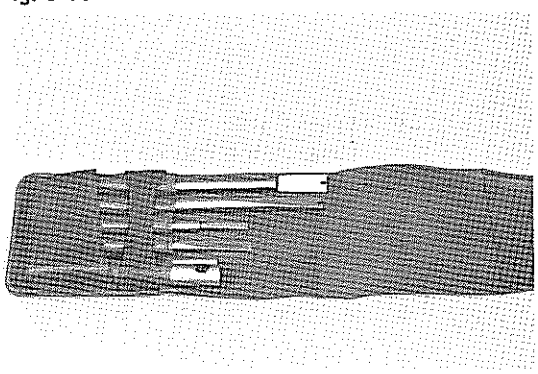
2. Check the choke valve action.

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

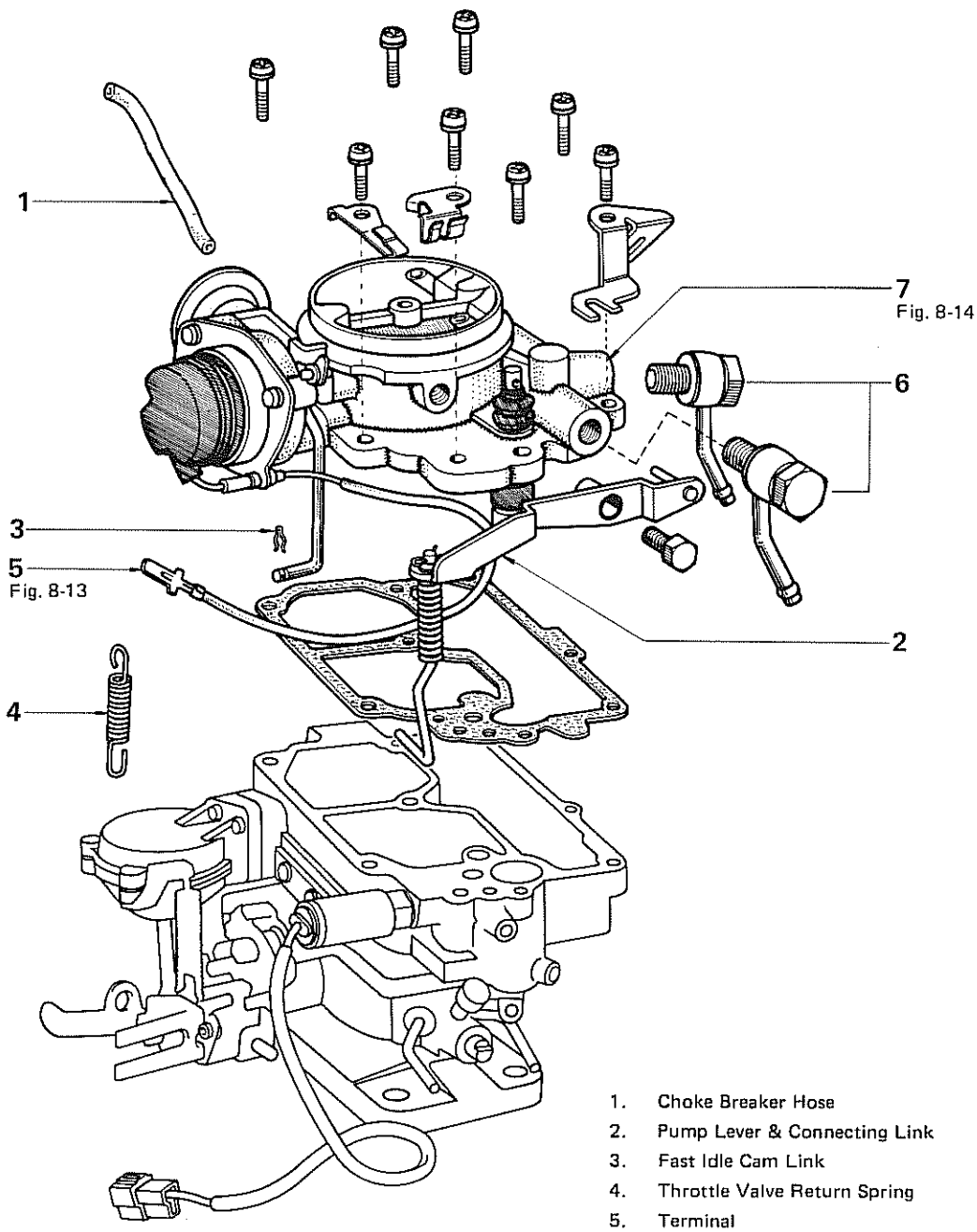
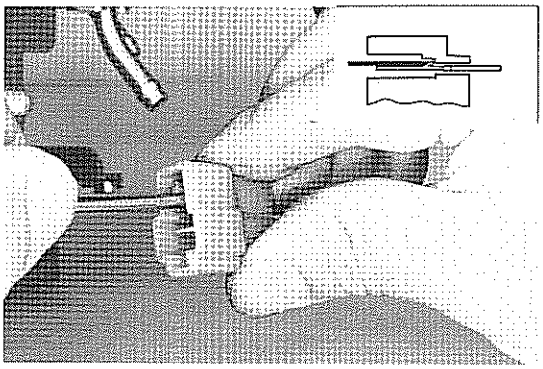
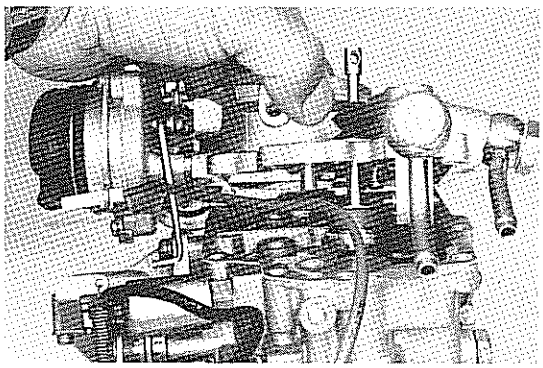


Fig. 8-13



Remove the terminal from the connecter.

Fig. 8-14



Lift out the air horn.

Float

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

Fig. 8-15

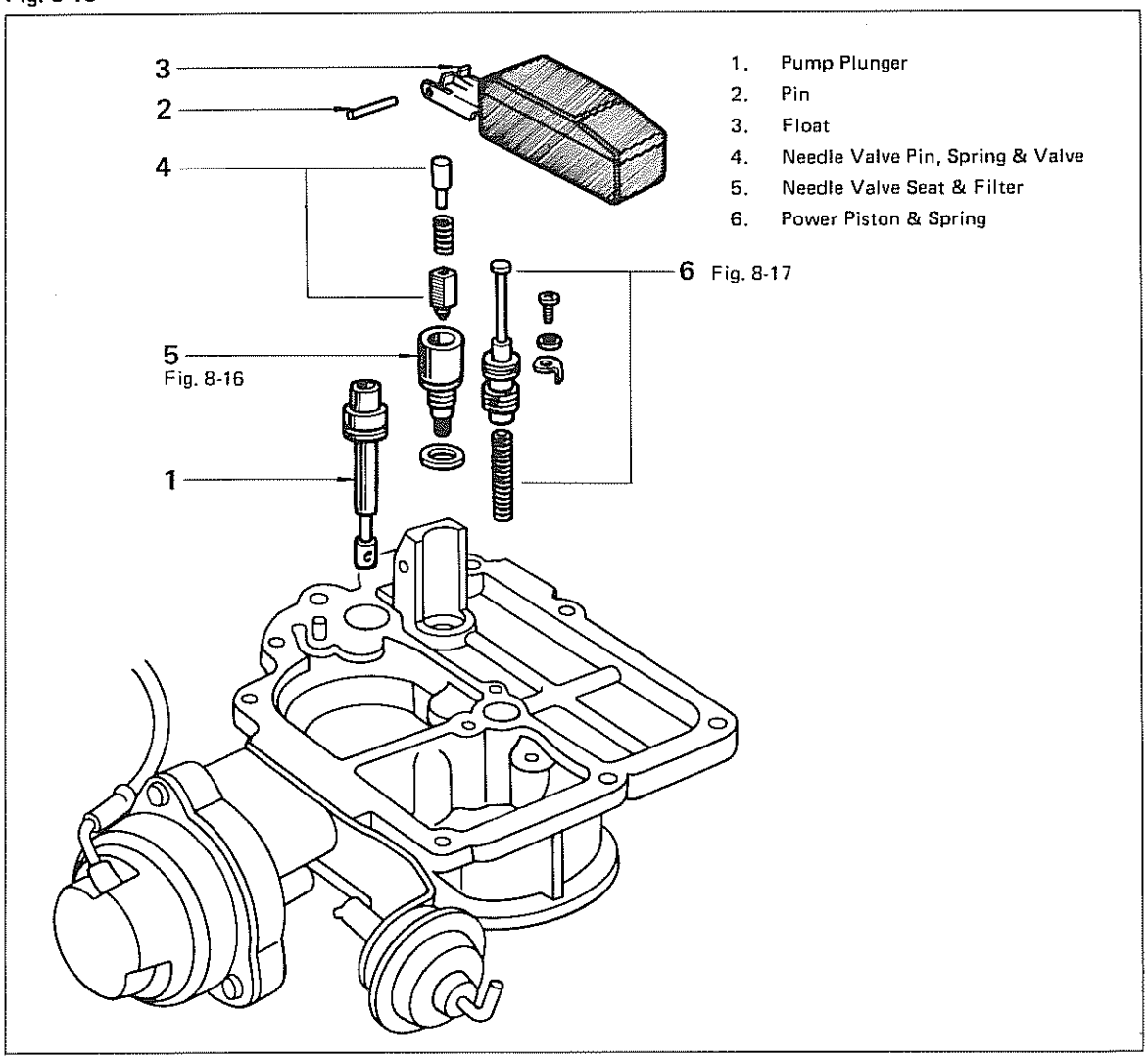
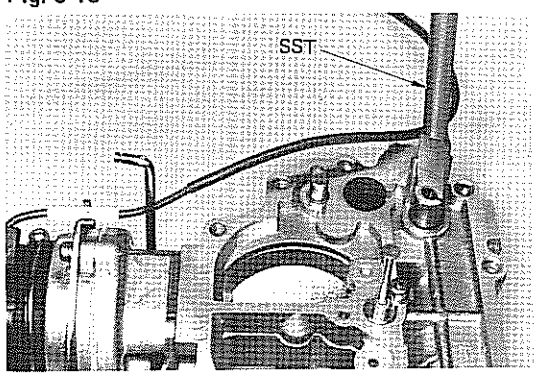
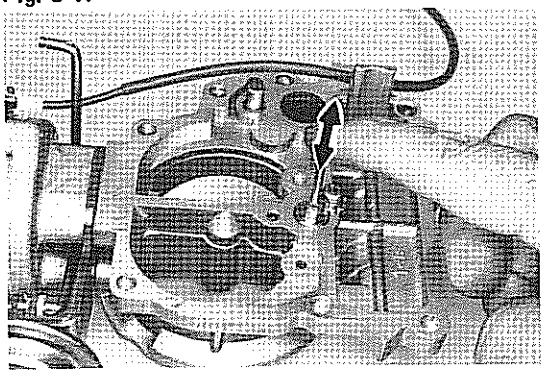


Fig. 8-16



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

Fig. 8-17

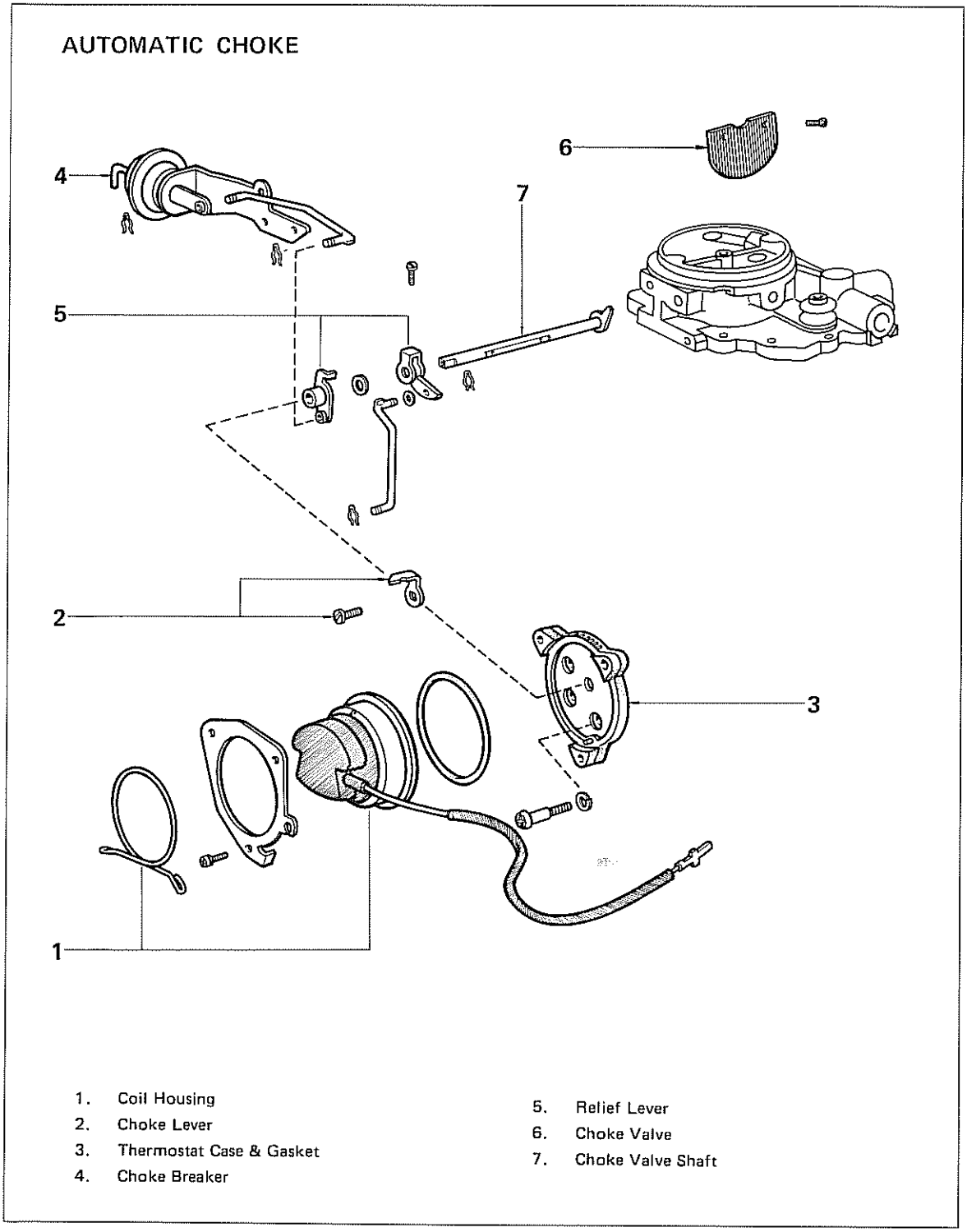


Check the power piston movement.

Choke System

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

Fig. 8-18

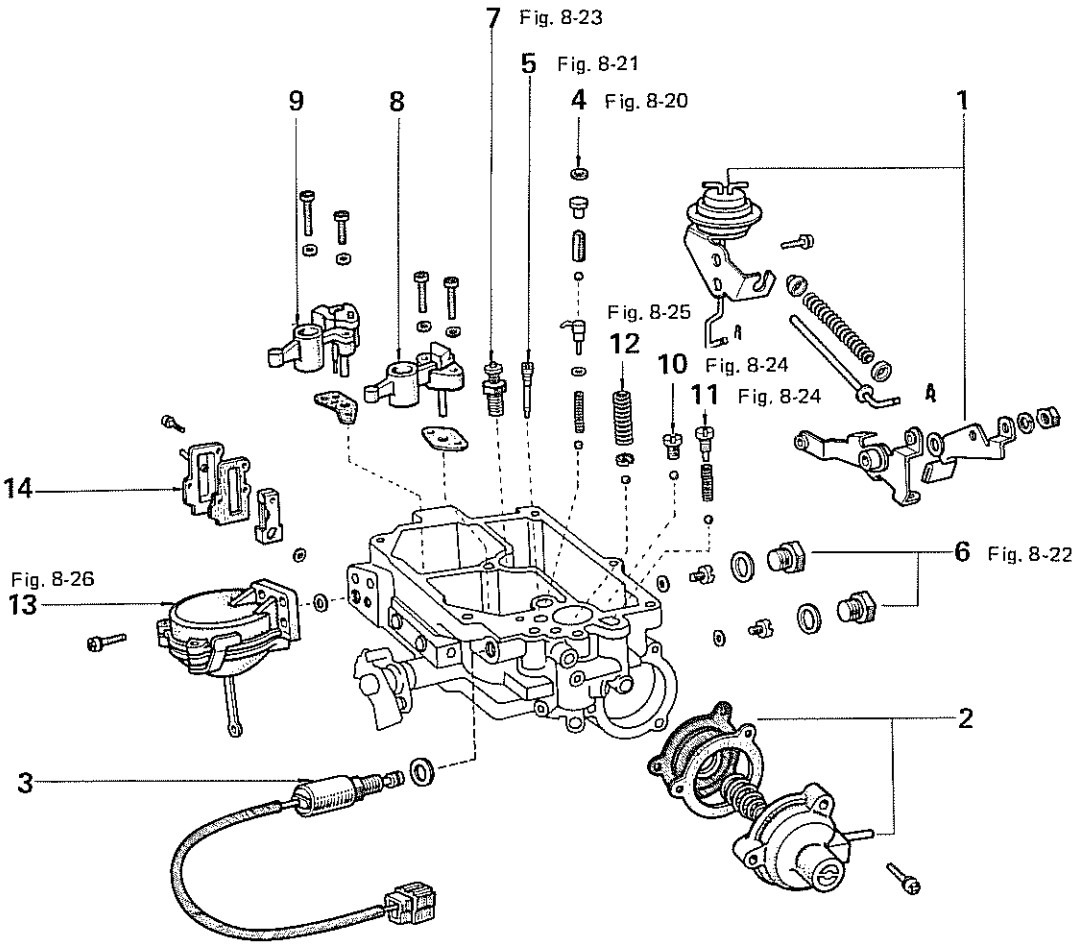


1. Coil Housing
2. Choke Lever
3. Thermostat Case & Gasket
4. Choke Breaker
5. Relief Lever
6. Choke Valve
7. Choke Valve Shaft

Body

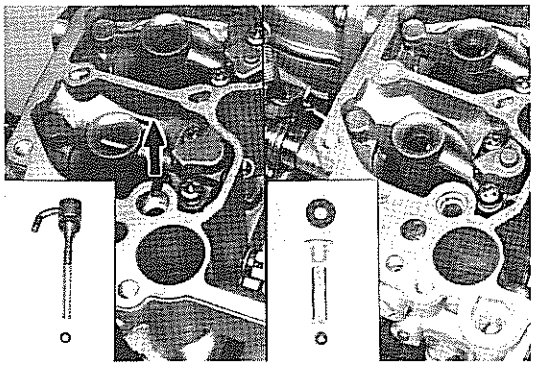
Disassemble the parts in the numerical order shown in the figure.

Fig. 8-19



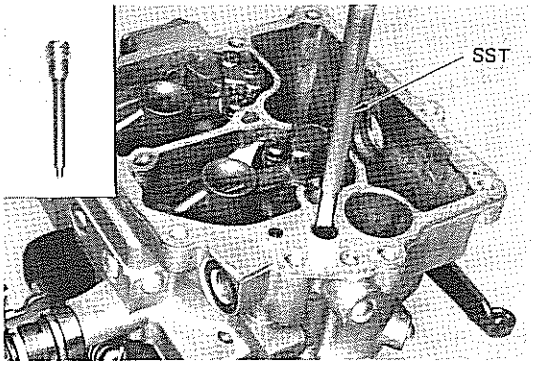
1. Throttle Positioner
2. AAP Diaphragm
3. Fuel Cut Solenoid Valve
4. Pump Discharge Weight & Outlet Valve
5. Slow Jet
6. First & Second Main Jet
7. Power Valve
8. First Small Venturi
9. Second Small Venturi
10. AAP Inlet Valve
11. AAP Outlet Valve
12. Pump Inlet Valve
13. Second Throttle Valve Diaphragm
14. HIC Valve

Fig. 8-20



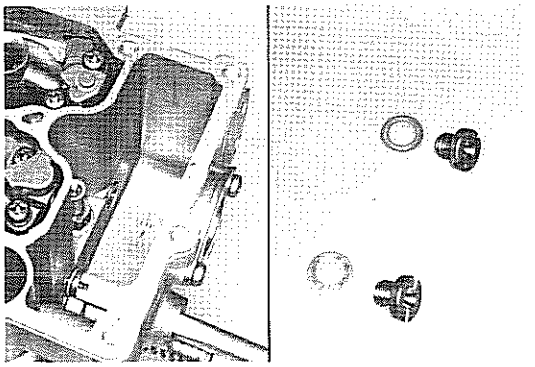
Arrange the acceleration pump nozzle, spring and pump discharge weight.

Fig. 8-21



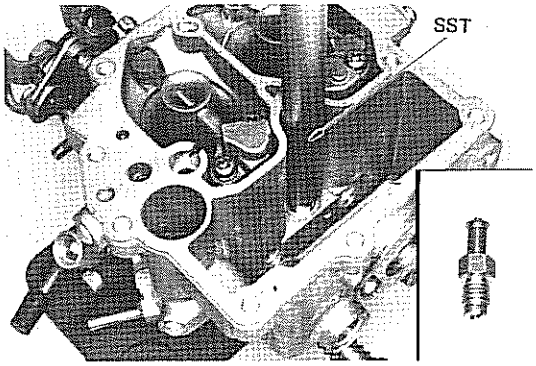
Remove the slow jet with SST.
SST [09860-11011]

Fig. 8-22



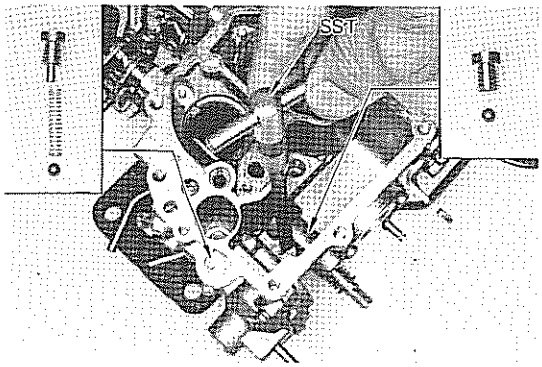
Remove the first and second main jets and gaskets.

Fig. 8-23



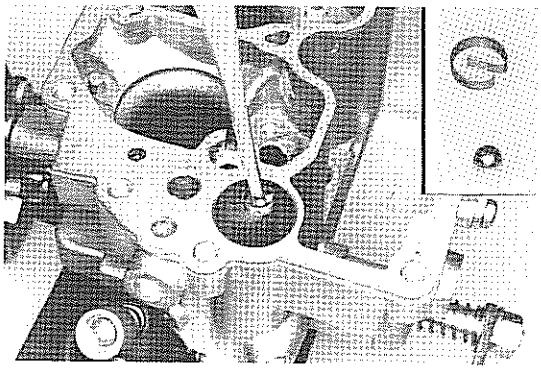
Remove the power valve with SST.
SST [09860-11011]

Fig. 8-24



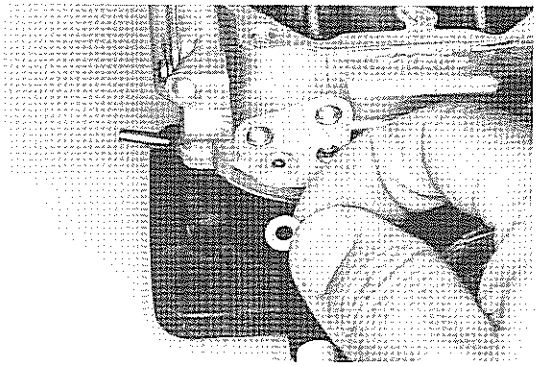
Remove the AAP outlet valve plug with SST. Then remove the spring and outlet check valve.
SST[09860-11011]

Fig. 8-25



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

Fig. 8-26

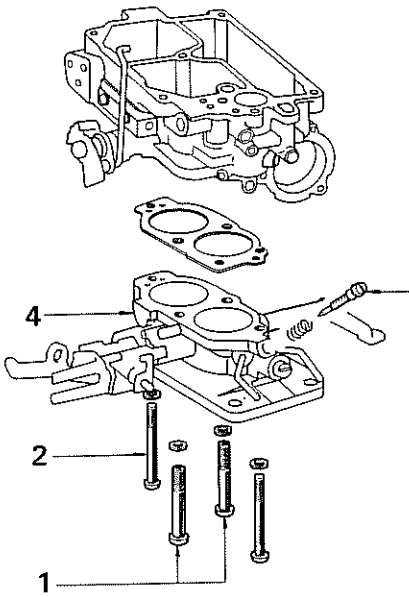


After removing the diaphragm housing, arrange the gasket.

Flange

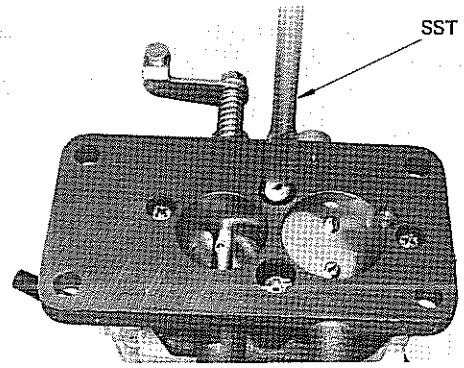
Disassemble the parts in the numerical order shown in the figure.

Fig. 8-27



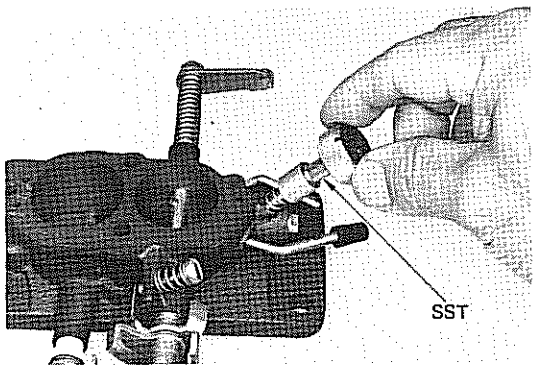
1. Vacuum Passage Bolt
2. Bolt
3. Idle Mixture Adjusting Screw
4. Flange

Fig. 8-28



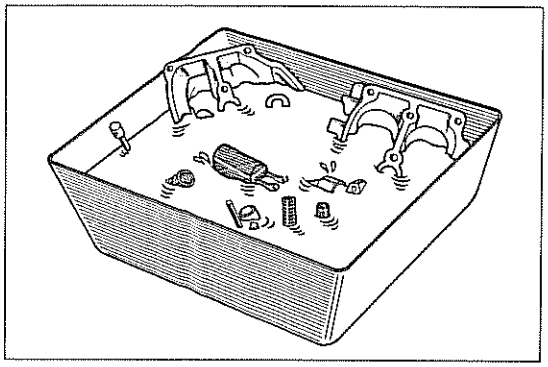
Remove the two bolts with SST.
SST [09860-11011]

Fig. 8-29



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

Fig. 8-30

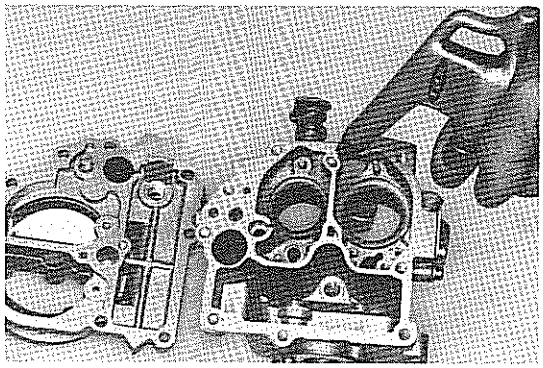


INSPECTION

– Precaution –

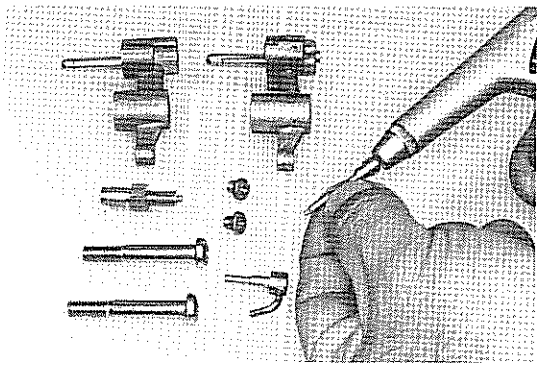
1. **Before inspecting the parts, wash them thoroughly in gasoline.**

Fig. 8-31



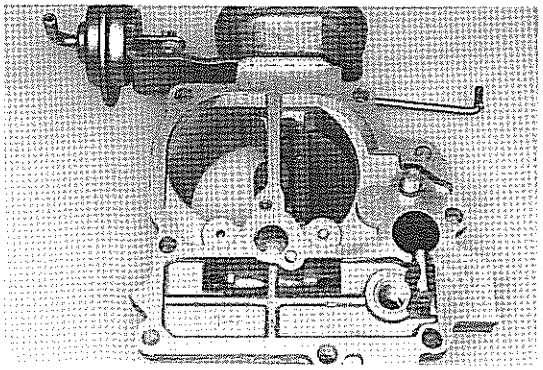
2. **Using compressed air, blow all dirt and other foreign matter from the jets and similar parts, and from the fuel passages and apertures in the body.**

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

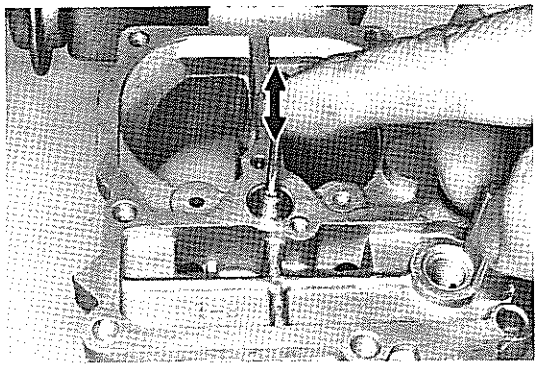


Inspect the following parts and replace any part damaged.

Air Horn Parts

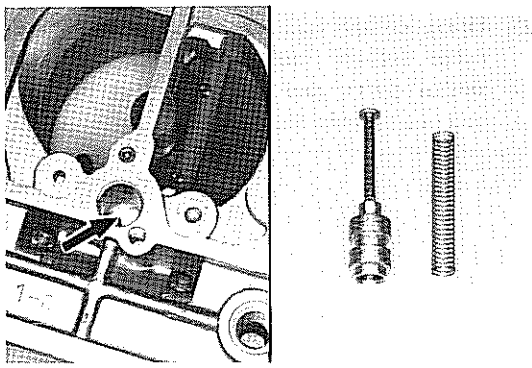
1. Air horn: Cracks, damaged threads, and wear on choke shaft bores.

Fig. 8-34



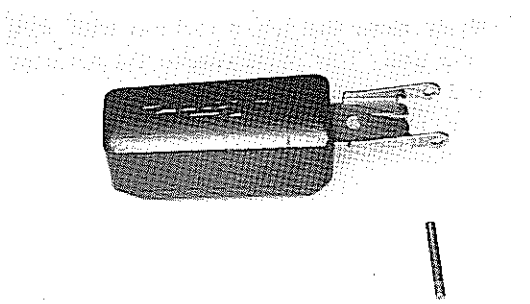
2. Make sure that power piston moves smoothly.

Fig. 8-35



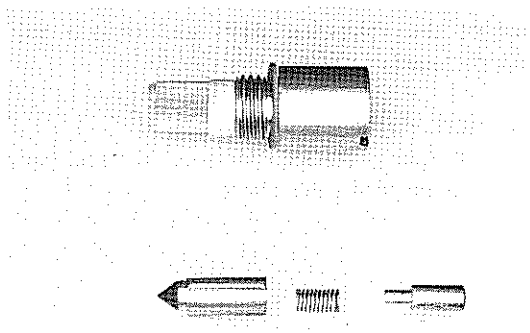
3. Power piston: Damaged.
Spring: Deformation and rust.

Fig. 8-36



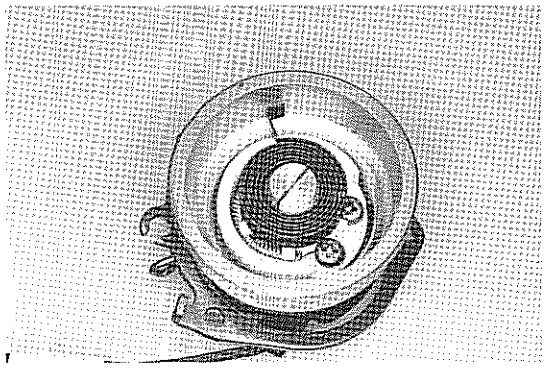
4. Check float and pivot pin for wear or breaks.

Fig. 8-37



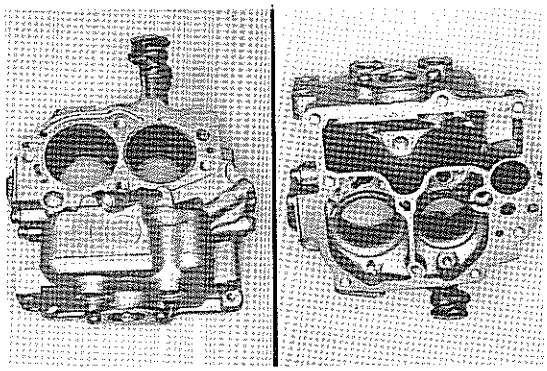
5. Strainer: Rust, breaks.
6. Needle valve surface.
7. Needle valve seat.

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.

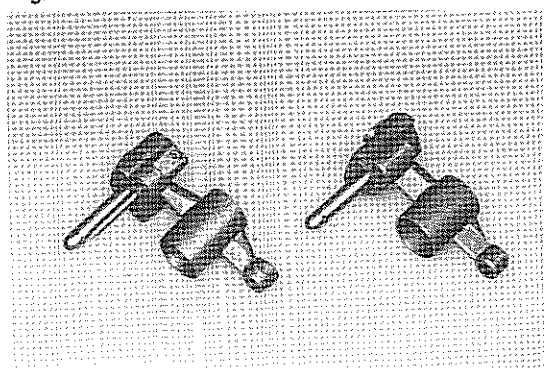
Fig. 8-39



Body Parts

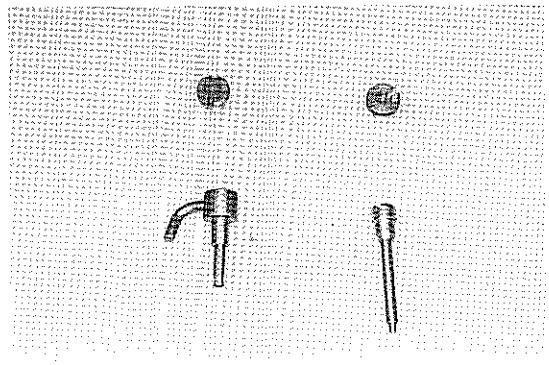
1. Body
   Cracks, scored mounting surfaces, damaged threads.

Fig. 8-40



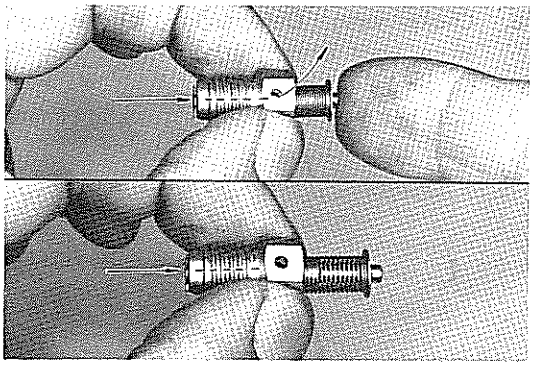
2. Venturi
   Damaged or clogged.

Fig. 8-41



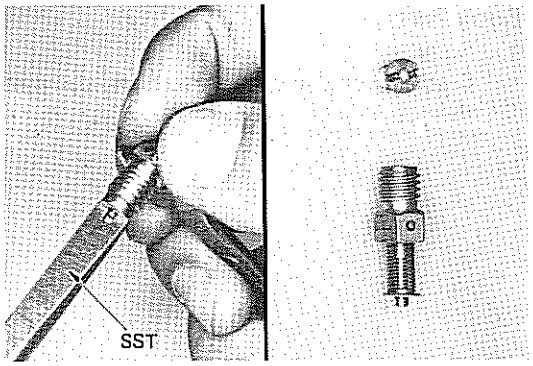
3. Jets
   Damaged or clogged.
   Damaged contact surface or threads.
   Screwdriver slots.

Fig. 8-42



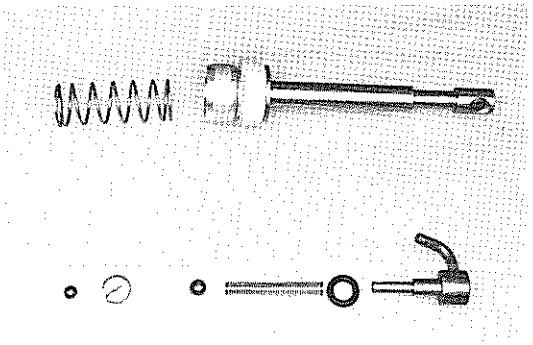
4. Power valve
Faulty opening and closing action.
Clogged.
Damaged contact surface or threads.

Fig. 8-43



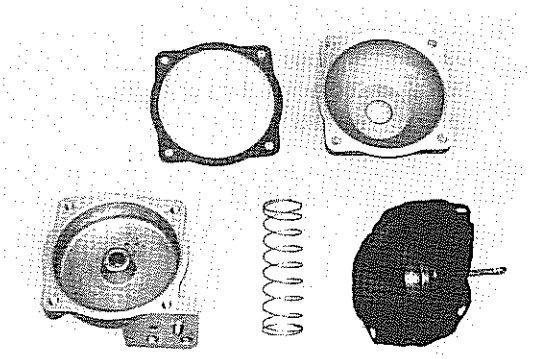
5. Use a spanner wrench and SST to remove the jet.
SST [09860-11011]

Fig. 8-44



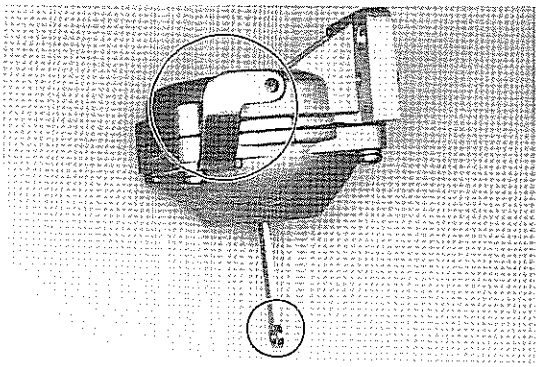
6. Acceleration pump
Pump damping spring: Deformation, rust.
Pump check ball: Damaged, rusted.
Pump plunger: Wear on sliding surface, deformed or damaged leather.

Fig. 8-45



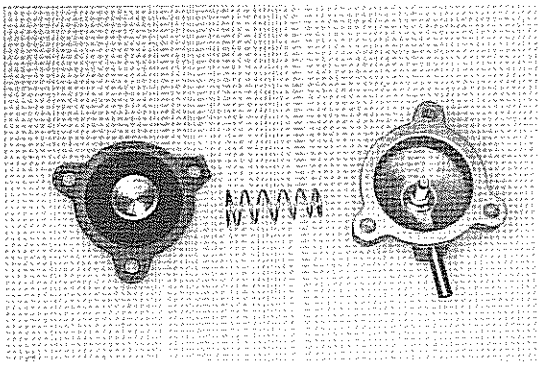
7. Secondary diaphragm
Damaged

Fig. 8-46



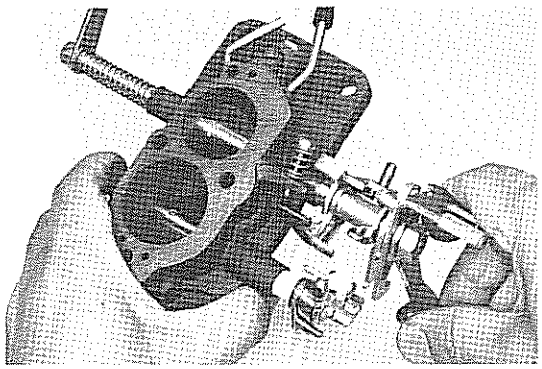
8. Install the diaphragm as shown in the figure.

Fig. 8-47



9. Auxuliary acceleration pump
Diaphragm damaged

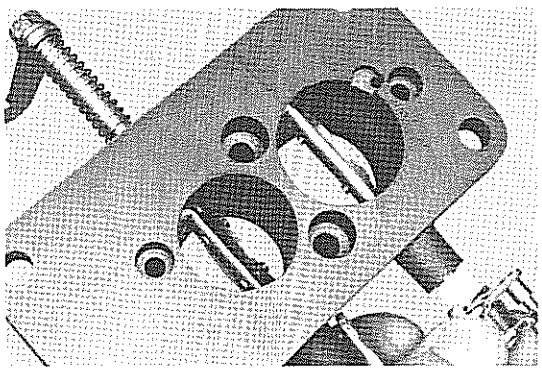
Fig. 8-48



Flange Parts

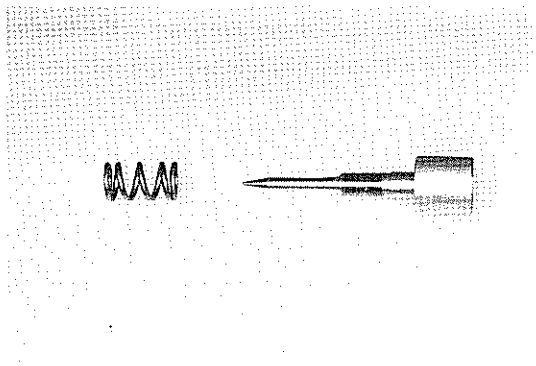
1. Flange: Cracks, injured mounting surfaces, damaged threads, wear at throttle shaft bearings.

Fig. 8-49



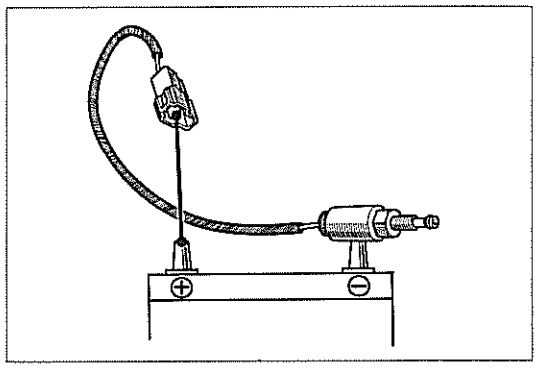
2. Throttle valves: Worn or deformed valves. Wear, bending, twisting, or faulty movement inside housing of shaft.

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 opsitive 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

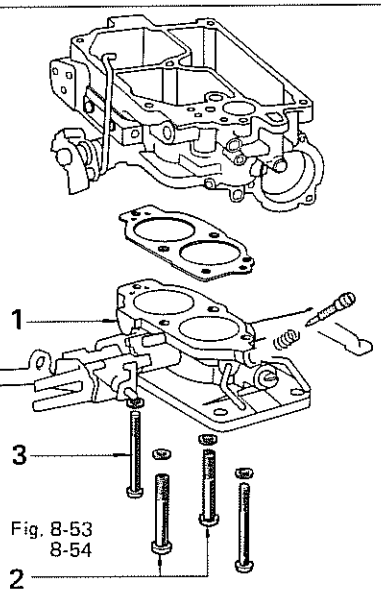
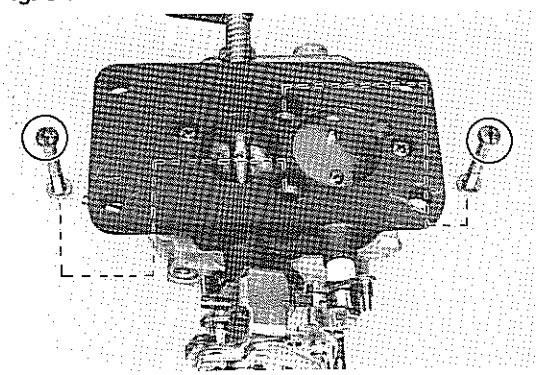


Fig. 8-53
8-54

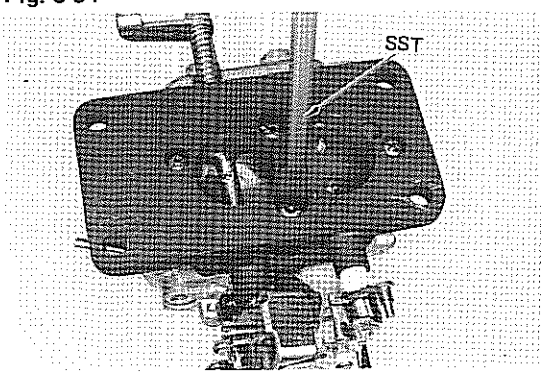
1. Flange
2. Vacuum Passage Bolt
3. Bolt

Fig. 8-53



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

Fig. 8-54

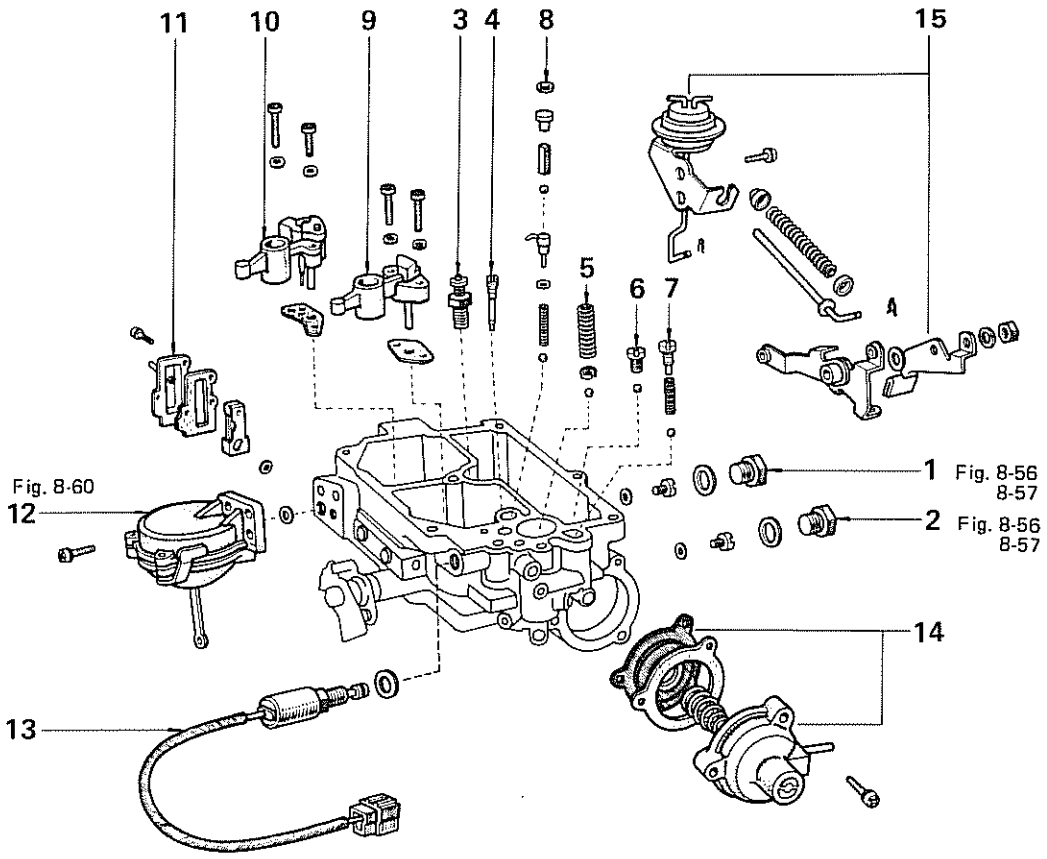


First finger tighten all bolts and then tighten them down.

Body

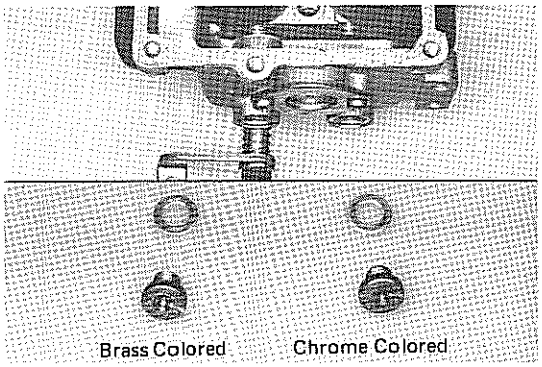
Assemble the parts in the numerical order shown in the figure.

Fig. 8-55



1. Second Main Jet
2. First Main Jet
3. Power Valve
4. Slow Jet
5. Pump Inlet Valve & Plunger Return Spring
6. AAP Inlet Valve
7. APP Outlet Valve
8. Pump Discharge Weight & Outlet Valve
9. First Small Venturi
10. Second Small Venturi
11. HIC Valve
12. Second Throttle Valve Diaphragm
13. Fuel Cut Solenoid Valve
14. AAP Diaphragm
15. Throttle Positioner

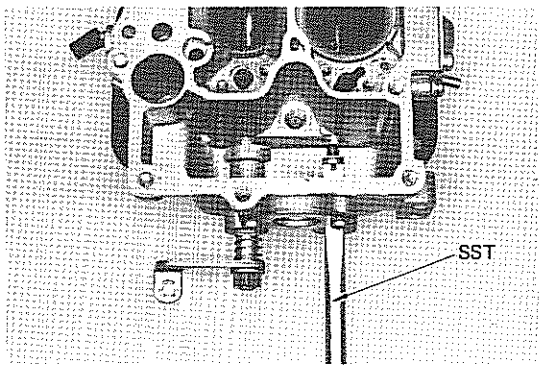
Fig. 8-56



Install the main jets over gaskets.

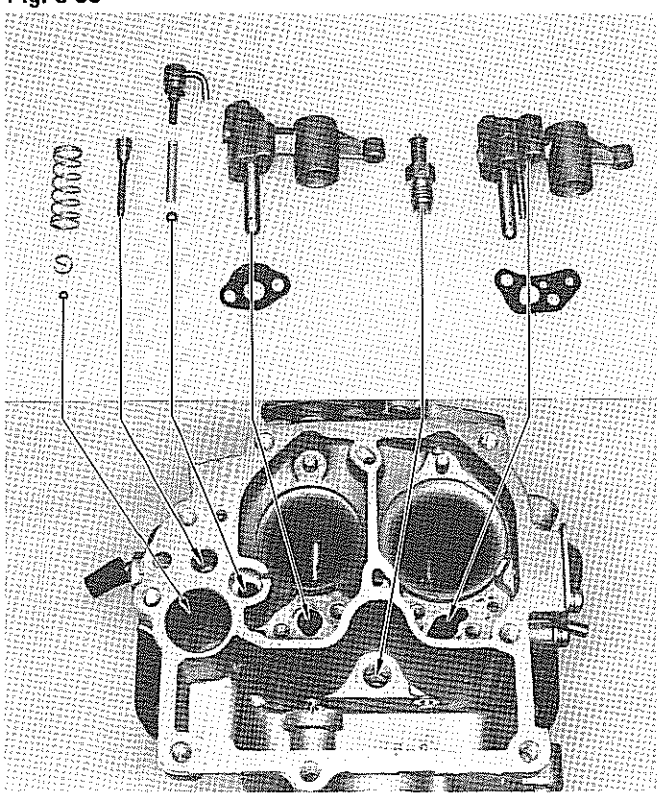
First jet: Brass colored
Second jet: Chrome colored

Fig. 8-57



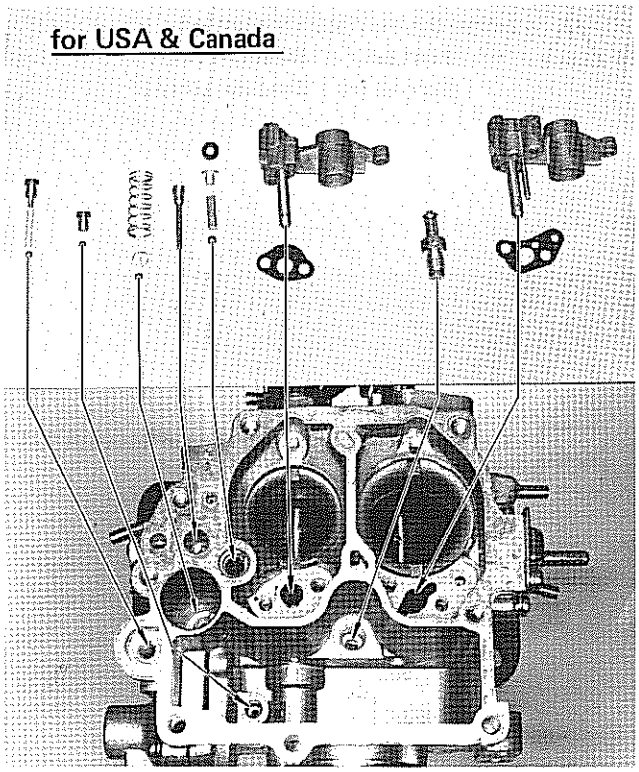
Tighten the first and second main jets with SST.
SST[09860-11011]

Fig. 8-58



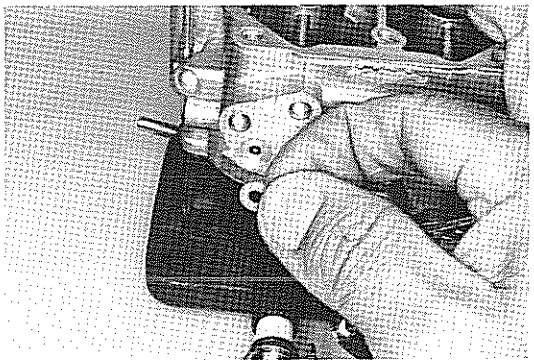
Install the jets, air bleed, valve and plugs as shown in the figure.

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

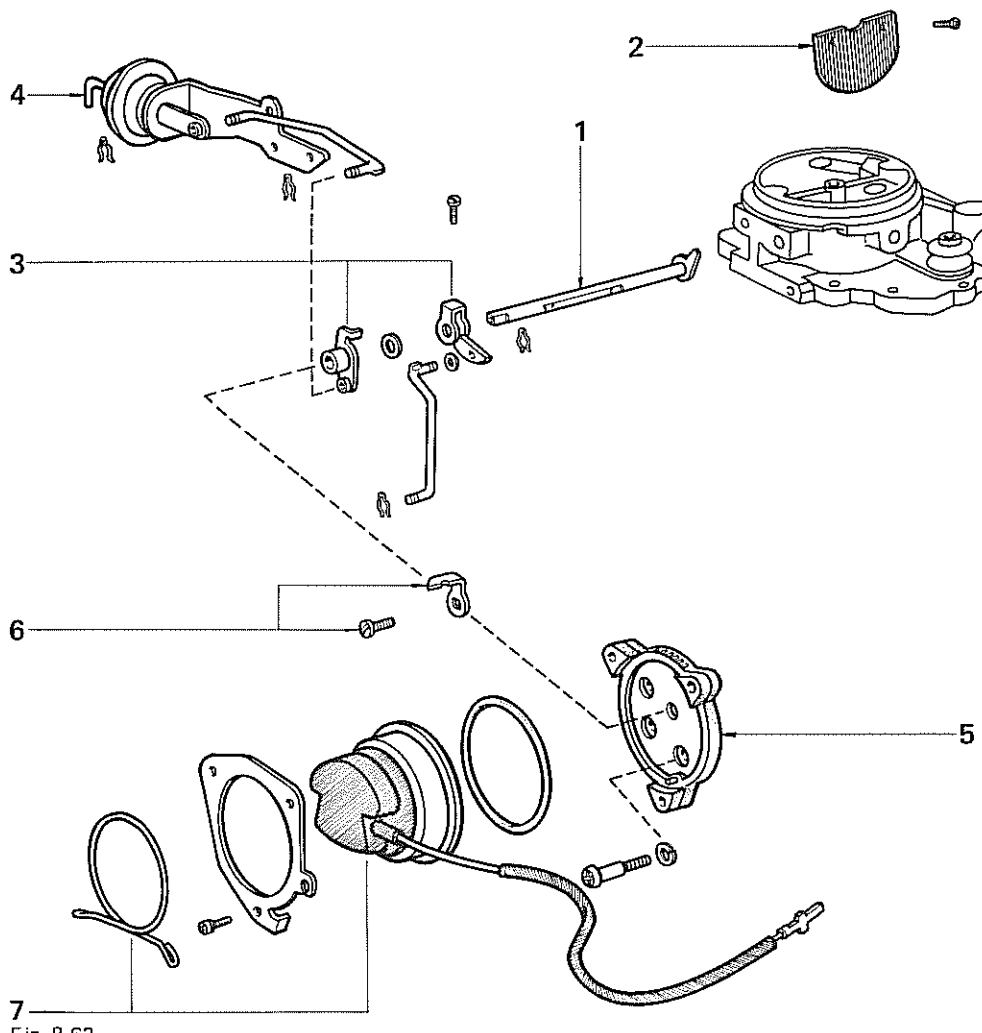
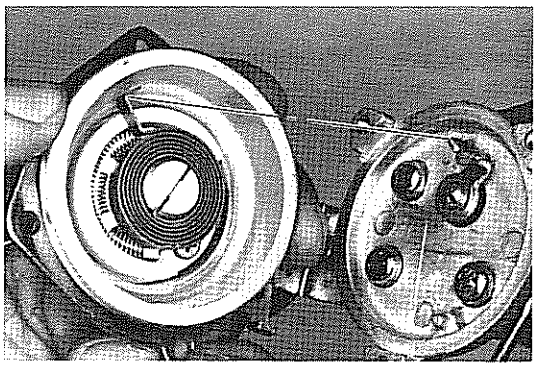


Fig. 8-62
8-64

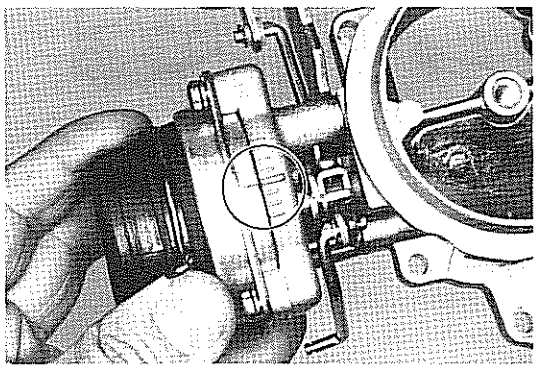
1. Choke Valve Shaft
2. Choke Valve
3. Relief Lever
4. Choke Breaker
5. Thermostat Case & Gasket
6. Choke Lever
7. Coil Housing

Fig. 8-62



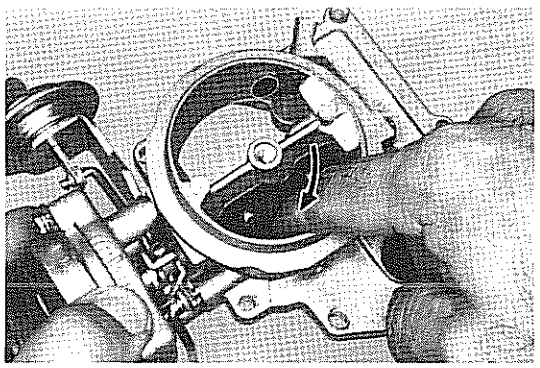
Hook the lever to the bimetal spring.

Fig. 8-63



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

Fig. 8-64

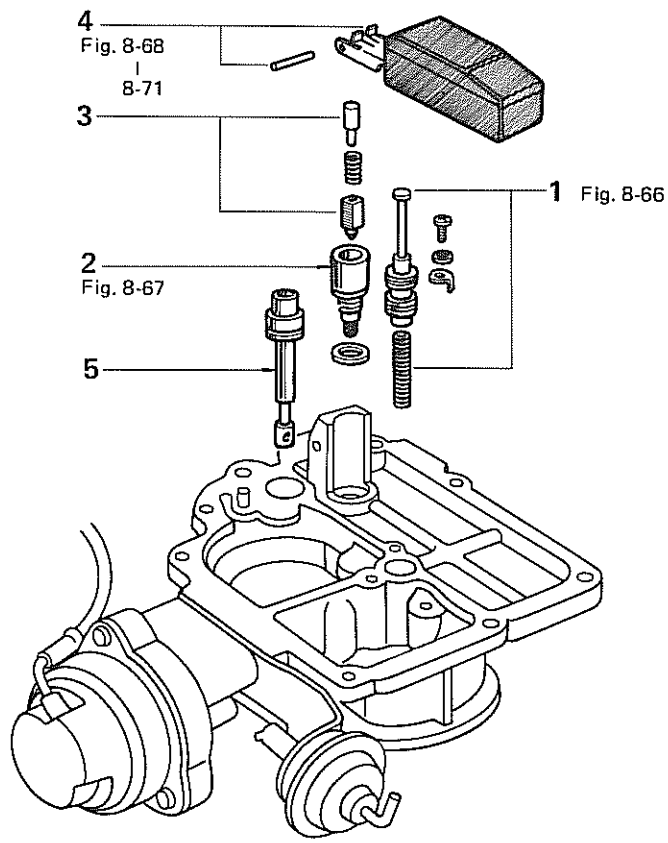


Check the choke valve action.

Float

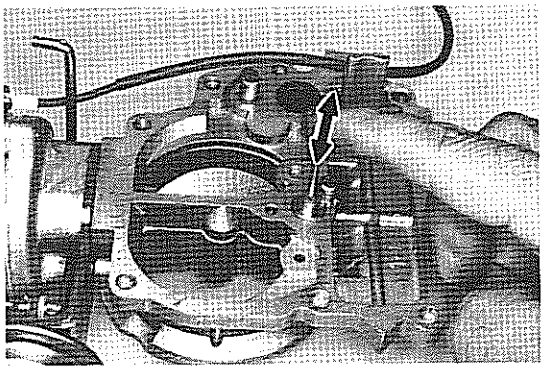
Assemble the parts in the numerical order shown in the figure.

Fig. 8-65



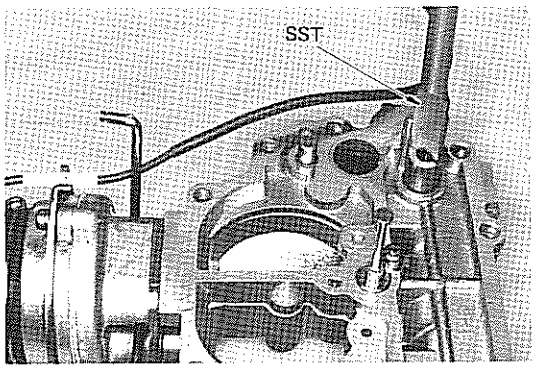
1. Power Piston
2. Needle Valve Seat
3. Needle Valve, Spring & Pin
4. Float & Pin
5. Pump Plunger

Fig. 8-66



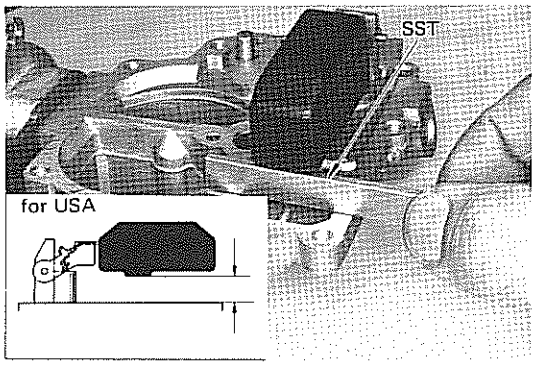
After installing, insure that power piston moves smoothly.

Fig. 8-67



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

Fig. 8-68



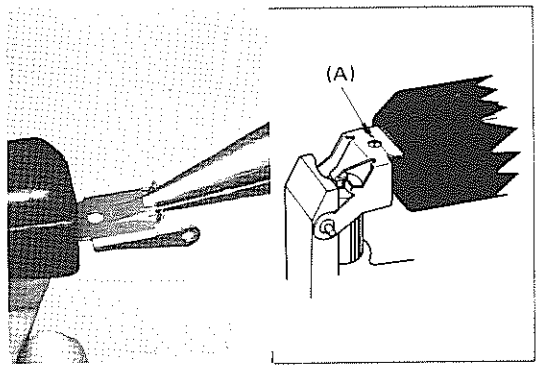
Adjust float level.
Allow the float to hang down by its own weight. Then check the clearance between the float and air horn with SST.
SST[09240-00014]

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.)**

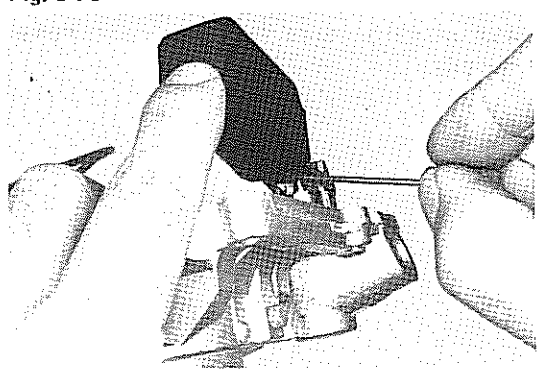
– Note –
This measurement is always made without any gasket on the air horn.

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

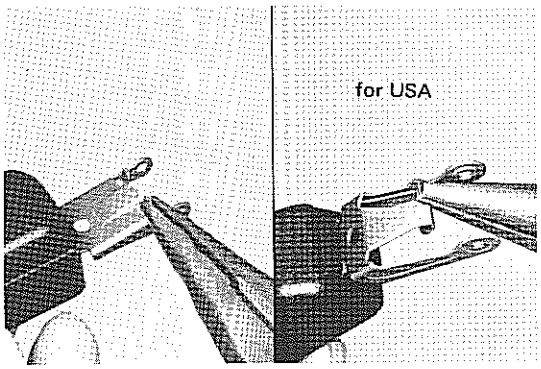


Adjust lowered position.
Lift up the float and check the clearance between the needle valve plunger and float lip with SST.
SST[09240-00020]

Float lower level:

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

Fig. 8-71

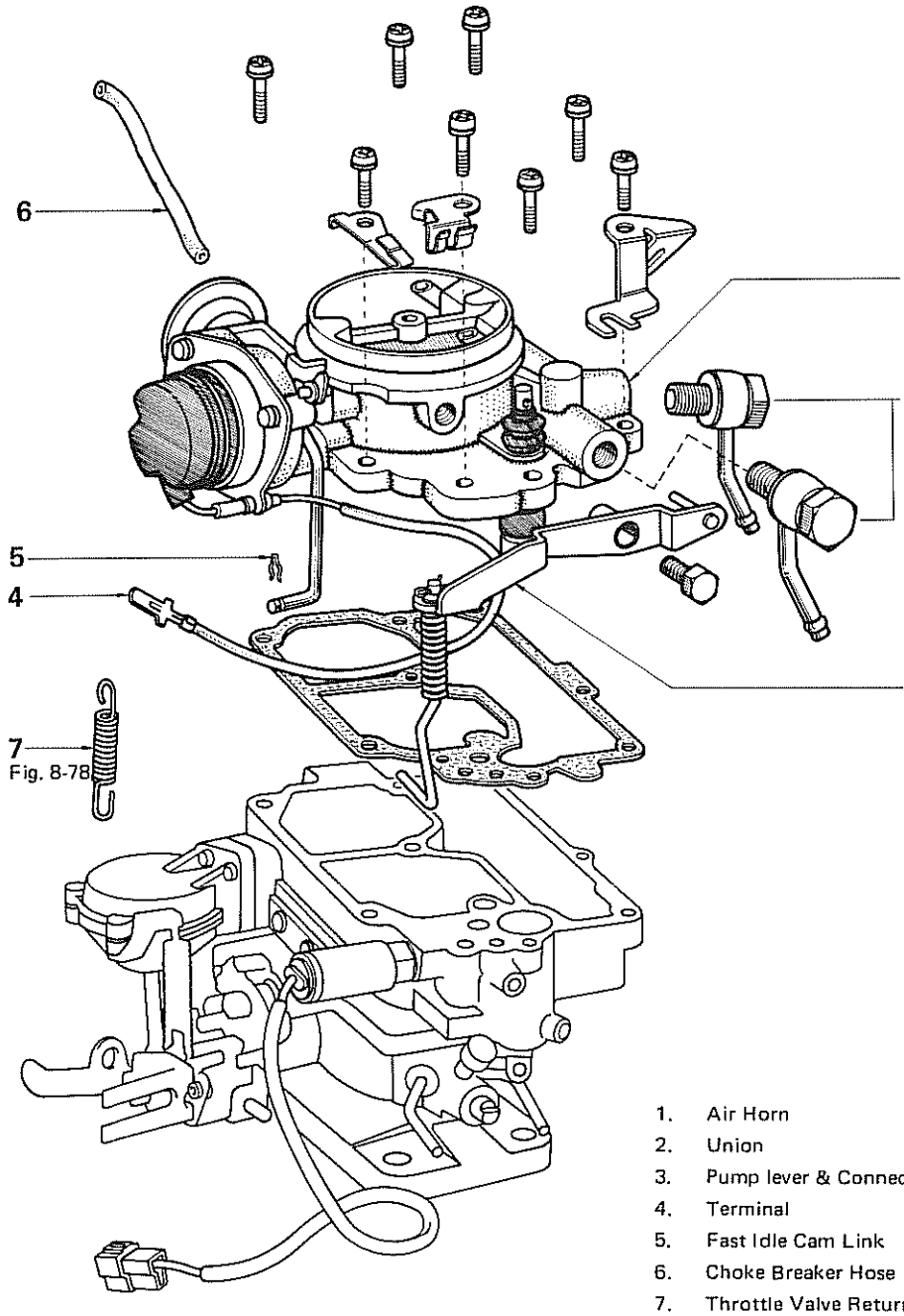


Adjust by bending the float lip as shown in the figure.

Body & Air Horn

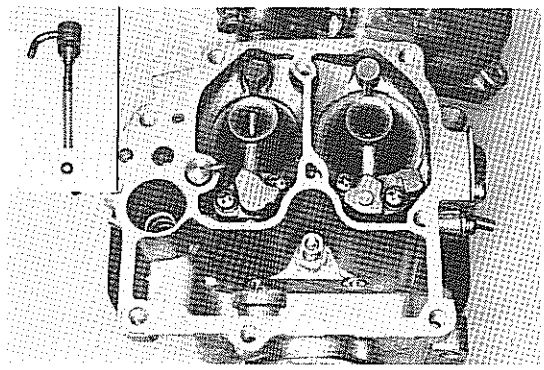
Assemble the parts in the numerical order shown in the figure.

Fig. 8-72



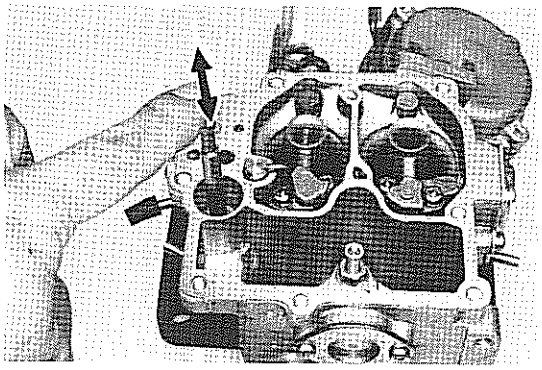
1. Air Horn
2. Union
3. Pump lever & Connecting Link
4. Terminal
5. Fast Idle Cam Link
6. Choke Breaker Hose
7. Throttle Valve Return Spring

Fig. 8-73



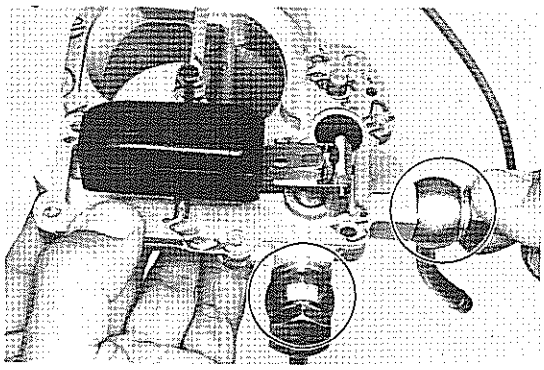
Before assembling the air horn, insure that the pump jet is properly assembled.

Fig. 8-74



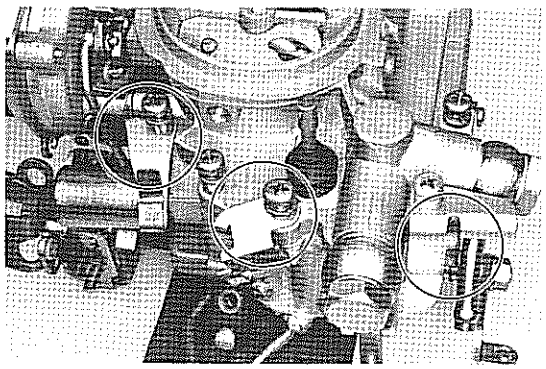
Before assembling the air horn, insure that pump plunger moves smoothly.

Fig. 8-75



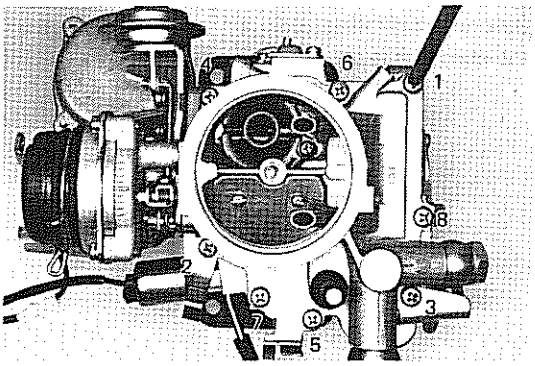
Temporarily install the fuel unions.

Fig. 8-76



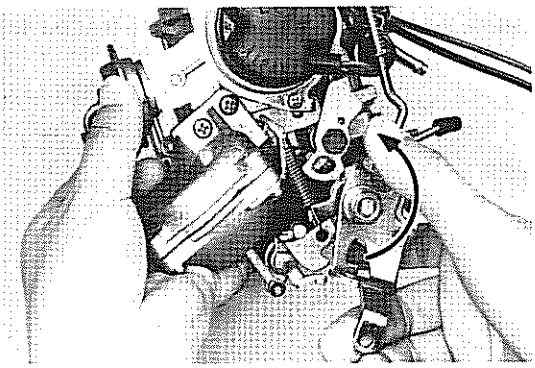
Install the clamps in the position shown in the figure.

Fig. 8-77



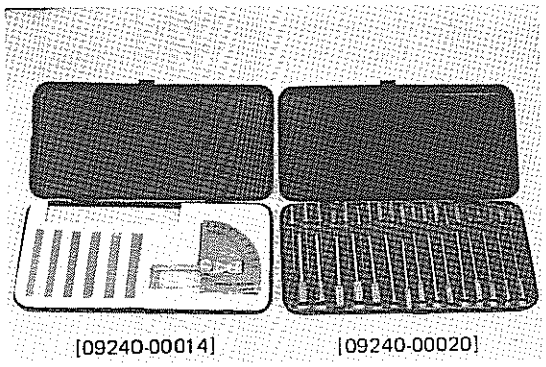
Tighten the air horn set screws at little at a time in diagonal order.

Fig. 8-78



After assembling, make sure that each link moves smoothly.

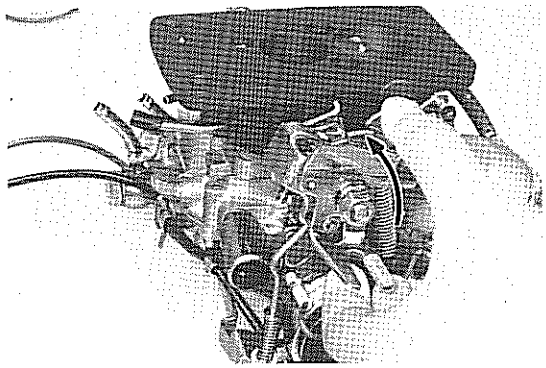
Fig. 8-79



ADJUSTMENT

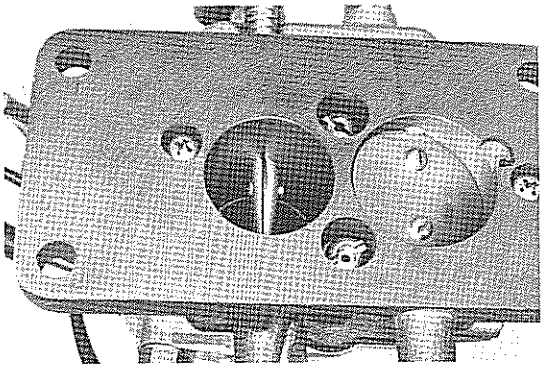
Make adjustments with SST.
SST [09240-00014]
[09240-00020]

Fig. 8-80



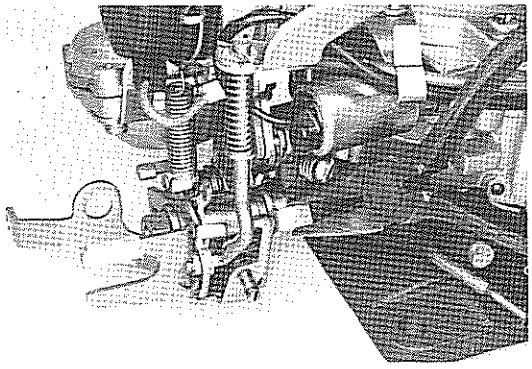
1. First throttle valve opening.
   (1) Fully open the first throttle valve.

Fig. 8-81



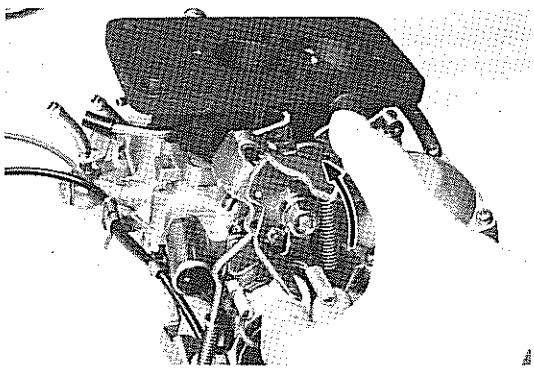
(2) Check the first throttle valve opening angle.
Opening angle: 90°

Fig. 8-82



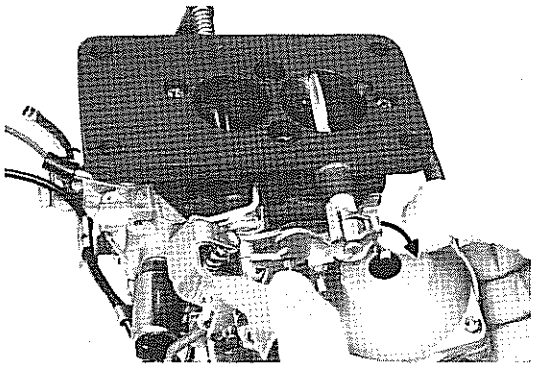
(3) Adjust by bending the throttle lever stopper.

Fig. 8-83



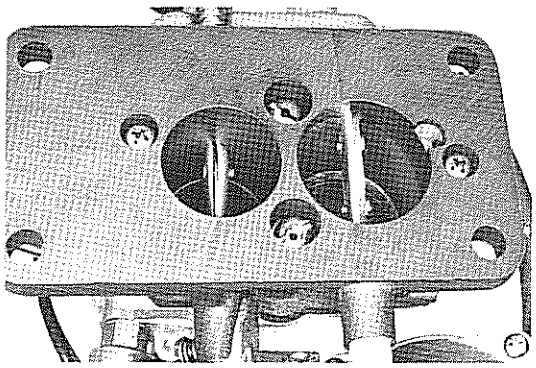
2. Second throttle valve opening.
   (1) Fully open the first throttle valve.

Fig. 8-84



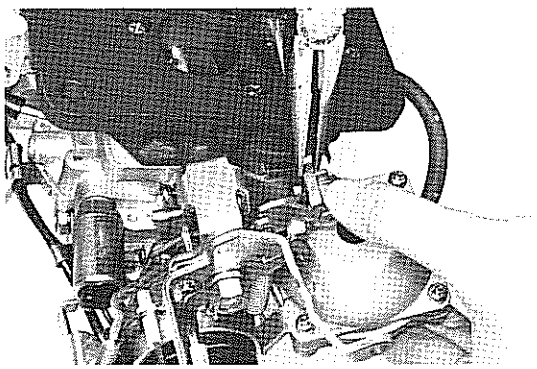
(2) Fully open the second throttle valve lever.

Fig. 8-85



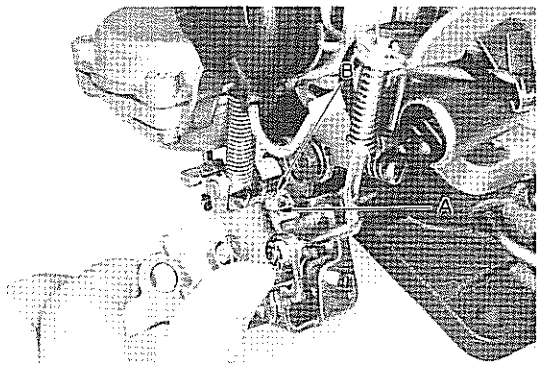
(3) Check the throttle valve opening angle.
Opening angle: 80°

Fig. 8-86



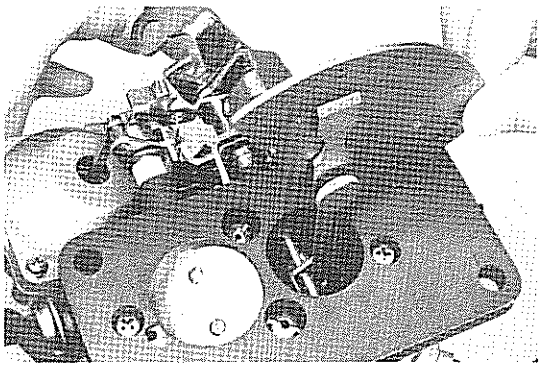
(4) Adjust by bending the throttle lever stopper.

Fig. 8-87



3. Secondary touch angle.
   (1) Open the first throttle valve until the throttle valve lever (A) part touch (B) part.

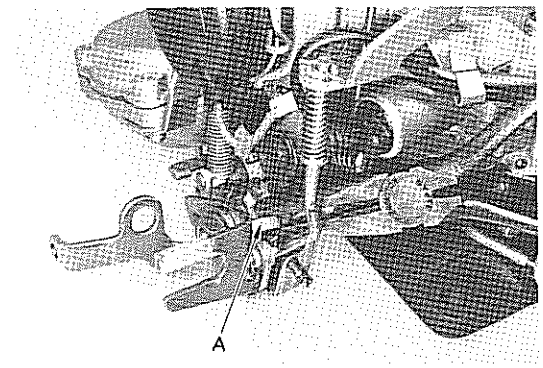
Fig. 8-88



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

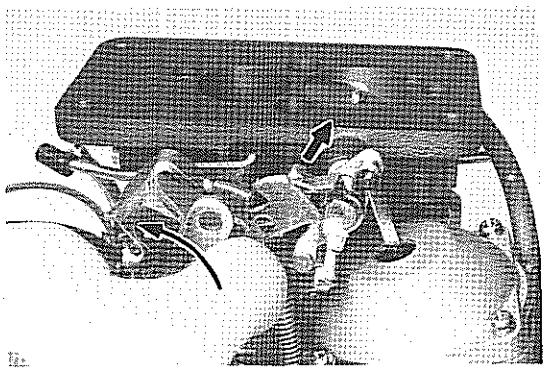
Secondary touch angle:
57° – 61°

Fig. 8-89



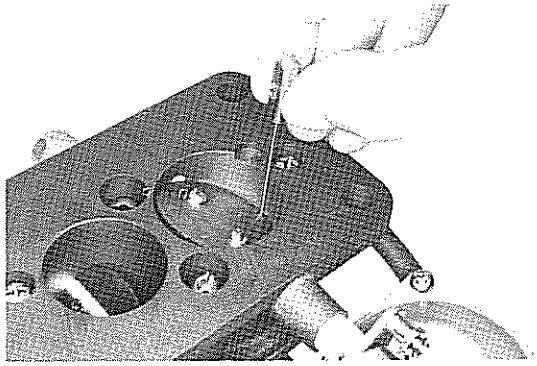
(3) Adjust by bending (A) part.

Fig. 8-90



4. Kick up
   (1) Open the first throttle valve until the kick arm slightly opens the second throttle valve.

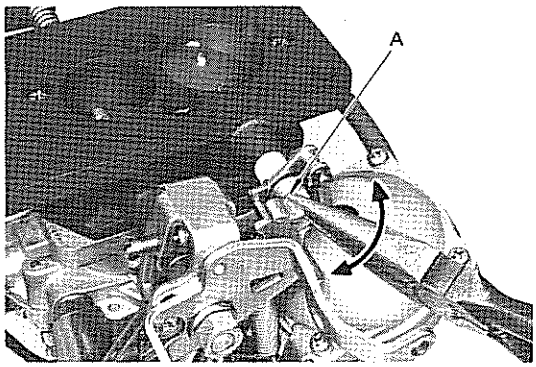
Fig. 8-91



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

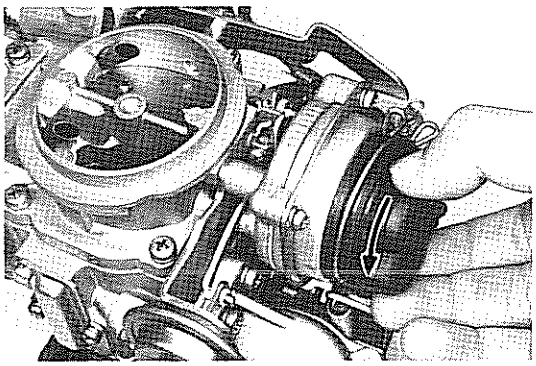
Kick up clearance:
0.2 mm
(0.008 in.)

Fig. 8-92



(3) Adjust by bending (A) part.

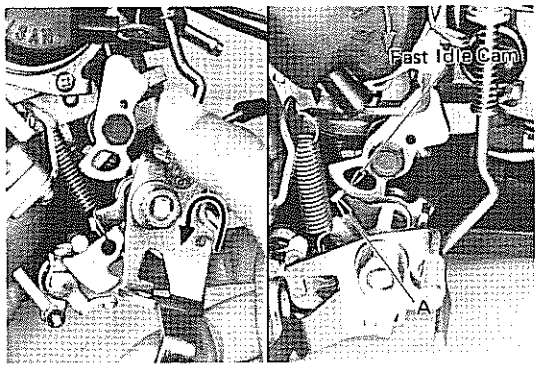
Fig. 8-93



5–1. Fast idle (automatic choke only)

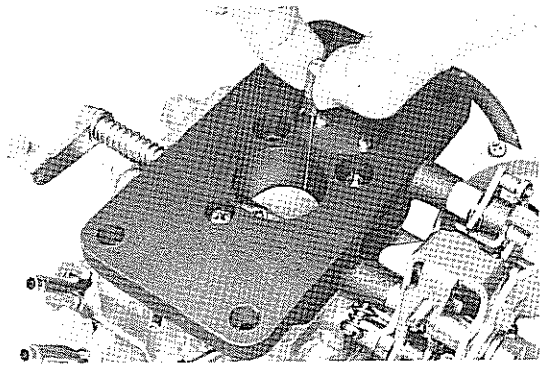
(1) Fully close the choke valve by turning the coil housing.

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.

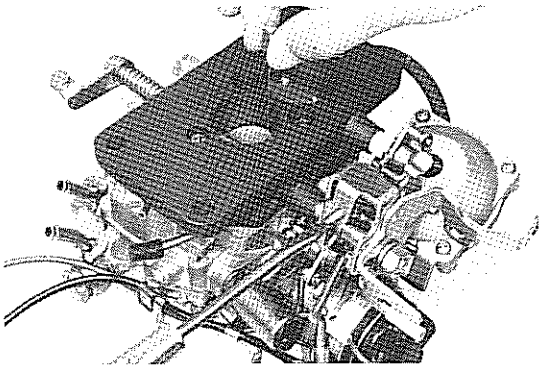
Fig. 8-95



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

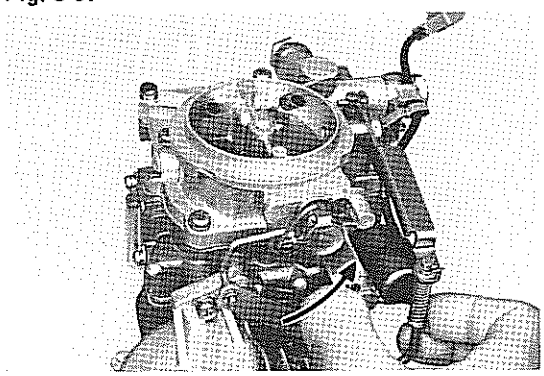
Fast idle clearance:
0.81 mm
(0.032 in.)

Fig. 8-96



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

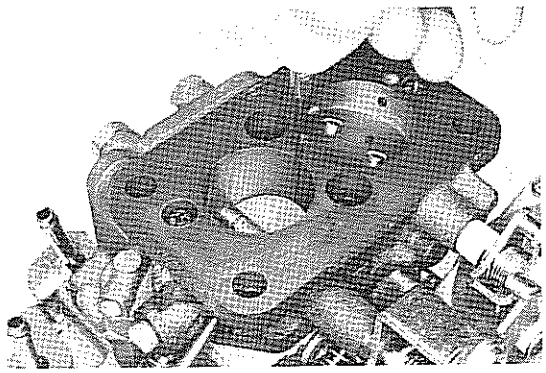
Fig. 8-97



5–2. Fast idle (manual choke only)

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

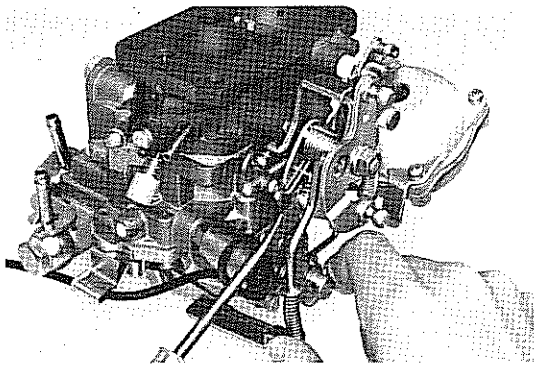
Fig. 8-98



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

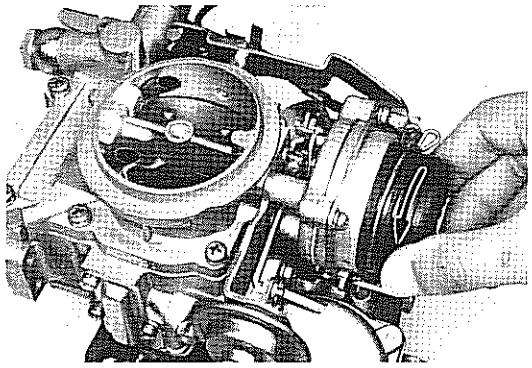
Fast idle clearance:
1.01 mm
(0.040 in.)

Fig. 8-99



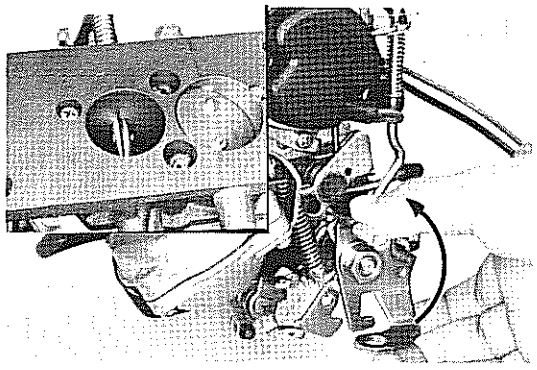
(3) Adjust by turning the fast idle adjusting screw.

Fig. 8-100



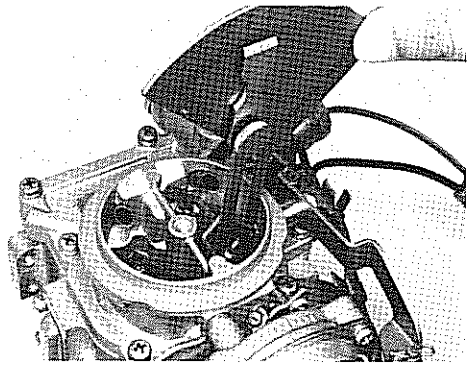
6. Unloader (only automatic hcoke)
(1) Fully close the choke valve by turning the coil housing.

Fig. 8-101



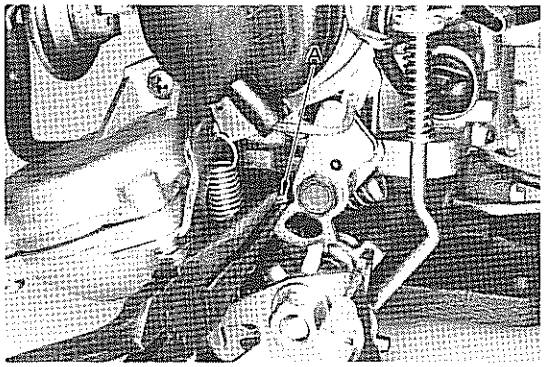
(2) Fully open the first throttle valve.

Fig. 8-102



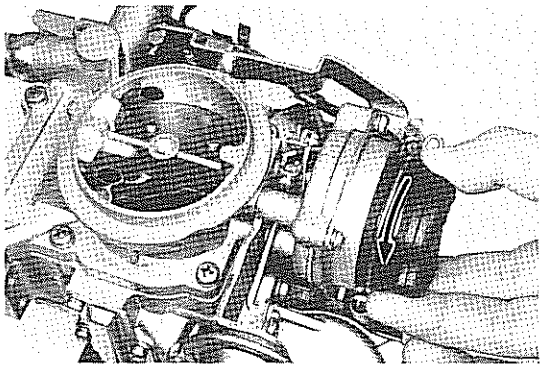
(3) At this time, check the choke valve opening angle.
Unloader angle: 47°

Fig. 8-103



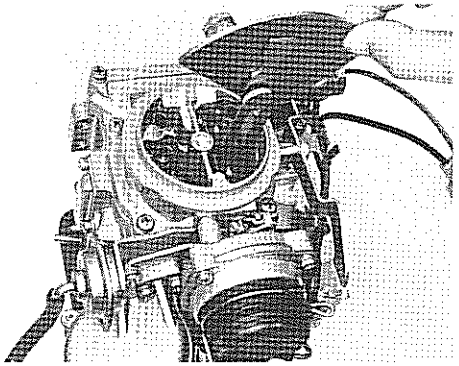
(4) Adjust by bending (A) part.

Fig. 8-104



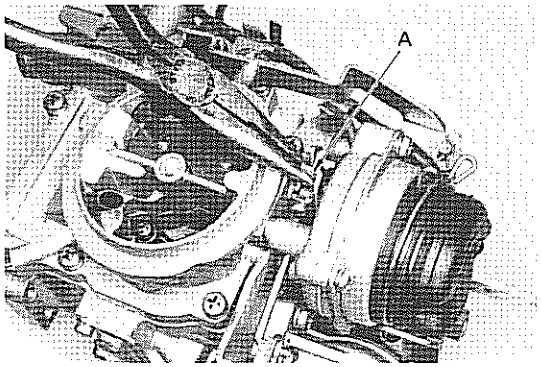
7. Choke breaker (automatic choke only)
   (1) Fully close the choke valve by turning the coil housing.

Fig. 8-105



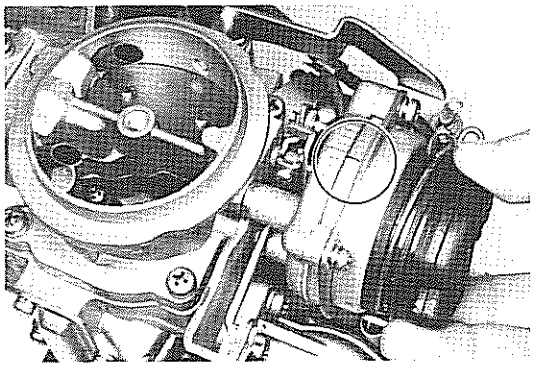
(2) Connect a hose to the diaphragm and suck on the hose with your mouth.
(3) At this time, check the clearance between the choke valve and bore.

Fig. 8-106



(4) Adjust by bending (A) part.

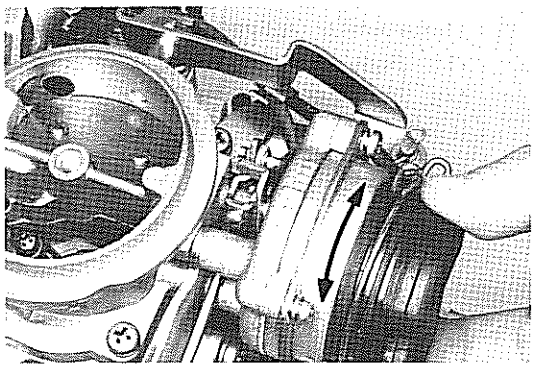
Fig. 8-107



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

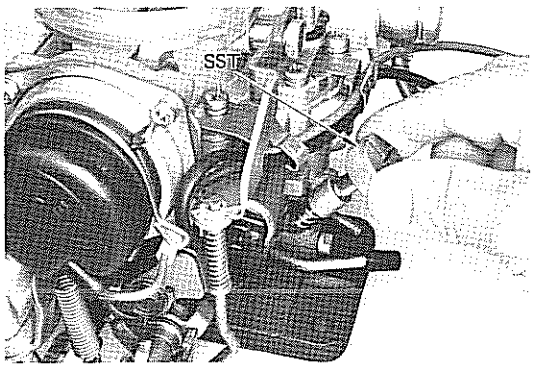
– Note –
The choke valve becomes fully closed when the atmospheric temperature reaches 25°C (77°F).

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.

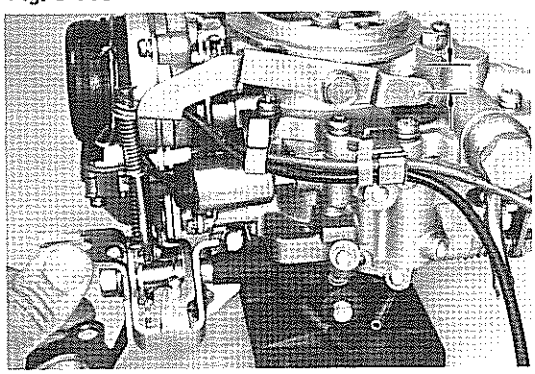
Fig. 8-109



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).

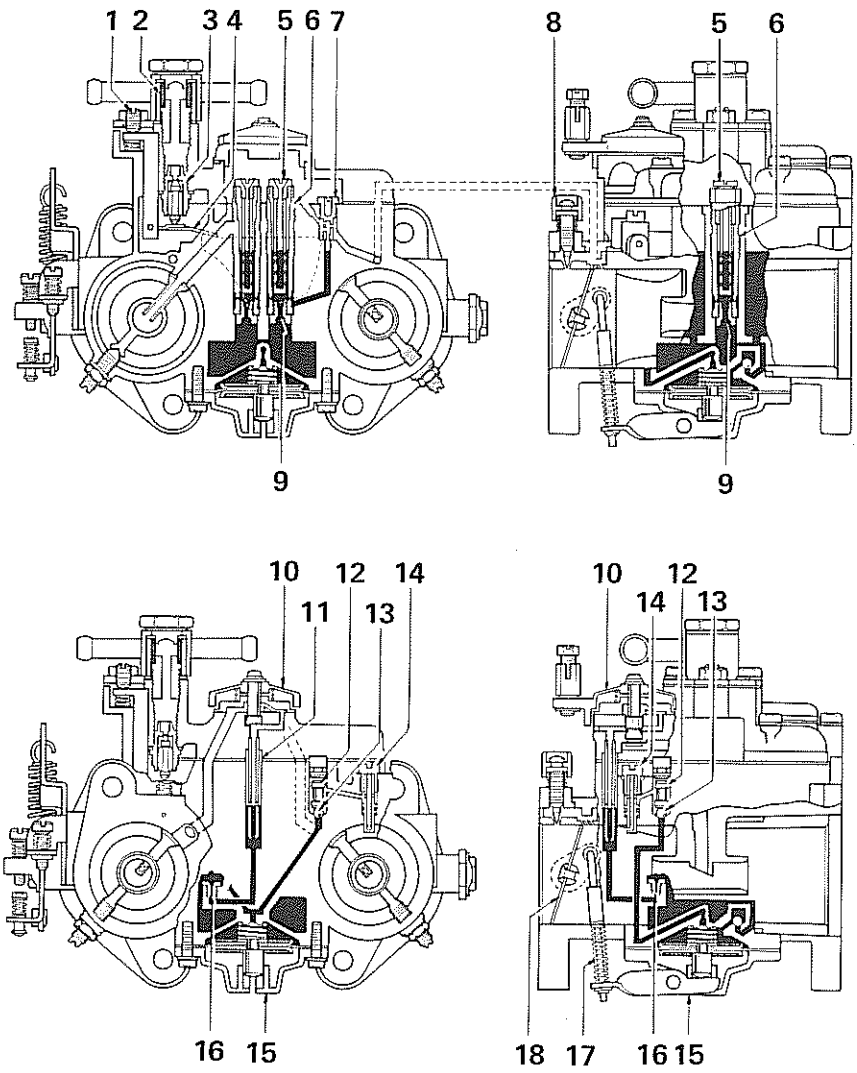
STD:	**2T, 3T & 3T-C**	**5.0 mm (0.20 in.)**
	2T-B	**3.0 mm (0.12 in.)**

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

SOLEX CARBURETOR

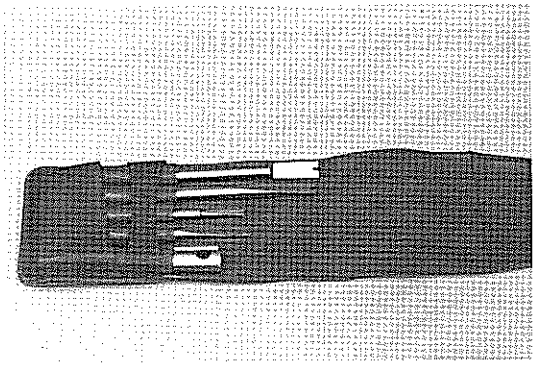
CARBURETOR CIRCUIT

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

Fig. 8-115



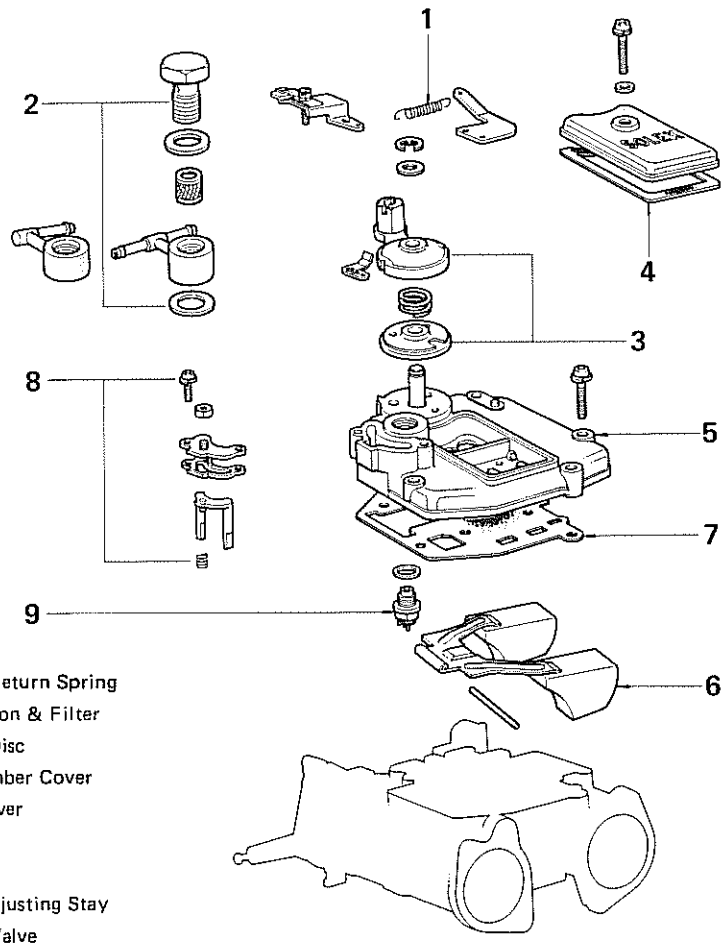
Use SST for carburetor servicing.
SST [09860-11011]

DISASSEMBLY

Bowl Cover

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

Fig. 8-116

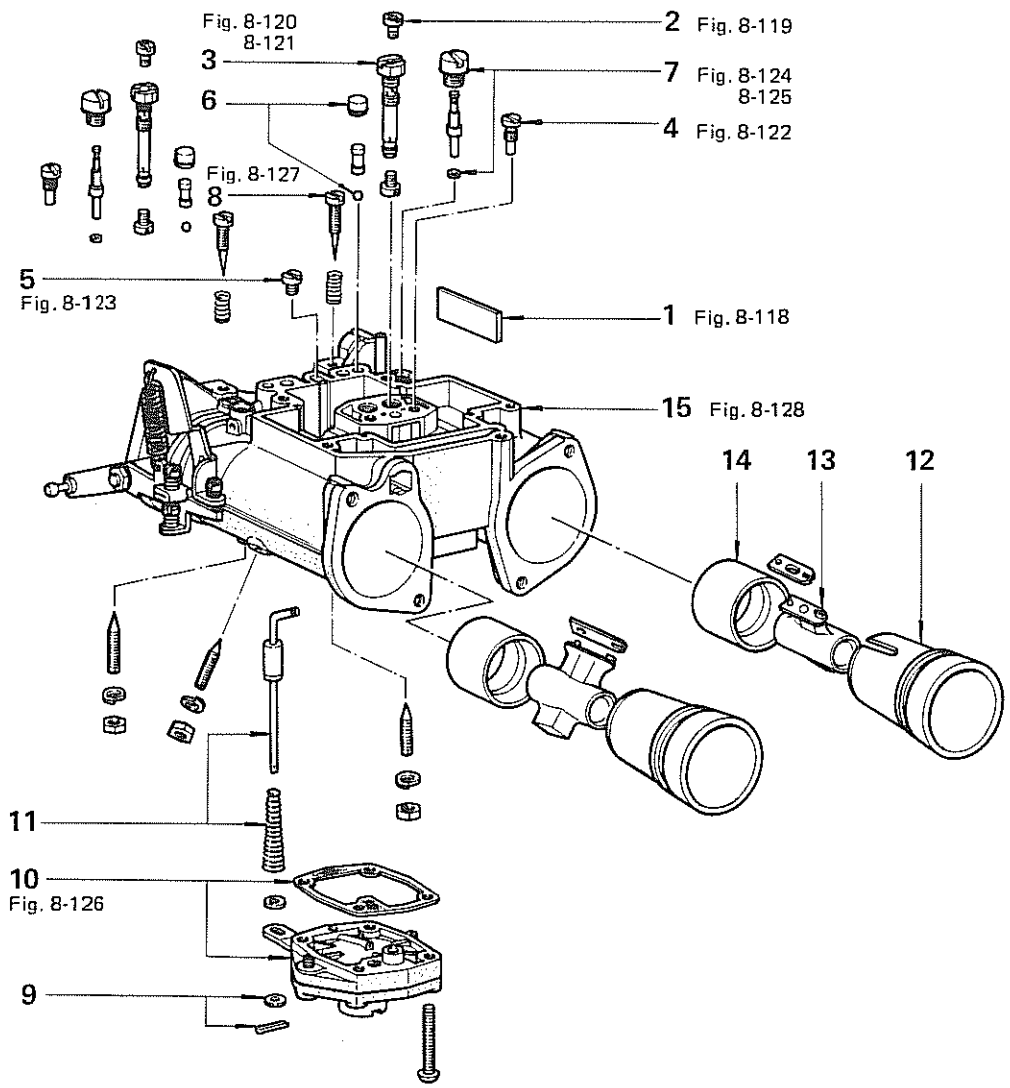


1. Starter Return Spring
2. Fuel Union & Filter
3. Starter Disc
4. Jet Chamber Cover
5. Bowl Cover
6. Float
7. Gasket
8. Float Adjusting Stay
9. Needle Valve

Body

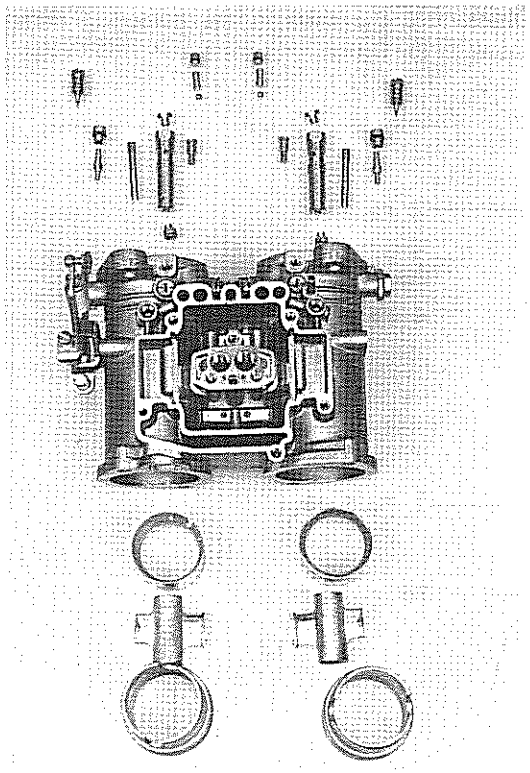
Disassemble the parts in the numerical order shown in the figure.

Fig. 8-117



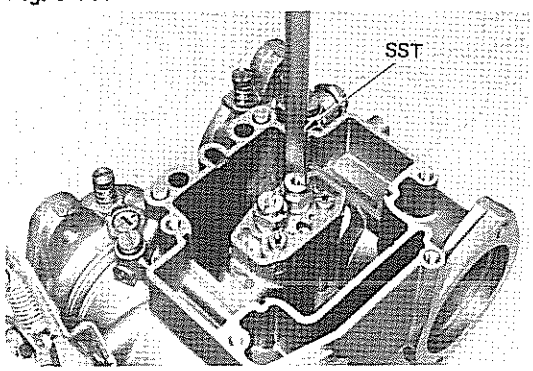
1. Float Chamber Plate
2. Main Air Bleed Jet
3. Main Jet Holder
4. Slow Jet
5. Starter Jet
6. Pump Discharge Weight & Check Valve
7. Pump Nozzle
8. Idle Mixture Screw
9. Cotter Pin & Washer
10. Accelerating Pump
11. Spring & Pump Rod
12. Sleeve
13. Small Venturi
14. Large Venturi
15. Body

Fig. 8-118



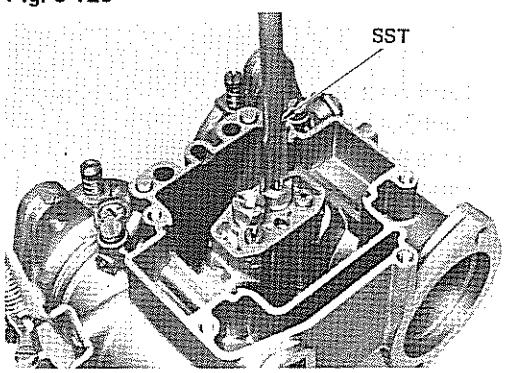
Arrange the parts for the right and left sides in respective order.

Fig. 8-119



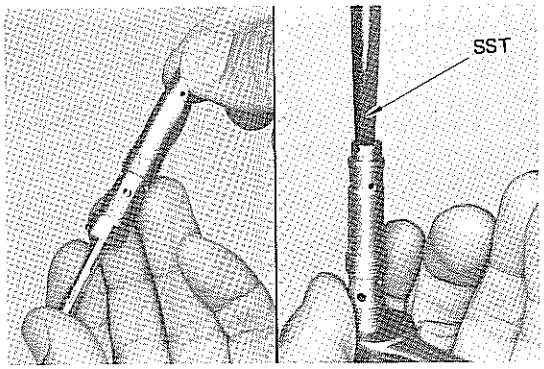
Remove the main air bleed jet with SST.
SST [09860-11011]

Fig. 8-120



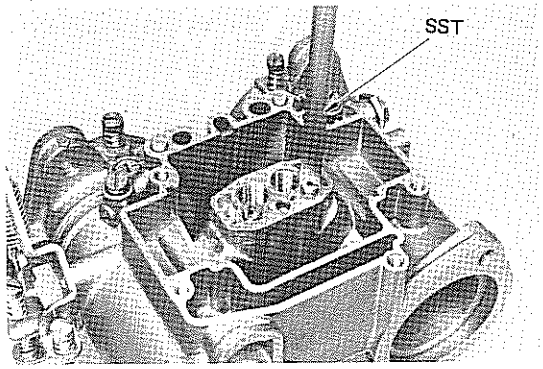
Remove the main jet holder with SST.
SST [09860-11011]

Fig. 8-121



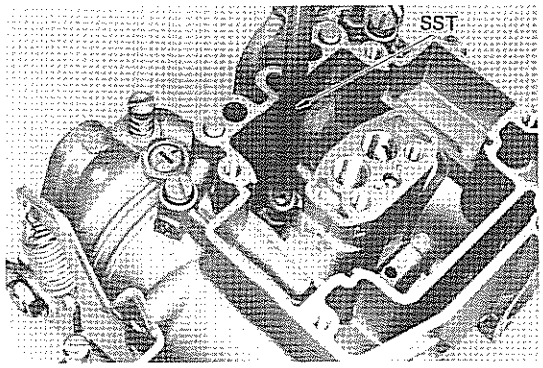
Remove the tube from the main jet holder.
Remove the main jet with SST.
SST[09860-11011]

Fig. 8-122



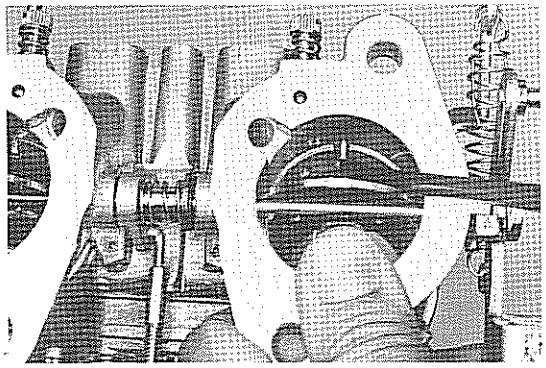
Remove the slow jet with SST.
SST[09860-11011]

Fig. 8-123



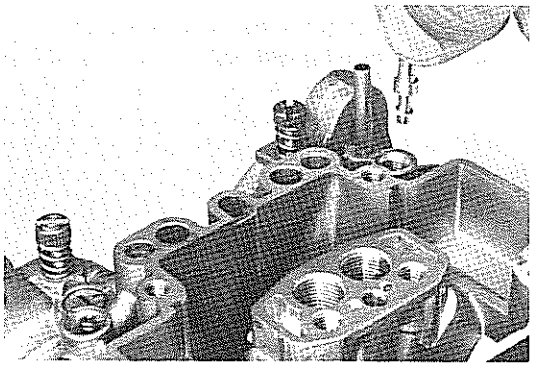
Remove the starter jet with SST.
SST[09860-11011]

Fig. 8-124



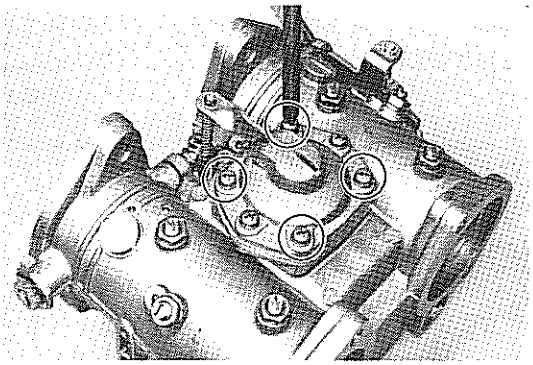
If the starter jet is difficult to remove, push up from the bottom with a screw driver.

Fig. 8-125



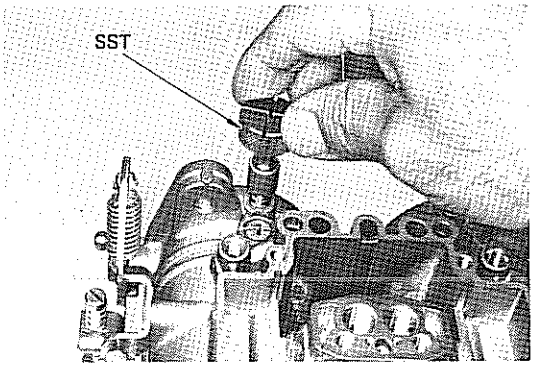
Remove the jet and gasket.

Fig. 8-126



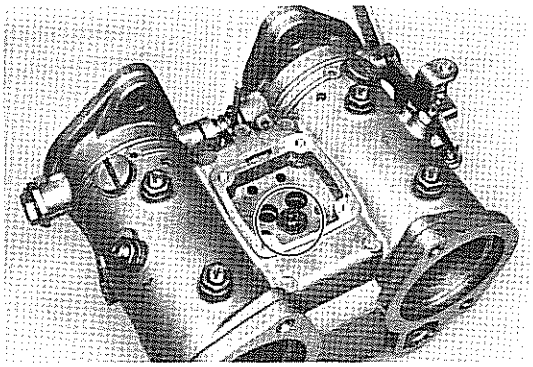
After removing 4 screws, remove the accelerating pump.

Fig. 8-127



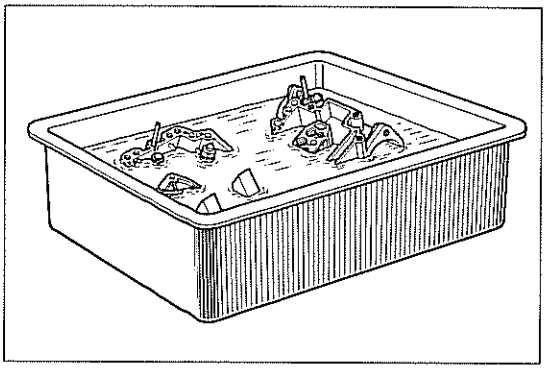
Remove the idle mixture adjusting screw with SST.
SST [09243-00010] or
[09243-00020]

Fig. 8-128



Do not remove the screw.

Fig. 8-129

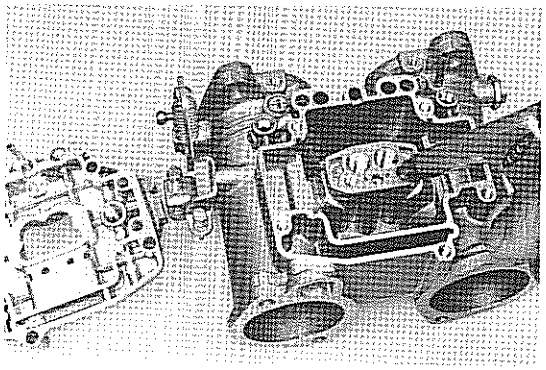


INSPECTION

– Precaution –

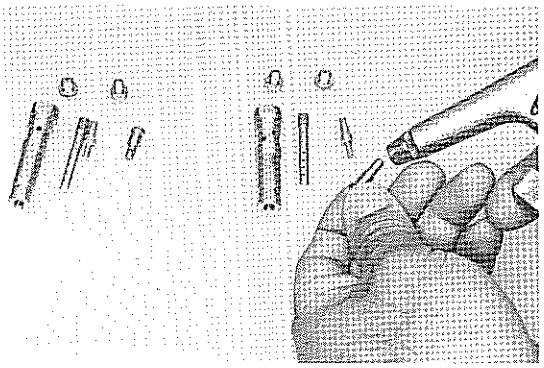
1. Before inspecting the parts, wash them thoroughly in gasoline.

Fig. 8-130



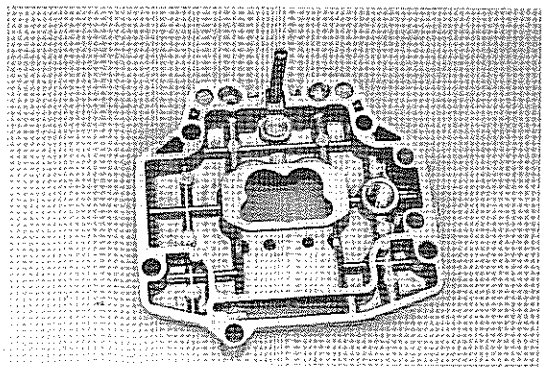
2. Using compressed air, blow all dirt and other foreign matter from the jets and similar parts, and from the fuel passages and apertures in the body.

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

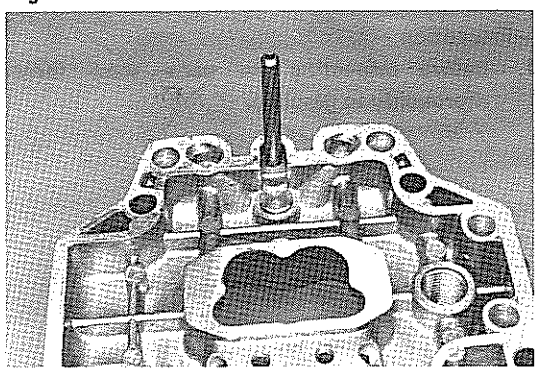


Inspect the following parts and replace any part damaged.

Bowl Cover Parts

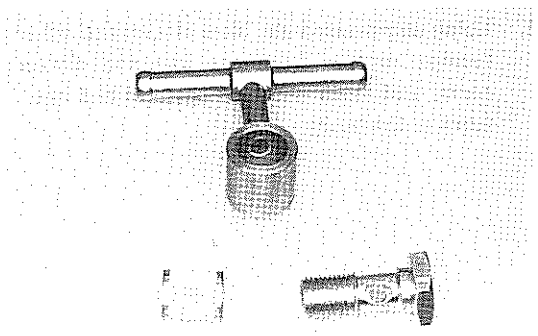
1. Bowl cover: Crakcs, damaged threads.

Fig. 8-133



2. Starter pipe: Damaged and/or clogged.

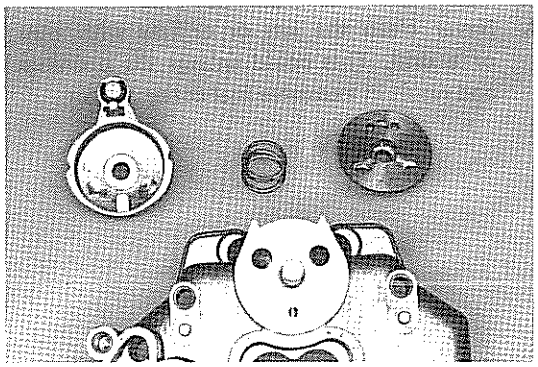
Fig. 8-134



3. Filter: Clogged, rusted, or damaged.

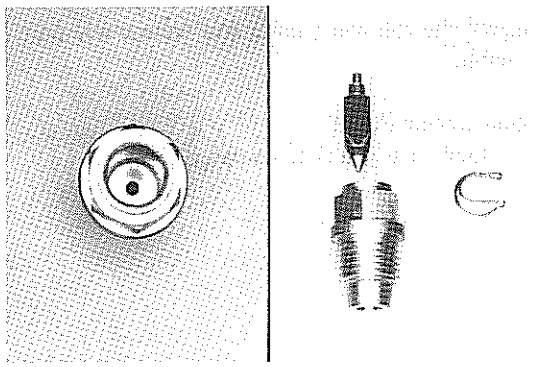
– Note –
New gasket must always be used whenever the union is removed.

Fig. 8-135



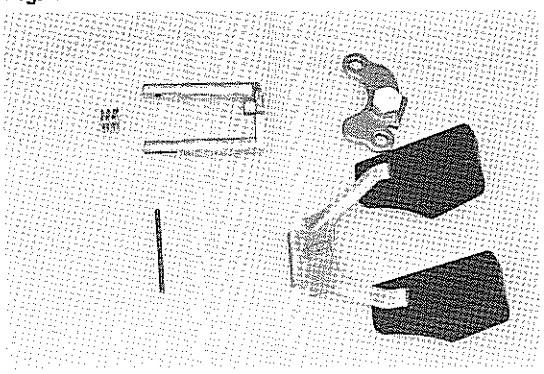
4. Starter disc: Damaged or worn sliding surface.

Fig. 8-136



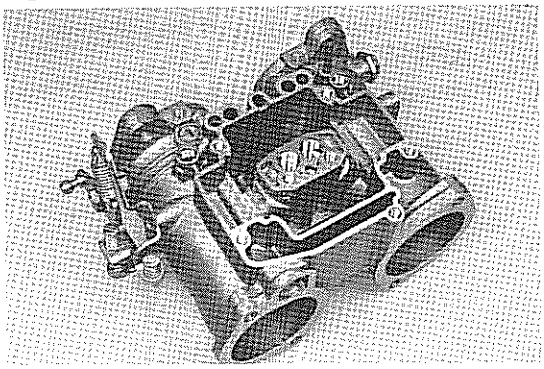
5. Needle valve: Contacting valve seat.

Fig. 8-137



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

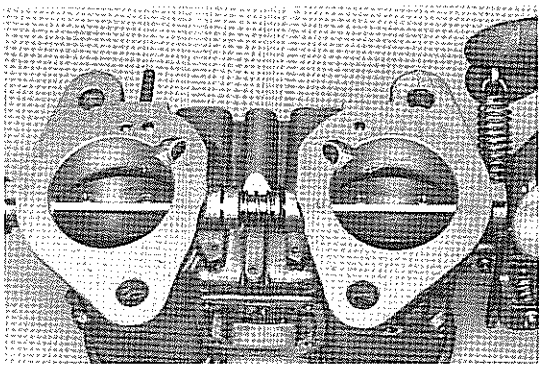
Fig. 8-138



Body Parts

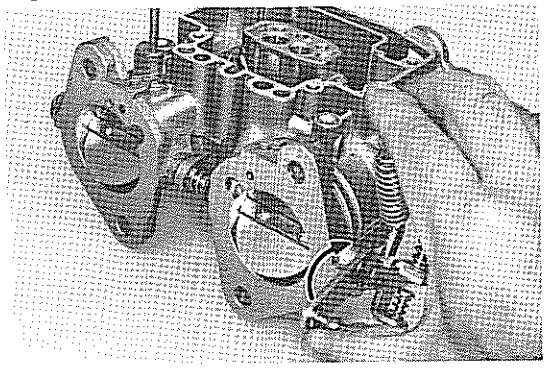
1. Body: Cracks, damaged mounting surfaces and threads, wear on throttle shaft bearings, and carbon adherence.

Fig. 8-139



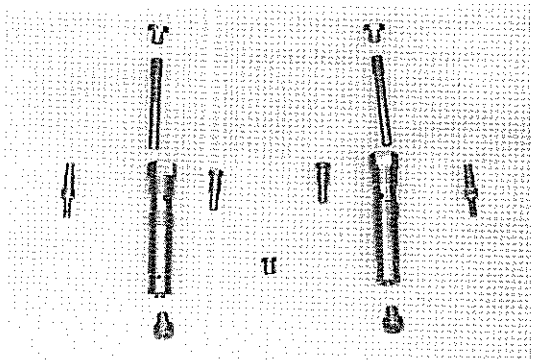
2. Bore: Wear on the throttle valve contacting surface.

Fig. 8-140



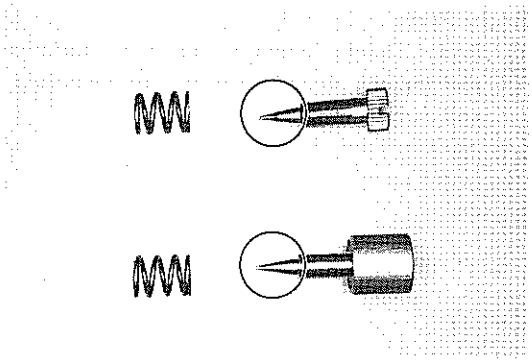
3. Throttle valve movement.

Fig. 8-141



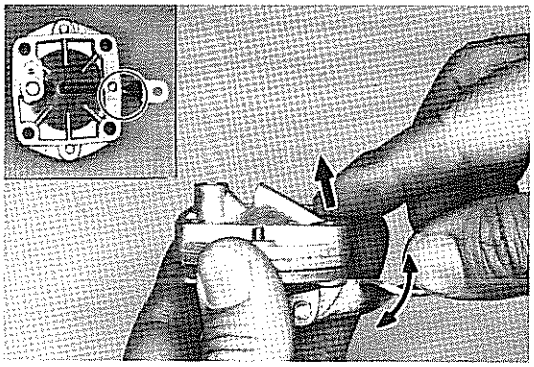
4. Jet: Clogging, damage to contacting surface, threads and screwdriver slots.

Fig. 8-142



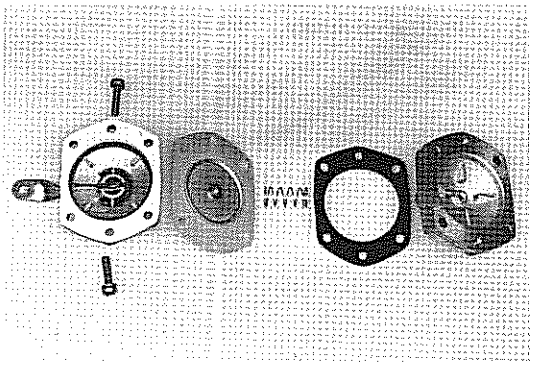
5. Idle mixture adjusting screw: Damage to tapered tip or threads.
6. Pump nozzle: Clogged and/or damaged.

Fig. 8-143



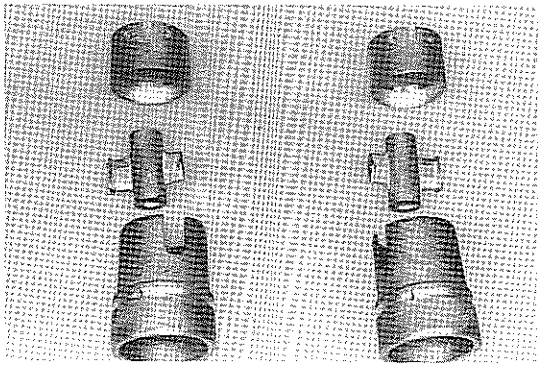
7. With the pump level, work the lever and insure that air is forced through the outlet hole.

Fig. 8-144



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

Fig. 8-145

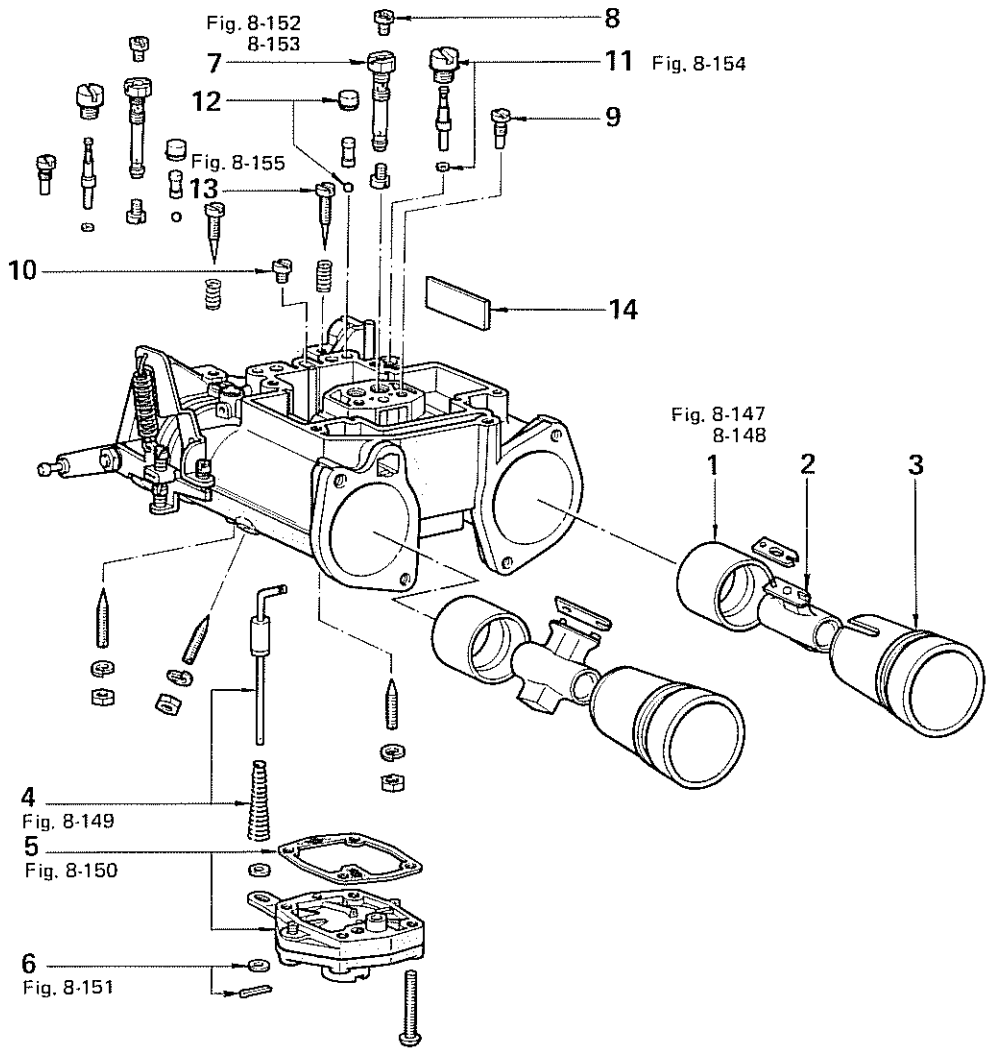


10. Venturi
    Damaged
    Small venturi
    Damaged or clogged

Body

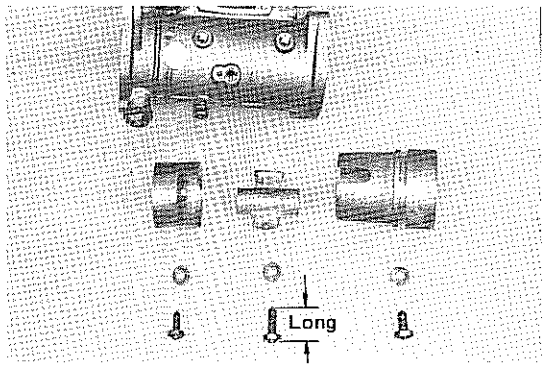
Assemble the parts in the numerical order shown in the figure.

Fig. 8-146



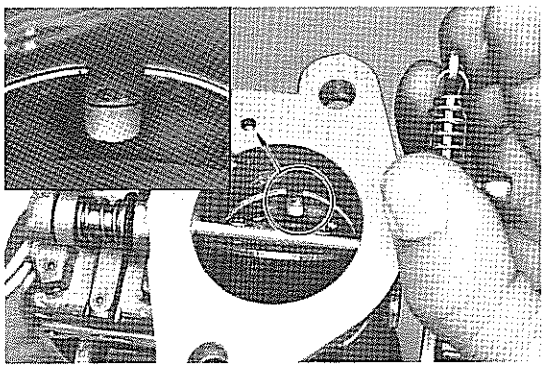
1. Large Venturi
2. Small Venturi
3. Sleeve
4. Pump Connecting Rod & Spring
5. Accelerating Pump Diaphragm
6. Cotter Pin & Washer
7. Main Jet Holder
8. Main Air Bleed Jet
9. Slow Jet
10. Starter Jet
11. Pump Nozzle
12. Pump Discharge Weight & Check Valve
13. Mixture Adjusting Screw
14. Float Chamber Plate

Fig. 8-147



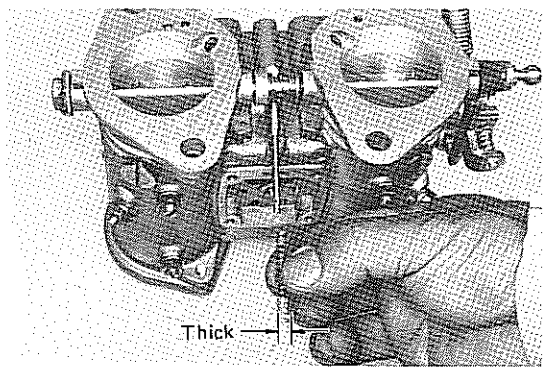
Assemble the small venturi with the long screw.

Fig. 8-148



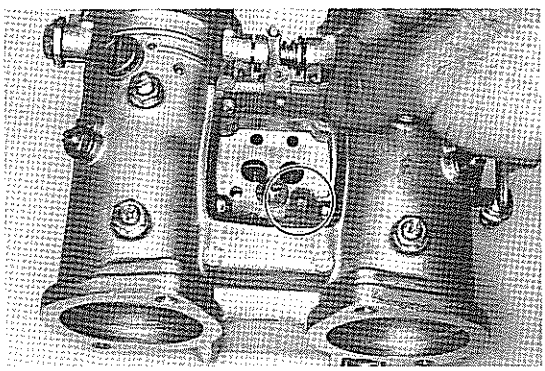
Install the venturi with the accelerator pump nozzle hole in the center of the venturi slit.

Fig. 8-149



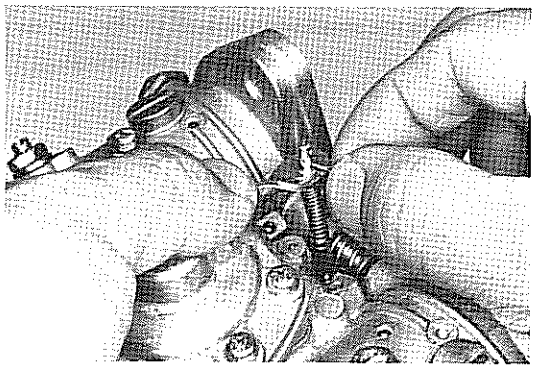
Install the spring in the direction shown in the figure.

Fig. 8-150



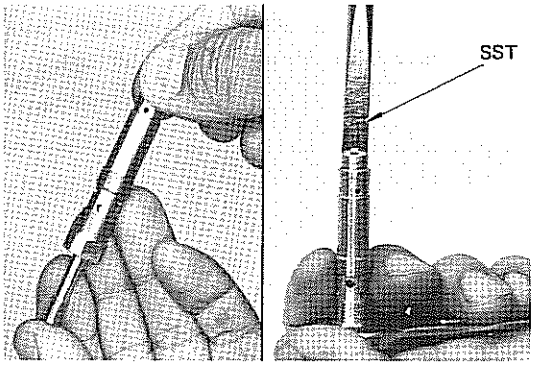
Install the gasket as shown in the figure.

Fig. 8-151



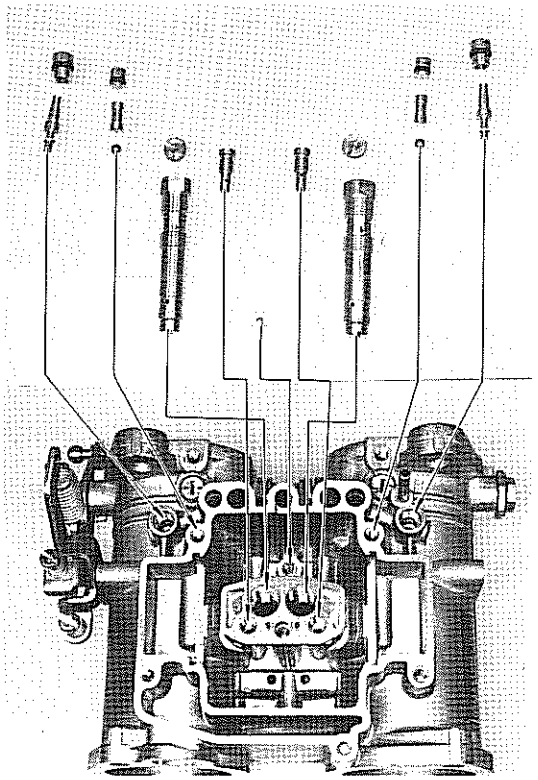
Install the cotter pin in the third hole from the tip of the pump rod.

Fig. 8-152



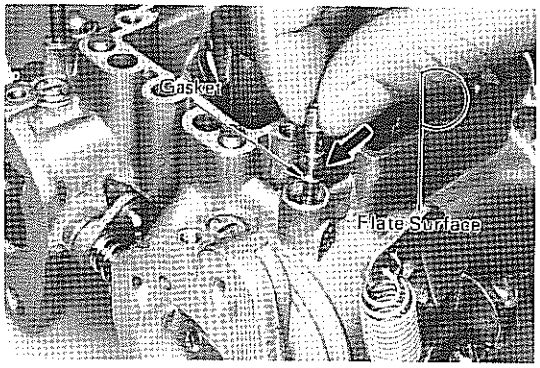
Before installing the main jet holder, assemble the sleeve and main jet into the holder with SST.
SST [09860-11011]

Fig. 8-153



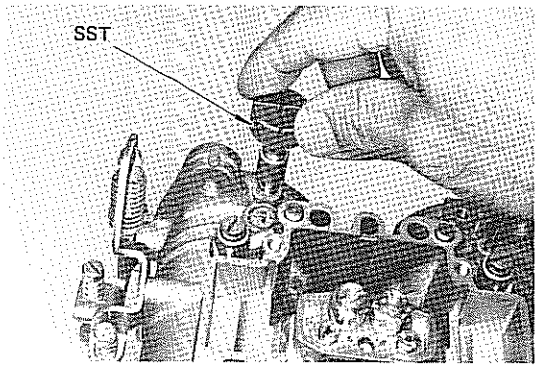
Install the jets, air bleeds, valves and plugs as shown in the figure.

Fig. 8-154



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

Fig. 8-155



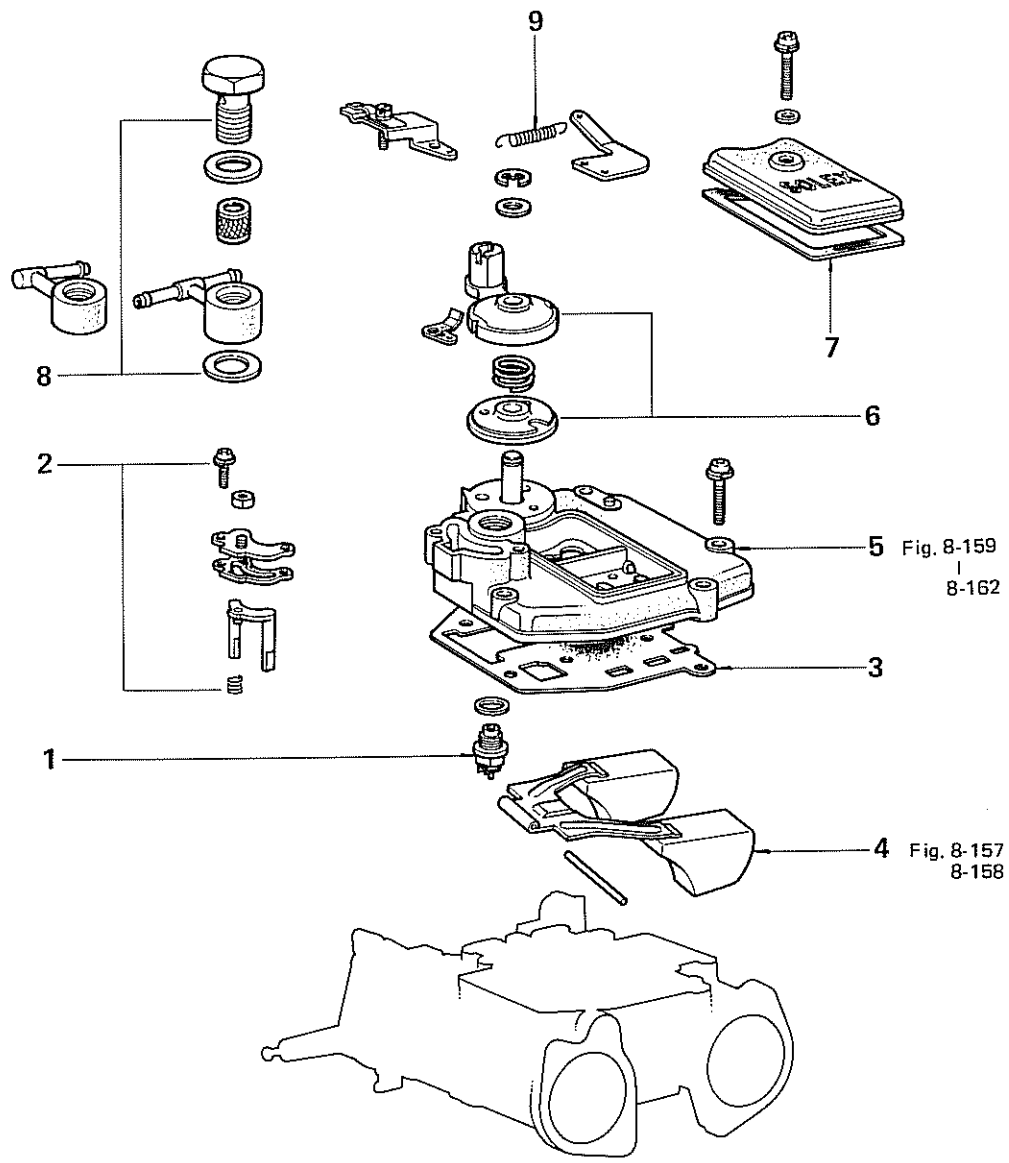
Screw out 1-1/2 turns from the fully closed position.

– Note –
Take care not to mistake the left and right sides.

Bowl Cover

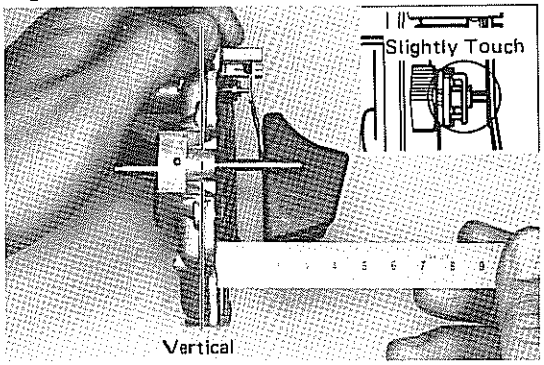
Assemble the parts in the numerical order shown in the figure.

Fig. 8-156



1. Needle Valve
2. Float Adjusting Stay
3. Gasket
4. Float
5. Bowl Cover
6. Starter Disc
7. Jet Chamber Cover
8. Fuel Union & Filter
9. Starter Back Spring

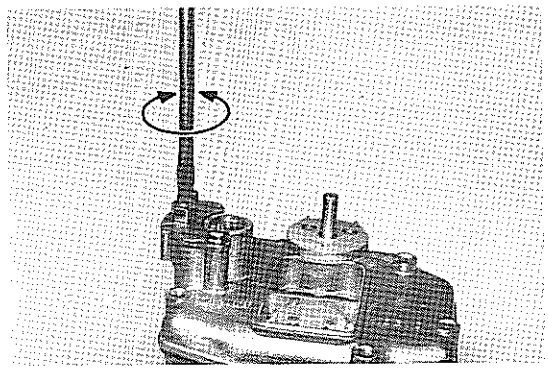
Fig. 8-157



Measure the float position.

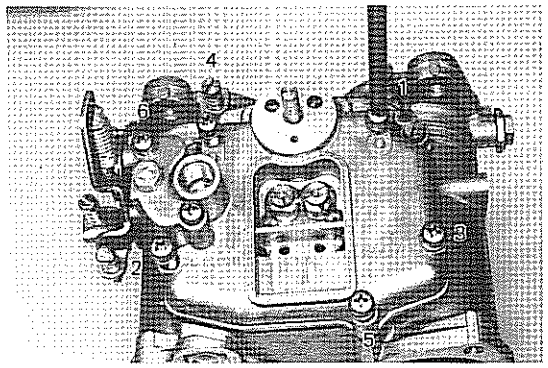
It should be about 16 mm (0.6 in.) from bowl cover lower surface.

Fig. 8-158



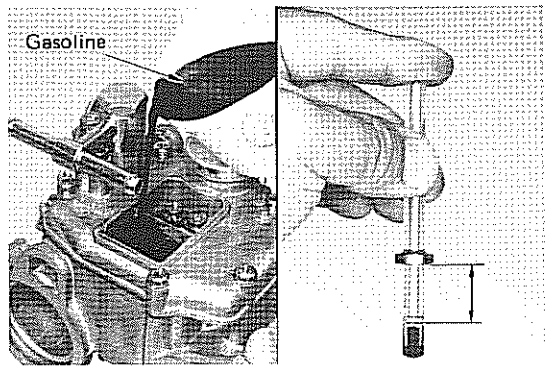
Adjust the float position as shown in the figure, if necessary.

Fig. 8-159



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

Fig. 8-160

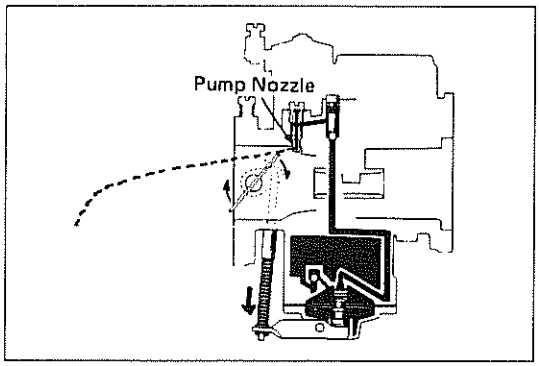


After assembling, check the acceleration pump

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

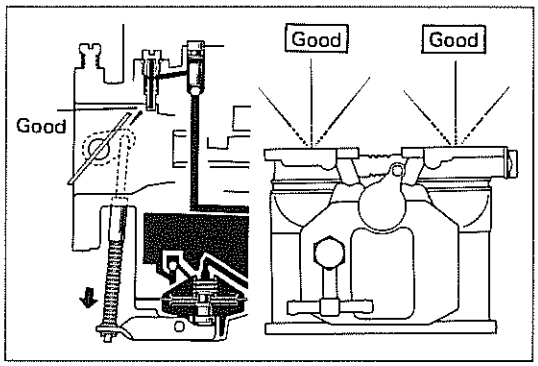
Fuel level: 20 – 21 mm (0.79 – 0.83 in.)

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.