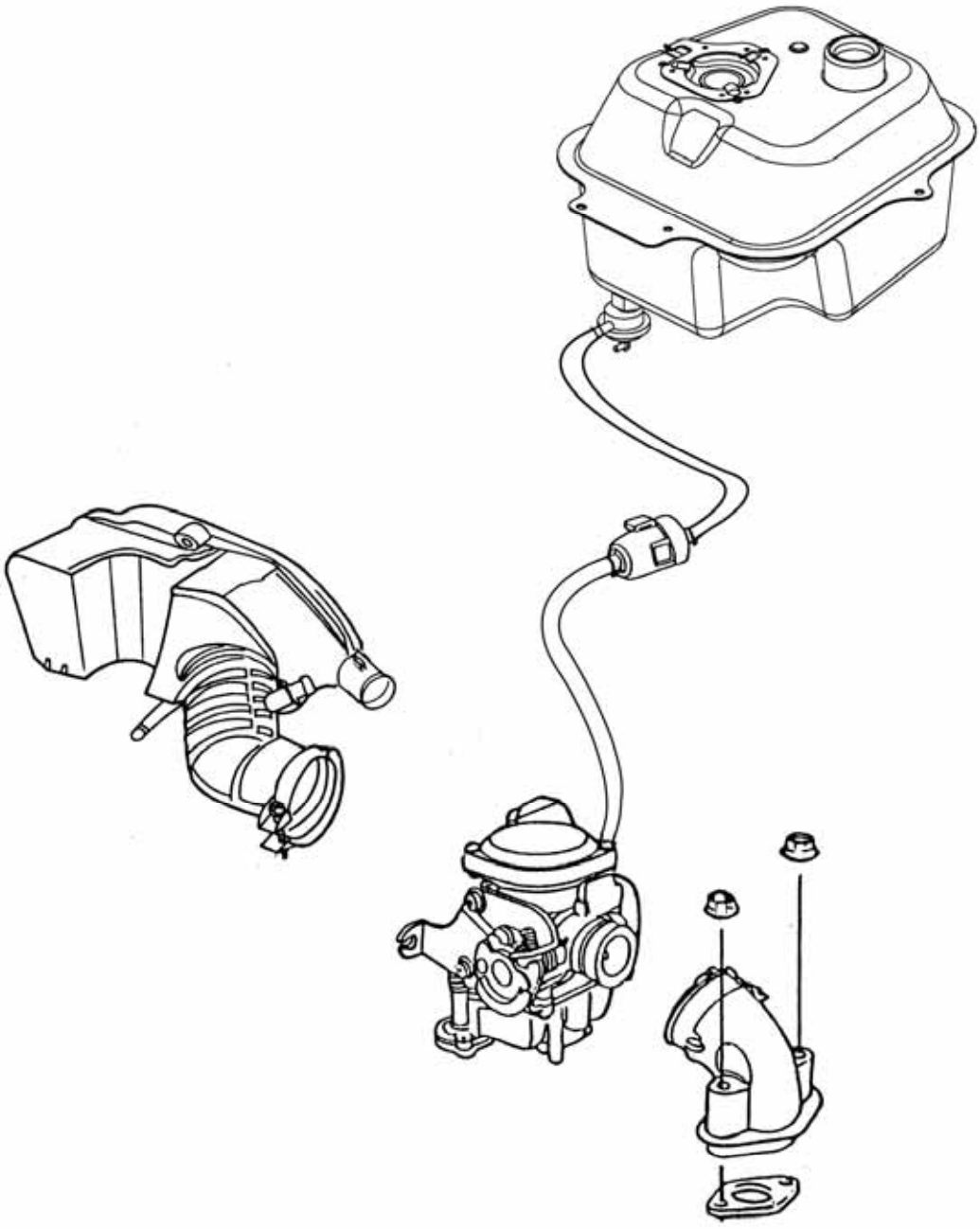
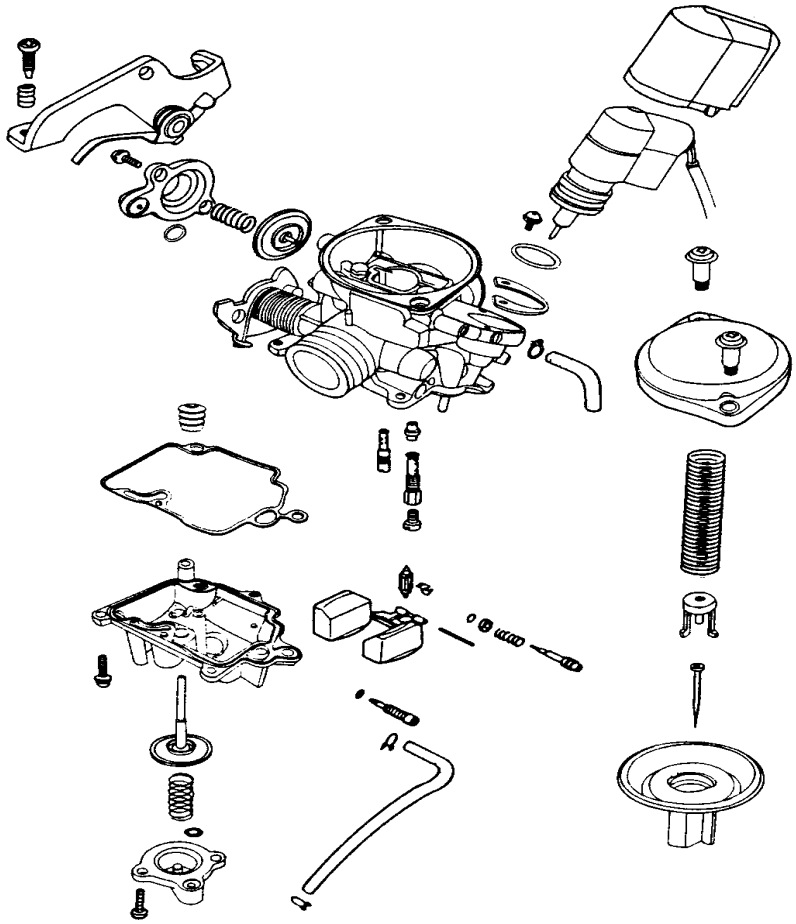
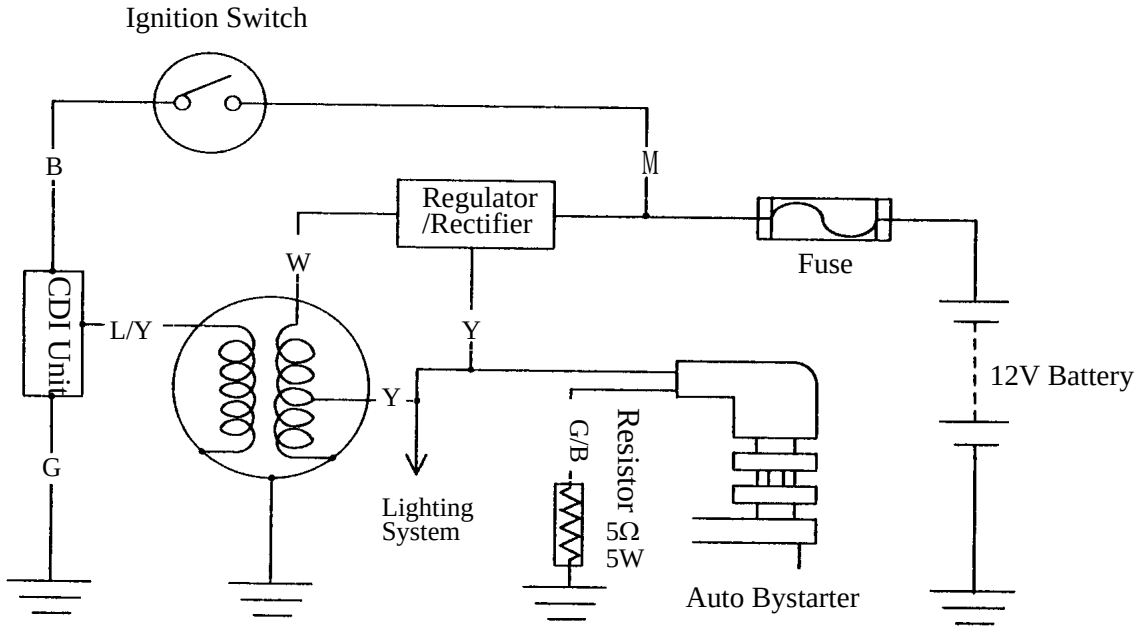
5. FUEL SYSTEM






Ignition Switch
B
M
Regulator
/Rectifier
Fuse
W
CDI Unit
L/Y
Y
12V Battery
Y
G
G/B
Resistor
5Ω
5W
Lighting
System
Auto Bystarter

SERVICE INFORMATION

GENERAL INSTRUCTIONS

Gasoline is very dangerous. When working with gasoline, keep sparks and flames away from the working area.
Gasoline is extremely flammable and is explosive under certain conditions. Be sure to work in a well-ventilated area.

- When disassembling the carburetor, be sure to service the vacuum piston and float chamber.
- Do not bend or twist control cables. Damaged control cables will not operate smoothly.
- When disassembling fuel system parts, note the locations of O-rings. Replace them with new ones during assembly.
- Before float chamber disassembly, loosen the drain screw to drain the residual gasoline into a clean container.
- After the carburetor is removed, plug the intake manifold side with a clean shop towel to prevent foreign matters from entering.
- Remove the vacuum diaphragm before cleaning the carburetor air and fuel passages with compressed air to avoid damaging the vacuum diaphragm.
- When the motorcycle is not used for over one month, drain the residual gasoline from the float chamber to avoid erratic idling and clogged slow jet due to deteriorated fuel.

SPECIFICATIONS

Item	Standard	
Venturi dia. (mm)	20	
Type	CVK	
Float level (mm)	17	
Main jet	Commonly: #82	Speed limits vehicle: #80
Slow jet	#35	
Idle speed	2000rpm±100	
Throttle grip free play	2～6mm	
Pilot screw opening	2±1/2	

TROUBLESHOOTING

Engine is hard to start

- No spark at plug (⇨Section 15)
- Compression too low
- No fuel to carburetor
  –Clogged fuel filter
  –Restricted fuel line
  –Faulty float valve
  –Incorrectly adjusted float level
- Engine flooded with fuel
  –Clogged air cleaner
  –Fuel overflowing
- Intake air leak
- Contaminated fuel
- Faulty auto bystarter
- Clogged idle system or auto bystarter passages

Rich mixture

- Faulty auto bystarter
- Faulty float valve
- Float level too high
- Clogged air jets
- Dirty air cleaner
- Flooded carburetor

Backfiring at deceleration

- Lean mixture in idle system
- Improper air cut-off valve operation

Misfiring during acceleration

- Faulty ignition system
- Lean mixture
- Faulty accelerating pump

Engine idles roughly, stalls or runs poorly

- Clogged fuel system
- Ignition malfunction
- Rich or lean mixture
- Contaminated fuel
- Intake air leak
- Incorrect idle speed
- Incorrectly adjusted pilot screw
- Clogged idle system or auto bystarter passages
- Incorrectly adjusted float level

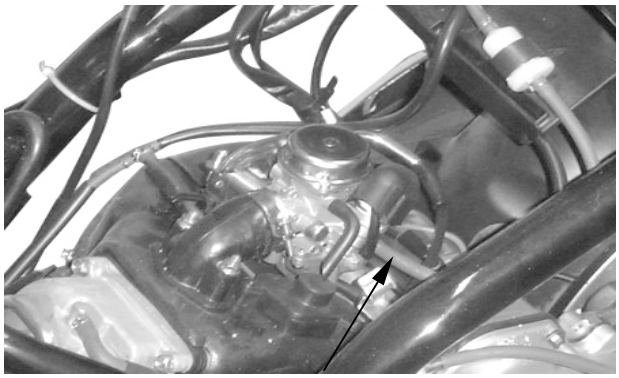
Lean mixture

- Clogged fuel jets
- Faulty float valve
- Float level too low
- Clogged fuel system
- Intake air leak
- Improper vacuum piston operation
- Improper throttle operation

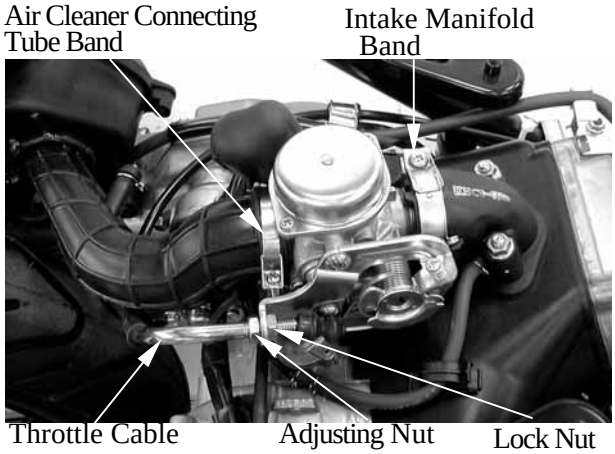
CARBURETOR REMOVAL

Remove the frame right side cover. (⇨2-4)
Disconnect the auto bystarter wire connector.
Remove the met-in box. (⇨2-3)

Loosen the drain screw and drain the fuel from the float chamber.
Disconnect the fuel tube and vacuum tube at the carburetor.



Loosen the throttle cable adjusting nut and lock nut, and disconnect the throttle cable from the carburetor.
Loosen the carburetor intake manifold band and air cleaner connecting tube band screws and then remove the carburetor.



AUTO BYSTARTER

OPERATION INSPECTION

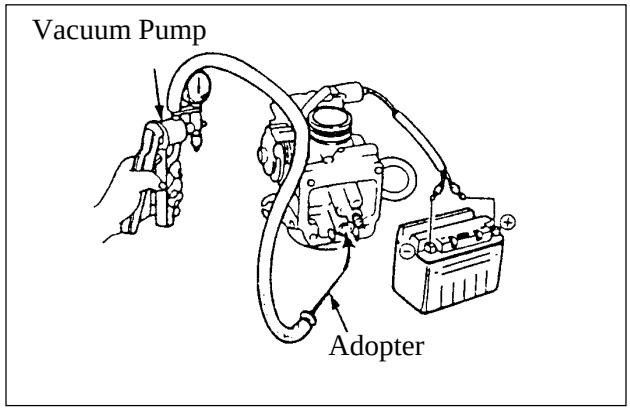
Measure the resistance between the auto bystarter wire terminals.

Resistance: 10Ω max. (10 minutes minimum after stopping the engine)

If the reading is not within the limit, replace the auto bystarter with a new one.

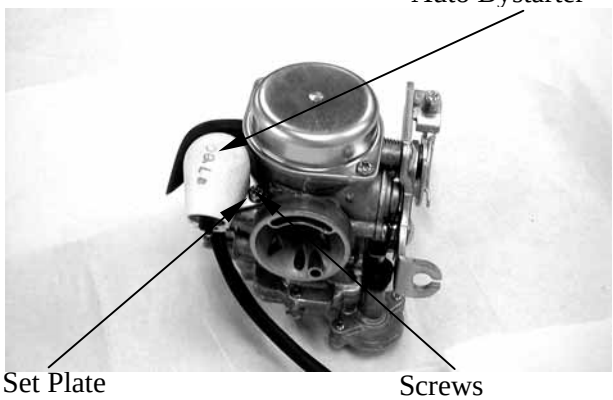
Connect a hose to the fuel enriching circuit of the carburetor. Connect the auto bystarter yellow wire to the positive (+) terminal of a battery and green wire to the negative (-) terminal. Wait 5 minutes and blow the hose with mouth or vacuum pump. If the passage is blocked, the auto bystarter is normal.

Disconnect the auto bystarter from the battery. Wait 30 minutes and blow the hose with mouth or vacuum pump. If air can be blown into the hose, the auto bystarter is normal.



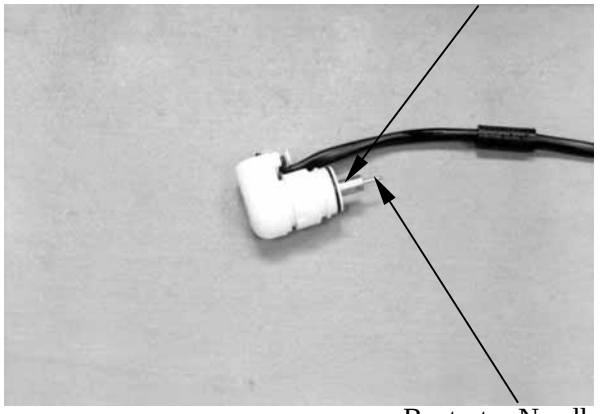
REMOVAL

Remove the set plate screws and set plate. Remove the auto bystarter from the carburetor.



AUTO BYSTARTER INSPECTION

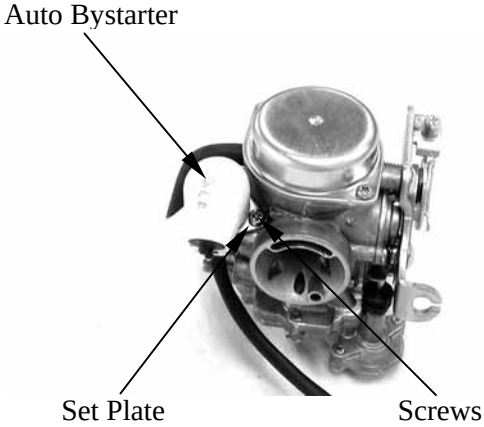
Check the auto bystarter valve and needle for nicks, wear or damage.
If any faulty part is found, replace the auto bystarter as a set.



INSTALLATION

Insert the auto bystarter into the carburetor body until it bottoms.
Position the set plate into the groove in the auto bystarter and tighten the screws.

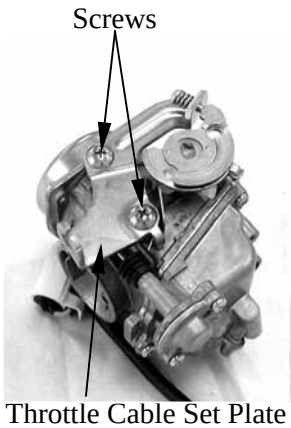
✳
- Be sure to install the auto bystarter and set plate properly.
- Install the set plate with its bottom face facing down.

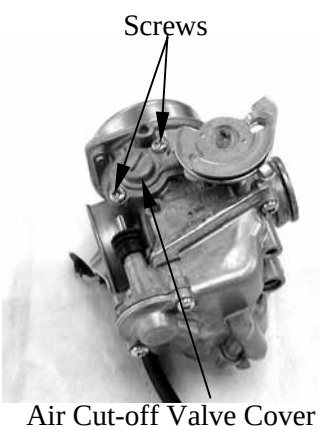


AIR CUT-OFF VALVE

DISASSEMBLY

Remove the two screws attaching the throttle cable set plate and the set plate.
Remove the two screws attaching the air cut-off valve.
Remove the spring and vacuum diaphragm.
Check the vacuum diaphragm for cracks or damage and check each passage for clogging.

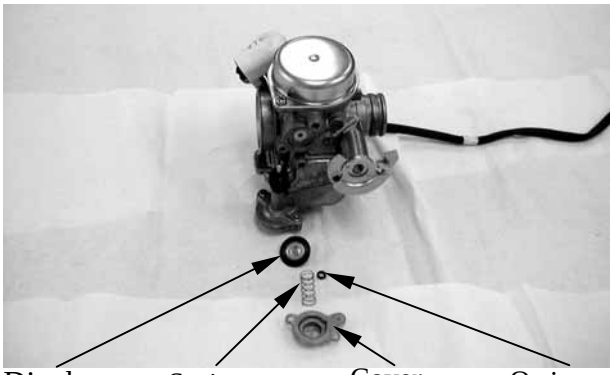




ASSEMBLY

Install the vacuum diaphragm onto the carburetor.
Install the spring and air cut-off valve cover.
Install the throttle cable set plate and tighten the two screws.

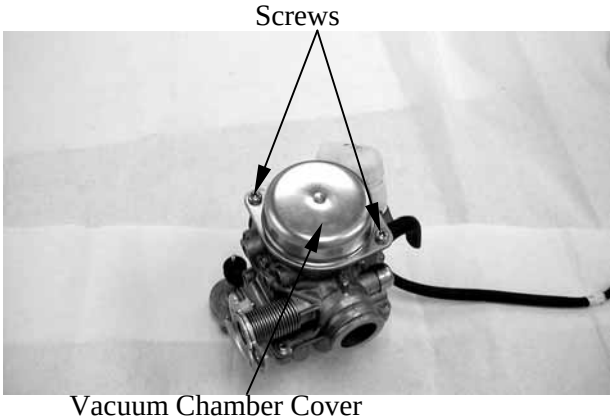
✳
- Be sure to set the vacuum diaphragm lip into the groove on the carburetor.
- When installing the air cut-off valve cover, make sure that the vacuum diaphragm is properly installed.



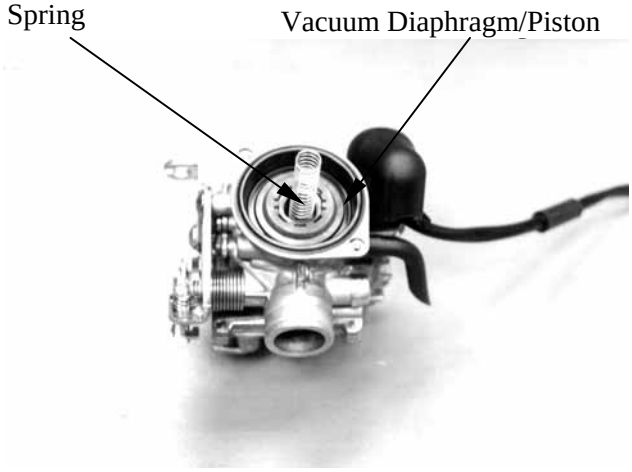
VACUUM CHAMBER

DISASSEMBLY

Remove the two vacuum chamber cover screws and the cover.

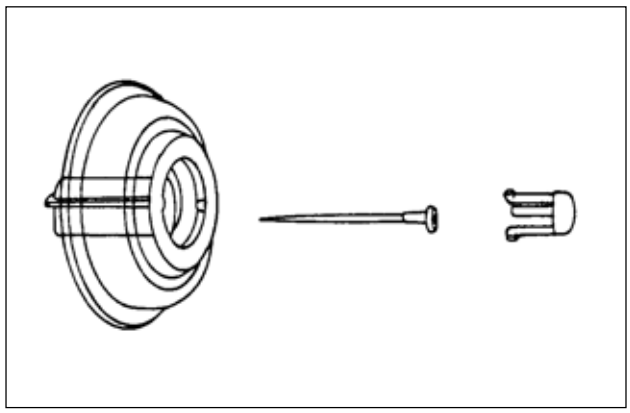


Remove the spring and vacuum diaphragm/ piston.



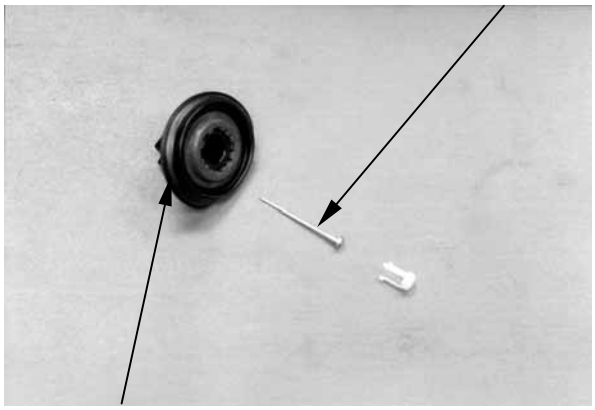
Remove the needle holder and jet needle.

* Be careful not to damage the vacuum diaphragm.



INSPECTION

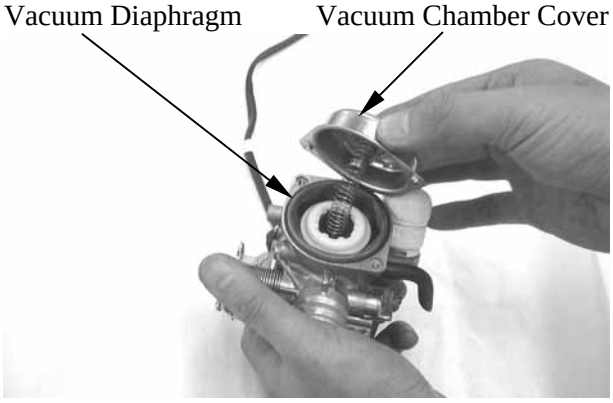
Inspect the needle for stepped wear.
Inspect the vacuum piston for wear or damage.
Inspect the diaphragm for deterioration and tears.



ASSEMBLY

Install the vacuum piston/diaphragm in the carburetor body.
Install the spring and then install the vacuum chamber cover.
Tighten the two screws.

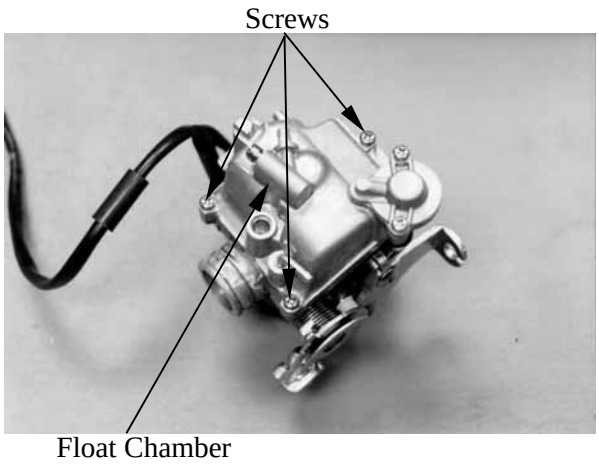
* • Be careful not to damage the diaphragm.
  • Hold the vacuum piston while tightening the vacuum chamber cover.



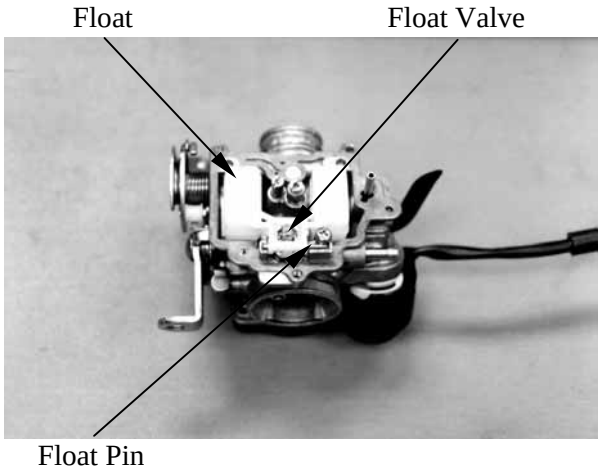
FLOAT CHAMBER

DISASSEMBLY

Remove the three float chamber screws and the float chamber.

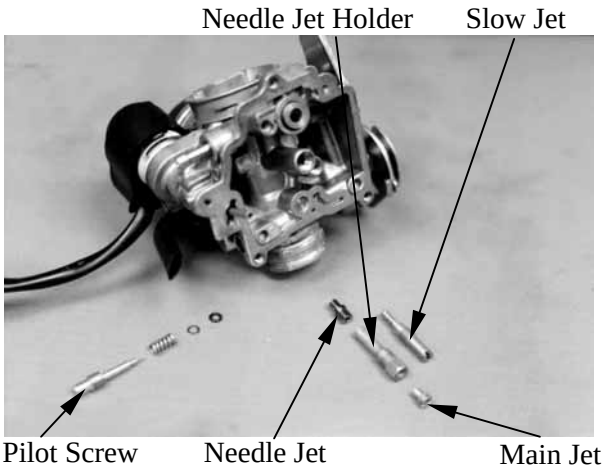


Loosen the float pin screw.
Remove the float pin, float and float valve.



Remove the main jet, needle jet holder, needle jet, slow jet and pilot screw.

✳
- Be careful not to damage the fuel jets and pilot screw.
- Before removing, turn the pilot screw in and carefully count the number of turns until it seats lightly and then make a note of this.
- Do not force the pilot screw against its seat to avoid seat damage.

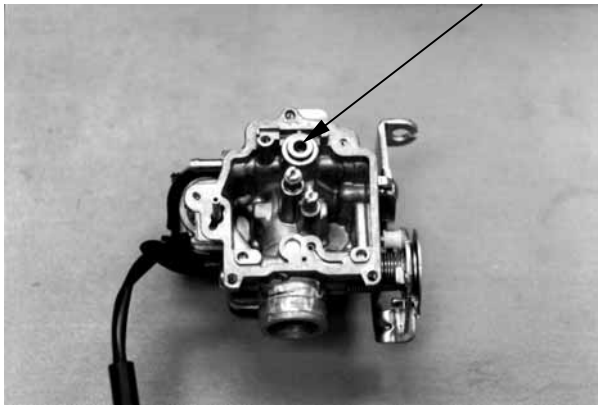


Clean the removed fuel jets with detergent oil and blow them open with compressed air.
Blow compressed air through all passages of the carburetor body.

INSPECTION

Inspect the float valve and valve seat for damage or clogging.
Inspect the float valve and valve seat contact area for stepped wear or contamination.

✳ Worn or contaminated float valve and valve seat must be replaced because it will result in float level too high due to incomplete airtightness.

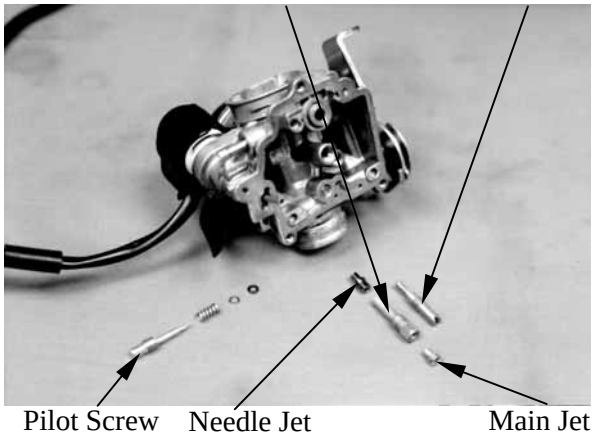


ASSEMBLY

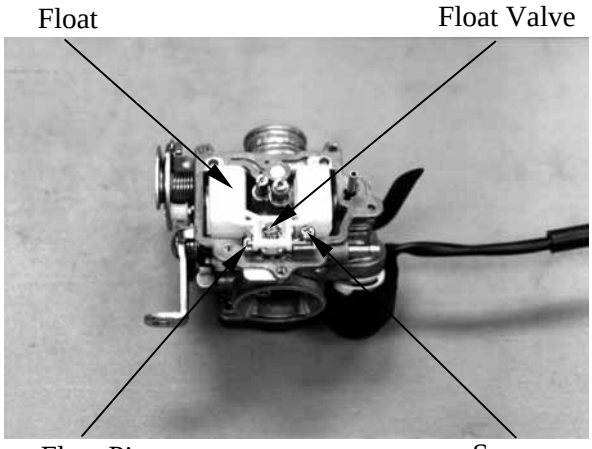
Install the slow jet, needle jet, needle jet holder, main jet and pilot screw.

✳ Return the pilot screw to the original position as noted during removal.

Standard Opening: $2\pm{}^{1}/_{2}$ turns



Install the float valve, float and float pin. Secure the float pin with the screw.

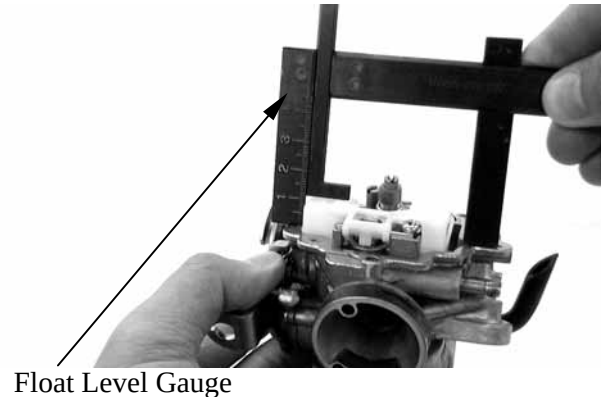


FLOAT LEVEL INSPECTION

✳
- Check the operation of the float valve and float before this inspection.
- Measure the float level by placing the float level gauge on the float chamber face parallel with the main jet.

Measure the float level.
Float Level: 17.0mm

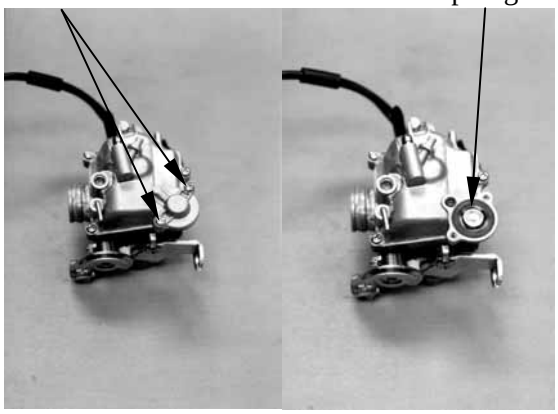
This installation sequence is the reverse of removal.



ACCELERATING PUMP

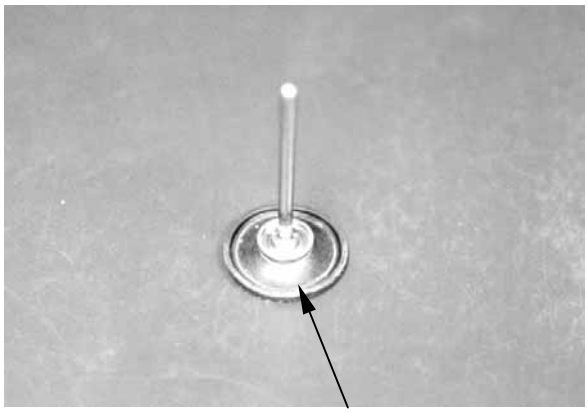
DISASSEMBLY

Remove the two accelerating pump cover screws and accelerating pump cover.
Remove the spring and accelerating pump diaphragm.

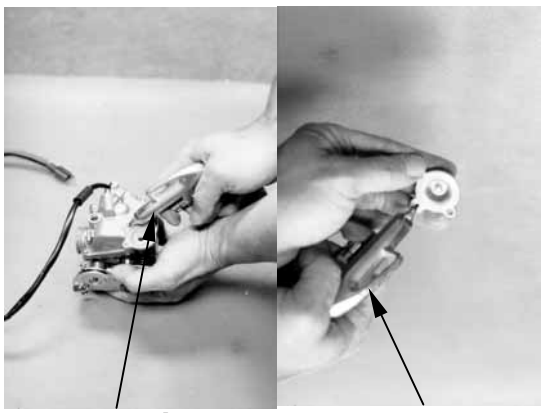


INSPECTION

Inspect the accelerating pump diaphragm for cracks, damage or deterioration.
Replace if necessary.



Check each accelerating pump fuel passage for clogging
Clean and blow them open with compressed air.

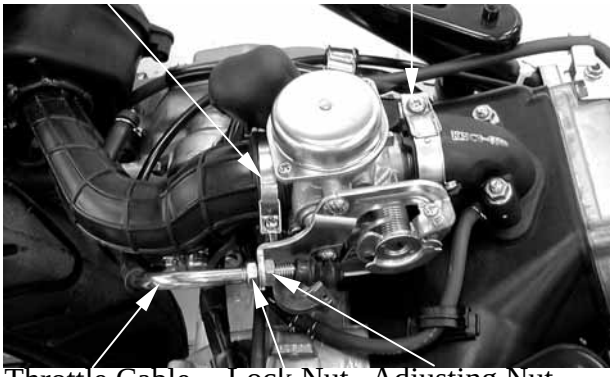


Install the accelerating pump in the reverse order of removal.

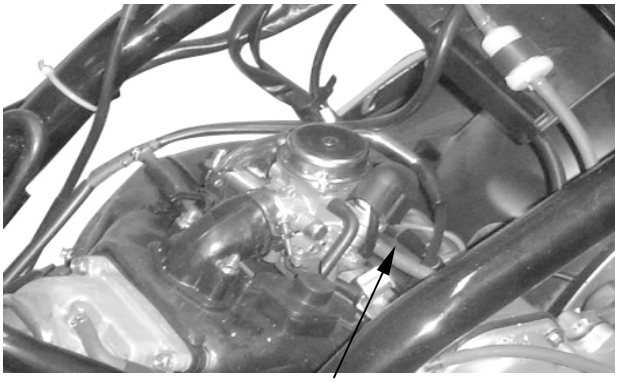
✳ Be careful not to damage the diaphragm during installation.

CARBURETOR INSTALLATION

Tighten the drain screw.
Install the carburetor onto the intake manifold, aligning the tab on the carburetor with the cutout in the intake manifold.
Tighten the intake manifold band screw.
Install the air cleaner connecting tube and tighten the band screw.
Connect the throttle cable to the throttle wheel on the carburetor.
Tighten the lock nut.



Connect the fuel tube and vacuum tube to the carburetor.



Connect the auto bystarter wire connector.
Perform the following inspections and adjustments:

-Throttle grip free play (⇨3-3)

-Carburetor idle speed (⇨3-5)

PILOT SCREW ADJUSTMENT

∗ **ADJUSTMENT**

∗
- The pilot screw is factory pre-set and no adjustment is necessary. During carburetor disassembly, note the number of turns of the pilot screw and use as a reference when reinstalling it.
- Place the motorcycle on its main stand on level ground for this operation.


Pilot Screw

A tachometer must be used when adjusting the engine speed.
Turn the pilot screw clockwise until it seats lightly and back it out to the specification given.

Standard Opening: $2\pm{}^{1}/_{2}$ turns

∗
- The carburetor must be adjusted when the engine is warm and the auto bystarter is closed.
- Do not force the pilot screw against its seat to prevent damage.

Warm up the engine and adjust the throttle stop screw to obtain the specified idle speed.

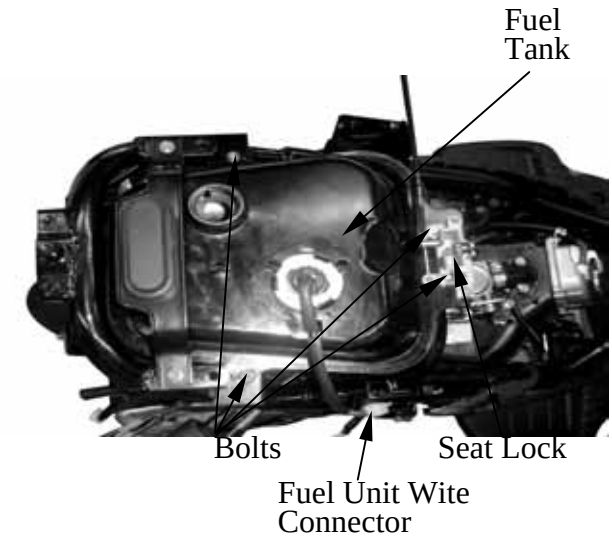
Idle Speed: 1900±100rpm

Turn the pilot screw in or out slowly to obtain the highest engine speed.
Slightly accelerate several times to make sure that the idle speed is within the specified range.
If the engine misses or runs erratic, repeat the above steps.

Throttle Stop Screw

FUEL TANK REMOVE

Remove the net-in box. (⇨2-3)
Remove the frame center cover.
Remove the frame body cover. (⇨2-3)
Remove the four bolts on the fuel tank, take the upper seat lock off.
Disconnect the fuel unit wire connector.
Remove the fuel tank.
The installation sequence is the reverse of removal.



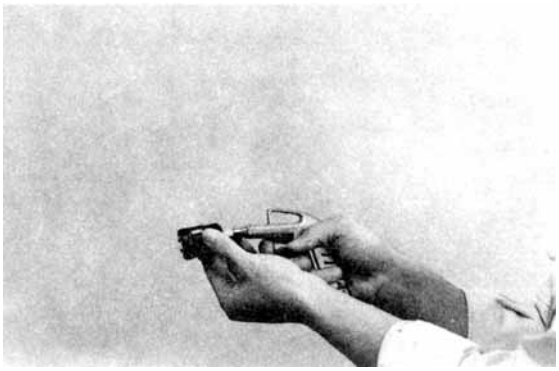
FUEL STRAINER REMOVAL

Remove the fuel strainer from the fuel tank.

INSPECTION

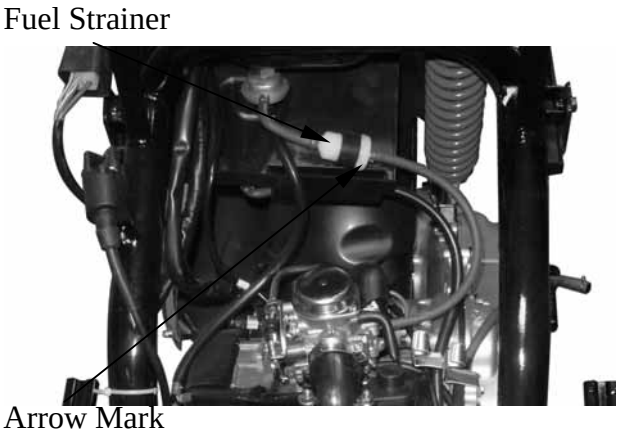
Inspect if the fuel strainer is clogged and clean it with compressed air.

✳
- When removing the fuel strainer, do not allow flames or sparks near the working area and drain the residual gasoline into a container.



INSTALLATION

Install the fuel strainer with its arrow mark toward the fuel pump.



FUEL UNIT

REMOVAL

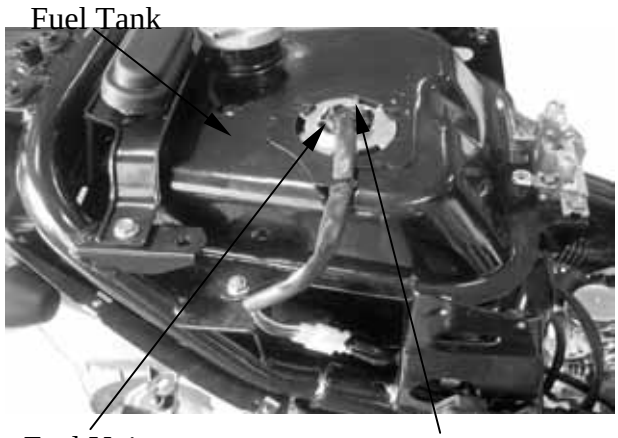
Remove the related parts.
Disconnect the fuel unit wire connector.
Turn the fixed plate on the fuel unit,take the fuel unit off.

✳ Do not bend the float arm on the fuel unit,otherwise the figure on the fuel meter will not correct.

INSTALLATION

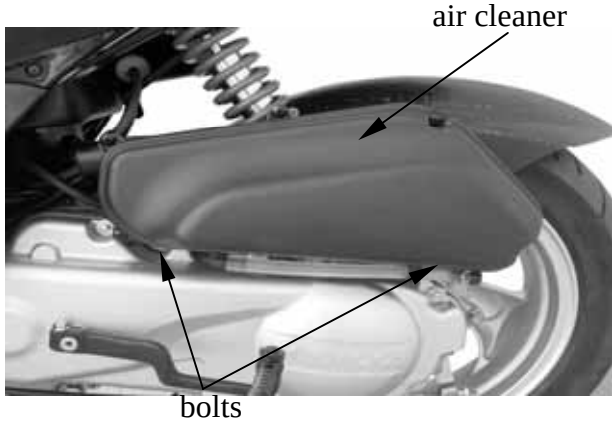
Inspet if the fuel unit is damaged,or harden.
Assemble the fuel unit in the reverse order of disassembly.

✳
- Align the groove on the fuel unit with the angle on the fuel tank.
- Inspect if the fuel tank leaked after installing and filling the gasoling.



AIR CLEANER

Loosen the air cleaner connecting tube band screw.
Disconnect the clinhead cover breather tube from the air cleaner.
Remove the two bolts and air cleaner case.



The installation sequence is the reverse of removal.