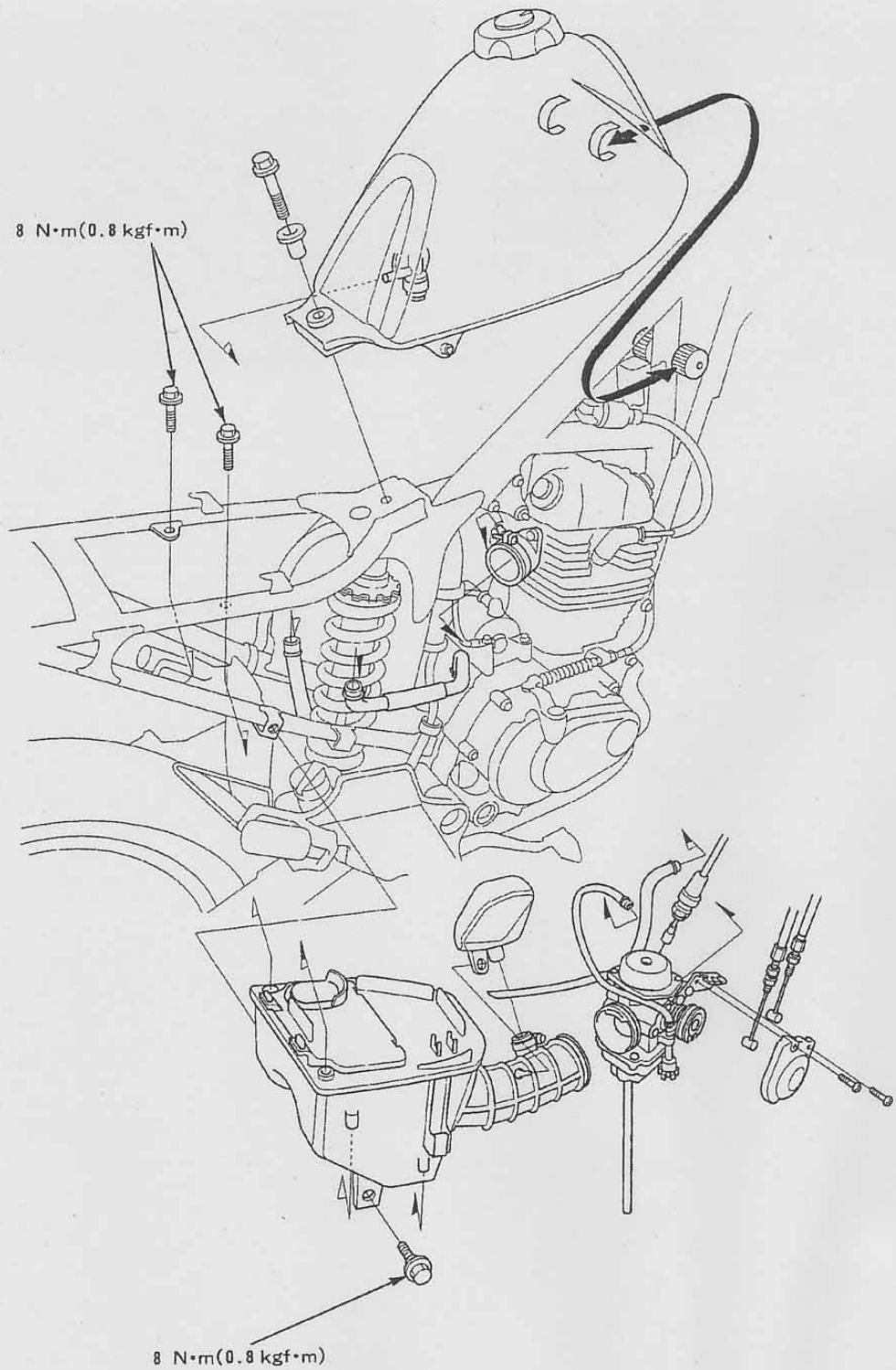


• Fuel System



Service Information.....	5 - 1	Pilot screw adjustment.....	5 - 13
Troubleshooting.....	5 - 2	Air filter case.....	5 - 14
Carburetor.....	5 - 3		

◆ Service Information

• General



- Petrol is highly flammable and explosive. Work in a well ventilated area. Do not smoke or allow flames or sparks in the work area.



- If the vehicle is to be stored for more than one month, drain fuel from the float chamber.
- Fuel left in the chamber may cause clogged slow jet resulting in unstable idling.
- There is no need to dismount the engine for the service works described in this chapter.
- After servicing items with the fuel cock OFF, turn it ON and check there is no fuel leak.
- Do not overstress cables. It may cause failure.
- Watch out for the O-Ring installation position and always install the new O-Rings when assembling.
- Loosen a drain screw on a float chamber to drain fuel from a carburetor before disassembling.
- Seal a port with a cloth or a tape after removing the carburetor to prevent debris entering the engine from the intake port.

• Specifications

Item		Standard
Carburetor	Type	VE3A
	Setting mark	VE3AA
	Venturi diameter	27.3mm equivalent
	Pilot screw opening	2.3/8 turns back
	Float level	18.5mm
	Idling rpm	1.400 ± 100rpm
	Main jet	#120
	Slow jet	#35
Throttle grip free play		2 - 6mm

• Torque Settings

Fuel cock lock nut	26N.m (2.7kgf-m)
Air filter case bolt	8N.m (0.8kgf-m)

- **Special tools**

Float level gauge 07401 – 0010000
Pilot screw wrench 07908 – 4730001

- **Troubleshooting**

The engine does not start

- Fuel cock is turned OFF
- No fuel in tank
- No fuel to carburetor
 - clogged fuel strainer
 - clogged fuel tube
 - faulty float valve
 - improper float level
 - clogged air vent on the fuel tank cap
- Engine flooded with fuel
 - clogged air filter
 - carburetor overflow
- Intake air leak
- Fuel contaminated
- Clogged slow system
- Improper use of choke valve
- No spark at plug (sec. 15)

Too lean mixture

- Clogged fuel jets
- Faulty float valve
- Float level too low
- Clogged fuel system
- Clogged carburetor air vent tube
- Intake air leak
- Blocked fuel tank cap vent

Too rich mixture

- Choke valve is applied
- Faulty float valve
- Float level too high
- Clogged air jets
- Clogged air filter element
- Carburetor overflow

Engine is difficult to start / stalls / idles roughly

- Improper valve clearance
- Clogged fuel system
- Overtightened cylinder head cover bolt (8mm)
- Faulty ignition system
- Too lean or too rich mixture
- Fuel contaminated
- Intake air leak
- Improper idling rpm
- Clogged slow system
- Improper float level
- Blocked fuel tank cap vent

Afterburning during engine braking

- Lean mixture in slow system
- Air leak in air cutoff valve tube

Backfiring and misfiring during acceleration

- Faulty ignition system
- Too lean mixture

Lack of power and high fuel consumption

- Clogged air filter
- Faulty ignition system
- Too lean mixture

◆ Carburetor



Keep away from flames or sparks.

• Removal

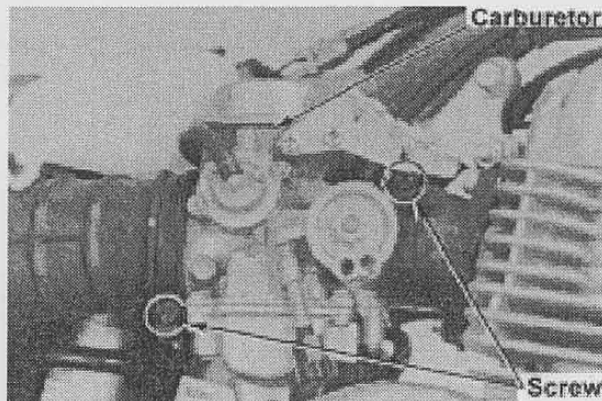
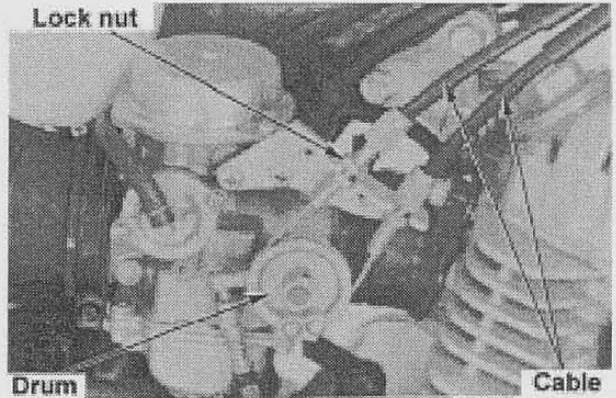
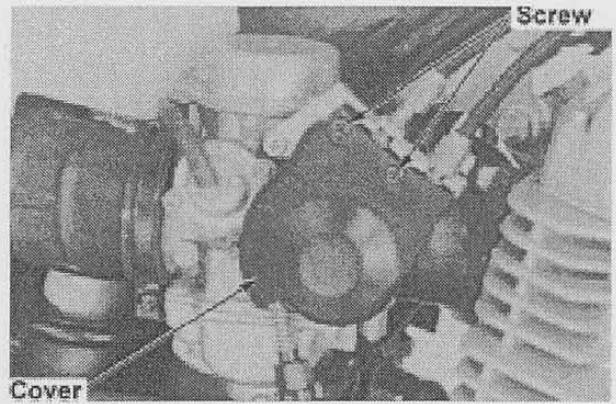
Remove a side cover (2-2).
Remove a fuel tank (2-10).
Place a suitable container under the carburetor and loosen the drain screw to drain the fuel in a float chamber.

Unscrew two screws to remove a throttle drum cover.

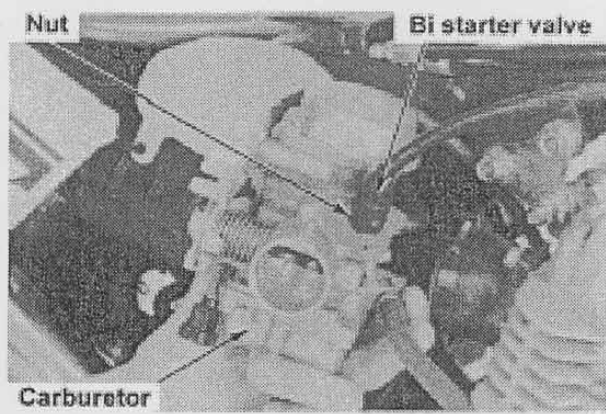
Loosen a lock nut to disconnect a throttle cable from the throttle drum.

Disconnect an air cutoff valve tube from an insulator.

Loosen an insulator band screw and a connecting band screw to remove the carburetor.



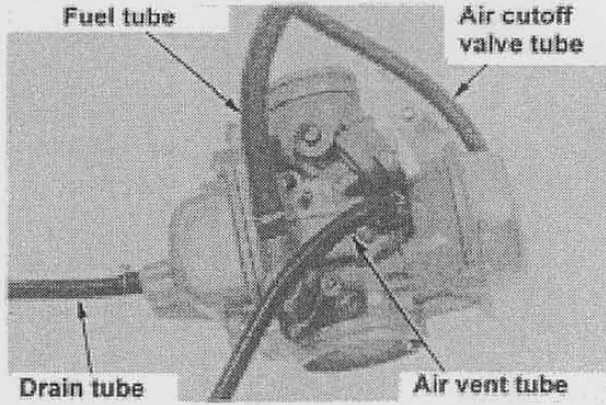
Loosen a bistarter valve nut to disconnect a bistarter valve and dismount the carburetor Assy.



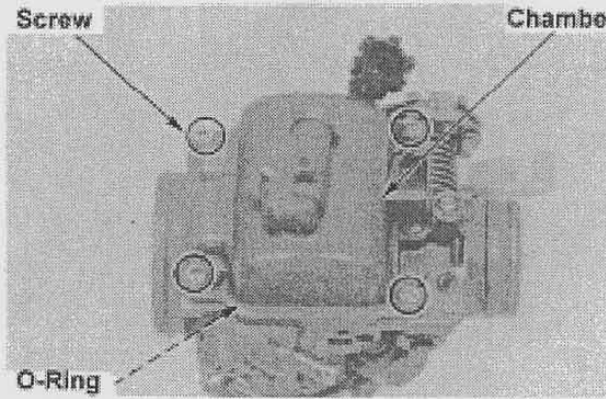
• **Disassembly**

Remove the following parts:

- fuel tube
- drain tube
- air vent tube
- air cutoff valve tube

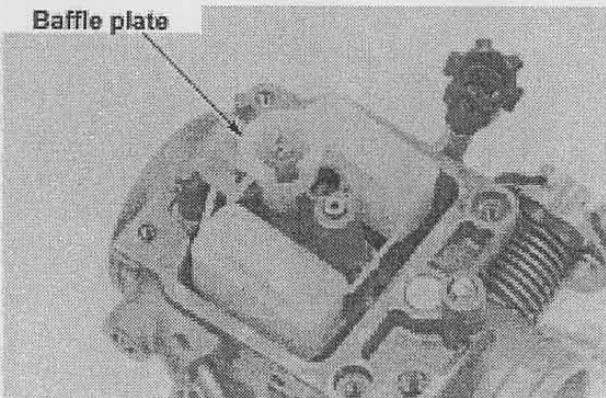


Remove screws to remove a vacuum chamber cover.



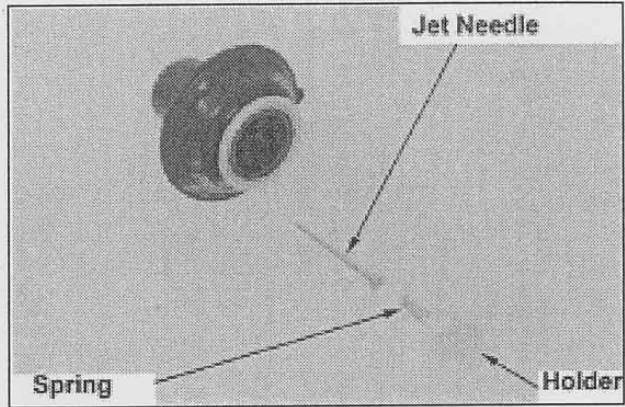
Remove a spring and a vacuum piston / diaphragm.

Check smooth movement of the piston in the carburetor body.



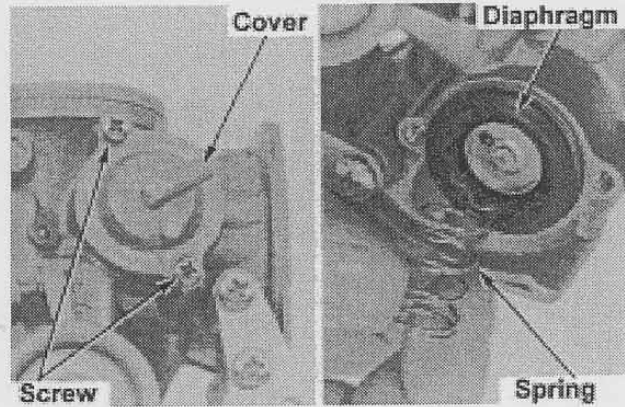
Remove the jet needle holder by rotating it counter clockwise.

Remove the spring and jet needle.

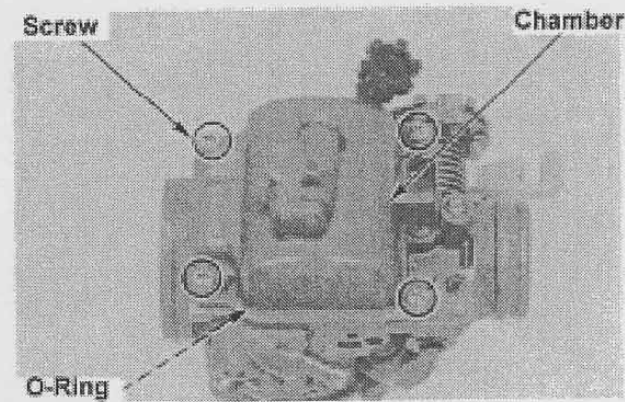


Note:
The air cutoff valve cover is pressed by the spring. Do not lose the spring or the screws when removing the cover.

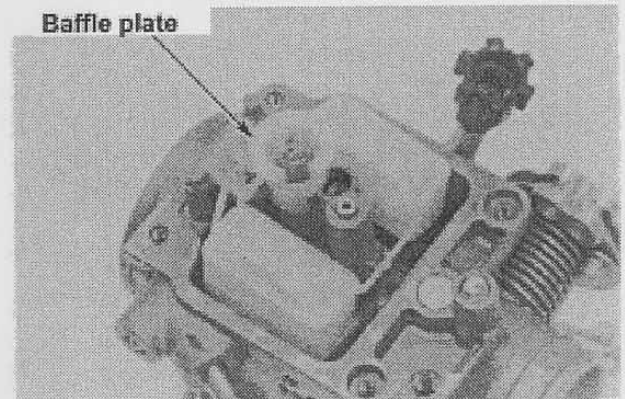
Remove screws to remove the cover, spring and the diaphragm.



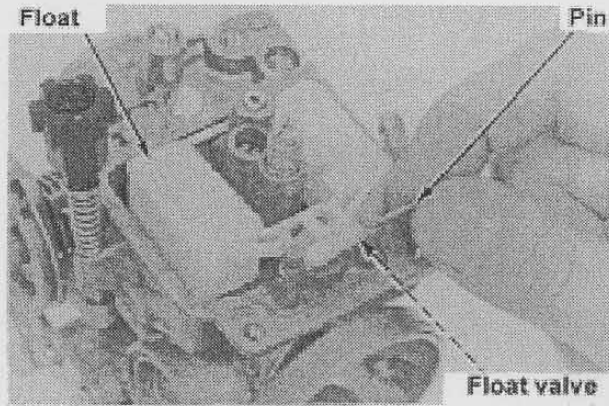
Unscrew to remove a float chamber and O-Ring.



Remove baffle plate.



Remove the float pin to remove float and float valve.

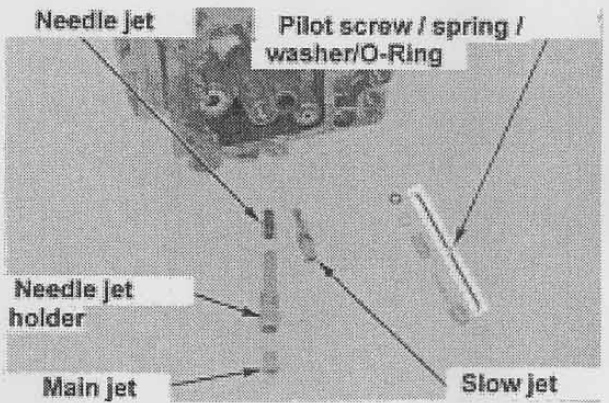
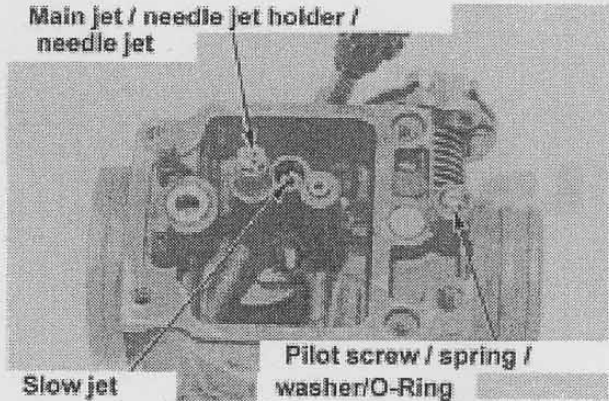


Remove the following parts:

Caution

- Jets are made out of soft material. Handle with care.
- Do not overtighten a pilot screw to avoid damaging the seat surface.

- main jet
- needle jet holder / needle jet
- slow jet
- pilot screw/spring/washer/O-Ring



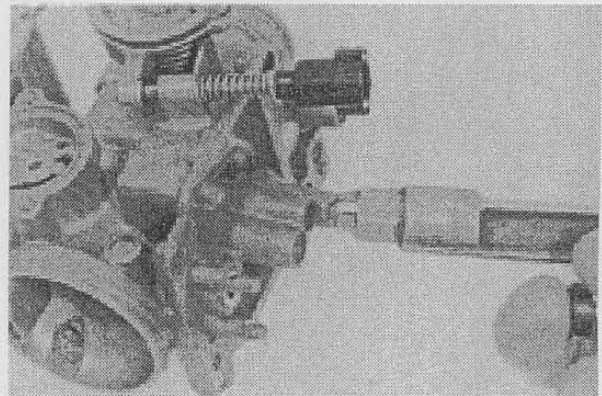
Note:
Record the number of turns of the pilot screw until it touches the seat.

• Carburetor Cleaning

Use compressed air to clean the carburetor body air passages and fuel passages.

Caution

Use compressed air after removing all diaphragms.

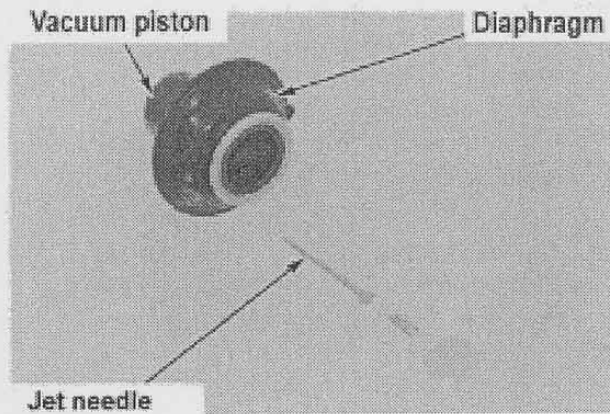


• Inspection

Vacuum piston / diaphragm

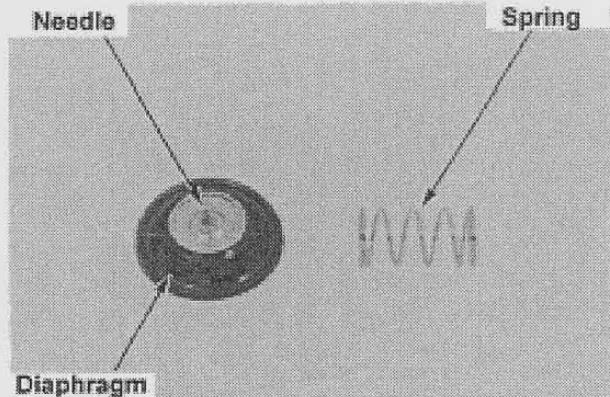
- Jet needle step wear → replace
- Vacuum piston damage → replace
- Diaphragm damage, pinhole or bent → replace

Carefully inspect damages and pin holes around the diaphragm as they affect pressurization.



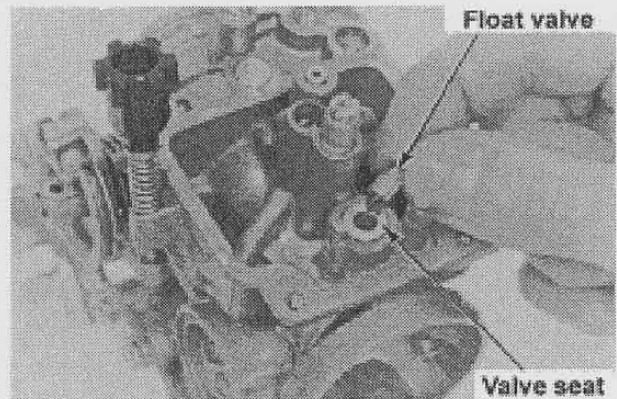
Air cutoff valve

- Diaphragm damage/pin hole
 - → replace
- Diaphragm needle wear → replace
- Spring deformation → replace



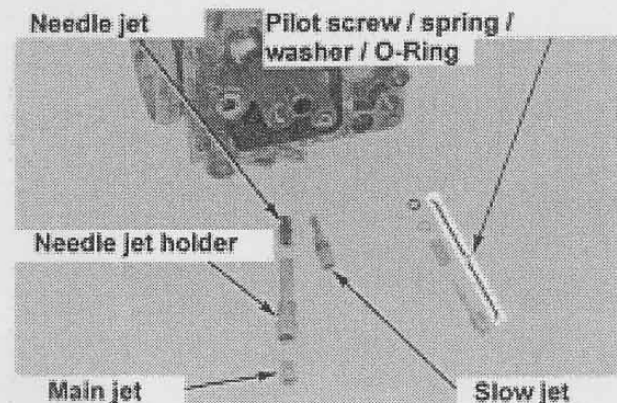
Float valve and valve seat

- Float damage → replace
- Float valve/valve seat damage /clog → clean or replace
- Valve seat contact surface wear → replace



Pilot screw

- Pilot screw needle damage/deformation → replace
- Spring damage/deformation
 - → replace
- O-Ring wear/damage → replace



Jets

Inspect each jet for wear and clog. Clean the jets and the holders with cleaning oil and apply compressed air.

• **Bistarter valve**

Check the smooth operation of a choke lever from full open to full close.

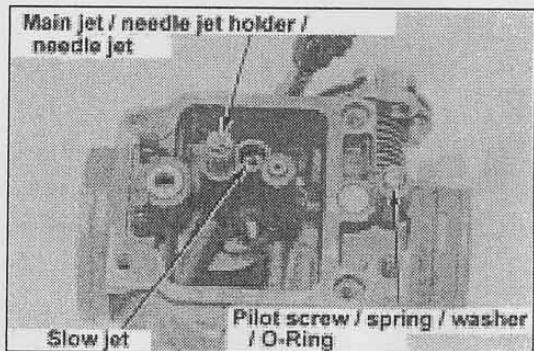
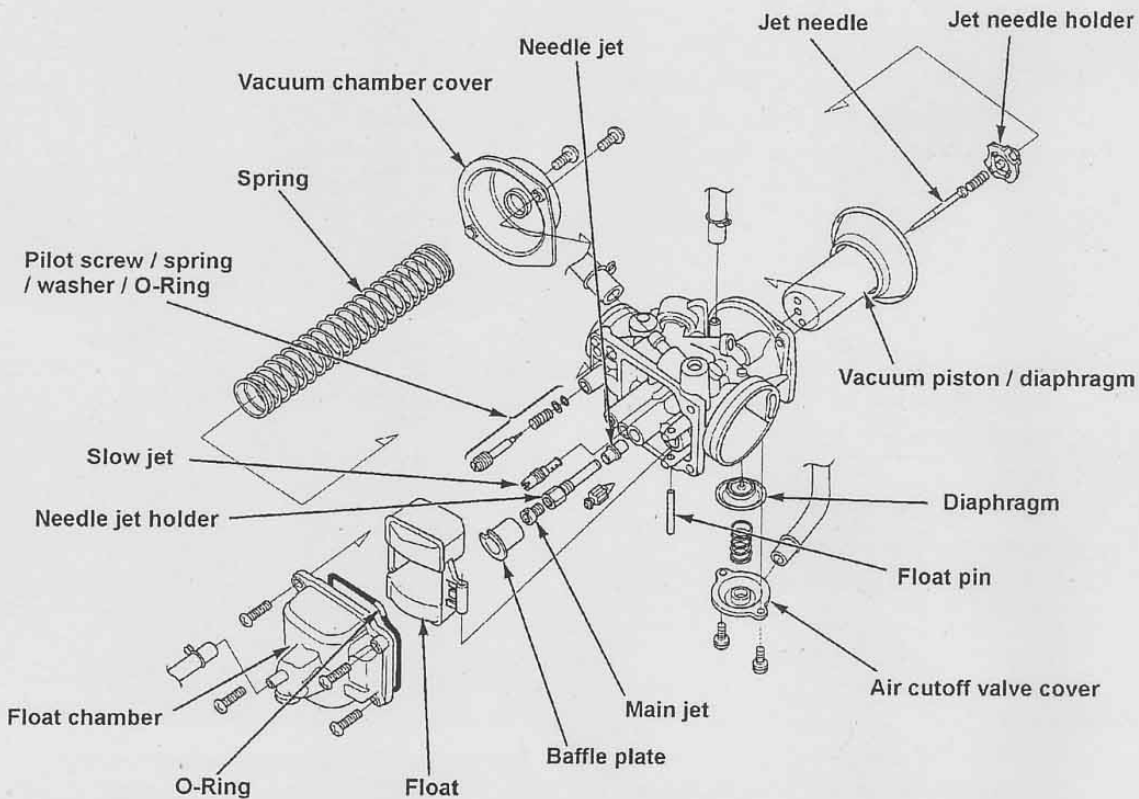
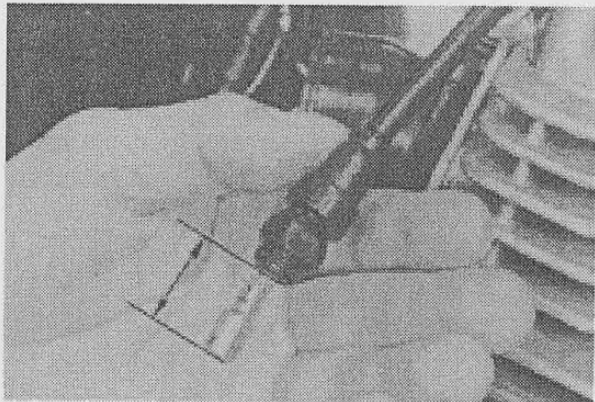
Inspect the choke cable for damage and deformation.

- Valve needle wear → replace
- Spring wear → replace

Set the choke lever to full close position.

Measure the distance between the valve step and the nut.

Standard: 27.5 ~ 30.5mm



- **Float level**

Install the float, the float valve and the float pin.

Measure the float level with the float valve and the float lip just touching.

Special tool

Float level gauge 07401-0010000

Float level: 18.5mm

Note:

Set the float level gauge perpendicular to the float chamber mount surface and use it at the main jet.

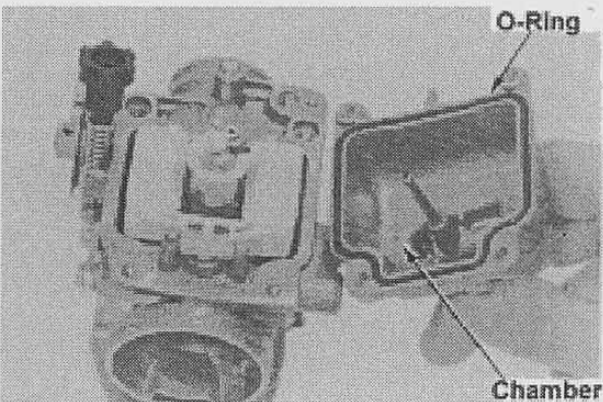
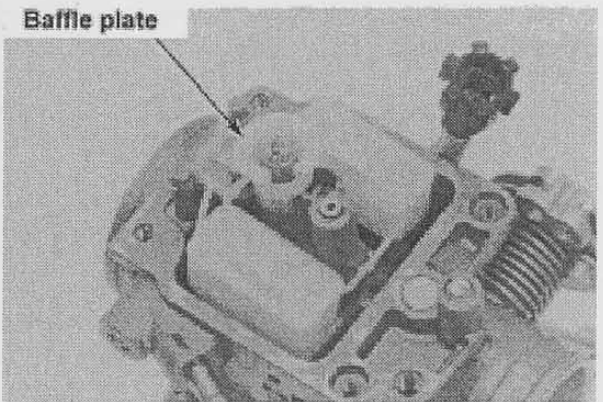
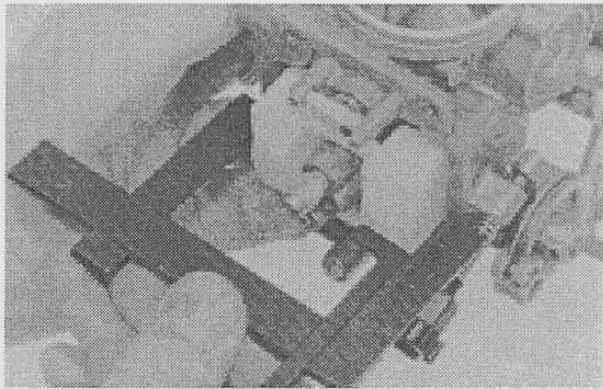
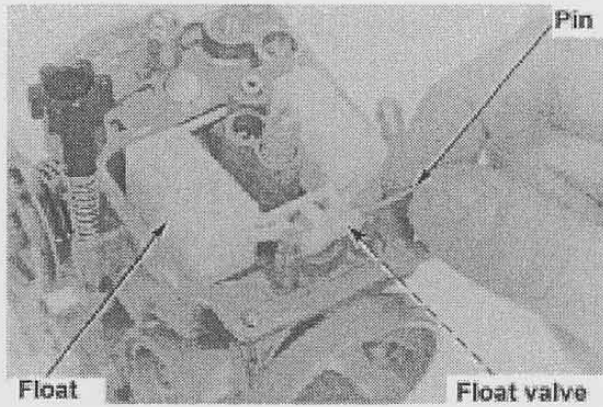
If the float level is out of the above number, inspect the float valve and the valve seat.

Replace them if necessary.

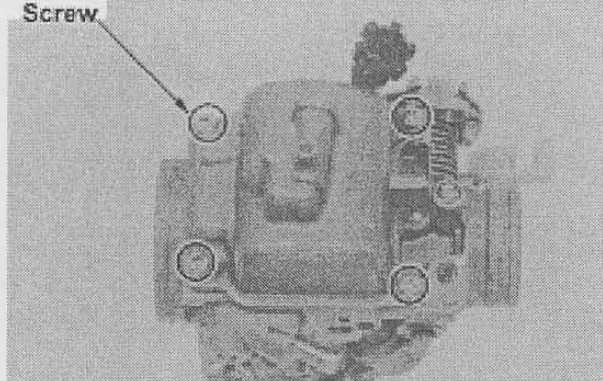
Install the baffle plate.

Inspect and replace the O-Ring if necessary.

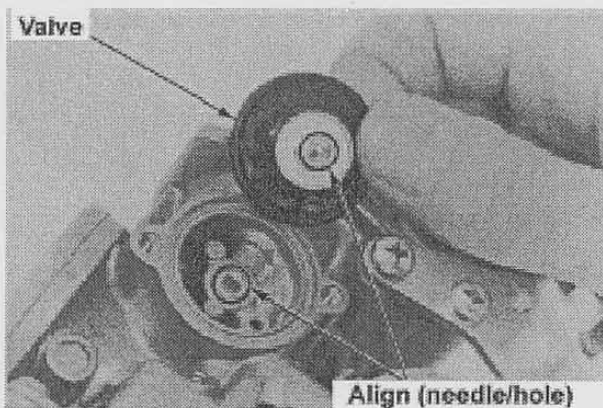
Install the O-Ring to the float chamber.



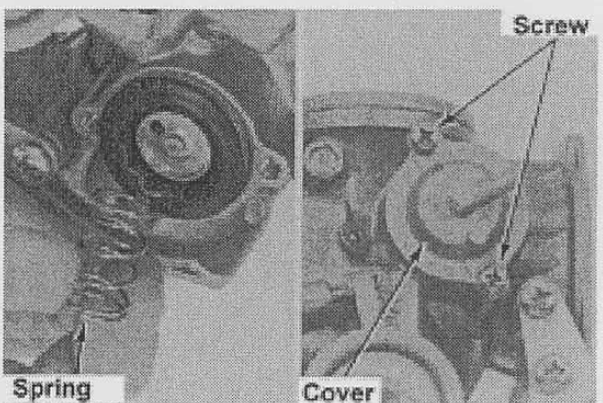
Install the float chamber and tighten screws.



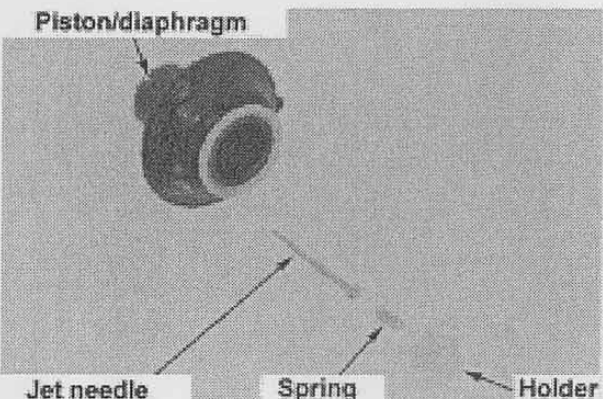
Align the needle on an air cutoff valve and the hole on a carburetor body and set the valve to the carburetor body.



Install a spring and an air cutoff valve cover and tighten the screws.



Set a jet needle to a vacuum piston.
Set a spring to a needle holder and install the holder to the vacuum piston.

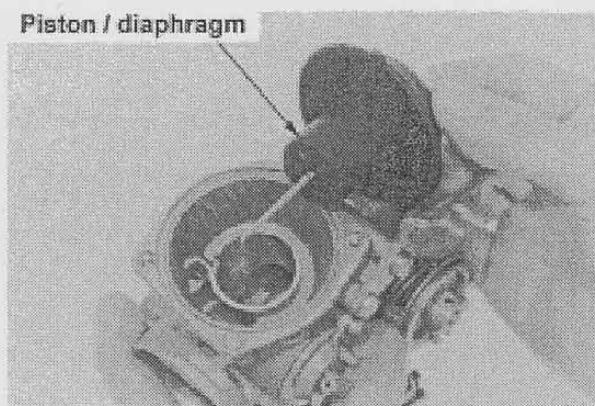


Push in the needle holder and rotate clockwise until it is locked.

After installing the holder, check the holder flange is fixed on the projection of the piston.

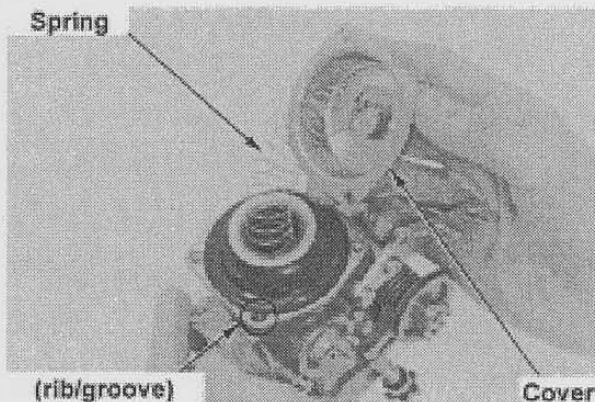
Install the vacuum piston / diaphragm to the carburetor body.

Push up the bottom of the vacuum piston and firmly set the diaphragm rib to the carburetor body groove.

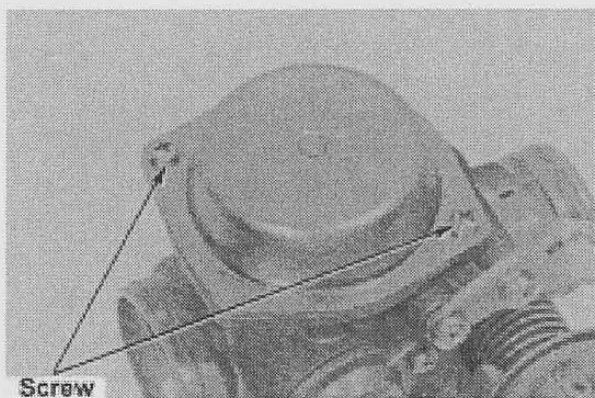


- Notes:
- Do not catch the diaphragm.
- Do not bend the spring. Press the spring straight in to keep the diaphragm rib fitted to the groove when installing the chamber cover.

Install the spring and the chamber cover while holding the vacuum piston.

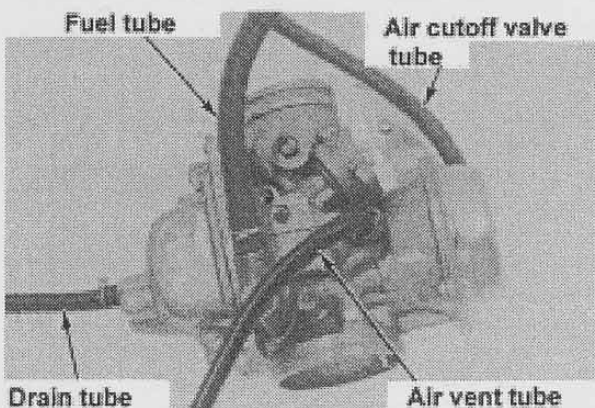


Set and tighten the screws.



Connect the following tubes:

- fuel tube
- drain tube
- air vent tube
- air cutoff valve tube



- **Installation**

Note:
Route cables and tubes by referring to the routing diagram (1-21).

Set the bistarter valve to the carburetor and tighten the valve nut.

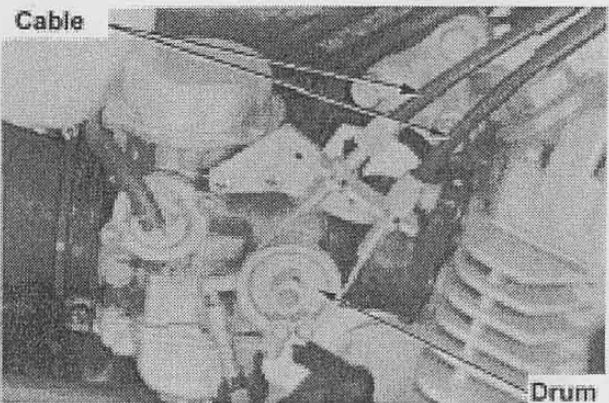
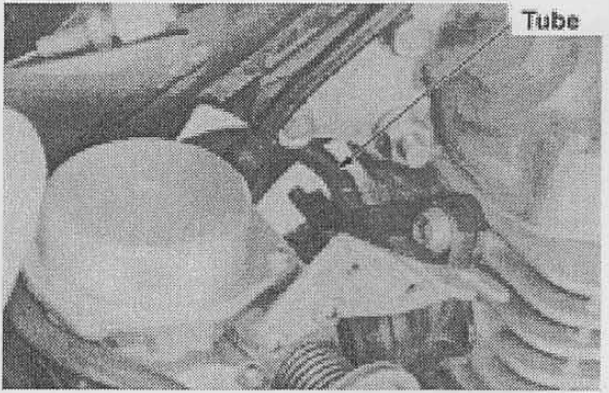
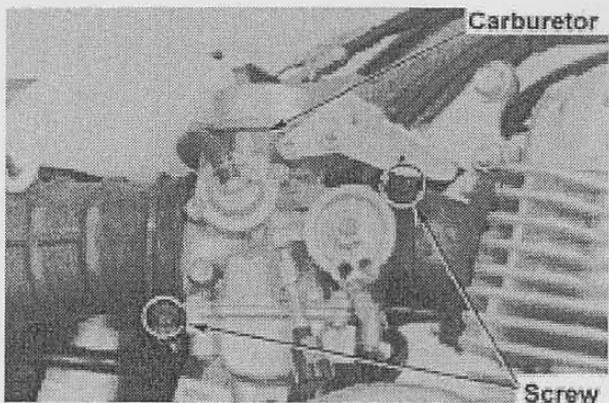
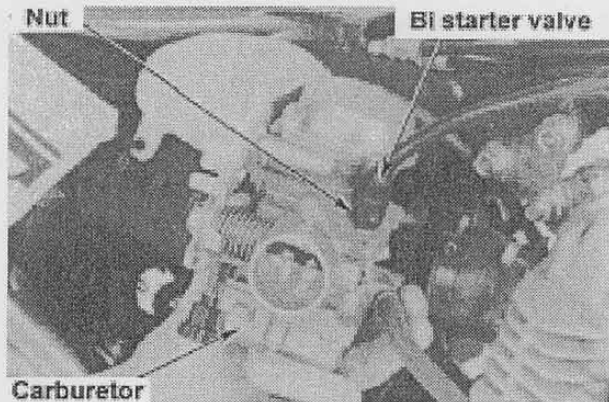
Mount the carburetor Assy between the connecting tube and the insulator.

Note:
Set the carburetor projection to the groove on the insulator.

Firmly tighten the connecting tube band screw and the insulator band screw.

Connect an air cutoff valve tube to the insulator.

Connect the throttle cable to the throttle drum.
Adjust the free play of the throttle (3-18).



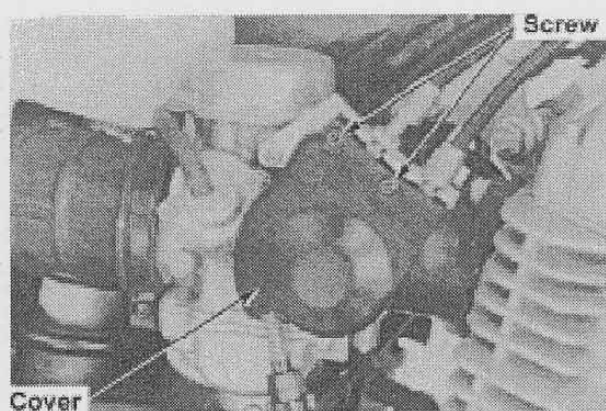
Install a throttle drum cover and tighten screws.

Install a fuel tank (2-11).

Install a side cover (2-2).

Note:

After the work, turn the fuel cock ON and check for fuel leak.



Adjust idling rpm (3-17).

If the pilot screw was replaced, adjust it by following the procedure below.

• **Pilot Screw Adjustment**

• **Notes:**

- The pilot screw is factory pre-set and no adjustment is required unless the screw is replaced. Turn the pilot screw back to the recorded turns.
- Fix the vehicle in straight up position. Make sure it is secured.
- Adjust the pilot screw after warming up the engine.

1. Install a tachometer which can accurately indicate a 50rpm change.
2. Turn the pilot screw until it gently touches the seat and turn back to the standard turns.

Standard turn (back): 2 3/8 turns

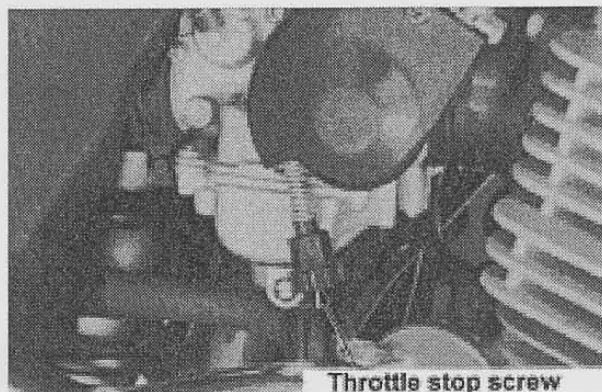
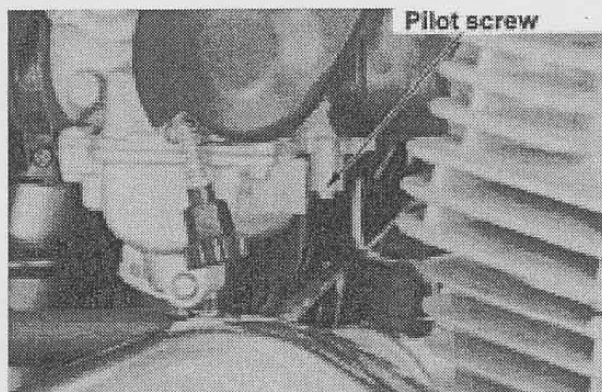
Special tool

Pilot screw wrench 07908-4730001



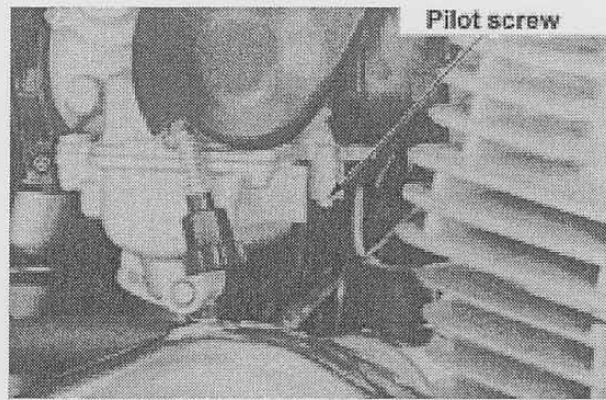
Do not overtighten to avoid damaging the seat.

3. Warm up the engine and set the standard idle rpm by adjusting the throttle stop screw.



4. Turn (back or in) the carburetor pilot screw for ½ turn and find out the position where the maximum idling rpm is obtained.
5. Snap a few times and turn the throttle stop screw to re-adjust the idling rpm.

If you fail to adjust, repeat from 2.

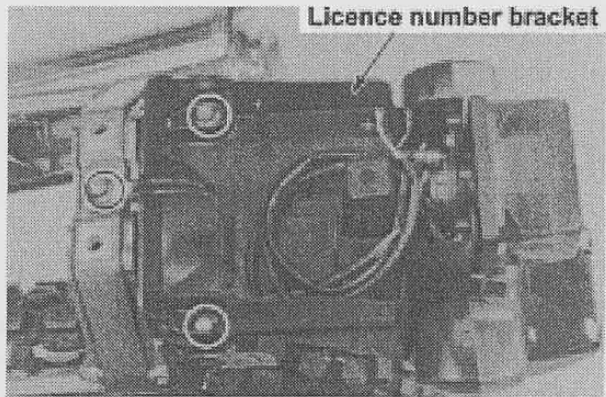


◆ Air Filter Case

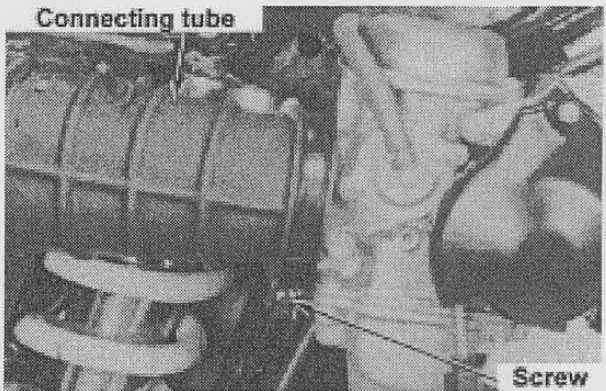
• Removal

Remove the following parts:

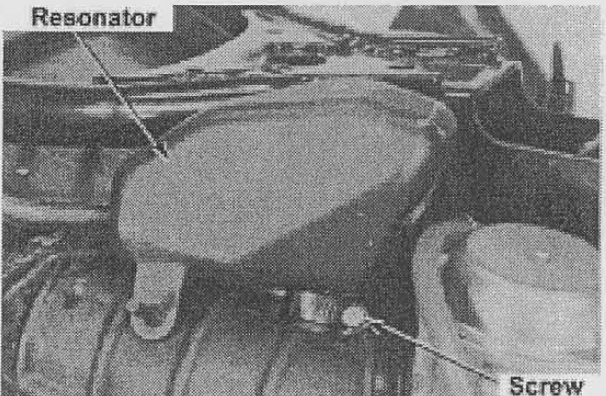
- side cover (2-2)
- licence number plate bracket (2-4)
- muffler (2-6)
- fuel tank (2-10)
- battery case (14-6)



Loosen a connecting tube band screw to disconnect the connecting tube from the carburetor.



- Remove the following parts:
- resonator band screw
 - resonator



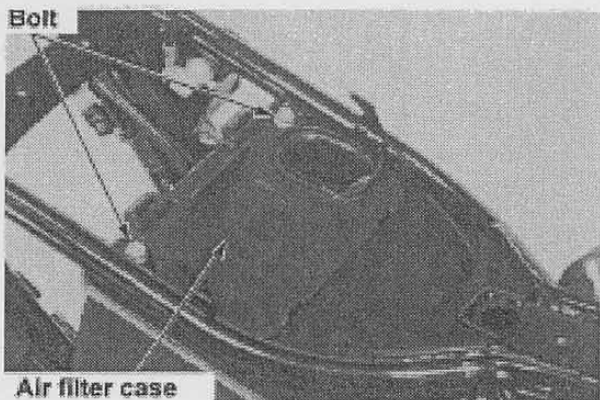
DTA

Remove an air cleaner case lower mount bolt.

Disconnect a crankcase breather tube.



Remove upper mount bolts to remove an air filter case.



• Installation

Follow the removal procedure in reverse order.

Torque:

Air filter case bolt: 8N.m (0.8kgf-m)

- Notes:
- Route wires and harness by referring to the routing diagram (1-21).
- Do not forget to connect the crankcase breather tube.