

## **5. FUEL SYSTEM**

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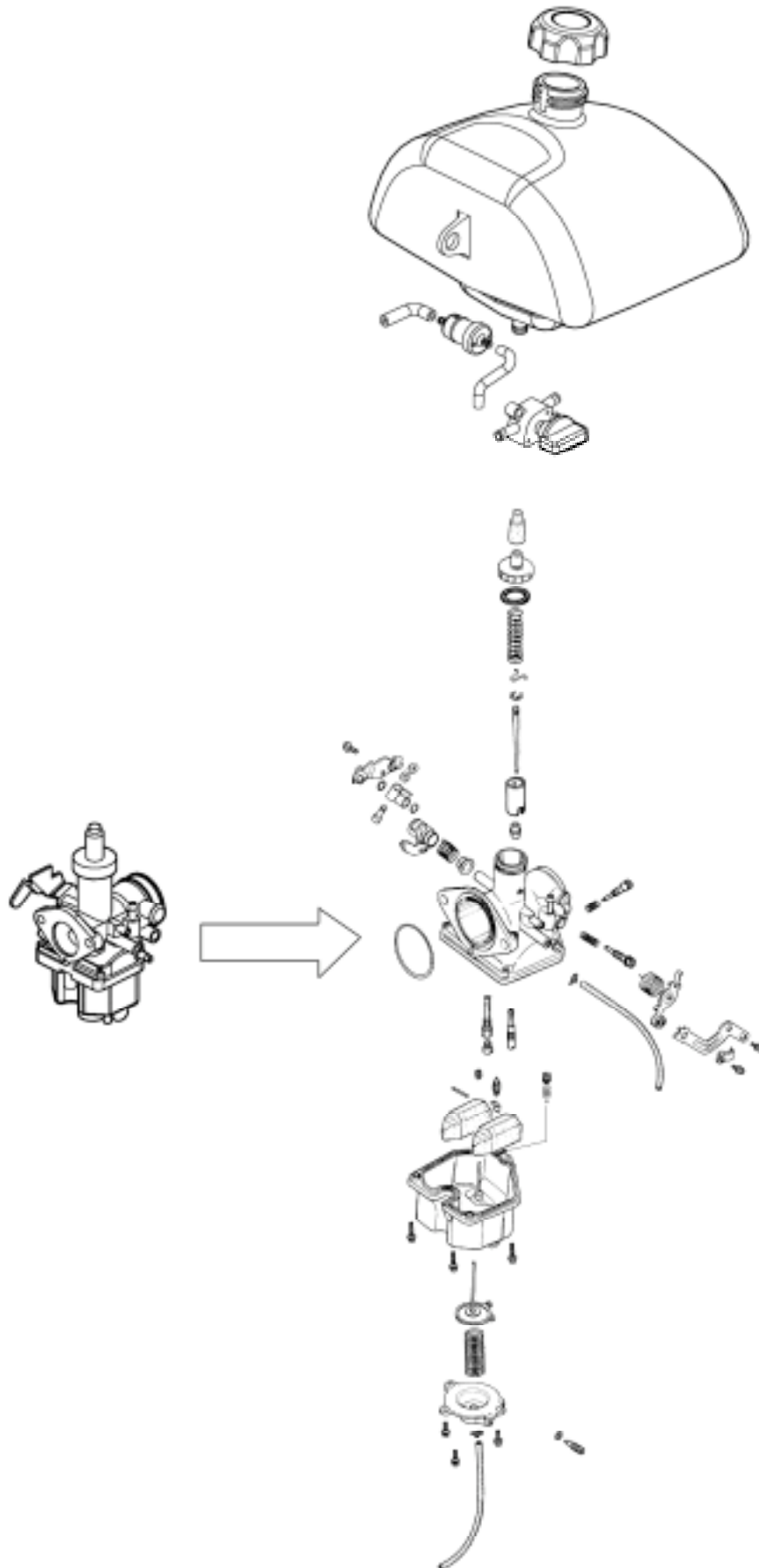
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### **FUEL SYSTEM**

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## 5. FUEL SYSTEM



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### 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.

- 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 reassembly.
- 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.
- When cleaning the carburetor air and fuel jets, the O-rings and diaphragm must be removed first to avoid damage. Then, clean with compressed air.
- When the machine 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(Mongoose/KXR 90)	Standard(Mongoose/KXR 50)
Type	PB	PB
Venturi dia.	□14	□14
Slow jet No.	#35	#38
Main jet No.	#100	#80
Adjust method	Piston	Piston
Idle speed	1700±100rpm	2000±100rpm
Throttle grip free play	1_ 4mm	1_ 4mm
Float level	8.0mm	8.0mm
Air screw opening	1±1/4	1±1/4

## **5. FUEL SYSTEM**

### **SPECIAL TOOL**

Float level gauge

### **TROUBLESHOOTING**

#### **Engine cranks but won't start**

- No fuel in tank
- No fuel to carburetor
- Cylinder flooded with fuel
- No spark at plug
- Clogged air cleaner
- Intake air leak
- Improper throttle operation

#### **Engine idles roughly, stalls or runs poorly**

- Faulty auto bystarter
- Ignition malfunction
- Faulty carburetor
- Poor quality fuel
- Lean or rich mixture
- Incorrect idle speed

#### **Misfiring during acceleration**

- Faulty ignition system
- Faulty carburetor

#### **Backfiring at deceleration**

- Float level too low
- Incorrectly adjusted carburetor
- Faulty exhaust muffler

#### **Engine lacks power**

- Clogged air cleaner
- Faulty carburetor
- Faulty ignition system

#### **Lean mixture**

- Clogged carburetor fuel jets
- Float level too low
- Intake air leak
- Clogged fuel tank cap breather hole
- Bent, kinked or restricted fuel line

#### **Rich mixture**

- Float level too high
- Clogged air jets
- Clogged air cleaner

## 5. FUEL SYSTEM

### FUEL TANK

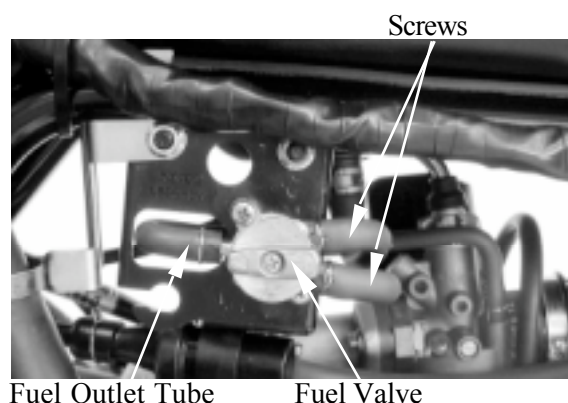
#### REMOVAL

##### Warning

- Keep sparks and flames away from the work area.
- Wipe off any spilled gasoline.

Remove front fender (See page 2-5).

Switch the fuel valve “OFF”.  
Disconnect the fuel outlet tube from fuel valve.  
Remove two screws attaching the fuel valve and holder.



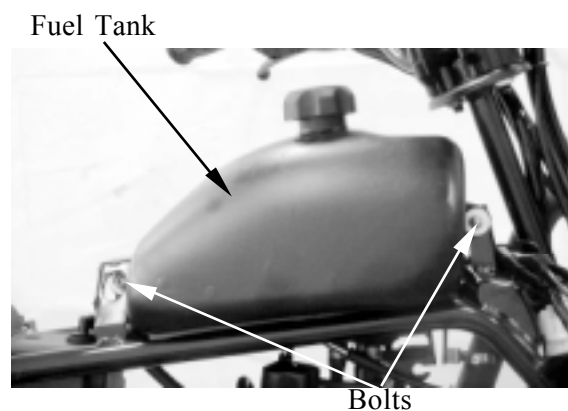
Fuel Outlet Tube

Fuel Valve

Remove the two bolts and then remove the fuel tank.

#### INSTALLATION

Reverse the “FUEL TANK REMOVAL” procedures.



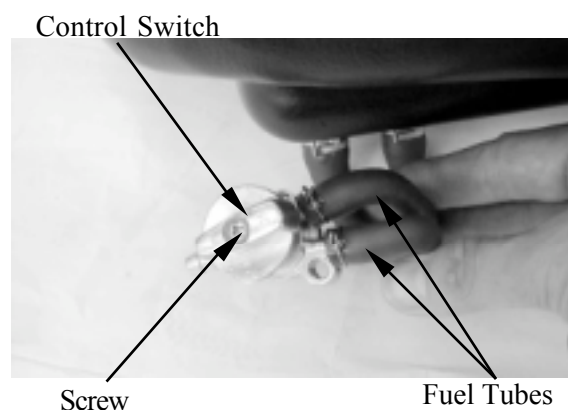
Fuel Tank

Bolts

### FUEL VALVE REMOVAL

- Keep sparks and flames away from the work area.
- Drain gasoline into a clean container.

Remove the screw and then remove control switch.  
Disconnect all fuel tubes and then remove fuel valve.



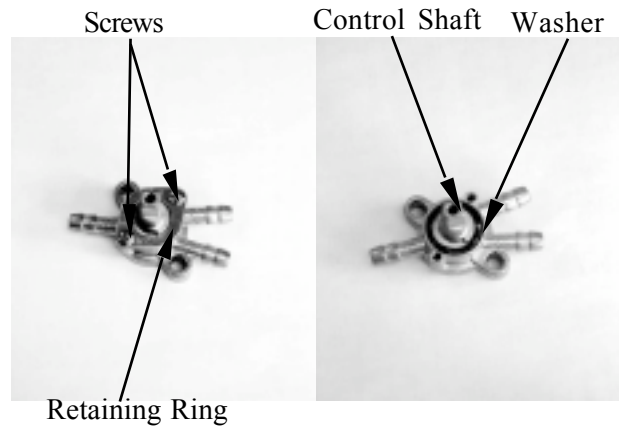
Screw

Fuel Tubes

## 5. FUEL SYSTEM

### DISASSEMBLY

Remove the two screws on the retaining ring and then remove retaining ring.  
Remove the washer and control shaft.

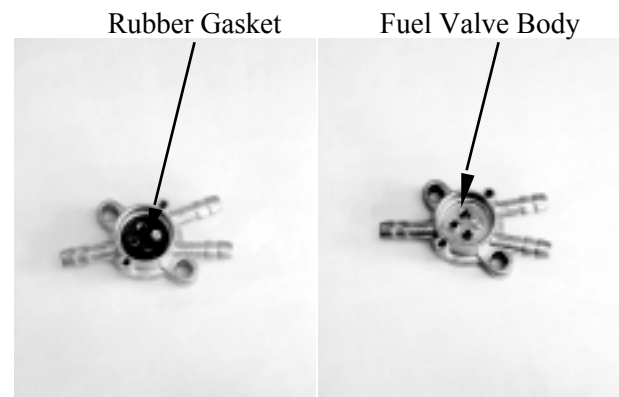


Remove the rubber gasket from the fuel valve body.

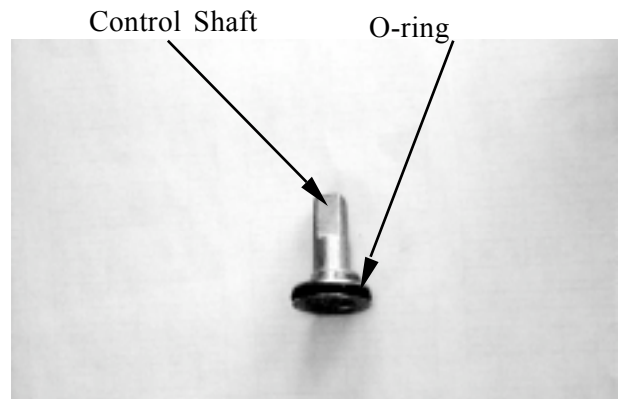
### INSPECTION

Inspect the fuel valve body for dirt and clog.  
Clean if necessary.

Replace the rubber gasket with new ones if they are damaged or deteriorated.



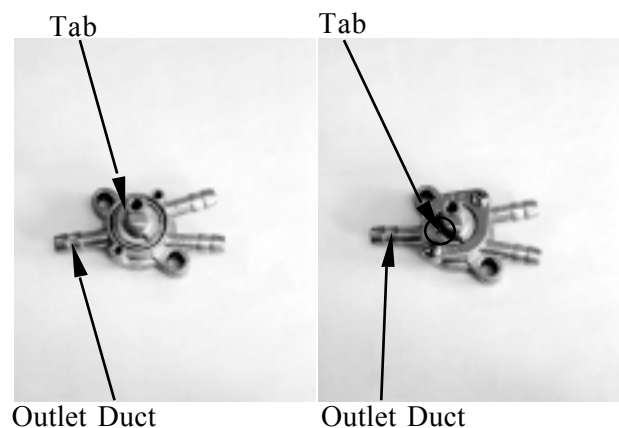
Replace the O-rings with new ones if they are damaged or deteriorated.



### ASSEMBLY

Reverse the "DISASSEMBLY" procedures.  
Install rubber gasket, control shaft, washer and retaining ring.

- Aligning the tab on the control shaft with the outlet duct in the fuel valve body.
- Aligning the tab on the retaining ring with the outlet duct in the fuel valve body.



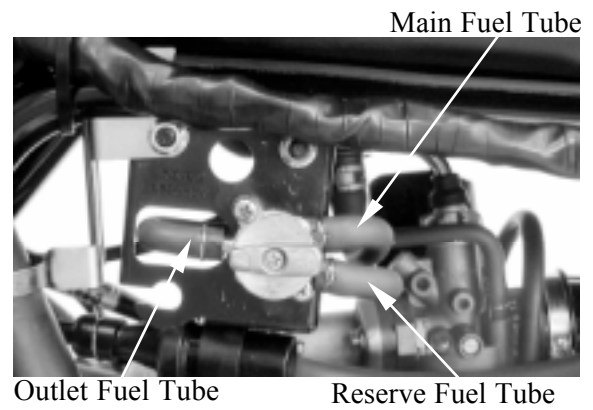
## 5. FUEL SYSTEM

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### INSTALLATION

Reverse the “FUEL VALVE REMOVEAL” procedures.

Connect all fuel tube.



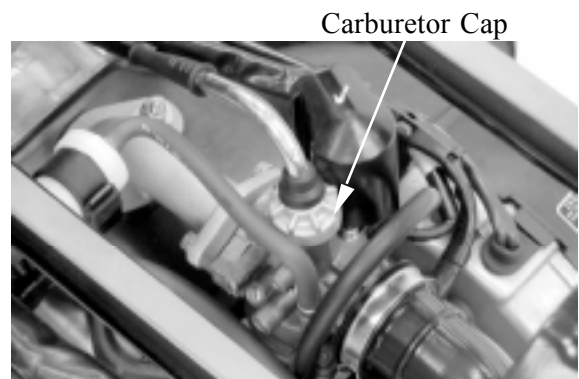
## 5. FUEL SYSTEM

### THROTTLE VALVE

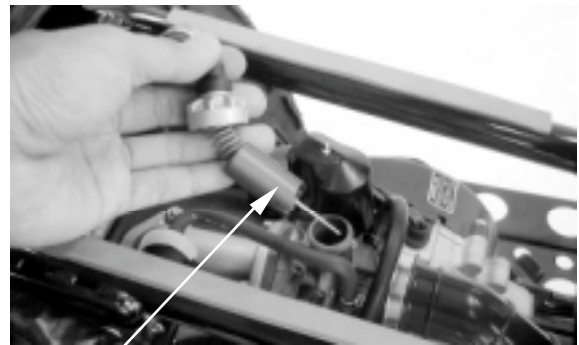
#### DISASSEMBLY

Remove the fuel tank. (Refer to “FUEL TANK” section in the chapter 5)

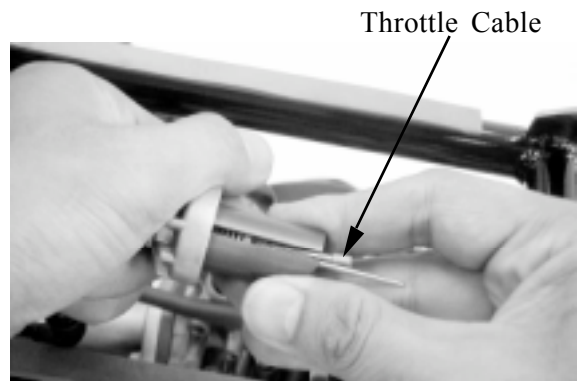
Remove the carburetor cap.



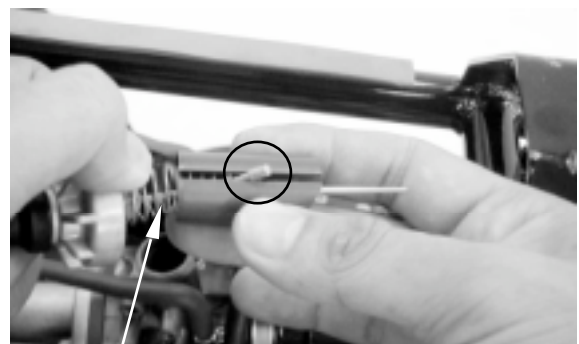
Pull out the throttle valve.



Compress the spring to disconnect the throttle cable by hand.



Remove the spring from the throttle valve

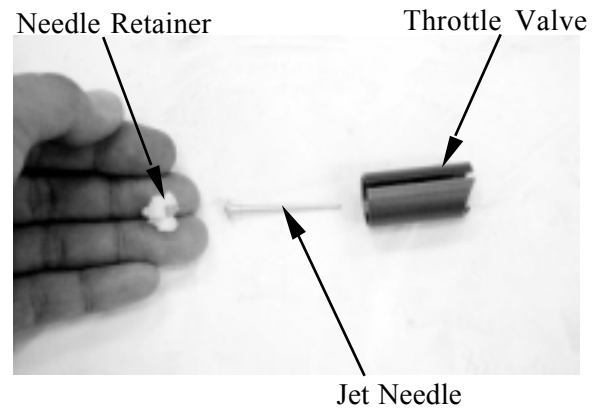


## 5. FUEL SYSTEM

Pry off the needle retainer and remove the jet needle.  
Check the throttle valve and jet needle for wear or damage.

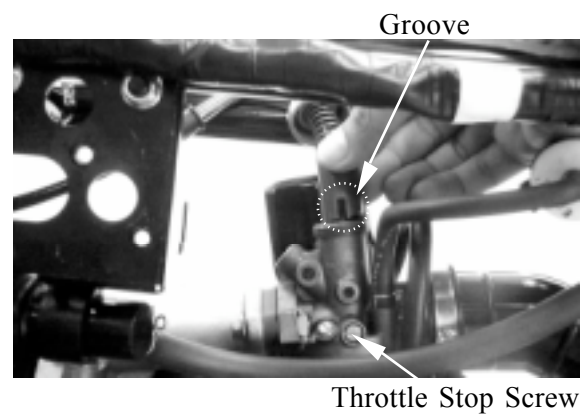
### ASSEMBLY

Reverse the “DISASSEMBLY” procedures.



Install the throttle valve into the carburetor body.

- ° Align the groove in the throttle valve with the throttle stop screw on the carburetor body.



## 5. FUEL SYSTEM

### AIR CLEANER (Mongoose/KXR 90)

#### CLEANING

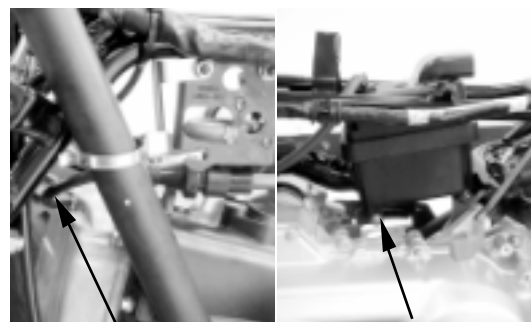
Refer to “AIR CLEANER” section in the chapter 3.

#### REMOVAL

Remove front fender. (See page 2-5)

Disconnect the oil recycle tube from cylinder head and frame.

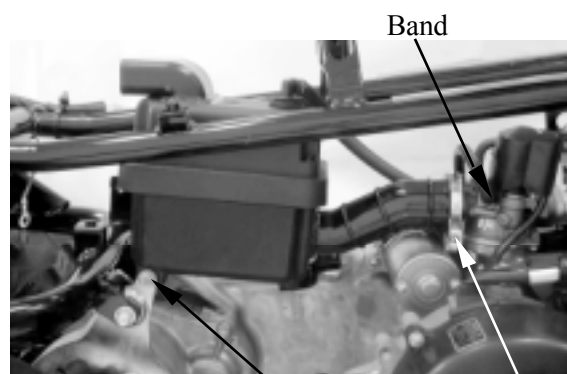
Remove the bolt at the air cleaner left side.



Oil Recycle Tube

Bolt

Loosen the screw at the band and remove bolt at the air cleaner right side, then remove air cleaner.



Band

Bolt

Screw

#### INSTALLATION

Reverse the “REMOVAL” procedures.



## 5. FUEL SYSTEM

### AIR CLEANER (Mongoose/KXR 50)

#### CLEANING

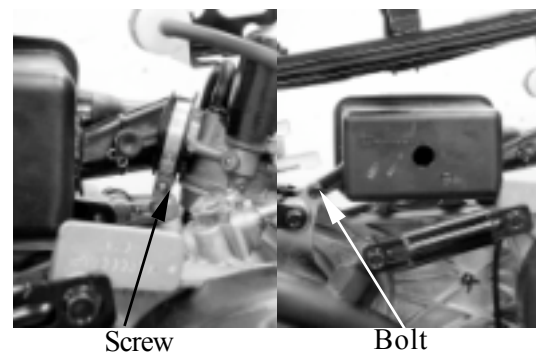
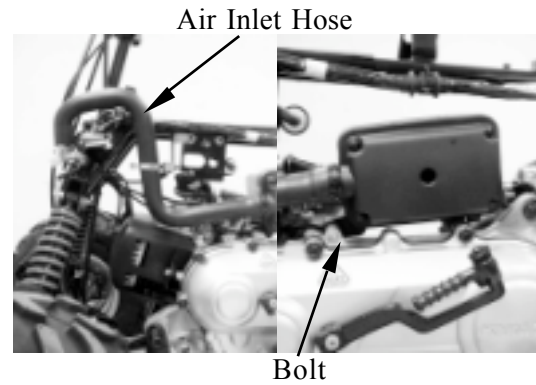
Refer to “AIR CLEANER” section in the chapter 3.

#### REMOVAL

Remove front fender. (See page 2-5)

Disconnect the air inlet hose from the frame.  
Remove the bolt at the air cleaner left side.

Loosen the screw at the band and remove bolt at the air cleaner right side, then remove air cleaner.



#### INSTALLATION

Reverse the “REMOVAL” procedures.

## 5. FUEL SYSTEM

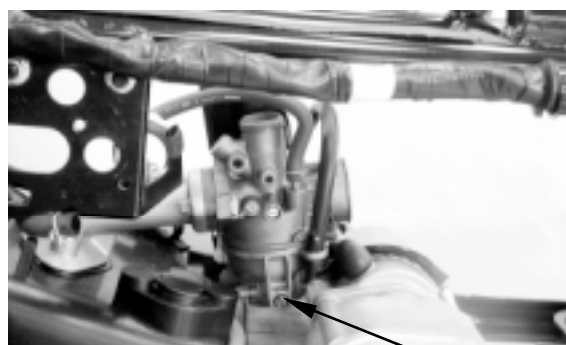
### CARBURETOR

#### REMOVAL

Remove the fuel tank, carburetor cap and air filter. (Refer to chapter 5)

Loosen the drain plug to drain the gasoline from the float chamber.

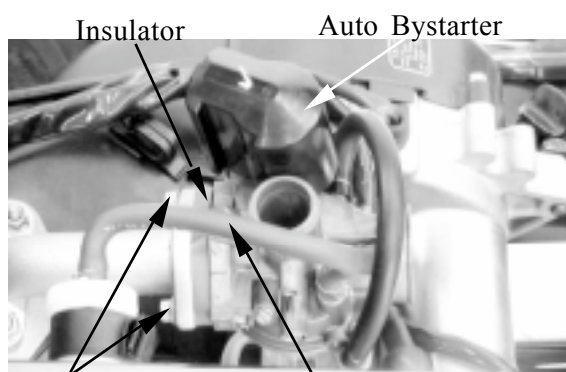
- °C
  - Keep sparks and flames away from the work area.
  - Drain gasoline into a clean container.



Fuel Drain Plug

Disconnect the fuel tube from carburetor and auto bystarter leads.

Remove the two bolts (nuts) attaching carburetor, then remove carburetor and insulator.



Bolts

Fuel Tube

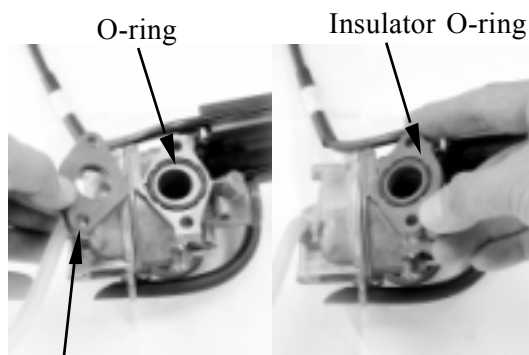
#### INSTALLATION

Reverse the "REMOVAL" procedures.

- °C
  - When installation, do not allow foreign particles to enter the carburetor.

Check the carburetor insulator and O-rings for wear or damage.

- °C
  - When installation, be sure the insulator O-ring face the intake manifold.



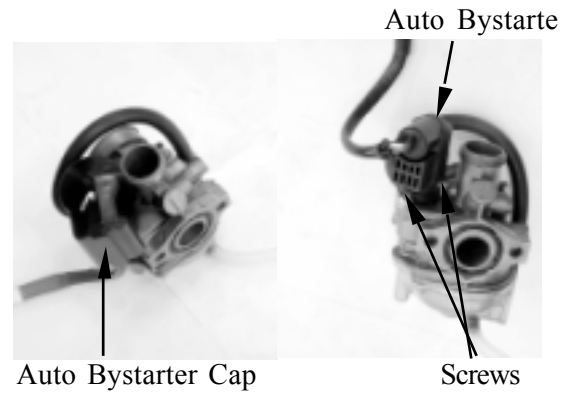
Insulator

## 5. FUEL SYSTEM

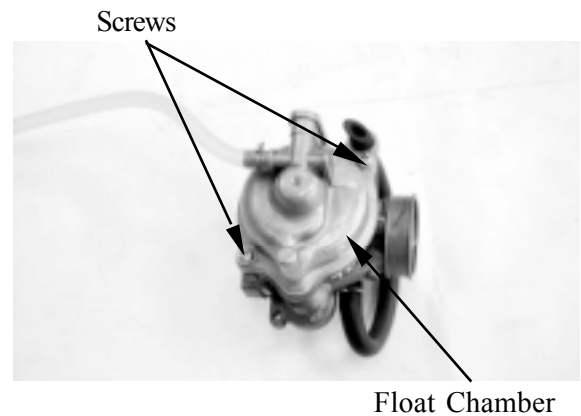
### DISASSEMBLY

Remove auto bystarter cap.

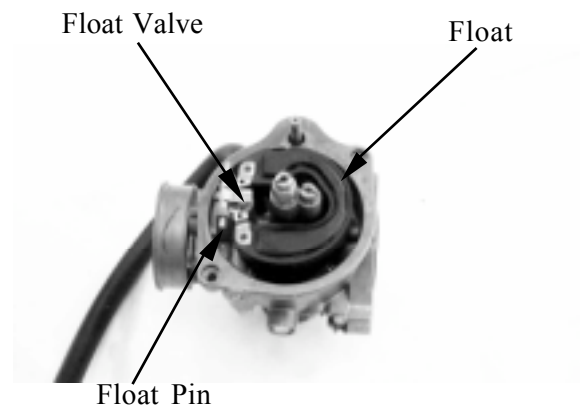
Remove the two screws and then remove auto bystarter and plate.



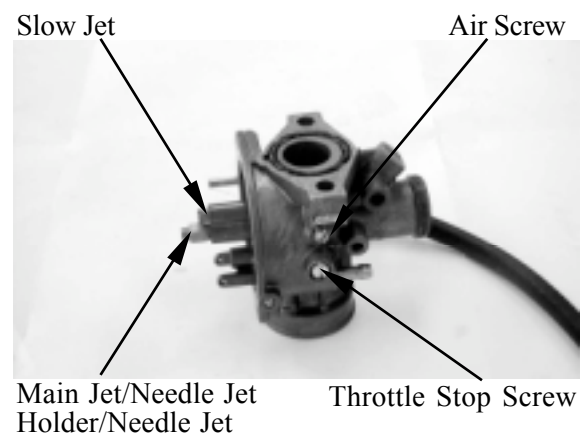
Remove the three float chamber screws and remove the float chamber.



Pull out the float pin, then remove float and float valve.



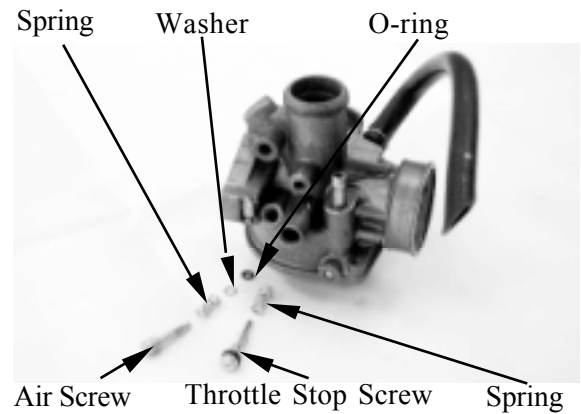
Remove the main jet, needle jet holder, and needle jet.  
Remove the slow jet.  
Remove the air screw and throttle stop screw.



## 5. FUEL SYSTEM

### CAUTIONS!

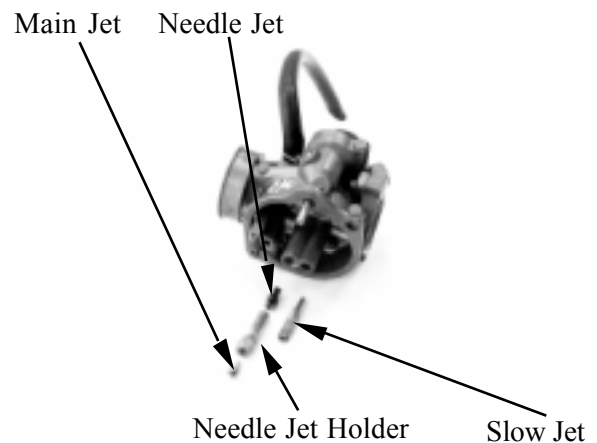
- Be careful not to damage the jets and jet holder when removing them.
- Before removal, turn the throttle stop screw and air screw in and count the number of turns until they seat lightly and then make a note of this.
- Do not force the screw against its seat to avoid seat damage.
- Be sure to install the O-ring in the reverse order of removal.



### ASSEMBLY

Reverse the "DISASSEMBLY" procedures.

- When installing the air screw, return it to the original position as noted during removal
- Refer to the "CARBURETOR IDLE SPEED" section in chapters to perform the idle speed adjustment.
- After the carburetor is installed, be sure to perform the Exhaust Emission Test.



## 5. FUEL SYSTEM

### CARBURETOR CLEANING

Blow compressed air through all passages of the carburetor body.



### FLOAT/FLOAT VALVE INSPECTION

Inspect the float valve seat for wear or damage.

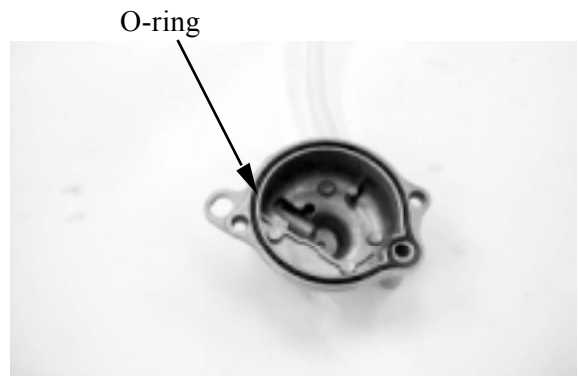
Inspect the float for damage or fuel level inside the float chamber.



### FUEL RESERVOIR O-RING CHECK

Remove the O-ring.

Inspect the check the O-ring for damage. Replace with new ones if necessary

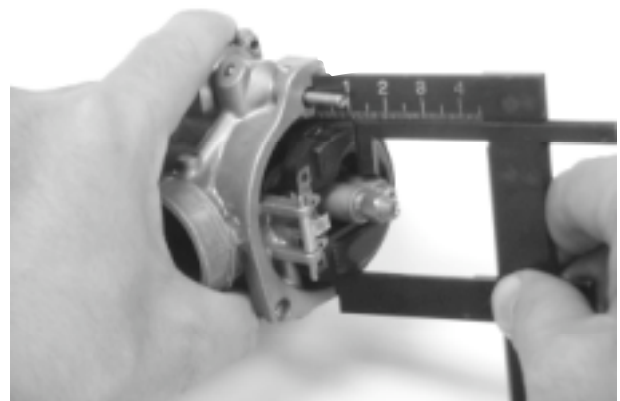


### FLOAT LEVEL INSPECTION

Turn the carburetor upside down so that the float will go down to make the float valve contact the float valve seat.

Then slowly tilt the carburetor and measure the float level with the float level gauge while the float pin just contacts with float valve.

**Float Level:** 8.0mm



## 5. FUEL SYSTEM

### AUTO BYSTARTER INSPECTION

Measure the resistance between the auto bystarter wire terminals.

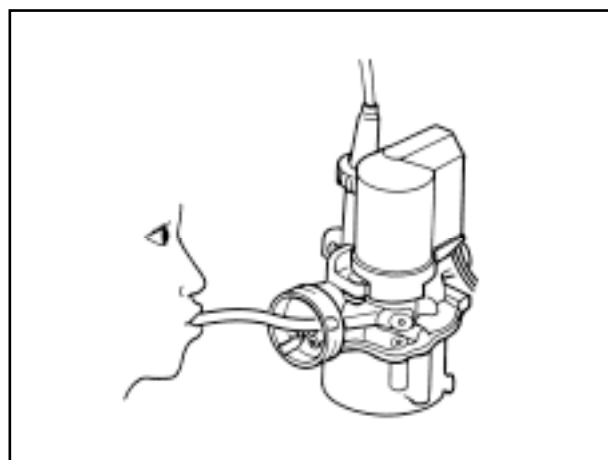
**Resistance:**  $5\Omega$  (10 minutes minimum after stopping the engine)

If the resistance exceeds  $5\Omega$ , replace the auto bystarter with a new one.



After the engine stops for 30 minutes, connect a hose to the fuel enriching circuit and blow the hose with mouth.

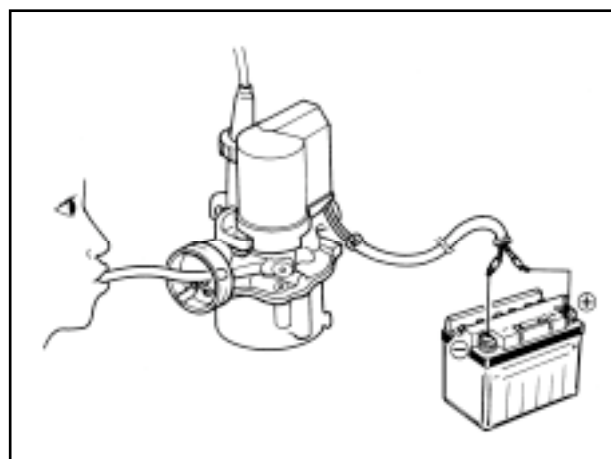
If air cannot be blown into the hose (clogged), the auto bystarter is faulty. Replace it with a new one.



Connect the auto bystarter yellow wire to the battery positive (+) terminal and green/black wire to the battery negative (-) terminal and wait 5 minutes.

Connect a hose to the fuel enriching circuit and blow the hose with mouth.

If air can be blown into the hose, the auto bystarter is faulty and replace it with a new one.

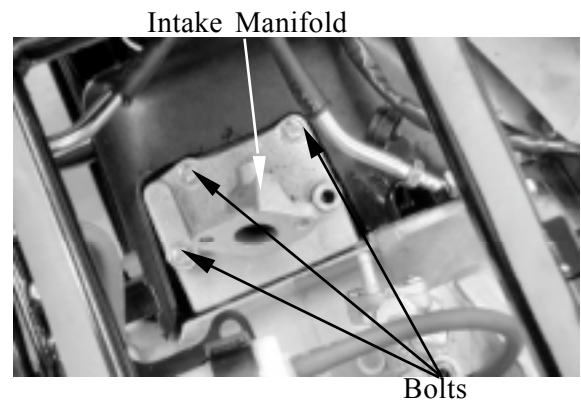


## 5. FUEL SYSTEM

### REED VALVE (Mongoose/KXR 50)

#### REMOVAL

Remove the oil pump control cable plate.  
(See page 4-11)  
Remove carburetor. (See page 5-11)  
Remove the three intake manifold bolts and gasket.  
Remove the reed valve and gasket.

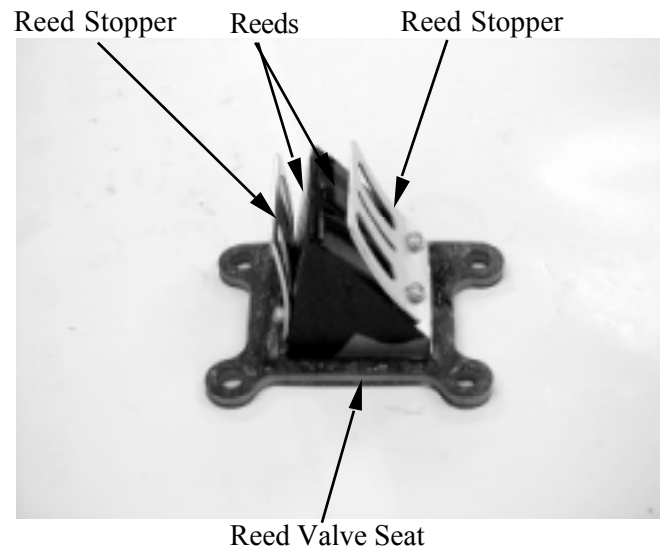


#### INSPECTION

Check the reed valve for damaged or weak reeds.  
Check the reed valve seat for cracks, damage or clearance between the seat and reed.  
Replace the valve if necessary.



Do not disassemble or bend the reed stopper. To do so can cause loss of engine power and engine damage. If any of the stopper, reed or valve seat is faulty, replace them as unit.



#### INSTALLATION

Install the reed valve in the reverse order of removal.



Install a new gasket with the gasket indentation aligned with the reed valve.  
After installation, check for intake air leaks.