

---

**CHAPTER 5.  
CARBURETION**

**CARBURETOR** ..... 5-1  
SECTIONAL VIEW ..... 5-2  
REMOVAL ..... 5-3  
DISASSEMBLY ..... 5-3  
INSPECTION ..... 5-5  
ASSEMBLY ..... 5-6  
INSTALLATION ..... 5-8  
ADJUSTMENT ..... 5-8  
CARBURETOR SETTING CHANGE ..... 5-9

**REED VALVE** ..... 5-10  
REMOVAL ..... 5-10  
DISASSEMBLY ..... 5-10  
INSPECTION ..... 5-10  
ASSEMBLY ..... 5-11  
INSTALLATION ..... 5-11

**CARB****CARBURETOR**

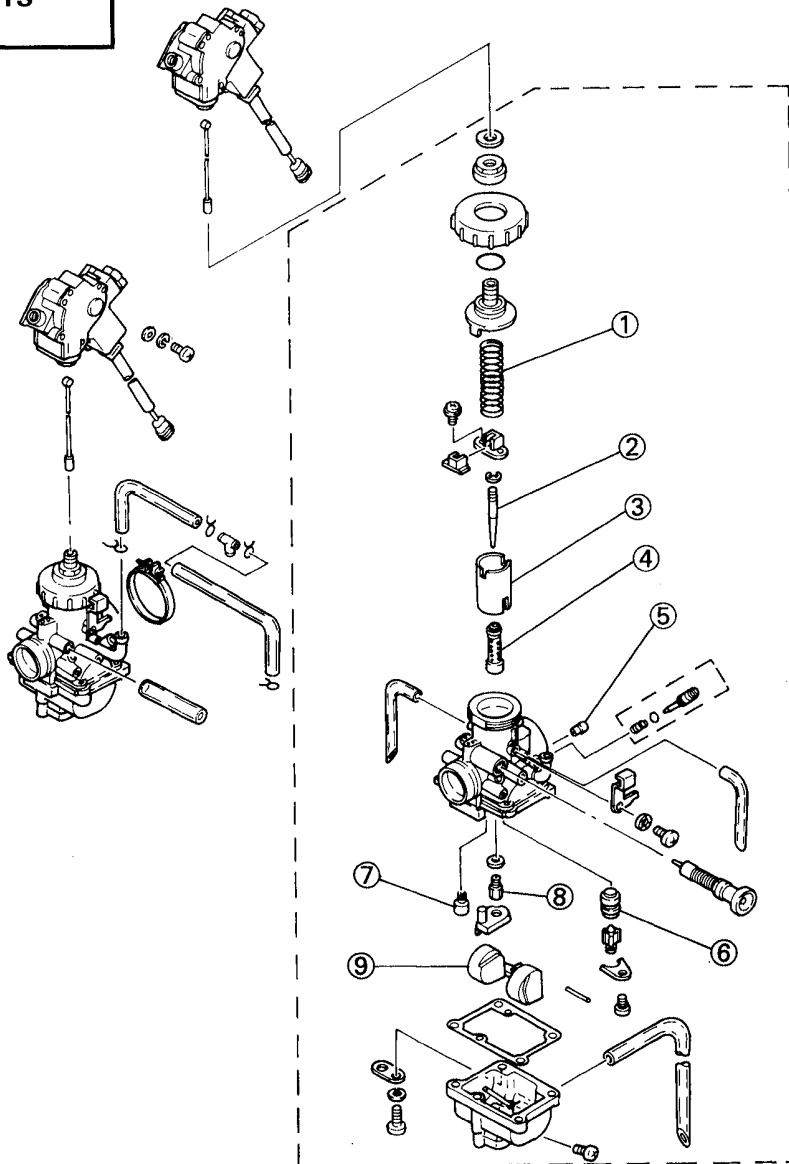
## CARBURETION CARBURETOR

- ① Throttle valve spring
- ② Jet needle
- ③ Throttle valve
- ④ Main nozzle
- ⑤ Pilot air screw
- ⑥ Needle valve assembly
- ⑦ Pilot jet
- ⑧ Main jet
- ⑨ Float

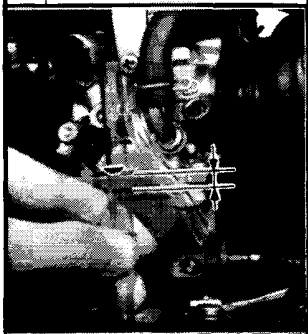
### SPECIFICATIONS

|                             |  |
|-----------------------------|--|
| MAIN JET (M.J.)             | #210                                       |
| MAIN AIR JET (M.A.J.)       | $\phi 1.6$                                 |
| JET NEEDLE (J.N.)           | 5N7-3                                      |
| NEEDLE JET (N.J.)           | O-8  |
| PILOT JET (P.J.)            | #25  |
| PILOT AIR SCREW<br>(P.A.S.) | 2 turns out                                |
| FLOAT HEIGHT (F.H.)         | $21.0 \pm 1.0$ mm<br>( $0.83 \pm 0.04$ in) |
| FUEL LEVEL (F.L.)           | 0.5~1.5 mm<br>(0.02~0.06 in)               |
| ENGINE IDLING SPEED         | $1,500 \pm 50$ r/min                       |

### B OPTIONAL MAIN JETS #200, #220, #240



### A FUEL LEVEL



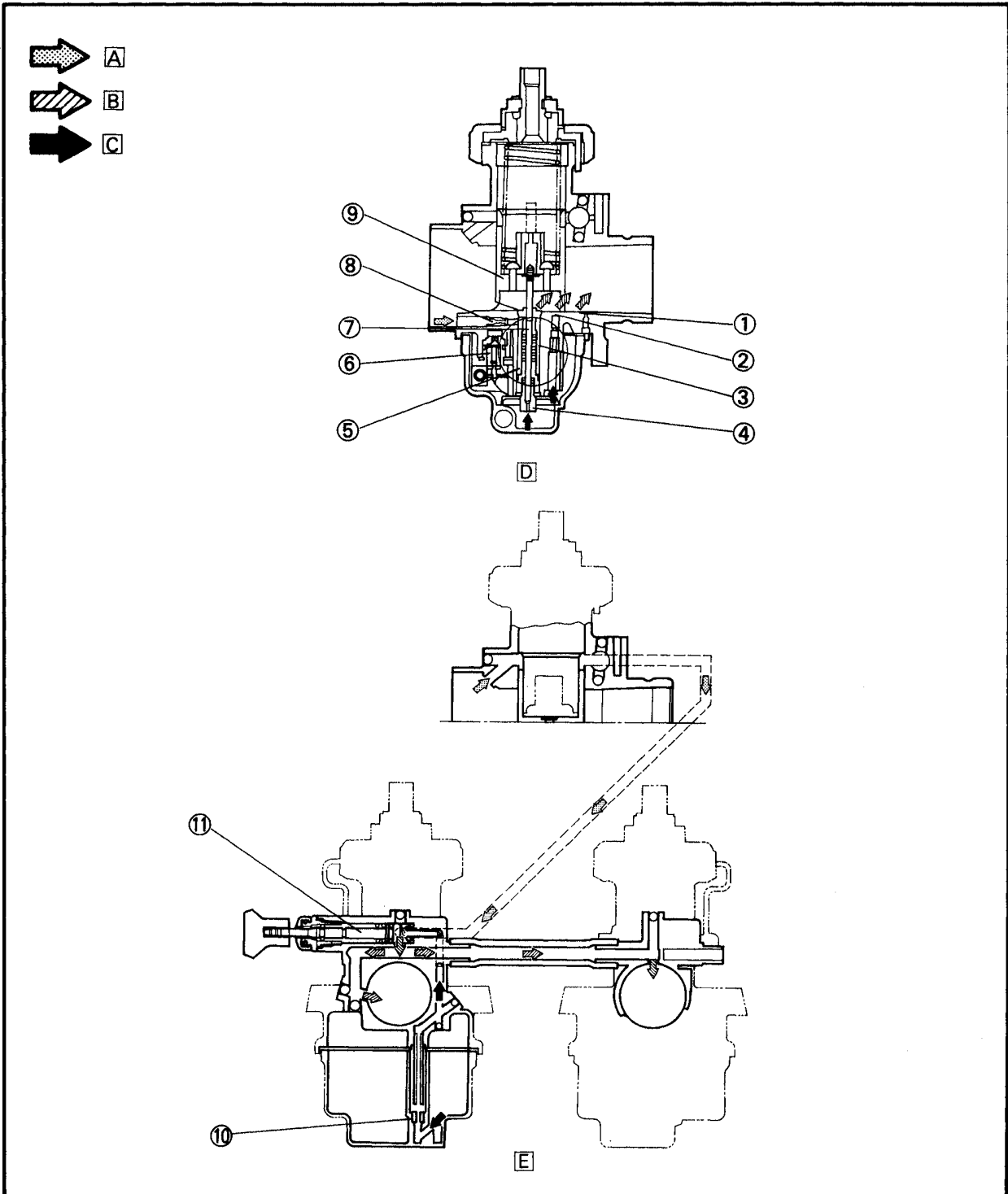


SECTIONAL VIEW

- ① Pilot outlet
- ② Bypass hole
- ③ Pilot jet
- ④ Main jet
- ⑤ Needle jet
- ⑥ Float valve set
- ⑦ Jet needle

- ⑧ Main air jet
- ⑨ Throttle valve
- ⑩ Starter jet
- ⑪ Starter plunger

- A AIR
- B MIXTURE
- C FUEL
- D MAIN METERING SYSTEM
- E STARTER SYSTEM



**REMOVAL**

## 1. Remove:

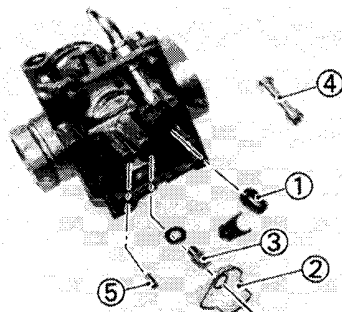
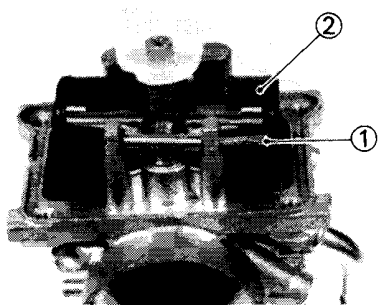
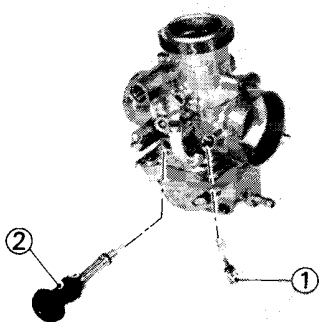
- Carburetor assembly

Refer to engine removal section.

**NOTE:**

The following parts can be cleaned and inspected without disassembly.

- Throttle valve
- Pilot air screw
- Starter plunger

**DISASSEMBLY**

## 1. Remove:

- Pilot air screw ①
- Starter plunger ②

## 2. Remove:

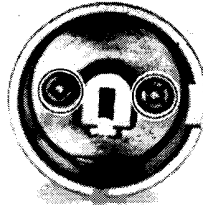
- Float chamber cover
- Float pin ①
- Float ②
- Needle valve

## 3. Remove:

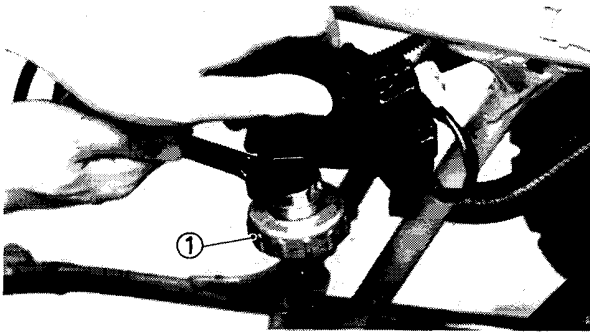
- Valve seat ①
- Main jet ring ②
- Main jet ③
- Main nozzle ④
- Pilot jet ⑤

## CARBURETOR

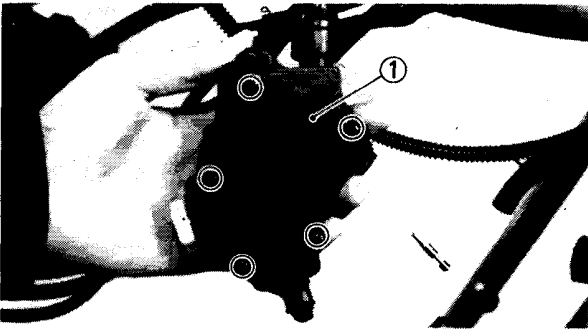
CARB



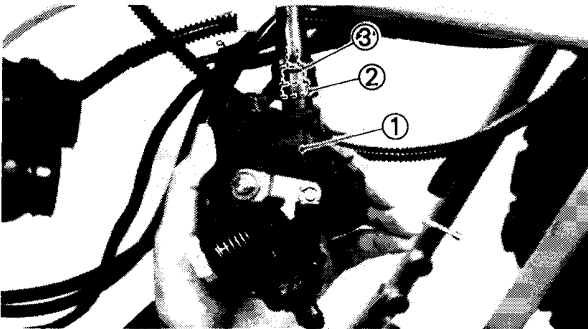
4. Remove:
  - Cable stopper
  - Throttle valve
  - Jet needle



5. Remove:
  - Carburetor top ①



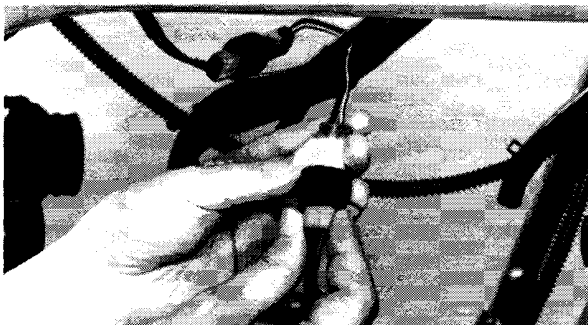
6. Remove:
  - Cover (T.O.R.S. switch-Right) ①



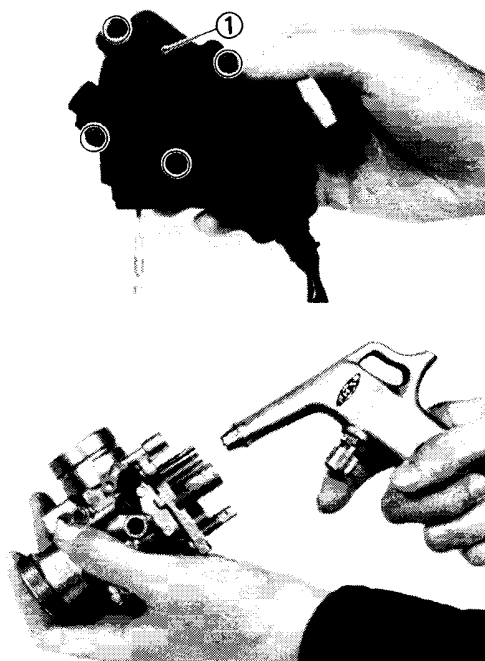
7. Disconnect:
  - Throttle cable ①

8. Loosen:
  - Locknut ②

9. Remove:
  - Adjuster ③



10. Disconnect:
  - T.O.R.S. switch lead



**11. Remove:**

- Cover (T.O.R.S. switch-Left) ①
- Throttle valve cable

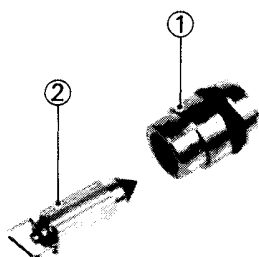
**INSPECTION**

**1. Inspect:**

- Carburetor body
- Contamination → Clean.

**NOTE:**

Use a petroleum based solvent for cleaning. Blow out all passages and jets with compressed air.

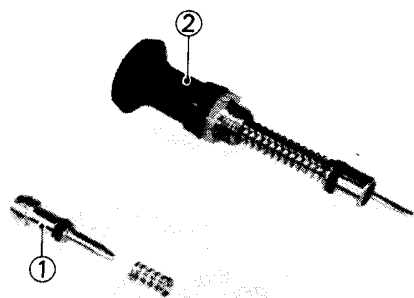


**2. Inspect:**

- Valve seat ①/Needle valve ②
- Wear/Contamination → Replace.

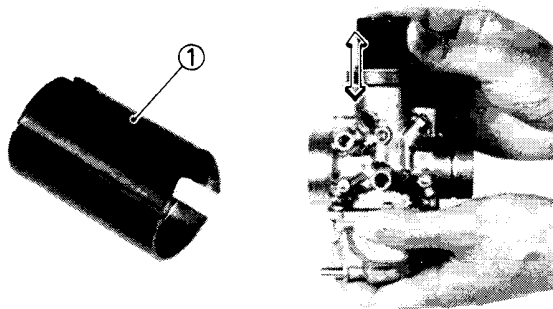
**NOTE:**

Always replace the needle valve and valve seat as a set.



**3. Inspect:**

- Pilot air screw ①/Starter plunger ②
- Wear/Contamination → Replace.
- O-rings
- Damage → Replace.

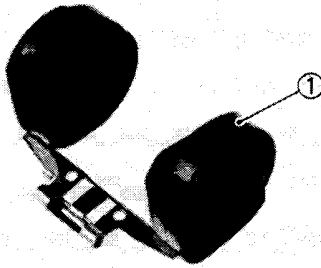


**4. Inspect:**

- Throttle valve ①
- Wear/Damage → Replace.

**5. Check:**

- Free movement
- Stick → Replace.
- Insert the throttle valve into the carburetor body, and check for free movement.



### 6. Inspect:

- Jet needle ①  
Bends/Wear → Replace.
- Throttle valve cable ②  
Wear/Damage → Replace.
- Gasket  
Damage → Replace.

### 7. Inspect:

- Float ①  
Damage → Replace.

## ASSEMBLY

To assemble the carburetor, reverse the disassembly procedures. Note the following points.

### CAUTION:

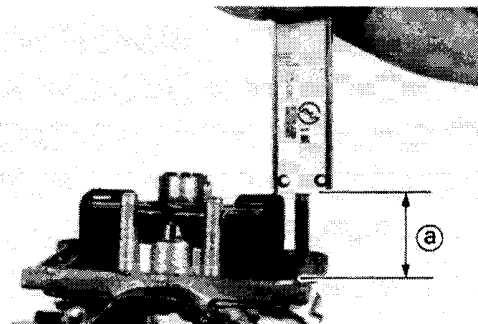
- Before reassembling, wash all parts in clean gasoline.
- Always use a new gasket.

### 1. Install:

- Valve seat
- Float
- Float pin

### 2. Measure:

- Float height  
Out of specification → Adjust.

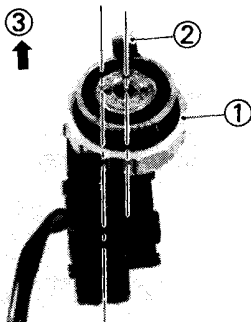
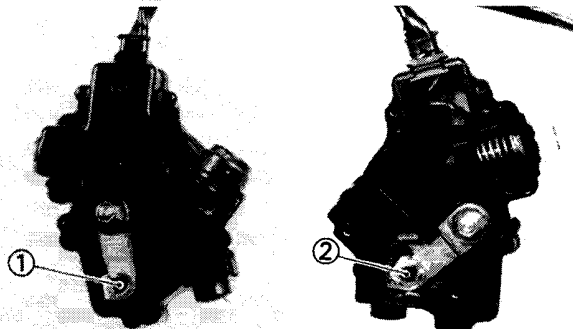
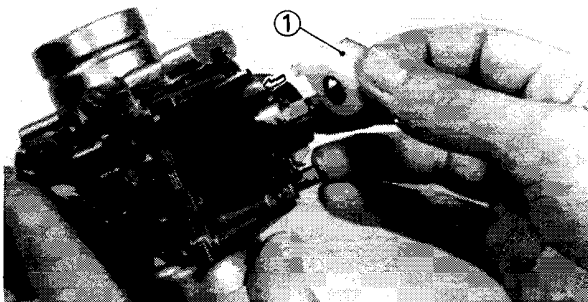
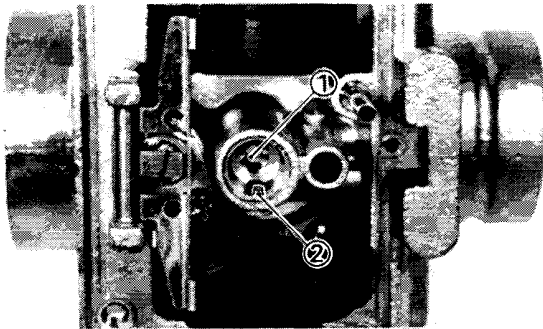
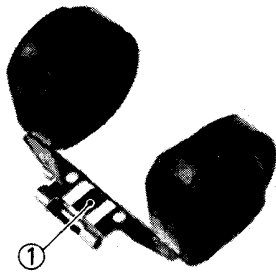


### Float height measurement and adjustment steps:

- Hold the carburetor in an upside down position.
- Measure the distance between the mating surface of the float chamber (gasket removed) and top of the float using a gauge.



**Float Height ①:**  
20 ~ 22 mm (0.80 ~ 0.88 in)



**NOTE:** \_\_\_\_\_

The float arm should be resting on the needle valve, but not compressing the needle valve.

- If the float height is not within specification, inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust the float height by bending the float tang ① on the float.
- Recheck the float height.

**3. Install:**

- Pilot jet
- Main nozzle ①
- Main jet

**NOTE:** \_\_\_\_\_

Be sure the pin ② engages with the locating slot on the main nozzle ①.

**4. Install:**

- Main jet ring ①
- Starter plunger
- Pilot air screw
- Float chamber cover

**5. Apply:**

- Lithium base grease
- Lightly grease to the cable pivot ①, ②.

**6. Install:**

- Throttle cable
- Throttle valve cable
- Covers (T.O.R.S. switch)

**7. Install:**

- Washer
- Carburetor top ①

**NOTE:** \_\_\_\_\_

Install the carburetor top ① with its tab ② forward ③.

**8. Connect:**

- T.O.R.S. switch lead





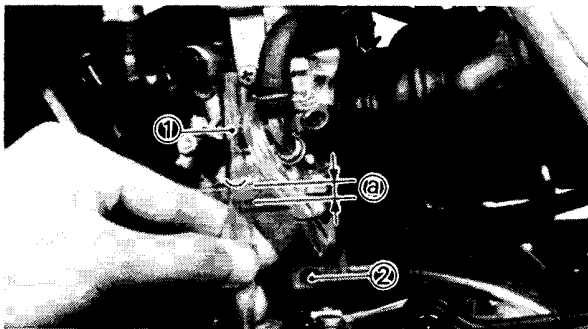
## INSTALLATION

1. Install:
  - Carburetor assembly
  - Reverse the removal step.

## ADJUSTMENT

### NOTE: \_\_\_\_\_

Before adjusting the fuel level, the float height should be adjusted.



1. Measure:
  - Fuel level
  - Out of specification → Adjust.

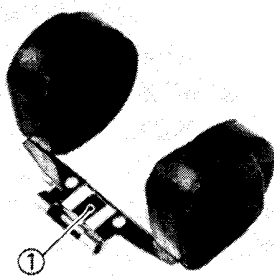
### Fuel level measurement and adjustment steps:

- Place the machine on a level place.
- Attach the Fuel Level Gauge ① (YM-01312-A) to the float chamber nozzle.
- Loosen the drain screw ② and start the engine.
- Place tube vertically next to the center of the mating line of the mixing body and float chamber cover.
- Measure the fuel level ③ with gauge.



**Fuel Level ③:**  
**3.0 ~ 4.0 mm (0.12 ~ 0.16 in)**  
**Above the Carburetor Body Edge.**

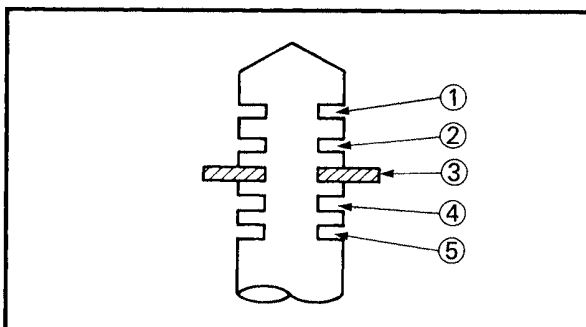
- If the fuel level is incorrect, adjust the fuel level.
- Remove the carburetor.
- Inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust the float height by bending the float tang ④ on the float.
- Recheck the fuel level.



### 2. Jet needle clip position

- Mid-range air/fuel mixture characteristics of the motorcycle
- Poor condition → Jet needle position change.

**Jet Needle Type: 5N7**  
**Standard Clip Position: No. 3 Groove**



- ① 1st (Leaner condition)
- ② 2nd
- ③ 3rd (Standard position)
- ④ 4th
- ⑤ 5th (Richer condition)



**CARBURETOR SETTING CHANGE**

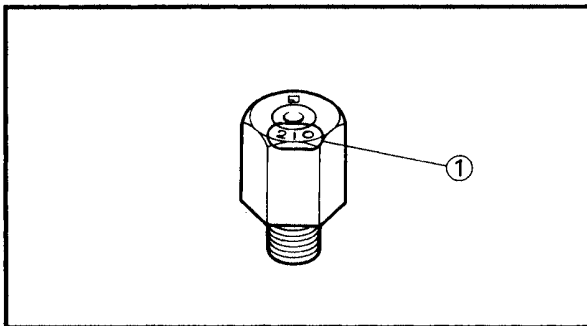
In extremely cold weather, it is necessary to change carburetor setting to maintain optimum engine performance and to prevent engine damage.

**NOTE:**

#200, #220, #240 optional main jets are enclosed in the tool compartment.

1. Remove:
  - Carburetor assembly
  - Refer to "CARBURETOR—REMOVAL" section.

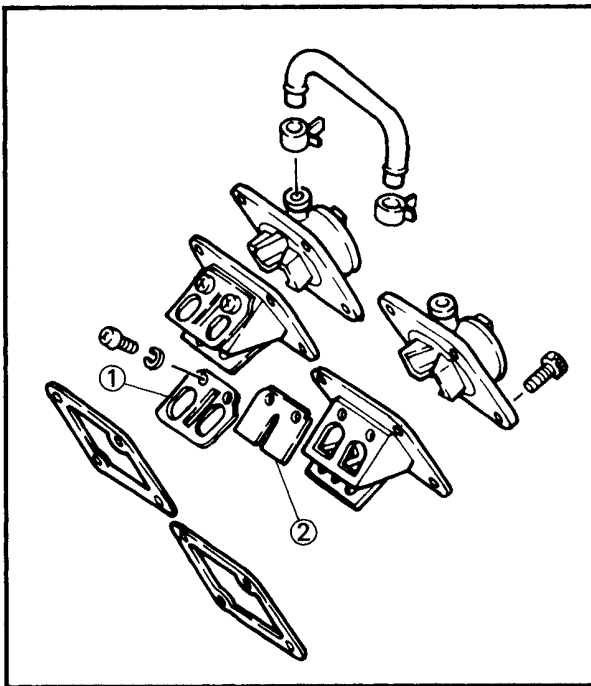
2. Adjust:
  - Carburetor setting



| Carburetor setting chart        |          |            |                             |
|---------------------------------|----------|------------|-----------------------------|
| Temperature                     | Main jet | Jet needle | Pilot air screw (turns out) |
| 20°C above (68°F)               | #200     | 3rd groove | 2.0                         |
| 0°C (32°F)<br>} 20°C (68°F)     | #210     | 3rd groove | 2.0                         |
| +5°C (41°F)<br>} -15°C (5°F)    | #220     | 3rd groove | 1-1/2                       |
| -10°C (14°F)<br>} -30°C (-22°F) | #240     | 4th groove | 1-1/2                       |

① Main jet number

3. Install:
  - Carburetor assembly
  - Refer to "CARBURETOR—INSTALLATION" section.



**REED VALVE**

**REMOVAL**

1. Remove:
  - Reed valve assembly  
Refer to "CHAPTER 3. ENGINE REMOVAL" section.

**DISASSEMBLY**

1. Remove:
  - Reed valve stopper ①
  - Reed valve ②

**INSPECTION**

1. Inspect:
  - Rubber joint  
Weathering/Other deterioration → Replace.
  - Reed petals  
Fatigue/Cracks → Replace.

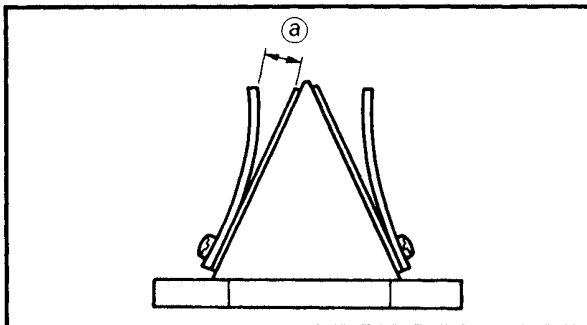
**Inspection steps:**

- Visually inspect the reed petals.

**NOTE:** \_\_\_\_\_

Correct reed petals should fit flush or nearly flush against neoprene seats.

- If in doubt as to sealing ability, apply suction to carburetor side of assembly.
- Leakage should be slight to moderate.



2. Measure:

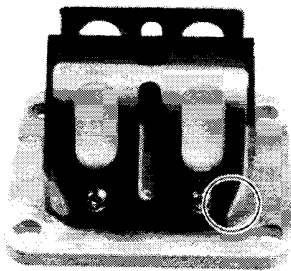
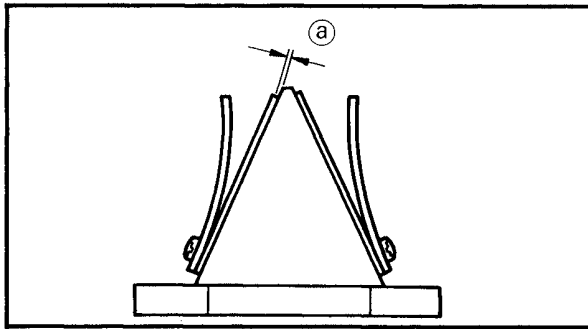
- Valve stopper height ①  
Out of specification → Adjust stopper/ Replace valve stopper.



**Valve Stopper Height ①:**  
10.3 ~ 10.7 mm (0.406 ~ 0.421 in)

**NOTE:** \_\_\_\_\_

If it is 0.4 mm (0.016 in) more or less than specified, replace the valve stopper.



## 3. Measure:

- Reed valve bending limit (a)
- Out of specification → Replace.



**Reed Valve Bending Limit (a):**  
0.5 mm (0.02 in)

**ASSEMBLY**

When assembling the reed valve, reverse the disassembly procedure. Note the following points.

## 1. Install:

- Reed valve
- Reed valve stopper

**NOTE:** \_\_\_\_\_

Note the cut in the lower corner of the reed and stopper plate.

## 2. Tighten:

- Screws (Reed valve)



**Screws (Reed Valve):**  
1 Nm (0.1 m•kg, 0.7 ft•lb)  
LOCTITE®

**NOTE:** \_\_\_\_\_

Tighten each screw gradually to avoid warping.

**INSTALLATION**

When installing the reed valve, reverse the removal procedure. Note the following points.

## 1. Install:

- Gasket (New)

## 2. Tighten:

- Bolts (Carburetor joint)



**Bolts (Carburetor Joint):**  
10 Nm (1.0 m•kg, 7.2 ft•lb)

**NOTE:** \_\_\_\_\_

Tighten each bolt gradually to avoid warping.