



CHAPTER 4 CARBURETION

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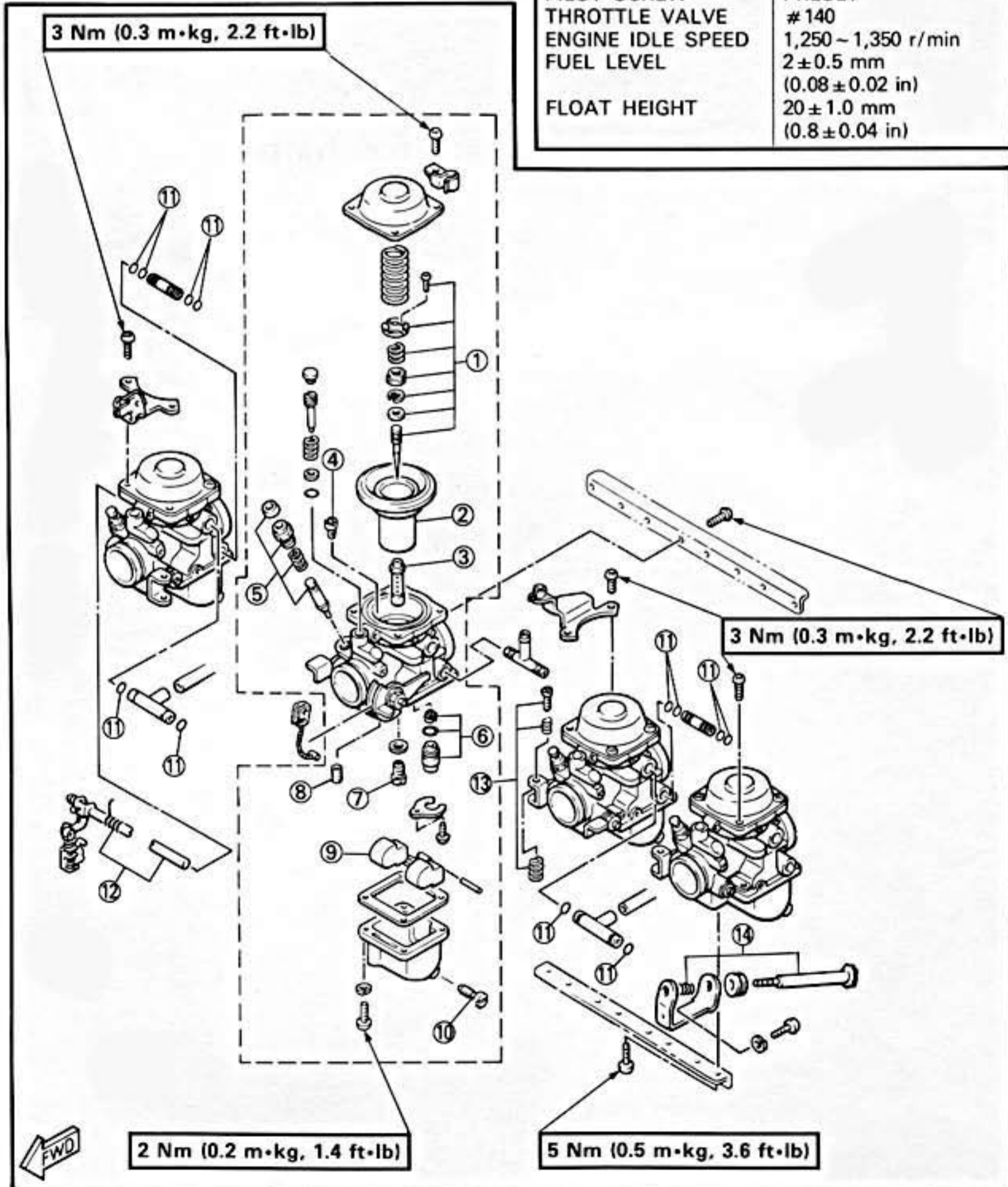
CARBURETION

CARBURETOR

- ① Jet needle set
- ② Throttle valve
- ③ Main nozzle
- ④ Pilot air jet
- ⑤ Starter plunger set
- ⑥ Valve seat set
- ⑦ Main jet
- ⑧ Pilot jet
- ⑨ Float
- ⑩ Drain screw
- ⑪ O-ring
- ⑫ Starter lever
- ⑬ Synchronizing screw
- ⑭ Throttle stop screw

SPECIFICATIONS

MAIN JET	# 97.5
MAIN AIR JET	# 140
PILOT JET	# 30
PILOT AIR JET	# 135
JET NEEDLE	
# 1 AND # 4	4CHP2
# 2 AND # 3	4CHP4
PILOT SCREW	PRESET
THROTTLE VALVE	# 140
ENGINE IDLE SPEED	1,250 ~ 1,350 r/min
FUEL LEVEL	2 ± 0.5 mm (0.08 ± 0.02 in)
FLOAT HEIGHT	20 ± 1.0 mm (0.8 ± 0.04 in)



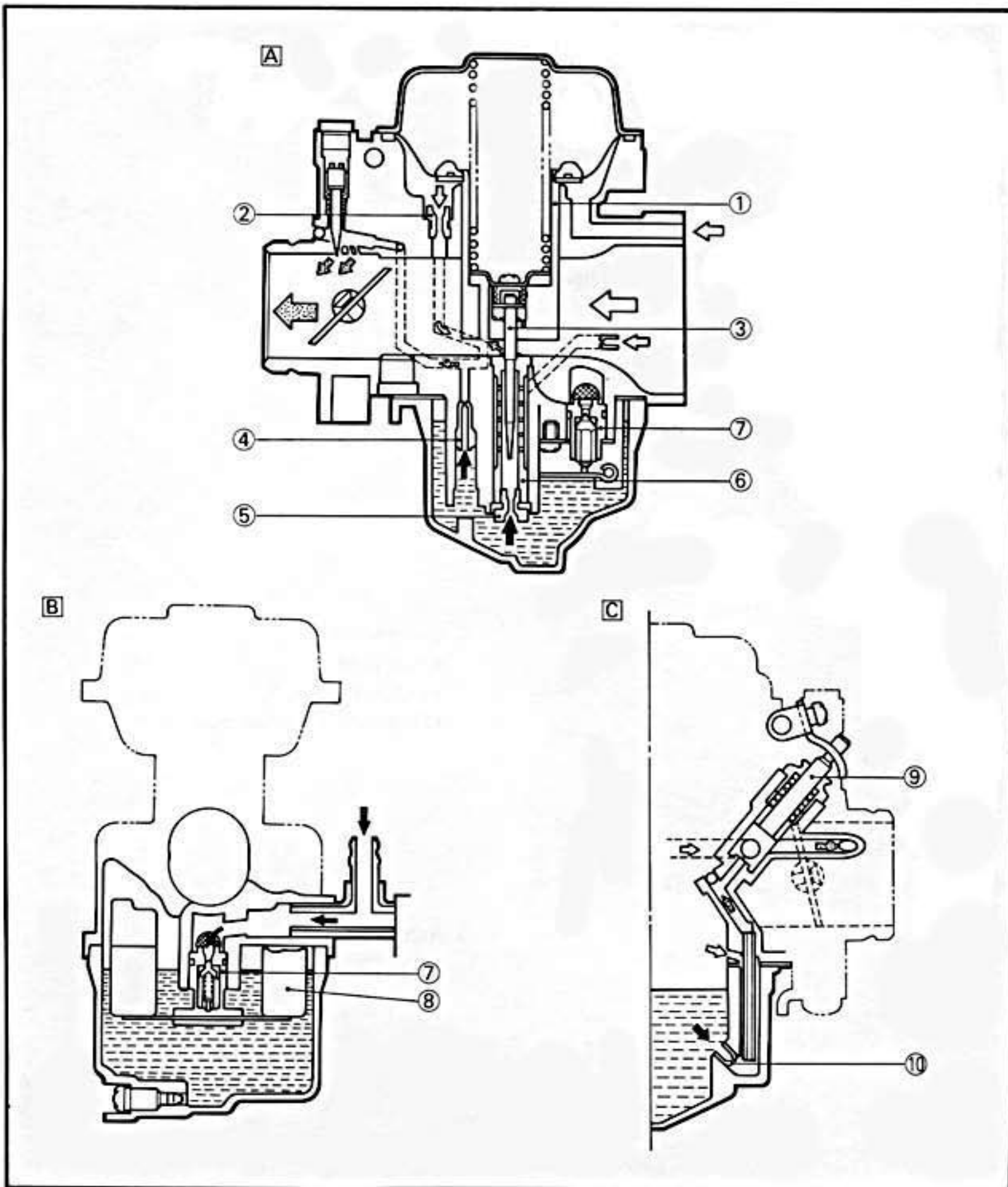


SECTION VIEW

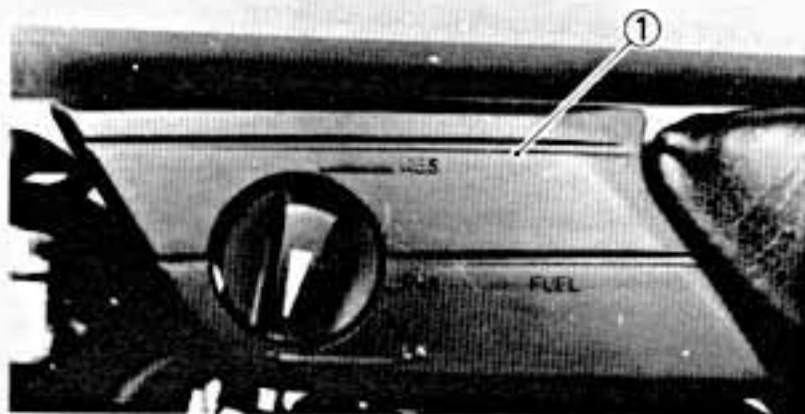
- ① Throttle valve
- ② Pilot air jet
- ③ Jet needle
- ④ Pilot jet
- ⑤ Main jet
- ⑥ Main nozzle
- ⑦ Valve seat
- ⑧ Float
- ⑨ Starter plunger
- ⑩ Starter jet

- A Main metering system
- B Float system
- C Starter system

- ← Air
- ← Fuel
- ← Mixture



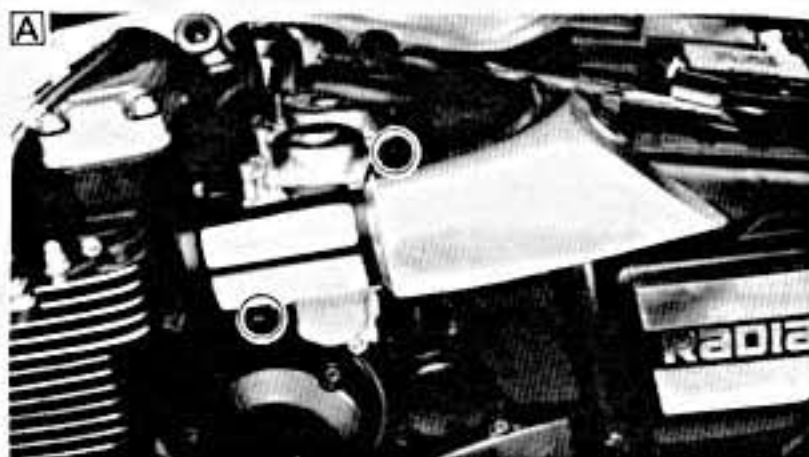
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**REMOVAL**

1. Turn the fuel cock to "ON" position.

2. Remove:

- Seat
- Cover (Fuel cock) ①

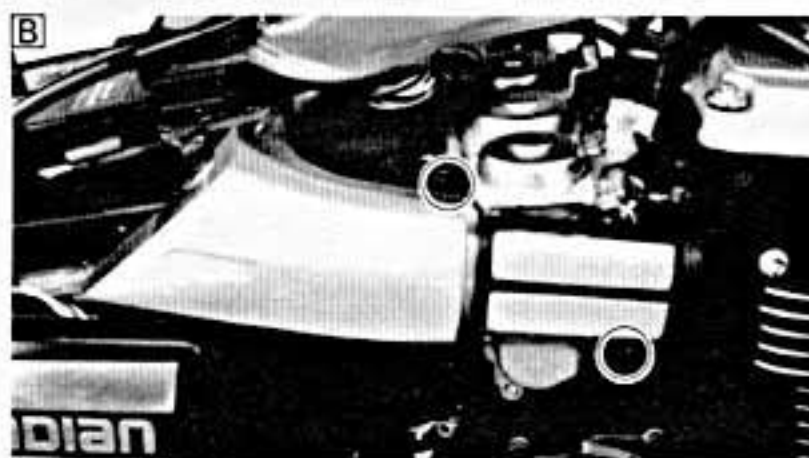


3. Remove:

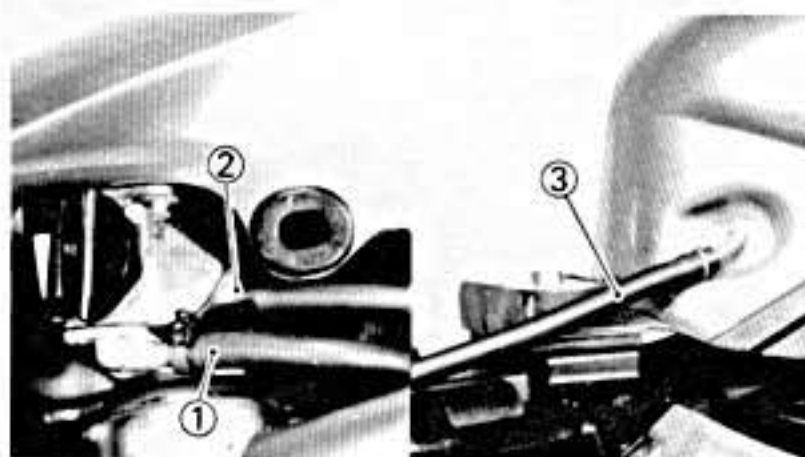
- Cover (Carburetor)

A Left side

B Right side



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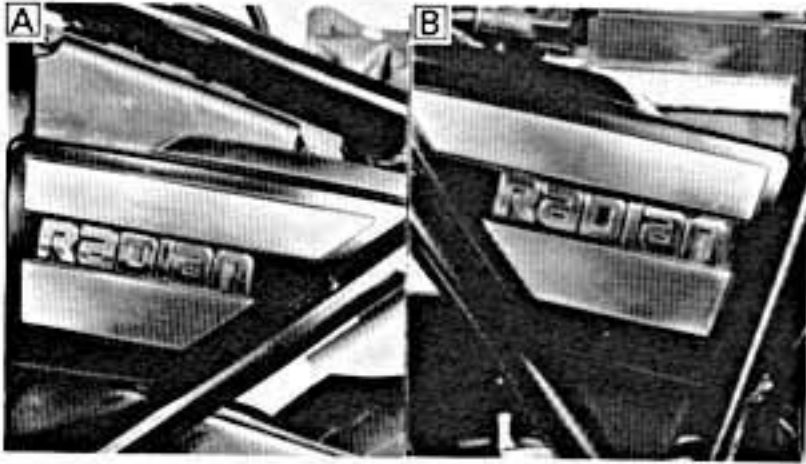
4. Disconnect:

- Fuel pipe ①
- Vacuum pipe ②
- Fuel tank breather pipe ③



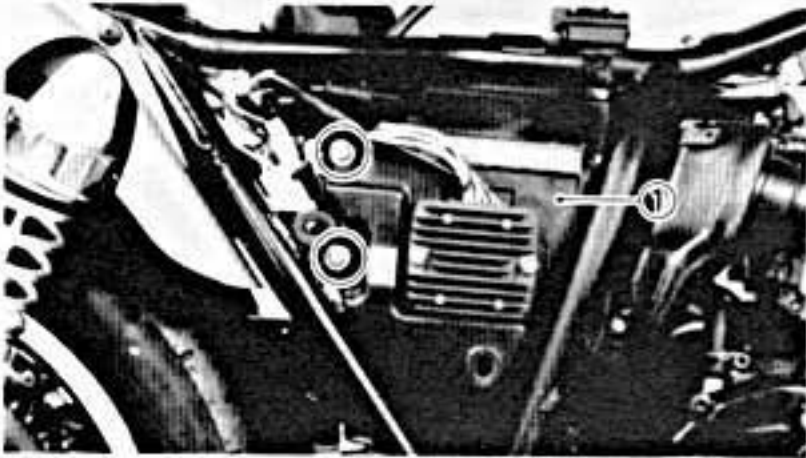
5. Remove:

- Fuel tank



6. Remove:
- Side cover

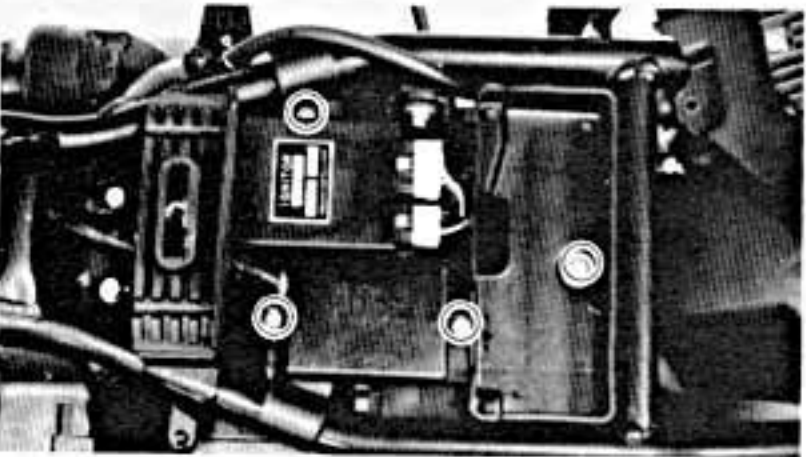
- A Left side
B Right side



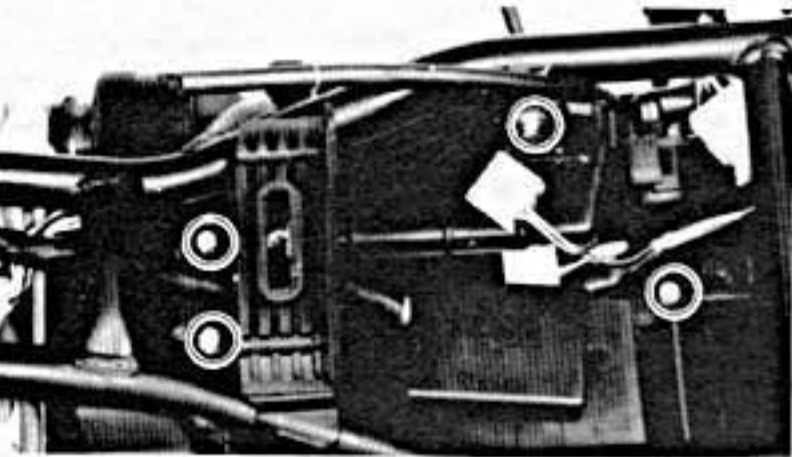
7. Remove:
- Battery case cover ①
 - Battery

CAUTION:

Disconnect the negative lead first, and then disconnect the positive lead.

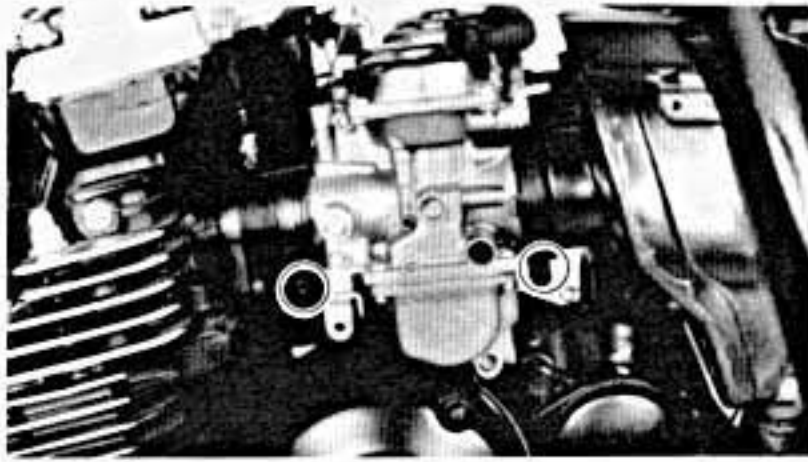


8. Remove:
- Screws (Fuse box)
 - Ignitor unit

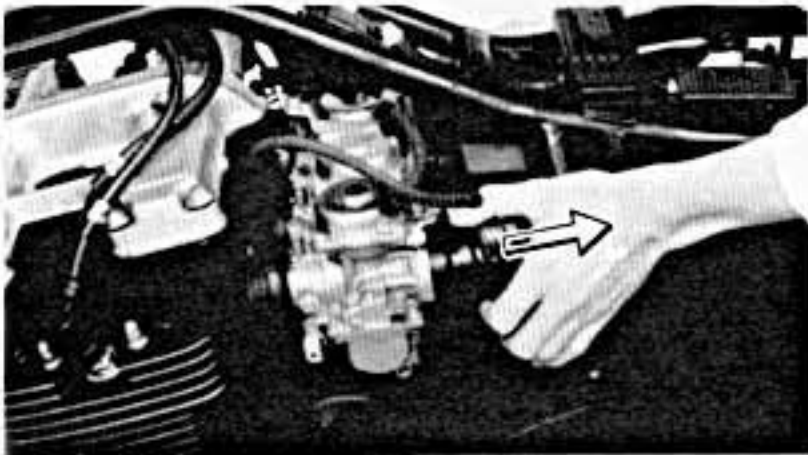


9. Remove:
- Bolts (Battery case)
 - Bolts (Air cleaner case)

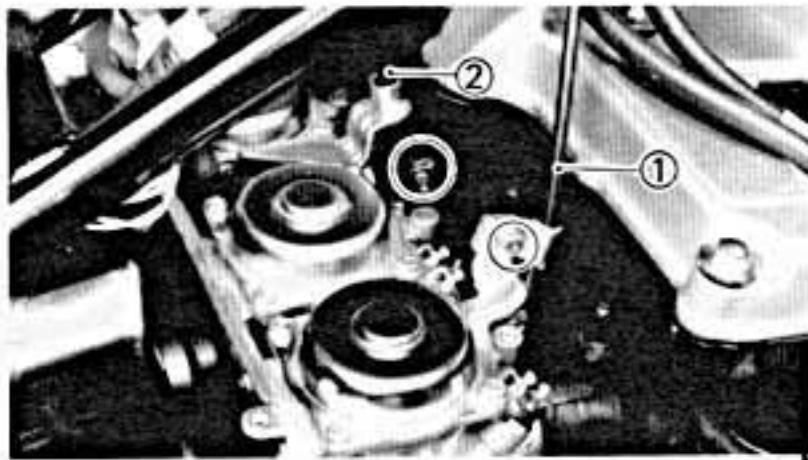




10. Loosen:
- Screws (Carburetor joints)



11. Slide the air cleaner case and the battery case backward.



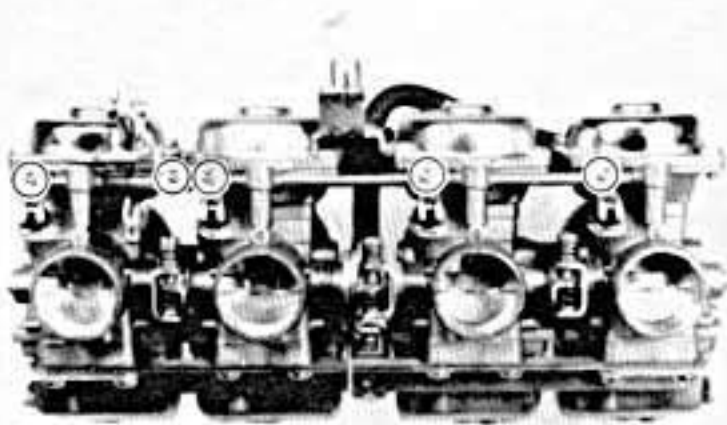
12. Remove:
- Starter cable ①
 - Throttle cable ②
 - Air bent hoses
 - Carburetor assembly

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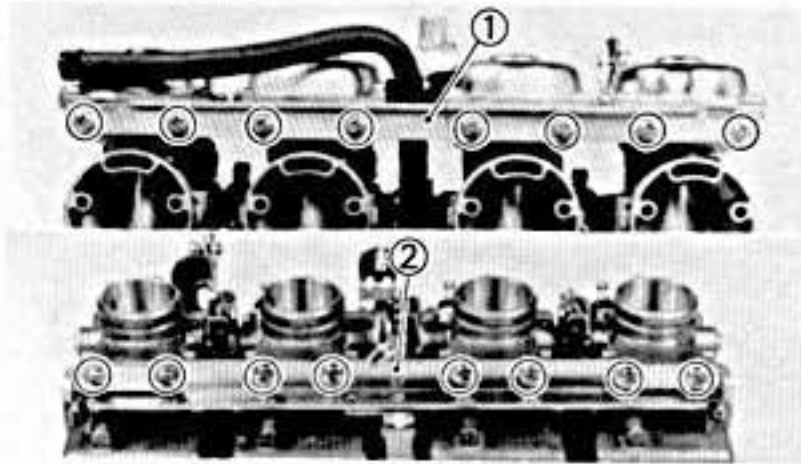
DISASSEMBLY

NOTE: _____
The following parts can be cleaned and inspected without carburetor separation.

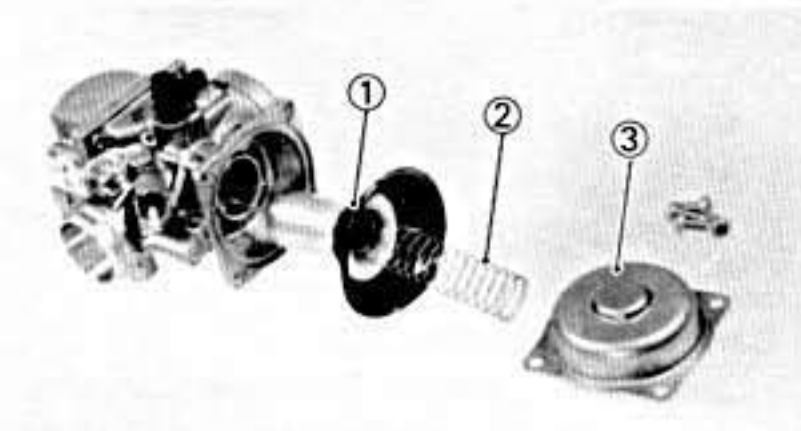
- Throttle valve
- Starter plunger
- Float chamber components



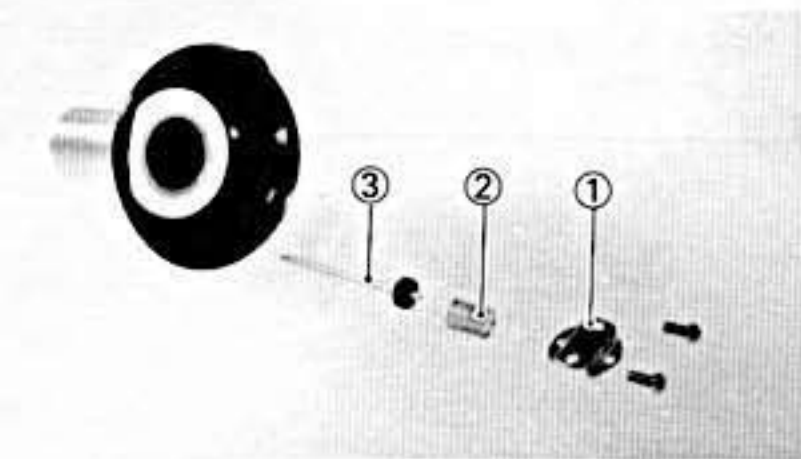
1. Remove:
- Starter lever shaft



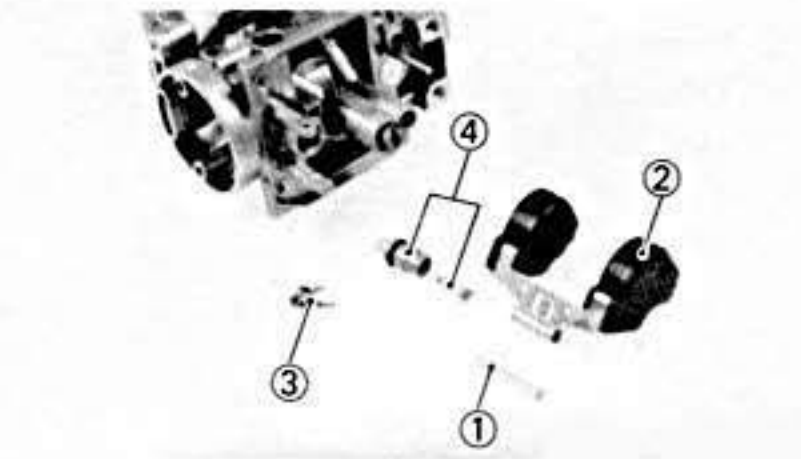
2. Remove:
- Upper bracket ①
 - Lower bracket ②



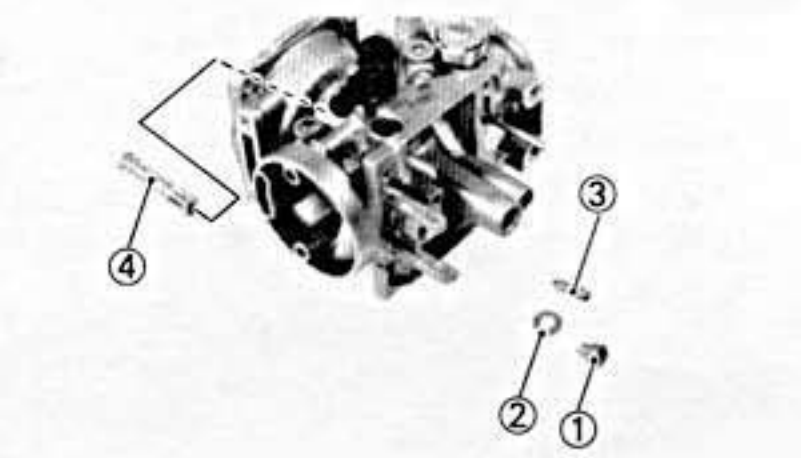
3. Remove:
- Vacuum chamber cover ①
 - Spring ②
 - Throttle valve assembly ③



4. Remove:
- Jet needle cover ①
 - Spring ②
 - Jet needle ③

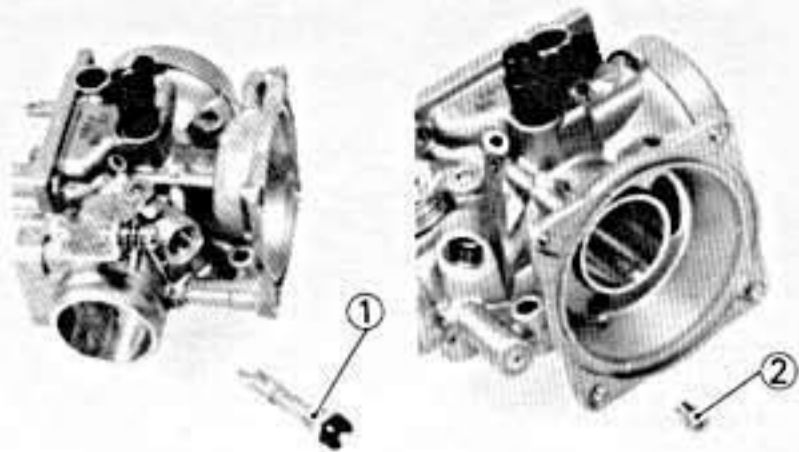


5. Remove:
- Float chamber cover
 - Gasket
 - Float pin ①
 - Float ②
 - Valve seat plate ③
 - Valve seat assembly ④

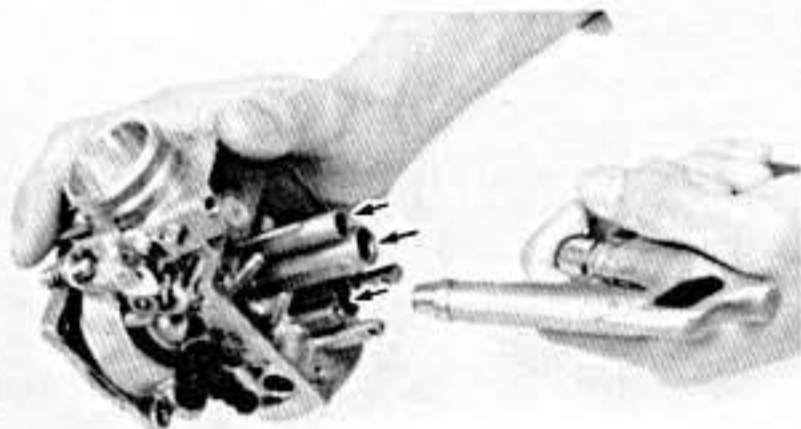


6. Remove:
- Main jet ①
 - Washer ②
 - Pilot jet ③
 - Main nozzle ④

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7. Remove:
- Starter plunger ①
 - Pilot air jet ②



INSPECTION

1. Inspect:
- Carburetor body
 - Fuel passage
- Contamination → Clean as indicated.

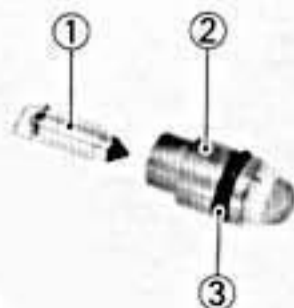
Carburetor cleaning steps:

- Wash carburetor in petroleum based solvent. (Do not use any caustic carburetor cleaning solution.)
- Blow out all passages and jets with compressed air.

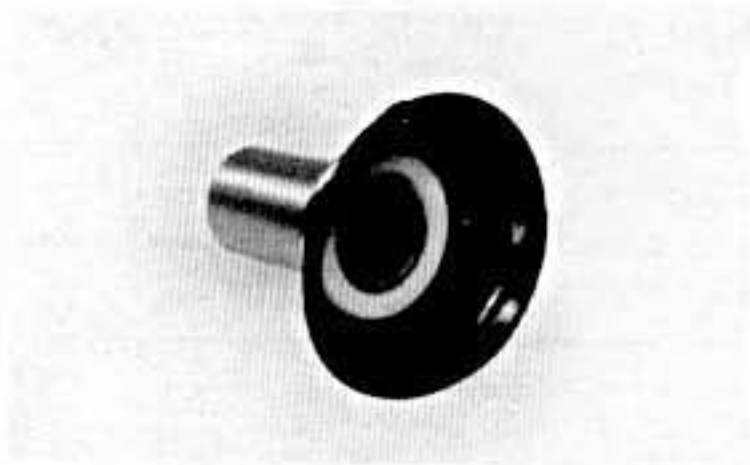
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2. Inspect:
- Floats
- Damage → Replace.

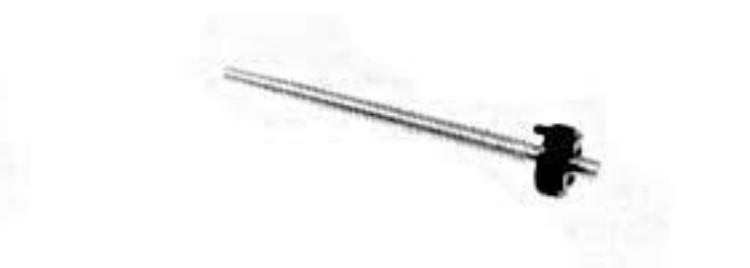


3. Inspect:
- Float needle valve ①
 - Seat ②
 - O-ring ③
- Damage/Wear/Contamination → Replace as a set.



4. Inspect:

- Throttle valve
Scratches → Replace.
- Rubber diaphragm
Tears → Replace.



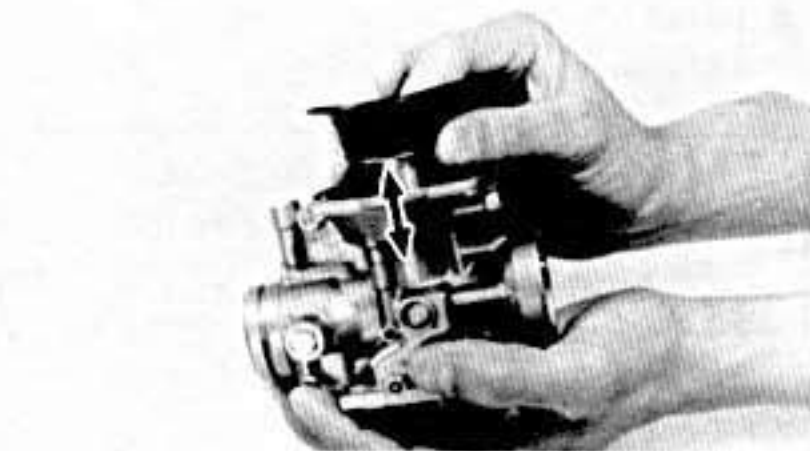
5. Inspect:

- Jet needle
Bends/Wear → Replace.



6. Inspect:

- Starter plunger
Wear/Damage → Replace.



7. Check:

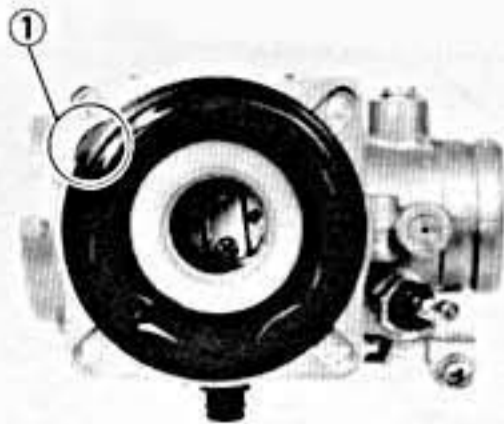
- Free movement
Insert the throttle valve into the carburetor body, and check for free movement.
Stick → Replace.

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.

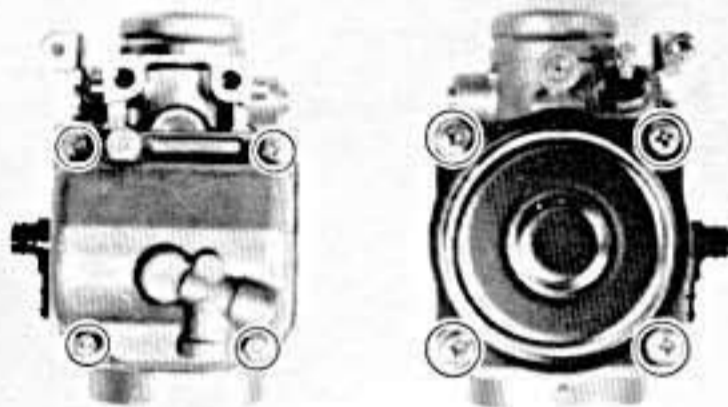


1. Install:

- Throttle valve

NOTE:

Note position of tab ① on diaphragm. This tab must be placed in the cavity of the carburetor body during reassembly.



2. Install:

- Float chamber cover
- Vacuum chamber cover



Screw (Float Chamber Cover):

2 Nm (0.2 m•kg, 1.4 ft•lb)

Screw (Vacuum Chamber Cover):

3 Nm (0.3 m•kg, 2.2 ft•lb)

3. Install:

- Upper bracket
- Lower bracket



Screw (Upper Bracket):

3 Nm (0.3 m•kg, 2.2 ft•lb)

Screw (Lower Bracket):

5 Nm (0.5 m•kg, 3.6 ft•lb)

4. Install:

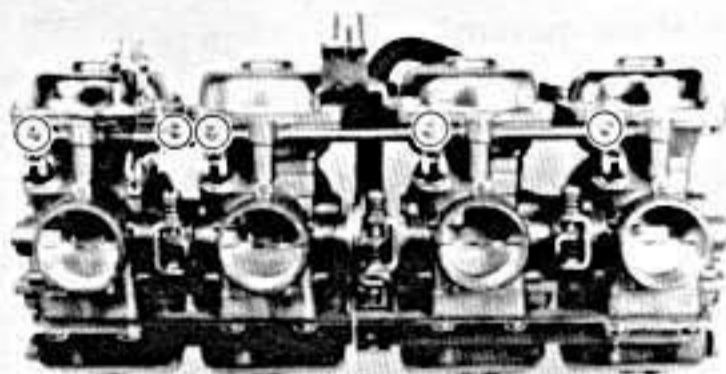
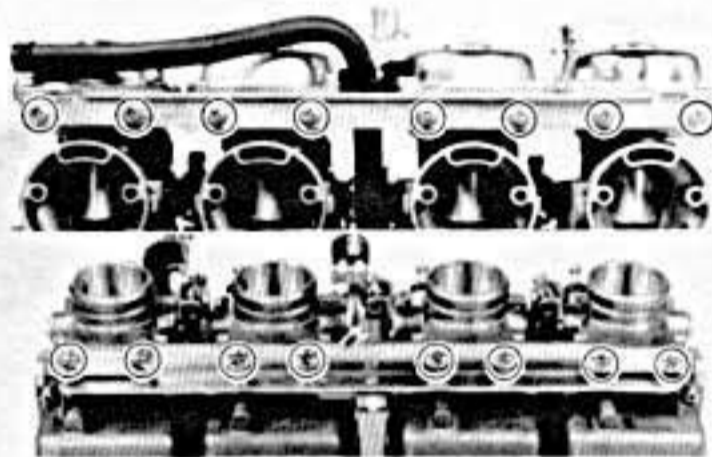
- Starter lever shaft



Screw (Starter Lever Shaft):

3 Nm (0.3 m•kg, 2.2 ft•lb)

Apply LOCTITE®.

**INSTALLATION**

1. Install:

- Carburetor assembly
- Reserve the removal procedure.



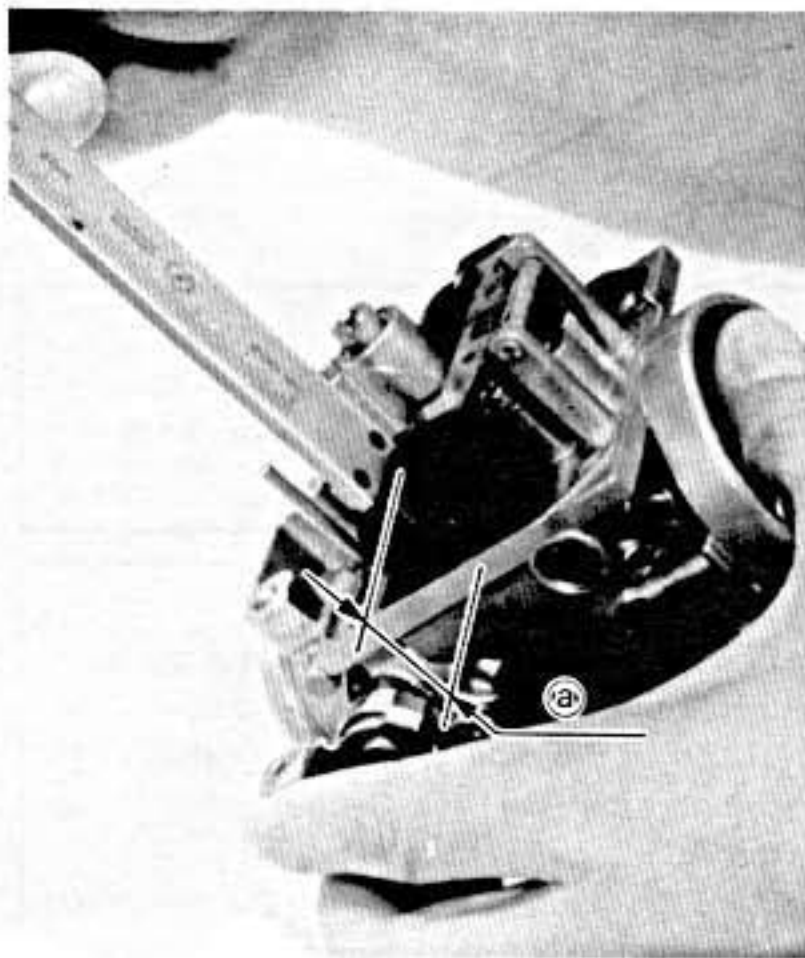
ADJUSTMENT

NOTE: _____

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

CAUTION:

The pilot screw settings are adjusted for maximum performance at the factory. Any attempt to change these settings will decrease engine performance.



Float Height Adjustment

1. Measure:

- Float height (a)
Out of specification → Adjust it by the following adjustment steps.



Float Height:

20.0 ± 1.0 mm (0.8 ± 0.04 in)

Float height measurement steps:

- Hold the carburetor in an upside down position.
- Incline the carburetor at $60 \sim 70^\circ$ (so that the end of the float valve does not hang down as a result of float weight).
- Measure the distance from the mating surface of the float chamber (gasket removed) to the top of the float.

NOTE: _____

The float should be just resting on, but not depressing, the spring loaded inlet needle.

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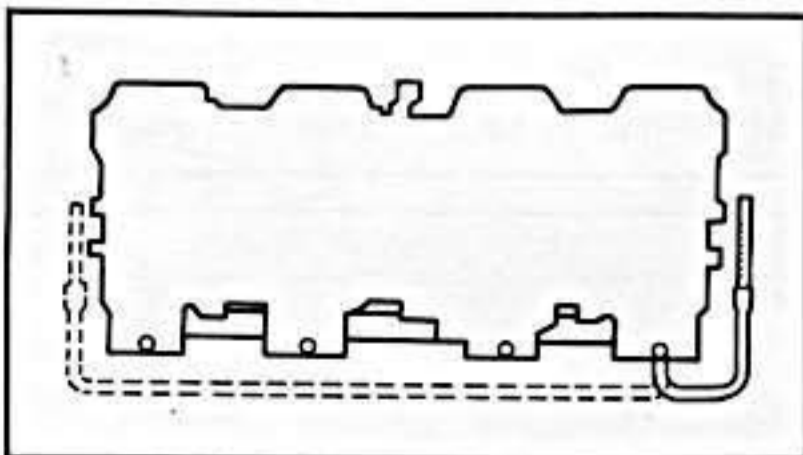
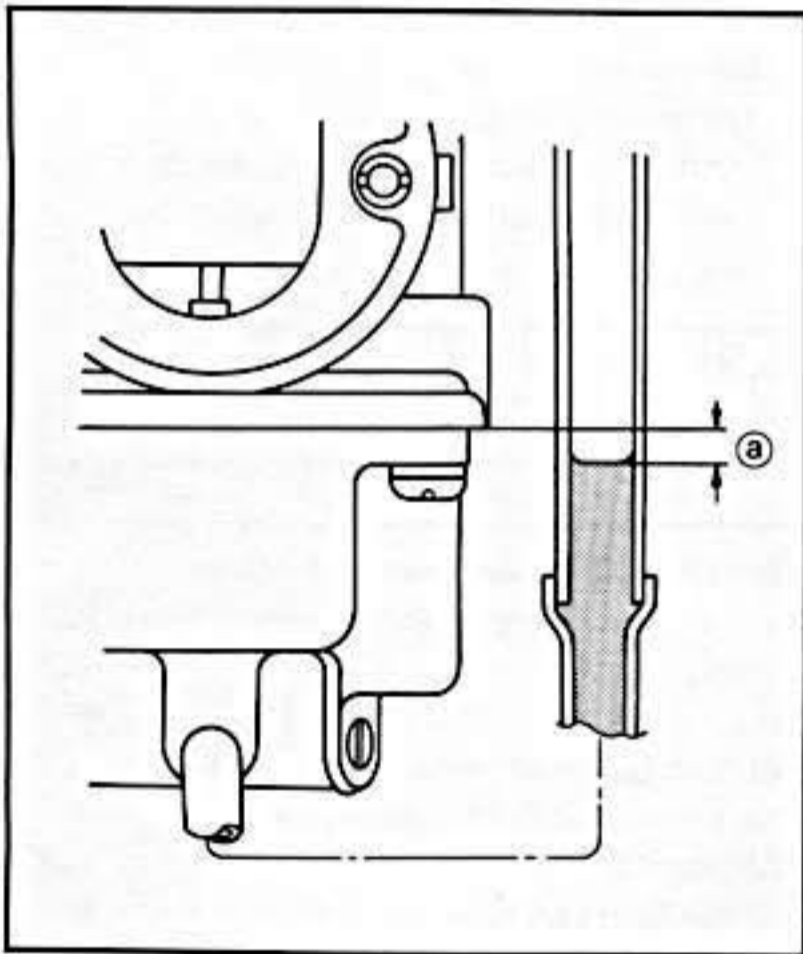


2. Adjust:
 - Float height

Float height adjustment steps:

- Remove the float, valve seat and the needle valve.
- Inspect the valve seat and the needle valve. If either is worn, replace as a set.
- If both are fine, adjust the float height by bending the float tang ①.
- Recheck the float height.

4



Fuel Level Adjustment

1. Measure:
 - Fuel level ①
 Out of specification → Adjust it by the following adjustment steps.



Fuel Level ①:
 2.0 ± 0.5 mm (0.08 ± 0.02 in)
 Below the Carburetor Body Edge.

Fuel level measurement steps:

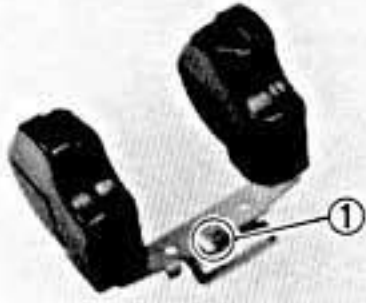
- Place the motorcycle on the level place.
- Install the Fuel Level Gauge Adapter (YM-01329) to the drain hole of the carburetor.
- Connect the Fuel Level Gauge (YM-01312) to the Adapter.
- Place the Gauge vertically next to the center of the mating line of the mixing body and float chamber cover.
- Loosen the drain screw.
- Warm up the engine, then shut it off after a few minutes.
- Measure the fuel level. It should be within the specified range.

NOTE:

Fuel level readings of both side of carburetor line should be equal.



2. Adjust:
- Fuel level



Fuel level adjustment steps:

- Remove the carburetor assembly. Refer to "REMOVAL" section.
- Remove the float, valve seat and the needle valve.
- Inspect the valve seat and the needle valve. If either is worn, replace as a set.
- If both are fine, adjust the float height by bending the float tang ①.
- Recheck the fuel level.



AIR CLEANER AND CRANKCASE VENTILATION SYSTEM

Refer to "CHAPTER 2—AIR CLEANER CLEANING" for air cleaner maintenance.

- ① Air cleaner
- ② Carburetor
- ③ Fresh air
- ④ Blow by gas

