3.8 CARBURETOR (S50, S65)

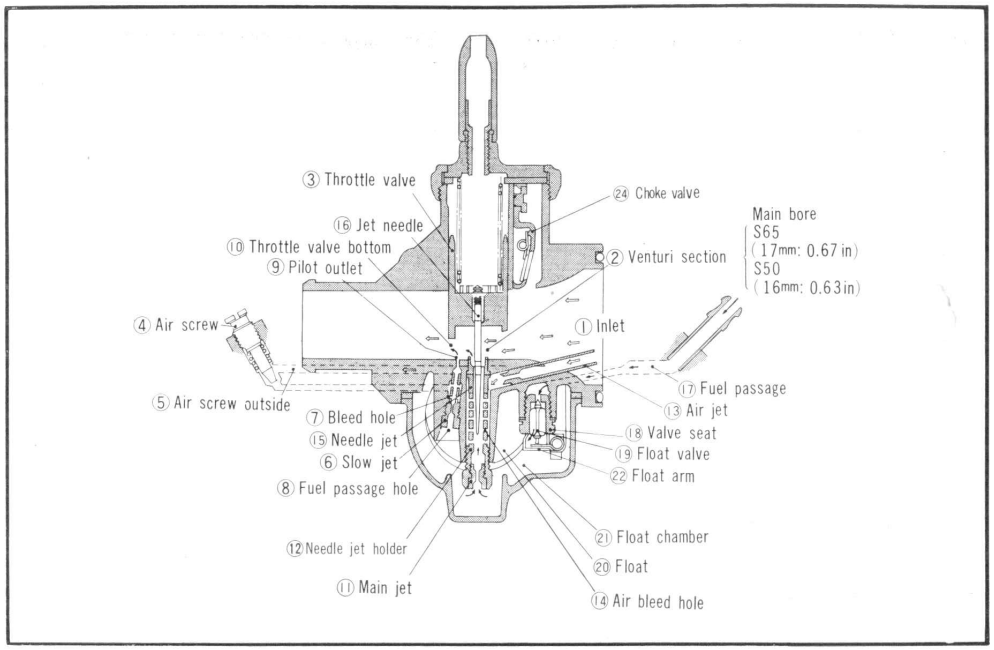

Figure 3-107. Carburetor cross sectional diagram

1. AIR FLOW

The air which passes through the air cleaner enters from inlet opening ①, passes under throttle valve ③ (main bore ②) and taken into the inlet side of the engine. The power output is determined by the volume of air taken into the engine. This necessary air flow is controlled by the vertical movement of the throttle valve which varies the area of the main bore ②. **(Fig. 3-107)**

2. FUEL FLOW

The air which flow through the main bore ② creates a low pressure directly under the throttle valve. It is here that the fuel outlets for both the main and slow systems are located. **(Fig. 3-107)**

a. Main System

The fuel passes through main jet ⑪ and enters the needle jet holder ⑫. The fuel mixes with the air taken in at air jet ⑬ and bled through air bleed hole ⑭. The fuel air mixture passes between needle jet ⑮ and jet needle ⑯, and discharges in a spray below the throttle valve ③. The fuel is atomized and mixed with the main air stream and is taken into the engine. **(Fig. 3-107).**

b. Slow System

The air which enters through air inlet ① passes around air screw ④ where it is metered and then mixed with the fuel from the fuel passage hole ⑧ and is discharged from pilot outlet ⑨ toward the throttle valve ③ as a fuel air mixture and finally mixes with the main air stream before entering the engine.

3. FLOAT CHAMBER

For S50 and S65, the fuel from the tank enters fuel passage ⑰, passes by valve seat ⑱, float valve ⑲ and enters float chamber ㉑. As the fuel fill the float chamber, the float ⑳ rises and forces the float valve against the valve seat with the float arm ㉒ to shut off the fuel flow into the float chamber. As the fuel in the float chamber is consumed and the fuel level drops, the float also lowers with the fuel level and allows the float valve to unseat from the valve seat, permitting the fuel to enter the float chamber. This cycle is repeated to maintain a constant fuel level.

A spring is incorporated in the float valve ⑲ where the float arm ㉒ make contact, for the purpose of absorbing the shock and preventing wear to the valve and seat caused by the fluctuation of the float when driving over rough road and in addition, it serves to maintain a constant full level in the float chamber.

Overflow pipe

If any foreign object should get stuck in between the float valve and seat and causes the fuel to overflow out of the slow jet or the needle jet, the fuel will enter the engine and dilutes the oil. To prevent such an occurance, an overflow pipe ㉓ is incorporated into the float chamber ㉑. The outlet of the overflow pipe ㉓ is higher than the normal fuel level and therefore, has no effect, but under overflow condition, the fuel level rises and the overflow fuel is drained outside. **(Fig. 3-108)**

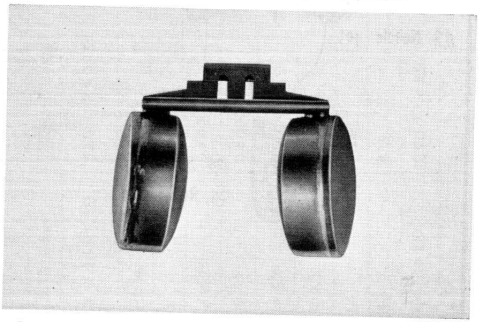

Figure 3-108. Float (S65)

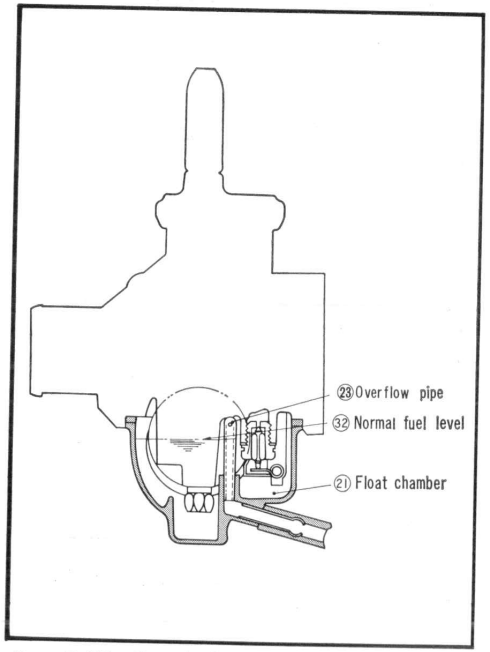

Figure 3-109. Float chamber