

Fig. 3-119. Needle jet

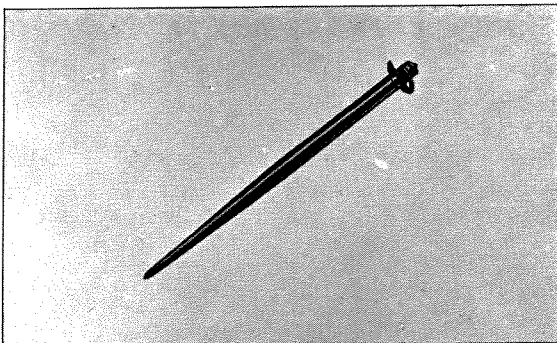


Fig. 3-120. Jet needle

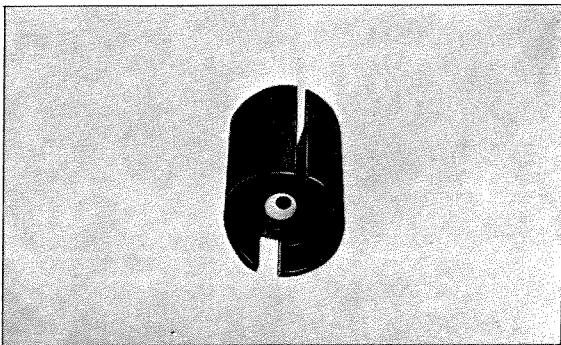
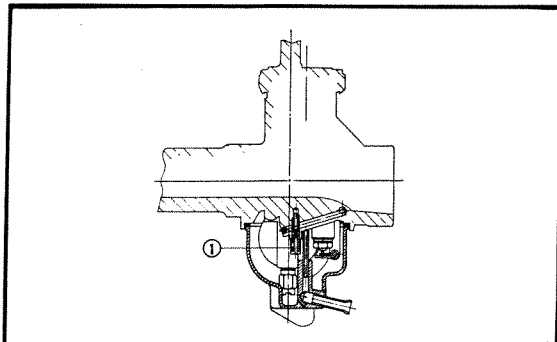


Fig. 3-121. Throttle valve



① Slow jet
Fig. 3-122. Slow jet

2. AIR JET

At full throttle opening, the fuel-air mixture has a tendency to become rich, and in order to prevent this condition, a bleed air is added to the fuel through the needle jet holder. The purpose of the air jet is to meter the amount of this air; the larger the air jet, more air will be added to the fuel mixture and a leaner fuel mixture is provided. Also, by mixing the air with the fuel, better atomization will be assured.

3. NEEDLE JET (Fig. 3-119)

At full or intermediate throttle opening, the needle jet will regulate the fuel which had been metered by the main jet. This control is accomplished together with the jet needle which will be described in the following paragraph. The hole of needle jet is made very accurately for precise control.

4. JET NEEDLE (Fig. 3-120)

The jet needle together with the needle jet described in the previous paragraph, meters the discharge of the fuel mixture in the 1/4 to 3/4 throttle range. The long tapered needle is suspended within the needle jet opening. The jet needle moves up and down with the throttle to control the fuel mixture proportionally to the throttle opening. There are three grooves on the head of the jet needle by resetting the set clip toward the lower groove, a richer fuel mixture will be provided.

5. THROTTLE VALVE (Fig. 3-121)

The throttle valve regulates the amount of fuel air mixture taken into the engine to control the output and speed of the engine. In addition, it serves a very important function in that it controls the fuel mixture. There is a cutaway on the throttle valve at the air inlet side which affects the vacuum pressure that controls the function of the needle jet. The use of the throttle valve with different size cutaway will control the discharge rate of the fuel, which affects the fuel-air ratio. The larger throttle valve cutaway number provides leaner mixture, however, this is only effective within the lower range of the throttle opening and has no effect above 1/2 throttle opening. There is also a throttle stop screw which sets the idling speed. Turning this screw IN will raise the idling speed, and lowers the speed when the screw is turned OUT.

6. SLOW JET (Fig. 3-122)

The slow jet controls the fuel at slow speed and at idling by regulating the air entering from the air bleed to produce a fuel-air mixture which assists in the atomization of the fuel. The slow jet, like the main jet, provides a richer fuel mixture when a jet of larger number is used.