

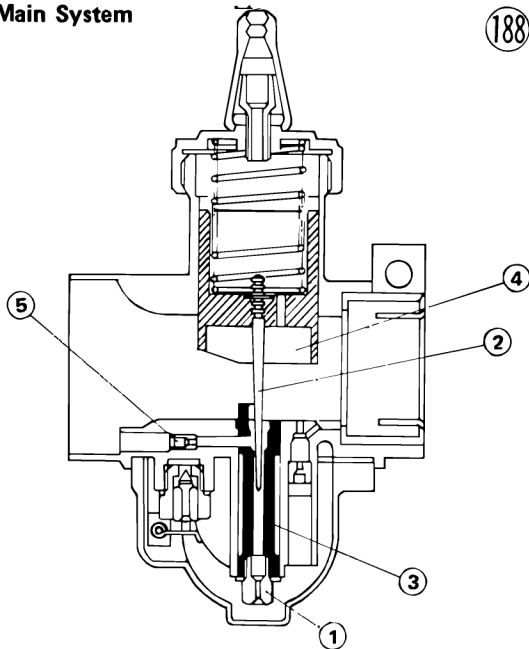
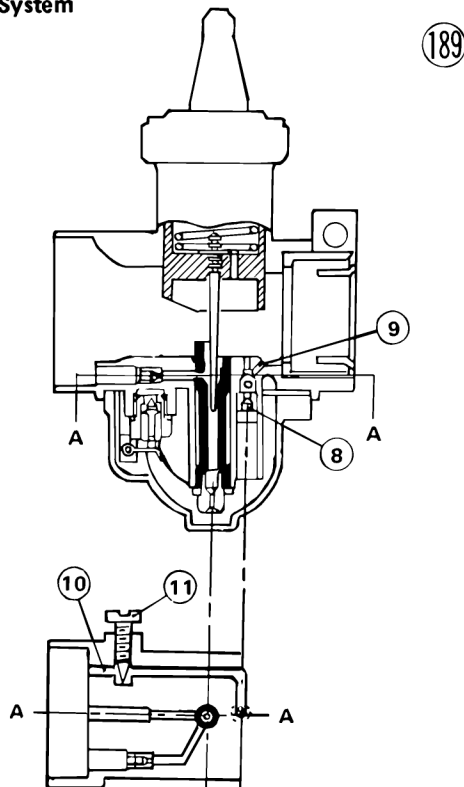
Main System**b. Pilot System**

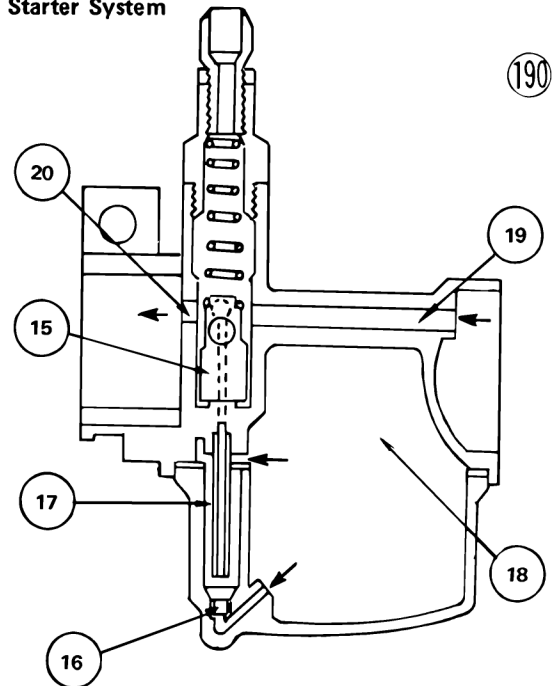
Fig. 189 shows the pilot system which includes the pilot jet (8), pilot (9), and pilot air screw (11).

When the engine is idling or running at low speed, the throttle valve is almost completely closed, and the principal air intake is through the pilot air inlet as controlled by the tapered pilot air screw. This air mixes with the fuel drawn up through the pilot jet and is spewed from the pilot outlet into the main bore, where it further mixes with the small current of air flowing there, and is finally drawn into the engine.

Pilot System**c. Starter System**

The purpose of this system is to enable easy starting when the engine is cold, and replaces the choke system found on 4 cycle or old style 2 cycle engines.

The engine is started with the throttle fully closed and the starter lever pushed completely down. With the lever pushed, starter plunger (15) is pulled up. Fuel is drawn up through the starter jet (16) by the negative intake pressure, and mixes with air that comes from the float chamber (18) via the air bleed opening (17). It is then mixed with the air from the starter primary air passage, and jetted through the hole in the rear of the throttle valve into the main bore. Here it supplements the main fuel mixture supply from the pilot system and is drawn into the engine.

Starter System**d. Float Mechanism**

The float (12), needle valve (13) and valve seat (14) make up the float mechanism, whose purpose is to maintain a constant fuel level in the float chamber by metering the gasoline from the fuel tank.

As in the case of a hand pumped bug sprayer, when the fluid level in the sprayer reservoir (or float chamber) is low, the same amount of pumping will not yield the same amount of spray out as when the reservoir is full. Therefore to retain the same fuel flow rate for a given set of conditions, the fuel level in the float chamber must be kept constant.

When the fuel level in the float chamber rises, the float also rises and closes the float valve, stopping fuel intake from the tank. When the level dips below normal the float lowers and opens the float valve more than normal, temporarily increasing fuel flow from the tank until the standard level is regained.