Intermediate Metering

The three by-pass ports located above the idle mixture discharge orifice serve the purpose of intermediate metering but have varying functions. The lowest port, situated at the throttle crack and above the idle orifice, discharges idle mixture when the throttle is set for idling. The two upper ports begin to discharge the fuel mixture only after the throttle has been slightly opened. This system was devised to provide smooth transition from idle speeds to power settings.

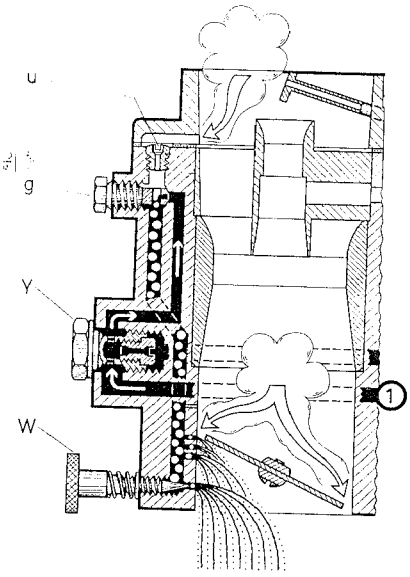

Fig. 6

Power Metering (normal operation)

The fuel flows through the main jet carrier (y) and the therein located main jet (Gg) into a well which connects with the primary venturi (x) and, thus, with the induction barrel. Placed into the well is the emulsion tube (s) together with the air correction jet (a) which is located directly above it. Vaccum in the induction barrel draws the fuel into the primary venturi where it is mixed with air; the fuel/air mixture then passes through the main venturi (k) where it is fully atomized. As the increasing vaccum effect causes the fuel level in the well to drop, air passes through the air correction jet and through calibrated orifices in the emulsion tube to mix with fuel metered by the main jet, thus emulsifying and effecting a derichment of the fuel/air mixture.

As long as the engine operates in the lower RPM range under partial or full load, only the main metering system is supplying the fuel. However, as the engine RPM increase, the vaccum effect at the power enrichment nozzle becomes so intense that it begins to draw fuel from the power enrichment system. The power enrichment system consists of a discharge nozzle and a metering jet; the fuel is drawn directly from the float chamber. This system feeds supplemental fuel into the primary venturi when the engine operates under full-power conditions at high RPM.