3.7.1 Diaphragm accelerator pump

As shown in figure 27, on opening the throttle slide (9), lever (8) controlled by a special cam (7) cast into the front of the throttle slide, acts directly on the pump diaphragm (1), held out by the spring (2).

This diaphragm, through the delivery valve (4) and pump jet (5), pumps fuel into the main barrel (10).

On closing the throttle, the diaphragm returns to its original position, pushed by the spring and drawing fuel up from float chamber through the inlet valve (6).

The pump injection amount can be changed by adjusting the screw (3) which controls the travel of the diaphragm and consequently the volume of fuel pumped out.

The start of pump operation is determined by the particular configuration of the cam (7) cast in the front of the slide (9).

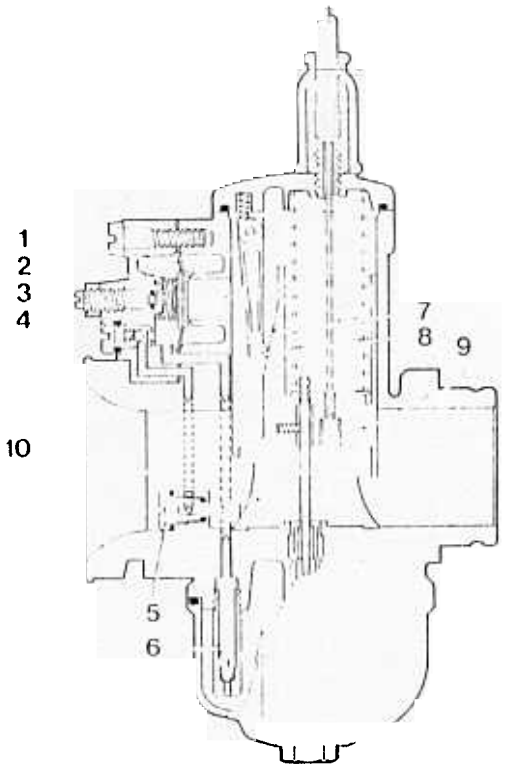

fig. 27

3.7.2 Selection of correct pump jet and slide pump cam

The profile of the cam in the throttle slide controls the action of the accelerator pump.

For example, cams having the operating ramp high up in the throttle valve (see figure 28) make the pump start to work immediately the throttle opens.

Operating ramps lower down in the slide (figure 29) delay the spraying action of the pump.

Having selected the cam type, to produce immediate or delayed pickup from engine idle, the pump jet size can then be chosen.

The size of pump jet selected determines the duration of fuel delivery, so the larger the pump jet used, the shorter the pump spraying interval and vice versa. The quantity of fuel sprayed out has already been fixed.

Pump jet selection must be effected with the engine running with rapid full-throttle acceleration; under these circumstances the optimum jet size should allow the engine to pick up regularly and promptly, rapidly increasing engine speed in every acceleration-speed range.

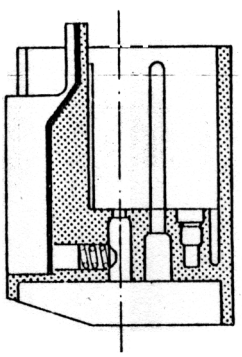

fig. 28

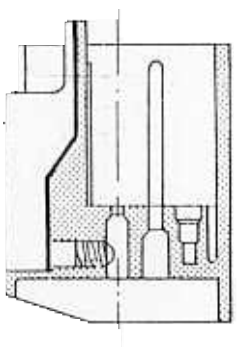

fig. 29