FUEL PUMP

General

Fuel is fed to the carburetors by a diaphragm pump which is flange-mounted to the crankcase. It is operated mechanically from a cam on the distributor drive shaft over an actuating rod. The quantity of fuel delivered by the pump is automatically controlled as the fuel is consumed by the float bowls.

The fuel pump consists of the pump cover, containig suction valve, delivery valve and a fuel strainer, and a fuel pump housing, incorperating the rocker mechanism. The diaphragm and spring are situated between the cover and the housing. The diaphragm consists of several layers of special flexible, clothlike material which is not affected by the fuel and two protecting discs which are riveted to the diaphragm actuating rod.

Operation

As the distributor drive shaft revolves, the cam causes the actuating rod to move against the rocker arm which pushes the diaphragm downward against the diaphragm spring. This movement creates a vacuum above the diaphragm which lifts the suction valve off its seat so that fuel can be drawn in. When the actuating rod moves backward, the loaded diaphragm spring pushes the diaphragm upward, forcing the fuel in the pump through the delivery valve and into the carburetors. This process is repeated at every turn of the cam (once every two revolutions of the engine).

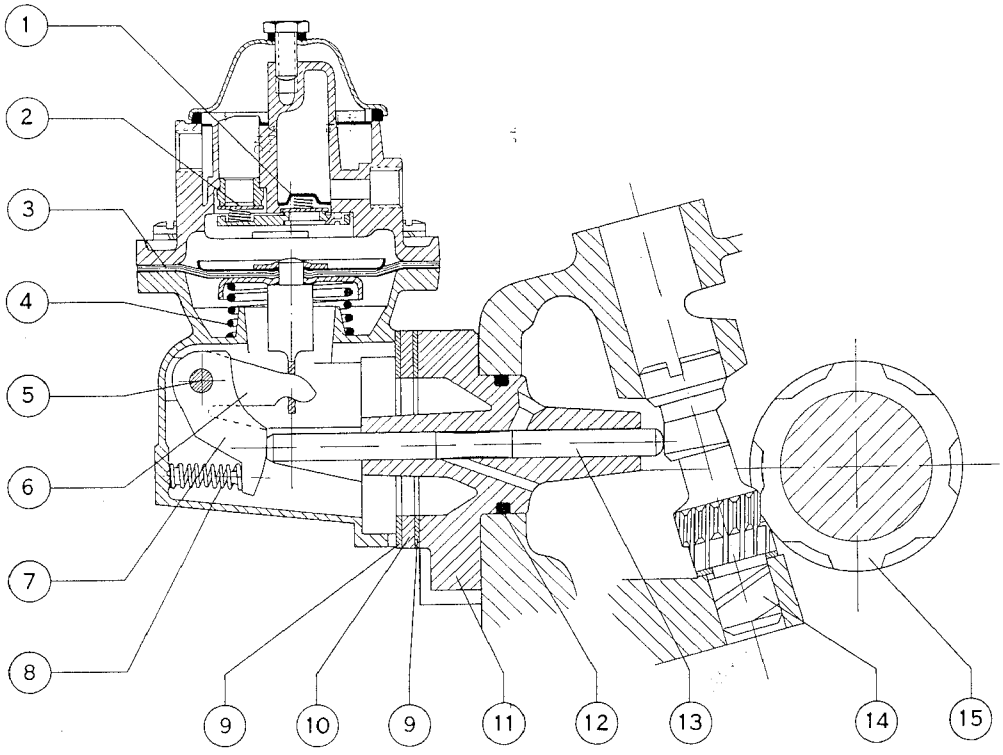

Fig. 29

Fuel Pump (Cutaway)

① Delivery valve
② Suction valve
③ Diaphragm
④ Diaphragm spring
⑤ Rocker arm pin
⑥ Rocker arm link
⑦ Rocker arm
⑧ Rocker arm spring
⑨ Gasket
⑩ Fibre flange
⑪ Intermediate flange (light alloy)
⑫ O-ring
⑬ Actuating rod
⑭ Distributor drive shaft
⑮ Distributor drive gear