The third passageway for the oil to flow is to the gearbox bearings where it is pumped to the gearbox main bearing on the mainshaft and also to the bearing on the layshaft. After this the oil drops down back into the oil sump, to be recirculated again through the engine.

2 Petrol tank: removal and replacement

1 The petrol tank fitted to the Z1 models is secured to the frame by means of a short channel that projects from the nose of the tank that engages with a rubber buffer surrounding a pin welded to the frame, immediately behind the steering head. This arrangement is duplicated either side of the nose of the tank and the frame. The rear of the tank is secured by a rubber clip that locates round a lip welded on to the back of the tank. The tank also has two rubber buffers on which it rests at the rear. A petrol tap is fitted with a reserve pipe that is switched over, when the fuel reaches the level of the main petrol pipe. There is no balance pipe.

2 The petrol tank can be removed from the machine without draining the petrol, although the rubber fuel lines to the carburettors will have to be disconnected. The dualseat must be lifted up to release the rubber clip at the rear of the tank then raise the tank at the rear and pull upwards and backwards to pull the tank off of the front rubbers. When replacing the fuel tank, lift at the rear and push down onto the front rubber buffers, then secure the rubber clip at the rear and reconnect the fuel lines.

3 Petrol tap and filter: removal, dismantling and replacement

1 It is not necessary to drain the petrol tank, if the tank is only half or under half full, as the tank can be laid on its side on a clean cloth or soft material (to protect the enamel), so that the petrol tap is uppermost. The petrol tap pipes should be removed, before removing the petrol tap. To remove the tap and filter, first undo the large hexagon union nut next to the tank, the tap body can then be detached complete with the filter. When the filter bowl is removed this will reveal the rubber 'O' ring gasket and the filter gauze. Remove the gauze and clean in petrol. When reassembling the tap, fit a new gasket between the body and the tank and a new rubber 'O' ring to the filter bowl if the old one is noticeably compressed. On no account overtighten the bowl, as it is made of soft metal and the threads will easily strip.

2 There is no necessity to remove either the tap or the petrol tank if only the filter bowl has to be detached for cleaning.

4 Carburettors: description and removal

1 The method of mounting the four carburettors is on a holding plate with eight countersunk screws, the whole bank of carburettors being connected to the intake side of the engine on short induction hoses. The four butterfly type throttle valves are operated by a single shaft, likewise the manually operated choke also has a single shaft operating four levers, one to each carburettor.

2 The throttles are operated by two cables from the handlebar, one to open the throttles and the other to close them. A heavy return spring is incorporated in the throttle return system. When closing the throttles the use of a separate return cable helps to close the throttle more positively. This ensures smooth throttle action.

3 A vacuum gauge fitting is incorporated on each inlet manifold as an aid to balancing manifold pressure, and when used in conjunction with a vacuum gauge array, allows the carburettors to be accurately synchronized.

4 Starting in extreme cold weather is aided by a separate starter system which acts by vacuum pressure and serves in place of a choke. The starter system takes the form of four plunger valves situated at the sides of the carburettors. The four plungers are operated in unison by a lever on the end of the shaft marked 'CHOKE'.

5 With the choke lever raised, and the throttles fully closed, a high intake vacuum is created when the engine is turned over. Fuel flow is metered by the starter jet, and fuel is drawn up

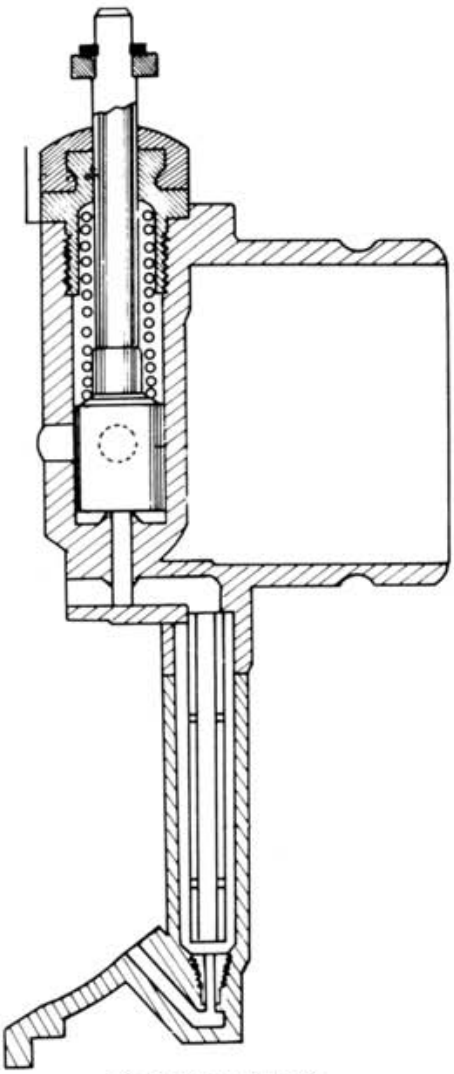


Fig. 2.1 Starter system

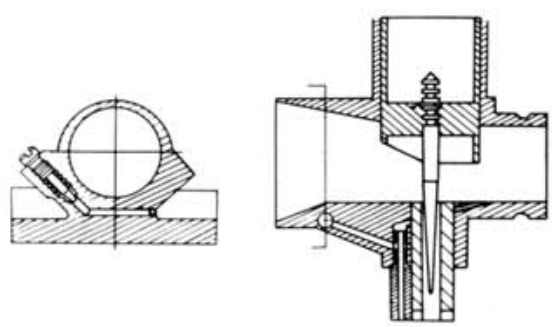


Fig. 2.2 Pilot system

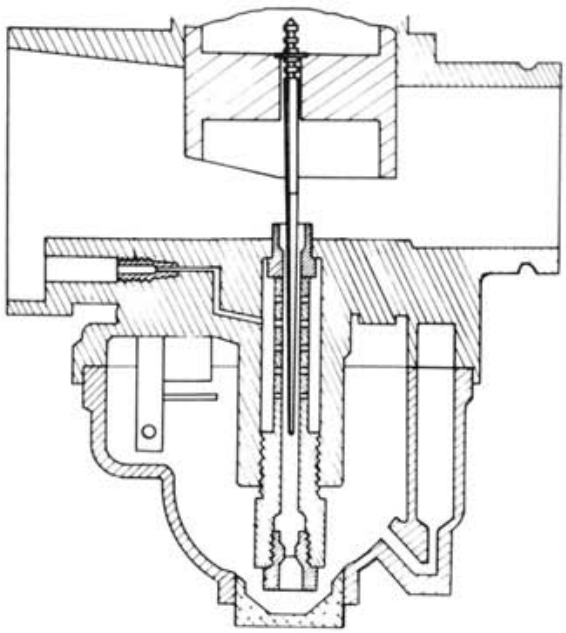
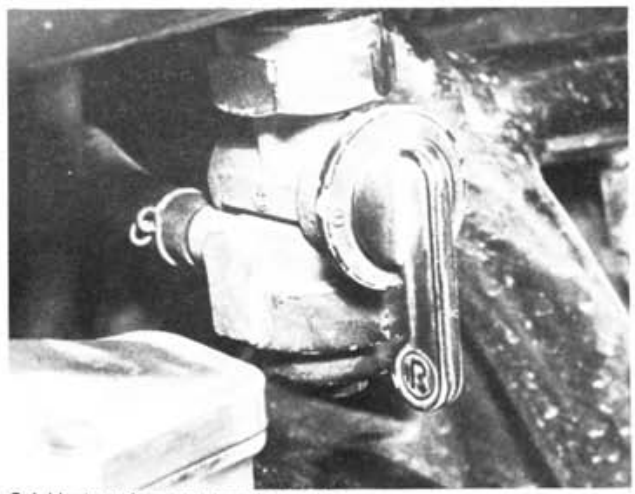


Fig. 2.3 Main system

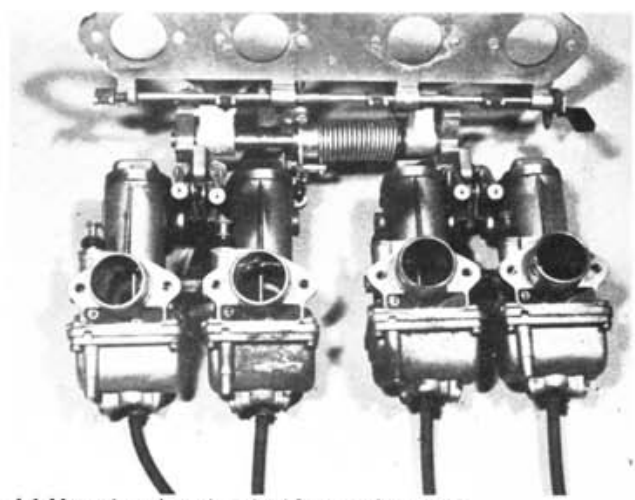
through the starter pipe to the starter plunger chamber where it is atomized. The rich mixture is then sprayed into the carburettor bore where a small fuel/air spray from the pilot system is mixed with it. The final mixture is then delivered to the engine.

It is essential that the starter plungers be fully raised by the choke lever and the starter jet, pipe, and the air bleed hole completely free of any blockage. The throttle must be fully closed so that sufficient vacuum is developed for efficient atomization to take place.

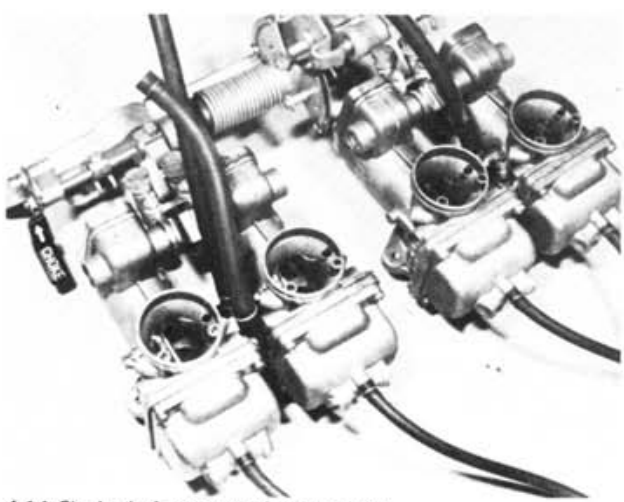
6 The pilot system is made up of the pilot jet, the pilot air screw, and the pilot outlet. It controls carburation from the idle position to approximately one eighth throttle opening. The pilot



3.1 Undo union nut to remove tap



4.1 Mounting plate detached from carburettors



4.1A Single shaft connects four throttles

4.2 Pulley operates two cables