

the distributor to manifold depression.

### Throttle By-pass Valve

In running experimental Emission Test Cycles, which include two over-run modes, it was shown that rates of hydrocarbon and CO emission are extremely high when manifold depression exceeds 22 in. - 23 in. Hg, the precise critical figure varying with different engines. To prevent rise in excess of the critical figure, therefore, a throttle by-pass valve (97 of Fig.21) is incorporated in CDSE carburettors. This valve is pre-set and provided that it is free from air leaks, should not require attention. It is possible however, that small particles of foreign matter may lodge under the valve seating, causing leakage and consequent high idle speed. In these circumstances, the valve cover should be removed, the valve and seating cleaned and the parts re-assembled.

It is important not to vary mixture ratio when the by-pass valve is in operation and the circuit, shown on the diagram, feeds from the mixing chamber to the downstream side of the primary throttle. (See Fig. 20.)

Manifold depression acting on the valve diaphragm will cause the valve to open when a value is reached that will overcome the coil spring tension.

### Ignition Retard Capsule

As an aid to emission control on idle and over-run and also as an engine brake to partially compensate for the throttle by-pass, an ignition retard capsule is fitted to the distributor. This is operated by the manifold depression through a valve mounted on the rear of the rear carburettor. This valve connects manifold depression to the distributor only when the throttles close. When the throttles open the valve seals the manifold tapping and vents the distributor to atmosphere. Consequently, the depression pipes must be fitted to the correct spigots on this valve. The bottom spigot connects to the distributor retard capsule.

The adjusting screw on the rear carburettor is factory set but should it be disturbed, reset to give approximately 3/32 in. (2.4 mm.) movement on the valve plunger when the throttles are closing and approximately 1/64 in. (.4 mm.) free play on the plunger when the throttles are closed.

All pipe connections must be air tight.

### Servicing

The servicing required for these carburetters is as given in Sections 'L.15' and 'L.16', with the exception of replacing the throttle by-pass valve gasket.

At intervals of every 24,000 miles (40,000 km), replace the throttle by-pass body gasket by removing the 3 valve body securing screws. While the by-pass body is off the carburetter, the primary throttle spindle seals can be replaced. First,