



6.13 Ensure throttle linkage spring is refitted

7 Carburettors: dismantling, examination and renovation

1 As mentioned previously, most of the normal overhaul jobs may be carried out with the instruments joined as a bank of four, thus avoiding a considerable amount of dismantling work. Note that where attention to the connecting linkages is required, it will be necessary to separate the instruments as described in Section 5.

2 Before any dismantling work takes place, drain out any residual fuel and clean the outside of the instruments thoroughly. It is essential that no debris finds its way inside the carburettors.

3 It is suggested that each carburettor is dismantled and re-assembled separately, to avoid mixing up the components. The carburettors are handed and therefore components should not be interchanged.

4 Invert one carburettor and remove the three float chamber screws. Lift the float chamber from position and note the chamber sealing ring. This need not be disturbed unless it is damaged. The two floats, which are interconnected, can be lifted away after displacing the pivot pin. The float needle is attached to the float tang by a small clip. Detach the clip from the tang and store the needle in a safe place.

5 When unscrewing any jet, a close fitting screwdriver must be used to prevent damage to the slot in the soft jet material.

6 Unscrew the main jet whilst holding the jet needle holder with a small spanner. The holder may then be unscrewed to release the needle jet which is a push fit and projects into the carburettor venturi. Invert the carburettor to facilitate needle jet removal. Note that the slow jet, fitted beside the main jet column, is pressed into the carburettor body and cannot be removed. For this reason, when the jets are being cleaned, the slow jet can only be cleared by using compressed air in the jet passage.

7 Note that the pilot mixture adjuster screws on the 1980 US market CB650 models are fitted with adjustment limiter caps. These limiter caps cannot be detached from the pilot screws; if force is employed to try and remove the caps, the screws will be damaged.

8 Before removing the screws, screw them fully inwards until they seat lightly, recording the exact number of turns or part-turns necessary to seat them. Note that the pilot screws **must not** be tightened down against their seats as damage will be inflicted on the seats. By making a note of the exact position of each pilot screw prior to its removal, the need for resynchronisation upon reassembly will be negated. Unscrew and remove the pilot screws and their springs, plain washers and O-rings. Do

not damage the screw threads when removing the plain washers and O-ring fitted to each screw.

9 A diaphragm air cut-off valve, is fitted to each carburettor to automatically richen the mixture on over-run, thus preventing backfiring in the exhaust system. The valve is located on the side of the main body, and thus will require separation of the instruments if attention is required. The cut-off valve is enclosed by a cover held on the outside of the carburettor body by two screws. Unscrew the screws holding the cover in place against the pressure of the diaphragm spring, and then lift the cover away. Remove the spring, and carefully lift the diaphragm and small O-ring.

10 An accelerator pump is fitted to the underside of carburettor No 2. If attention or examination of the device is required, remove the three pump cover retaining screws, detach the cover, and remove the spring and diaphragm.

11 Check the condition of the floats. If they are damaged in any way, they should be renewed. The float needle and needle seating will wear after lengthy service and should be inspected carefully. Wear usually takes the form of a ridge or groove, which will cause the float needle to seat imperfectly. If damage to the seat has occurred the carburettor body must be renewed because the seat is not supplied as a separate item.

12 After considerable service the throttle needle and the needle jet in which it slides will wear, resulting in an increase in petrol consumption. Wear is caused by the passage of petrol and the two components rubbing together. It is advisable to renew the jet periodically in conjunction with the throttle needle.

13 Inspect the cut-off valve diaphragm for signs of perishing or perforation. Damage will be easily seen.

14 Before the carburettors are reassembled, using the reversed dismantling procedure, each should be cleaned out thoroughly using compressed air. Avoid using a piece of rag since there is always risk of particles of lint obstructing the internal passages or the jet orifices.

15 Never use a piece of wire or any pointed metal object to clear a blocked jet. It is only too easy to enlarge the jet under these circumstances and increase the rate of petrol consumption. If the compressed air is not available, a blast of air from a tyre pump will usually suffice.

16 Do not use excessive force when reassembling a carburettor because it is easy to shear a jet or some of the smaller screws. Furthermore, the carburettors are cast in a zinc-based alloy which itself does not have a high tensile strength. Take particular care when replacing the throttle valves to ensure the needles align with the jet seats. It should be noted that the throttle valve assembly which does not have a synchronisation adjuster should be fitted to the No 2 carburettor.



7.4a Remove float chamber noting the sealing ring

