

engine. Disconnect the choke cable (if fitted) and place it clear of the carburettor.

3 Obtain a small clean container and place it underneath the carburettor drain pipe (where fitted). Loosen the float chamber drain screw and allow the fuel contained in the float chamber to drain into the container. Tighten the drain screw. Note that if the fuel tank has been left in position, the tap must be turned to the 'Off' position and the fuel pipe disconnected before the carburettor is drained.

4 On XR80 and XL80 S models only, remove the three air cleaner cover retaining nuts, remove the cover to carburettor mouth retaining clip and detach the cover from the carburettor by pulling it first backwards and then outwards away from the machine.

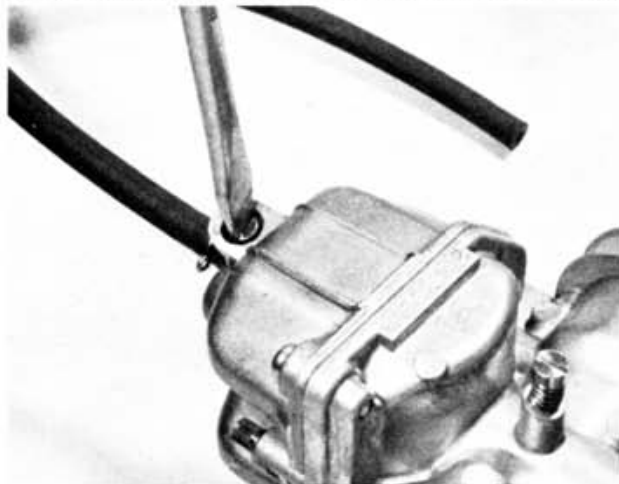
5 On all other models, displace the air cleaner case hose to carburettor intake retaining clip and prise the hose away from the carburettor.

6 The carburettor may now be removed from the inlet stub by removing the two nuts, one each side of the stub. Carefully ease the carburettor backwards, to clear the two retaining studs, and then down and sideways to remove it from the machine. Take care to ensure all pipes attached to the carburettor are free to follow it during removal and carefully withdraw the throttle valve from the carburettor body as the carburettor is removed. If the valve or needle require attention, they can be detached by compressing the return spring against the underside of the top, and disengaging the cable end from its recess

in the valve. The needle is held by a spring clip, which is itself positioned by a second clip inside the valve. It is normally advisable to leave this assembly undisturbed unless obviously worn.

7 Refitting of the carburettor is a reversal of the removal procedure, noting the following points. Great care must be taken to ensure that all connections are free from air leaks, which will have an adverse effect on engine performance. This means checking the carburettor body to intake stub O-ring for damage or deterioration and renewing it if necessary; the air cleaner case to carburettor mouth hose should also be inspected for signs of possible air leakage. Tighten the carburettor retaining nuts evenly to avoid any risk of distortion to the carburettor mounting flange. Finally, check that the carburettor top is screwed fully home and the throttle cable adjusted as stated in paragraph 5 of Section 54 of Chapter 1.

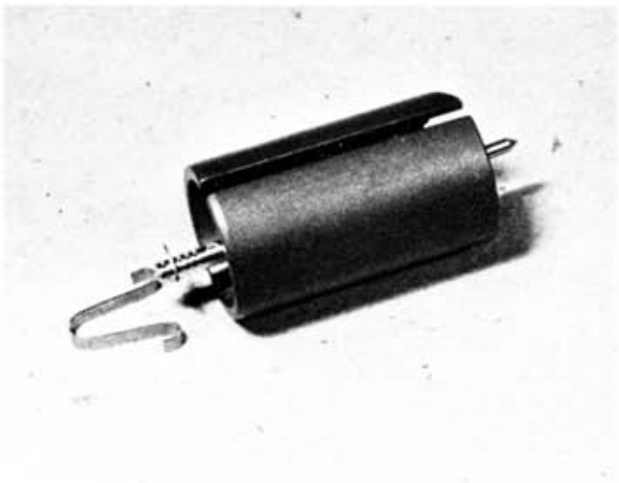
8 Note: it is essential that before the engine is run, all disturbed fuel pipe and carburettor connections are checked for leaks. Switch the fuel tap lever to the 'On' position and closely inspect the connections, allowing time for the fuel to fill the float chamber. Whilst carrying out this inspection, check that all fuel and vent pipes have been correctly routed and are not chafing against frame or engine components. If a leak is found, it must be cured before attempting to start and run the machine. Petrol dripping onto hot engine castings may well result in an explosion or fire.



5.3 The location of the float chamber drain screw (all except 80)



5.6a If necessary, the throttle valve may be detached from the cable



5.6b The V-spring ...



5.6c ... locates within the valve and retains the needle spring clip

6 Carburettor: dismantling, examination and reassembly

1 Before dismantling the carburettor, cover an area of the work surface with clean paper or rag. This will not only prevent any components that are placed upon it from becoming contaminated with dirt, moisture or grit but, by making them more visible, will also prevent the many small components removed from the carburettor body from becoming lost.

2 Detach the float chamber by inverting the carburettor and removing the three screws and spring washers that retain it to the main body (two on the XR80 and XL80 S models). There is a sealing gasket around the edge of the float chamber, which will remain either with the float chamber or the main body of the carburettor.

3 Pull out the pivot pin from the twin float assembly and lift the floats away. The float needle can now be displaced from its seating and should be put aside in a safe place for examination at a later stage. It is very small and easily lost if care is not taken to store it in a safe place.

4 Remove the plastic anti-surge baffle (where fitted) from the main jet and unscrew the main jet from the central column between the two floats. The needle jet holder is immediately below the main jet, and may also be unscrewed. Invert the carburettor and allow the needle jet to fall out of its recess.

5 On XR80 models, remove the slow running jet, situated next to the needle jet holder. On all other models, the jet is in a similar position but fixed.

6 On XR80 models, the pilot adjustment screw is situated on the side of the carburettor, being the lower, rearmost of the two screws with the carburettor in the installed position. On all other models, the screw is situated just in front of the float chamber. When removing the pilot screw, count the number of turns needed to detach it from the carburettor body and note the information for reference when refitting. Care should be taken to retain the spring after the screw has been removed. On 1980 XL100 S (US) models the pilot screw is fitted with a limiter cap to conform to EPA regulations. The limiter cap allows rotation of the screw only within fixed limits (about 300° of rotation) and thus prevents unjudicious adjustment of the screw which might increase mixture strength and thus exceed the EPA regulations. A pilot screw fitted with a limiter cap can be removed only after removal of the float bowl. On reassembly it should be fitted in exactly the position in which it was found. If a new screw is to be fitted the mixture strength should be set accurately by following the procedure given in paragraph 3 of the following Section. Having done this a new limiter cap should be fitted so that the stop prevents rotation of the cap in an anti-clockwise direction and thus prevents a richer mixture setting being provided. On XL80 S models the

pilot screw is covered by a tight-fitting plug drifted into a recess in the carburettor body. Because of this, pilot screw removal or adjustment is not possible subsequent to factory installation.

7 Remove the throttle stop screw, located on the side of the carburettor just above the float chamber, taking care to count and note the number of turns needed for removal and to retain the spring after the screw has been removed.

8 Check that the floats are in good order and not punctured. It is not possible to effect a permanent repair. In consequence, a new replacement should always be fitted if damage is found.

9 The float needle seating will wear after lengthy service and should be closely examined with a magnifying glass. Wear usually takes the form of a ridge or groove, which will cause the float needle to seat imperfectly. In extreme cases the seat will wear, and because it is not removable the complete carburettor body must be renewed.

10 The hand-operated cold starting choke should not require attention. Wear is unlikely to occur unless the machine has covered a very high mileage, in which case the whole carburettor will then require renewal.

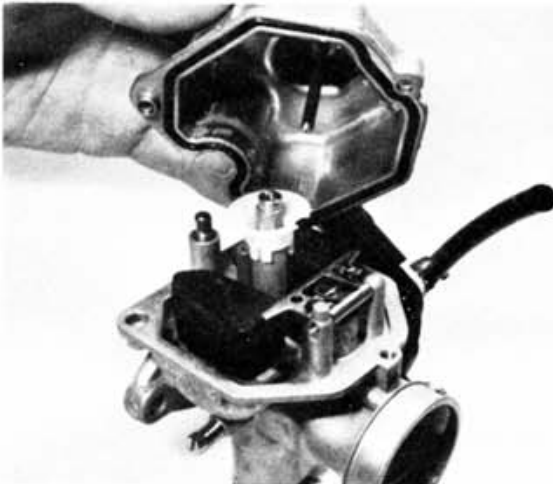
11 Although the carburettor top has been unscrewed, no further dismantling should prove necessary nor is advisable. It is unlikely that the position of the needle will need to be changed or the slide renewed, except after a long period of service in the latter case.

12 Check that all mating surfaces on the carburettor body are flat by using a straight-edge laid across the mating surface. Ensure all O-rings and sealing gaskets are renewed when re-assembling and refitting the carburettor and that, where applicable, they are correctly seated in their retaining grooves. The springs on the pilot jet and throttle stop screws should be carefully inspected for signs of corrosion and fatigue and renewed if necessary.

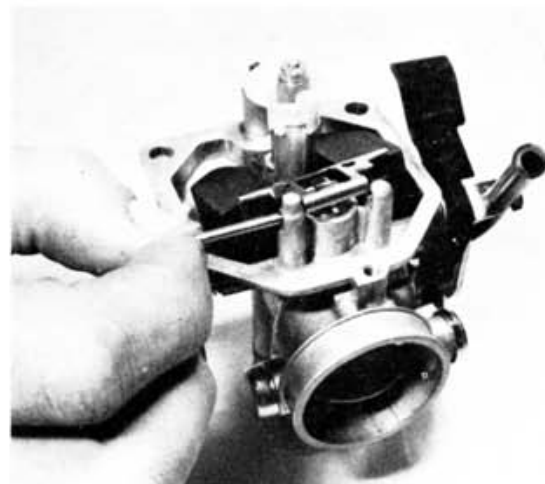
13 Before the carburettor is reassembled, by reversing the dismantling procedure, it should be cleaned out thoroughly using compressed air. Avoid using a piece of rag since there is always risk of particles of lint obstructing the internal passages or the jet orifices.

14 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 compressed air is not available, a blast of air from a tyre pump will usually suffice. As a last resort, a fine nylon bristle may be used.

15 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 carburettor is cast in a zinc based alloy which itself does not have a high tensile strength. If any of the castings are damaged during reassembly, they will almost certainly have to be renewed.



6.2 Detach the carburettor float chamber ...



6.3a ... pull out the pivot pin to free the float assembly ...