

moved to align with the hole of the jet before being finally pushed home. With the top of the mixing chamber tightened, reposition the carburettor so that it is vertical and retighten its retaining clamps.

14 It is now necessary to ensure that the throttle cable is correctly adjusted and functions smoothly over its full operating range. Adjustment of this cable is correct when there is 0.5 – 1.0 mm (0.02 – 0.04 in) of free movement in the cable outer when it is pulled out of its adjuster at the carburettor top. If cable adjustment is found to be incorrect, then loosen the adjuster locknut and rotate the adjuster the required amount before retightening the locknut. Initial adjustment should always be carried out at the carburettor end of the cable. Where the machine has an adjuster at the throttle twistgrip, then use this adjuster for any fine adjustment that may be necessary.

15 Where necessary, reconnect the tachometer drive cable to its location at the top of the gearbox housing. Ensure that the end of the cable inner is correctly located in the drive gear assembly before fitting and tightening the knurled retaining ring. Refit both sidepanels.

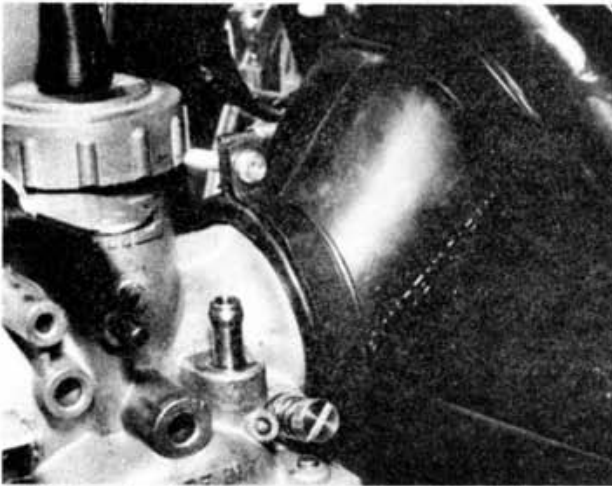
16 Finally, reconnect the fuel pipe to the carburettor and retain it in position with the spring clip. Turn the tap lever to the 'On' position and carefully check both ends of the pipe for any signs of fuel leakage. On no account should fuel be allowed to come

into contact with hot engine castings; if this is allowed to happen, fire may result causing serious personal injury.

7 Carburettor: dismantling, examination, renovation 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.

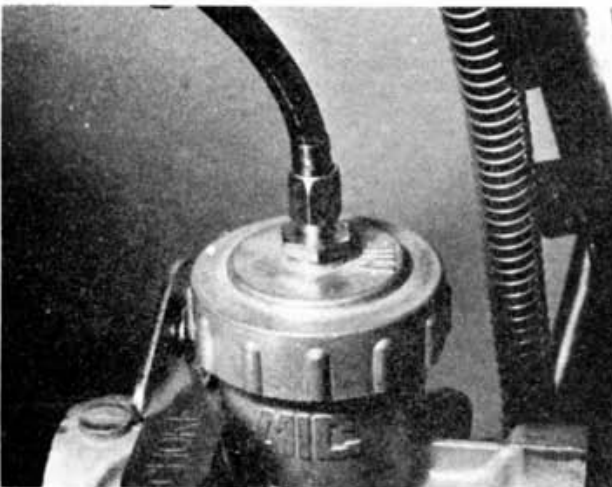
2 Proceed to dismantle the carburettor by removing the four screws and spring washers that retain the float chamber to the main body of the carburettor. In practice, it was found that the float chamber had become quite firmly adhered to the carburettor body and some gentle persuasion was needed to remove it. Tapping around the joint with a soft-faced hammer may serve to break this seal, otherwise it will be necessary to place the flat of a small screwdriver between the side of the chamber and the lip of the body in order to lever the components apart. Note that there may well be a slot cut in the mating surface of the



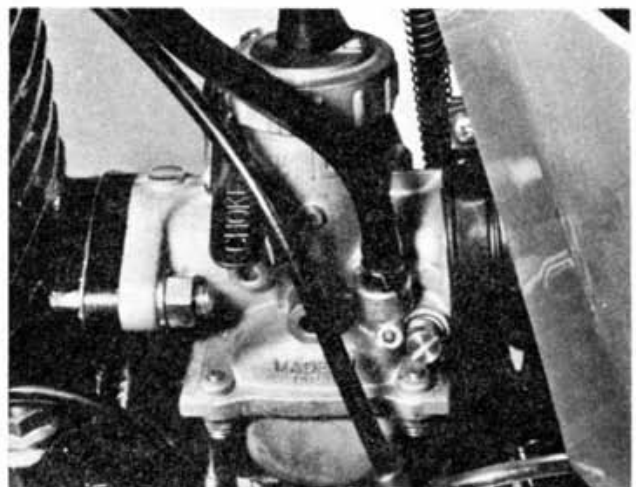
6.12 Clamp the air inlet hose to the carburettor mouth



6.13 Carefully slide the throttle valve into the carburettor body (125 shown)



6.14 Locate the throttle cable adjuster (100 and 125)



6.16 Retain the fuel feed pipe in position with its spring clip

carburettor body. If this is so, then the flat of the screwdriver should be inserted at this point. Take great care when using a screwdriver, not to place any great strain on the component castings: the two components should part fairly easily.

3 With the float chamber thus removed and placed to one side, pull the pivot pin from the twin float assembly and lift the floats from position. 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 in a safe place.

4 On TS100 and 125 models, unscrew and remove the float needle seat together with its sealing washer. Detach the baffle plate which the seat holds in position.

5 On TS185 and 250 models, unscrew and remove the single crosshead screw which serves to retain the float needle seat retaining plate in position between the two float pivot pin columns. Withdraw the plate and, using a pair of long-nose pliers, pull the needle seat out of its location in the carburettor body. In order to avoid causing any damage to the seat, it is best to pad the jaws of these pliers with tape.

6 On all models, unscrew and remove the main jet and carefully hook its washer out of its location in the carburettor body. Note that, when unscrewing any jet from the carburettor, a close fitting screwdriver of the correct type must be used to prevent damage occurring to the soft material from which the jet is constructed. With the main jet and its washer removed, the needle jet may be pushed out of its location so that it leaves the carburettor body through the top of the mixing chamber. Take note of the alignment pin cast in the needle jet location for reference when refitting.

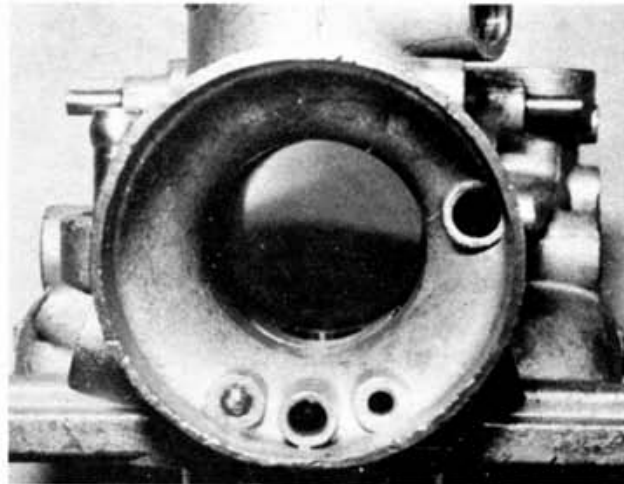
7 Unscrew and remove the pilot jet (with US models, take careful note of the information given in the following Section). In practice, it was found that this jet was very tight and great care combined with some effort was needed to free it. Note the setting of the throttle stop screw by counting the number of turns required to screw it fully in. Remove the throttle stop screw, taking care to retain its spring.

8 Note the setting of and remove the pilot air screw with its spring. Failure to note the settings of the aforementioned screws will make it less easy to 'retune' the carburettor after it has been reassembled and refitted to the machine.

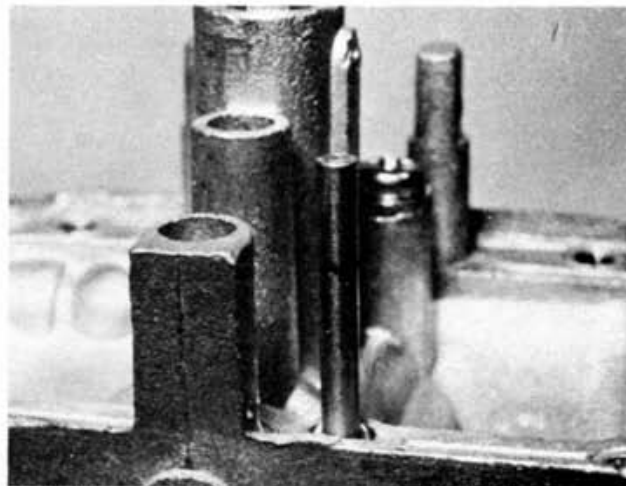
9 The only removable component parts now left in the body of the carburettor are the throttle valve sighting plug with its sealing washer and those components which make up the choke assembly. Unless the condition of its sealing washer is suspect, the sighting plug may now be left fitted. Reference to the figures accompanying this test will show that the type of carburettor fitted to the TS185 and TS250 models incorporates a choke assembly but, unlike the TS100 and TS125 type, does not show the component parts of this assembly as separate obtainable items. Nevertheless, it is worth removing the complete choke assembly from the carburettor body, not only for examination but to allow proper cleaning of the body casting. The main body of the carburettor is now devoid of all removable components and should be placed to one side in readiness for cleaning.

10 The only removable component fitted to the float chamber of the carburettor is the drain plug, which takes the form of a single slotted screw with a sealing washer located beneath its head. It is not necessary to remove this plug except for renewal of the sealing washer or replacement of the screw itself.

11 Prior to examination of the carburettor component parts, clean each part thoroughly in clean fuel before placing it on a piece of clean rag or paper. Use a soft nylon-bristled brush to remove any stubborn contamination on the castings and blow dry each part with a jet of compressed air. Avoid using a piece of rag for cleaning since there is always a risk of particles of lint obstructing the airways or jet orifices. Never use a piece of wire or any pointed metal object to clear a blocked jet, it is only too easy to enlarge a jet under these circumstances and increase the rate of petrol consumption. If an air line is not available, a blast of air from a tyre pump will usually suffice. If all else fails to clear a blocked jet, remove a bristle from the soft-bristled



7.11 a Use compressed air to blow clear blocked airways



7.11 b Never use a piece of wire to clear a blocked jet

brush and carefully pass it through the jet to clear the blockage. Remember to observe the necessary fire precautions during the cleaning procedure and take care to guard against any blow-back of fuel by wearing eye protection.

12 Check each casting for cracks or damage and check that each mating surface is flat by laying a straight-edge along its length. Any distorted casting must be replaced with a serviceable item.

13 Remove all O-rings and sealing gaskets from the component parts and replace them with new items. Ensure that, where applicable, they are correctly seated in their retaining grooves. Any spring washers that have become flattened should now be renewed.

14 The springs on the throttle stop and pilot air screws should now be carefully inspected for signs of corrosion and fatigue and renewed if necessary.

15 The seating area of the float needle 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. If the needle has to be renewed, remember that the needle seat will have worn in unison and in extreme cases, will also need renewing. Check also that the small pin which protrudes from the end of the needle is free to move and is returned to its extended position by the action of the spring fitted beneath it. The correct