

the rubber buffers engage with the guide channels correctly. If difficulty is encountered in engaging the front of the tank with the rubber buffers, apply a small amount of fuel to the buffers to ease location. Always carry out a leak check on the fuel pipe connections after fitting the tank and running the engine. Any leaks found must be cured; as well as the wastage involved, any fuel dropping onto hot engine castings may well result in a fire or explosion occurring. Take care not to trap any control cables or electrical leads between the tank and frame tubes.

3 Fuel tap: general description, removal, servicing and refitting

1 Any one of three types of fuel tap may be found to be fitted to the machines covered in this Manual. Two of these types are similar in appearance and incorporate 'On' and 'Res' positions for the tap lever. One of the two however, has a primary function in the form of a screw located near the base of the tap body, thus providing a means of allowing fuel to pass directly from the tank to the carburettors when the engine is not running. The third type of tap incorporates three lever positions; as well as the 'On' and 'Res' previously mentioned, there is also a 'Pri' position which provides the same priming function as for the screw.

2 With the tap lever turned to the 'On' position or 'Res' position, fuel can only flow to the carburettors when the engine is running. This is due to the tap diaphragm which is controlled by the induction pressure. If there is no fuel in the carburettor float chambers, as may be the case after carburettor dismantling, the primary function of the tap (where incorporated) should be utilised to allow an unrestricted flow of fuel from the tank to the float chambers.

3 Where the tap incorporates a 'Pri' position for the lever, the priming function can be utilised simply by turning the lever to that position. Where the tap incorporates a priming screw, the screw should be turned anti-clockwise so that the base of its head protrudes 2 – 3 mm (0.08-0.12 in) from the surface of the tap body. The screw should not be allowed to protrude more than 5 mm (0.20 in) otherwise fuel will leak from the screw housing. The screw must be retightened and the tap lever returned to the 'On' position as soon as the carburettors have been primed and the engine is running. Where the tap incorporates no priming function, the tap must be by-passed in order to allow fuel to pass to the float chambers whilst the engine is not running.

4 Before the fuel tap can be removed, it is first necessary to drain the tank. This is easily accomplished by removing the feed pipe from the carburettor float chamber and allowing the

contents of the tank to drain into a clean receptacle. This is only possible when a tap incorporating a priming function is fitted. Alternatively, the tank can be removed with fuel still in it and placed on one side, so that the fuel level is below the tap outlet. Care must be taken not to damage the tank paintwork whilst doing this.

5 The tap is held to the underside of the tank by two bolts with washers. There is an O-ring seal between the tap body and the tank, which must be renewed if it is damaged or if fuel leakage has occurred.

6 The filter screens, which are integral with the plastic level pipes, should be cleaned of any deposits using a soft brush and clean fuel. Because there is only a single tap to feed two carburettors, any restriction in fuel flow may lead to fuel starvation, causing missing and in extreme cases overheating due to a weak mixture.

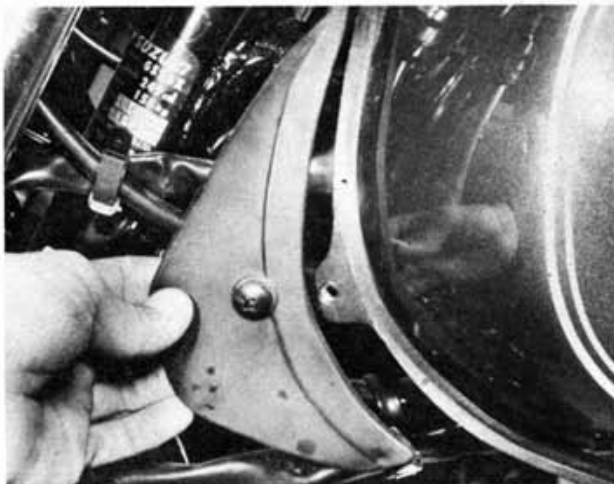
7 Taps that do not incorporate a 'Pri' position for the lever are supplied as sealed units and must be renewed as such if leakage occurs around the lever joint. Taps which incorporate the three lever positions may be dismantled to the extent of removing the lever assembly in order to cure leakage around its joint. It is worth noting at this point that any leak around the lever joint may be due to the two plate securing screws having become loosened during machine use, in which case any leakage may be cured simply by retightening the screws. Although the tank must be drained before the lever assembly can be removed, there is no need to disturb the body of the tap.

8 To dismantle the lever assembly, remove the two crosshead screws passing through the plate on which the operating positions are inscribed. The plate can then be lifted away, followed by a spring washer, the lever itself and the seal behind the lever. The seal will have to be renewed if leakage has occurred. Check for any sediment build up within the tap body and if necessary clean it out using a similar method to that described for the filter screens.

9 Reassemble and refit the tap using a reversal of the above sequence. It is not necessary to use jointing compound or any other sealing medium to effect a seal.

4 Fuel feed hose: examination

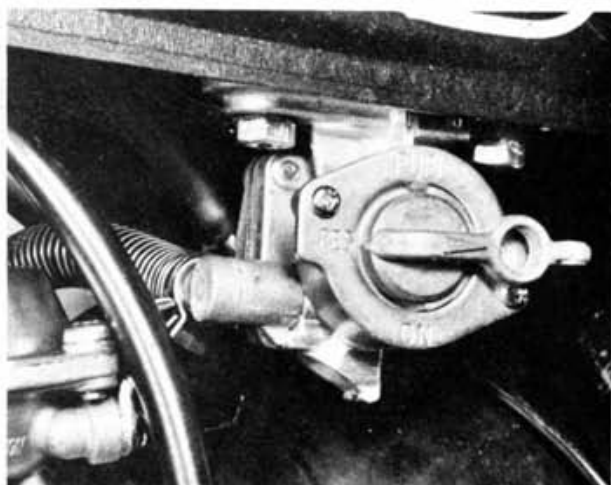
1 The fuel feed hose is made from thin walled synthetic rubber and is of the push-on type. It is only necessary to replace the pipe if it becomes hard or splits. It is unlikely that the retaining clip should need replacing due to fatigue as the main seal between the pipe and union is effected by an interference fit.



2.2 Where necessary, remove the fuel tank trim...



2.3 ...before removing the tank mounting bolt



3.8 The fuel tap lever assembly is retained by two crosshead screws

5 Carburettors: removal and refitting

1 To improve access to the carburettor assembly, it is advisable to remove the fuel tank as described in Section 2 of this Chapter.

2 Commence removal of the carburettor assembly by detaching the throttle cable from the carburettor throttle operating pulley. To do this, loosen both the locknuts that retain the cable end adjuster to the carburettor mounted retaining clip. Rotate the throttle twistgrip so that the throttle is fully open and with the flat of a small screwdriver, hold the pulley in the fully open position whilst releasing the twistgrip to provide enough slack in the cable to allow the nipple to be released from its location in the pulley. Slide the cable end adjuster sideways to free it from the retaining bracket and tuck the cable out of the way on the frame top tube.

3 Loosen the clamps between the carburettors and air filter housing and release the housing from the three mounting points located on each inner side panel. Note when removing the retaining screws that one screw each side has electrical leads beneath its head; the position of these screws must be noted for reference when refitting. Note also that there are bushes located beneath all the screw heads and these must be removed before the housing can be slid rearwards to clear the carburettor mouths. It will also be necessary to ease each side panel outwards so that it clears the housing. Some difficulty was experienced in freeing the housing from the carburettor mouths and moving it back far enough to clear completely the carburettor assembly, but with the aid of an assistant and a certain amount of patience the job can soon be completed.

4 Finally, to remove the carburettor assembly from the machine, loosen the clamps between the carburettors and cylinder head and pull the carburettor assembly rearwards to clear the inlet manifolds and then to the right to clear the machine.

5 To refit the carburettor assembly, follow the above removal procedure in the reverse sequence whilst noting the following points. Take care to refit the electrical leads to their original locations beneath the heads of the filter housing retaining screws. Check that the throttle cable is correctly routed and adjusted and that all connections are correctly located and tightened so as to prevent any likelihood of fuel or air leakage.

6 Carburettors : dismantling, examination and reassembly

1 The two Mikuni CV carburettors are mounted as a unit on two angled metal brackets and are interconnected by the throttle linkage and the choke control rod. It is not normally

necessary to separate the two carburettors in order to carry out a regular inspection of the internal components of each instrument. Instructions for separating the two units are, however, listed later in this Section.

2 Dismantling of each individual carburettor should be carried out as follows. Note that each carburettor should be dismantled separately, to prevent accidental interchange of parts. 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 becoming lost.

3 Detach the float chamber from the carburettor body by unscrewing the four retaining screws and lock washers. Lift the float chamber away whilst taking care not to damage the gasket located beneath it. Make sure the float chamber gasket is in good condition. It should not be disturbed unless it shows sign of damage or has been leaking. It will, however, need to be removed if it is found necessary to check the float height.

4 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.

5 Unscrew and remove the single crosshead screw that serves to retain the float needle seat retaining plate in position between the two pivot pin columns of the carburettor body. Remove the plate and pull the needle seat from position, placing it together with the float needle.

6 Before attempting to remove either the pilot jet or main jet, check that the flat of the screwdriver to be used is a very good fit in the slot provided in each jet. Irreparable damage will occur to the jet if the slotted head is in any way malformed by an incorrectly fitting screwdriver. Unscrew and withdraw the pilot jet and follow this by unscrewing the main jet. Note the plain washer located beneath the head of the main jet and that the needle jet is prevented from dropping out of its location within the carburettor body by a small locating pin; this means that the jet can only be removed from the diaphragm housing.

7 Remove the diaphragm cover from the top of the carburettor body by unscrewing its four retaining screws and lock-washers. Lift out the piston spring, followed by the piston/diaphragm unit together with the jet needle. The needle jet should drop out of its location if the carburettor is now inverted into a cupped hand. If necessary, sharply tap the carburettor into the hand to jar the jet from position.

8 The jet needle is retained in the centre of the piston body by means of a plastic retainer and circlip. Removal of this circlip was found to be difficult. With no straight long-nose circlip pliers available, the only means found of dislodging the circlip was to ease it out of position by using the end of a thin-shanked parallel pin punch (as shown in the accompanying photograph) located in one of the circlip ends. A similar tool can of course be manufactured from any length of dowelled rod, although it must be rigid enough for the purpose. With the circlip removed, pull the plastic retainer out of the piston centre and dislodge the needle assembly.

9 Unscrew the pilot air jet from the side of the carburettor mouth. On UK models screw in the pilot adjuster screw until it seats lightly, counting the exact number of turns required to do so, so that it can be placed in the same position upon reassembly. Having recorded the screw position remove the screw from the carburettor. On US models the screw should not be disturbed because the adjustment is preset at the factory to comply with EPA regulations. Refer to Section 9 of this Chapter for further details.

10 The internal components of the carburettor have all now been removed. If, for any reason such as a worn or damaged linkage component, the two carburettors have to be separated, then proceed as follows. Loosen the two grub screws that retain the starter (choke) shaft to the two operating levers and withdraw the shaft from position. Take great care to retain the