

carburettor body. Thoroughly clean the outside of the carburettor and then remove the damper rod from the top of the suction chamber. Undo and remove the suction chamber securing screws and carefully lift the chamber up vertically to remove it, revealing the piston and spring. Remove the spring and carefully lift the piston vertically, avoiding bending or side loads on the needle underneath it. Empty the oil out of the piston and support the piston on a narrow necked jar to protect the needle.

3 Clean off fuel deposits and stains using only petrol or methylated spirit and a piece of rough cloth – on no account use any abrasive, and this includes metal polish. Dry the parts after cleaning with lint-free rag.

4 A reasonably accurate test for wear on the piston or suction chamber can be made as follows. Lightly oil the piston rod in which the damper fits (but don't oil the piston periphery) and its bore in the suction chamber and reassemble the piston without its spring. Fit the damper and, using modelling clay, block off the suction transfer holes in the bottom of the piston. Hold the unit upside down and push the piston fully in. Then turn the assembly the right way up and, while preventing the piston from dropping out, time how long it takes the piston to move fully down. The correct time is five to seven seconds and if the piston travel time is outside this tolerance recheck for cleanliness and/or mechanical damage. Renew the assembly if it cannot be brought within the permitted time tolerance.

5 Reassembly follows the reverse of the dismantling procedure. Top up the damper with multigrade engine oil to a level of 0.5 in (13 mm) above the top of the hollow piston rod and refit the damper, not forgetting its sealing washer.

11 SU carburettors (H1 and H2) – adjustments and turning

1 Adjustments on SU carburettors are limited to setting the mixture strength and the idling speed. It is important that the spark plugs are in good condition, the contact breaker points are correctly adjusted, the valves and the springs are in good condition and the valve clearances correctly adjusted before making any adjustment on the carburettors. In addition the engine must be run until it has reached its normal running temperature. Remove the air intake cleaner before starting the adjustments.

2 Disconnect the carburettor throttle interconnection by slackening the actuating arms. Unscrew each of the throttle adjusting screws to fully close the throttle then screw down each idling adjustment screw one full turn to open the throttle.

3 Remove the suction chambers and carefully lift out the pistons, identifying them so that they can be refitted to their correct carburettor, and disconnect the choke control cable. Turn the jet adjusting nuts so that each jet is flush with the bridge in the induction passage, or as near as possible, with both jets in the same relative positions. Refit the pistons and suction chambers and check that the pistons fall freely after being lifted. Turn down each jet adjusting nut two full turns (12 flats).

4 Restart the engine and adjust the idling speed by turning each throttle adjusting screw the same amount. Use a piece of tubing placed close to the carburettor intake and compare the hiss by listening to each carburettor in turn. Adjust the throttle adjusting screws to get the hiss similar in both intakes and the idling speed as specified. This procedure synchronises the throttles (Fig. 3.8). An easier (and for most people more accurate) method is to employ the use of a carburettor balancing device. These can be easily obtained at most good auto-accessory shops. The balancer should be used by following the manufacturer's instructions.

5 Once this has been achieved adjust the mixture strength by screwing each jet adjusting nut up or down by the same amount until the fastest idling speed is obtained with the engine running smoothly. Whilst making this adjustment, keep the jets pressed upwards to ensure that they are in contact with the adjusting nuts.

6 As the mixture is adjusted, it is likely that the idling speed will increase. If so, reduce the speed by adjusting the two throttle adjusting screws, each by the same amount.

7 Check the mixture strength by lifting the piston of the front carburettor by about 1/32 in (1 mm) and listen to the engine speed; this will indicate one of the following:

- (a) If the speed increases, then the front carburettor mixture strength is too rich
- (b) If the speed immediately drops, then the mixture strength is too weak
- (c) If the speed momentarily increases slightly, then stabilises, the mixture strength is correct

8 Repeat the procedure on the rear carburettor and, after adjustment, recheck the front carburettor. Both carburettors are inter-dependant and the checking, adjusting and rechecking must be repeated until the mixture is correct on both carburettors and the idling speed is correct.

9 Once the mixture appears to be correct listen to the noise of the exhaust; it should be a regular, even note. If it is irregular with a splashy type of beat and no visible colour then the mixture is too weak. If there is a regular or rhythmic type of beat together with traces of black smoke, the mixture is too rich.

10 Set the throttle linkage clearance by putting a 0.012 in (0.3 mm) feeler gauge between the throttle shaft stop at the top and the carburettor heat shield (Fig. 3.9). Move the throttle shaft lever down until the lever pin just rests on the lower arm of the fork in the carburettor throttle lever and then tighten the throttle shaft lever clamp bolt. Repeat the procedure on the other carburettor and then remove the feeler gauge. Operate the throttle and check that a clearance exists in both throttle pin/fork connections.

11 Reconnect the choke cable, making sure that the jet heads return against the lower face of the jet adjusting nuts when the choke knob is pushed fully home. Pull the choke knob out until the linkage is just about to move the carburettor jets (at least 0.25 in or 6 mm) and adjust the fast idle screws an equal amount to produce an engine speed of about 1000 rpm with the engine hot.

12 Refit the air intake cleaner.