SCOOTER SERVICE SHEET

1006

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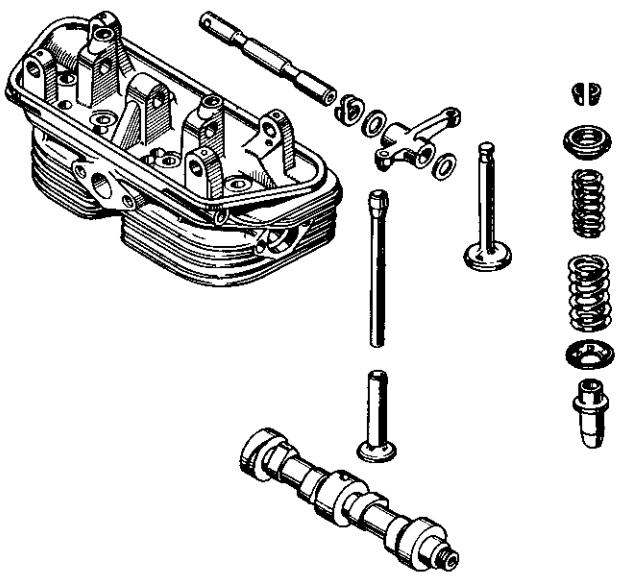
250 c.c. O.H.V. TWIN CYLINDER SCOOTER

ATTENTION TO VALVES

To remove a valve, compress the springs with Service Tool No. 61-5001. Take out the split collets and remove the valve spring cup and springs, and the valve will then drop down through its guide. Each valve is removed in the same way.

The valves must be cleaned thoroughly to remove carbon deposits. Fine emery cloth can be used sparingly but be careful not to remove metal.

Normally it will only be necessary to grind-in the valves to their seats lightly. To do this smear a small quantity of fine grinding paste on the face of the valve and return the valve to its seat. Grip the valve head with Service Tool No. 61-5035 and rotate, whilst maintaining a slight pressure. Raise the valve and turn it to a new position every few moments. Grinding should continue until both mating faces show a uniformly matt metallic surface all round.



Camshaft and Valve Gear A. Fig. 20

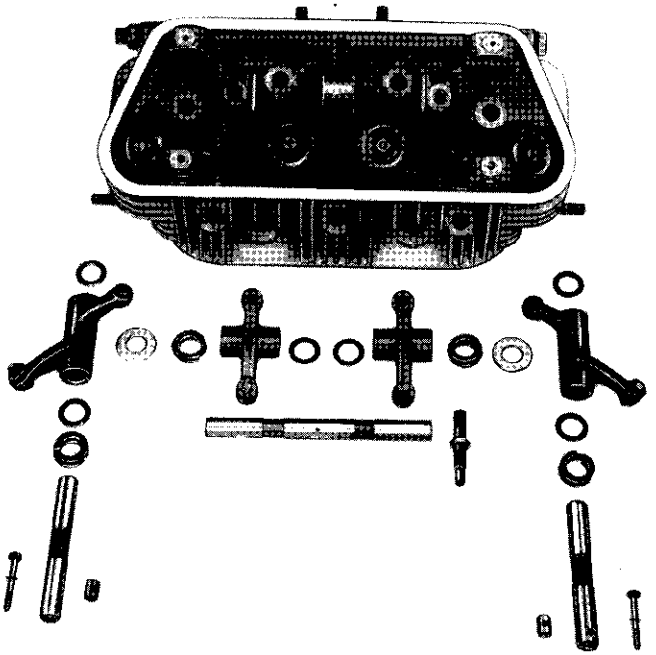
If the valve seats are badly pitted do not attempt to re-grind as this will only wear away the valves. Instead, the seats must be re-cut with Service Tool No. 61-5036 and the valve re-faced by a Dealer. If a valve guide is worn, as shown by excessive side clearance between stem and guide it can be pressed out from the combustion chamber side after the cylinder head has been heated in boiling water for 2 or 3 minutes. It is necessary first to remove the rocker before pressing out an exhaust valve guide and how to do this is explained in the next section. Press in the new guide from the rocker side, again with the cylinder head hot. After fitting a new guide the valve seat should be re-cut to ensure that it is concentric with the guide.

Re-assembly of the valves is in reverse order but do not forget to remove all traces of grinding compound and to smear the valve stems with clean engine oil.

Dismanting and re-assembling Valve Rockers and Shafts.

In normal circumstances there will be no need to disturb the valve rocker assembly. If it is necessary the operation is quite simple, but it must be noted that oil is pumped through passage ways drilled in the cylinder head and then up through the posts supporting the rocker shafts and through oilways in the shafts to lubricate valve rockers. It is, therefore, essential that the rocker shafts are re-assembled correctly, otherwise the oil supply to the rockers will be cut off.

The exhaust rockers are situated at left and right hand of the cylinder head with the inlet rockers in the middle. To take out an exhaust rocker shaft remove the small hexagon headed bolt from the sparking plug side rocker post and tap the shaft through towards the plug side. A small piece of tube must be fitted over the end of the shaft so that the steel ball which is pressed into the shaft to close the drilled oilway is not disturbed. As the shaft is drawn out it will be seen that there is an oilway drilled at 90° to its axis, this oilway mating up with the hole in the post.



Valve Rocker Assembly. Fig. 21

There is a thrust washer against each rocker post and on the plug side a spring washer between the end of the rocker and the thrust washer.

To remove the inlet valve rocker shaft and rockers, take out the hexagon headed stud on the left hand post and tap the shaft through towards the right hand side; there is no need to disturb the stud on the right hand post. There is a thick washer against each outside post, with a spring washer between thrust washer and rocker and a thin thrust washer between rocker and central post. There is a radial slot on the end of the shaft to line up with the stud on re-assembly. Again re-assemble in reverse order; partially insert the shaft, place a thick thrust washer against the outside post, then a spring washer followed by the first inlet rocker. Press the shaft through to the middle post, fit a thin thrust washer, then the second inlet rocker, the spring washer and finally a thick thrust washer against the outer post.

As a general rule there is no need to disturb the adjusting screws on the rockers except for setting the valve clearance on re-assembly, but it is as well to examine the ball ends of the screws. If these are chipped or damaged they will cause rapid wear on both the adjusting pin and the push rod and should therefore be replaced.