

# Care and Maintenance

No. 104 OF A SERIES OF ARTICLES DEALING WITH THE MAINTENANCE OF POPULAR CARS

## WHEN even- tually decar- bonising is

# THE DAIMLER FIFTEEN

cylinder head, and  
from round the  
valve ports, finish-

called for the task must be approached systematically. First remove the bonnet, noting that the bonnet stay can be disconnected from the bonnet at the spring-ball joint, and then by removing the nuts holding the hinge pins in their brackets on the dash the bonnet can be lifted off. Drain the cooling system through the tap below the water pump, and remove the high-tension leads from the sparking plugs and the tube carrying the leads. The r can be pulled out of the spring clips holding it, or set screws holding the clips may be removed. Disconnect the top end of the oil pipe supplying the rocker shaft, also the petrol pipe and throttle control.

The automatic mixture control must now be removed by disconnecting the control rod, the small pipe from the induction manifold, the thermometer bulb, and the water hose, so that the complete unit may be lifted away after unscrewing the two nuts which hold its flange.

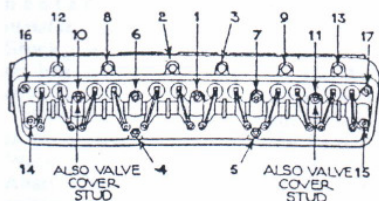
Remove the elbow connecting carburettor and air silencer, and then the valve cover and air silencer. Undo the nuts securing exhaust pipe and manifold.

### Off With the Head

The seven nuts securing the rocker shaft should now be loosened each a little at a time until finally they are taken off, when the rocker shaft may be lifted off complete. Lift out the push-rods, marking them so that they can be returned to the same positions, undo the remaining cylinder-head nuts, and give the engine a few quick turns with the starting handle to loosen the cylinder-head joint. The head can then be lifted off complete with carburettor and manifolds.

Turn the engine to bring two pistons to the top of stroke, put clean rag into the other cylinder bores, and scrape carbon from the piston tops and from the face of the block.

Repeat the operation for the other pistons, and when work on the block is completed put clean rag in the bores while the head is attended to.



The order of tightening cylinder head nuts

A valve spring compressor is supplied in the tool kit and its bolt should be passed through one of the stud holes in the cylinder head at the side nearest to the manifolds. On fitting the remainder of the valve tool and screwing down the butterfly nut a valve spring can be compressed until the split cotters and the circlip at the end of the valve stem can be removed. On unscrewing the butterfly nut the valve spring can be withdrawn and also the valve. Remove all the valves in this manner, noting that the valves are numbered so that they can be returned to their proper positions.

Scrape the carbon from the combustion chambers and

### PART III (Conclusion)

ing off with emery cloth, but taking care not to damage the valve seatings. Clean the valve heads with emery cloth and clean

the stems with a paraffin-moistened rag. Then grind in the valves in the usual manner until an even matt surface is secured on the seat. Test the valve seat by giving it a thin coating of soot from a candle flame and pressing the valve on its seat with a to-and-fro rotary movement; if the valve is properly ground in the soot should be evenly removed. Or the valve may be held on its seat and a few drops of petrol inserted into the port, when a good seat should prove petrol-tight.

### Refitting Valves

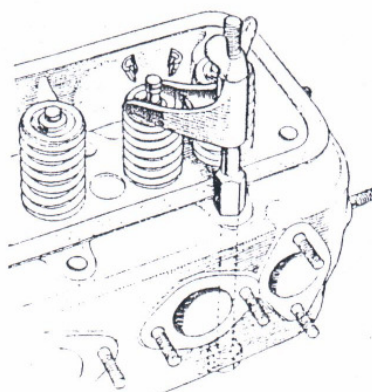
When the valves are all ground in, and all traces of grinding compound removed from valves, seats and ports, they can be reassembled in the head in their correct order, and then the inlet and exhaust manifolds can be refitted while the head is on the bench. Clean the cylinder-head gasket, or if its condition is doubtful fit a new one, smearing both sides with jointing compound or gold size, and guiding it down carefully into position over the cylinder head studs. Care should be taken to see that the cylinder block face is quite clean.

Replace the cylinder head, push-rods, and valve rocker assembly, screwing down all nuts loosely. Then tighten the nuts evenly and gradually, a little at a time, in the order shown in the accompanying diagram. The remainder of the reassembly is a reversal of the dismantling process, and when it is completed the radiator should be filled with water, and the engine started and allowed to run slowly until warm, when the cylinder-head nuts can be further tightened.

Valve clearances must then be carefully adjusted, and it is wise, after a run of about 200 miles, to give the cylinder-head and manifold nuts a final tightening while the engine is hot, and to check tappet adjustment.

When decarbonising, the opportunity may be taken to carry out some of the other maintenance tasks on the engine, and amongst other things the plugs can be

cleaned and their gaps reset to .018in. The plugs recommended are Lodge C14. The commutators and brush gear of dynamo and starting motor can also be cleaned by removing the spring cover strap and holding a soft cloth against the commutator with a strip of wood



How to use the valve spring compressor