

CYLINDER HEAD OVERHAUL

Valve Guides

The valve guides are cast integral with the cylinder head, no inserts are used.

Two valves with oversize stems are available, the guide must be reamed to the next largest size.

Reaming Valve Guides

Special Tools		
Reamer Number	Reamer Oversize	Valve Guide Size
C3433	.127 mm (.005 in)	9.626-9.652 mm (.379-.380 in)
C3430	.38 mm (.015 in)	9.88-9.9 mm (.389-.39 in)

Remove and dismantle the cylinder head (Refer to Sub-section A 231).

Thoroughly clean the cylinder head.

Measure the valve stem clearances (Refer to Sub-section A 231) to determine guides requiring reaming.

Using the appropriate reamer, ream the guide.

Note: Do not attempt to ream the valve guides from standard directly to .38 mm (.015 in). Use step procedure of .127 mm (.005 in) and .38 mm (.015 in) so the valve guides may be reamed true in relation to the valve seat.

Check that the new valve stem slides freely in the guide.

Following the guide reaming operation it is essential that the valve seat and valve are refaced to ensure a gas tight seating. The following sequence of operations must be used:

1. Ream valve guide to oversize condition.
2. Reface valve seat.

3. Lap new valve to refaced seat.

The refacing and lapping operations are described under 'Refacing Valves and Valve Seats'.

Thoroughly clean the cylinder head.

Re-assemble and refit the cylinder head (Refer to Sub-section A 231).

Refacing Valves and Valve Seats

Special Tool
Valve stem height gauge C 3746

Remove and dismantle the cylinder head (Refer to Sub-section A 231).

Thoroughly clean the cylinder head and remove all traces of carbon.

Examine the valve seats and valve faces for pitting or burning, if defective they should be recut to the dimensions shown in Fig. 1.

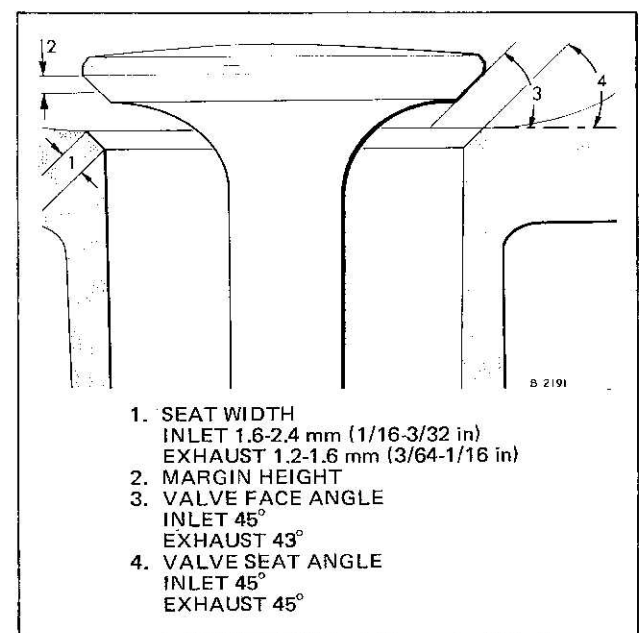


Fig. 1 Valve face and seat angles

DESCRIPTION AND MODIFICATIONS

This may seem a little out of place but I have heard about problems with people stealing work and selling it - for example on eBay.

If you're reading this and you bought this manual anywhere then you have been ripped off.

Please contact me via my email mikejamson@hotmail.com Otherwise I can be found on the dodge50 facebook page, if not then get in contact with Greg and he can pass the message on to me.

I have not done this pdf manual for my own personal gain and wish to see the community of 50 series owners benefit from the information here, and I do not want to see the community get taken advantage of and somebody else gain from it unfairly.

The information in pdf format will hopefully allow more of these wonderful trucks to stay on the road by providing information to everybody.

This has been quite a long and involved process to scan the manual and to convert it into a pdf format. I do apologise as I have used several different scanners and several different computers to do it, so there are no doubt some errors hidden throughout, as well as some editing errors.

I have aimed to balance quality and file size and hope that this balance meets to everybody's approval.

If you see an error please let me know and I will fix it as soon as I can.

The intake and exhaust valve seats and the intake valve face have a 45° angle. The exhaust valve face has a 43° angle. The valve face and valve seat angles are shown in Fig. 1.

Check the margin height (Fig. 1) after the valves are refaced. Valves with less than 1.19 mm ($3/64$ in) should be renewed.

Clean the seat and valve until there is no trace of grinding paste.

Dab the seating with engineer's marking and rotate the valve in the seat not more than 3 mm ($\frac{1}{8}$ in) in each direction. A complete circle of marking should appear on the valve face and seating indicating a good seal.

The finished seat width and seating position must be with the seating in the centre of the valve face. If the seating is at the top of the valve face, lower it with a 30° stone. If the seating is at the bottom of the valve face, raise it with a 60° or 75° stone.

When the valves are finally lapped to the seats check the height of the valve stem above the valve spring seat using Special Tool C3746 (Fig. 2). If the valve is too long grind off the tip, keeping it square, until the installed length is within limits.

Thoroughly clean the cylinder head.

Re-assemble and refit the cylinder head (Refer to Sub-section A 231).

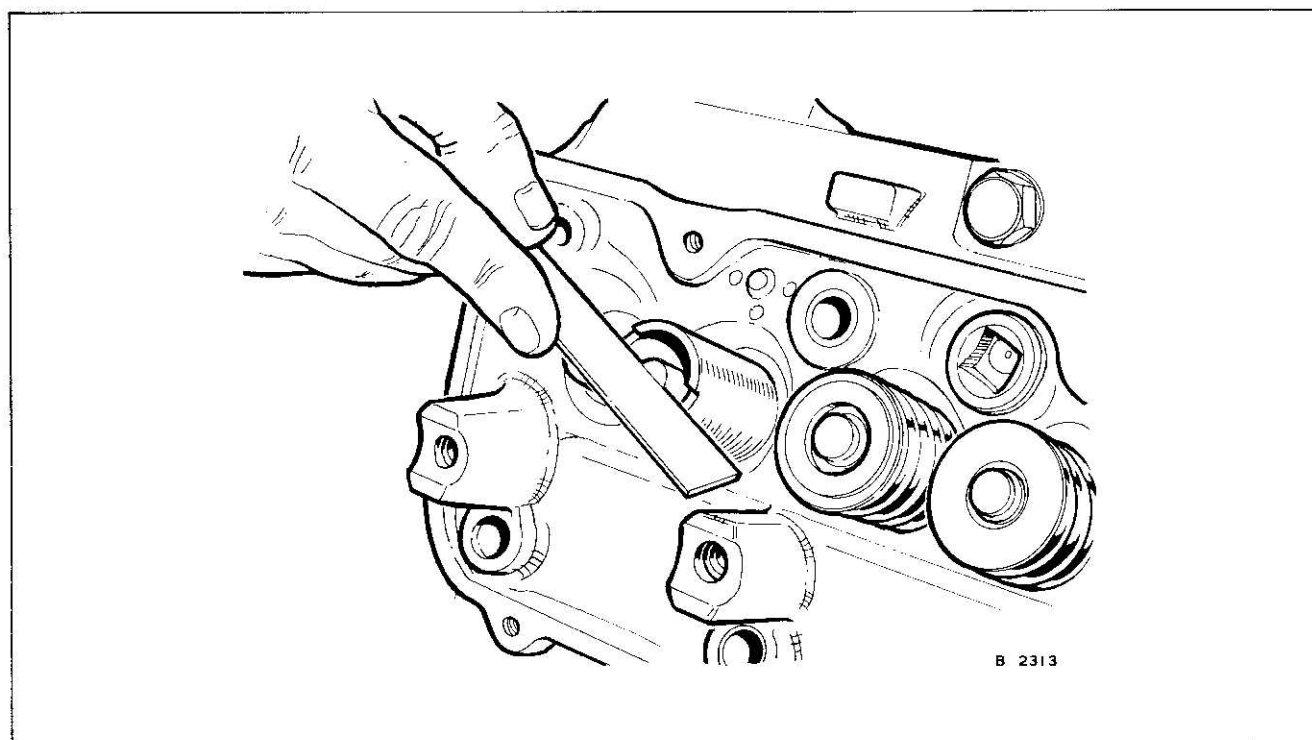


Fig. 2 Using valve stem height gauge C 3746