

**25 EN**

### Checking Valve Guides

Special Tools: P 21b Limit gauge for valve guides

Valve guides may not be replaced with equipment normally available in workshops, since they are cooled to a very low temperature before installing to insure a tight interference fit. Forcing out guides can cause damage to the cylinder head.

Cylinder heads should be returned to the factory for replacement of valve guides.

Valve stem clearance in the guides is:

Intake: 0.035 to 0.060 mm (.0014 to .0024 in.)

Exhaust: 0.055 to 0.080 mm (.0022 to .0032 in.)

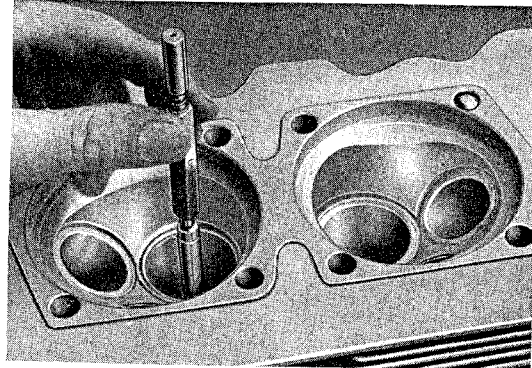


Fig. 154

**26 EN**

### Checking and Facing Valve Seats

Special Tools: P 11 Valve seat cutter consisting of a holder and 10 mm dia. guide pin

P 12 Cutter set consisting of 8 cutters

#### Checking

1. Check whether valve guides are secure in cylinder head.
2. Check valve seating using engineer's blue on the valve face.
3. Check contact of valve. If valve does not contact the entire seat face, reface with cutter.
4. To check whether valves leak, fill port with fuel.

#### Valve Cutting:

Valve seats which are worn or burned can be recut as long as the maximum 45° seat width is not exceeded and the 15° bevel does not go beyond the seat insert.

If this is not the case the cylinder head must be exchanged. It is not possible to replace the valve seats with the equipment normally available in a workshop.

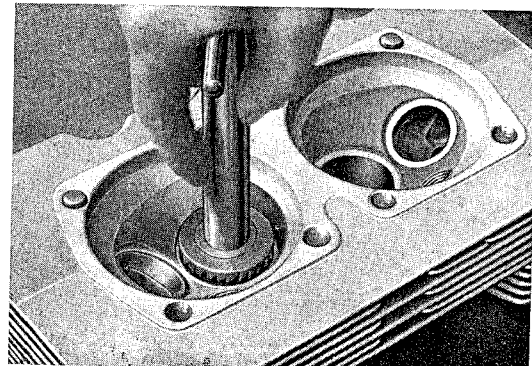


Fig. 155