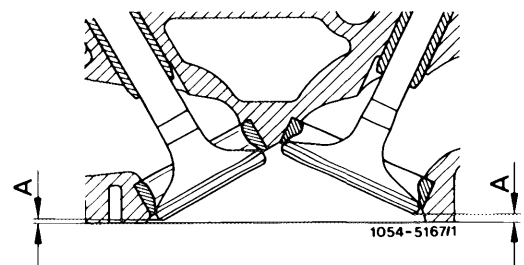
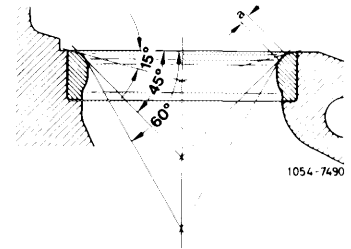


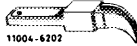

05-291 Machining valve seats

Data	Intake	Exhaust	
Valve seat width a	1.8-2.5	1.5-2.0	
Valve seat angle	45°		
Correction angle, top	15°		
Correction angle, bottom	60°		
Permissible runout of valve seat	0.05		
	Minimum distance A with new valves and new valve seats, cylinder head parting surface not machined	Minimum distance A with new valves and new valve seats, cylinder head parting surface 0.4 mm milled off	
Intake	3.3	2.9	
Exhaust	Valve retainer dia. 37 mm	0.6	0.2
	Valve retainer dia. 39 mm	0.04	0.36 standout
	Max. distance A with new valves and machined valve seats, cylinder head parting surface not machined	Max. distance A with new valves and machined valve seats, cylinder head parting surface 0.4 mm milled off	
Intake	4.2	3.8	
Exhaust	Valve retainer dia. 37 mm	1.5	1.1
	Valve retainer dia. 39 mm	0.94	0.54

Max. distance A is reduced by the same dimension by which the cylinder head parting surface has been machined down.



Special tools

Magnetic lifter for valve cone halves		116 589 06 63 00
Master mandrel 9 mm dia. for intake and exhaust valve guide		116 589 08 21 00
Master mandrel 11 mm dia. for exhaust valve guide		116 589 09 21 00

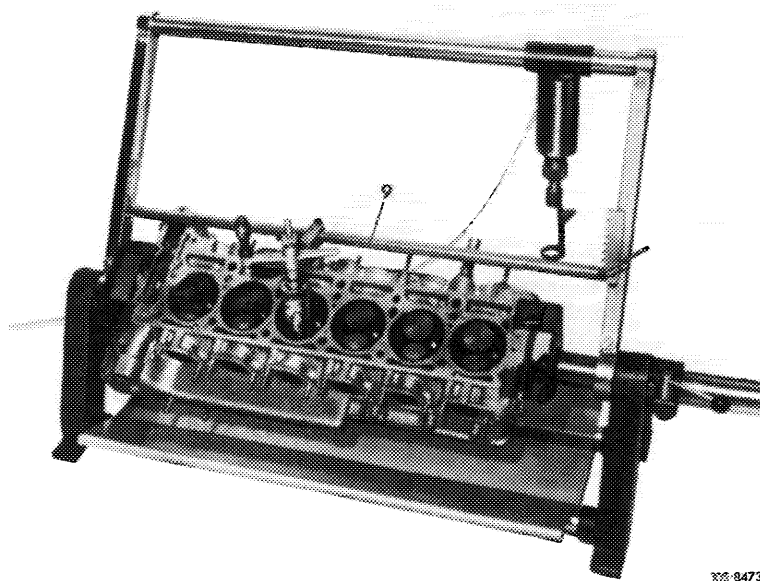
Conventional tools

Cylinder head clamping device	e.g. made by Rothenberger, D-6233 Kelkheim order no. 2.9900
Valve seat machining tool	e.g. made by Hunger, D-8000 München type VDSNL 1/45/30 order No. 236.00.308
Test set for valve seats	e.g. made by Hunger, D-8000 München order No. 216.93.300
60° correcting bit No. 13 for bottom correction angle	e.g. made by Hunger, D-8000 München order No. 216.64.622

Note

Clamp cylinder head in clamping device for disassembly and machining.

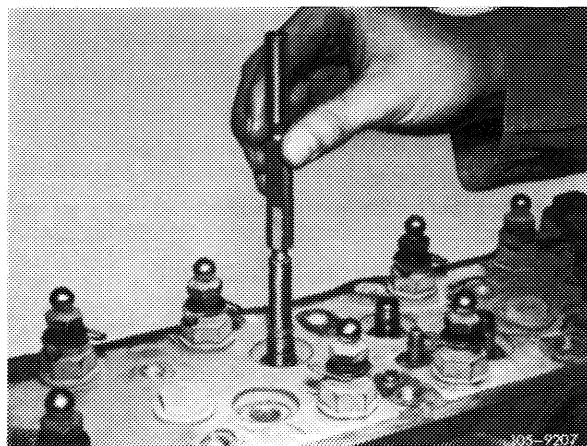
Machine valve seats with valve seat machining tool, valve seat grinding machine or with a valve seat cutter.



05-9473

Machining valve seats

- 1 Check valve guides, replacing if necessary (05-295).

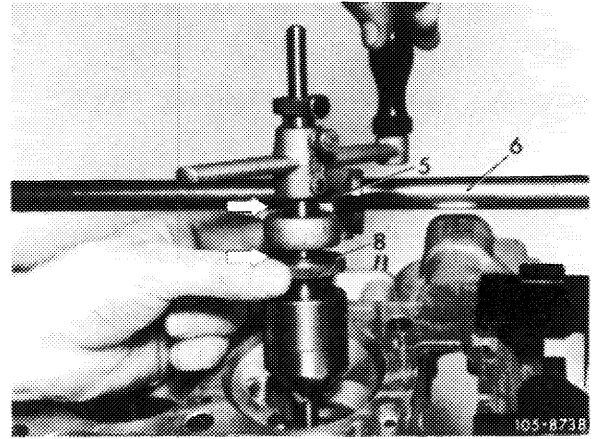


05-9207

2 Machine valve seat (45°) according to instructions of tool manufacturer.

Attention!

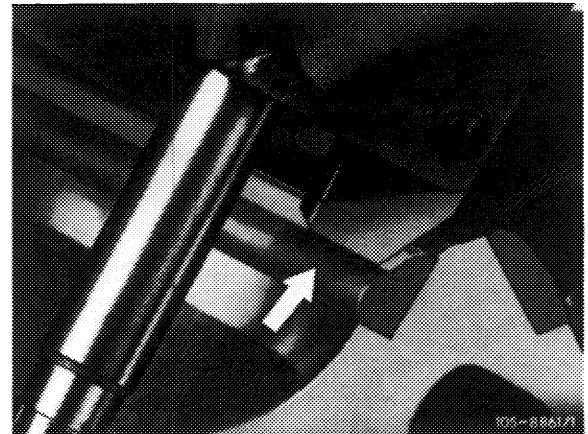
First loosen pilot after runout of valve seat has been checked (point 5).



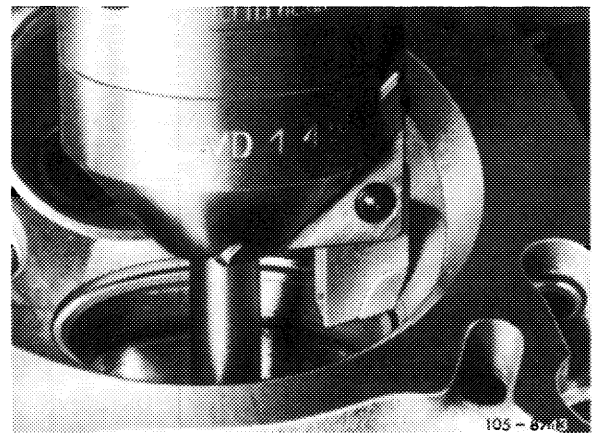
3 Correct bottom of valve seat to 60° .

Attention!

Do not machine bead (arrow) on lower part of valve seat.

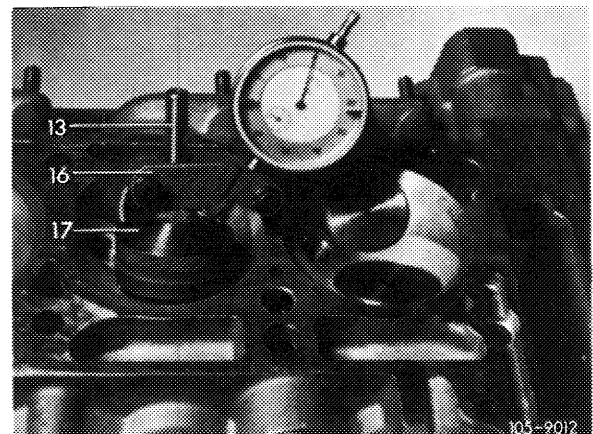


4 Measure valve seat width, and, if necessary, correct top to 15° .



5 Check valve seat runout.

This requires sliding test sleeve (17) with dial gage holder (16) and dial gage on to pilot, and turning test sleeve. In so doing the permissible runout must not exceed 0.05 mm.



13 Pilot
16 Dial gage holder
17 Test sleeve

6 Guide in new valve and check max. distance A (arrow).

If necessary, replace valve seat insert (05-140).

