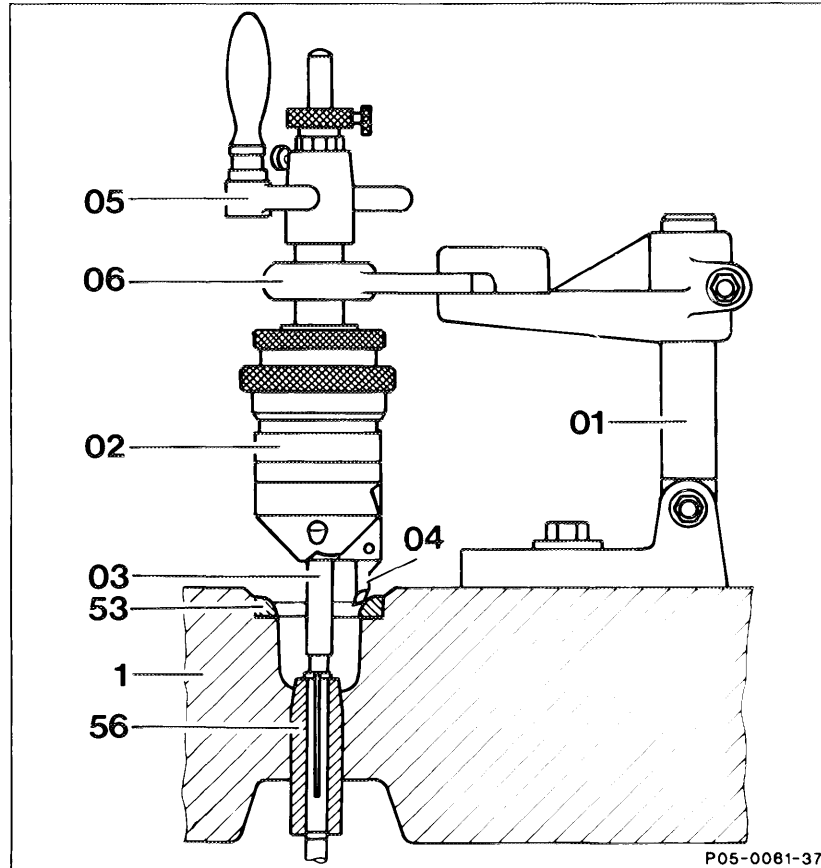


05-291 Machining valve seats

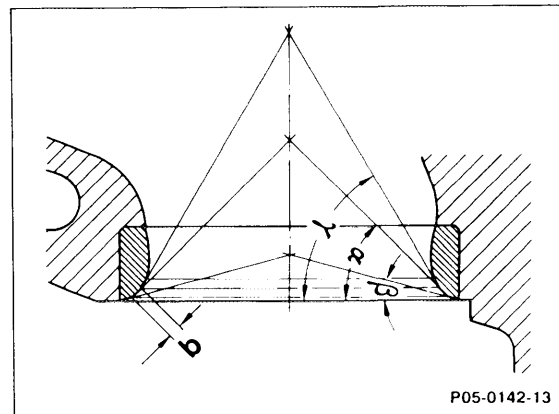
Preceding work:
Valve guides checked (05-285).



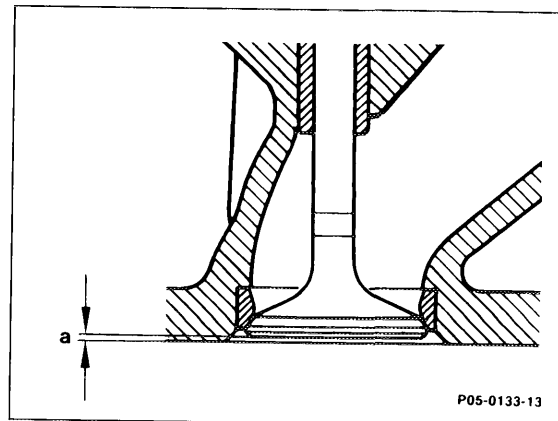
Valve seats (53)	machine in accordance with tool manufacturer's operating instructions. Refer to data for adjustments.
Note	
Eccentricity of valve seat	Only loosen the pilot when eccentricity of the valve seat has been checked.
Valve seat width (b)	check (Number 2).
Valves	measure, correct if required (Number 3).
	insert and measure distance (A).

Data

Valve seat	Intake	Exhaust
Valve seat width (b)	1.2 – 1.7	1.5 – 2.0
Valve seat angle (α)	45°	45°
Upper correction angle (β)	15°	15°
Lower correction angle (γ)	65°	65°
Permitted concentricity deviation of valve seat	0.03	0.03
Minimum gap (a) on new valves and new valve seats	0.1 – 0.5	0.1 – 0.5
Gap (a) on reworked valve seats and reground valves	- 1.0	- 1.0



The gap (a) reduces by the same amount as cylinder head parting surface has been reworked.



Conventional tools

Cylinder head clamping fixture	e. g. Hunger, D-8000 München 70 Part No. 211.60.000
Valve seat turning equipment, model VDSNL 1/45/30	e. g. Hunger, D-8000 München 70 Part No. 236.03.308
Test set for valve seats	e. g. Hunger, D-8000 München 70 Part No. 216.93.300
65° correction steel No. 13 for lower correction angle	e. g. Hunger, D-8000 München 70 Part No. 216.64.622

Note

Clamp cylinder head in the clamp fixture for dismantling and machining. Machine valve seats with valve seat turning equipment, with valve seat grinder or valve seat miller. The location of the hydraulic valve clearance compensating elements must be checked after machining the valve seat inserts and, if required corrected (05-211).

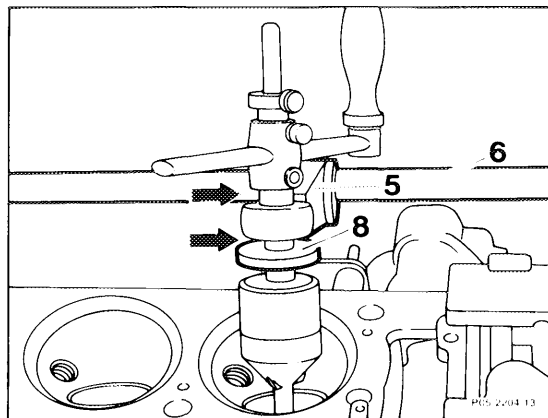
Machining valve seats

1 Machine valve seat (45°) (see tool manufacturer's operating instructions).

Caution!

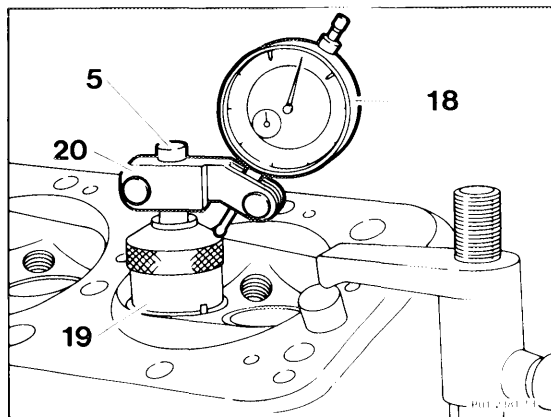
Only loosen pilot (5) when eccentricity of the valve seat has been checked.

6 Clamping fixture
8 Forward feed operation



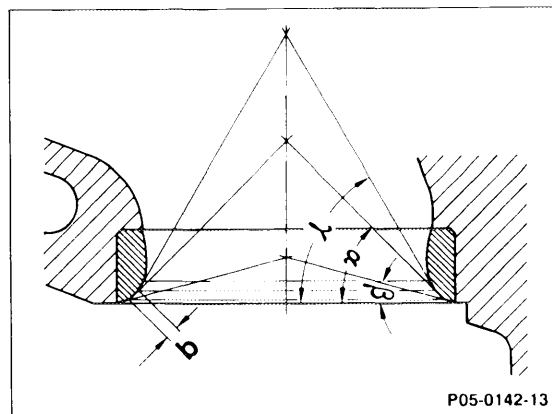
2 Check eccentricity of valve seat (max. 0.03 mm).

Slide fitting sleeve (19) and dial gauge holder (20) and dial gauge (18) onto the pilot (5).



3 Measure valve seat width (b) and, if required make a 15° adjustment at the top (β) and 65° adjustment at the bottom (γ).

Valve seat width (b)
Intake: 1.2 - 1.7 mm
Exhaust: 1.5 - 2.0 mm.



4 Insert valves and measure distance (a).

Distance (a) 0.1 - 0.5 mm.

If (a) is outside tolerance, replace valve seat insert (05-290).

