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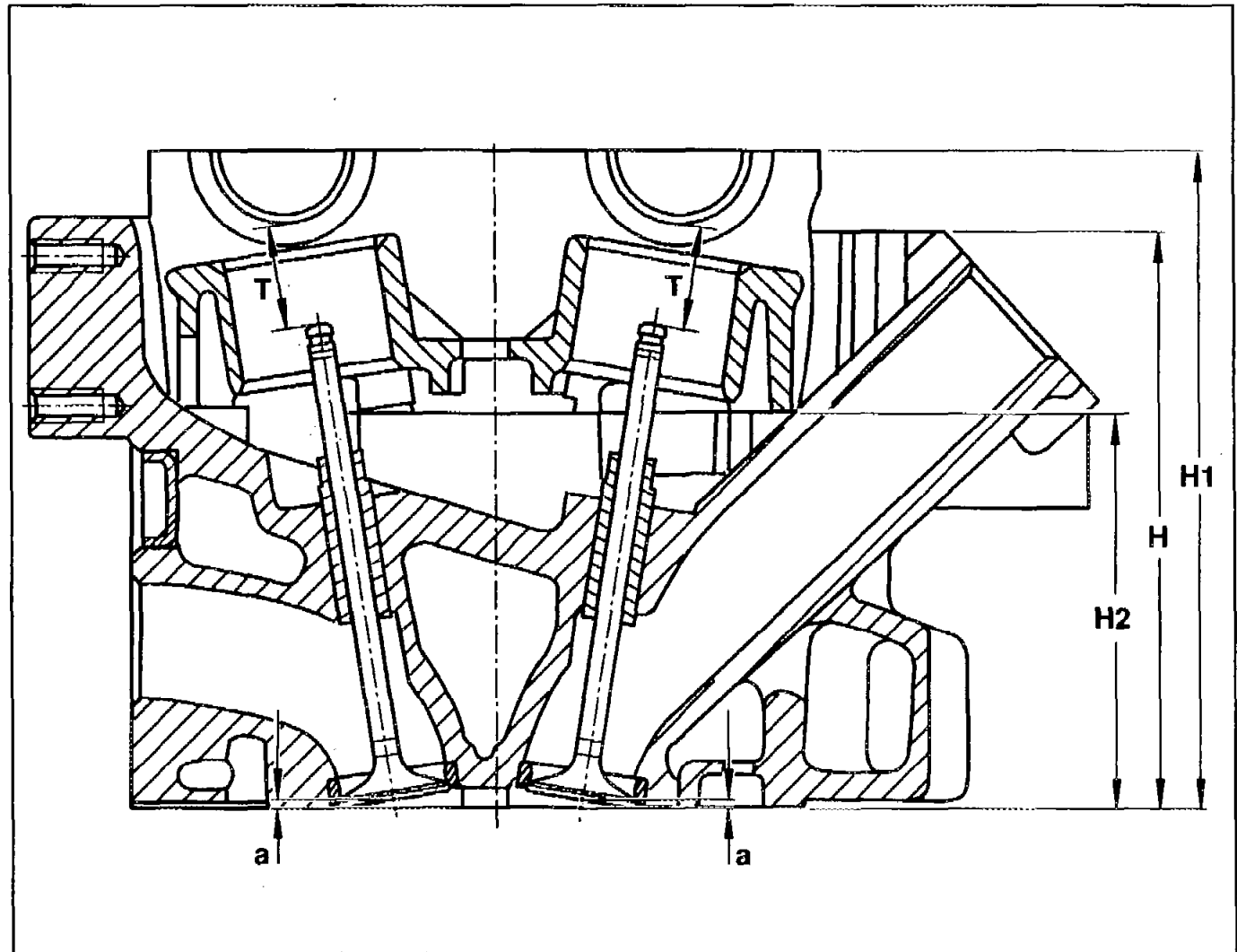
AR01.30-P-7162B







Checking, facing cylinder head contact surface





8.10.96

ENGINE 604, 605, 606 /**Cylinder head**

- a* Valve stands back in the case of new valves and valve seat rings
- H* Overall height of cylinder head, without camshaft housing
- H1* Overall height for center of bearing bore of cylinder head camshaft
- H2* Overall height from contact surface of camshaft housing
- T* Distance from valve stem end to base of camshaft bearing



	<p>Removal, installation</p>		
	<p>Only face cylinder head contact surface if porous or damaged points exist. Minor differences in the flatness in the longitudinal direction should not be reworked. These even themselves out when the cylinder head is tightened.</p>		
<p>1</p>	<p>Remove valves</p>		<p>AR05.30-P-3511B</p>
<p>2</p>	<p>Prechambers removed</p>		<p>AR01.30-P-5402HA M5</p>
<p>3</p>	<p>Inspect cylinder head contact surface for flatness, porous or damaged points</p>		<p>BE01.30-P-1004-02A WH58.30-Z-1002-12A</p>
<p>4</p>	<p>Inspect hardness of cylinder head contact surface</p>	 <p>If the cylinder head has been subjected to excessive heat, this can result in a change in the microstructure. Machining then only produces a tight seal of cylinder head/cylinder head gasket/crankcase, if certain minimum hardness is achieved.</p> 	<p>AR01.30-P-7162-02A K15 BE01.30-P-1011-02A WH58.30-Z-1001-30A</p>
<p>5</p>	<p>Measure height of cylinder head (check dimension H)</p>	 <p>Note reading obtained</p>	<p>BE01.30-P-1001-02A</p>

6	Face cylinder head contact surface	 <p>The stock removal at the cylinder head and at the crankcase together should not be more than 0.5 mm. If the crankcase has already been machined, the maximum stock removal at the cylinder head contact surface should not be more than 0.3 mm. The camshaft housing must not be machined otherwise the basic bores of the camshaft bearings will be altered.</p>	BE01.30-P-1006-02A WH58.30-Z-1004-01A
7	Once again measure height of cylinder head (check dimension H)	 Measure stock removal.	BE01.30-P-1001-02A
8	Rework valve seats according to the stock removal at the cylinder head		AR05.30-P-4511A
9	Measure distance from valve stem end to the base of the camshaft bearing (check dimension T) or to the amount by which the valve stands back (check dimension a)	 Check dimension (T) Insert \varnothing 5 mm round bar into the base of the camshaft bearing for this purpose and measure dimension "T".  Check dimension (a) see ↓ measuring amount by which valve stands back	BE01.30-P-1009-02A AR05.30-P-4100-01A M15

		<p>ⓘ If the measurement obtained is less than dimension "T" or "a", it is no longer possible to achieve correct valve clearance compensation; replace valve seat ring or cylinder head as appropriate ↓</p> <p>Replace valve seat ring</p>	<p>BE01.30-P-1008-02A</p> <p>AR05.30-P-3831A</p>
10	Install in the reverse order		



Test data of cylinder head

Number	Designation	Engine 604, 605, 606
BE01.30-P-1001-02A	Height of cylinder head (H) without camshaft housing	When new mm 126.85–127.15
		Wear limit after machining mm 126.8
		Fig. see AR01.30-P-7162-01A
BE01.30-P-1004-02A	Unevenness of contact surface in longitudinal, transverse direction mm	≤0.04
BE01.30-P-1006-02A	Peak-to-valley height mm	0.006
BE01.30-P-1008-02A	Distance (a) for new valves and new valve seat rings	Exhaust valve mm 1.3–1.7
		Inlet valve mm 1.3–1.7
		Fig. see AR01.30-P-7162-01A
BE01.30-P-1009-02A	Distance from valve stem end to base of camshaft bearing (T) mm	23.7–24.2
		Fig. see AR01.30-P-7162-01A
BE01.30-P-1011-02A	Hardness of cylinder head contact surface in area of sealing bead of cylinder head gasket HB	>70
		Fig. see AR01.30-P-7162-01A

Commercially available tools (see Workshop Equipment Manual)

Number	Designation	Make (e.g.)	Order number
WH58.30-Z-1004-01A	Surface grinding machine with milling device for light alloy surfaces	KWT KFZ-Werkstatt- Technik GmbH Siemensstraße 11 D-63128 Dietzenbach or G. Kindermann u. Co GmbH Kindermannstr.2 D-97199 Ochsenfurt	2101 0000
WH58.30-Z-1002-12A	Knife-edge straightedge, about 500 mm long		
WH58.30-Z-1001-30A	Impact hardness tester, poldi system	Hahn und Kolb Borsigstraße 50 70459 Stuttgart	82110-82113