

Data

Engine <sup>1)</sup>		615		616, 617 1st version		2nd version		
Version	Group No.	Piston dia.	Cylinder bore	Piston dia.	Cylinder bore	Piston dia.	Cylinder bore	
Standard	Cylinder 1	0	86.98 87.009-87.018	90.98 91.009-91.018	90.88 90.909-90.918	90.88 90.909-90.918	90.88 90.909-90.918	
		1	86.99 87.019-87.028	90.99 91.019-91.028	90.89 90.919-90.928	90.89 90.919-90.928	90.89 90.919-90.928	
		2	87.00 87.029-87.038	91.00 91.029-91.038	90.90 90.929-90.938	90.90 90.929-90.938	90.90 90.929-90.938	
	Cylinders 2-4 and 5	0	86.98 86.998-87.008	90.98 90.998-91.008	90.88 90.898-90.908	90.88 90.898-90.908	90.88 90.898-90.908	
		1	86.99 87.009-87.018	90.99 91.009-91.018	90.89 90.909-90.918	90.89 90.909-90.918	90.89 90.909-90.918	
			87.00 87.019-87.028	91.00 91.019-91.028	90.90 90.919-90.928	90.90 90.919-90.928	90.90 90.919-90.928	
Maximum tolerance limit lengthwise or crosswise						0.10		
Permissible ovality and conicity						as new		0.014
						tolerance limit		0.05
Permissible tolerance perpendicular to crankshaft axis, relative to cylinder height						0.05		
Permissible peak-to-valley height						0.002-0.004		
Permissible waviness						50 % of peak-to-valley height		
Chamfer of cylinder bores						see illustration		

<sup>1)</sup> There are no repair stages for these engines.

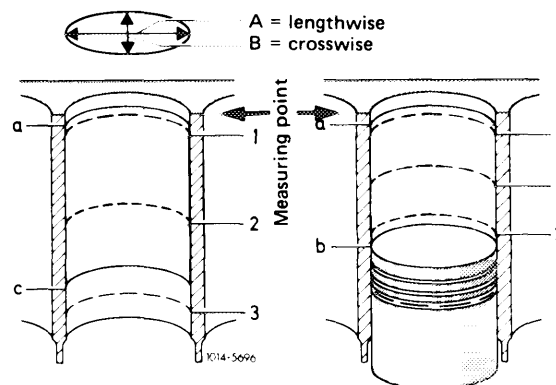
Note

In addition to a visual inspection, it is also absolutely essential to measure the cylinder bores in reply to complaints about "heavy oil consumption".

Clean cylinder bores are to be measured with an internal measuring instrument at points 1, 2 and 3 in lengthwise direction A (piston pin axis) and in crosswise direction B.

With pistons in situ, measuring point No. 3 is barely above the piston; the latter must be at bottom dead center.

- a Top return point of 1st piston ring
- b Bottom dead center of piston
- c Bottom return point of oil scraper ring



Chamfer cylinder bores after boring.

The material allowance for honing must not exceed 0.05 mm.

