



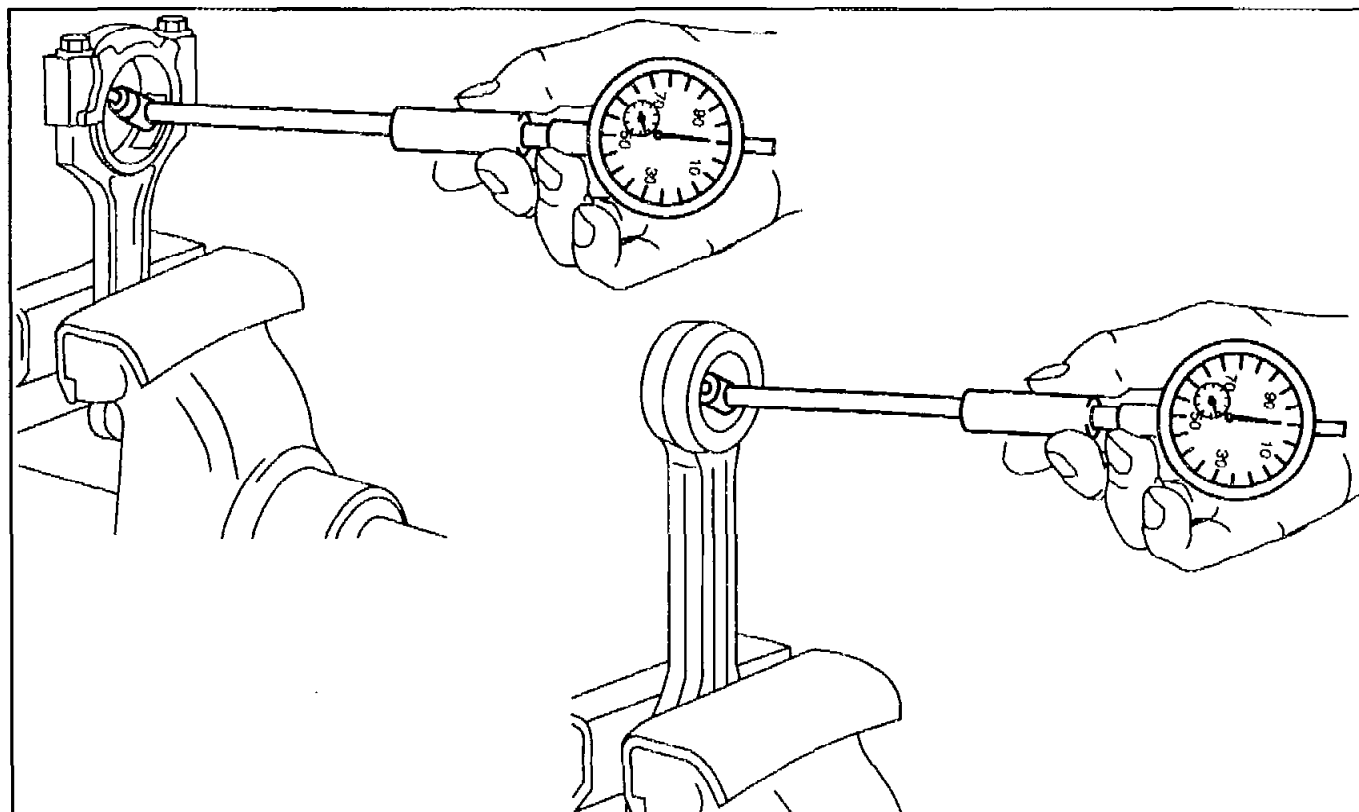
G1

AR03.10-P-6111HA

Testing, repairing connecting rod








13.1.98

ENGINE 604, 605, 606







P03.10-0200-05

☒ ☒	Removing, installing		
1	Remove pistons		AR03.10-P-7021B 01
◀	Inspecting		

2	Inspect conrods for blue discoloration, cross scores and notches	<p> Conrods with blue discoloration (caused by bearing damage), with cross scores and notches must not be reused. ↓</p> <p>Replace conrod and compensate for different conrod weights by milling off the balancing weight, see ↓</p> <p>Connecting rod as-built description</p>	<p>BE03.10-P-1005-01C</p> <p>GF03.10-P-6111B</p>
3	Bolt conrod bearing caps to conrod	<p> Conrod and conrod bearing caps are marked together and fixed in position with two dowel sleeves.</p> <p>Tighten conrod bolts to the initial tightening torque. ↓</p> <p>Tightening conrod bolts.</p> <p></p>	<p>AR03.10-P-6111-02A K14</p> <p>BA03.10-P-1001-01B</p>
4	Measure conrod bearing basic bore and repair	<p>If the maximum permissible diameter is exceeded, grind off conrod bearing cap at its contact surface by max. 0.02 mm.</p> <p>  </p>	<p>BE03.10-P-1002-01C</p> <p>001 589 53 21 00</p> <p>WH58.30-Z-1065-12A</p> <p>WH58.30-Z-1055-12A</p>
5	Inspect conrod bush inner diameter	<p></p>	<p>BE03.10-P-1006-01C</p> <p>001 589 53 21 00</p>



		  If excessive wear present ↓ press in new conrod bush. Conrod bush inner Ø (d) Conrod bush outer Ø Conrod bush basic bore Ø (d1) Piston pin play in conrod bush Peak-to-valley height (R _z) of conrod bush on inside	WH58.30-Z-1065-12A WH58.30-Z-1055-12A AR03.10-P-6111-03HA L14 BE03.10-P-1006-01C BE03.10-P-1007-01C BE03.10-P-1008-01C BE03.10-P-1009-01C BE03.10-P-1010-01C
6	Align conrod	 	AR03.10-P-6111-04HA N14 WH58.30-Z-1017-05A WH58.30-Z-1018-05A BE03.10-P-1003-01C BE03.10-P-1004-01C
7	Install in the reverse order		

Test data of connecting rod

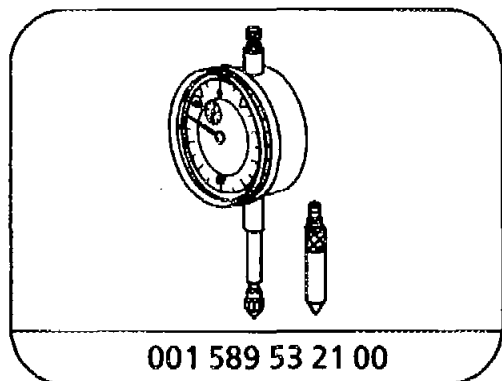
Number	Designation		Engine 604, 605.910/911/912, 606.910/912	Engine 605.960/ 962, 606.961/962/964
BE03.10-P-1001-01C	Dimension	Distance from middle of conrod bearing bore to conrod bush bore (L) mm	148.97–149.03	148.97–149.03
		Width of conrod at conrod bearing bore (B) and at conrod bush bore (b) mm	21.948–22.000	21.948–22.000
		Fig. see	AR03.10-P-6111-05BW	AR03.10-P-6111-05BW
BE03.10-P-1002-01C		Conrod bearing shell basic bore (D1) \emptyset mm	51.600–51.614	51.600–51.614
		Permissible out-of-roundness and conicity of basic bore mm	0.02	0.02
		Fig. see	AR03.10-P-6111-05BW	AR03.10-P-6111-05BW
BE03.10-P-1003-01C		Permissible twist of conrod bearing bore to conrod bush bore over length of 100 mm mm	0.1	0.1
BE03.10-P-1004-01C		Permissible difference of axial parallelism of conrod bearing bore to conrod bush bore over length of 100 mm mm	0.045	0.045
BE03.10-P-1005-01C		Permissible difference in weight of complete conrod of an engine g	2	2

Test data of connecting rod

Number	Designation	Engine 604, 605.910/911/912, 606.910/912	Engine 605.960/ 962, 606.961/962/964	
BE03.10-P-1006-01C	Conrod bush inner \varnothing (d)	mm	26.012–26.018	28.018–28.024
	Fig. see		AR03.10-P-6111- 05BW	AR03.10-P-6111- 05BW
BE03.10-P-1007-01C	Conrod bush outer \varnothing	mm	28.575–28.600	30.575–30.600
BE03.10-P-1008-01C	Conrod bush basic bore \varnothing (d1)	mm	28.500–28.521	30.500–30.525
	Fig. see		AR03.10-P-6111- 05BW	AR03.10-P-6111- 05BW
BE03.10-P-1009-01C	Piston pin play in conrod bush	mm	0.007-0.018	0.007-0.018
BE03.10-P-1010-01C	Peak-to-valley height (R_z) of conrod bush on inside	μm	5	5

Nm Connecting rod

Number	Designation	Engine 604, 605, 606
BA03.10-P-1001-01B	Conrod bolt	
	(stretch shank)	
	initial torque	Nm 40
	tightening angle	$^{\circ}$ \triangleleft 90



Dial gage

Commercially available tools (see Workshop Equipment Manual)

Number	Designation	Make (e.g.)	Order number
WH58.30-Z-1017-05A	Conrod tester	Model BC 501 KWT D-63128 Dietzenbach	
WH58.30-Z-1018-05A	Conrod aligning equipment	Model BC 503 KWT D-63128 Dietzenbach	
WH58.30-Z-1065-12A	Quick calipers for internal measurements	Hahn und Kolb Borsigstr. 50 70469 Stuttgart	33520 080

**Commercially available tools (see Workshop Equipment Manual)**

Number	Designation	Make (e.g.)	Order number
WH58.30-Z-1055-12A	Gage for micrometer	Hahn und Kolb Borsigstr. 50 70469 Stuttgart	31414150