

03–310 Checking, replacing and tightening conrod bolts

Conrod bolt sizes

Version	Part Number	Distance a and b (fig., point 1)		Thread dia. d	Expansion stem dia. c when new (fig., point 1)	Min. Expansion stem dia.
		a	b			
1st version	110 038 01 71	5.5	3	M 10x1	8.4–0.1	8.0
2nd version	110 038 03 71		4.5			
3rd version	110 038 04 71	6.6				

Conrod bolt installation pressure

45000 N

Conrod nut torque

Initial torque

40–50

Torque angle

90–100°

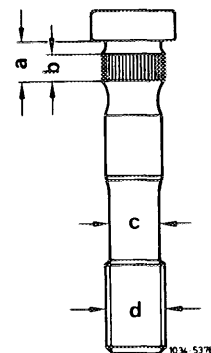
Self-made tool

Steel plate

see fig., point 3

Checking

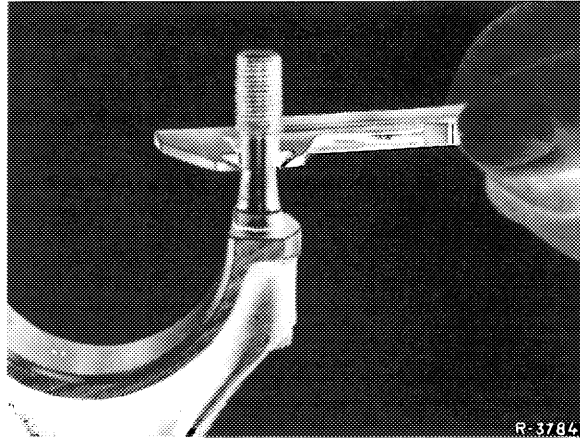
1 Measure smallest expansion stem diameter before reusing.



Note: If the minimum expansion stem diameter reaches or is less than 8.0 mm, replace conrod bolt.

Only knock out a conrod bolt to replace it.

Use third version conrod bolts for repairs.

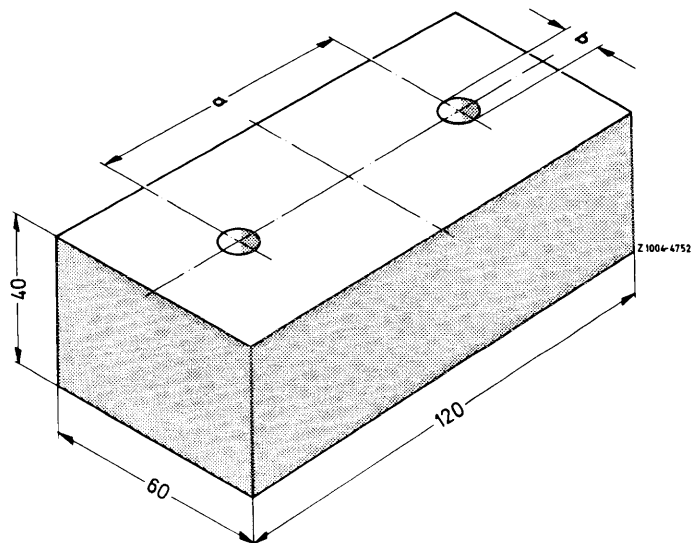


Replacing

2 Knock out conrod bolts.

3 Press new bolts into conrod with a pressure of about 45000 N, or knock in with a hammer and mandrel.

Place the connecting rod on a ground steel plate when knocking in or pressing in conrod bolts.



Distance between holes $a = 64.6$ mm
Bore $b = 11$ mm

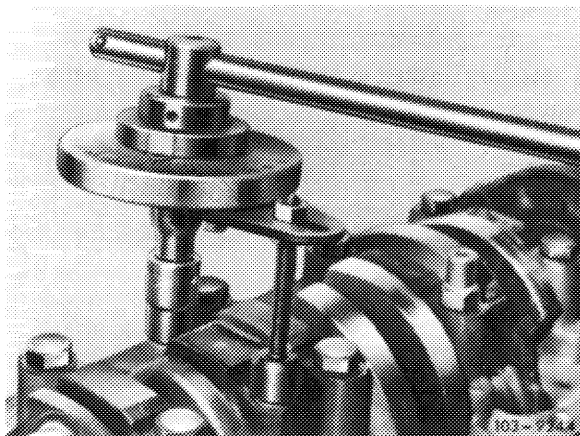
Tightening

4 Lubricate nuts and threads.

5 Tighten conrod nuts to a torque pressure of 40–50 Nm and a torque angle of 90–100°.

Attention!

Tighten conrod bolts knocked in with a hammer to a torque pressure of 60–70 Nm and a torque angle of 90–100° for the first time.



Make sure that this instruction is observed, since otherwise the nuts of the conrod bolts may become loose.

Note: If no angle of rotation wrench is available, the connecting rod nuts can also be tightened by means of a normal socket wrench with toggle **in one step** by an angle of 90–100°. Estimate angle as accurately as possible. **To eliminate angle faults, do not use a torque wrench** for tightening according to angles of rotation.