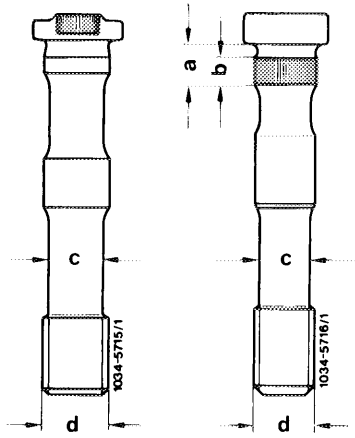
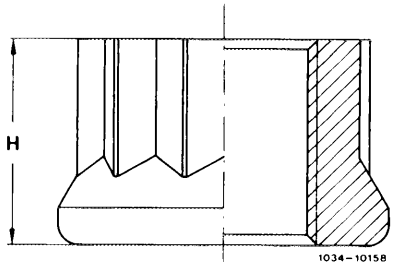
Dimensions of connecting rod bolt and connecting rod nut

		1st version 2nd version	3rd version
Part no.		116 038 01 71 116 038 02 71	116 038 04 71
Thread dia. d		M 11 x 1	M 10 x 1
Necked-down shaft dia c when new		9,5–0,1	8,4–0,1
Minimum necked-down shaft dia. c		8,5	8,0
Dimension	a	–	6,6
	b	–	4,5
	c		4,2
Length L		57,7–58,5	58,2–58,5
Connecting rod nut height H		11	



1st and 2nd version 3rd version



Tightening torque

Connecting rod nuts	initial torque	40–50 Nm
	angle of rotation torque	90–100°

Self-made tool

Steel plate	refer to Fig., item 3

Note

Prior to assembly, lubricate connecting rod bolt threads and nut contact surface with engine oil.

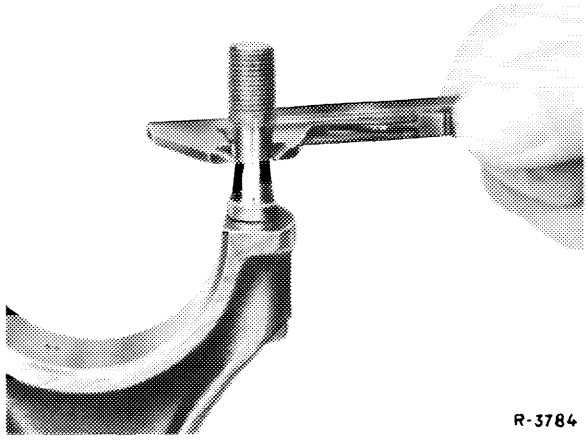
Connecting rod bolt 3rd version may be used only in connecting rods with 10 mm bolt bore.

Knock-out connecting rod bolts only if they are to be replaced.

Checking

1 Measure minimum necked-down shaft dia. c prior to re-use.

If the minimum necked-down shaft dia. c shown in table is attained, replace connecting rod bolt.



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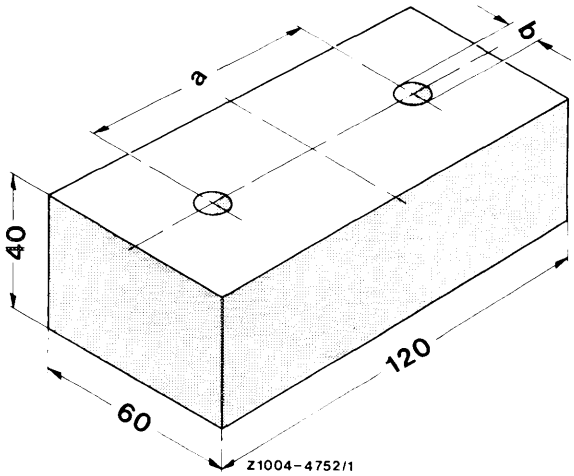
Replacement

2 Knock-out connecting rod bolts.

3 Press new connecting rod bolts into connecting rod at approx. 45 000 N, or knock in with hammer and mandrel. When knocking or pressing in connecting rod bolts, set connecting rod on a ground steel plate.



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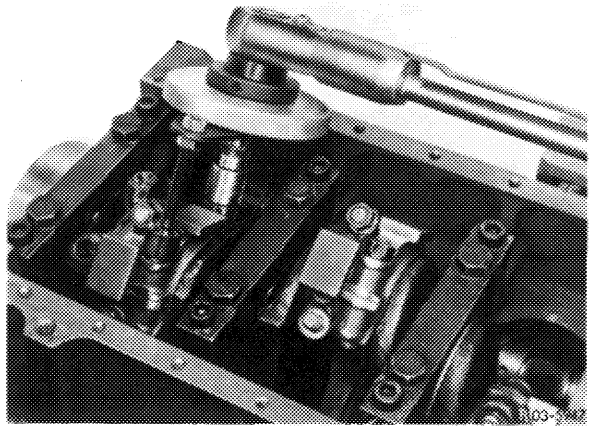
Hole spacing a = 68 mm
Bore b = 11.5 mm

Attention!
Connecting rod bearing caps mounted with **hex. nuts** may **not subsequently** be converted to **double hex. nuts.** Since hex. nuts have a smaller dia. than double hex. nuts, the double hex. nuts would rest on the burr created when tightening hex. nuts.

Tightening



4 Lubricate nuts and thread faces.

5 Tighten connecting rod nuts with 40–50 Nm initial torque and then to 90–100° angle of rotation torque.

Attention!
Tighten connecting rod bolts knocked in with a **hammer the first time** to **60–70 Nm** initial torque and then to 90–100° angle of rotation torque.

Make sure that these instructions are observed, since otherwise the nuts of the connecting rod bolts may become loose.

Note: If no angle of rotation torque wrench is available, the nuts can also be tightened with a normal socket wrench with a tommy bar **in one step** to the specified angle. The angle should be estimated as accurately as possible. **To eliminate angle of rotation errors, do not use torque wrench** for tightening angle of rotation.