

## 03–313 Repairing and squaring connecting rods

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### Data

Center of conrod bearing bore to center of conrod bushing bore	<u>131.950</u> <u>130.050</u>
Width of conrod at conrod bearing bore and conrod bushing bore	<u>27.890</u> <u>27.857</u>
Basic bore for conrod bearing shells	<u>51.619</u> <u>51.600</u>
Basic bore for conrod bushing	<u>26.021</u> <u>26.000</u>
Conrod bushing inside dia.	<u>23.013</u> <u>23.007</u>
Peak to valley height on inside of conrod bushing	0.004
Permissible stagger of conrod bore to conrod bushing bore in reference to a length of 100 mm	0.1
Permissible difference in parallel between axes: conrod bearing bore to conrod bushing bore in reference to a length of 100 mm	dia. 0.015
Permissible deviation of conrod bearing bore from true	0.020
Permissible difference in weight of all connecting rods of one engine	5 gr.

### Tightening torque

Conrod nuts	Initial torque	40–50 Nm
	Torque angle	90–100°

### Conventional tool

Connecting rod checking and straightening tool	Made by Krupp GmbH, 5309 Meckenheim e.g. Model CL 6
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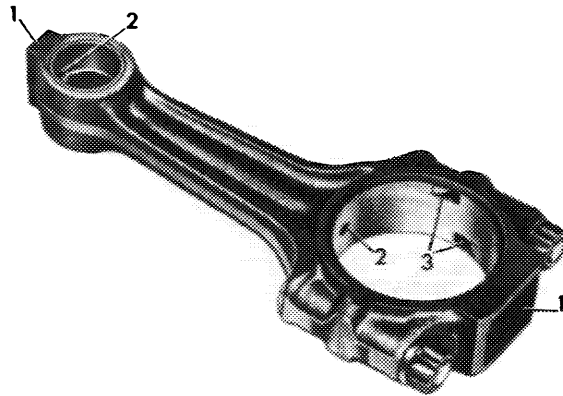
## Note

Connecting rods, which are overheated (blue discoloration) due to bearing damage, may not be re-used.

The connecting rod and its cap are marked to fit together. The connecting rod stem must not show cross scoring and notches.

Connecting rods with a machined conrod bushing are delivered as replacement parts.

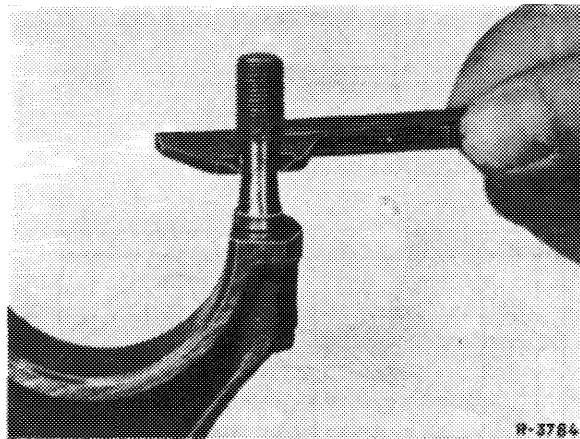
When renewing conrods pay attention to different weights of rods.



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## Repairing

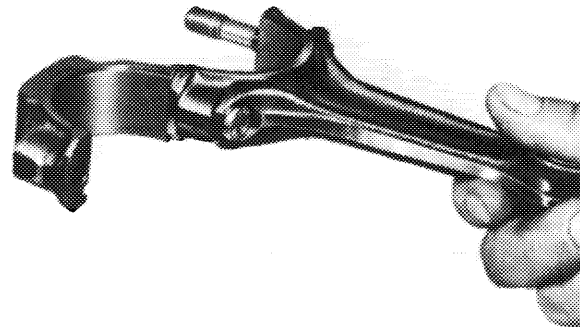
1 Check conrod bolts and replace if necessary (03-310).



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2 Check conrod bolt bores.

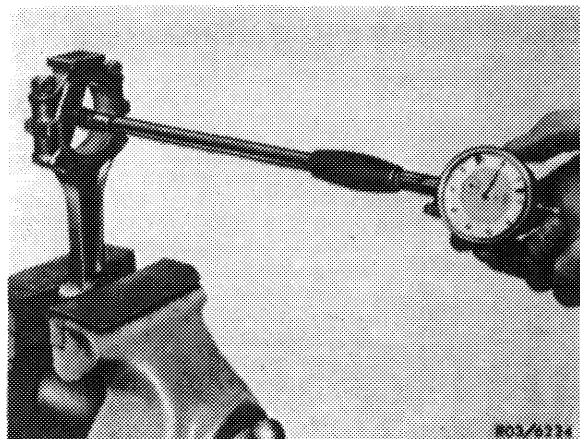
Place conrod cap on a conrod bolt. If the conrod cap moves down by its own weight, the connecting rod must be replaced.



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3 Mount connecting rod bearing cap and tighten to 40-50 Nm and 90-100° angle of rotation torque.

4 Measure conrod bearing basic bore. If a basic bore exceeds the value of 51.62 mm or shows conicity, hone bearing surface of bearing cap on a surface plate up to max. 0.02 mm.



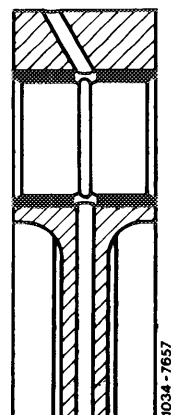
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5 Press in new conrod bushing that oil bores match.

Installation pressure 2500 Nm.

6 Mill or ream out conrod bushing.

7 Hone side bearing surfaces of connecting rod on a surface plate.

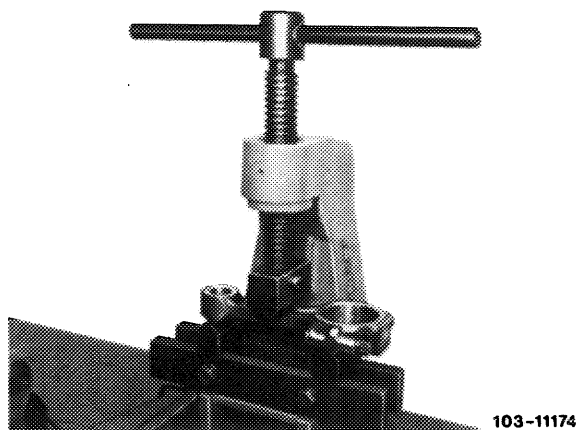


### Squaring

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8 Square connecting rod with a conrod tester.

9 Align parallel of conrod bore to conrod bushing bore.



10 Correct stagger of conrod bore to conrod bushing bore.

