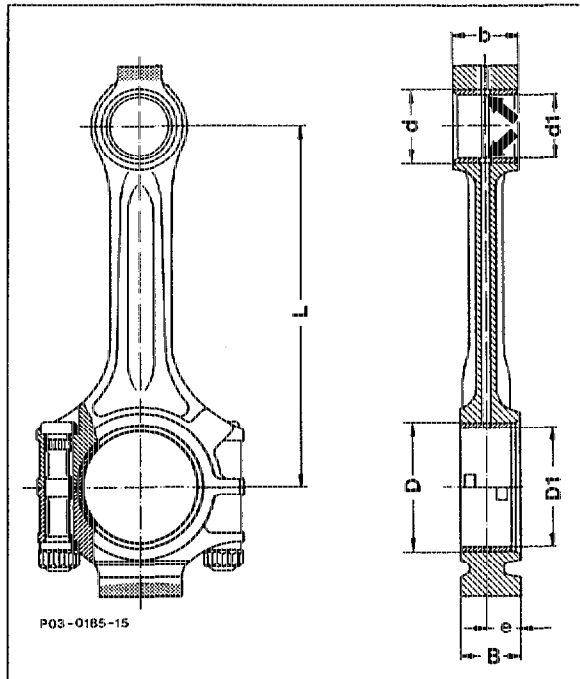


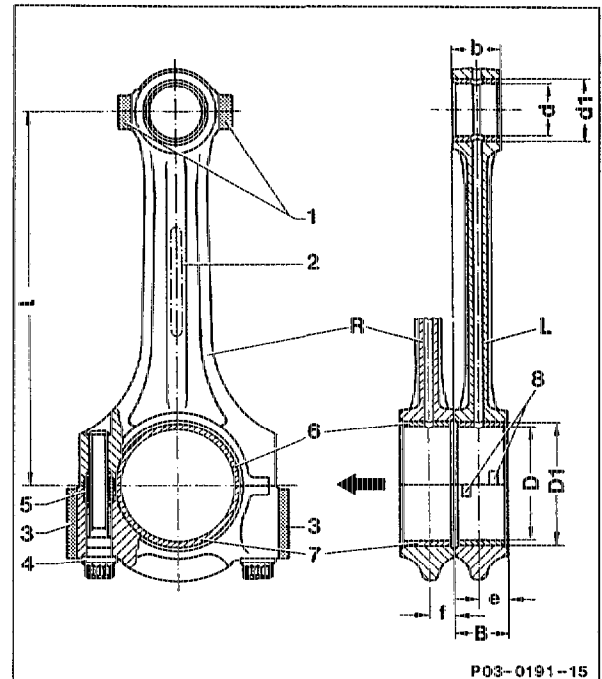
## 03-3130 Repairing and aligning conrod

Operation no. of operation texts and work units or standard texts  
and flat rates  
03-6111

### Engine 119.96



### Engine 119.97/98

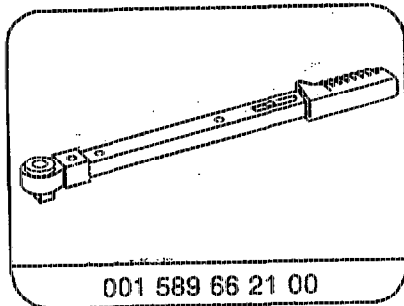


### Data

Engine	119.96	119.97/98
Centre of conrod bearing bore to centre of conrod bush bore (L)	<u>154.550</u> 154.450	<u>149.050</u> 148.950
Width of conrod at conrod bearing bore (B)	<u>24.890</u> 24.857	
Width of conrod at conrod bush bore (b)	<u>28.000</u> 27.900	<u>22.100</u> 21.900
Basic bore for conrod bearing shells (D)	<u>51.619</u> 51.600	
Basic bore for conrod bush (d)	<u>29.021</u> 29.000	<u>27.210</u> 27.000
Conrod bush ID (d1)	<u>26.013</u> 26.007	<u>24.013</u> 24.007
Piston pin play in conrod bush	<u>0.007</u> 0.013	<u>0.007</u> 0.018
Peak-to-valley height of conrod bush on inside	0.004	0.005

Engine	119.96	119.97
Permissible twist of conrod bearing bore relative to conrod bush bore		0.15
Permissible variation of parallelism of conrod bearing bore to conrod bush bore		0.07
Permissible variation of conrod bearing bore from roughness		0.01
Permissible difference in weight of complete conrod within an engine		4 g

### Special tool



### Commercially available tools

Conrod tester	e. g. Model BC 501 KWT D-6057 Dietzenbach
Conrod straightening device	e. g. Model BC 503 KWT D-6057 Dietzenbach
Quick-callipers for internal measurements dia. 20 – 40 mm dia. 40 – 60 mm	
Micrometer 0 – 25 mm 50 – 75 mm	

### Note

Conrods which have been overheated as a result of the bearing damage (blue discolouring) must not be re-used.

Conrod and conrod caps are marked together. The conrod stem must not have any transverse scoring and notches.

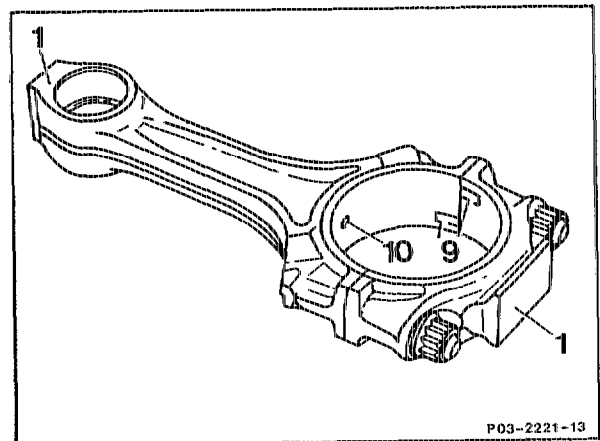
Conrods are supplied with machined conrod bush as a replacement part.

Conrod and crankshafts with different thrust collar dia. may be installed together when performing repairs.

Engine 119.97: The conrod and the conrod cap are fixed together with fit sleeves.

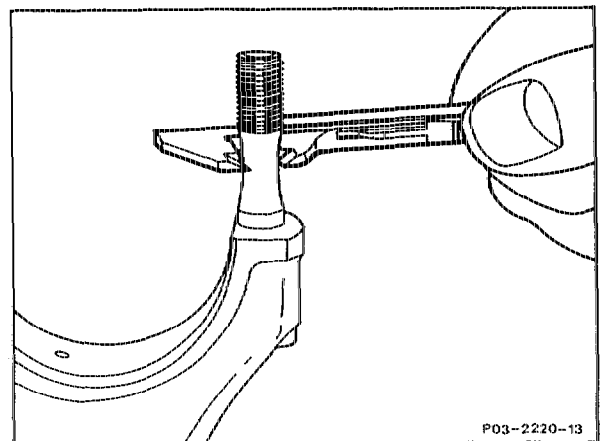
Pay attention to difference in weight when replacing the conrod.

Conrod of engine 119.960  
1 Weight balance  
9 Locating grooves  
10 Oil drilling

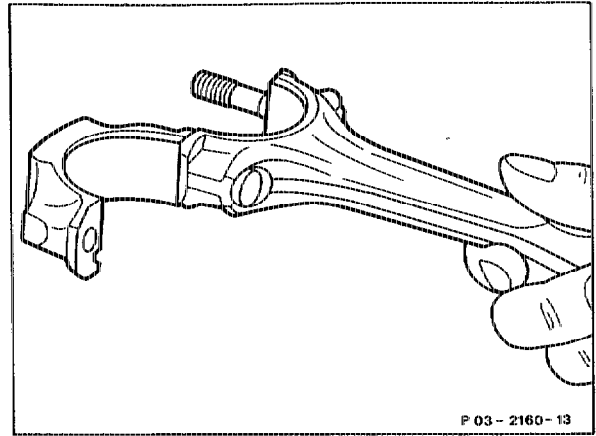


### Repairing

1 Check conrod bolts, replace if necessary (03-3100).

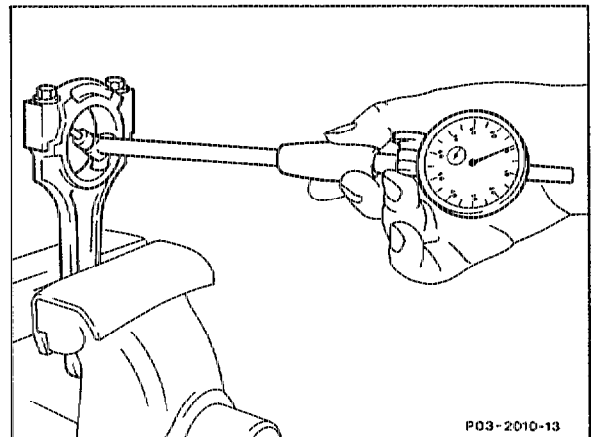


2 Engine 119.96: Examine bores for conrod bolts. Fit conrod cap onto a conrod bolt. If the conrod cap moves down as the result of its own weight, the conrod must be replaced.



3 Install conrod bearing caps. Oil thread and bolt head contact surface for this step and tighten to 40 Nm.

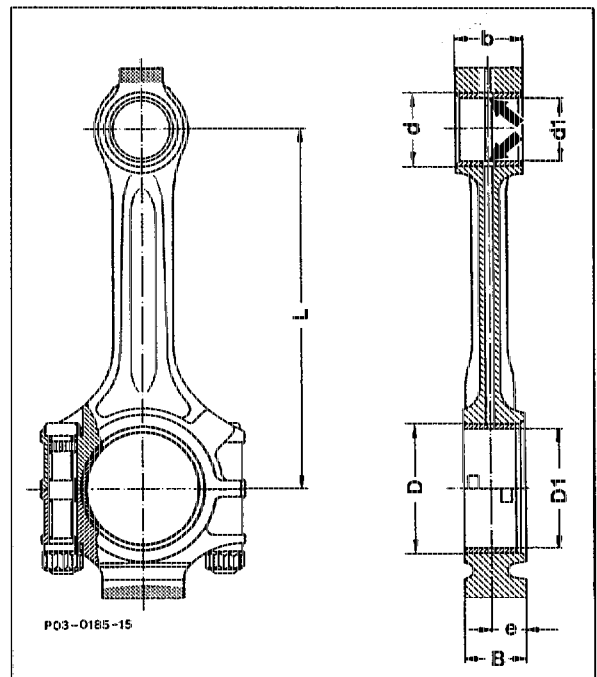
4 Measure conrod bearing basic bore. If the basic bore exceeds the value of 51.619 mm or is conical, dress bearing cover at its contact surface on a dressing plate up to max. 0.02 mm.



5 Press in new conrod bush so that the oil bores are aligned (arrows). Insertion pressure 2500 N.

6 Turn or ream conrod bush.

7 Dress side contact surfaces of conrod on the dressing plate.

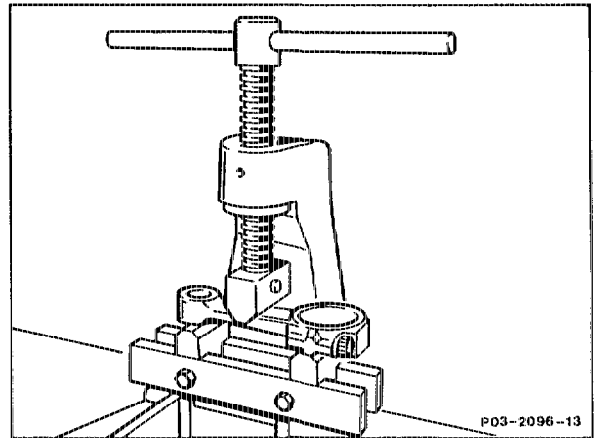


Conrod of Engine 119.96

## Aligning

8 Align conrod with conrod tester.

9 Align conrod bearing bore to conrod bush bore (parallelism).



10 Examine twist of conrod bearing bore to conrod bush bore and correct if necessary.

