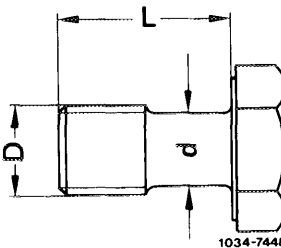


**Necked-down bolts for driven plates onto crankshaft**

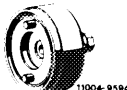
Necked-down bolts, part No.	116 032 02 71	116 052 04 71 <sup>1)</sup>	
Thread D	M 12 x 1.5		
Necked-down shank dia. d	when new	9.8-0.2	
	minimum dia.	9.3	
Length L	23	29 <sup>1)</sup>	

<sup>1)</sup> In case of repairs the crankshaft 1st version of model 107.026 with engine 117.960 can be replaced by the shorter crankshaft 117 031 14 01 together with a compensation plate (10.5 mm thick) and longer necked-down bolts (29 mm instead of 23 mm).

**Tightening torques**

Necked-down bolts for driven plates to crankshaft	Initial torque	30-40 Nm
	Angle of rotation torque	90-100°

**Special tool**

Installation tool for radial sealing ring with end cover fitted		117 589 00 43 00
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**Note**

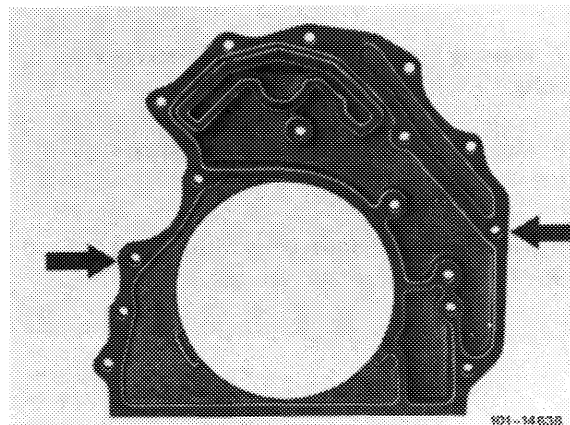
The end cover directs the engine oil from the main oil gallery to the two oil galleries supplying the cylinder heads and is sealed against the crankcase by means of sealing compound. It is for this reason that the radial sealing ring should be replaced without removing the end cover if possible.

The running surface for the rear radial sealing ring on the crankshaft is hardened and ground without helix.

If the crankshaft has a groove on the running surface of the sealing ring, a repair stage sealing ring with a sealing lip offset to the inside should be installed.

Standard radial sealing ring (13 mm wide).

Radial sealing ring repair stage (10.5 mm wide) for use with worn crankshaft.



## Renewing

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1 Force out radial sealing ring by means of a screwdriver.

### Caution!

Do not damage crankshaft and installation bore for the sealing ring.

2 Inspect running surface on crankshaft.

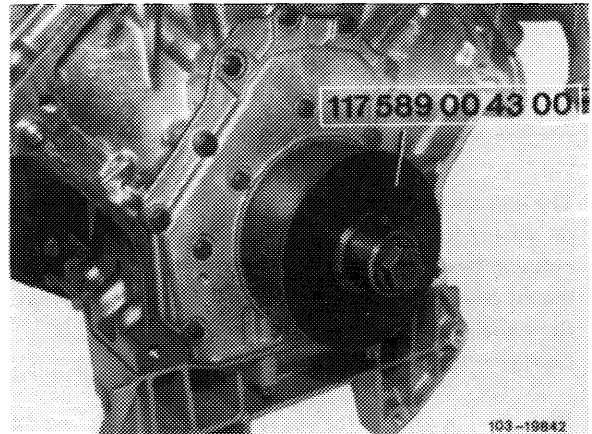
3 Fit mounting sleeve to crankshaft.

4 Fill radial sealing ring space between dust lip and sealing lip with long-life grease according to sheet 266.2 of the Specifications for Service Products.

5 Push radial sealing ring over the installation sleeve.

6 Using the installation tool, pull radial sealing ring into the cover until it bottoms.

It must be observed that on crankshafts with locating dowel a corresponding bore is provided on the installer.



7 Measure necked-down shank of necked-down bolts.

8 Mount driven plates in correct sequence (03–410).

9 Tighten necked-down bolts with 30–40 Nm and 90–100° angle of rotation torque.