

Crankshaft - exploded view

1 - Bearing shells 1, 2, and 4

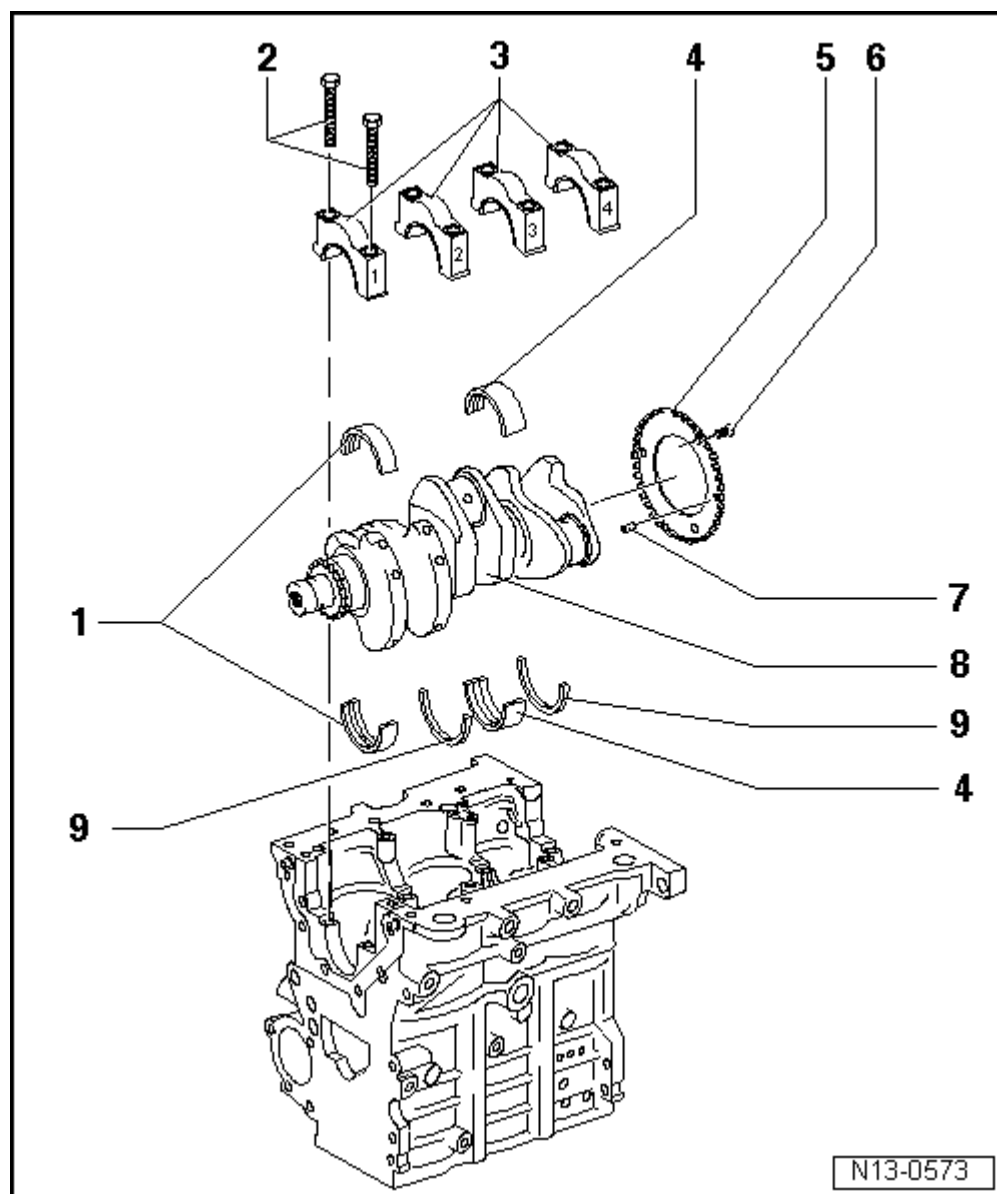
- ☐ For bearing cap (without oil groove)
- ☐ For cylinder block (with oil groove)
- ☐ Do not interchange used bearing shells (mark positions)

2 - Bolt

- ☐ Renew
- ☐ 65 Nm +90° ($\frac{1}{4}$ turn further)
- ☐ To measure radial clearance, tighten to 65 Nm but do not turn further

3 - Bearing cap

- ☐ Bearing cap 1: Pulley end
- ☐ Bearing shell retaining lugs (cylinder block/bearing cap) must be on the same side



4 - Bearing shell 3

- ☐ For bearing cap (without oil groove)
- ☐ For cylinder block (with oil groove)

5 - Sender wheel

- ☐ For engine speed sender -G28-
- ☐ Sender wheel must be renewed if bolts are loosened
- ☐ Removing and installing → Fig.

6 - Bolt

- ☐ Renew
- ☐ 10 Nm +90° ($\frac{1}{4}$ turn further)

7 - Dowel pin

- ☐ Checking projection from crankshaft → Fig.

8 - Crankshaft

- ❑ Before removing, ensure that a suitable surface is prepared so that the sender wheel -item 5- is not damaged and does not lie against any other item.
- ❑ Axial clearance when new: 0.07 ... 0.17 mm; wear limit: 0.37 mm
- ❑ Check radial clearance with Plastigage
- ❑ Radial clearance when new: 0.03 ... 0.08 mm; wear limit 0.17 mm
- ❑ Do not rotate the crankshaft when checking the radial clearance
- ❑ Crankshaft dimensions → [Chapter](#)

9 - Thrust washer

- ❑ For cylinder block, bearing 3

Removing and installing sender wheel

- Sender wheel -2- must always be renewed after slackening off bolts -1-.

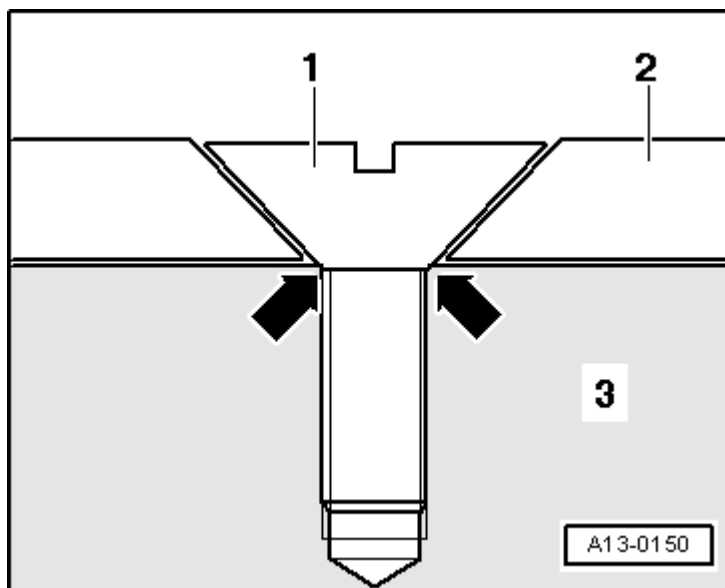


Note

- ♦ If the countersunk bolts are tightened a second time, the seats for the bolt heads in the sender wheel will be deformed to such an extent that the bolt heads make contact with the crankshaft -3--arrows- and the sender wheel beneath the bolts will be loose.
- ♦ Sender wheel can only be installed in one position. Holes are off-set.

Tightening torque

Component	Nm
Sender wheel to crankshaft	10 + 90° 1)2)
<ul style="list-style-type: none"> • 1) Renew bolts. • 2) 90° = one quarter turn. 	



Checking dowel pin projection out of crankshaft

- Use depth gauge to check projection -a- of dowel pin with sender wheel -1- removed.

1 - Sender wheel

2 - Bolt

3 - Projection of dowel pin -3- out of crankshaft

- Dimension -a- = 2.5 ... 3.0 mm.

