(engine removed)

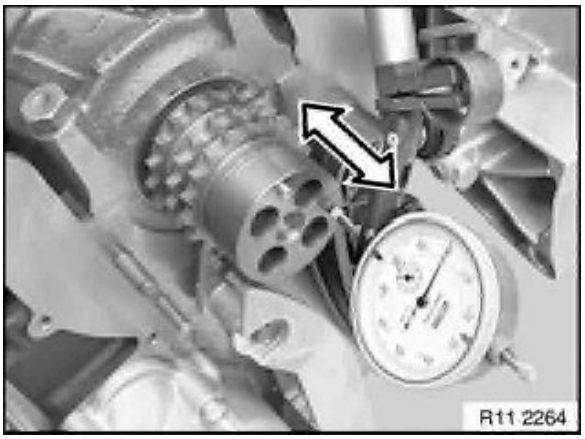
Remove cylinder head.

Remove lower timing case cover.

Remove pistons.

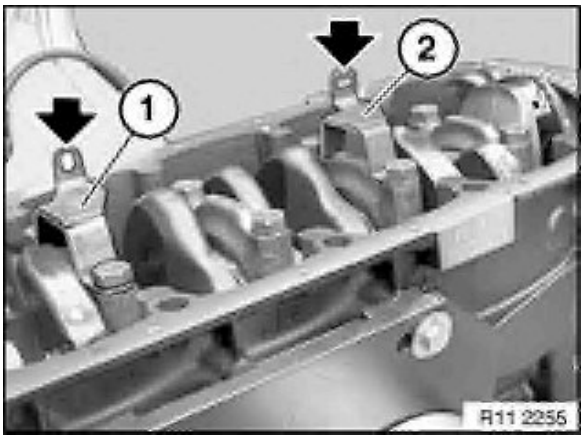
Remove flywheel.

Remove end cover at rear. This task is described in the section Replacing crankshaft radial seal.



Checking axial clearance:

If permitted end float is exceeded, check crankshaft, guide bearing shells and engine block, replacing if necessary.



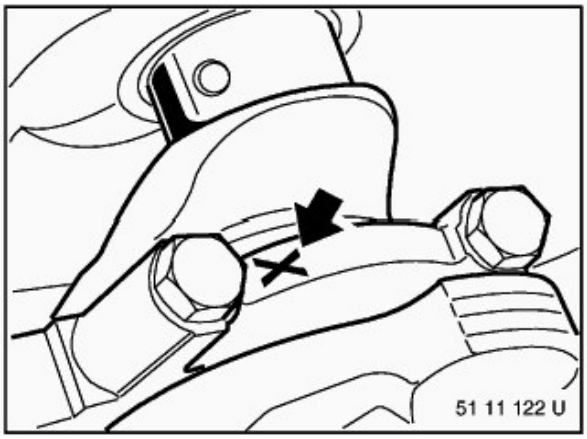
Holders for oil lines are fitted on main bearing caps 3 and 5.

Caution!

Holders (1 and 2) are different.

Holder (1) with elongated hole in vertical direction.

Holder (2) with elongated hole in horizontal direction.



Note:

Main bearing caps 1 to 5 are marked on exhaust side.

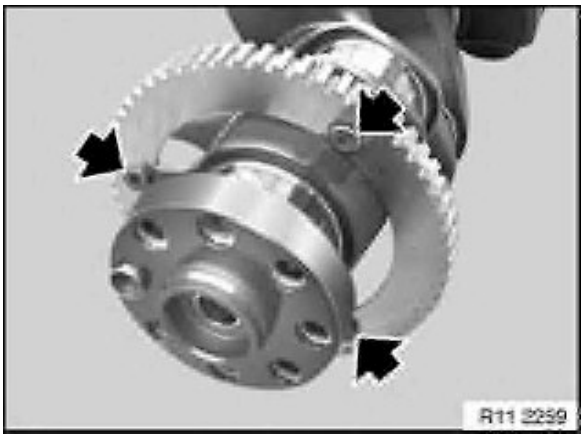
Main bearing caps 6 and 7 are not marked.

Main bearing cap 6 is guide bearing.

Remove screws securing main bearing caps.

Remove main bearing caps 1 to 7.

Lever out crankshaft.



Caution!

The increment gear cannot be released without the screws being damaged or destroyed.

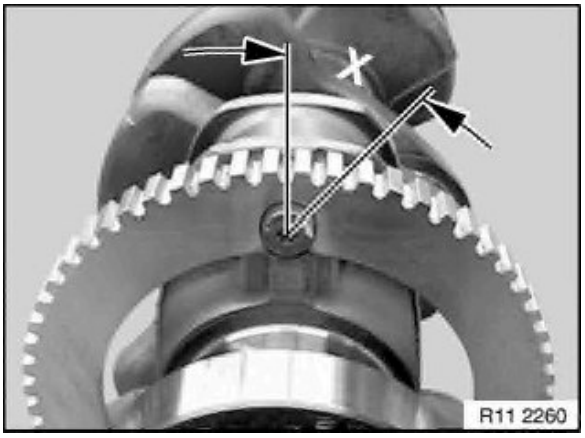
The Parts Service offers a crankshaft with fitted increment gear.

If in an exceptional case increment gear has to be removed:

Caution!

Protect crankshaft against damage.

Release screws, drill out screw heads if necessary.



Installation:

Replace increment gear and screws.

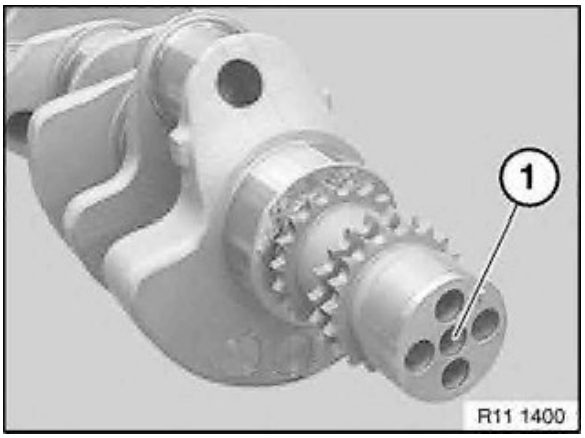
Tighten down screws to 5 Nm.

Mark 45° angle on screw head and sensor gear.

Caution!

Screws can be tightened down to max. 45°.

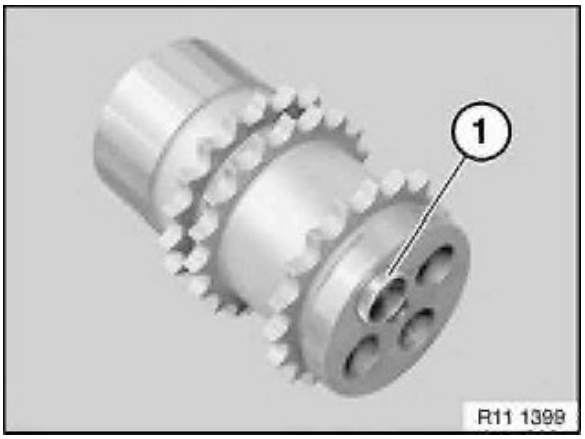
Tighten down with 40 ° to 45 ° torsion angle.



If necessary, remove sprocket wheel:

Release screw in bore (1).

Detach sprocket wheel from crankshaft.

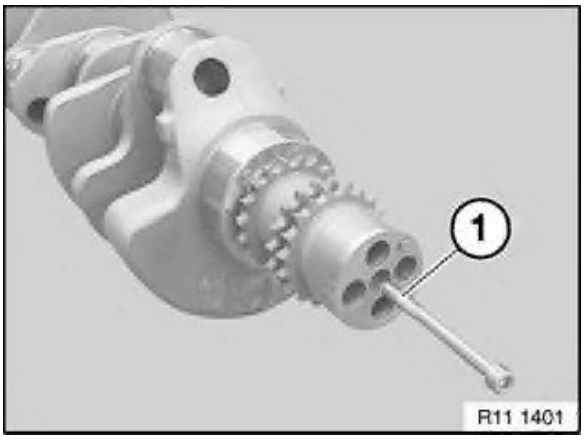


Note:

Sprocket wheel is secured with an adapter sleeve (1) to crankshaft.

Installation:

Check adapter sleeve (1) for damage and correct installation position.



Installation:

Align adapter sleeve of sprocket wheel to locating bore of crankshaft and fit sprocket wheel.

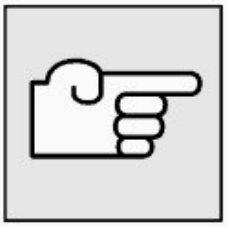
Apply a thin coat of screw retaining compound to screw thread (1).

Insert screw.

Tighten down crankshaft sprocket wheel to 10 Nm.

Caution!

Observe grinding stage of crankshaft.



Replace main crankshaft bearing shells.

Replace conrod bearing shells.

Replace grooved ball bearings in crankshaft.