

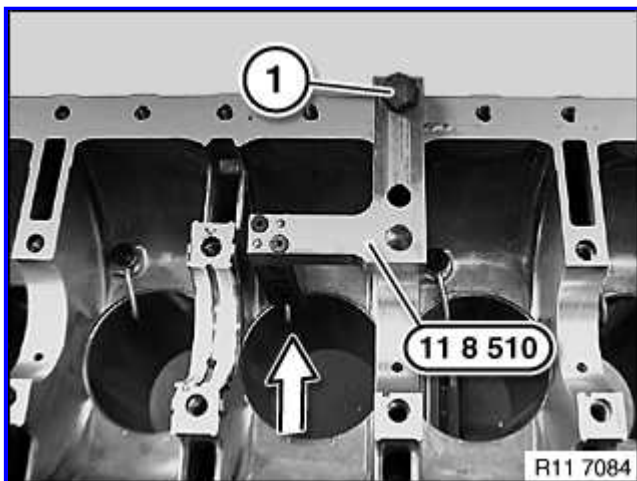
11 21 531**Replacing all crankshaft main bearing (N55)****Special tools required:**

- [00 2 590](#)
- [11 4 470](#)
- [11 8 510](#)

**Necessary preliminary tasks:**

- Remove [crankshaft](#).

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**Checking position of oil spray nozzles:**

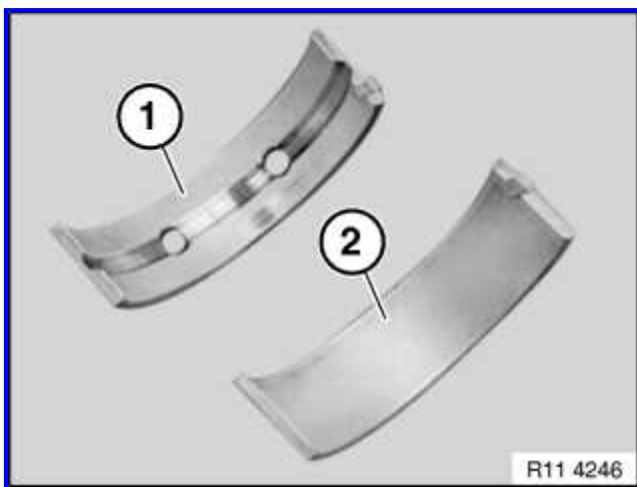
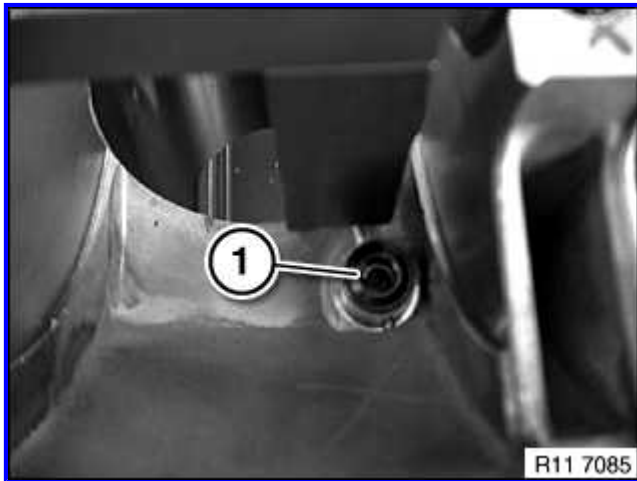
Check position of oil spray nozzle according to position on special tool [11 8 510](#).

Insert special tool [11 8 510](#) into main bearing screw connection and secure from turning with screw (1).

If necessary, adjust oil spray nozzles and secure.

Tighten banjo bolt (1).

Tightening torque: [11 11 5AZ](#).



Installation note:

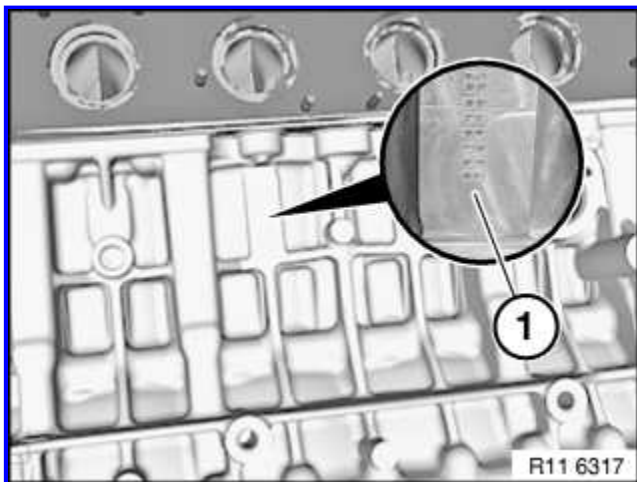
Bearing shell (1) with lubricating groove must be fitted in upper section of crankcase.

Bearing shell (2) without lubricating groove must be installed in lower section of crankcase.

Important!

Allocation of bearing positions:

Bearing position 1 is at the front on the timing chain drive in the direction of travel.



Main bearing classification (1) in crankcase.

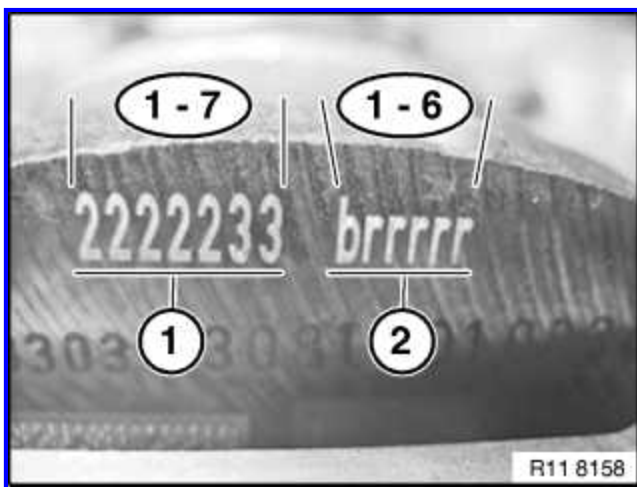
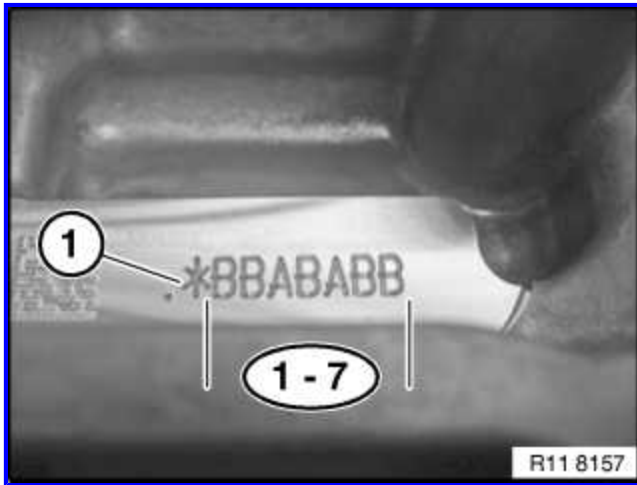
Installation note:

When all the letters and number code have been determined, the bearing shell colour must be allocated, see table.

Main bearing classification:

Code letters A / B or C) are used for the crankcase upper section.

For bearing seat assignment from 1 to 7, the first bearing position is indicated by a star (1) on timing drive.



Main bearing classification:

ID codes 1 / 2 or 3) are used for crankcase lower section.

For bearing seat assignment (1) from 1 to 7, the first bearing position is located on timing drive.

Note:

Code letters (2) are required exclusively for classifying [connecting rod bearing](#).

Observe [bearing classification](#).



Installation note:

The letter / number combination produces a bearing shell pairing.

Identification by different colours.

Important!

First bearing position is on the timing drive.

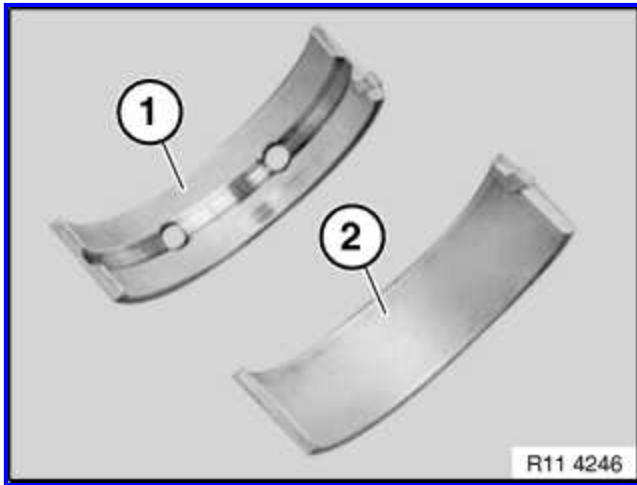
Engine damage will result if an insufficiently small radial clearance is determined.

If a large radial clearance is determined, this can lead to noises in crankshaft drive.

Code letters on crankcase:

Code letter A = bearing shell (1) colour Yellow with lubricating groove.

Code letter B = bearing shell (1) colour Green with lubricating



groove.

Code letter C = bearing shell (1) colour Red with lubricating groove.

Code numbers on crankshaft:

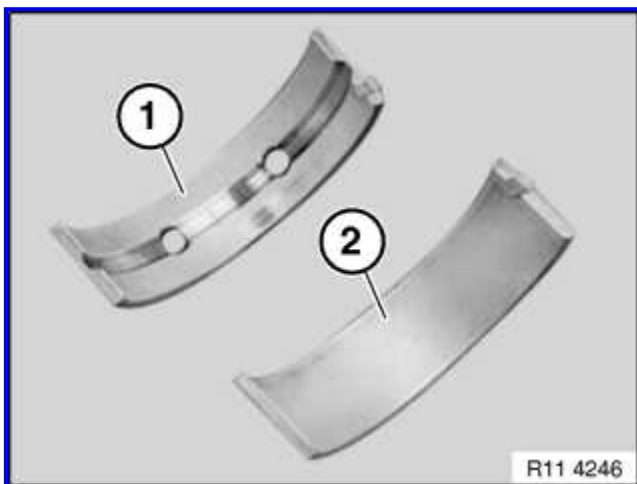
Code number 1 = bearing shell (2) Yellow without lubricating groove.

Code number 2 = bearing shell (2) Green without lubricating groove.

Code number 3 = bearing shell (2) Red without lubricating groove.

Important!

The colour set **Yellow and Red** must not be fitted; the bearing colours Green / Green must be selected for this colour set.



Installation note:

Possible colour combinations for mounting the crankshaft in the crankcase.

Installation example:

For bearing 1 with code letter **B** on crankcase and code letter **1** on crankshaft, the bearing shell (1) with the colour **Green** is required for the crankcase upper section and bearing shell (2) with the colour **Yellow** for the crankcase lower section (bedplate).

Bearing 2: **B** and **2** colours Green and Green.

Bearing 3: **A** and **2** colours Yellow and Green.

Bearing 4: **B** and **2** colours Green and Green.

Bearing 5: **A** and **1** colours Yellow and Yellow.

Bearing 6: **B** and **3** colours Green and Red.

Bearing 7: **B** and **1** colours Green and Yellow.

Important!

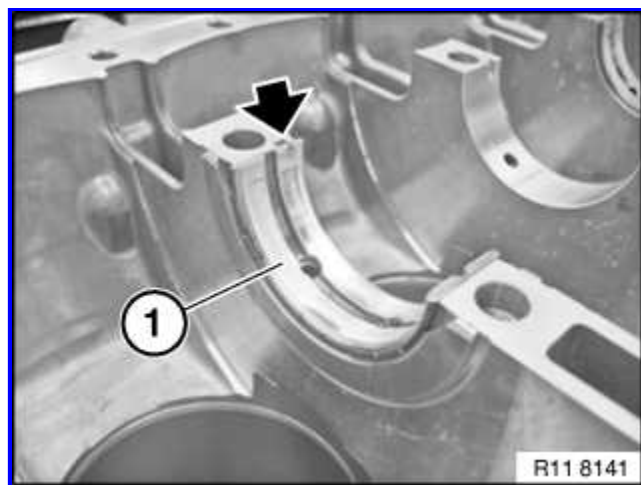
The colour set **Yellow and Red** must not be fitted; the bearing colours Green / Green must be selected for this colour set.

(A 1) Crankcase / **Yellow**

(B 1) Crankcase / **Green**

(C 1) Crankcase / **Green**

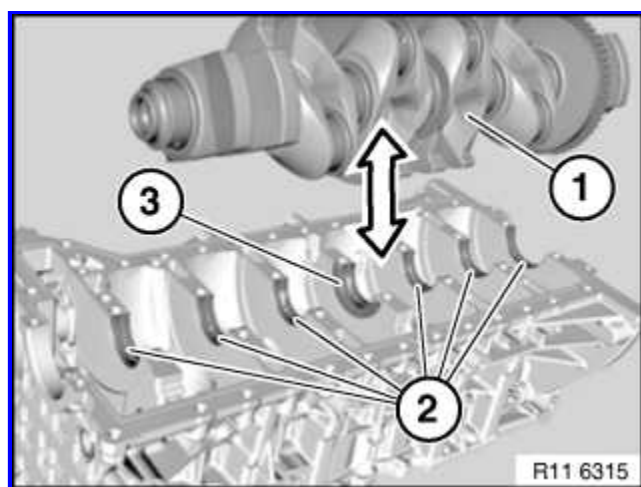
(A 1) Crankcase lower section / Yellow	(B 1) Crankcase lower section / Yellow	(C 1) Crankcase lower section / Green
(A 2) Crankcase / Yellow	(B 2) Crankcase / Green	(C 2) Crankcase / Red
(A 2) Crankcase lower section / Green	(B 2) Crankcase lower section / Green	(C 2) Crankcase lower section / Green
(A 3) Crankcase / Green	(B 3) Crankcase / Green	(C 3) Crankcase / Red
(A 3) Crankcase lower sections / Green	(B 3) Crankcase lower section / Red	(C 3) Crankcase lower section / Red



Note:

Guide bearing shell (1) at bearing seat 4 is a thrust bearing.

Observe [bearing classification](#).



Important!

Do not use any metal-cutting tools.

Only use special tool [11 4 470](#) to clean sealing surfaces.

Installation note:

Clean all sealing surfaces.

Install bearing shells (2) and guide bearing shell (3).

Installation note:

If a radial clearance needs to be redetermined, use special tool [00 2 590](#) to do this.

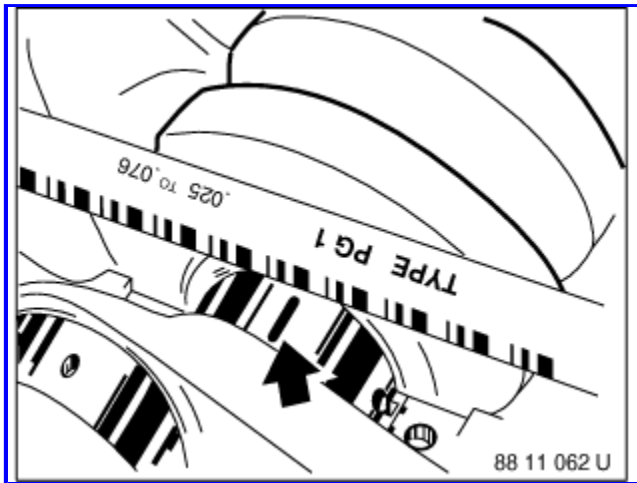


Installation note:

All measuring points must be clean and free from oil and grease. If necessary, clean all measuring points.

The old bearing screws can be used to determine the radial clearance.

Set up [crankcase lower section](#) with bearing shells.



Remove crankcase lower section.

Read off [radial clearance](#) at width of flattened Plastigage and measuring scale.

Installation note:

Remove Plastigage.

Apply a light coat of oil to bearing shells and crankshaft.



Fit [crankcase lower section](#).

Assemble engine.