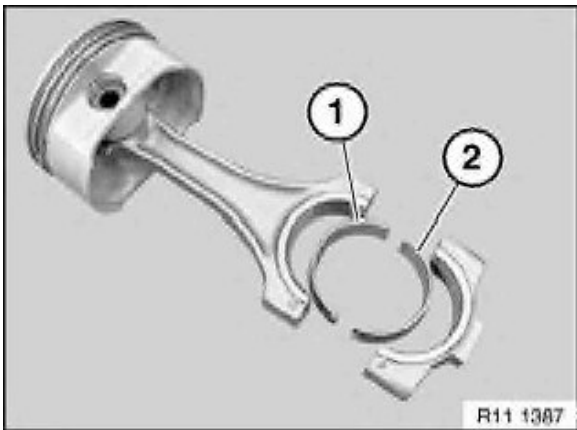


(piston removed)



Caution!

Note grinding stages on crankshaft.



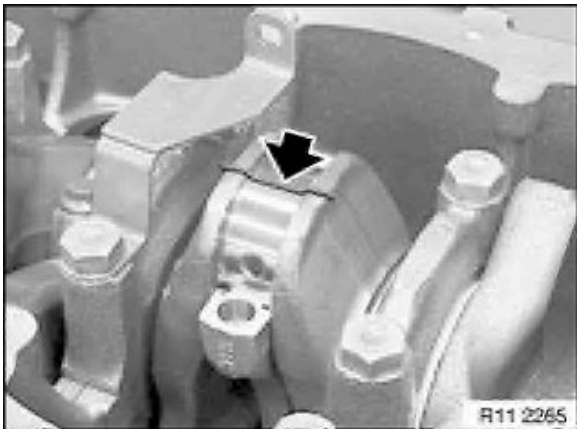
Note:

Classified conrod bearing shells are installed at top (1) and bottom (2) in the series.

The classification is removed when the conrod bearing shells are replaced.

Install bearing shells with yellow color coding at top and bottom.

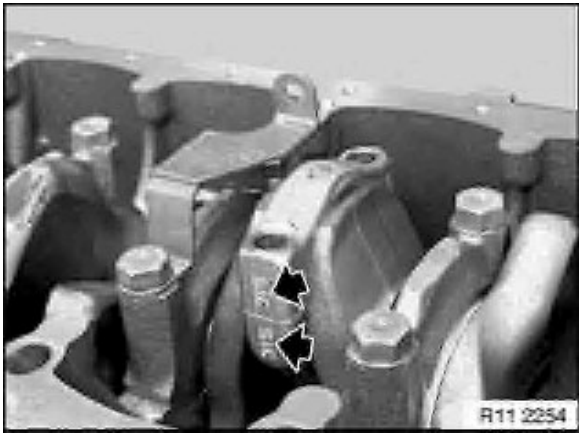
Install piston.



Check connecting-rod bearing clearance:

Piston in BDC position.

Fit special tool 00 2 590 (Plastigage Type PG 1) to the oil-free crankshaft.

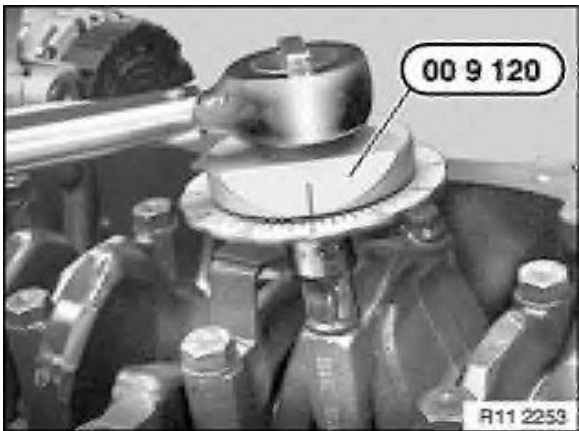


Fit bearing caps so that pair numbers match up.



Caution!

Contrary to the rule for all other BMW engines, the conrod bolts are not allowed to be replaced in the S54 engine. The conrods must be replaced if a conrod bolt is damaged.



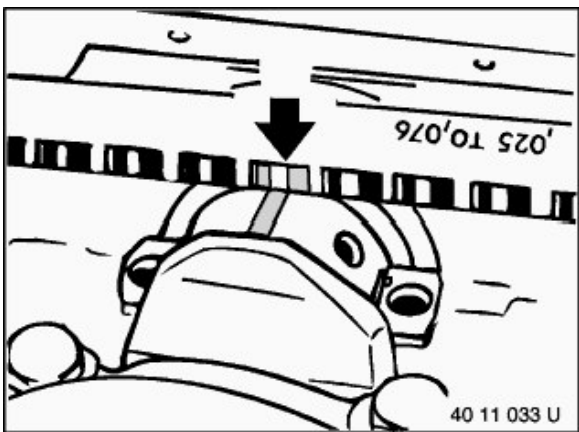
Caution!

Do not distort conrods or crankshaft.

Tighten down conrod bolts with special tool 00 9 120.

Tightening torque:

- Application torque 5 Nm
- Joining torque 30 Nm
- Angle of rotation 70°



Remove bearing cap and read off bearing play at width of flattened plastic thread with assistance of measurement scale.

Conrod bearing clearance: 0.040 to 0.070 mm

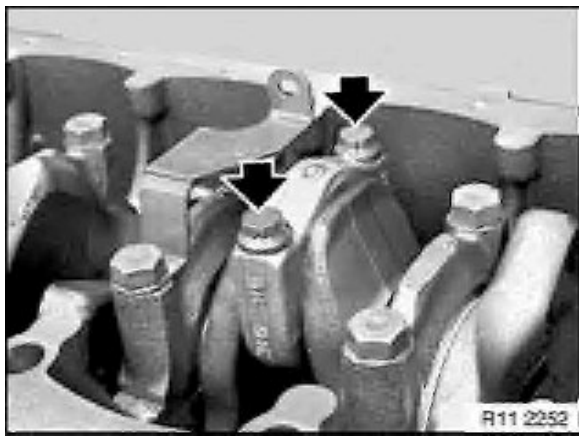
Caution!

If a bearing clearance of below 0.040 mm is measured:

Replace conrod bearing shells.

If a bearing clearance of below 0.040 mm is measured with the new conrod bearing shells:

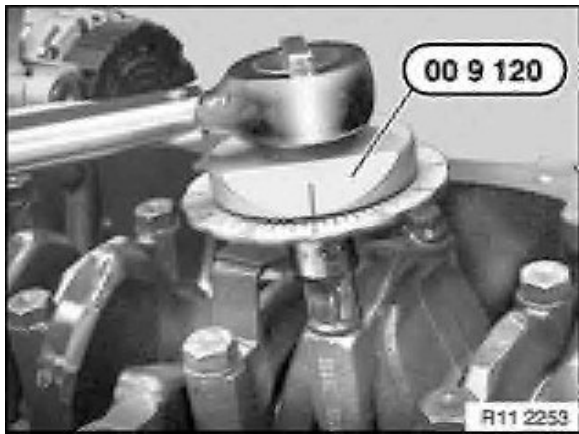
Replace conrod.



- Remove plastic thread.
- Lubricate crankshaft and bearing shells.
- Fit bearing caps so that pair numbers match up.

Caution!

Contrary to the rule for all other BMW engines, the conrod bolts are not allowed to be replaced in the S54 engine.



Tighten down conrod bolts with special tool 00 9 120.

Tightening torque:

- Application torque 5 Nm
- Joining torque 30 Nm
- Angle of rotation 70°