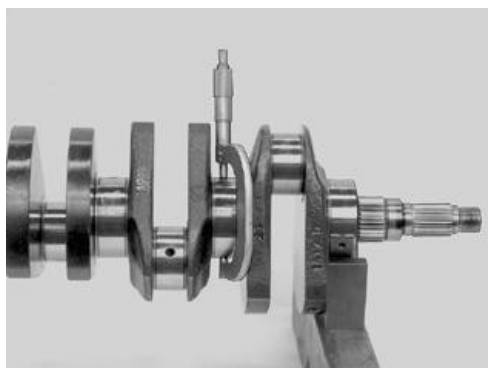


Measuring the crankshaft assembly

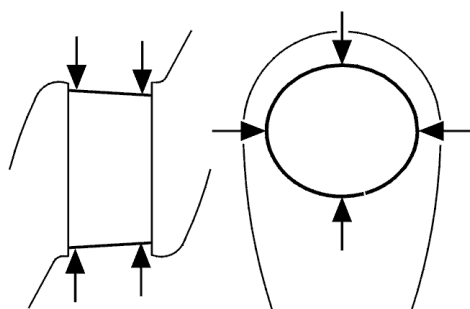
Note! The illustrations in this service information are used for different model years and / or models. Therefore there may be some variation. However, the essential information in the illustrations is always correct.

Measuring the crankshaft



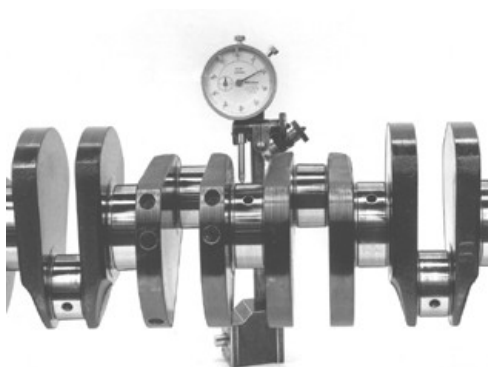
Use a micrometer.

Measure the out-of-round and taper of the bearing journal. Measure at a number of points laterally and longitudinally.



For the correct values for the connecting rod bearing journals and main bearing journals, see [Specifications](#).

Check the out-of-true of the crankshaft



Use a dial indicator and magnetic holder. Position the crankshaft with the two outer main bearings in the V block.

Turn the crankshaft and measure the radial runout on the other main bearing journals. For the correct values, see [Specifications](#).

Removing the piston rings

Use piston ring pliers.

Remove coke deposits. Scrape the piston ring grooves clean with a groove cleaner or a broken and filed piston ring.

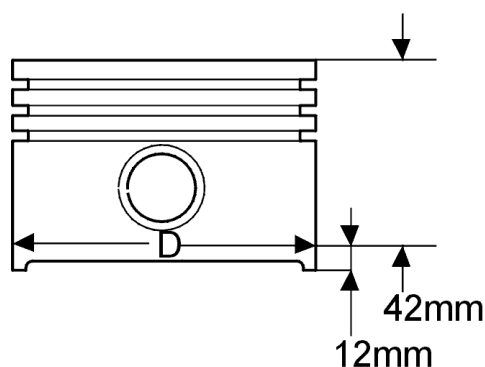
Check for damage, wear and cracks.



Checking piston ring axial clearance

Use **new** piston rings.

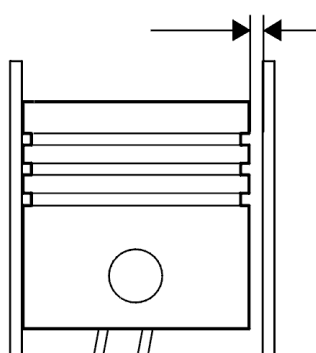
For the correct values, see [Specifications](#).



Checking the piston diameter

Use a micrometer and vernier calliper.

For the correct values, see [Specifications](#).



Calculating the running clearance of the piston

For the correct values, see [Specifications](#).

Disassembling connecting rods and pistons

Check first that the piston and connecting rod are marked.

Piston marking: Scrape the piston pin clean. If the marking is unclear, mark the piston with



the cylinder number and an arrow pointing to the front of the engine. Use a marker pen.

Connecting rod marking: See [Assembling the crank mechanism](#) .

Carefully push out the lock-ring using a groove-cut chisel.

Warning! The snap ring can easily come off. Wear protective goggles!

Press out the piston pin with your thumb. Clean and check the connecting rods, caps and screws for damage, signs of wear or cracks.

Checking the alignment of the piston pins in the pistons

The piston pin must not be loose. It should be possible to push it through the hole using thumb pressure.

Replace the piston if the play is too great.



Checking the alignment of the piston pins in the connecting rods

The piston pin should slide through the hole with light thumb pressure.

If the play is too great measure the piston pin. Use a micrometer.

For the correct diameter of the piston pin, see [Specifications](#) .



New connecting rod

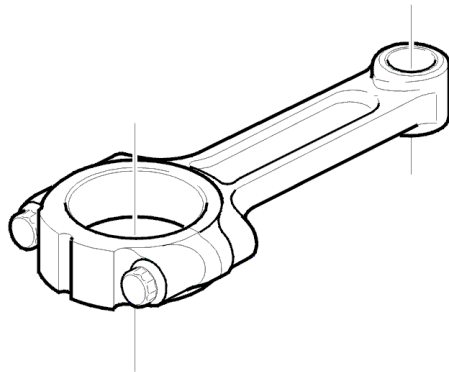
A new connecting rod has been introduced on B6294S engines.

The mating surface between the cap and the connecting rod is **not** machined. It is aligned through a dedicated fracture surface.

Caution! If the cap is turned the wrong way and tightened, the structure of the fracture surface will be damaged and the connecting rod must then be discarded.

Note! Blow the fracture surface clean with





compressed air before reinstalling the cap.

Checking the bearing recess in the connecting rod big end

Visually check the bearing shells.

If in doubt measure out-of-round.

Use a bore gauge.

For the correct diameter of the bearing recess, see [Specifications](#) .

Checking the connecting rod in a connecting rod aligner

Check for out-of-true and twisting.

Caution! Check that the aligner fork is unburred and round at the handle.

Remove and apply the expander at the big end between each alignment operation.