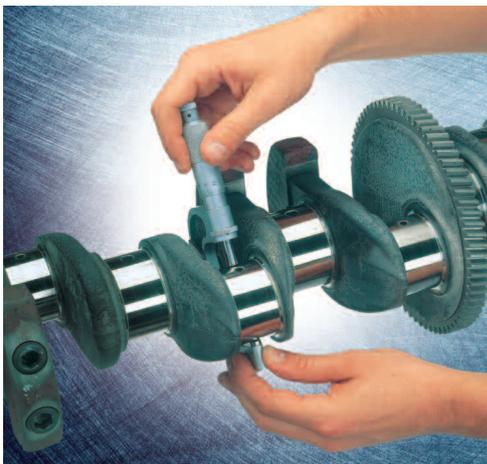


# Fitting recommendations

1. When the engine is being taken apart, the parts that belong together are to be marked.
2. No parts may be damaged when the crankshaft is being taken out. The parts which are taken out are to be cleaned carefully. Contamination is the most common cause of damage to bearings. For this reason, all parts involved in the oil circulation system, in particular the oil channels in the engine unit and the crankshaft, are to be cleaned carefully.
3. Checking the parts



The following characteristics of basic bores and the crank pins (surface, radii and oil escape bores) are to be checked: dimensions, roundness, hardness, roughness and cylindricity. Also check for damage. Check the con rods to see if they are bent or twisted. As a basic principle, the regulations and data of the engine manufacturer are to be observed.

4. The shape of the housing bore has a big influence on the durability of the plain bearings. For this reason, the processing of the housing bore may only be done after the bolts have been tightened – in line with the tightening regulations of the engine manufacturer.

Before the final installation – a test installation may be done first – the basic bores are to be cleaned and the transport protection is to be removed from the new slide bearings. So as to avoid damage caused by a dry start-up, the running surfaces are to be lubricated with clean motor oil when the plain bearings are installed. When there are bearing pairs that are made of different materials, make sure that they have been installed correctly. The terms “upper” (top) or “lower” (bottom) can be seen on the bearing backs of these slide bearings. The slide bearing half that is marked “upper” is to be installed at the top of the housing; the one that is marked “lower” is to be installed at the bottom on the cap. After the plain bearings have been positioned correctly, the bearing caps are to be tightened according to the manufacturers recommendations. The bearing bore diameters are then to be measured exactly in three measuring planes, one of which is to be in the direction of the load.

5. Before the flanged bearing is installed, the difference in dimensions between the cheek width of the crankshaft and the total width of the guide bearing is to be checked.

When assembling, check whether the crankshaft can be turned easily and without jerking and check at the same time the axial clearance of the crankshaft.

When checking the con rod axial clearance, make sure that the con rod can be moved easily.

As a basic principle, the recommendations and data of the engine manufacturer are to be observed.