Mounting instruction for SKF ConCentra roller bearing units

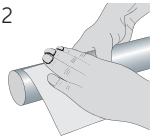
Carefully read the complete instructions prior to starting work.

⚠ The mounting and dismounting of rolling bearings involve the handling of sometimes heavy weights, the use of tools and other devices, and in some cases the use of high pressure oil. In order to avoid accidents, injuries or damage to property please follow carefully the prescribed methods.
CAUTION! This is a unit assembly. No attempt should be made to disassemble the unit prior to installation. The mounting screws must under no condition be tightened unless the unit is mounted on a shaft since this may damage the unit.
NOTE: A label marked "MOUNT.SIDE" shows the mounting side and "DISMOUNT.SIDE" shows the dismounting side of the unit.

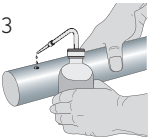
Mounting

1. Determine the positions of the locating and non-locating units. The locating unit should always be at the drive side.
2. Make sure that the base of the bearing unit and the support surface are clean and free from burrs. For the support surface a flatness tolerance within tolerance grade IT7 is recommended. For less demanding applications IT8 may be satisfactory. Recommended max surface finish for the support surface is $R_a \leq 12{,}5$ µm. If the bearing unit elevation is adjusted with shims these must cover the whole contact area between the unit and the support surface.
3. Make sure the shaft is clean and free from burrs and check the dimensional and form accuracy of the shaft. The recommended diameter tolerance for the shaft is h9 and the cylindricity tolerance grade IT5. For less demanding applications h10 and IT7 may be satisfactory. Recommended max surface finish for the shaft is $R_a \leq 3{,}2$ µm. Lightly oil the shaft bearing seatings with low viscous oil.
4. Mount any components which are to be on the shaft between the bearing positions.
5. Push the bearing units on to the shaft with dismounting side leading. Leave 40 mm minimum space behind the unit to make dismounting possible.
6. Fasten the bearing units to the support surface with the attachment bolts but do not tighten.
7. Adjust the position of the bearing units on the support surface if necessary.

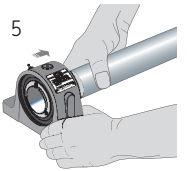
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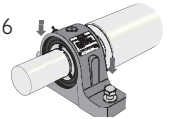
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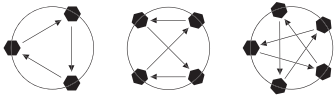


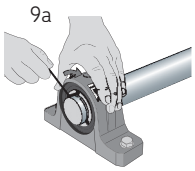
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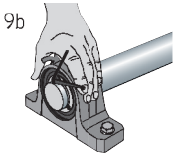
8. Position the shaft axially in the bearing units.
9. Lock the locating bearing (SYT .. F/FTS) on the shaft.

9a. This is done by tightening the grub screws in the mounting side ring using the hexagonal key. Hold the short end of the hexagonal key and tighten the screws a 1/2 turn each according to the mounting pattern. Continue to tighten the screws to finger tightness.





9b. Turn the hexagonal key and tighten the screws by using the long end of the key. Tighten 1/4 turn on each screw according to the mounting pattern until the hexagonal key starts to flex.



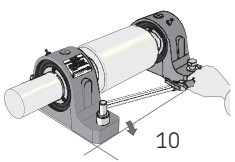
9c. Mount the supplied red torque wrench on the short end of the hexagonal key and tighten the screws until the hexagonal key comes in contact with the torque indicator.

If another torque wrench is used the recommended tightening torque is 7,4 Nm.

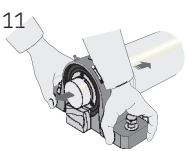
CAUTION! Do not use auxiliary equipment such as hammer or a pipe when tightening the screws.

10. Check the bearing unit alignment. The maximum permissible misalignment of the shaft relative to the unit is 1,5°. Fully tighten the attachment bolts of the locating bearing unit. The recommended tightening torques for bolts of strength class 8.8 are:

M12 ----- 80 Nm (59 ft.lbf.)
M16 ----- 200 Nm (148 ft.lbf.)
M20 ----- 385 Nm (284 ft.lbf.)
M24 ----- 665 Nm (484 ft.lbf.)
1/2 UNC -- 95 Nm (70 ft.lbf.)
5/8 UNC -- 185 Nm (137 ft.lbf.)
3/4 UNC -- 320 Nm (236 ft.lbf.)
7/8 UNC -- 515 Nm (380 ft.lbf.)
1 UNC --- 770 Nm (568 ft.lbf.)

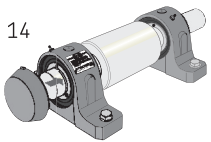


11. Find the middle of the bearing seating in the non-locating housing (SYT .. L/LTS) by supporting the shaft and by pushing the unloaded bearing from one end position in the housing to the other. If only thermal elongation of the shaft is expected it is recommended that the end position opposite to the locating bearing is chosen as the seating.



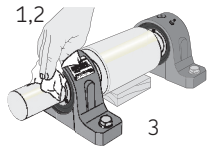
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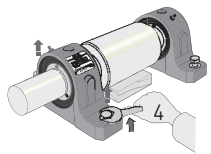
12. Lock the non-locating bearing on the shaft as under point 9.
13. Check the bearing unit alignment. The maximum permissible misalignment of the shaft relative to the unit is 1,5°. Fully tighten the attachment bolts of the non-locating bearing unit. The recommended tightening torques are given under point 10.
14. If needed at the end of the shaft, snap the end cover into the housing bore.



Dismounting

1. Clean the bearing position and all the internal hexagons of the grub screws.
2. Remove any rust or damage over which the bearing unit is to be withdrawn.
3. Support the shaft with its components.
4. Loosen the attachment bolts.
5. Loosen the grub screws in the mounting side ring 3 or 4 turns.
6. Tighten the two grub screws in the dismounting side ring alternately by a 1/4 turn until the unit loosens from the shaft. If the unit will not loosen and the hexagonal key starts to flex considerably, please follow step a-c.

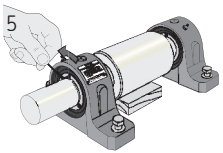


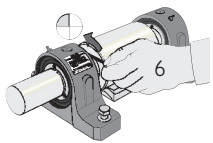


On no account should the grub screws in the dismounting side ring be further tightened if the bearing and sleeve do not come free.

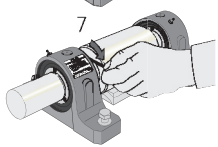
In such a case

a) the two grub screws in the dismounting side ring should be loosened again by 3 or 4 turns and then
b) the grub screws in the mounting side ring should be tightened until the long arm of the hexagonal key starts to bend noticeably.
c) The procedure described under points 5 and 6 should then be repeated.

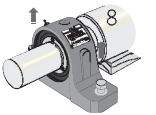




7. Loosen the grub screws in the dismounting side ring again by 3 or 4 turns.
8. Remove the attachment bolts.
9. Withdraw the unit from the shaft.
10. If the application permits, it is recommended to remove all the attachment bolts and to lift out the complete arrangement of

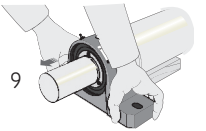


shaft with SKF ConCentra units and other components. Then proceed as described under points 5 to 9.



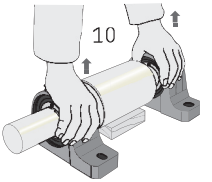
Lubrication

SKF ConCentra roller bearing units are delivered filled with SKF grease LGEP 2. The quantity of grease corresponds to a completely filled bearing and 30 % - 50 % of the free space in the housing. Relubricate the unit with SKF grease LGEP 2 or equivalent.



Label

The designation of the unit is shown on a label covered by a transparent protective film. If the unit is repainted, the label can be revealed by removing this protective film.



K-671/SKF Mekan AB 2005