

Mounting of Radial Insert Ball Bearings with Spherical Outer Ring in Bearing Housings

Mounting manual

About the mounting manual

This manual is valid for the mounting of radial insert ball bearings with spherical outer rings in conventional cast iron housings or plastic housings from Schaeffler.

The mounting of special designs of radial insert ball bearings or bearing housings must be considered individually. Please contact Schaeffler in such cases.

Downloading this manual MON 108:
<https://www.schaeffler.de/std/1FA1>

Symbols

The warning and hazard symbols are defined in accordance with ANSI Z535.6-2011.

NOTICE

In case of non-compliance, damage or malfunctions in the product or the adjacent construction may occur. ⚠

Qualified personnel

Mounting of the radial insert ball bearing may only be carried out by qualified personnel.

Usage for the intended purpose

The radial insert ball bearing may only be used in conjunction with a suitable bearing housing. The radial insert ball bearing must be fitted in the bearing housing prior to initial operation.

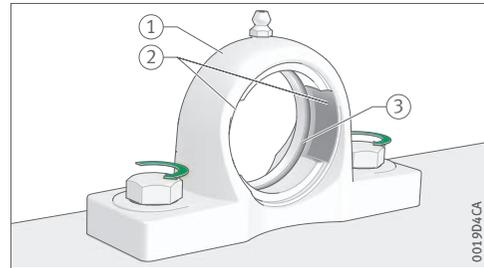
Preparation for mounting

- ▶ Provide a clean, bright working environment.
- ▶ Ensure that the surfaces of the bearing housing and radial insert ball bearing, including lubrication grooves, are free from contaminants.

Mounting

- ▶ Screw mount the bearing housing ① on the adjacent construction or locate the housing on an ancillary construction, following the instructions in the technical documentation for the bearing housing.
- ▶ Check where the locating slots ② are located in the bearing housing. The radial insert ball bearing is later mounted on the side with the locating slots.
- ▶ Check where the lubrication groove ③ is located inside the bearing housing ①.

① Locating slots and lubrication groove in the bearing housing



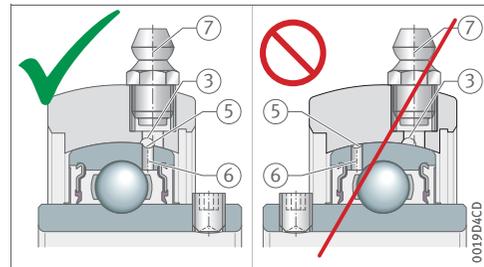
NOTICE

Inadequate lubrication reduces the operating life of the radial insert ball bearing.

In order to ensure a facility for relubrication, the lubrication groove ⑤ or lubrication hole ⑥ of the radial insert ball bearing must be located directly under the lubrication groove ③ of the bearing housing after mounting.

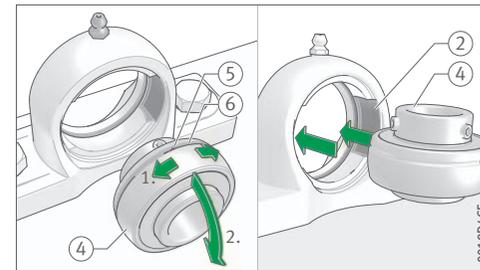
For optimal lubrication, the lubrication hole ⑥ is located directly under the lubrication nipple ⑦ of the bearing housing after mounting. ⚠

② Target position of lubrication grooves and lubrication holes



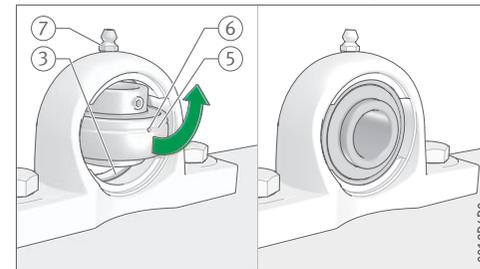
- ▶ If necessary, rotate the radial insert ball bearing ④ about its axis in order to correctly position the lubrication groove ⑤ and the lubrication hole ⑥.
- ▶ Tilt the radial insert ball bearing ④ forwards by 90°.
- ▶ Insert the radial insert ball bearing ④ into the locating slots ② until it is centred in the bearing housing.

③ Position and insert the radial insert ball bearing



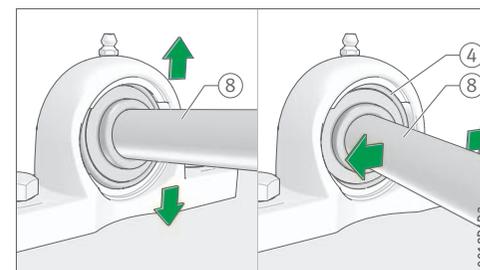
- ▶ Tilt the radial insert ball bearing ④ upwards by approximately 90° so that the lubrication groove ⑤ or lubrication hole ⑥ of the radial insert ball bearing and the lubrication groove ③ of the bearing housing are directly on top of each other.
- ▶ Ensure that the lubrication hole ⑥ of the radial insert ball bearing is under the lubrication nipple ⑦

④ Tilt the radial insert ball bearing upwards



- ▶ Recommendation: Insert a suitable shaft ⑧ or a round piece of wood in the bearing bore as a mounting aid.
- ▶ Swivel the radial insert ball bearing ④ several times in different directions.

⑤ Swivel the radial insert ball bearing several times



NOTICE

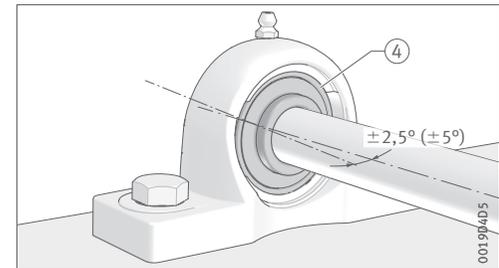
Inadequate lubrication reduces the operating life of the radial insert ball bearing.

In order to ensure a facility for relubrication, the misalignment of the radial insert ball bearing relative to the bearing housing must be within a tolerance of $\pm 2,5^\circ$.

In the case of misalignments between $\pm 2,5^\circ$ and $\pm 5^\circ$, the possibility for relubrication is determined by the respective combination of radial insert ball bearing and bearing housing. Please ask Schaeffler for further information. ⚠

- ▶ Move the radial insert ball bearing ④ to its final position.
- ▶ Ensure that the misalignment of the radial insert ball bearing is within tolerance.
- » The radial insert ball bearing is mounted in the bearing housing.

⑥ Mounting result



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