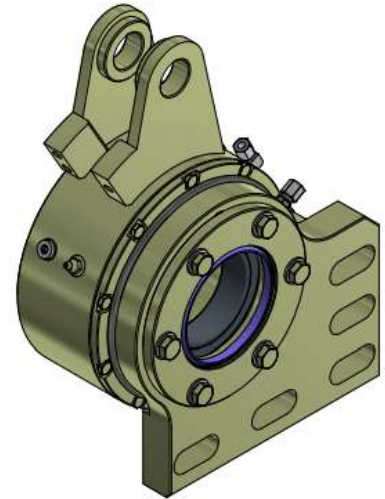


# WORK INSTRUCTION

<b>DOCUMENT</b>	<b>Shimming Gripper Shaft Bearings - E Series</b>
<b>MACHINE/ GROUP</b>	<b>Epiroc - E Series Carousel</b>
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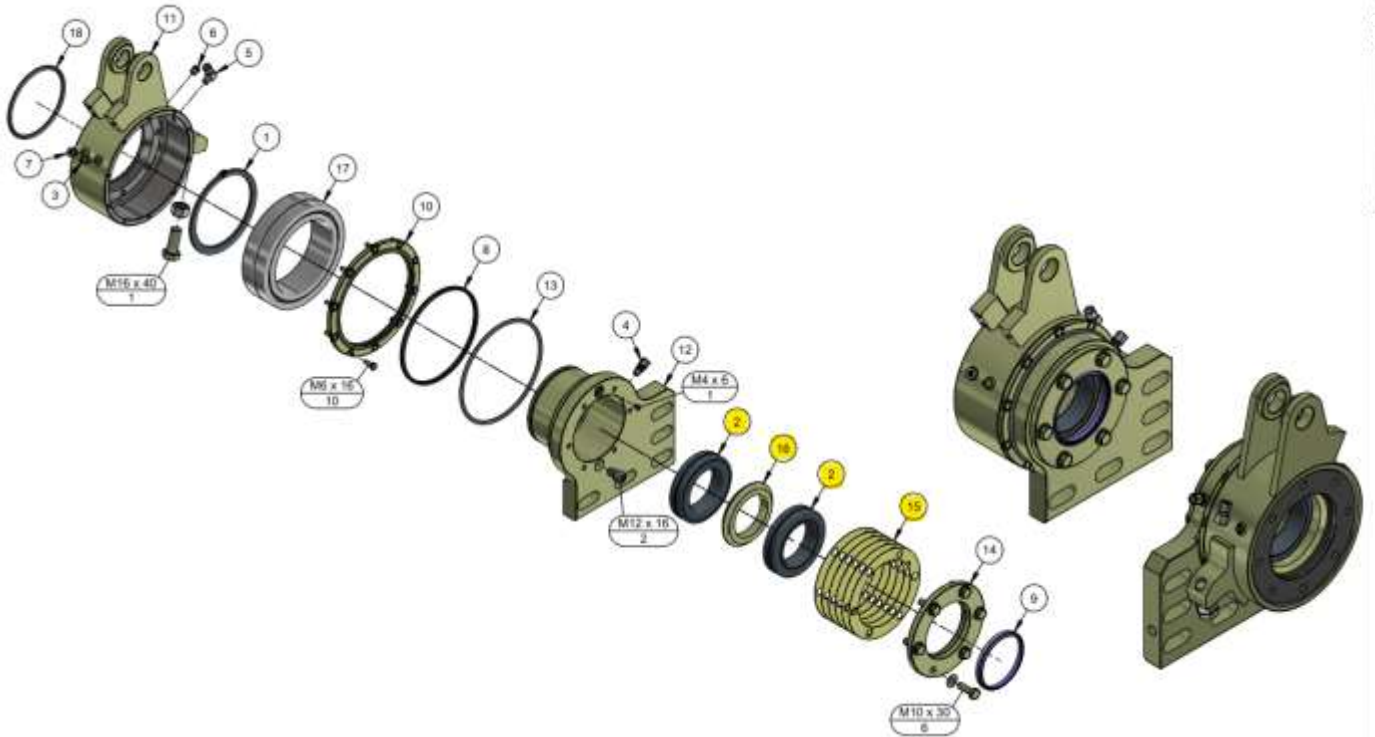
## **Background**

When replacing the angular spherical bearings (item 2) on an E series gripper shaft, it is critical that the correct preload is applied. Preload of the bearings is achieved by installing the correct number / thickness shims under the bearing retainer plate.

This document explains the correct process and procedure for installing the angular bearings and setting the correct preload to ensure the components achieve maximum service life.

## Part Numbers

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**Item 2.** MT0501 0000 81 - ANGULAR SPHERICAL BEARING (Qty 2)

**Item 15.** MT9111 4244 24 - SHIM (Qty 6)

**Item 16.** MT9111 4244 26 - SPACER RING (Qty 1)

## Recommended Procedure

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**Step 1.** Ensure the bearing housing is clean and ready for assembly.



**Step 2.** Grease and install the first angular bearing (item 2) into the housing. Use a mild steel dolly or bronze punch to avoid damaging the bearing.

**Step 3.** Install the bearing spacer (item 16).

**Step 4.** Install the second angular bearing (item 2). Use a mild steel dolly or bronze punch to ensure the bearings are all the way down on the housing shoulder.

**Step 5.** Install the retainer plate (item 14) using three (3) bolts. Tighten the bolts to 10Nm.



**Step 6.** Measure the gap between the housing and retainer plate with feeler gauges in three different positions around the plate. Average the measurement results to find the shim thickness required. Alternatively, check the clearance gap using the shims (item 15) as shown below to identify the number of shims required.



**Step 7.** Remove the retainer plate and install the measured number of shims + 1 more shim to allow for operating clearance when the retainer plate is fully tensioned.

**Step 8.** Install the retainer plate and 6 x M10 x 30mm bolts. Tension bolts to a spec of 50Nm.



**Step 9.** Using a soft face hammer, gently tap the top bearing to ensure both bearings and spacer move/pivot freely.

**Note:** *When completing step 9, if the bearings won't move without using excessive force go back to step 6 and ensure the correct number of shims are fitted to achieve the required bearing preload.*