

# Installation Guide: NexBot Robotics 762-004 Joint Overhaul Maintenance Kit

SKU: NXB-KIT-762-004 | Revision: 1.0 | Category: Wear Parts & Consumables > Robot Maintenance Kits > Joint Overhaul Kits

**DANGER:** Disconnect all power sources before beginning installation. Follow lockout/tagout (LOTO) procedures per OSHA 1910.147.

## 1. Required Tools & Materials

- Metric hex key set (including long-reach keys)
- Calibrated torque wrench with appropriate socket set
- Bearing puller/press kit
- Soft-faced mallet
- Industrial grade degreasing solvent
- Lint-free industrial wipes
- Grease gun with precision applicator tip
- Lockout/Tagout (LOTO) kit

## 2. Pre-Installation Checks

1. Confirm the robot model is compatible with the NXB-KIT-762-004 as specified in the master service manual.
2. Move the robot arm to the designated maintenance position to ensure safe access and joint stability.
3. Perform a full system backup of the robot controller software and parameters.
4. Power down the robot and apply Lockout/Tagout (LOTO) procedures to all energy sources.
5. Unpack the 7.5 kg kit and verify all components are present and undamaged by cross-referencing with the included packing list.
6. Thoroughly clean the exterior of the joints scheduled for overhaul to prevent contamination.

### 3. Installation Procedure

#### Step 1: Step 1: Disconnect Power and Apply LOTO

Ensure all primary and secondary power sources to the robot and controller are de-energized. Apply personal safety locks and tags to the main disconnect as per facility safety procedures.

**Warning:** Failure to de-energize and lock out the system can result in fatal electric shock or unexpected robot movement.

#### Step 2: Step 2: Remove Joint Housing Covers

Carefully unfasten and remove the access covers for the target joint. Keep track of all fasteners and note their original positions for reassembly.

#### Step 3: Step 3: Disconnect and Remove Position Encoder

Gently disconnect the encoder cabling and unbolt the encoder unit from the joint. Handle this component with extreme care as it is sensitive to shock and contamination.

**Warning:** Improper handling of the position encoder can lead to permanent damage and require a costly replacement and full system remastering.

#### Step 4: Step 4: Extract Old Bearings and Seals

Using the appropriate bearing puller, remove the old bearings from the joint housing and shaft. Carefully pry out the old O-rings and seals, taking care not to scratch or gouge the housing surfaces.

**Warning:** Some components may be under preload. Wear safety glasses to protect from any parts that may release under pressure.

### Step 5: Step 5: Clean and Inspect Mating Surfaces

Thoroughly clean all internal surfaces of the joint housing with an approved degreasing solvent and lint-free wipes. Inspect all surfaces for signs of damage, scoring, or corrosion before proceeding.

### Step 6: Step 6: Install New Components from Kit

Install the new bearings, seals, and O-rings provided in the NXB-KIT-762-004. Use a bearing press or soft-faced mallet to ensure components are fully and evenly seated without damage.

**Warning:** Do not reuse any old wear components. Only use parts supplied in the sealed 762-004 kit to ensure compatibility.

### Step 7: Step 7: Apply Specified Lubricant

Using a clean grease gun, apply the lubricant included in the kit to the designated points within the joint assembly. Consult the robot's primary service manual for the correct fill volume and lubrication pattern.

### Step 8: Step 8: Reassemble and Torque Fasteners

Reassemble the joint components, including the position encoder, ensuring all alignment marks are correctly matched. Tighten all fasteners in the sequence and to the torque values specified in the robot service manual.

**Warning:** Incorrect torque values or tightening sequences can lead to premature failure or inaccurate robot performance.

## 4. Post-Installation Verification

1. Double-check that all tools and foreign materials have been removed from the work area.
2. Reinstall all joint housing covers and secure them.
3. Remove LOTO devices and restore power to the robot controller in accordance with safety procedures.

4. In a low-speed manual mode, carefully move the overhauled joint through its full range of motion, listening for any unusual noises.
5. Perform the robot's axis mastering or zeroing procedure as defined in the controller software manual.
6. Run a pre-existing, low-intensity production program for at least 30 minutes and monitor the overhauled joint for excessive heat or vibration.

**Note:** For technical support, contact your authorized service provider or visit <https://robotics.barca.group/support>.