

# User Manual: NexBot Robotics 713-009 O-Ring And Gasket Kit

SKU: NXB-GEN-713-009 | Version: 1.0 | Brand: NexBot Robotics

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## 1. Safety Information

**READ ALL SAFETY INSTRUCTIONS BEFORE OPERATION.** Failure to follow safety procedures may result in serious injury or equipment damage.

**DANGER:** Stored Electrical and Mechanical Energy. Always perform a full Lockout/Tagout (LOTO) procedure on the robot controller and associated machinery before opening any service panel or housing. Failure to do so can result in fatal electric shock or sudden robot movement.

**WARNING:** Pressurized Systems. Robot systems may contain high-pressure pneumatic or hydraulic lines. Always verify that all system pressure has been safely vented before loosening any fittings or removing components.

**WARNING:** Crush and Pinch Hazards. Robot axes can move unexpectedly if not properly secured or de-energized. Keep all body parts clear of the robot's work envelope during service.

**CAUTION:** Component Damage. The FKM seals in this kit can be damaged by sharp tools, abrasive cleaners, or incompatible lubricants. Use only the recommended tools and materials to prevent premature seal failure.

**NOTICE:** Contamination Control. Sealing surfaces must be perfectly clean for the gaskets and O-rings to function correctly. Any dirt, oil, or old material residue can cause leaks and void the warranty.

## 2. Product Overview

NexBot Robotics 713-009 O-Ring And Gasket Kit (NXB-GEN-713-009) is a complete multi-part maintenance kit assembled for planned service on compatible NexBot robot platforms at the scheduled service interval. The kit is intended to be received, opened, and used as a single service package rather than as a single replacement part. Included components typically cover the main wear and service items required for the maintenance event, including J1 Axis Housing Gasket, J2 Axis Primary O-Ring, J3 Axis Primary O-Ring, J4/J5/J6 Axis Housing Gaskets (x3), J4/J5/J6 Axis Secondary O-Rings (x3), Seal Lubricant Packet (5ml), O-Ring Pick Tool. This structure helps maintenance planners order one kit for the service window and ensures technicians have the core consumables and replacement parts on hand before shutdown begins. The kit is appropriate for preventive maintenance execution, planned overhauls, and standardized service handoff where parts completeness and interval accuracy matter.

## 3. Getting Started

### 1. Kit Identification and Purpose

The NexBot Robotics 713-009 O-Ring And Gasket Kit (NXB-GEN-713-009) is a curated set of wear parts for scheduled preventative maintenance. Before starting, confirm the SKU on the package matches the one specified in the robot's service schedule for the current maintenance interval. This ensures you have the correct, genuine parts for the job.

### 2. Kit Contents and Handling

This kit contains all necessary FKM (Fluorocarbon rubber) seals and gaskets for a specific major service event. Upon opening, verify all parts on the packing list are present. Handle the seals with clean gloves to avoid transferring oils and contaminants, and keep them in their protective packaging until the moment of installation.

### 3. Required Documentation

This document provides guidance on using the kit itself. It is not a replacement for the primary service manual of your specific NexBot robot model. The robot's service manual contains critical, model-specific information such as detailed disassembly steps, fastener torque specifications, and system diagrams.

### 4. Proper Storage

If not used immediately, store the NXB-GEN-713-009 kit in its original, sealed packaging. Keep it in a cool, dry, dark environment away from direct sunlight, ozone sources (like electric motors), and extreme temperatures to preserve the integrity of the FKM seals.

## 4. Operation

### Application at Scheduled Intervals

The NXB-GEN-713-009 kit is intended to be used as a complete set during a single, planned maintenance event. Do not use parts from the kit for ad-hoc

repairs, as this may disrupt the documented service history and leave other critical seals unreplaced. The entire kit's contents are designed to wear at a similar rate.

## Seal Lubrication Technique

Proper lubrication is critical for preventing damage to FKM O-rings during installation and ensuring a long service life. Apply a very thin film of a NexBot-approved, FKM-compatible grease to the O-ring before installation. This helps it slide into place without twisting or tearing.

**Tip:** Excess lubricant is counterproductive; it can attract contaminants and does not improve sealing performance. A light sheen is all that is required.

## Gasket Seating and Alignment

Gaskets provide a seal between two stationary metal surfaces and rely on perfect alignment and even compression. Ensure the gasket is seated correctly on any locating pins or features and that it is not folded, creased, or misaligned before installing the housing cover.

## Fastener Torquing Sequence

When re-securing a housing over a new gasket, tightening the fasteners in the correct sequence is as important as the final torque value. Always follow the star or crisscross pattern specified in the robot's service manual. This ensures the housing applies even pressure across the entire gasket surface, preventing leaks.

## Disposal of Used Components

The used gaskets and O-rings removed during service should be considered industrial waste. They cannot be reused. Dispose of the old FKM components in accordance with your facility's waste management policies and local environmental regulations.

# 5. Maintenance Schedule

Interval	Task	Notes
Per Robot Service Schedule	Install the complete NXB-GEN-713-009 kit during the major preventative maintenance service as prompted by the robot controller or service log (e.g., every 8,000 operational hours).	This is a mandatory task to maintain equipment reliability and warranty coverage. Do not skip or postpone this service.
Weekly	Visually inspect the exterior of robot joints and housings for any signs of fluid weeping, grease extrusion, or excessive grime accumulation around sealing areas.	Early detection of a minor leak can prevent a major failure and unplanned downtime.
Monthly	Review robot controller logs for any recurring faults related to axis binding, excessive motor torque, or position errors.	These can sometimes be early indicators of increased friction caused by a deteriorating or contaminated internal seal.

Interval	Task	Notes
Pre-Service Planning	Order the NXB-GEN-713-009 kit several weeks in advance of the scheduled maintenance date.	Ensuring parts are on-hand prevents delays in critical preventative maintenance.
Post-Service	After a kit installation, monitor the serviced joints more frequently for the first 24-48 hours of operation to confirm the integrity of the new seals.	This initial monitoring period is critical for validating that the service was performed correctly.

## 6. Troubleshooting

Symptom	Possible Cause	Solution
A fluid leak is visible from a joint immediately after service.	Possible causes include a pinched or twisted O-ring, debris on the sealing surface, an improperly seated gasket, or incorrect/uneven fastener torque.	Power down and LOTO the robot. Disassemble the joint, discard the newly installed seals (they cannot be reused), re-clean and inspect all surfaces, and install a new kit using the correct procedure and torque specifications.
The robot axis makes a whining or grinding noise after reassembly.	A seal, most likely an O-ring, may have been pinched or rolled during reassembly, creating high friction and binding.	Immediately stop the robot to prevent further damage. Disassemble the affected joint, inspect for a damaged seal, and replace it. Ensure proper lubrication and careful alignment during reassembly.
The NXB-GEN-713-009 kit arrived with a broken seal or a missing part.	This is likely a quality control or shipping issue.	Do not use the kit. Contact NexBot Robotics technical support or your distributor immediately with the kit's lot number to arrange for a replacement.
A new gasket tears while tightening the housing cover.	The housing cover was misaligned, the gasket was not seated correctly, or the fasteners were tightened unevenly, causing the gasket to be pinched and cut.	Stop immediately. Loosen all fasteners, remove the damaged gasket, and re-clean the surfaces. A new gasket must be used; do not attempt to repair or reuse the torn one.
A leak reappears from the same location weeks after a successful service.	The root cause may be a scratch, gouge, or warp in the metal sealing surface of the robot housing itself, which a new seal cannot fix.	Disassemble and meticulously inspect the metal mating surfaces. If damage is found, the robot component itself may require machining or replacement. Contact NexBot Robotics support for guidance.

Symptom	Possible Cause	Solution
The new O-ring seems to not fit or is difficult to install in its groove.	The wrong O-ring from the kit is being used for that specific groove, or the O-ring has been exposed to an incompatible chemical causing it to swell.	Cross-reference the O-ring with the kit's packing list and the robot service manual diagram. Ensure only approved cleaners and lubricants are being used in the service area.

## 7. Technical Specifications

Parameter	Value	Unit
Weight	0.45	kg
Material	FKM (Fluorocarbon rubber)	
Country of Origin	IT	