

User Manual: NexBot Safety 713-008 O-Ring And Gasket Kit

SKU: NXB-GEN-713-008 | 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: Failure to completely de-energize and properly apply Lockout/Tagout (LOTO) procedures to the robot before starting maintenance will result in electric shock, unexpected motion, and severe or fatal injury.

WARNING: Use only NexBot-approved lubricants and cleaning solvents. Using incompatible chemicals can cause the FKM material in this kit to degrade, swell, or shrink, leading to premature seal failure and potential equipment damage.

WARNING: Do not expose FKM seals to extreme heat sources such as cutting torches or open flames. At temperatures above 300°C (572°F), FKM can decompose and release highly toxic and corrosive hydrogen fluoride gas.

CAUTION: Wear appropriate Personal Protective Equipment (PPE), including safety glasses and chemical-resistant gloves, during the entire installation process to protect against solvents and lubricants.

NOTICE: The NXB-GEN-713-008 kit is designed for a single maintenance event. Do not reuse any of the old seals or gaskets that have been removed. Always replace with new components from the kit to ensure system integrity.

NOTICE: Store this kit in its original, unopened packaging in a controlled environment (15-25°C, <60% RH) away from direct sunlight, UV light, and ozone sources to prevent premature aging of the elastomer components.

2. Product Overview

NexBot Safety 713-008 O-Ring And Gasket Kit (NXB-GEN-713-008) 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 Main Seal (FKM), J2 Axis Housing Gasket (FKM), J3 Axis Flange O-Ring (FKM), J4 Axis Wrist Seal (FKM), J5/J6 Axis Cover O-Rings (FKM, set of 2), Encoder Cover Gaskets (set of 6), Seal Installation Tool, Isopropanol Cleaning Wipes (pack of 10). 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 Overview and Purpose

The NexBot Safety 713-008 O-Ring And Gasket Kit is a comprehensive package of wear items for scheduled major service intervals. It is assembled to ensure that all critical sealing components for specific robot axes are replaced simultaneously, promoting reliability and simplifying maintenance logistics.

2. Verification of Applicability

Before opening the package, confirm that the SKU NXB-GEN-713-008 is the correct kit specified for your robot model's upcoming maintenance task. Refer to the robot's primary service manual to verify compatibility and to understand which components are used for each axis.

3. Required Documentation

This kit is intended to be used in conjunction with the official NexBot service manual for your specific robot platform. The manual contains critical information, including disassembly procedures, torque specifications, and lubricant types that are not included with this kit.

4. Operation

Adherence to Service Intervals

This kit is engineered for preventative maintenance at scheduled operational hour milestones. Adhering strictly to these intervals and using the complete kit is essential for preventing unplanned downtime caused by age-related seal and gasket failures.

Tip: Order kits in advance of scheduled maintenance to avoid delays. Check the kit's shelf life upon receipt to ensure it will be valid when the service is due.

Component Identification and Placement

Each item in the NXB-GEN-713-008 kit is precision-manufactured for a specific location. Use the diagrams in the service manual to correctly identify and place each gasket and seal. Installing a component in the wrong location can lead to leaks or mechanical failure.

Importance of Surface Condition

The performance of the new FKM seals and gaskets is directly dependent on the quality of the mating surfaces. Ensure all metal surfaces are scrupulously clean, dry, and free from any scratches, burrs, or old adhesive that could create a leak path.

Proper Lubrication Technique

Applying a thin film of a compatible grease to o-rings and seal lips is critical for preventing damage during installation and ensuring a proper initial seal. Avoid over-application, as excess grease can attract contaminants or cause hydraulic lock.

Tip: Use a dedicated, clean applicator to apply grease. Do not use your finger, as it can transfer contaminants.

Disposal of Used Materials

All used o-rings, seals, and gaskets removed from the robot must be considered industrial waste. Dispose of these components and any used cleaning materials in accordance with your facility's safety protocols and local environmental regulations.

5. Maintenance Schedule

Interval	Task	Notes
Pre-Service	Inspect the unopened NXB-GEN-713-008 kit to ensure the vacuum seal is intact and it has been stored correctly.	Do not use a kit if the packaging has been compromised or if it is past its expiration date.
During Service	Replace all specified seals and gaskets with new parts from the kit, regardless of the visual condition of the old parts.	This preventative replacement is key to long-term reliability.
Post-Service (1-8 hours)	After returning the robot to service, periodically inspect the serviced joints for any signs of fluid leakage.	A minor amount of weeping can be normal initially, but any dripping indicates a problem.
Quarterly	Visually inspect the exterior of the serviced joints for excessive contamination buildup or signs of external damage.	Clean the area as needed to allow for effective leak detection in the future.
Annually	Review maintenance logs to plan for the next scheduled	

Interval	Task	Notes
	service requiring a new NXB-GEN-713-008 kit.	Ensure kits are ordered with sufficient lead time.

6. Troubleshooting

Symptom	Possible Cause	Solution
Fluid is leaking from a joint immediately after service.	Seal was cut or pinched during installation, mating surface was not clean, or fasteners were incorrectly torqued.	De-energize and LOTO the robot. Disassemble the joint, inspect the new seal for damage, and re-clean the surfaces. Replace the seal if damaged and re-torque all fasteners to spec in the correct sequence.
The robot axis is noisy or moves with a stutter after reassembly.	A gasket is misaligned or an o-ring is pinched, causing mechanical binding.	Stop operation immediately. Disassemble the joint and carefully inspect the position of all new components. Reassemble according to the service manual, ensuring everything is seated correctly.
A new seal fails months after installation.	Use of an incompatible cleaning agent or lubricant, or extreme operating temperatures beyond the FKM material's rating.	Conduct a full review of all chemicals used near the robot. Verify operating temperatures are within specification. Replace the seal and implement stricter controls on chemical usage.
A fastener will not tighten to the correct torque value.	Threads in the housing or on the fastener are stripped or damaged.	Do not operate the robot. Remove the fastener and inspect the threads. Re-tap the hole or replace the component with damaged threads as specified by NexBot service procedures.
A seal or gasket from the kit appears to be the wrong size.	The kit may be for a different robot revision, or the part has been misidentified.	Do not attempt to force the component. Re-verify the robot model and serial number against the kit's compatibility list. Contact NexBot technical support for assistance.
The housing cover will not sit flush after installing the new gasket.	The gasket is not seated correctly on its alignment pins, or debris is trapped on the mating surface.	Remove the housing cover and re-inspect the gasket alignment and surface cleanliness. Ensure no wires or other components are being pinched.

7. Technical Specifications

Parameter	Value	Unit
Weight	0.3	kg
Material	FKM (Fluoroelastomer)	
Country of Origin	JP	