

# User Manual: NexBot Robotics 921-004 Preventive Maintenance Plan

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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:** Never enter the robotic work cell while the system is operational. The maintenance plan requires the system to be fully de-energized and locked out before any work begins.

**WARNING:** The services described in the NexBot Robotics 921-004 Preventive Maintenance Plan must only be performed by a certified NexBot Robotics field technician. Attempting to perform these tasks yourself will void the warranty and may result in severe injury or equipment damage.

**CAUTION:** Ensure that the work area is clean and free of oil, coolant, or other slip hazards before, during, and after the service visit.

**NOTICE:** It is the customer's responsibility to provide a safe working environment and to inform the technician of all site-specific safety hazards and procedures.

**NOTICE:** Any issues discovered during the preventive maintenance that are outside the scope of the plan will be documented and quoted separately for repair.

## 2. Product Overview

The NexBot Robotics 921-004 Preventive Maintenance Plan is a structured service designed to proactively maintain the health, safety, and performance of your automated systems. This comprehensive annual plan is executed by a certified NexBot Robotics field technician to identify potential issues before they lead to costly downtime, ensuring your robotic assets operate at their original factory specifications. By adhering to a regular maintenance schedule, you can significantly extend the operational lifespan of your equipment and maximize your return on investment. The core of this maintenance plan is a meticulous 40-point inspection covering all critical mechanical and electrical systems of the robot. This includes checking the manipulator arm for signs of wear, backlash, or damage; verifying the integrity of all electrical harnesses and connections; and ensuring the controller cabinet is clean and its cooling systems are functioning optimally. Our technician will perform a full lubrication service on all required axes, replacing old lubricants with factory-specified formulas to reduce friction and prevent premature component failure. This service is crucial for maintaining the robot's specified repeatability and speed. A key benefit of the 921-004 plan is the verification and fine-tuning of the robot's calibration. Using proprietary diagnostic tools, the technician will check mastering and axis calibration, making precise adjustments as needed to restore peak positioning accuracy. The plan also includes a thorough inspection of all safety circuits, including emergency stops, safety-rated I/O, and any integrated guarding systems, to ensure compliance and a safe operating environment for your personnel. The typical on-site duration for this comprehensive service is approximately 4 to 6 hours per robot, minimizing disruption to your production schedule. Upon completion of the service, you will receive a detailed digital report outlining all actions performed, measurements taken, and any findings or recommendations for future attention. This documentation provides a valuable service history for each asset, aids in predictive maintenance planning, and serves as a record of due diligence for safety and quality audits. This proactive maintenance plan is recommended for all compatible NexBot robot models operating in demanding industrial environments, from high-speed pick-and-place to precision assembly and material handling.

## 3. Getting Started

### 1. Understanding Your Plan Coverage

The NXB-KIT-921-004 plan is an annual service that includes a comprehensive inspection, lubrication, and functional testing of one specified robotic system. The plan covers all labor and travel for the scheduled visit and includes a detailed service report upon completion. Consumables like grease and batteries are included, but major replacement parts are not.

### 2. Activating and Scheduling Your Service

Upon purchase, you will receive a welcome email with your service plan agreement number. Contact the NexBot Robotics service department via phone or our online portal, referencing your agreement number, to schedule your annual maintenance visit. We recommend scheduling at least 4-6 weeks in advance to secure your desired timeframe.

### 3. Preparing for the Technician's Visit

To ensure an efficient and effective service, please prepare your facility and personnel as outlined in the 'Installation Guide' section of this document. This

includes arranging for safe access, having a knowledgeable point of contact available, and backing up your system data. Proper preparation minimizes downtime during the service window.

## 4. Operation

### Reviewing Your Service Report

After each service visit, you will receive a comprehensive digital service report. This document details all checks performed, measurements taken, and parts adjusted or replaced. Pay close attention to the 'Recommendations' section, which will highlight potential issues to monitor or parts that may require future replacement.

**Tip:** Keep all service reports for the life of the asset. This creates a valuable maintenance history that can aid in future troubleshooting and demonstrates a commitment to asset care.

### Understanding Service Recommendations

If the technician identifies a worn component that is not covered under the standard plan (e.g., a motor, a cable harness), it will be noted in the report. A separate quotation for the parts and labor required to complete the repair will be provided for your approval. Addressing these recommendations promptly is key to preventing unplanned downtime.

### Accessing Your Service History Online

As a NexBot Robotics service plan holder, you have access to our customer portal. Here you can view past service reports, check the status of your current plan, and request future service visits. Your login credentials are provided in your service plan welcome email.

### Renewing Your Preventive Maintenance Plan

Your 921-004 plan is valid for one year from the date of activation. You will receive a renewal notice approximately 60 days before your plan expires. Renewing your plan ensures continuous coverage and maintains your asset in peak condition, protecting your investment.

**Tip:** Multi-year renewals often come with a discount. Contact your service representative for more information.

## 5. Maintenance Schedule

Interval	Task	Notes
Daily	Visually inspect the robot and work cell for leaks, loose fasteners, or physical damage. Check for any unusual noises during operation.	This is a brief, pre-shift check performed by the operator.
Weekly	Clean the exterior surfaces of the robot arm and controller. Ensure controller cabinet	Use only approved cleaning solutions. Do not spray liquid

Interval	Task	Notes
	ventilation fans are unobstructed.	directly onto electronic components.
Monthly	Check the end-of-arm tooling (EOAT) for wear and verify that all connections (pneumatic, electrical) are secure.	This task should be performed by trained plant maintenance personnel.
Quarterly	Review the system's error log via the teach pendant. Document and investigate any recurring faults.	Consult the robot's primary user manual for error code descriptions.
Annually	Schedule and execute the NexBot Robotics 921-004 Preventive Maintenance Plan.	This comprehensive service is performed by a certified NexBot technician and covers tasks beyond the scope of routine user maintenance.

## 6. Troubleshooting

Symptom	Possible Cause	Solution
Unsure if my service plan is active.	Plan may have expired or activation may not have been completed.	Contact the NexBot Robotics service department with your robot's serial number or the original purchase order number to verify plan status.
Need to reschedule a confirmed service visit.	Unexpected change in production schedule or site availability.	Contact your service coordinator as soon as possible. Please note that rescheduling with less than 48 hours notice may incur a fee.
Did not receive the final service report.	Email may have been blocked by a spam filter or sent to the wrong contact.	Check your spam/junk folder. If it's not there, contact the service department to confirm the contact email on file and request that the report be resent.
The service report contains a discrepancy or error.	A clerical error or misunderstanding during the debriefing.	Contact the service manager who signed the report immediately. Provide specific details about the discrepancy for a prompt review and correction.
Technician recommended a repair not covered by the plan.	A component was found to be worn or damaged beyond normal service parameters.	Review the separate quotation provided for the repair. Contact your service representative to

Symptom	Possible Cause	Solution
		approve the work or to discuss alternative options.
Cannot access the online customer portal.	Incorrect login credentials or user account not yet activated.	Use the 'Forgot Password' link on the portal login page. If you never received credentials, contact the service department to have your account set up.
The technician was unable to complete all maintenance tasks.	The robot could not be made available, or the required access was not provided.	A follow-up visit will be required to complete the service, which may be billable. Ensure all pre-check requirements are met for the rescheduled visit.

## 7. Technical Specifications

Parameter	Value	Unit
Country of Origin	JP	