Installation Guide: NexBot Robotics 921-004 Preventive Maintenance Plan

SKU: NXB-KIT-921-004 | Revision: 1.0 | Category: Services & Training > Service Plans > Preventive Maintenance Plans

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

1. Required Tools & Materials

- Designated Site Point of Contact (POC) for the technician
- Access credentials for the robot controller (Operator or higher level)
- A complete list of recent system alarms or faults
- Site-specific safety procedures and required Personal Protective Equipment (PPE) information
- Unobstructed and safe physical access to the entire robotic work cell
- Network access credentials if remote diagnostics are required
- A copy of the original system commissioning report for reference

2. Pre-Installation Checks

1. Confirm the scheduled date and time of service with your NexBot Robotics service coordinator.
2. Verify that the SKU NXB-KIT-921-004 is active and associated with the correct asset serial number.
3. Ensure the robotic system can be safely powered down and locked out for the duration of the service.
4. Inform all relevant production and safety personnel of the scheduled maintenance window.
5. Prepare a dedicated, safe area for the technician to stage tools and service components.
6. Back up all current robot programs and system configurations prior to the technician's arrival.

3. Installation Procedure

Step 1: Step 1: Technician Arrival and Site Check-in

The certified NexBot Robotics field technician will arrive on-site at the scheduled time. Escort the technician through your facility's sign-in and safety orientation procedures.

> **Warning:** Ensure the technician is provided with all required site-specific PPE before entering any production areas.

Step 2: Step 2: Pre-Service Briefing and Work Permit Issuance

Meet with the technician and your designated POC to review the scope of work for the 921-004 plan. Discuss any known issues, review recent fault logs, and issue any required work permits.

Step 3: Step 3: System Lockout/Tagout (LOTO) and Initial Inspection

The technician will follow established LOTO procedures to de-energize the robotic system. A thorough visual inspection of the mechanical and electrical components will be performed to identify any immediate concerns.

> **Warning:** Only the authorized NexBot technician and designated site personnel should be involved in the LOTO procedure.

Step 4: Step 4: Mechanical Systems Maintenance

The technician will inspect, clean, and lubricate all major axes, joints, and gearboxes. This includes checking for leaks, verifying belt tension, and ensuring all mechanical fasteners are secure per factory specifications.

Step 5: Step 5: Electrical and Control Cabinet Inspection

All control cabinet wiring connections are checked for tightness. The technician will clean fans and filters, inspect power supplies, and verify the condition of safety circuit components.

> **Warning:** Risk of electric shock. The control cabinet must only be accessed by a certified technician after proper LOTO has been applied.

Step 6: Step 6: System Backup and Software Review

A complete backup of the robot's software, parameters, and configuration is created. The technician will review system logs and verify that the firmware and software versions are appropriate for the application.

Step 7: Step 7: System Power-Up and Performance Validation

After removing LOTO, the technician will power up the system and perform a series of functional tests. This includes mastering the robot, cycling it through its range of motion, and verifying repeatability to ensure it meets original factory performance benchmarks derived from our Japanese engineering standards.

> **Warning:** Ensure the work cell is clear of all personnel and tools before restoring power and initiating robot motion.

Step 8: Step 8: Post-Service Debriefing and Report Generation

The technician will review the completed maintenance checklist with your POC, highlighting any findings or recommendations. A preliminary service report will be provided, with a final detailed report sent electronically within 2-3 business days.

4. Post-Installation Verification

1. Review the final service report in detail and note any recommendations for future action.
2. Ensure you have received the official Certificate of Preventive Maintenance for your records.
3. Update your internal Computerized Maintenance Management System (CMMS) with the service details.
4. Schedule any recommended follow-up actions, such as component replacement or further diagnostics.

5. File the service report and certificate with the asset's permanent documentation.
6. Monitor system performance to confirm that it continues to operate at expected levels.

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