ANNUAL ROBOT SAFETY INSPECTION CHECKLIST

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Polar Dynamics Robotics, Inc.

Form RSI-2024-A | Rev. 3.2

Last Updated: January 1, 2024

1. GENERAL INFORMATION

1. Robot Unit Information:

-

Model Number: _____

Serial Number: _____

-

BlueCore(TM) Version: _____

-

Manufacturing Date: _____

-

Hours in Operation: _____

-

Operating Environment Temperature Range: _____ C to _____ C

2. Inspection Details:

-

Inspection Date: _____

-

Inspector Name: _____

-

Inspector Certification #: _____

-

Location: _____

-

Supervisor: _____

2. MECHANICAL SYSTEMS INSPECTION

1. Chassis Integrity

-

[ ] Inspect reinforced cold-resistant chassis for structural damage

-

[ ] Verify integrity of thermal insulation barriers

[ ] Check all welded joints and connection points

-

[ ] Examine shock absorption systems

-

[ ] Verify chassis temperature monitoring sensors

2. Drive System

-

[ ] Test motor functionality across operating temperature range

-

[ ] Inspect gear mechanisms for wear

-

[ ] Verify cold-weather lubricant levels

-

[ ] Check drive wheel condition

-

[ ] Test emergency brake system

-

[ ] Verify motor temperature sensors

3. ELECTRICAL SYSTEMS INSPECTION

1. Power System

-

[ ] Test BlueCore(TM) battery performance

-

[ ] Verify charging system functionality

-

[ ] Check all power connections

[ ] Inspect thermal management system

[ ] Test backup power systems

[ ] Verify battery insulation integrity

2. Control Systems

[ ] Test main control board

[ ] Verify sensor array functionality

[ ] Check communication systems

[ ] Test emergency shutdown system

-

[ ] Verify software version compliance

-

[ ] Check error logging system

4. SAFETY SYSTEMS VERIFICATION

1. Collision Avoidance

-

[ ] Test proximity sensors

-

[ ] Verify emergency stop functionality

-

[ ] Check obstacle detection systems

[ ] Test speed control mechanisms

-

[ ] Verify safety zone parameters

2. Environmental Protection

-

[ ] Check environmental seals

-

[ ] Verify IP67 rating integrity

-

[ ] Test condensation management system

-

[ ] Check temperature monitoring alerts

-

[ ] Verify humidity control systems

5. NAVIGATION SYSTEM INSPECTION

1. Sensor Systems

-

[ ] Test LiDAR functionality

-

[ ] Verify camera systems

-

[ ] Check positioning sensors

-

[ ] Test environmental mapping system

-

[ ] Verify sensor calibration

2. Navigation Software

-

[ ] Verify navigation algorithm version

-

[ ] Test path planning functionality

-

[ ] Check mapping accuracy

-

[ ] Verify position tracking precision

-

[ ] Test emergency return protocols

6. COMPLIANCE VERIFICATION

1. Required Standards

[ ] ISO 10218-1:2011 compliance

-

[ ] ANSI/RIA R15.06-2012 verification

-

[ ] CE marking requirements

-

[ ] OSHA safety requirements

-

[ ] Company safety protocols

2. Documentation

-

[ ] Update maintenance log

-

[ ] Record software versions

-

[ ] Document safety test results

-

[ ] File inspection report

-

[ ] Update digital twin data

7. CERTIFICATION

The undersigned certifies that the above-referenced robot unit has be
inspected in accordance with Polar Dynamics Robotics, Inc.'s safety s
and applicable regulatory requirements.

PASS CONDITIONAL PASS FAIL

Comments: _

_

Inspector Signature: _ **Date:**

Supervisor Approval: **Date:**

8. LEGAL DISCLAIMER

This inspection checklist is proprietary to Polar Dynamics Robotics, In
constitutes confidential information. The safety inspection must be pe
certified personnel in accordance with company procedures and appli
regulations. This checklist does not supersede or replace any regulato
requirements or standards. Polar Dynamics Robotics, Inc. assumes n
for any damages arising from the use or misuse of this checklist or the
inspection process.

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