MAINTENANCE PROTOCOL - CRYOTECH DISTRIBUTION

Effective Date: January 15, 2024

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Version: 2.0

1. PURPOSE AND SCOPE

1. This Maintenance Protocol ("Protocol") establishes the mandatory maintenance, inspection, and service requirements for all CryoTech Distribution Systems ("Systems") manufactured by Polar Dynamics Robotics, Inc. ("Company") and deployed at customer facilities.

2. This Protocol applies to all IceNav(TM)-enabled autonomous mobile robots operating in temperature-controlled environments below 0 C (32 F).

2. DEFINITIONS

1. "Authorized Service Provider" means a technician or entity certified by the Company to perform maintenance on the Systems.

2. "Critical Components" includes, but is not limited to:

a) Thermal management subsystems

b) Cold-resistant actuators

c) IceNav(TM) sensors and navigation hardware

d) Power distribution modules

e) Environmental sealing systems

3. "Maintenance Interval" refers to the Company-specified periods during which routine maintenance must be performed.

3. MAINTENANCE REQUIREMENTS

1. Scheduled Maintenance

1.1. Level 1 Maintenance (Weekly):

- 	Visual inspection of thermal seals

- 	Verification of sensor calibration

- Battery performance assessment

- Download and analysis of operational logs

1.2. Level 2 Maintenance (Monthly):

- Full diagnostic scan of IceNav(TM) system

- Actuator load testing

- Thermal management system efficiency verification

- Replacement of desiccant packages

- Lubrication of cold-rated components

1.3. Level 3 Maintenance (Quarterly):

- Complete system calibration

- Replacement of wear components

- Software updates and security patches

- Environmental seal integrity testing

- Power system optimization

4. DOCUMENTATION AND REPORTING

1. Maintenance Records

1.1. The Authorized Service Provider shall maintain detailed service records including:

- Date and time of maintenance

- Service technician identification

- Components inspected or replaced

- Test results and measurements

- Firmware versions and updates

- Operational anomalies detected

- Corrective actions taken

2. Compliance Reporting

2.1. Monthly compliance reports must be submitted to the Company's Quality Assurance department, including:

- Maintenance schedule adherence

- Component failure rates

- System performance metrics

- Environmental condition logs

- Incident reports (if any)

5. QUALITY CONTROL

1. All replacement parts must be Company-certified components specifically rated for cold environment operation.

2. Post-maintenance testing must verify:

- Thermal management system efficiency

- Navigation accuracy within 5mm

- Battery performance at rated temperature

- System response times

- Emergency stop functionality

6. SAFETY PROTOCOLS

1. All maintenance activities must comply with:

- OSHA safety requirements

- Company safety protocols

- Facility-specific safety procedures

- Cold environment work guidelines

2. Required Personal Protective Equipment:

- Cold environment protective gear

- Electrical safety equipment

- Anti-static protection

- Safety glasses and gloves

7. WARRANTY AND LIABILITY

1. Failure to comply with this Protocol may void the System warranty and release the Company from liability for:

- System malfunction

- Performance degradation

- Component failure

- Consequential damages

2. The Company reserves the right to audit maintenance records and inspect Systems at any time to verify Protocol compliance.

8. PROTOCOL UPDATES

1. This Protocol is subject to revision based on:
- Technical improvements

- Regulatory changes

- Field performance data

- Safety requirements

2. Authorized Service Providers will be notified of updates via the Company's technical bulletin system.

9. EXECUTION

IN WITNESS WHEREOF, this Protocol is executed by the authorized representative of Polar Dynamics Robotics, Inc.

By:

Name: Katherine Wells

Title: Chief Financial Officer

Date: January 15, 2024

10. CONTACT INFORMATION

Technical Support: support@polardynamics.com

Emergency Service: 1-800-ICE-TECH

Quality Assurance: qa@polardynamics.com

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