

AMR-350 MAINTENANCE AND SERVICE MANUAL

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Document Number: NF-MSM-2023-350

Revision: 3.2

Effective Date: January 1, 2024

Classification: CONFIDENTIAL AND PROPRIETARY

1. INTRODUCTION

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1 This Maintenance and Service Manual ("Manual") contains proprietary information.

- 1 -

2 This Manual provides authorized service personnel with necessary procedures

2. SYSTEM SPECIFICATIONS

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1 The AMR-350 consists of the following primary components:

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Multi-Surface Navigation Module (MSNM-350)

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Terrain Mapping Processing Unit (TMPU-V4)

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Dual LiDAR Array System (DLAS-2000)

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Adaptive Drive Assembly (ADA-MK3)

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Power Management System (PMS-350)

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2 Operating Parameters:

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Maximum Load Capacity: 350 kg

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Operating Speed: 0.1 - 2.0 m/s

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Battery Life: 12 hours continuous operation

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Charging Time: 2.5 hours (standard) / 1 hour (rapid)

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Operating Temperature: 0°C to 45°C

3. MAINTENANCE PROCEDURES

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1 Scheduled Maintenance Intervals:

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Daily System Check (DSC)

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Weekly Performance Verification (WPV)

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Monthly Comprehensive Inspection (MCI)

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Quarterly Component Analysis (QCA)

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2 Daily System Check Requirements:

- a) Visual inspection of all external components
- b) Battery charge level verification
- c) Emergency stop system testing
- d) Navigation sensor calibration check
- e) Drive system operation verification

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3 Prohibited Activities:

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Unauthorized firmware modifications

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Non-certified component replacements

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Operation outside specified parameters

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Disabled safety systems

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Unauthorized software alterations

4. SERVICE PROTOCOLS

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1 Service Level Classifications:

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Level 1: Operator-level maintenance

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Level 2: Certified technician service

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Level 3: NaviFloor factory service

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2 Required Tools and Equipment:

- a) NaviFloor Diagnostic Interface (NDI-350)
- b) Calibration Kit (CAL-MK4)
- c) Torque Measurement Tools (TMT-Series)
- d) Component Testing Module (CTM-2000)

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3 Service Documentation Requirements:

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Maintenance log entries

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Component replacement records

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Calibration certificates

- - 7 -

Performance test results

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Incident reports

5. SAFETY PROTOCOLS

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1 Required Safety Equipment:

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ESD protection gear

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Safety glasses

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Insulated tools

- - 8 -

Lock-out/tag-out devices

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2 Safety Procedures:

- a) Power isolation verification
- b) Mechanical lockout implementation
- c) Environmental hazard assessment
- d) Emergency response preparation

6. WARRANTY AND LIABILITY

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1 Warranty Coverage:

This Manual and associated procedures are covered under NaviFloor's Limited

Warranty Program (Document NF-WP-2023-350).

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2 Liability Limitations:

NaviFloor shall not be liable for any damages resulting from:

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Unauthorized modifications

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Improper maintenance procedures

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Non-certified repairs

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Operation outside specifications

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Failure to follow safety protocols

7. CONFIDENTIALITY

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1 This Manual contains confidential and proprietary information of NaviFlo

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2 Authorized service personnel must maintain strict confidentiality regarding

8. DOCUMENT CONTROL

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1 Change History:

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Rev 3.2: January 1, 2024 - Updated safety protocols

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Rev 3.1: October 15, 2023 - Enhanced maintenance procedures

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Rev 3.0: July 1, 2023 - Major revision including new components

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2 Document Authorization:

APPROVED BY:

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Dr. Elena Kovacs

Chief Research Officer

NaviFloor Robotics, Inc.

Date: January 1, 2024

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Richard Torres

Chief Operating Officer

NaviFloor Robotics, Inc.

Date: January 1, 2024

