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1. INTRODUCTION

1.1 PURPOSE

This document is designed for use by the installing agency of the Garmin GMX 200 as Instructions for Continued Airworthiness in response to Federal Aviation regulation (FAR) Part 23.1529, and Part 23 Appendix G. They include information required by the operator to adequately maintain the Garmin GMX 200.

1.2 Scope

This document identifies the Instruction for Continued Airworthiness for modification of the aircraft for installation of the Garmin GMX 200.

1.3 Document Control

This document shall be released, archived, and controlled in accordance with the Garmin document control system. When this document is revised, refer to Section 2.15 for information on how to gain FAA acceptance or approval and how to notify customers of changes.

1.4 Airworthiness Limitations Section

There are no additional Airworthiness Limitations as defined in 14 CFR § 23, Appendix G. G23.4 that result from this modification. The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

1.5 Permission to Use Certain Documents

Permission is granted to any corporation or person applying for approval of a Garmin GMX 200 to use and reference appropriate STC documents to accomplish the Instructions for Continued Airworthiness and show compliance with STC engineering data. This permission does not construe suitability of the documents. It is the responsibility of the applicant to determine the suitability of the documents for the ICA.

1.6 Definitions

The following terminology is used within this document:

- 1) **AC:** Advisory Circular
- 2) **ACO:** Aircraft Certification Office
- 3) **AEG:** Aircraft Evaluation Group
- 4) **CFR:** Code of Federal Regulations
- 5) **DER:** Designated Engineering Representative
- 6) **FAA:** Federal Aviation Administration
- 7) **IAW:** In Accordance With
- 8) **ICA:** Instructions for Continued Airworthiness

- 9) **MFD:** Multi-Function Display unit
- 10) **PMI:** Primary Manufacturing Inspector
- 11) **POI:** Primary Operations Inspector
- 12) **STC:** Supplemental Type Certificate
- 13) **TC:** Type Certification or Type Certificate
- 14) **TSO:** Technical Standard Order

2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

2.1 Introduction

Content, Scope, Purpose and Arrangement:	This document identifies the Instructions for Continued Airworthiness for the modification of the aircraft by installation of the Garmin GMX 200.
Applicability:	Applies to aircraft altered by installation of the Garmin GMX 200.
Definition of Abbreviations:	See Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications: <i>(or later FAA approved revisions)</i>	190-00607-04 Rev. B <i>GMX 200 Installation Manual</i> 005-C0315-00 Rev. A <i>GMX 200 STC Master Data List</i>
Retention:	This document, or the information contained within, will be retained in the aircraft's permanent records.

2.2 Description of Alteration

Installation of the Garmin GMX 200 and other system interfaces. The GMX 200 consists of a LCD display, keypads, keyboard and rotary knob.

2.3 Control, Operating Information

See the GMX 200 Installation Manual, listed under the reference documentation in paragraph 2.1 of this document, for system operation and self-test information.

2.4 Servicing Information

None. In the event of system failure, return the unit to the manufacturer or an approved Garmin repair station.

2.5 Periodic Maintenance Instructions

The GMX 200 is designed to detect internal failure. A thorough self-test is executed automatically upon application of power to the units, and built-in test is continuously executed. Detected errors are indicated on the equipment via failure annunciators and maintenance is on-condition.

Operation of the GMX 200 is not permitted unless an inspection as described in this section has been completed within the preceding 12 calendar months. Conduct a visual inspection on the unit and its wire harness to insure continued installation integrity:

1. Inspect the unit for security of attachment.
2. Inspect all knobs and buttons for legibility.
3. Inspect condition of wiring, routing, and attachment/clamping.

2.5.1 Cleaning the Front Panel

The front bezel, keypad, and display can be cleaned with a soft cotton cloth dampened with clean water. DO NOT use any chemical-cleaning agents. Care should be taken to avoid scratching the surface of the display.

2.5.2 Display Backlight

The display backlight is rated by the manufacturer as having a usable life of 50,000 hours. This life may be more or less than the rated time depending on the operation conditions of the GMX 200 unit. Over time, the backlight may dim and the display may not perform as well in direct sunlight conditions. The user must determine by observation when the display brightness is not suitable for its intended use. Contact the Garmin factory repair station when the backlight requires service.

2.5.3 Altitude Encoder

In this VFR non-essential system, it is recommended that any interfaced pressure altitude source be calibrated every 24 months. Refer to the manufacturer's installation and calibration manual.

2.6 Troubleshooting Information

If error indications are displayed on the GMX 200 unit, consult the Troubleshooting section contained in the GMX 200 Installation Manual, listed under reference documentation in paragraph 2.1 of this document. The 'GMX 200 Post-Installation Checkout Log' in the aircraft permanent records includes the configuration information for the installation. (See Table 5-3 in the GMX 200 Installation Manual for a sample Log).

2.7 Removal and Replacement Information

If the GMX 200 unit is removed and reinstalled, verify that the unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

If the GMX 200 unit is removed for repair and reinstalled, or if the unit is removed and replaced with a different unit, then follow 'Post Installation Configuration & Checkout Procedures' procedures contained in the GMX 200 Installation Manual listed in paragraph 2.1 of this document, and verify the unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

2.8 Diagrams

Refer to the GMX 200 Installation Manual (listed under reference documentation in section 2.1 of this document) for drawings applicable to this installation. Wiring diagrams are in Appendix E of the GMX 200 Installation Manual.

2.9 Special Inspection Requirements

None, N/A.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

None, N/A.

2.12 Special Tools

No special tools are required for system checkout. See GMX 200 Installation Manual listed in reference documentation in section 2.1 of this document.

2.13 Additional Instructions for Aircraft Operating under FAR 121/135

1. Aircraft Electrical Loads: Perform aircraft electrical system load analysis. See GMX 200 Installation Manual listed in reference documentation in section 2.1 of this document.
2. Methods of balancing flight controls: N/A.
3. Special Repair Methods applicable to the airplane: See certificate holder's General Maintenance Manual for instructions.

2.14 Overhaul Period

The system does not require overhaul at a specific time period. Power on self-test and continuous BIT will monitor the health of the GMX 200 unit. If the unit indicates an internal failure, the unit may be removed and replaced. See troubleshooting section contained in the GMX 200 Installation Manual, listed under reference documentation in paragraph 2.1 of this document.

2.15 ICA Revision and Distribution

To revise this ICA, a letter must be submitted to the ACO along with the revised ICA. The ACO will obtain AEG acceptance, and approve any revision to the Airworthiness Limitations Section 1.4. After FAA acceptance/approval, Garmin will release the revised ICA for customer use, and provide any required notification of the revision.

The latest revision of this document will be available on the Garmin website (garmin.com). A Garmin Service Letter, describing ICA revision, will be sent to dealers and GMX 200 owners of record if revision is determined to be significant.

2.16 Assistance

Flight Standards Inspectors or the certificate holder's PMI have the required resources to respond to questions regarding this ICA. In addition, the customer may refer questions regarding this equipment and its installation to the manufacturer, Garmin AT. Garmin AT customer assistance may be contacted during normal business hours via telephone 800-525-6726 or email from the Garmin web site at support.salem@garmin.com.

2.17 Implementation and Record Keeping

Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the operator's aircraft maintenance manual and/or the operator's aircraft scheduled maintenance program.