

SERVICE INFORMATION NO. SI 40-016

SERVICE INFORMATION NO. SI D4-022

I. TECHNICAL DETAILS

1.1 Airplanes affected:

DA 40 all airplanes equipped with Garmin GTX 330 with Software Version below 3.06
DA 40 D all airplanes equipped with Garmin GTX 330 with Software Version below 3.06

1.2 Subject:

Software Upgrade for Garmin GTX 330

ATA-Code: 34-50

1.3 Reason:

Garmin has issued the Mandatory Software Service Bulletin No. 0409 with the purpose of upgrading the GTX 330 Software to Version 3.06.

1.4 Information:

For detailed information see attached Garmin Software Service Bulletin No. 0409.

This SSB is applicable with no restrictions in case of Software Version below 3.06.

II. OTHERS

none



**** MANDATORY ****

SOFTWARE SERVICE BULLETIN

NO.: 0409

TO: All Garmin Aviation Service Centers

DATE: 19 July 2004

SUBJECT: GTX 330/330D GTX 33/33D* Software Upgrade to Version 3.06

*Note: The term GTX 330 applies to both GTX 330 Mode S Transponders and GTX 330D Diversity Mode S Transponders unless otherwise stated. Likewise, the term GTX 33 applies to both GTX 33 Mode S Transponders and GTX 33D Diversity Mode S Transponders unless otherwise stated.

PURPOSE

This Software Service Bulletin incorporates new unit Software Version 3.06 for the GTX 330 TSO C112 Class 2A units, P/Ns 011-00455-00, 011-00455-20, GTX 330D P/Ns 011-00455-10, 011-00455-30, GTX 33 P/N 011-00779-00 and GTX 33D P/N 011-00779-01.

SW 3.06 provides mandatory software changes. Uploading SW 3.06 is an alternate means of compliance (AMOC) to Airworthiness Directive 2004-10-15. See attachment, page 5 of 5.

SW 3.06 corrects a TAS, TCAD and TCAS I system "whisper-shout" problem that potentially could lead to the aircraft not being visible at certain ranges. TCAS II systems are not affected.

The procedures contained in this Software Service Bulletin are considered outside the scope of the G1000 Integrated Avionics System. The GTX 33 LRU in the G1000 system will be addressed by different procedures in a separate Software Service Bulletin at a later date.

DESCRIPTION

This modification consists of uploading new firmware to the unit using a Garmin supplied diskette, P/N A00-10113-07. (Note: requires Windows.)

APPROVAL

TSO C112 Class 2A

The Engineering data contained in GTX 330/GTX 33 Software Version 3.06 are FAA approved. This change is a minor software change.

This Software Service Bulletin, SSB 0409, dated 19 July 2004, is approved by the Manager, Wichita Aircraft Certification Office, ACE-115W by letter dated July 22, 2004, as an alternate method of compliance with AD 2004-10-15.

AFMS AND PILOT'S GUIDE CONSIDERATIONS

There are no recommended AFMS changes.

GTX 330 Pilot's Guide, P/N 190-00207-00 Rev. A.

PRODUCT AFFECTED

All GTX 330/GTX 33 units with Software Version 3.05 or previous. The unit's current software version is displayed at power up.

COMPLIANCE

Mandatory: This software service bulletin addresses a potential safety issue applicable to GTX 330/GTX 33 units containing Software Version 3.05 or previous. This Service Bulletin documents the change required to comply with Airworthiness Directive 2004-10-15.

REFERENCES

GTX 330 Installation Manual, P/N 190-00207-02, Rev. F and GTX 33 Installation Manual, P/N 190-00303-61, Rev. B

MANPOWER

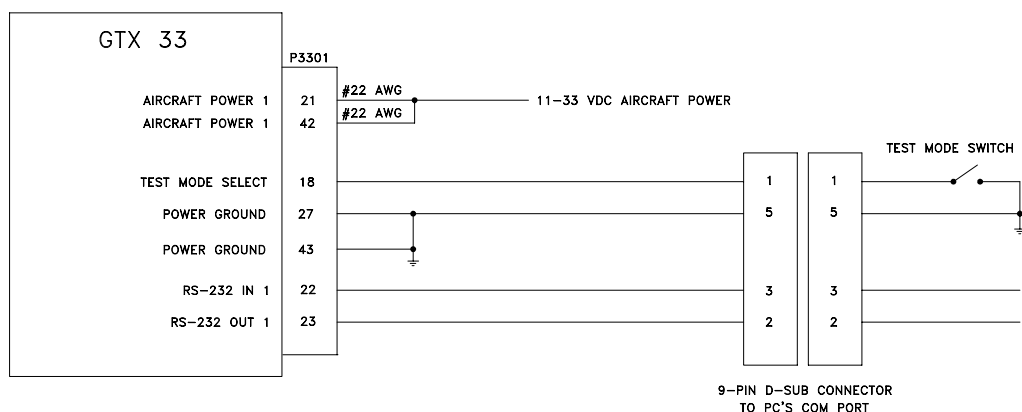
One-hour (1.0) labor including testing.

WARRANTY INFORMATION

This modification is warranty reimbursable for parts and labor required. When completing the Garmin warranty claim, be sure to include the GTX 330/GTX 33 serial number and clearly indicate that this Service Bulletin has been complied with to ensure proper reimbursement.

MODIFICATION INSTRUCTIONS FOR UPGRADING TO SOFTWARE VER. 3.06

1. Use a test harness for the GTX 330/GTX 33 as shown in the following figure:



2. Ensure that the unit is turned off. Connect the GTX 330/GTX 33 to the test harness and apply power to the harness.
3. With the unit off, enable test mode via the Test Mode Switch. (Applies a ground to P3301 pin 18).
4. At the Computer's DOS prompt, extract the files from the diskette, P/N A00-10113-07 into a directory on the Computer's Hard Disk Drive using the following command lines:
C:
MD C:\GARMIN
CD C:\GARMIN
A:330UPD07 (note these are zeros)
5. Connect the 9-pin D-Sub connector of the test harness to a free serial port (COM 1 or 2) on the PC.
6. Turn the unit on. The unit will be in test mode and show a dynamic test screen.
7. From the DOS prompt, in the directory in which you extracted the files (e.g., C:\GARMIN), run the update program using the following command line:
AVXRGN32 /R4 /Fhex 006B0172.01J (note: these are zeros, observe exact character string including spacing).
8. During the software upload, the unit's display test pattern either becomes static or the display will blank, depending on the software version originally installed in the unit. The upload process should take approximately 2 minutes to complete; the unit will reset itself, turn on, and show a dynamic display test screen.
9. Turn the unit off and disable test mode via the test mode switch.
10. Turn the unit on and verify the new software version on the GTX 330 Startup/Self-Test Page. For the GTX 33 verify new software version on the associated display unit.

TESTING PROCEDURE

The unit's built-in Self-Test and successful completion of the Post Installation Check Out Procedure in the aircraft, as outlined in the unit's Installation Manual, shall be adequate to identify any errors in this modification.

IDENTIFICATION PROCEDURE

The unit's current software version is viewed at power up as indicated in the last step of the MODIFICATION INSTRUCTIONS.

MATERIAL INFORMATION

All parts required to modify multiple GTX 330/GTX 33 units per this Service Bulletin are listed below:

QTY	Part Number	Description
1	A00-10113-07	Diskette, GTX 330/GTX 33 SW, 3.06

A connector kit is available to construct the test harness if required:

QTY	Part Number	Description
1	011-00583-00	GTX 330/GTX 33 Connector kit

ADDITIONAL INFORMATION

None.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Small Airplane Directorate
Wichita Aircraft Certification Office
1801 Airport Road, Room 100
Wichita, Kansas 67209

July 22, 2004

Mr. Stephen R. Whittemore
Garmin International
1200 East 151st Street
Olathe, KS 66062

Subject: TSO Authorization for GARMIN GTX 330, GTX 330D, GTX 33, GTX 33D

Reference: Garmin letter dated July 20, 2004

Dear Mr. Whittemore:

We have reviewed your request for a Minor Change to GTX 330, GTX 330D, GTX33, GTX 33D. Software Version 3.06, implemented by Software Service Bulletin No. 0409, dated 19 July 2004, is approved as a minor change. We will retain your letter and the data listed in the enclosure, supporting the change, in our files.

The Software Service Bulletin No. 0409, dated 19 July 2004, incorporating Software Version 3.06 is an acceptable Alternative Method of Compliance (AMOC) to Airworthiness Directive (AD) 2004-10-15. You may place the following statement (or an equivalent) in the "Approval" section of the service bulletin:

"This Service Bulletin No. 0409, dated 19 July 2004, is approved by the Manager, Wichita Aircraft Certification Office, ACE-115W by letter dated July 22, 2004, as an alternative method of compliance with AD 2004-10-15."

The service bulletin containing the statement above is considered an approved alternative method of compliance, and requests for approval from individual operators are not required.

Software Service Bulletin No. 0304, Rev B, incorporating Software Version 3.03 continues to be an acceptable means of compliance, as referenced in AD 2004-10-15.

If you have questions regarding this authorization, contact Roger A. Souter at 316-946-4134.

Sincerely,

Gerald M. Baker
Acting Manager
Wichita Aircraft Certification Office

Enclosure