

SERVICE INFORMATION NO. SI 40-123

NOTE: SI's are used only:
1) To distribute information from DAI to our customers.
2) To distribute applicable information/documents from our suppliers to our customers with additional information.
Typically there is no revision service for SI's. Each new information or change of that will be sent along with a new SI.

I. TECHNICAL DETAILS

1.1 Airplanes affected:

All DA 40 and DA 40 F

1.2 Subject:

GARMIN Service Advisory No. 1051 Revision A
GARMIN Software Service Bulletin No. 0533 Revision B

ATA-Code: 34-00

1.3 Reason:

For aircraft with GDU software versions 6.00 and higher GARMIN has issued GARMIN Service Advisory No. 1051 Revision A regarding the update of the IGRF (International Geometric Reference Frame) Magnetic Field Model from base year 2005 to 2010.

For all other aircraft, which are unable comply with Garmin Service Advisory 1051, GARMIN has issued the Software Service Bulletin No. 0533 Revision B which contains instructions for updating the IGRF (International Geometric Reference Frame) Magnetic Field Model from base year 2005 to 2010.

1.4 Information:

For detailed technical information refer to the GARMIN Software Service Bulletin No. 0533, Revision B and GARMIN Service Advisory No. 1051, Revision A.

II. OTHERS

2.1 STC Information:

The GARMIN G1000 system and its associated systems, components and software are installed in the DA 40 airplanes under one of the following known GARMIN STC:

- FAA STC No:
 - SA01254WI (G1000 System)
 - SA01444W-D (G1000 System and GFC 700 A/P System with optional WAAS installation)
- EASA STC No.:
 - EASA.IM.A.S.01023 (G1000 System)

Additionally to the above mentioned STC further GARMIN STC's may be approved.

The applicability of the attached GARMIN publication must be checked. For this purpose refer to the related airplane documentation, contact your responsible GARMIN Service Centre or your local authority.

2.2 Miscellaneous:

The GARMIN Service Advisory No. 1051 Revision A and the GARMIN Software Service Bulletin No. 0533 Revision B are attached to this SI.

In case of doubt contact GARMIN.



SERVICE ADVISORY

NO.: 1051 Rev A

TO: Owners and Operators of Garmin Integrated Flight Decks and G500/G600 systems

DATE: December 17, 2010

SUBJECT: 2010 IGRF (International Geomagnetic Reference Field) Magnetic Field Model

AFFECTED PRODUCTS

All Garmin Integrated Flight Decks (G1000/Cirrus Perspective/Embraer Prodigy/G900X/G950) with GDU software versions 6.00 and higher and all G500/G600 systems are affected.

NOTE

The Garmin Integrated Flight Deck GDU software version can be found on the AUX-Systems Status Page.

DESCRIPTION

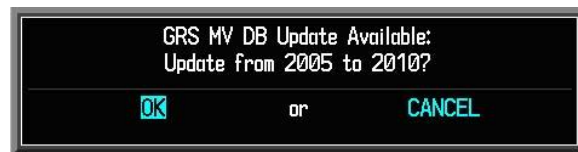
The 2010 IGRF Magnetic Field Model is now available to update as part of navigation database cycle 1013 (and subsequent database cycles).

RESOLUTION

CAUTION

Make sure electrical power to the system is not interrupted during the update process. If electrical power is interrupted during the update process, the system may require maintenance.

1. Update the navigation database as described in the applicable pilot's guide.
2. At the following prompt, select "OK" to update the IGRF Magnetic Field Model.



NOTE

For systems with multiple GRS units installed, a similar message will appear for each GRS.

An update will be made available at a later date for Garmin Integrated Flight Decks with GDU software versions less than 6.00.

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SOFTWARE SERVICE BULLETIN

NO.: 0533 Rev B

TO: All Garmin Aviation Service Centers

DATE: 11 January 2011

SUBJECT: New 2010 IGRF Magnetic Field Model For All Garmin Integrated Flights Decks (G1000, G900X, G950, Cirrus Perspective, Embraer Prodigy) Equipped Aircraft

REVISION B: Updated for 2010 IGRF Magnetic Field Model

PURPOSE

This Service Bulletin contains instructions for updating the IGRF (International Geometric Reference Frame) Magnetic Field Model from base year 2005 to 2010 for systems that are unable comply with Garmin Service Advisory 1051 (2010 IGRF update as part of navigation database cycle 1013). As the earth's magnetic field is continuously changing, similar updates will become available every five years.

DESCRIPTION

This Service Bulletin requires all Garmin integrated flight deck equipped aircraft to update the IGRF Magnetic Field Model to 2010 before December 31, 2011. Failure to do so may compromise heading and attitude performance and result in an advisory message starting January 1, 2012.

AFMS AND PILOT'S GUIDE CONSIDERATIONS

There are no recommended AFMS changes.

PRODUCT AFFECTED

All Garmin integrated flight deck systems equipped with a GRS 77 AHRS containing IGRF Magnetic Field Model 2005 are affected. The IGRF Magnetic Field Model can be viewed on the System Status page in Configuration mode. For instructions on viewing the IGRF Magnetic Field Model refer to the MODIFICATION INSTRUCTIONS Section of this Service Bulletin.

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COMPLIANCE

Compliance with this software service bulletin is recommended for the next regularly scheduled aircraft maintenance event. Completion must be accomplished prior to December 31, 2011.

REFERENCES

For general information regarding the G1000 Configuration mode see the G1000 Configuration and Line Maintenance Manual, P/N 190-00303-04, Rev. F or later.

WARRANTY INFORMATION

This modification is not warranty reimbursable.

MODIFICATION INSTRUCTIONS FOR SYSTEMS WITH GDU SOFTWARE VERSIONS LESS THAN 7.00

CAUTION

Make sure electrical power to the system is not interrupted during the update process. If electrical power is interrupted during the update process, the system may require maintenance.

With the G1000 turned off, insert the 2010 IGRF Model Update Card into the top slot of the PFD.

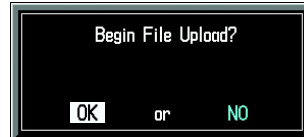
1. Hold the ENT key down while powering on the MFD and PFD.
2. Apply power to entire Garmin Integrated Flight Deck.
3. Press the FMS knob to activate the cursor.
4. Using the FMS knob highlight **GRS1 MV DB** in the LRU field.
5. If IGRF Part Number is 006-D0159-01 and Version is 2005.00 continue to step #6. If IGRF Part Number is 006-D0159-02 and Version is 2010.00, do not continue this procedure.



6. Press the FMS knob to deactivate the cursor.
7. Turn the small FMS knob to the Software Upload page in the System group.
8. Press the FMS knob to highlight **GRS77 IGRF – 2010 006-B0223-XX** in the File List.



9. Press the LOAD softkey.
10. Select OK and press the ENT key to acknowledge the following prompt:



11. Monitor the upload status as it progresses:



12. After the files finish loading, press the ENT key to acknowledge the following prompt:



13. Press the FMS knob to deactivate the cursor.

14. Turn the small FMS knob to the System Status Page.

15. Press the FMS knob to activate the cursor.

16. Using the FMS knob highlight **GRS1 MV DB** in the LRU field.

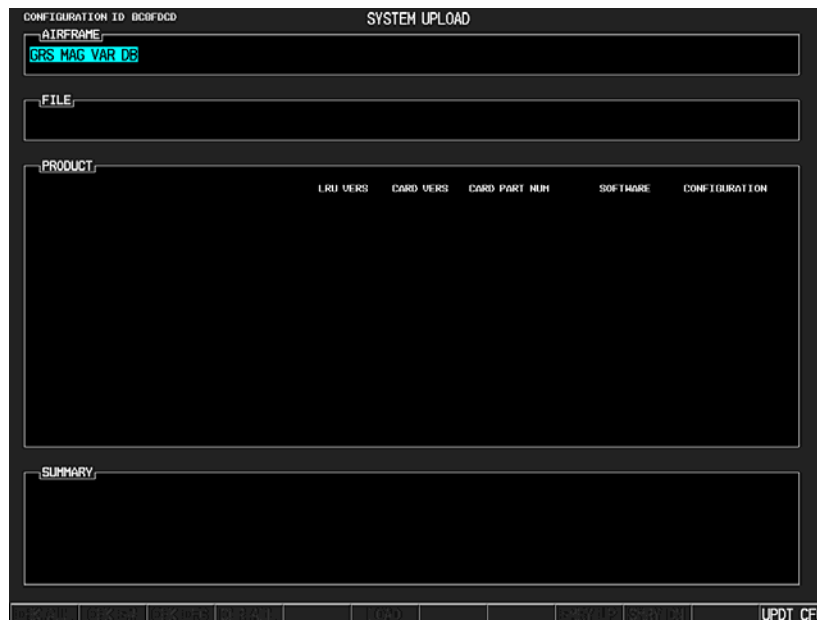
17. Verify IGRF Part Number is 006-D0159-02 and Version is 2010.00.

MODIFICATION INSTRUCTIONS FOR SYSTEMS WITH GDU SOFTWARE VERSIONS 7.00 AND GREATER

CAUTION

Make sure electrical power to the system is not interrupted during the update process. If electrical power is interrupted during the update process, the system may require maintenance.

1. Insert the 2010 IGRF Model Update Card into the top slot of PFD 1.
2. Hold the ENT key down while powering on the MFD and PFD(s).
3. Apply power to entire Garmin Integrated Flight Deck.
4. Press the FMS knob to activate the cursor.
5. Using the FMS knob navigate to the System Upload page.
6. Select "GRS MAG VAR DB" in the AIRFRAME field.



7. Press the ENT key.

8. Select "GRS Magnetic Variance Database Upload" in the FILE field.

CONFIGURATION ID: 01637F79 SYSTEM UPLOAD

AIRFRAME:
GRS MAG VAR DB

FILE:
GRS77 Magnetic Variance Database Upload

PRODUCT:

| LRU VERS | CARD VERS | CARD PART NUM | SOFTWARE | CONFIGURATION |
|----------|-----------|---------------|----------|---------------|
|----------|-----------|---------------|----------|---------------|

SUMMARY:

UPDT CFG

9. Press the ENT key.

10. If IGRF Part Number is 006-D0159-01 and Version is 2005.00 continue to step #11.

If IGRF Part Number is 006-D0159-02 and Version is 2010.00, do not continue this procedure.

11. Ensure all installed GRS entries are selected.

CONFIGURATION ID: 000FDC0 SYSTEM UPLOAD

AIRFRAME:
GRS MAG VAR DB

FILE:
GRS77 Magnetic Variance Database Upload

PRODUCT:

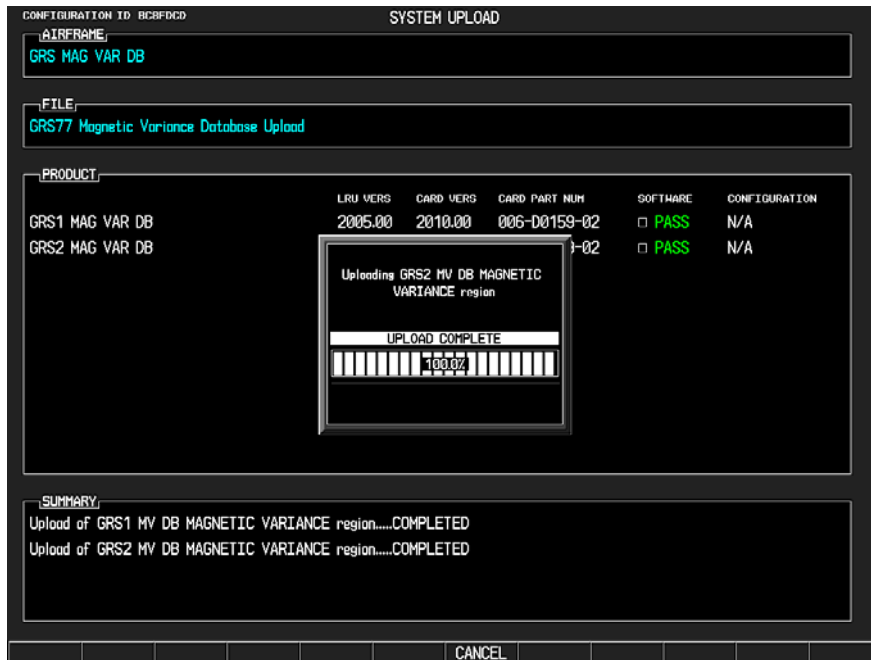
| LRU VERS | CARD VERS | CARD PART NUM | SOFTWARE | CONFIGURATION |
|-----------------|-----------|---------------|--------------|---|
| GRS1 MAG VAR DB | 2005.00 | 2010.00 | 006-D0159-02 | <input checked="" type="checkbox"/> N/A |
| GRS2 MAG VAR DB | 2005.00 | 2010.00 | 006-D0159-02 | <input checked="" type="checkbox"/> N/A |

SUMMARY:

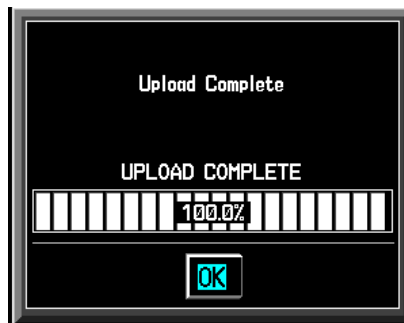
CHK ALL CHK SH CHK CFG CLR ALL LOAD UPDT CFG

Selected
GRS Entries

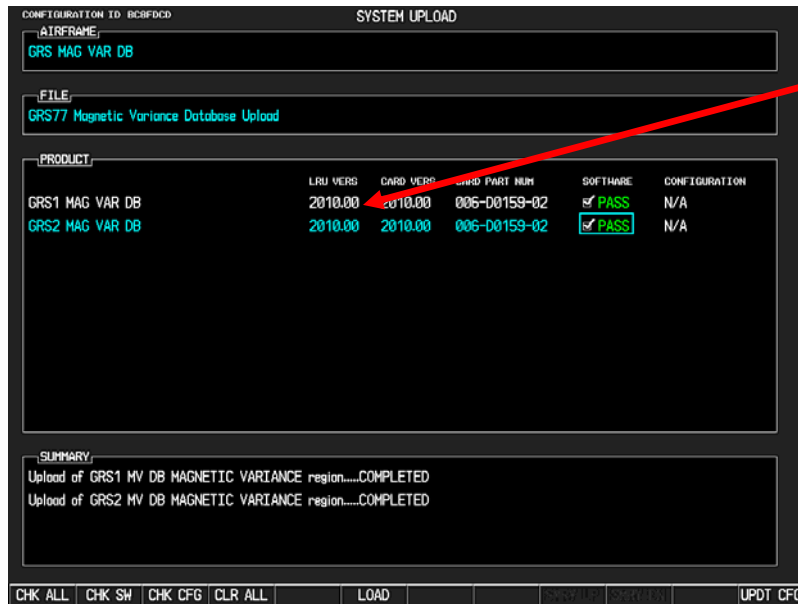
12. Press the LOAD softkey.
13. Monitor the upload status as it progresses.



14. Select "OK" at the Upload Complete prompt.



15. Verify all GRS LRU VERS fields indicate 2010.00.



TESTING PROCEDURE

None.

MATERIAL INFORMATION

| QTY | Part Number | Description |
|-----|--------------|--------------------------------|
| 1 | 010-00987-00 | 2010 IGRF Magnetic Field Model |

The 2010 IGRF Magnetic Field Model can be downloaded from the dealers only portion of www.garmin.com.