

REVISION TRANSMITTAL

This sheet transmits Revision 1 to SEL-34-07 which:

- A. Is updated with Garmin Service Advisory No. 1612 with Revision E
- B. Adds Garmin Software Service Bulletin No. 0533 Revision D
- C. Updates the Effectivity section with Beechcraft model G36 airplanes and ending serial numbers on Cessna model airplanes.

NOTE: This revision replaces the original issue SEL-34-07 in its entirety.

REVISION COMPLIANCE

INFORMATIONAL. This service letter is for informational purposes only.

LOG OF REVISIONS

Original Issue

August 4, 2016

Revision 1

February 16, 2021

TITLE

NAVIGATION - TRANSMITTAL OF GARMIN SERVICE DOCUMENTS FOR 2020 IGRF (INTERNATIONAL GEOMAGNETIC REFERENCE FIELD) MAGNETIC FIELD MODEL

EFFECTIVITY

The airplanes that follow that are equipped with a Garmin Integrated Flight Deck (ex. G1000, G2000).

CESSNA MODEL AIRPLANES

MODEL	SERIAL NUMBERS
172R	17281241 thru 17281622
172S	172S9810 thru 172S12608
182T	18281228 thru 18283120
T182T	T18208232 thru T18209100
206H	20608216 thru 20608353
T206H	T20608450 thru T2069621
350 (LC42-550FG)	42502 thru 42569, 421001 thru 421010
400 (LC41-550FG)	41563 thru 41800, 411001 thru 411161
T240	T24000001 thru T24002146

BEECHCRAFT MODEL AIRPLANES

MODEL	UNIT NUMBERS
G36	E-3630, E-3636 thru E-4146

REASON

The 2020 IGRF Magnetic Field Model requires an update by December 31, 2021.

DESCRIPTION

This service letter transmits two Garmin service documents relating to the 2020 IGRF (International Geomagnetic Reference Field) Magnetic Field Model.

- Garmin Service Advisory NO.: 1612 Revision E, 2020 IGRF (International Geomagnetic Reference Field) Magnetic Field Model.
- Garmin Service Bulletin NO.: 0533 Revision D, New 2020 IGRF Magnetic Field Model For G1000, G900X, G950, Cirrus Perspective, Embraer Prodigy equipped Aircraft With GDU Software Version 5.02 And Previous

COMPLIANCE

INFORMATIONAL. This service letter is for informational purposes only.

REFERENCES

Garmin Service Advisory NO. 1612 Revision E 2020 IGRF (International Geomagnetic Reference Field) Magnetic Field Model

Original Issue - August 4, 2016
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Garmin Service Bulletin NO.: 0533 Revision D, New 2020 IGRF Magnetic Field Model For G1000, G900X, G950, Cirrus Perspective, Embraer Prodigy equipped Aircraft With GDU Software Version 5.02 And Previous

PUBLICATIONS AFFECTED

None

ACCOMPLISHMENT INSTRUCTIONS

1. Review and complete the attached Garmin Service Documents:
 - Garmin Service Advisory NO. 1612 Revision E 2020 IGRF (International Geomagnetic Reference Field) Magnetic Field Model
 - Garmin Service Bulletin NO.: 0533 Revision D, New 2020 IGRF Magnetic Field Model For G1000, G900X, G950, Cirrus Perspective, Embraer Prodigy equipped Aircraft With GDU Software Version 5.02 And Previous
2. Make an entry in the airplane logbook that states compliance and method of compliance with this service letter.



SOFTWARE SERVICE BULLETIN

NO.: 0533 Rev D

TO: All Garmin Aviation Service Centers

DATE: October 13, 2020

SUBJECT: New 2020 IGRF Magnetic Field Model For G1000, G900X, G950, Cirrus Perspective, Embraer Prodigy Equipped Aircraft With GDU Software Versions 5.02 And Previous

REVISION D: Updated for 2020 IGRF Magnetic Field Model

PRODUCT AFFECTED

G1000, G900X, G950, Cirrus Perspective, and Embraer Prodigy systems (with GDU Software Versions 5.02 and previous) equipped with a GRS 77 AHRS containing IGRF Magnetic Field Model 2015 (or earlier) 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.

NOTE

Refer to Garmin Service Advisory 1612 for instructions on systems with GDU software versions 6.00 and greater.

PURPOSE

This service bulletin contains instructions for verifying and updating the IGRF (International Geomagnetic Reference Frame) Magnetic Field Model from base year 2015 to 2020. As the earth's magnetic field is continuously changing, similar updates will become available every five years.

DESCRIPTION

This modification consists of verifying and updating the IGRF Magnetic Field Model.

AFMS AND PILOT'S GUIDE CONSIDERATIONS

There are no recommended AFMS changes.

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OMPLIANCE

Compliance with this software service bulletin is recommended for the next regularly scheduled aircraft maintenance event. Completion must be accomplished prior to December 31, 2021.

REFERENCES

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

WARRANTY INFORMATION

This modification is not warranty reimbursable.

MODIFICATION INSTRUCTIONS

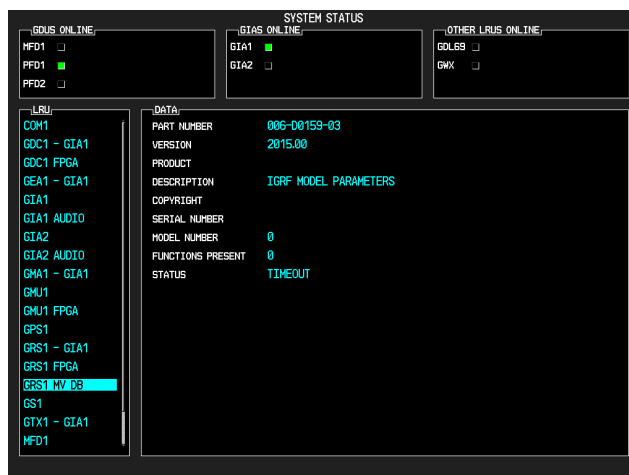
Refer to the MATERIAL INFORMATION section of this bulletin for instructions on how to create a 2020 IGRF Model Update Card.

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 2020 IGRF Model Update Card into the top slot of the PFD.

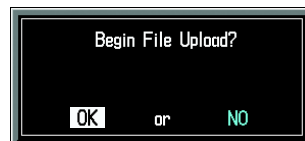
1. Hold the ENT key down while powering on the MFD and PFD.
2. Apply power to entire Garmin Integrated Flight Deck.
3. Press the FMS knob to activate the cursor.
4. Using the FMS knob highlight **GRS1 MV DB** in the LRU field.
5. If IGRF Part Number is 006-D0159-03 and Version is 2015.00 continue to step #6. If IGRF Part Number is 006-D0159-04 and Version is 2020.00, 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 **IGRF VER 2020.00 006-D0159-04** 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-D0159-04 and Version is 2020.00.

TESTING PROCEDURE

None.

MATERIAL INFORMATION

Do the following to create a 2020 IGRF Magnetic Field Model update card:

1. Put a blank SD card in your PC's SD card reader/writer.

NOTE

SD card must be SanDisk brand 2GB or less and formatted to FAT 32.

2. Go to <https://dealers.garmin.com>.
3. Download the 006-B1330-04 2020 IGRF database file.
4. Save the database file to a PC.
5. Double-click on the .exe database file saved in Step 3.
6. Obey the onscreen prompts to save the database to the SD card.

NOTE

Do not copy the .exe database file to the SD card.

7. Eject the SD card.

SERVICE ADVISORY

NO.: 1612 Rev E

TO: Owners and Operators of Garmin Integrated Flight Decks
DATE: October 13, 2020
SUBJECT: 2020 IGRF (International Geomagnetic Reference Field) Magnetic Field Model
REVISION E: Added guidance for 2020 IGRF

AFFECTED PRODUCTS

All Garmin G1000 Integrated Flight Decks (G900X, G950, G1000(H), G1000 NXi, Cirrus Perspective™, Embraer Prodigy™) with a Garmin AHRS and GDU software versions 6.00 and greater are affected.

All Garmin G2000, G3000, G5000(H), and Embraer Prodigy® Touch systems with a Garmin AHRS are also affected.

NOTE

G1000, G900X, G950, Cirrus Perspective, and Embraer Prodigy systems with GDU software versions 5.02 and previous are covered by a separate service bulletin. Contact your local dealer.

DESCRIPTION

The 2020 IGRF Magnetic Field Model is now available. Refer to the RESOLUTION section for instructions on how to update the IGRF Magnetic Field Model. Completion must be accomplished before December 31, 2021.

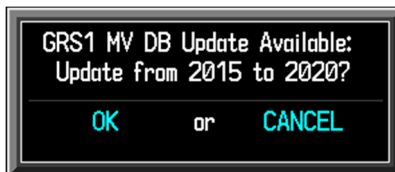
SERVICE ADVISORY

RESOLUTION

Garmin Integrated Flight Decks with GIA software versions less than 7.00 and greater than 7.71

The 2020 IGRF Magnetic Field Model is available to update as part of the Navigation Database cycle 2012 (and subsequent database cycles).

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.



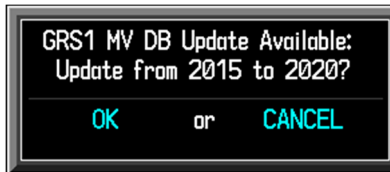
NOTE

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

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Garmin Integrated Flight Decks with GIA software versions 7.00 to 7.71

After updating to Navigation Database cycle 2012 (or subsequent database cycles), the following prompt will show on the display. Selecting “OK” to update the IGRF will result in a timeout error. The IGRF will not be updated.



To update the IGRF do the following:

1. Put a blank SD card in your PC's SD card reader/writer.

NOTE

For G900X, G950, G1000(H), Cirrus Perspective, and Embraer Prodigy systems using 006-B1330-04, the SD card must be SanDisk brand 2GB or less and formatted to FAT 32.

2. Go to fly.garmin.com/fly-garmin/redirect/magvar-update.
3. Download one of the following 2020 IGRF database files.
 - 006-B1330-04 - G900X, G950, G1000(H), Cirrus Perspective, and Embraer Prodigy
 - 006-B1330-05 - G2000, G3000, G5000, and Embraer Prodigy Touch systems
4. Save the database file to a PC.
5. Double-click on the .exe database file saved in Step 4.
6. Obey the onscreen prompts to save the database to the SD card.

NOTE

Do not copy the .exe database file to the SD card.

7. Eject the SD card.
8. Connect the aircraft to a ground power unit.
9. Put the SD card in the top slot of **PFD1**.

NOTE

Not using PFD1 may result in a failed IGRF database.

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10. Energize the system.
11. This prompt will show on the display.

NOTE

The screenshot below is for reference only. Actual GDU software version shown may differ depending on the version of the current GDU software.

```
INITIALIZING SYSTEM
CHECKING SOFTWARE VERSION.
GDU SOFTWARE VERSION 15.00 DETECTED. PLEASE WAIT FOR THE SYSTEM TO INITIALIZE.
0% COMPLETE
```

12. The system will reboot and start uploading the 2020 IGRF Magnetic Field Model.

NOTE

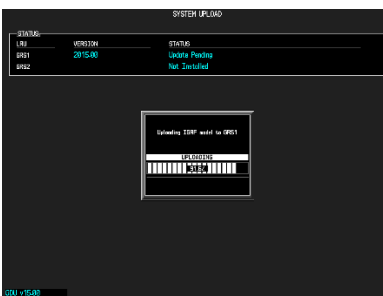
Do not interact with the MFD during this process. Interacting with the MFD may result in a failed IGRF database.

CAUTION

This process may take longer than 20 minutes to complete. Do not perform a system power cycle during this step.

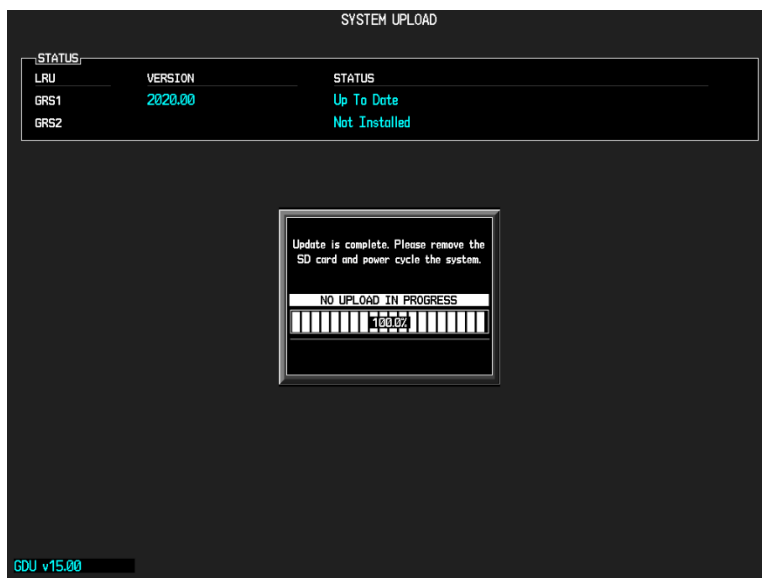
SERVICE ADVISORY

13. Do the following if progress does not begin:
 - a. Stop power to the appropriate GRS.
 - b. Energize the appropriate GRS.



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14. When the update is complete this prompt will show on the display.



15. Remove the SD card.

16. Stop power to the system.