

SERVICE INFORMATION No. SI 40-093

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 aircraft equipped with GARMIN G1000 and GPS/WAAS System, see also Section 2.1.
All DA 40 F aircraft equipped with GARMIN G1000 and GPS/WAAS System, see also Section 2.1.

1.2 Subject:

GARMIN: Service Advisory No. 0838 Rev. A
ATA-Code: 34-00

1.3 Reason:

GPS/WAAS receiver resets in latitudes north of 60° N, which results in a temporary loss of navigation.

1.4 Information:

For detailed technical information see GARMIN Service Advisory No. 0838 Rev. A.

II. OTHERS

2.1 STC Information:

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

- FAA STC No.:
 - SA01254WI-D (G1000 System)
 - SA01444WI-D (G1000 System and GFC 700 A/P System with optional WAAS installation)
 - SA01480WI-D (Synthetic Vision Technology, SVT);
- EASA STC No.:
 - EASA.IM.A.S.01023 (G1000 System).

Additionally to the above mentioned STC's 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. 0838 Rev. A is attached to this SI.

In case of any doubt contact GARMIN.



SERVICE ADVISORY

NO.: 0838 Rev A

TO: Owners/Operators of Garmin GPS/WAAS products operating north of 60 degrees latitude
DATE: October 3, 2008
SUBJECT: GPS/WAAS Loss of Reception in Alaska, Northwest Canada, and Eastern Russia

AFFECTED PRODUCTS

All G1000, Cirrus Perspective, G900X, 400W/500W Series and GNS 480 (CNX80) units with GPS/WAAS are affected.

DESCRIPTION

It has been reported to Garmin that operators using Garmin GPS/WAAS equipped units have been experiencing GPS/WAAS receiver resets, resulting in a temporary loss of navigation. The problem may occur only during certain satellite conditions and only in latitudes north of 60°N that include WAAS coverage. These occurrences are related to the receiver's interaction with the newly expanded WAAS coverage in Alaska and Northern Canada.

During the reset of the GPS/WAAS receiver, the receiver will not provide a position for approximately two minutes. The unit will function in dead reckoning (DR) mode during those two minutes. The condition and type of operation are annunciated to alert the flight crew of the loss of GPS/WAAS position data. The byproduct result is only a reset of a GPS/WAAS receiver; the condition does not result in any erroneous or misleading information being displayed or otherwise used in the system.



ACTION RECOMMENDED

Operators in the area where the problem occurs can disable the WAAS functionality on their Garmin equipment as the GPS receiver is not affected (does not reset) when WAAS is disabled. This will limit the capability of the unit, but it will also ensure that there is no interruption of GPS position data.

In some installations, operators having two GPS/WAAS receivers may disable WAAS functionality on one unit to ensure there is no interruption in position service, while preserving the WAAS functionality at the aircraft level (outside of the potential two minute position interruption). In the G1000, Cirrus Perspective, and G900X systems there is no way to disable WAAS functionality on one GPS/WAAS receiver; if WAAS functionality is disabled in these systems then it is disabled for the entire system.

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For G1000, Cirrus Perspective, G900X installations and installations with a single 400W/500W Series and GNS 480 (CNX80) unit:

Disabling WAAS functionality will result in the inability to perform LNAV/VNAV and LPV approach operations. LNAV approach operations, terminal operations (e.g., departures and arrivals), and en route operations are not affected with WAAS functionality disabled. Pre-flight planning should include a RAIM availability check at the destination airport when planning to use the GPS receiver without WAAS as the basis for an approach.

For installations with two 400W/500W Series or GNS 480 (CNX80) units that choose to disable WAAS functionality on only one unit:

To ensure continuity in position service if a reset occurs, operators should make appropriate adjustments to crew contingency procedures/training in case a WAAS receiver reset occurs (e.g., revert to receiver that has WAAS disabled and use LNAV minima).

Note: To ensure TAWS-B availability is unaffected by the potential GPS/WAAS receiver reset, it is recommended that WAAS functionality be disabled when operating in the affected geographic region.

INSTRUCTIONS FOR DISABLING WAAS FUNCTIONALITY:

In the G1000, Cirrus Perspective, and G900X systems there is no way to disable WAAS functionality on only one GPS/WAAS receiver; if WAAS functionality is disabled in these systems, it is disabled for the entire system.

To disable WAAS functionality in G1000, Cirrus Perspective, and G900X units:

1. Select the GPS Status Page.
2. Press the SBAS softkey.
3. Press the FMS knob, 'WAAS' is highlighted.
4. Press the ENT key to uncheck the box.
5. Press the FMS knob to remove the cursor.

To disable WAAS functionality in 400W/500W Series units:

1. Select the SETUP 2 Page in the AUX Page Group.
2. Press the small knob and then turn the knob to the 'SBAS Selection'.
3. Press ENT, the SBAS Selection Page will appear.
4. Turn the small knob, a dropdown menu will appear.
5. Turn the small knob again and select 'OFF' from the dropdown menu, then press ENT.
6. Press the small knob to exit SBAS Selection.

To disable WAAS functionality in GNS 480 WAAS equipped units:

1. Press the SYS softkey to bring up the System Page.
2. Press the CNFG softkey to bring up the Configuration Page.
3. Turn the large knob to highlight 'WAAS'.
4. Press the knob, WAAS 'ENABLED' will be highlighted.
5. Turn the small knob to change the value to 'DISABLED'.
6. Press the knob again to save the value.

Note: Consult the appropriate Garmin Pilot Guide for additional information regarding disabling WAAS functionality.

RESOLUTION

A future software release for each product will correct this issue and will be made available once completed.