



SERVICE ALERT

NO.: 1307 Rev. B

TO: Owners/operators of Hawker Beechcraft King Air and Cessna Mustang aircraft with Garmin G1000 installations, and Garmin Dealers/Installers

DATE: April 04, 2013

SUBJECT: Potential loss of PFD displayed heading and/or attitude for G1000 systems installed in King Air and Cessna Mustang Aircraft

REVISION B: Adds updated information regarding the causes for heading drift and additional pilot action.

AFFECTED PRODUCTS

King Air and Cessna Mustang aircraft with Garmin G1000 installations equipped with GRS 77 AHRS (Attitude Heading Reference System) may be affected.

DESCRIPTION

Garmin has received a very limited number of reports of a temporary loss of heading and attitude (provided by the AHRS) displayed in the products noted above. There are two possible causes.

- Moving the aircraft on the ground (e.g., towing operations) during the first 10 seconds after turning on power to the AHRS (when power is applied to a PFD, power is also applied to the associated AHRS)
- Magnetic interference introduced near the magnetometer(s) during AHRS initialization (i.e. during the 60 seconds following power up of the AHRS)

Either of the above conditions can cause noticeably drifting heading to be displayed on the PFD (Primary Flight Display) prior to takeoff. Noticeably drifting heading may induce a temporary loss of PFD displayed heading and/or attitude information after takeoff and during climb.

NOTE

For the purpose of this alert, “noticeably drifting heading” occurs when the PFD heading is continuously turning in one direction at a rate of more than ½ degree per second when the aircraft is stationary. A constant heading offset on the PFD prior to aircraft movement is not an indication of this issue.

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PILOT ACTION

Do not move the aircraft on the ground during the first 10 seconds after turning on the pilot and co-pilot PFDs.

Do not take off if the heading displayed on the PFD is noticeably drifting.

DATA COLLECTION

Garmin recommends using flight data logging to automatically store critical flight and engine data by inserting SD data card Garmin Part Number 010-00330-99 into the top card slot of the MFD (see applicable Pilot's Guide for details). Although other data cards may work, not all SD cards are compatible with the G1000. The recommended Garmin Part Number is TSO approved for use in the G1000 systems affected by this alert. This flight data can assist Garmin in evaluating this issue (see item 10 following).

If the issue described in this alert (noticeably drifting heading while on the ground or loss of displayed heading after takeoff) is encountered, please provide the following information along with any pertinent photographs or videos to Garmin Aviation Product Support at <mailto:avionics@garmin.com>. Alternatively, please call Product Support at 888.606.5482.

- 1) Aircraft location, airport identifier, and location on the field (example, Southeast side of main FBO ramp)
- 2) Date and time that issue occurred.
- 3) Was the aircraft being towed within 10 seconds after turning on the pilot or co-pilot PFD?
- 4) Did heading appear to be drifting?
- 5) Did drifting heading occur while on the ground or in flight?
- 6) What was the approximate heading drift rate (i.e., in degrees per second)?
- 7) Was the aircraft stationary or taxiing when drifting heading was observed?
- 8) Approximately how long after attitude and heading information became valid on the PFD was the drifting heading observed?
- 9) Approximately how long after AHRS power up was the drifting heading observed?
- 10) Were there any obvious sources of magnetic disturbances within 20 feet of the aircraft while the AHRS was initializing? Examples of magnetic disturbances include: auxiliary power cart, car, truck or vehicle, powered medical equipment, etc.
- 11) Remove the SD card (used for flight data logging) from the MFD top slot and insert the card into an SD card reader on a computer. Locate the file for the date of the occurrence per the following example, "Log_130205_101119____.csv" where the first set of digits represent the year/month/day (i.e February 5, 2013). Send the applicable file in an email to avionics@garmin.com using the subject line "Loss of Heading Data".