

Subject: Reduced Availability of Localizer Performance with Vertical Guidance Procedures

Ref. Publications:

- Rockwell Collins Operator Service Bulletin (OPSB) 0188-18 [reference 523-0825479-001117] original issue dated 07 June 2018.
- Rockwell Collins Service Bulletin (SB) GPS-4x00()-34-15 [reference 523-0825395-101000] Revision 1 dated 08 November 2018.

Applicability:

All operators, Type Certificate (TC) and Supplemental Type Certificate (STC) holders of aircraft types fitted with Collins Aerospace (formerly Rockwell Collins) Global Positioning System (GPS) receiver GPS-4000S, Part Number 822-2189-100, mod 14 or less, all serial numbers up to 4FLKRB inclusive.

Description:

EASA has been made aware that Rockwell Collins GPS-4000S receiver may lose lock on the European Geostationary Navigation Overlay Service (EGNOS) satellite and then operate in GPS navigation mode without applying EGNOS corrections, as described in the Rockwell Collins OPSB 0188-18. The GPS receiver reversion to GPS navigation mode may result in the interruption of any LPV (Localizer Performance with Vertical guidance) or RNP APCH (Required Navigation Performance – Approach) approach using GNSS/SBAS (Global Navigation Satellite System / Satellite-based Augmentation System) geometric altitude as a source of altitude.

The issue will therefore affect the availability and the continuity of the navigation system for LPV approaches and for RNP APCH approaches using GNSS/SBAS geometric altitude. There are no means to determine the quantitative impact, and thus the continuity requirements for these approaches may no longer be met.

At this time, the safety concern described in this SIB is not considered to be an unsafe condition that would warrant Airworthiness Directive (AD) action under Regulation (EU) [748/2012](#), Part 21.A.3B, nor warrant the issuance of an operational directive under Regulation (EU) [965/2012](#), Annex II, ARO.GEN.135(c).

Recommendation(s):

EASA recommends that all affected operators ensure their flight crews are aware of the risks and are ready for an alternate non-SBAS approach, when planning to perform an LPV approach or an

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RNP APCH approach using GNSS/SBAS geometric altitude. The affected operators should also consider instructions of Rockwell Collins OPSB 0188-18 when planning an SBAS approach.

EASA recommends all affected TC and STC holders, as well as all affected operators to update the Collins Aerospace GPS-4000S receiver in accordance with the instructions of Rockwell Collins SB GPS-4x00()-34-15 Revision 1.

Contact(s):

For further information contact the EASA Safety Information Section, Certification Directorate.

E-mail: ADs@easa.europa.eu.

For any question concerning the technical content of this SIB, please contact your local Rockwell Collins Customer Support Engineer, or any other contact online at [Collins Aerospace Services and Support](#).

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