

**Email Subject Line:** GPS Airworthiness Directive 2021-08-07

To our valued customers,

On April 7, 2021, the Federal Aviation Administration (FAA) published Airworthiness Directive (AD) 2021-08-07 for certain Rockwell Collins Inc. ("Collins") GPS-4000S Global Positioning Systems (GPS). The AD applies to part number 822-2189-100 and is effective May 12, 2021.

Per the FAA, the AD was prompted by an un-annunciated GPS vertical position error, which could result in a misleading localizer performance vertical (LPV) glidepath. The FAA issued this AD to prevent a misleading GPS position on an LPV approach. The condition, if not addressed, could result in a misleading GPS position on an LPV approach resulting in controlled flight into terrain.

Operators are to comply with the AD by completing the following actions within the specified time frames, unless already completed:

(1) Within 24 months replace each GPS-4000S GPS part number 822-2189-100 with a GPS that does not have part number 822-2189-100.

(2) As of 24 months after the effective date of this AD, do not install GPS-4000S GPS part number 822-2189-100 on any airplane.

In addition to the AD, information regarding this condition may be found in the following Collins Technical Publications:

- Service Information Letter (SIL) GPS-4X00(-)-19-3, part number 523-0829428 NO SUPPORT TO PERFORM LOCALIZER PERFORMANCE WITH VERTICAL (LPV) AND REQUIRED NAVIGATION PERFORMANCE (RNP) LESS THAN 0.3 NAUTICAL MILE APPROACHES OVER ALASKA
- Operational Service Bulletin (OPSB) 0207-20, part number 523-0829692 TEMPORARY EXCLUSIONS OF LPV SELECTION FOR CERTAIN ALASKAN APPROACHES
- These documents are available through the Collins Technical Publications [website](#).

Compliance to the AD maybe accomplished by converting existing GPS-4000S -100 units via Collins SB-510 to a -101. The conversion addresses the condition described in the AD and the UTC Time Offset condition described in SIL GPS-4X00(-)-19-2 P/N 523-0826445. To expedite and simplify the conversion, Collins has created a pool of units for exchange. GPS-4000S -101 units will be available for exchange free of charge with the return of a GPS-4000S -100 unit. Details for how to obtain such units are provided in the [Frequently Asked Questions](#).

**Collins strongly recommends that customers update parts affected by this AD during the subject aircrafts' next scheduled maintenance event and no later than May 12, 2023. The next scheduled update to the GPS constellation that will cause a repeat of the "leap**

**second” issue is set for June 11, 2023.** Collins further recommends that all units subject to this AD receive the required modifications at the same time to reduce any operational restrictions with affected GPS units. All warranty claims related to compliance with this update should be submitted to Collins per the standard processes. Collins’ STC’s prohibit inter-mixability of unit part numbers and therefore the exchange of two units in dual installations is required. See the [Frequently Asked Questions](#).

Additional information may be found on the Collins [customer portal](#) as well as in the [Frequently Asked Questions](#). If you have further questions or concerns, contact your local Customer Support Engineer. If you do not know who your local CSE is, please visit our [website](#) for more information.

Additionally, you may also contact the Collins Avionics Support Center at: AvionicsSupport@Collins.com or call 1-319-295-5000. Please be sure to include your aircraft type, GPS model number, GPS part number, serial number and modification status.

Regards,

Collins Aerospace Avionics Aftermarket Services