



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 18-153R1

Issued: 21 December 2018

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

THALES AVS FRANCE SAS

Type/Model designation(s):

GPS/SBAS Receiver Topstar 200 LPV units

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.21O.10047210

Foreign AD: Not applicable

Supersedure: None

ATA 34 – Navigation – Global Navigation Satellite System – Operational Limitations

Manufacturer(s):

Thales AVS France SAS (Thales), formerly Thales Avionics SAS

Applicability:

Thales Global Positioning System/Satellite Based Augmentation System (GPS/SBAS) receivers, Topstar 200 LPV, identified by Part Number (P/N) C17149HA01 and P/N C17149JA02, using SBAS.

These receivers are known to be installed on, but not limited to, certain ATR 42-500 and ATR 72-212A aeroplanes (see Note 1 of this AD), and Sikorsky S-76D helicopters.

Definitions:

For the purpose of this AD, the following definitions apply:

The applicable TR: Temporary revision (TR) to ATR 42-500 (commercially known as 600 version) Aircraft Flight Manual (AFM), and to ATR 72-212A (600 version) AFM, as applicable.

The SIL: Thales NavDB Service Information Letter (SIL) Airac Cycle 1813 Ref. F9111-J70883BY-00.



Reason:

It has been determined that, in SBAS areas, in specific conditions of the GPS satellite constellation in line of sight to the aircraft, the Thales Topstar 200 LPV GPS/SBAS receiver may provide an erroneous position on its outputs, which may not be detected by the integrity check. Depending on the aircraft installation, this error may not be noticed by the flight crew.

This condition, if not corrected, could possibly compromise the safety margins when the receiver is used for Localizer Performance with Vertical guidance (LPV) and/or RNP-AR (Required Navigation Performance – Authorization Required) operations.

Prompted by these findings, Thales has informed the respective aircraft manufacturers.

For the reasons described above, this AD requires removal from the navigation database of LPV procedures and all RNP-AR procedures in SBAS areas, listed in the SIL. To ensure a reset of all the GPS computations which may contribute to the erroneous GPS position output, this AD also requires, for certain ATR aeroplanes (see Note 1 of this AD), amendment of the applicable AFM.

This PAD is revised to remove the requirement to amend the AFM, except for certain ATR aeroplanes, and limits the action (reset of GPS receivers) to flights in SBAS areas. This PAD also introduces a reference to the SIL, which includes the full list of deleted procedures, therefore deleting Appendix 1 from the PAD.

This AD is considered as an interim action and further AD action will follow.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Use of Navigation Database:

- (1) Within 30 days after the effective date of this AD, update the navigation database where all RNP-AR procedures within SBAS areas and LPV procedures as listed in the SIL have been removed and, thereafter, use only a regularly updated navigation database where the above-mentioned procedures are removed.

AFM Update:

- (2) For ATR aeroplanes as identified in Note 1 of this AD: Within 30 days after the effective date of this AD, amend the applicable AFM by inserting the applicable TR, containing instructions to reset the GPS receivers before each flight, unless not at all operating in an SBAS area, inform all flight crew and, thereafter, operate the aircraft accordingly.

Note 1: ATR42 and ATR72 aeroplanes authorised for LPV or RNP-AR operations, in one of the following configurations:

ATR 42-500 (commercially known as 600 version) aeroplanes on which ATR modification (mod) 7180 or mod 7182 has been embodied in production, or on which SB ATR42-34-0194 or SB ATR42-34-0196 has been embodied in service; and



ATR 72-212A (600 version) aeroplanes on which ATR mod 7180, mod 7182 or mod 7585 has been embodied in production, or SB ATR72-34-1143, SB ATR72-34-1145 or SB ATR72-34-1154 has been embodied in service.

Ref. Publications:

Thales NavDB SIL Airac Cycle 1813 Ref. F9111-J70883BY-00 dated 26 November 2018.

ATR 42-500 (commercially known as 600 version) AFM TR [to be published].

ATR 72-212A (600 version) AFM TR [to be published].

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 04 January 2019.
2. The original issue of this PAD was posted on 08 November 2018 as PAD 18-153 for consultation until 06 December 2018. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this PAD. Enquiries regarding this revised PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#).
4. For any question concerning the technical content of the requirements in this PAD, or for information related to Thales GPS receiver and Navigation Database, please contact: Thales AVS France SAS, E-mail: continued.airworthiness@thalesgroup.com.

