



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0760; Project Identifier 2019-NE-18-AD; Amendment 39-21108; AD 2020-08-02]

RIN 2120-AA64

Airworthiness Directives; Thales AVS France SAS Global Positioning System/Satellite Based Augmentation System Receivers

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Thales AVS France SAS (Thales) Global Positioning System/Satellite Based Augmentation System (GPS/SBAS) receivers installed on airplanes and helicopters. This AD was prompted by reports that Thales GPS/SBAS receivers provided, under certain conditions, erroneous outputs on aircraft positions. This AD requires the installation of a software update to the aircraft navigation database and insertion of a change to the applicable airplane flight manual (AFM). The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email: wcs_cust_service_eng.gr

sik@lmco.com; Thales AVS France SAS, 75-77 Avenue Marcel Dassault, 33700
Mérignac – France, Tel: +33 (0)5 24 44 77 40, www.thalesgroup.com; or ATR-GIE
Avions de Transport Régional, 1, Allée Pierre Nadot, 31712 Blagnac Cedex, France;
telephone +33 (0) 5 62 21 62 21; fax +33 (0) 5 62 21 67 18; email
continued.airworthiness@atr-aircraft.com. You may view this service information at the
FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA,
01803. For information on the availability of this material at the FAA, call 781-238-7759.
It is also available on the Internet at <https://www.regulations.gov> by searching for and
locating Docket No. FAA-2019-0760.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov>
by searching for and locating Docket No. FAA-2019-0760; or in person at Docket
Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
The AD docket contains this final rule, the mandatory continuing airworthiness
information (MCAI), any comments received, and other information. The address for
Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West
Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington,
DC, 20590.

FOR FURTHER INFORMATION CONTACT: Kirk Gustafson, Aerospace Engineer,
Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-
238-7190; fax: 781-238-7199; email: kirk.gustafson@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part
39 by adding an AD that would apply to certain Thales GPS/SBAS receivers installed on
airplanes and helicopters. The NPRM published in the Federal Register on January 31,

2020 (85 FR 5584). The NPRM was prompted by reports that Thales GPS/SBAS receivers provided, under certain conditions, erroneous outputs on aircraft positions. The NPRM proposed to require the installation of a software update to the aircraft navigation database and insertion of a change to the applicable AFM. The FAA is issuing this AD to address the unsafe condition on these products.

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2019-0004, dated January 11, 2019, corrected on January 17, 2019 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

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.

For the reasons described above, this [EASA] 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 [EASA] AD also requires, for certain

ATR aeroplanes (see Note 1 of this [EASA] AD), amendment of the applicable AFM.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0760.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed.

Related Service Information under 1 CFR Part 51

The FAA reviewed Task 31-61-00-800-802, “2. FMS Database Update for Multifunction Display (MFD)” of the Sikorsky Aircraft Corporation, Aircraft Maintenance Manual (AMM) SA S76D-AMM-000, 31-61-00, dated November 30, 2017. This Task provides instructions for updating the MFD on affected Sikorsky aircraft.

The FAA also reviewed ATR72 AMM Job Instruction Cards, Doc. No. 45-11-00 LDG 10030-004, dated June 1, 2018, and ATR42-400/500 Series AMM Job Instruction Cards, Doc. No. 45-11-00 LDG 10030-004, dated July 1, 2018. These service documents provide instructions on updating the navigation databases installed on affected ATR airplanes.

The FAA also reviewed Thales Service Information Letter (SIL) Doc. No. THAV/SIL-1308, Issue 7, dated September 28, 2018. The SIL describes procedures to upload navigational database using Thales PMAT software on affected ATR airplanes.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 45 Thales GPS/SBAS receivers installed on, but not limited to, GIE Avions de Transport Régional model ATR42 airplanes and Sikorsky Aircraft Corporation model S-76D helicopters of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Update navigation database for GPS/SBAS receiver	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$3,825
Update AFM	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$11,475

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2020-08-02 **Thales AVS France SAS**: Amendment 39-21108; Docket No. FAA-2019-0760; Project Identifier 2019-NE-18-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Thales AVS France SAS (Thales) Global Positioning System/Satellite Based Augmentation System (GPS/SBAS) receivers, Topstar 200 LPV, part numbers (P/Ns) C17149JA02 and C17149HA01. These GPS/SBAS receivers are installed on, but not limited to, ATR-GIE Avions de Transport Régional (ATR) model ATR42 and ATR72 airplanes and Sikorsky Aircraft Corporation model S-76D helicopters, respectively.

(d) Subject

Joint Aircraft System Component (JASC) Code 3457, Global Positioning System.

(e) Unsafe Condition

This AD was prompted by reports that Thales GPS/SBAS receivers provided, under certain conditions, erroneous outputs on aircraft positions. The FAA is issuing this AD to prevent erroneous aircraft position outputs from the Thales GPS/SBAS receivers. The unsafe condition, if not addressed, could result in controlled flight into terrain and loss of the aircraft.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For operators of affected ATR model ATR42 and ATR72 airplanes:

(i) Update the aircraft's navigation database within 30 days after the effective date of this AD using the software upload instructions, as applicable, in the following:

(A) ATR72 Aircraft Maintenance Manual (AMM) Job Instruction Cards, Doc. No. 45-11-00 LDG 10030-004, dated June 1, 2018.

(B) ATR42-400/500 Series AMM Job Instruction Cards, Doc. No. 45-11-00 LDG 10030-004, dated July 1, 2018.

(C) Thales Service Information Letter (SIL) Doc. No. THAV/SIL-1308, Issue 7, dated September 28, 2018.

(ii) [Reserved]

(2) For operators of affected ATR model ATR42 and ATR72 airplanes:

(i) Within 30 days after the effective date of this AD, amend Section 1.2 “Each Flight Checks” of the pre-flight section in the applicable airplane flight manual by inserting the change shown in Figure 1 and Figure 2 to paragraph (g)(2)(i) of this AD.

Figure 1 to Paragraph (g)(2)(i) – Reset Instructions for 1 GPS Receiver Installed

- ▶ DATA/INIT/POS INIT page..... DISPLAY
- ▶ GPS POS key..... SELECT
- ▶ C/B NAV/COM/SURV GPS 1..... PULL
- **After 10 s**
 - ▶ C/B NAV/COM/SURV GPS 1..... PUSH
 - ▶ SENSOR INIT< key..... SELECT

Figure 2 to Paragraph (g)(2)(i) – Reset Instructions for 2 GPS Receivers Installed

- ▶ DATA/INIT/POS INIT page..... DISPLAY
- ▶ GPS POS key..... SELECT
- ▶ C/B NAV/COM/SURV GPS 1..... PULL
- ▶ C/B NAV/COM/SURV GPS 2..... PULL
- **After 10 s**
 - ▶ C/B NAV/COM/SURV GPS 1..... PUSH
 - ▶ C/B NAV/COM/SURV GPS 2..... PUSH
 - ▶ SENSOR INIT< key..... SELECT

(ii) Before each flight, power cycle the Thales GPS/SBAS receiver unit.

(3) For operators of Sikorsky S-76D helicopters, within 30 days after the effective date of this AD, update the aircraft's navigation database using the instructions in TASK 31-61-00-800-802, "2. FMS Database Update for Multifunction Display (MFD)" of the Sikorsky Aircraft Corporation, AMM SA S76D-AMM-000, 31-61-00, dated November 30, 2017.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Boston ACO Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Kirk Gustafson, Aerospace Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7190; fax: 781-238-7199; email: kirk.gustafson@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2019-0004, dated January 11, 2019 (corrected on January 17, 2019), for more information. You may examine the EASA AD in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0760.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Sikorsky Aircraft Corporation, Aircraft Maintenance Manual (AMM) SA S76D-AMM-000, 31-61-00, dated November 30, 2017.

(ii) ATR72 AMM Job Instruction Cards, Doc. No. 45-11-00 LDG 10030-004, dated June 1, 2018.

(iii) ATR42-400/500 Series AMM Job Instruction Cards, Doc. No. 45-11-00 LDG 10030-004, dated July 1, 2018.

(iv) Thales Service Information Letter Doc. No. THAV/SIL-1308, Issue 7, dated September 28, 2018.

(3) For Sikorsky Aircraft Corporation service information identified in this AD, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email: wcs_cust_service_eng.gr-sik@lmco.com.

(4) For Thales service information identified in this AD, contact Thales AVS France SAS, 75-77 Avenue Marcel Dassault, 33700 Mérignac – France, Tel: +33 (0)5 24 44 77 40, www.thalesgroup.com.

(5) For ATR service information identified in this AD, contact ATR-GIE Avions de Transport Régional, 1, Allée Pierre Nadot, 31712 Blagnac Cedex, France; telephone +33 (0) 5 62 21 62 21; fax +33 (0) 5 62 21 67 18; email continued.airworthiness@atr-aircraft.com.

(6) You may view this service information at FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 8, 2020.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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