[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0760; Product Identifier 2019-NE-18-AD]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt 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 proposed AD was prompted by reports that Thales GPS/SBAS receivers provided, under certain conditions, erroneous outputs on aircraft positions. This proposed AD would require 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 proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202 493 2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12 140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, 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.

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 NPRM, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

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:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2019-0760; Product Identifier 2019-NE-18-AD" at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this proposed AD.

Confidential Business Information

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Kirk Gustafson, Aerospace Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803. Any commentary that the FAA receives

which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Discussion

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD No. 2019-0004, dated January 11, 2019, corrected on January 17, 2019 (referred to after this as "the MCAI"), to address an unsafe condition for the specified products. The MCAI states, in pertinent part:

> 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 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.

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, 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 Aircraft Maintenance Manual (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.

FAA's Determination

This product has been approved by EASA and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified the FAA of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the Agency evaluated all the relevant information provided by EASA and determined the unsafe

condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require installation of a software update to the aircraft navigation database and insertion of a change to the applicable AFM.

Costs of Compliance

The FAA estimates that this proposed 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 proposed 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

(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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

Thales AVS France SAS: Docket No. FAA-2019-0760; Product Identifier 2019-NE-18-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 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) of this AD.

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

Figure 1 to Paragraph (g) – 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) – 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

(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 No. 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 it in Docket No. FAA-2019-0760.

(3) For 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; 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 referenced 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.

Issued in Burlington, Massachusetts, on January 27, 2020.

Robert J. Ganley,
Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.
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