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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0584; Product Identifier 2017-NM-173-AD; Amendment 39-19494; AD 2018-23-08]

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Airbus SAS Model A330-200, A330-200 Freighter, and A330-300 series airplanes. This AD was prompted by reports of dual flight management system (FMS) resets with the loss of flight plan (F-PLN) data. This AD requires revising the airplane flight manual (AFM) to prohibit required navigation performance-authorization required (RNP-AR) operations using flight management guidance envelope computer (FMGEC) standard P5H3. This AD would also require modifying the FMS software of airplanes equipped with FMGEC standard P5H3. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 16, 2019.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of January 16, 2019.

ADDRESSES: For service information identified in this final rule, contact Airbus SAS, Airworthiness Office–EAL, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email airworthiness.A330-A340@airbus.com; internet <http://www.airbus.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0584.

Examining the AD Docket

You may examine the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0584; 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

regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) 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: Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3229.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus SAS Model A330-200, A330-200 Freighter, and A330-300 series airplanes. The NPRM published in the Federal Register on July 18, 2018 (83 FR 33873). The NPRM was prompted by reports of dual FMS resets with the loss of F-PLN data. The NPRM proposed to require revising the AFM to prohibit RNP-AR operations using FMGEC standard P5H3. The NPRM also proposed to require modifying the FMS software of airplanes equipped with FMGEC standard P5H3.

We are issuing this AD to address dual FMS reset and loss of F-PLN data, which in the context of RNP-AR operations of the airplane could result in significantly reduced situational awareness of proximity to terrain and/or other aircraft to below acceptable safety margins, and out of the context of RNP-AR operations could lead to an unusually high pilot workload.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2017-0233, dated November 23, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus SAS Model A330-200, Model A330-200 Freighter, and Model A330-300 series airplanes. The MCAI states:

Operators of [Airbus SAS Model] A330 aeroplanes fitted with a Flight Management Guidance Envelope Computer (FMGEC) standard P5H3 have reported some occurrences of dual Flight Management System (FMS) reset with the loss of Flight Plan (F-PLN) data. These events have been identified in all flight phases, including Take-Off transition.

This condition, if not corrected, particularly in the context of Required Navigation Performance–Authorization Required (RNP-AR) operations of the aeroplane, could lead to a large reduction in safety margins due to terrain and/or surrounded traffic proximity [below acceptable safety margins], and out of the context of RNP-AR operations could lead to an increased pilot workload.

To address this potential unsafe condition, Airbus issued Aircraft Flight Manual (AFM) Temporary Revision (TR) 774 issue 1 [approved October 13, 2017, to the Airbus A330/A340 Airplane Flight Manual] to provide instructions to prohibit RNP-AR operations. In addition, Airbus developed modification (mod) 207362 to allow FMS software downgrading from P5 to P4A standard, and issued [Airbus SAS] Alert Operator Transmission (AOT) A22L002-17 providing instructions to implement that mod on in-service aeroplanes. As a long term action, Airbus intend to publish Service Bulletin (SB) A330-22-3264, which will supersede AOT A22L002-17 [dated October 20, 2017], to provide the same instructions for FMS software downgrade.

For the reasons described above, this [EASA] AD requires amendment of the applicable AFM and operating the aeroplane accordingly, and requires FMS software downgrading of aeroplanes with FMGEC standard P5H3.

You may examine the MCAI in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0584.

Comments

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

Support for the NRPM

Air Line Pilots Association, International (ALPA) stated its support for the NPRM.

Request To Revise Applicability

Delta Air Lines (DAL) requested that we revise the applicability of the proposed AD to state that the AD is not effective for airplanes that have a Thales FMS installed. DAL justified the request by stating that the applicability of the proposed AD was too general, and removing airplanes with a Thales FMS installed from the applicability would not result in a decrease in safety, because the action is intended only for airplanes with a Honeywell FMS installed.

We disagree with DAL's request because FMGEC standard P5H3 can be embodied in production or in service on both Thales and Honeywell FMS. Further, this AD requires modification of Groups 1 and 2 airplanes in accordance with Airbus Service Bulletin A330-22-3264, dated March 14, 2018, which requires prior or simultaneous accomplishment of prerequisite Airbus SAS service information applicable to airplanes with a Honeywell FMS, Release 2, or a Thales flight guidance card. We have not changed this AD in this regard.

Request To Develop New Software Standard

ALPA suggested that a temporary downgrade of the FMS software from P5H3 standard to P4A standard is a short-term fix, and recommended that a new software standard be developed. ALPA contends that the new software standard should eliminate the potential of dual FMS resets, which could lead to loss of flight plan data, while incorporating the features of the advanced P5H3 standard.

We disagree with ALPA's request. The unsafe condition of dual FMS resets, which could lead to loss of flight plan data, was introduced by the FMS software P5H3 standard. The unsafe condition is eliminated by downgrading the FMS software to P4A standard, which is a permanent repair. The FAA acknowledges ALPA's recommendation, and we might consider further rulemaking on this issue if Airbus proposes new software. We have not changed the AD in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

Airbus SAS has issued Service Bulletin A330-22-3264, dated March 14, 2018. This service information describes procedures to downgrade the FMS from P5 to P4A operational software on FMGEC standard P5H3, by embodying Modification 207362S34542 on the affected airplanes.

Airbus SAS has issued A330/A340 AFM Temporary Revision TR774, RNP AR Operations Forbidden with FMGEC Standard P5H3, Issue 1, dated October 16, 2017, to the Airbus A330/A340 AFM. This service information describes the operational restrictions for RNP-AR on Airbus SAS Model A330 series airplanes equipped with FMGEC standard P5H3.

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.

Other Related Service Information

The Airbus A330/A340 Airplane Flight Manual (AFM) for the aircraft affected by this AD is required to be furnished with the aircraft, in accordance with 14 CFR 25.1581. Further, operators of the aircraft affected by this AD must operate in accordance with the limitations specified in the AFM, in accordance with 14 CFR 91.9.

Costs of Compliance

We estimate that this AD affects 3 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated Costs for Required Actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
3 work-hours × \$85 per hour = \$255	\$0	\$255	\$765

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all known costs in our cost estimate.

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.

We are 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 transport category airplanes and associated appliances to the Director of the System Oversight Division.

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 that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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):



**FAA
Aviation Safety**

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2018-23-08 Airbus SAS: Amendment 39-19494; Docket No. FAA-2018-0584; Product Identifier 2017-NM-173-AD.

(a) Effective Date

This AD is effective January 16, 2019.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus SAS Model A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, and A330-343 airplanes, certificated in any category, all manufacturer serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 22, Auto flight.

(e) Reason

This AD was prompted by reports of dual flight management system (FMS) resets with the loss of flight plan (F-PLN) data. We are issuing this AD to address dual FMS reset and loss of F-PLN data, which in the context of required navigation performance-authorization required (RNP-AR) operations of the airplane could result in significantly reduced situational awareness of proximity to terrain and/or other aircraft to below acceptable safety margins, and out of the context of RNP-AR operations could lead to an unusually high pilot workload.

(f) Compliance

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

(g) Definitions

For the purposes of this AD, the definitions in paragraphs (g)(1) through (g)(3) of this AD apply.

(1) Group 1 airplanes are those that have flight management guidance envelope computer (FMGEC) standard P5H3 (Airbus SAS Modification 204758 Part Number (P/N) FMGEC C13226HA07 with P/N FMS operational SW PS4087700-906) embodied in production, or embodied in service as specified in Airbus Service Bulletin A330-22-3209; Airbus Service Bulletin A330-22-3225; Airbus Service Bulletin A330-22-3244; Airbus Service Bulletin A330-22-3247; or Airbus Service Bulletin A330-22-3262; except those that have RNP-AR.

(2) Group 2 airplanes have the same configuration as those in Group 1, but in addition have RNP-AR (Airbus SAS Modification 203441, or Airbus SAS Modification 203442, or Airbus SAS Modification 200624) embodied in production or Airbus Service Bulletin A330-34-3262; Airbus Service Bulletin A330-34-3308; or Airbus Service Bulletin A330-34-3345; embodied in service.

(3) Group 3 airplanes are those in any configuration other than that identified in paragraph (g)(1) or (g)(2) of this AD.

(h) Airplane Flight Manual (AFM) Revision

For Group 2 airplanes: Within 30 days after the effective date of this AD, revise the Limitations section of the Airbus A330/A340 AFM to include the information in Airbus A330/A340 AFM Temporary Revision TR774, RNP AR Operations Forbidden with FMGEC Standard P5H3, Issue 1, dated October 16, 2017 (“TR774”), and inform all flight crews, and, thereafter, operate the airplane accordingly, as specified in TR774. TR774 prohibits the RNP-AR operation on Airbus SAS Model A330 series airplanes equipped with FMGEC standard P5H3. Revising the AFM to include TR774 may be done by inserting a copy of TR774 in the AFM. When TR774 has been included in general revisions of the AFM, the general revisions may be inserted in the AFM, provided the relevant information in the general revision is identical to that in TR774, and TR774 may be removed.

Note 1 to paragraph (h) of this AD: The Airbus A330/A340 AFM for the aircraft affected by this AD is required to be furnished with the aircraft, in accordance with 14 CFR 25.1581. Further, operators of the aircraft affected by this AD must operate in accordance with the limitations specified in the AFM, in accordance with 14 CFR 91.9.

(i) FMS Software Modification

(1) For Group 1 and Group 2 airplanes: Within 60 days after the effective date of this AD, modify the airplane by installing FMS software P4A (P/N FMS operational SW PS4087700-905) on FMGEC standard P5H3 (P/N FMGEC C13226HA07 with P/N FMS operational SW PS4087700-906), in accordance with the instructions of Airbus Service Bulletin A330-22-3264, dated March 14, 2018.

(2) For Group 2 airplanes: After modification of an airplane as required by paragraph (i)(1) of this AD, the AFM revision required by paragraph (h) of this AD may be removed from the AFM of that airplane.

(j) Optional Modification

For Group 3 airplanes: From the effective date of this AD, it is allowed to modify any airplane into a Group 1 or Group 2 configuration, provided that, concurrently, that airplane is modified in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-22-3264, dated March 14, 2018.

(k) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraph (i) of this AD and optional actions specified in paragraph (j) of this AD, if those actions were performed before the effective date of this AD using Airbus Alert Operators Transmission-AOT A22L002-17, dated October 20, 2017.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Section, Transport Standards 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 International Section, send it to the attention of the person identified in paragraph (m)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA authorized signature.

(3) Required for Compliance (RC): If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2017-0233, dated November 23, 2017, for related information. This MCAI may be found in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0584.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3229.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (n)(3) and (n)(4) of this AD.

(n) 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 this AD specifies otherwise.

(i) Airbus Service Bulletin A330-22-3264, dated March 14, 2018.

(ii) Airbus A330/A340 Airplane Flight Manual Temporary Revision TR774, RNP AR Operations Forbidden with FMGEC Standard P5H3, Issue 1, dated October 16, 2017.

(3) For Airbus SAS service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAL, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email airworthiness.A330-A340@airbus.com; internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) 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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on November 2, 2018.
Jeffrey E. Duven,
Director, System Oversight Division,
Aircraft Certification Service.