



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-9508; Directorate Identifier 2016-NM-065-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2015-22-06 for all Airbus Model A318, A319, A320, and A321 series airplanes. AD 2015-22-06 currently requires revising the After Start Normal Procedures section of the airplane flight manual (AFM) to provide procedures that address latent failures in the Spoiler and Elevator Computer (SEC). Since we issued AD 2015-22-06, there have been reports that some maintenance messages pointed out the loss of elevator servo control monitoring performed by SEC 1, SEC 2, or both, during the engine start. This proposed AD would add a requirement to install updated SEC software. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We 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 by any of the following methods:

- Federal eRulemaking Portal: Go to <http://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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Airbus, Airworthiness Office–EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425 227-1221.

### **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-2016-9508; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations

office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-9508; Directorate Identifier 2016-NM-065-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

On October 22, 2015, we issued AD 2015-22-06, Amendment 39-18311 (80 FR 68429, November 5, 2015) (“AD 2015-22-06”). AD 2015-22-06 requires revision

of the AFM intended to address an unsafe condition that can occur in the SEC for all Airbus Model A318, A319, A320, and A321 series airplanes.

Since we issued AD 2015-22-06, there have been reports that some maintenance messages were recorded within the Post Flight Report (PFR) that pointed out the loss of elevator servo control monitoring performed by SEC 1, SEC 2, or both, during the engine start.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive, 2016-0056, dated March 18, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A318, A319, A320, and A321 series airplanes. The MCAI states:

Following the introduction of new Spoiler and Elevator Computer (SEC) hardware C Part Number (P/N) B372CAM0100 with software (SW) standards 122, 124 and 125 (identified by P/N B372CAM0101, P/N B372CAM0102 and P/N B372CAM0103, respectively, and hereafter referred to as an “affected SEC software standard” in this [EASA] AD), some airlines reported receiving maintenance messages, e.g. “SEC OR WIRING FROM L or R ELEV POS MON XDCCR” and/or “SEC OR WIRING FROM G or Y ELEV POS XDCCR”, which are associated with servo control or elevator transducer monitoring. Such messages are triggered by a short data inconsistency due to power transients, when the engines are started.

This condition, if not corrected, could lead to an undetected loss of redundancy during flight if an affected SEC cannot control the related elevator servo control(s), possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, EASA issued AD 2015-0191 [which corresponds to AD 2015-22-06] to

require amendment of the applicable [Airbus] Airplane Flight Manual (AFM) to include the flight crew procedure necessary to recover full SEC redundancy.

Since that [EASA] AD was issued, to fix the software deficiency, SEC software standard 126 (identified by P/N B372CAM0104) was developed, which is embodied in production through Airbus modification (mod) 161208 (installation of SEC software standard 126), and introduced in service through Airbus Service Bulletin (SB) A320-27-1252.

For the reason described above, this [EASA] AD retains the AFM change requirements of EASA AD 2015-0191, which is superseded, and requires the removal and/or upgrade of [an affected] SEC.

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-2016-9508.

#### **Related Service Information under 1 CFR part 51**

Airbus has issued the following service information:

- Airbus Service Bulletin A320-27-1252, Revision 01, dated February 18, 2016.
- Airbus Service Bulletin A320-27-1257, dated December 18, 2015.

This service information provides information for identifying affected SECs and updating the software on affected SECs. These documents are distinct since they apply to different airplane configurations.

Airbus also issued A318/A319/A320/A321 Temporary Revision TR572, Issue 1.0, dated August 13, 2015, to the Airbus A318/A319/A320/A321 Airplane Flight Manual. This service information describes the reset of SEC 1 and SEC 2 that must be done after engines start.

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 and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

**Differences Between this Proposed AD and the Service Information**

Subtask 271257-832-006-001, Instructions “2” and “3,” in the Accomplishment Instructions of Airbus Service Bulletin A320-27-1257, dated December 18, 2015, have software part numbers that are incorrect. Paragraph (n) of this proposed AD provides the corrected part numbers. The correct part numbers were provided by Airbus in Operators Information Transmission (OIT) 16-0001, Revision 00, dated January 20, 2016.

**Costs of Compliance**

We estimate that this proposed AD affects 959 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

**Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
AFM revision (retained action from AD 2015-22-06)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$81,515

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Removal and replacement of SEC (new proposed action)	4 work-hours X \$85 per hour = \$340	\$0	\$340	\$326,060

### **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.

### **Regulatory Findings**

We 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. 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.

**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 removing Airworthiness Directive (AD) 2015-22-06, Amendment 39-18311 (80 FR 68429, November 5, 2015), and adding the following new AD:

**Airbus:** Docket No. FAA-2016-9508; Directorate Identifier 2016-NM-065-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2015-22-06, Amendment 39-18311 (80 FR 68429, November 5, 2015) (“AD 2015-22-06”).

**(c) Applicability**

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1) through (c)(4) of this AD, all manufacturer serial numbers.

(1) Airbus Model A318-111, -112, -121, and -122 airplanes.

(2) Airbus Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

(3) Airbus Model A320-211, -212, -214, -231, -232, and -233 airplanes.

(4) Airbus Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 27, Flight Controls.

**(e) Reason**

This AD was prompted by reports that some maintenance messages were recorded within the Post Flight Report (PFR) that pointed out the loss of elevator servo control monitoring performed by Spoiler and Elevator Computer (SEC) 1, SEC 2, or both, during the engine start. We are issuing this AD to prevent an undetected loss of redundancy during flight if an affected SEC cannot control the related elevator servo control(s), possibly resulting in reduced control of the airplane.

**(f) Compliance**

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

**(g) Retained Airplane Flight Manual Revision, with Revised Compliance Language**

This paragraph restates the requirements of paragraph (g) of AD 2015-22-06, with revised compliance language. For airplanes equipped with SEC hardware C part number (P/N) B372CAM0100 with software standards 122 (P/N B372CAM0101), 124 (P/N B372CAM0102), or 125 (P/N B372CAM0103), on SEC position 1 or 2, or both: Within 30 days after November 20, 2015 (the effective date of AD 2015-22-06), revise the After Start Normal Procedures section of the airplane flight manual (AFM) to include the statement specified in figure 1 to paragraph (g) of this AD. This may be done by inserting a copy of this AD, or AD 2015-22-06, or Airbus A318/A319/A320/A321 Temporary Revision TR572, Issue 1.0, dated August 13, 2015, to the Airbus A318/A319/A320/A321 AFM, into the applicable AFM.

**Figure 1 to Paragraph (g) of this AD – AFM Temporary Revision**

<p><b>AFTER START NORMAL PROCEDURE</b> <b>After both engines start:</b> Turn OFF then ON SEC 1 and SEC 2 one after the other.</p>
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Note 1 to paragraph (g) of this AD: When a statement identical to that in figure 1 to paragraph (g) of this AD has been included in the After Start Normal Procedures section of the general revisions of the AFM, the general revisions may be inserted into the AFM, and this AD, or AD 2015-22-06, or Airbus A318/A319/A320/A321 Temporary Revision TR572, Issue 1.0, dated August 13, 2015, may be removed from the AFM.

Note 2 to paragraph (g) of this AD: Airbus Operations Engineering Bulletin OEB-50 provides additional information on the subject addressed by this AD.

**(h) Retained Parts Installation Limitation, with No Change**

This paragraph restates the requirements of paragraph (i) of AD 2015-22-06, with no change. For all airplanes: As of November 20, 2015 (the effective date of AD 2015-22-06), do not install SEC hardware C P/N B372CAM0100 with software standard 122 (P/N B372CAM0101), 124 (P/N B372CAM0102), or 125 (P/N B372CAM0103), on SEC position 1 or 2, or both, on any airplane, unless the AFM of the airplane is revised concurrently with that installation, as required by paragraph (g) of this AD.

**(i) New Requirement of this AD: Replacement of Software**

Within 3 months after the effective date of this AD, comply with the actions in paragraphs (i)(1) or (i)(2) of this AD, as applicable.

(1) For an airplane that has received Airbus modification 39429 (installation of SEC hardware C P/N B372CAM0100) in production: Install SEC software standard 126, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-27-1252, Revision 01, dated February 18, 2016.

(2) For an airplane that has not received Airbus modification 39429 in production: Inspect to determine whether an affected SEC software standard is installed. Do the inspection in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-27-1257, dated December 18, 2015, except as required by paragraph (n) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the SEC C can be conclusively determined from that review. If an

affected SEC software standard is found installed, replace the affected software standard using an installation method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA).

**(j) New Requirement of this AD: Compliance for Airplanes Having Airbus Modification 161208 Embodied in Production**

An airplane on which Airbus modification 161208 has been embodied in production is compliant with the requirements of paragraph (i) of this AD, provided it is determined that no affected SEC software standard, as identified in paragraph (g) of this AD, is installed on that airplane.

**(k) New Requirement of this AD: Disposition of AFM after Airplane Modification**

After modification of an airplane as required by paragraph (i) of this AD, remove the information specified in Airbus A318/A319/A320/A321 TR572, Issue 1.0, dated August 13, 2015, to the Airbus A318/A319/A320/A321 AFM from the AFM of that airplane.

**(l) New Requirement of this AD: Parts Installation Prohibition**

As of the effective date of this AD, no person may install on any airplane an affected SEC software standard, or a SEC hardware C hosting an affected SEC software standard.

**(m) New Provision of this AD: Installation of Equivalent Software and Hardware**

Installation on an airplane of a SEC software standard, or of a SEC hardware standard, approved after the effective date of this AD, is acceptable for compliance with

the requirements of paragraph (i) of this AD for that airplane, provided the conditions specified in paragraphs (m)(1) and (m)(2) of this AD are met.

(1) The software and hardware standard, as applicable, is approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA; and

(2) Replacement of the affected software standard is done using an installation method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA.

**(n) Exception to Service Information Specifications**

Subtask 271257-832-006-001 of Airbus Service Bulletin A320-27-1257, dated December 18, 2015, includes incorrect instructions. This AD requires that those instructions be followed as specified in paragraphs (n)(1) and (n)(2) of this AD.

(1) For Subtask 271257-832-006-001 instruction “2”: If SEC C 126 software P/N B372CAM0104 is found, no further action is required by this AD.

(2) For Subtask 271257-832-006-001 instruction “3”: If SEC C 122 software P/N B372CAM0101, SEC C 124 software P/N B372CAM0102, or SEC C 125 software P/N B372CAM0103 is found, do corrective actions using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA.

**(o) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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 Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149. 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. The AMOC approval letter must specifically reference this AD.

**(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 Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA 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.

**(p) Special Flight Permits**

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

**(q) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016-0056, dated March 18, 2016, 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-2016-9508.

(2) For service information identified in this AD, contact Airbus, Airworthiness Office–EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

Issued in Renton, Washington, on December 7, 2016.

Dionne Palermo,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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