



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0343; Product Identifier 2019-NM-206-AD; Amendment 39-21272; AD 2020-20-16]

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2018-17-05, which applied to all Airbus SAS Model A350-941 and -1041 airplanes. AD 2018-17-05 required a check of the insulation resistance of the direct drive solenoid valve (DDSOV) of each affected electro-hydrostatic actuator (EHA) and applicable corrective actions. Since the FAA issued AD 2018-17-05, it was determined that certain EHA part numbers can be modified and re-identified as specified in a European Union Aviation Safety Agency (EASA) AD, which could inadvertently remove certain part numbers from the applicability in other EHA-related ADs including AD 2018-17-05. This AD was prompted by reports of EHA units that were returned to the manufacturer with degraded insulation resistance in the DDSOV; investigation results revealed that moisture ingress, due to incorrect sealing application, had caused this degradation. This AD was also prompted by a report of a technical issue detected on EHAs installed on inboard ailerons

and elevators, causing potential erroneous monitoring of those actuators. This AD requires a check of the insulation resistance of the DDSOV of each affected EHA and applicable corrective actions, and modification or replacement of certain EHAs; as specified in two EASA ADs, which are incorporated by reference. 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 material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this IBR material on the EASA website at <https://ad.easa.europa.eu>. You may view this IBR material at the FAA, Airworthiness Products Section, Operational Safety 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 in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0343.

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-2020-0343; 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, 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: Kathleen Arrigotti, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3218; Kathleen.Arrigotti@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2019-0301, dated December 12, 2019 (“EASA 2019-0301”); and EASA AD 2020-0027R1, dated February 21, 2020 (“EASA AD 2020-0027R1”); (these ADs are also referred to as the Mandatory Continuing Airworthiness Information, or “the MCAI”) to correct an unsafe condition for all Airbus SAS Model A350-941 and -1041 airplanes. EASA AD 2020-0027R1 supersedes EASA AD 2018-0141, dated July 3, 2018 (which corresponds to FAA AD 2018-17-05, Amendment 39-19359 (83 FR 40438, August 15, 2018) (“AD 2018-17-05”).

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2018-17-05. The NPRM published in the Federal Register on May 1, 2020 (85 FR 25345).

AD 2018-17-05 applied to all Airbus SAS Model A350-941 and -1041 airplanes and addressed degraded insulation resistance in the DDSOV, due to incorrect sealing application, which could lead to the DDSOV being unable to command or maintain the

EHA in active mode, possibly resulting in reduced control of the airplane. Since AD 2018-17-05 was issued, it has been determined that certain EHA part numbers can be modified and reidentified as described in EASA AD 2019-0301, which would inadvertently remove certain part numbers from the applicability in other EHA-related ADs. Therefore, EASA issued AD 2020-0027R1 to revise the definition of an affected EHA.

In addition to the determination that certain EHA part numbers might have been inadvertently removed from the actions required by AD 2018-17-05, the NPRM was prompted by reports of EHA units that were returned to the manufacturer with degraded insulation resistance in the DDSOV; investigation results revealed that moisture ingress, due to incorrect sealing application, had caused this degradation. The NPRM was also prompted by a report of a technical issue detected on EHAs installed on inboard ailerons and elevators, causing potential erroneous monitoring of those actuators. The NPRM proposed to require a check of the insulation resistance of the DDSOV of each affected EHA and applicable corrective actions, and modification or replacement of certain EHAs, as specified in EASA AD 2019-0301 and EASA AD 2020-0027R1.

The FAA is issuing this AD to address degraded insulation resistance, which could lead to the DDSOV being unable to command or maintain the EHA in active mode, and possibly result in reduced control of the airplane. The FAA is also issuing this AD to address the possibility of an in-flight loss of inboard aileron or elevator control, which, due to the resulting drag, would lead to increased fuel consumption, and when combined with one engine inoperative, could result in reduced control of the airplane. See the MCAI for additional background information.

Comments

The FAA 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 NPRM

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

Request to Use Technical Adaptions for EASA AD 2019-0301

Delta Airlines (DAL) requested that the proposed AD include Airbus Technical Adaptations 80602190/058/2020 and 80602190/059/2020 approved by the EASA Design Organization Approval (DOA) (EASA.21J.031) as an approved method of compliance to correct the errors identified in certain service information specified in EASA AD 2019-0301. DAL also requested, or allow the accomplishment of maintenance procedure (MP) tasks A350-A-27-14-XX-0A003-345A-A in lieu of testing step 3.E.(b), option 1, as an alternative means of compliance with Airbus Service Bulletin A350-27-P034, Revision 01, dated April 8, 2020; and MP task A350-A-27-34-XX-08003-345A-A in lieu of testing step 3.E.(b), option 1, as an alternative means of compliance to Airbus Service Bulletin A350-27-P036, Revision 01, dated April 8, 2020; for EASA AD 2019-0301.

The FAA partially agrees with the comment. As another method of compliance, the FAA has added paragraph (h)(7) to this AD to allow use of Airbus Technical Adaptations 80602190/058/2020 and 80602190/059/2020 approved by the EASA DOA (EASA.21J.031).

The FAA disagrees with allowing the use of the maintenance procedures tasks specified above because the tasks are not approved by Airbus and Airbus SAS's EASA DOA for use with the service information. However, under the provisions of paragraph (i)(1) of this AD, the FAA will consider requests for the use of certain service information if sufficient data are submitted to substantiate that the change would provide an acceptable level of safety. The FAA has not changed the AD in this regard.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the change described previously and minor editorial changes. The FAA has 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.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related IBR material under 1 CFR Part 51

EASA AD 2019-0301 describes, among other actions, procedures for modifying or replacing affected EHAs. In addition, EASA AD 2020-0027R1 describes procedures for a check of the insulation resistance of the DDSOV of each affected EHA (installed on inboard ailerons, elevators, and rudder) and applicable corrective actions (replacing or reidentifying the affected EHA). This material 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 13 airplanes of U.S. registry. The FAA estimates 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
Up to 28 work-hours X \$85 per hour = Up to \$2,380	\$0**	Up to \$2,380	Up to \$30,940

*Table does not include estimated costs for reporting.

**The FAA has received no definitive data on the parts cost for the modification or replacement specified in this AD.

The FAA estimates that it would take about 1 work-hour per product to comply with the reporting requirement in this AD. The average labor rate is \$85 per hour. Based on these figures, the FAA estimates the cost of reporting the inspection results on U.S. operators to be \$1,105, or \$85 per product.

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
Up to 28 work-hours X \$85 per hour = Up to \$2,380	Up to \$518,314	Up to \$520,694

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

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 that 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 removing Airworthiness Directive (AD) 2018-17-05, Amendment 39-19359 (83 FR 40438, August 15, 2018), and adding the following new AD:

2020-20-16 Airbus SAS: Amendment 39-21272; Docket No. FAA-2020-0343; Product Identifier 2019-NM-206-AD.

(a) Effective Date

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

(b) Affected ADs

This AD replaces AD 2018-17-05, Amendment 39-19359 (83 FR 40438, August 15, 2018) (“AD 2018-17-05”).

(c) Applicability

This AD applies to all Airbus SAS Model A350-941 and -1041 airplanes, certificated in any category.

(d) Subject

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

(e) Reason

This AD was prompted by reports of electro-hydrostatic actuator (EHA) units that were returned to the manufacturer with degraded insulation resistance in the direct drive solenoid valve (DDSOV); investigation results revealed that moisture ingress, due to incorrect sealing application, had caused this degradation. This AD was also prompted by a report of a technical issue detected on EHAs installed on inboard ailerons and elevators,

causing potential erroneous monitoring of those actuators. The FAA is issuing this AD to address degraded insulation resistance, which could lead to the DDSOV being unable to command or maintain the EHA in active mode, and possibly result in reduced control of the airplane. The FAA is also issuing this AD to address the possibility of an in-flight loss of inboard aileron or elevator control, which, due to the resulting drag, would lead to increased fuel consumption, and when combined with one engine inoperative, could result in reduced control of the airplane.

(f) Compliance

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

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2020-0027R1, dated February 21, 2020 (“EASA AD 2020-0027R1”); and EASA AD 2019-0301, dated December 12, 2019 (“EASA AD 2019-0301”).

(h) Exceptions and Clarifications to EASA AD 2019-0301 and EASA AD 2020-0027R1

(1) Where EASA AD 2019-0301 and EASA AD 2020-0027R1 refer to their effective dates, this AD requires using the effective date of this AD.

(2) The “Remarks” section of EASA AD 2019-0301 and EASA AD 2020-0027R1 do not apply to this AD.

(3) Where EASA AD 2019-0301 requires the accomplishment of paragraphs (1) through (6), this AD requires only the accomplishment of paragraphs (5) and (6).

(4) Paragraph (6) of EASA AD 2020-0027R1 specifies to report insulation check results (e.g., results of the detailed inspection of the insulation resistance) to Airbus within a certain compliance time. For this AD, report inspection results at the applicable time specified in paragraph (h)(4)(i) or (ii) of this AD.

(i) If the insulation check was done on or after the effective date of this AD: Submit the report within 30 days after the insulation check.

(ii) If the insulation check was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(5) EASA AD 2020-0027R1 includes a definition for “affected EHA” that specifies “as listed by serial number in the applicable SB.” All serial numbers listed in the “applicable SB” are included in the definition of “affected EHA” regardless of the associated part numbers that are also listed in the “applicable SB.”

(6) For any service information referenced in EASA AD 2019-0301 that specifies to return parts to the manufacturer, that action is not required by this AD.

(7) Where any service information referenced in EASA AD 2019-0301 specifies rigging for testing, this AD allows rigging using Airbus Technical Adaptations 80602190/058/2020 and 80602190/059/2020 approved by the EASA Design Organization Approval (DOA) (EASA.21J.031).

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, Large Aircraft Section, International Validation 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 Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@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 instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* For any service information referenced in EASA AD 2020-0027R1 and paragraphs (5) and (6) of EASA AD 2019-0301 that contains RC procedures and tests: Except as required by paragraph (i)(2) of this AD, RC 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.

(4) *Paperwork Reduction Act Burden Statement:* A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory as required by this AD; the nature and extent of confidentiality to be provided, if any. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

(j) Related Information

For more information about this AD, contact Kathleen Arrigotti, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3218; Kathleen.Arrigotti@faa.gov.

(k) 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.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) European Union Aviation Safety Agency (EASA) AD 2019-0301, dated December 12, 2019.

(ii) EASA AD 2020-0027R1, dated February 21, 2020.

(4) For EASA AD 2019-0301 and EASA AD 2020-0027R1, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find these EASA ADs on the EASA website at <https://ad.easa.europa.eu>.

(5) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0343.

(6) You may view this material 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 September 25, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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