



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-9187; Directorate Identifier 2016-NM-032-AD; Amendment 39-18777; AD 2017-01-10]**

**RIN 2120-AA64**

**Airworthiness Directives;** Airbus Defense and Space S.A. (Formerly Known as Construcciones Aeronauticas, S.A.) 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 Defense and Space S.A. Model C-212 airplanes. This AD was prompted by multiple reports of damaged and cracked rudder torque tube shafts. This AD requires various repetitive inspections, and corrective actions if necessary. This AD also provides a modification which terminates the repetitive inspections. We are 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 Airbus Defense and Space, Services / Engineering Support, Avenida de Aragón 404, 28022 Madrid, Spain; telephone: +34 91 585 55 84; fax: +34 91 585 31 27; email: MTA.TechnicalService@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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9187.

**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-2016-9187; 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 AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone: 800-647-5527) is Docket Management Facility, 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:** Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-227-1112; fax: 425-227-1149.

## **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 Defense and Space S.A. Model C-212 airplanes. The NPRM published in the Federal Register on October 11, 2016 (81 FR 70062). The NPRM was prompted by multiple reports of damaged and cracked rudder torque tube shafts. The NPRM proposed to require repetitive general visual and high frequency eddy current (HFEC) inspections of the inner rudder torque tube shaft for cracks, deformation, and damage; repetitive detailed inspections, and HFEC inspections, if necessary, of the inner and outer rudder torque tube shaft for cracks, deformation, and damage; and corrective actions if necessary. We are issuing this AD to detect and correct damaged and cracked rudder torque tube shafts, which could lead to structural failure of the affected rudder torque tube shaft and possible reduced control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2016-0052, dated March 14, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Defense and Space S.A. Model C-212 airplanes. The MCAI states:

Occurrences were reported of finding a damaged and cracked rudder torque tube shaft, Part Number (P/N) 212-46237-01. Subsequent investigation determined that this damage occurred after parking of the aeroplane during a heavy wind gust, without having set the flight control surfaces in locked position.

This condition, if not detected and corrected, could lead to structural failure of the affected rudder torque tube shaft, possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, EADS-CASA issued Alert Operators Transmission (AOT) AOT-C212-27-0001 to provide inspection instructions, and Service Bulletin (SB) SB-212-27-0058 providing modification instructions.

For the reasons described above, this [EASA] AD requires repetitive inspections of the affected rudder torque tube shaft, and introduces an optional modification [replacement], which constitutes terminating action for those repetitive inspections.

Required actions include repetitive general visual and HFEC inspections of the inner rudder torque tube shaft for cracks, deformation, and damage; repetitive detailed inspections, and HFEC inspections, if necessary, of the inner and outer rudder torque tube shaft for cracks, deformation, and damage; a general visual inspection to verify rudder alignment if necessary; and corrective actions if necessary. Repetitive inspections are done depending on conditions (wind conditions, gust lock engagement, and rudder deviation) identified in Airbus Defense & Space Alert Operators Transmission AOT-C212-27-0001, Revision 0, dated July 15, 2015 (“AOT-C212-27-0001, Rev. 0”). Damage may include bulging, dents, peeled paint, or visible corrosion. Corrective actions include replacement of the rudder torque tube shaft with a new rudder torque tube shaft, and repair. The optional terminating action includes replacement of the rudder torque tube shaft with an improved rudder torque tube shaft. 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-2016-9187.

## **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

## **Clarification of the Actions in Paragraph (g)(2) of the Proposed AD**

Paragraph (g)(2) of the proposed AD specifies to do inspections “after the conditions” identified in paragraph 3.1.1.1 of AOT-C212-27-0001, Rev. 0. We have revised paragraph (g)(2) of the AD to clarify the inspections are done after any weather event that includes the conditions identified in paragraph 3.1.1.1 of AOT-C212-27-0001, Rev. 0.

## **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD with the change described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting 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**

We reviewed the following Airbus Defense and Space service information.

- EADS CASA Service Bulletin SB-212-27-0058, dated April 25, 2014. This service information describes procedures for replacement of the rudder torque tube shaft with an improved rudder torque tube shaft.

- AOT-C212-27-0001, Rev. 0. This service information describes procedures for general visual and HFEC inspections of the inner rudder torque tube shaft for cracks, deformation, and damage; detailed inspections, and HFEC inspections, if necessary, of the inner and outer rudder torque tube shaft for cracks, deformation, and damage; a general visual inspection to verify rudder alignment; and corrective actions, if necessary.

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**

We estimate that this AD affects 49 airplanes of U.S. registry.

We estimate the following costs to comply with this 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>
Inspections	Up to 33 work-hours X \$85 per hour = \$2,805 per inspection cycle	\$0	Up to \$2,805 per inspection cycle	Up to \$137,445 per inspection cycle

**Estimated costs for optional actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Optional modification	Up to 48 work-hours X \$85 per hour = \$4,080	\$48,729	Up to \$52,809

We have received no definitive data that will enable us to provide cost estimates for the on-condition actions and parts cost specified in this AD.

## **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 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):

**2017-01-10 Airbus Defense and Space S.A. (Formerly Known as Construcciones Aeronauticas, S.A.):** Amendment 39-18777; Docket No. FAA-2016-9187; Directorate Identifier 2016-NM-032-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 Airbus Defense and Space S.A. (formerly known as Construcciones Aeronauticas, S.A.) Model C-212-CB, C-212-CC, C-212-CD, C-212-CE, C-212-CF, C-212-DF, and C-212-DE airplanes, certificated in any category, all manufacturer serial numbers.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by multiple reports of damaged and cracked rudder torque tube shafts. We are issuing this AD to detect and correct damaged and cracked rudder torque tube shafts, which could lead to structural failure of the affected rudder torque tube shaft and possible reduced control of the airplane.

**(f) Compliance**

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

**(g) Repetitive Inspections**

For airplanes equipped with a rudder torque tube shaft having part number (P/N) 212-46237-01: Do the actions specified in paragraphs (g)(1) and (g)(2) of this AD.

(1) Within 30 days after the effective date of this AD: Do general visual, detailed, and high frequency eddy current (HFEC) inspections of the inner and outer surfaces of the rudder torque tube shaft, as applicable, for cracks, deformation, and damage, in accordance with the instructions of Airbus Defense & Space Alert Operators

Transmission AOT-C212-27-0001, Revision 0, dated July 15, 2015 (“AOT-C212-27-0001, Rev. 0”).

(2) Thereafter, before further flight after any weather event that includes the conditions identified in paragraph 3.1.1.1 of AOT-C212-27-0001, Rev. 0, do the applicable inspections identified for each condition.

**(h) Corrective Actions**

If, during any inspection required by paragraph (g) of this AD, any crack, deformation, or damage is found, before further flight do all applicable corrective actions, in accordance with AOT-C212-27-0001, Rev. 0. Where AOT-C212-27-0001, Rev. 0, specifies to contact Airbus for corrective action: Before further flight, accomplish corrective actions in accordance with the procedures specified in paragraph (k)(2) of this AD.

**(i) Optional Modification**

Modification of an airplane by replacing the rudder torque tube shaft P/N 212-46237-01 with an improved part, in accordance with the Accomplishment Instructions of EADS CASA Service Bulletin SB-212-27-0058, dated April 25, 2014, constitutes terminating action for the inspections required by paragraphs (g)(1) and (g)(2) of this AD for the modified airplane.

**(j) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using

Airbus Military All Operator Letter (AOL) AOL-212-037, Revision 01, dated April 11, 2014.

**(k) 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: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-227-1112; 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.

**(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 the European Aviation Safety Agency (EASA); or EADS CASA's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(l) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2016-0052, dated March 14, 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-2016-9187.

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

**(m) 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) EADS CASA Service Bulletin SB-212-27-0058, dated April 25, 2014.

(ii) Airbus Defense & Space Alert Operators Transmission AOT-C212-27-0001, Revision 0, dated July 15, 2015.

(3) For service information identified in this AD, contact Airbus Defense and Space, Services / Engineering Support, Avenida de Aragón 404, 28022 Madrid, Spain; telephone: +34 91 585 55 84; fax: +34 91 585 31 27; email: [MTA.TechnicalService@Airbus.com](mailto:MTA.TechnicalService@Airbus.com).

(4) You may view this 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.

(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 Renton, Washington, on January 4, 2017.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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