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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0385; Directorate Identifier 2010-NM-256-AD; Amendment 39-16780; AD 2011-17-16]

RIN 2120-AA64

Airworthiness Directives; Airbus Model A330-200, A330-300, A340-300, A340-500, and A340-600 Series Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

During a Back-up Control Module (BCM) retrofit campaign * * *, some BCMs have been found with loose gyrometer screws.

* * * When the aeroplane is in control back up configuration (considered to be an extremely remote case), an oscillation of the BCM output order may cause degradation of the BCM piloting laws, potentially leading to erratic motion of the rudder and possible subsequent impact on the Dutch Roll, which constitutes an unsafe condition.

* * * * *

* * * [S]everal Pedal Feel Trim Units (PFTU) have been found with loose or broken screws during the accomplishment of maintenance tasks on A330 fitted with electrical rudder and A340-600. The loose or failed screws could lead to the loss of the coupling between the Rotary Variable Differential Transducer (RVDT) shaft and the PFTU shaft, and consequently to a potential rudder runaway when the BCM is activated.

* * * * *

The unsafe condition is loss of control of the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective September 26, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 26, 2011.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on April 26, 2011 (76 FR 23218). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During a Back-up Control Module (BCM) retrofit campaign in accordance with [European Aviation Safety Agency] (EASA) AD 2006-0313 requirements, some BCMs have been found with loose gyrometer screws.

The gyrometer is installed on the DELRIN plate by internal screws and the DELRIN plate is installed on BCM casing by external screws.

Investigations done by the BCM manufacturer SAGEM have shown that the root cause of these events is a lack of design robustness of the BCM[.] When the aeroplane is in control back up configuration (considered to be an extremely remote case), an oscillation of the BCM output order may cause degradation of the BCM piloting laws, potentially leading to erratic motion of the rudder and possible subsequent impact on the Dutch Roll, which constitutes an unsafe condition.

EASA AD 2008-0131 was issued to prohibit aeroplane dispatch with FCPC3 [flight control primary computer] inoperative (from GO IF to NO GO) as an interim solution, limited to A330 and A340-300 fitted with electrical rudder.

After EASA AD 2008-0131 issuance, several Pedal Feel Trim Units (PFTU) have been found with loose or broken screws during the accomplishment of maintenance tasks on A330 fitted with electrical rudder and A340-600. The loose or failed screws could lead to the loss of the coupling between the Rotary Variable Differential Transducer (RVDT) shaft and the PFTU shaft, and consequently to a potential rudder runaway when the BCM is activated.

EASA AD 2009-0153 retained the requirements of EASA AD 2008-0131 and extended the applicability to A340-500/600 aeroplanes.

This [EASA] AD, which supersedes EASA AD 2009-0153 retaining its requirements, requires the installation of:

- a new BCM on A330 and A340-200/-300 series aeroplanes fitted with electrical rudder, and
- an improved PFTU on A330 and A340-200/-300 series aeroplanes fitted with an electrical rudder and A340-500/&600 series aeroplanes, which, once installed, eliminate the root cause of the unsafe condition and cancel the operational limitation.

* * * * *

The unsafe condition is loss of control of the airplane. You may obtain further information by examining the MCAI in the AD docket.

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.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a Note within the AD.

Costs of Compliance

We estimate that this AD will affect 46 products of U.S. registry. We also estimate that it will take about 17 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$0 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$66,470, or \$1,445 per product.

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 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); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, 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.

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 AD:



2011-17-16 Airbus: Amendment 39-16780. Docket No. FAA-2011-0385; Directorate Identifier 2010-NM-256-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective September 26, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to airplanes specified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, certificated in any category.

(1) Airbus Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes, all manufacturer serial numbers on which Airbus modification 49144 (install electrical rudder) has been embodied in production, except those on which Airbus modification 58118 and Airbus modification 200667 have been embodied in production.

(2) Airbus Model A340-311, -312, and -313 airplanes, all manufacturer serial numbers on which Airbus modification 49144 has been embodied in production, except those on which Airbus modification 58118 and Airbus modification 200667 have been embodied in production.

(3) Airbus Model A340-541 and -642 airplanes, all manufacturer serial numbers, except those on which Airbus modification 200667 has been embodied in production.

Subject

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

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

During a Back-up Control Module (BCM) retrofit campaign * * *, some BCMs have been found with loose gyrometer screws.

* * * When the aeroplane is in control back up configuration (considered to be an extremely remote case), an oscillation of the BCM output order may cause degradation of the BCM piloting laws, potentially leading to erratic motion of the rudder and possible subsequent impact on the Dutch Roll, which constitutes an unsafe condition.

* * * * *

* * * [S]everal Pedal Feel Trim Units (PFTU) have been found with loose or broken screws during the accomplishment of maintenance tasks on A330 fitted with electrical rudder and A340-600. The loose or failed screws could lead to the loss of the coupling

between the Rotary Variable Differential Transducer (RVDT) shaft and the PFTU shaft, and consequently to a potential rudder runaway when the BCM is activated.

* * * * *

The unsafe condition is loss of control of the airplane.

Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Dispatch Prohibition

(g) As of the effective date of this AD, dispatch with the flight control primary computer (FCPC) 3 "PRIM 3" inoperative is prohibited unless the applicable modifications required by this AD have been done within the compliance time in this AD.

Airplane Flight Manual (AFM) Revision

(h) Within 30 days after the effective date of this AD, revise the Limitations section of the Airbus A330 or A340 AFM, as applicable, to include the following statement: "Dispatch with the flight control primary computer (FCPC) 3 "PRIM 3" inoperative is prohibited." This may be done by inserting a copy of this AD into the applicable AFM.

Note 1: When a statement identical to that in paragraph (h) of this AD has been included in the general revisions of the applicable AFM, the general revisions may be inserted into the applicable AFM, and the copy of this AD may be removed from the applicable AFM.

Modification

(i) For Airbus Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, and A340-311, -312, and -313 series airplanes: Within 48 months after the effective date of this AD, do the actions specified in paragraphs (i)(1) and (i)(2) of this AD:

(1) Modify the BCM, in accordance with the Accomplishment Instruction of Airbus Service Bulletin A330-27-3161 (for Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -341, -343 airplanes) or A340-27-4160 (for Model A340-311, -312, and -313 airplanes), both dated November 6, 2009.

(2) Modify the PFTU, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3169 or A340-27-4167, both dated May 3, 2010, as applicable.

(j) For Airbus Model 340-541 and -642 airplanes: Within 48 months after the effective date of this AD, modify the PFTU, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A340-27-5053, dated May 3, 2010.

Terminating Action

(k) Modifying both the BCM and PFTU as required by paragraphs (i)(1) and (i)(2) of this AD terminates the requirements of paragraphs (g) and (h) of this AD.

(l) Modifying the PFTU as required by paragraph (j) of this AD terminates the requirements in paragraphs (g) and (h) of this AD.

FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

(m) 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: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149. Information may be e-mailed 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) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

Related Information

(n) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2010-0191, dated September 27, 2010 [Corrected October 7, 2010], and the service bulletins listed in table 1 of this AD, for related information.

Table 1—Airbus Service Bulletins

Document	Date
Airbus Mandatory Service Bulletin A330-27-3169	May 3, 2010
Airbus Mandatory Service Bulletin A340-27-4167	May 3, 2010
Airbus Mandatory Service Bulletin A340-27-5053	May 3, 2010
Airbus Service Bulletin A330-27-3161	November 6, 2009
Airbus Service Bulletin A340-27-4160	November 6, 2009

Material Incorporated by Reference

(o) You must use the service information contained in table 2 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Airbus SAS—Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; e-mail airworthiness.A330-A340@airbus.com; Internet <http://www.airbus.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the 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/code_of_federal_regulations/ibr_locations.html.

Table 2—Material Incorporated by Reference

Document	Date
Airbus Mandatory Service Bulletin A330-27-3169	May 3, 2010
Airbus Mandatory Service Bulletin A340-27-4167	May 3, 2010
Airbus Mandatory Service Bulletin A340-27-5053	May 3, 2010
Airbus Service Bulletin A330-27-3161	November 6, 2009
Airbus Service Bulletin A340-27-4160	November 6, 2009

Issued in Renton, Washington on August 10, 2011.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.