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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2009-0264; Directorate Identifier 2008-NM-174-AD; Amendment 39-16017; AD 2009-18-20]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

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**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:

One Long Range operator experienced a failure of one spoiler servo-control, associated with surface deflection in flight and hydraulic leak. On ground, this servo-control Part Number (P/N) MZ4306000-02X was found with the maintenance cover broken. Investigations showed that the rupture of the maintenance cover was due to pressure pulse fatigue.

\* \* \* The rupture of the maintenance cover in flight may result in the deflection of the associated spoiler surface up to the null-hinge position (loss of the hydraulic locking).

It may also result in the loss of the associated hydraulic system (external leakage). In the worst case, the three hydraulic systems may be affected, which constitutes an unsafe condition.

\* \* \* \* \*

Loss of the three hydraulic systems could result in reduced controllability of the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective October 14, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 14, 2009.

**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 March 26, 2009 (74 FR 13148). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

One Long Range operator experienced a failure of one spoiler servo-control, associated with surface deflection in flight and hydraulic leak. On ground, this servo-control Part Number (P/N) MZ4306000-02X was found with the maintenance cover broken. Investigations showed that the rupture of the maintenance cover was due to pressure pulse fatigue.

The maintenance cover allows switching the servo-control from "Operational" to "Maintenance" modes. The same cover is installed on all standard MZ spoiler servo-controls except on P/N MZ4339390-12 and MZ4306000-12, which have a reinforced maintenance cover. The rupture of the maintenance cover in flight may result in the deflection of the associated spoiler surface up to the null-hinge position (loss of the hydraulic locking). It may also result in the loss of the associated hydraulic system (external leakage). In the worst case, the three hydraulic systems may be affected, which constitutes an unsafe condition.

For the reasons described above, this EASA (European Aviation Safety Agency) AD requires the identification and the modification of all standard MZ spoiler servo-controls with initial maintenance cover (P/N MZ4339390-01X, -02X, -10X for position 1 and P/N MZ4306000-01X, -02X, -10X for positions 2 to 6) into standard MZ servo-controls with reinforced maintenance cover (P/N MZ4339390-12 for position 1 and P/N MZ4306000-12 for positions 2 to 6).

Loss of the three hydraulic systems could result in reduced controllability of the airplane. You may obtain further information by examining the MCAI in the AD docket.

### **Revised Service Information**

We have reviewed Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008. We referred to Airbus Service Bulletin A330-27-3110, Revision 02, dated March 2, 2007, as the appropriate source of service information for accomplishing certain actions specified in the NPRM. We have determined that the actions specified in Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008, are essentially the same as the actions specified in Airbus Service Bulletin A330-27-3110, Revision 02, dated March 2, 2007. Therefore, we find that no additional work will be required for airplanes that have done the requirements of this AD in accordance with Airbus Service Bulletin A330-27-3110, Revision 02, dated March 2, 2007. We have

changed paragraphs (f)(2) through (f)(6) of this AD to refer to Revision 03, dated September 3, 2008, of Airbus Service Bulletin A330-27-3110. We have also changed paragraph (f)(7) of this AD to give credit to operators who have accomplished the actions in accordance with Airbus Service Bulletin A330-27-3110, Revision 02, dated March 2, 2007, as well as the earlier versions of the service bulletin.

## **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

## **Request To Clarify Proposed Applicability**

Airbus asks that the applicability specified in paragraph (c) of the NPRM be clarified. Airbus notes that the language "\* \* \* except those identified in paragraphs (c)(1) and (c)(2) of this AD" is misleading, because the exceptions are already included in paragraphs (c)(1) and (c)(2) of the AD.

We agree with Airbus. We have changed paragraph (c) of this AD as follows: "This AD applies to Airbus Model A330-300, A340-200, and A340-300 series airplanes; certificated in any category; as identified in paragraphs (c)(1) and (c)(2) of this AD."

## **Request To Clarify Paragraphs (f)(1), (f)(2)(i), and (f)(2)(ii) of the NPRM**

Airbus also asks that the words "of the aircraft" be added to the applicable paragraphs after the words "since first flight" for clarification. Airbus notes that the missing text is confusing to operators, who are asking Airbus if "since first flight" refers to flight hours on the equipment or flight hours on the airplane.

We agree with Airbus. It was our intent that the phrase "since first flight" apply to the subject airplanes, not equipment. Therefore, we have changed all applicable references in paragraphs (f)(1) through (f)(6) of this AD to specify "since first flight of the airplane."

## **Conclusion**

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## **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**

Based on the service information, we estimate that this AD affects 16 products of U.S. registry. We also estimate that it takes 1 work-hour per product to comply with the basic requirements of this

AD. The average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$1,280, or \$80 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:



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**2009-18-20 Airbus:** Amendment 39-16017. Docket No. FAA-2009-0264; Directorate Identifier 2008-NM-174-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective October 14, 2009.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Airbus Model A330-300, A340-200, and A340-300 series airplanes; certificated in any category; as identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Airbus Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes, manufacturer serial numbers (MSNs) up to and including MSN 588, except those on which Airbus Service Bulletin A330-27-3110 has been embodied in service.

(2) Airbus Model A340-211, -212, -213, -311, -312, and -313 airplanes, MSNs up to and including MSN 598, except those on which Airbus Service Bulletin A340-27-4115 has been embodied in service.

**Subject**

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

**Reason**

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

One Long Range operator experienced a failure of one spoiler servo-control, associated with surface deflection in flight and hydraulic leak. On ground, this servo-control Part Number (P/N) MZ4306000-02X was found with the maintenance cover broken. Investigations showed that the rupture of the maintenance cover was due to pressure pulse fatigue.

The maintenance cover allows switching the servo-control from "Operational" to "Maintenance" modes. The same cover is installed on all standard MZ spoiler servo-controls except on P/N MZ4339390-12 and MZ4306000-12, which have a reinforced maintenance cover. The rupture of the maintenance cover in flight may result in the deflection of the associated spoiler surface up to the null-hinge position (loss of the hydraulic locking). It may also result in the loss of the associated hydraulic system (external leakage). In the worst case, the three hydraulic systems may be affected, which constitutes an unsafe condition.

For the reasons described above, this EASA (European Aviation Safety Agency) AD requires the identification and the modification of all standard MZ spoiler servo-controls with initial maintenance cover (P/N MZ4339390-01X, -02X, -10X for position 1 and P/N MZ4306000-01X, 02X, -10X for positions 2 to 6) into standard MZ servo-controls with reinforced maintenance cover (P/N MZ4339390-12 for position 1 and P/N MZ4306000-12 for positions 2 to 6).

Loss of the three hydraulic systems could result in reduced controllability of the airplane.

## **Actions and Compliance**

(f) Unless already done, do the following actions.

(1) For airplanes that have accumulated more than 8,500 total flight cycles since first flight of the airplane as of the effective date of this AD: Do the actions required by paragraphs (f)(1)(i) and (f)(1)(ii) of this AD, as applicable.

(i) Within 3 months after the effective date of this AD: Identify the part number of spoiler servo-controls installed on the airplane at all positions in order to determine the number of affected hydraulic circuits in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27A3154, Revision 01; or Airbus Mandatory Service Bulletin A340-27A4154, Revision 01; both dated July 25, 2008; as applicable. If there is no spoiler servo-control installed with a part number identified in Table 1 of this AD, no further action is required by this paragraph.

(ii) If there is any spoiler servo-control installed with a part number identified in Table 1 of this AD, do all applicable actions required by paragraph (f)(2), (f)(3), or (f)(4) of this AD, as applicable.

**Table 1 – Spoiler Servo-Control Part Numbers**

<b>Position 1</b>	<b>Positions 2 through 6</b>
MZ4339390-01X	MZ4306000-01X
MZ4339390-02X	MZ4306000-02X
MZ4339390-10X	MZ4306000-10X

(2) If three affected hydraulic circuits are identified during the inspection required by paragraph (f)(1) of this AD, do the actions required by paragraphs (f)(2)(i), (f)(2)(ii), and (f)(2)(iii) of this AD, at the time specified.

(i) Before the accumulation of 10,400 total flight cycles since first flight of the airplane, or within 3 months after accomplishing the requirements of paragraph (f)(1)(i) of this AD, whichever occurs later: Modify the affected spoiler servo-controls on one hydraulic circuit in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(ii) Before the accumulation of 10,800 total flight cycles since first flight of the airplane, or within 6 months after accomplishing the requirements in paragraph (f)(1)(i) of this AD, whichever occurs later: Modify the affected spoiler servo-controls on the second hydraulic circuit in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(iii) Within 18 months after the effective date of this AD: Modify the remaining affected spoiler servo-controls in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(3) If two affected hydraulic circuits are identified during the inspection required by paragraph (f)(1) of this AD, do the actions required by paragraphs (f)(3)(i) and (f)(3)(ii) of this AD, at the time specified.

(i) Before the accumulation of 10,800 total flight cycles since first flight of the airplane, or within 6 months after accomplishing the requirements specified in paragraph (f)(1)(i) of this AD, whichever occurs later: Modify the affected spoiler servo-controls on one hydraulic circuit in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(ii) Within 18 months after the effective date of this AD: Modify the remaining affected spoiler servo-controls in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(4) If one affected hydraulic circuit is identified during the inspection required by paragraph (f)(1) of this AD: Within 18 months after the effective date of this AD, modify the affected spoiler servo-controls in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(5) For airplanes that have accumulated less than or equal to 8,500 total flight cycles since first flight of the airplane as of the effective date of this AD: Do the actions required by paragraphs (f)(5)(i) and (f)(5)(ii) of this AD, as applicable.

(i) Within 9 months after the effective date of this AD: Do the actions specified in paragraph (f)(1)(i) of this AD. If there is no spoiler servo-control installed with a part number identified in Table 1 of this AD, no further action is required by this paragraph.

(ii) If there is any spoiler servo-control installed with a part number identified in Table 1 of this AD: Within 18 months after the effective date of this AD, modify all the affected spoiler servo-controls in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(6) As of the effective date of this AD, no person may install any spoiler servo-control with a part number identified in Table 1 of this AD on any airplane as a replacement part, unless the part has been modified in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3110, Revision 03, dated September 3, 2008; or Airbus Service Bulletin A340-27-4115, Revision 01, dated March 2, 2007; as applicable.

(7) Actions accomplished before the effective date of this AD in accordance with the service bulletins specified in Table 2 of this AD are considered acceptable for compliance with the corresponding requirements of this AD.

**Table 2 – Credit Service Information**

<b>Service Bulletin</b>	<b>Revision Level</b>	<b>Date</b>
Airbus Service Bulletin A330-27-3110	Original	November 28, 2003
Airbus Service Bulletin A330-27-3110	01	March 26, 2004
Airbus Service Bulletin A330-27-3110	02	March 2, 2007
Airbus Service Bulletin A340-27-4115	Original	November 28, 2003

#### **FAA AD Differences**

Note 1: This AD differs from the MCAI and/or service information as follows: No differences.

## Other FAA AD Provisions

(g) 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. Send information 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. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(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.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## Related Information

(h) Refer to EASA Airworthiness Directive 2008-0160, dated August 22, 2008, and the service bulletins specified in Table 3 of this AD, for related information.

**Table 3 – Related Service Information**

<b>Service Bulletin</b>	<b>Revision Level</b>	<b>Date</b>
Airbus Mandatory Service Bulletin A330-27A3154	01	July 25, 2008
Airbus Mandatory Service Bulletin A340-27A4154	01	July 25, 2008
Airbus Service Bulletin A330-27-3110	03	September 3, 2008
Airbus Service Bulletin A340-27-4115	01	March 2, 2007

## Material Incorporated by Reference

(i) You must use the service information contained in Table 4 of this AD to do the actions required by this AD, as applicable, 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](mailto: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 or 425-227-1152.

(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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**Table 4 – Material Incorporated by Reference**

<b>Service Bulletin</b>	<b>Revision Level</b>	<b>Date</b>
Airbus Mandatory Service Bulletin A330-27A3154, excluding Appendix 1	01	July 25, 2008
Airbus Mandatory Service Bulletin A340-27A4154, excluding Appendix 1	01	July 25, 2008
Airbus Service Bulletin A330-27-3110	03	September 3, 2008
Airbus Service Bulletin A340-27-4115	01	March 2, 2007

Issued in Renton, Washington, on August 26, 2009.

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