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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2009-1092; Directorate Identifier 2009-NM-219-AD; Amendment 39-16068; AD 2009-24-09]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule; request for comments.

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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:

An A330 operator experienced a low level of the Yellow hydraulic circuit due to a loose[ning] of check valve part number (P/N) CAR401. During the inspection on the other two hydraulic systems, the other three CAR401 check valves were also found to be loose with their lock wire broken in two instances.

A340 aeroplanes are also equipped with the same high pressure manifold check valves.

Investigations are on-going to determine the root cause of this event.

Additional cases of CAR401 check valve loosening have been experienced in service on aeroplanes having accumulated more than 1000 flight cycles (FC). The check valve fitted on the Yellow hydraulic system is more affected, probably due to additional system cycles induced by cargo door operation.

The loss of torque due to pressure cycles could contribute to check valve loosening, resulting in a leak and finally the loss of the associated hydraulic system and, in the worst case, of the three hydraulic systems of the aeroplane.

\* \* \* \* \*

The unsafe condition is the possible loss of all three hydraulic systems, which could result in loss of control of the airplane. This AD requires actions that are intended to address the unsafe condition described in the MCAI.

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

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

We must receive comments on this AD by January 11, 2010.

**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 W12-40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **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 this 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:** 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**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Emergency Airworthiness Directive 2009-0223-E, dated October 13, 2009 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

An A330 operator experienced a low level of the Yellow hydraulic circuit due to a loose[ning] of check valve part number (P/N) CAR401. During the inspection on the other two hydraulic systems, the other three CAR401 check valves were also found to be loose with their lock wire broken in two instances.

A340 aeroplanes are also equipped with the same high pressure manifold check valves.

Investigations are on-going to determine the root cause of this event.

Additional cases of CAR401 check valve loosening have been experienced in service on aeroplanes having accumulated more than 1000 flight cycles (FC). The check valve fitted on the Yellow hydraulic system is more affected, probably due to additional system cycles induced by cargo door operation.

The loss of torque due to pressure cycles could contribute to check valve loosening, resulting in a leak and finally the loss of the associated hydraulic system and, in the worst case, of the three hydraulic systems of the aeroplane.

This AD requires to perform the following inspection programme to detect any check valve loosening and, if necessary, apply the associated corrective actions:

1st Step: On yellow and blue hydraulic circuits: lock wire inspection, inspection for traces of seepage or black deposit, check valve torque and red marking application.

2nd Step: On green hydraulic circuit: same inspections as required in 1st Step and on yellow and blue hydraulic circuits: inspection of check valves for condition.

Finally: On green, yellow and blue hydraulic circuits: repetitive inspection of check valves for condition.

The unsafe condition is the possible loss of all three hydraulic systems, which could result in loss of control of the airplane. The inspection program involves a detailed inspection of the lock wire for presence and integrity, a detailed inspection for traces of seepage or black deposits, an inspection for proper torque, and a detailed inspection to determine alignment of the check valve and manifold. The corrective actions include replacing seal assemblies, replacing the check valve, removing the lock wire, and re-torquing the check valve. The required actions also include installing a new lock wire. You may obtain further information by examining the MCAI in the AD docket.

### **Relevant Service Information**

Airbus has issued All Operators Telexes A330-29A3111 and A340-29A4086, both Revision 1, both dated October 8, 2009. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

### **FAA's Determination and Requirements of This 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 issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

### **Differences Between the 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 FAA policies. Any such differences are highlighted in a NOTE within the AD.

### **FAA's Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the compliance time defined in the MCAI is 28 days for initial inspection. Loss of torque could lead to loosening of the check valve. Loosening of the check valve can lead to a hydraulic leak with possible loss of the associated hydraulic system, and in the case of the loss of all three hydraulic systems of the airplane. Loss of a hydraulic system could result in reduced controllability and increased workload for the flightcrew. Loss of all three hydraulic systems could result in loss of control of the airplane. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2009-1092; Directorate Identifier 2009-NM-219-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of 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 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 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.

## **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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**2009-24-09 AIRBUS:** Amendment 39-16068. Docket No. FAA-2009-1092; Directorate Identifier 2009-NM-219-AD.

**Effective Date**

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

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to all Airbus Model A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 series airplanes, all manufacturer serial numbers; and Model A340-211, -212, -213, -311, -312, and -313 series airplanes, all manufacturer serial numbers; certificated in any category.

**Subject**

(d) Air Transport Association (ATA) of America Code 29: Hydraulic Power.

**Reason**

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

An A330 operator experienced a low level of the Yellow hydraulic circuit due to a loose[ning] of check valve part number (P/N) CAR401. During the inspection on the other two hydraulic systems, the other three CAR401 check valves were also found to be loose with their lock wire broken in two instances.

A340 aeroplanes are also equipped with the same high pressure manifold check valves.

Investigations are on-going to determine the root cause of this event.

Additional cases of CAR401 check valve loosening have been experienced in service on aeroplanes having accumulated more than 1000 flight cycles (FC). The check valve fitted on the Yellow hydraulic system is more affected, probably due to additional system cycles induced by cargo door operation.

The loss of torque due to pressure cycles could contribute to check valve loosening, resulting in a leak and finally the loss of the associated hydraulic system and, in the worst case, of the three hydraulic systems of the aeroplane.

This AD requires to perform the following inspection programme to detect any check valve loosening and, if necessary, apply the associated corrective actions:

1st Step: On yellow and blue hydraulic circuits: lock wire inspection, inspection for traces of seepage or black deposit, check valve torque and red marking application.

2nd Step: On green hydraulic circuit: same inspections as required in 1st Step and on yellow and blue hydraulic circuits: inspection of check valves for condition.

Finally: On green, yellow and blue hydraulic circuits: repetitive inspection of check valves for condition.

The unsafe condition is the possible loss of all three hydraulic systems, which could result in loss of control of the airplane. The inspection program involves a detailed inspection of the lock wire for presence and integrity, a detailed inspection for traces of seepage or black deposits, an inspection for proper torque, and a detailed inspection to determine alignment of the check valve and manifold. The corrective actions include replacing seal assemblies, replacing the check valve, removing the lock wire, and re-torquing the check valve. The required actions also include installing a new lock wire.

## 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.

## Actions

(g) Do the actions required by paragraphs (g)(1) through (g)(3) of this AD.

(1) For airplanes that do not have Airbus Modification 54491 embodied in production, or Airbus Service Bulletin A330-29-3101 or Airbus Service Bulletin A340-29-4078 embodied in service: Within 100 flight cycles or 28 days after the effective date of this AD, whichever occurs first, inspect the check valves on the blue, green, and yellow hydraulic systems to identify their P/Ns, in accordance with the instructions of Airbus All Operators Telex (AOT) A330-29A3111, Revision 1, dated October 8, 2009 (for Model A330-200 and -300 series airplanes); or AOT A340-29A4086, Revision 1, dated October 8, 2009 (for Model A340-200 and -300 series airplanes).

(i) If check valves having P/N CAR401 are installed on all three hydraulic systems, before further flight, do the actions specified in paragraph (g)(2)(i) of this AD. After accomplishing the actions required by paragraph (g)(2)(i) of this AD, do the actions specified in paragraphs (g)(2)(ii) and (g)(2)(iii) of this AD at the applicable compliance times specified in those paragraphs.

(ii) If check valves having P/N CAR401 are not installed on all three hydraulic systems, no further action is required until any check valve having P/N CAR400 is replaced with a check valve having P/N CAR401. If any check valve having P/N CAR400 is replaced by a check valve having P/N CAR401, before further flight, do the inspection specified in paragraph (g)(1) of this AD to determine if all three hydraulic systems are equipped with check valve having P/N CAR401.

(2) For airplanes on which Airbus Modification 54491 was embodied in production, or Airbus Service Bulletin A330-29-3101 or Airbus Service Bulletin A340-29-4078 was embodied in service, do the actions specified in paragraphs (g)(2)(i), (g)(2)(ii), and (g)(2)(iii) of this AD.

(i) Except as required by paragraph (g)(1)(i) of this AD, at the applicable times specified in paragraphs (g)(2)(i)(A) and (g)(2)(i)(B) of this AD, as applicable: Do the inspection program (detailed inspection of the lock wire for presence and integrity, a detailed inspection for traces of seepage or black deposits, and an inspection for proper torque) on yellow and blue high pressure manifolds, install new lock wires, and do all applicable corrective actions, in accordance with the instructions of paragraph 4.1.1 of Airbus AOT A330-29A3111, Revision 1, dated October 8, 2009 (for Model A330-200 and -300 series airplanes); or AOT A340-29A4086, Revision 1, dated October 8, 2009 (for Model A340-200 and -300 series airplanes). Do all applicable corrective actions before further flight.

(A) For airplanes on which Airbus Modification 54491 has been embodied in production: At the later of the times specified in paragraphs (g)(2)(i)(A)(1) and (g)(2)(i)(A)(2) of this AD.

(1) Before the accumulation of 1,000 total flight cycles since first flight but no earlier than the accumulation of 700 total flight cycles since first flight.

(2) Within 100 flight cycles or 28 days after the effective date of this AD, whichever occurs first.

(B) For airplanes on which Airbus Service Bulletin A330-29-3101 or A340-29-4078 was embodied in service: At the later of the times specified in paragraphs (g)(2)(i)(B)(1) and (g)(2)(i)(B)(2) of this AD.

(1) Within 1,000 flight cycles since the embodiment of Airbus Service Bulletin A330-29-3101 or A340-29-4078 but no earlier than 700 flight cycles after the embodiment of Airbus Service Bulletin A330-29-3101 or A340-29-4078.

(2) Within 100 flight cycles or 28 days after the effective date of this AD, whichever occurs first.

(ii) Within 900 flight hours after accomplishment of paragraph (g)(2)(i) of this AD, do the inspection program (detailed inspection of the lock wire for presence and integrity, a detailed inspection for traces of seepage or black deposits, and an inspection for proper torque) and install a new lock wire on the green high pressure manifold; and do an inspection (detailed inspection for traces of seepage or black deposits, and detailed inspection to determine alignment of the check valve and manifold) on the yellow and blue high pressure manifolds, and do all applicable corrective actions; in accordance with the instructions of paragraph 4.1.2 of Airbus AOT A330-29A3111, Revision 1, dated October 8, 2009 (for Model A330-200 and -300 series airplanes); or AOT A340-29A4086, Revision 1, dated October 8, 2009 (for Model A340-200 and -300 series airplanes). Do all applicable corrective actions before further flight.

(iii) Within 900 flight hours after accomplishment of paragraph (g)(2)(ii) of this AD, and thereafter at intervals not to exceed 900 flight hours, do the inspection program (detailed inspection for traces of seepage or black deposits, and detailed inspection to determine alignment of the check valve and manifold) on the green, yellow, and blue high pressure manifolds, and do all applicable corrective actions, in accordance with the instructions of paragraph 4.1.3 of Airbus AOT A330-29A3111, Revision 1, dated October 8, 2009 (for Model A330-200 and -300 series airplanes); or AOT A340-29A4086, Revision 1, dated October 8, 2009 (for Model A340-200 and -300 series airplanes). Do all applicable corrective actions before further flight.

(iv) Actions accomplished before the effective date of this AD, according to Airbus AOT A330-29A3111, dated September 2, 2009 (for Model A330-200 and -300 series airplanes); or AOT A340-29A4086, dated September 2, 2009 (for Model A340-200 and -300 series airplanes); are considered acceptable for compliance with the corresponding actions specified in paragraph (g)(2)(i) of this AD.

(3) Within 10 days after accomplishment of the inspections specified in paragraphs (g)(1) and (g)(2) of this AD, or within 10 days after the effective date of this AD, whichever occurs later, report all inspection results to Airbus in accordance with Airbus AOT A330-29A3111, Revision 1, dated October 8, 2009 (for Model A330-200 and -300 series airplanes); or AOT A340-29A4086, Revision 1, dated October 8, 2009 (for Model A340-200 and -300 series airplanes).

## **FAA AD Differences**

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

## **Other FAA AD Provisions**

(h) 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. 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.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

### **Related Information**

(i) Refer to MCAI European Aviation Safety Agency Emergency Airworthiness Directive 2009-0223-E, dated October 13, 2009; and Airbus AOTs A330-29A3111 and A340-29A4086, both Revision 1, both dated October 8, 2009; for related information.

### **Material Incorporated by Reference**

(j) You must use Airbus All Operators Telex A330-29A3111, Revision 1, dated October 8, 2009; or Airbus All Operators Telex A340-29A4086, Revision 1, dated October 8, 2009; as applicable; to do the actions required by this AD, unless the AD specifies otherwise. (Only the first page of these documents contains the document number, revision level, and date; no other page of these documents contain this information.)

(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).

Issued in Renton, Washington, on November 16, 2009.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9-28069 Filed 11-25-09; 8:45 am]