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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2008-0670; Directorate Identifier 2007-NM-339-AD; Amendment 39-16526; AD 2010-24-07]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Model A318-111 and A318-112 Airplanes and Model A319, A320, and A321 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:

Damage to the lower lateral fittings of the 80VU rack, typically elongated holes, migrated bushes [bushings], and/or missing bolts have been reported in-service. In addition damage to the lower central support fitting (including cracking) has been reported.

In the worst case scenario a complete failure of the 80VU fittings in combination with a high load factor or strong vibration could lead to failure of the rack structure and/or computers or rupture/disconnection of the cable harnesses to one or more computers located in the 80VU. This rack contains computers for Flight Controls, Communication and Radio-navigation. These functions are duplicated across other racks but during critical phases of flight the multiple system failures/re-configuration may constitute an unsafe condition.

\* \* \* \* \*

We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective January 11, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of January 11, 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:** Tim Dulin, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2141; fax (425) 227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That supplemental NPRM was published in the Federal Register on August 4, 2010 (75 FR 46873). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Damage to the lower lateral fittings of the 80VU rack, typically elongated holes, migrated bushes [bushings], and/or missing bolts have been reported in-service. In addition damage to the lower central support fitting (including cracking) has been reported.

In the worst case scenario a complete failure of the 80VU fittings in combination with a high load factor or strong vibration could lead to failure of the rack structure and/or computers or rupture/disconnection of the cable harnesses to one or more computers located in the 80VU. This rack contains computers for Flight Controls, Communication and Radio-navigation. These functions are duplicated across other racks but during critical phases of flight the multiple system failures/re-configuration may constitute an unsafe condition.

For the reasons described above, EASA AD 2007-0276 was issued to require repetitive [detailed] inspection of the lower lateral 80VU fittings for damage and [repetitive detailed] inspection of the lower central 80VU support for damage and cracking, and the accomplishment of associated corrective actions, depending on findings.

Since AD 2007-0276 was issued, Airbus introduced a new reinforced lower central support for the 80VU.

This [EASA] AD has been revised to introduce the new reinforced lower central support as an optional terminating action to the repetitive inspections.

\* \* \* \* \*

The associated corrective actions include repair or replacement of the lower lateral fittings and/or replacement of the lower central support. Modifying the 80VU lower lateral fittings (the modification includes replacing the 80VU lower lateral fittings) eliminates the need for the repetitive inspection of the lower lateral fittings. Replacing the 80VU lower central support (i.e., replacing the pyramid fitting on the 80VU rack with a new, reinforced fitting) eliminates the need for the repetitive inspection of the lower central support. 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 considered the comments received.

### **Request To Allow Credit for Actions Done per Previous Service Bulletin**

Lufthansa stated that paragraph (g) of the NPRM specifies that doing a modification in accordance with Airbus Service Bulletin A320-25-1557, Revision 02, dated November 5, 2008, terminates the inspections of the lateral fittings. The commenter stated this is not correct because any revision of the service bulletin terminates the inspections.

We infer that Lufthansa requests that we revise paragraph (g) of the final rule to allow credit for actions done in accordance with previous issues of Airbus Service Bulletin A320-25-1557. We agree that previous issues are acceptable; however, it is not necessary to revise paragraph (g) of the final rule. We give credit for doing actions in accordance with previous revisions of the service information in paragraph (l) of the final rule. We have not changed this AD in this regard.

### **Request To Defer Corrective Actions**

Lufthansa requested that we allow operators to defer doing the replacement specified in paragraph (j) of the NPRM. The commenter noted that Airbus Service Bulletin A320-53-1215, dated November 5, 2008, and EASA AD 2007-0276R1, dated March 18, 2010, both allow deferring the replacement. The commenter also noted that exhaustive data on cracks and crack growth are available on request.

We disagree with the request to allow deferring the replacement required by paragraph (j) of the final rule. Our policy specifies the requirement to repair known cracks before further flight (though we might make exceptions to this policy in certain cases of unusual need). This policy is based on the fact that such damaged airplanes do not conform to the FAA-certificated type design and, therefore, are not airworthy until a properly approved repair is made. We consider the compliance times in this AD to be adequate to allow operators to acquire parts to have on hand in the event that a crack is detected during inspection. Therefore, we have determined that, due to the safety implications and consequences associated with such cracking, any subject 80VU rack lower central support that is found to be cracked must have associated corrective actions done before further flight. However, under the provisions of paragraph (m) of the final rule, we will consider requests for approval of an extension of the compliance time if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have not changed the AD in this regard.

### **Request To Allow Alternate Actions in Lieu of the Replacement in Paragraph (j) of the NPRM**

Lufthansa further requested that we allow alternative actions other than doing a replacement in accordance with Airbus Service Bulletin A320-53-1215, dated November 5, 2008, as specified in paragraph (j) of the NPRM. The commenter stated that Airbus Service Bulletin A320-53-1215, dated November 5, 2008, and EASA AD 2007-0276R1, dated March 18, 2010, both specify repairing or replacing the pyramid fitting in accordance with Airbus Service Bulletin A320-25A1555, dated June 14, 2007; or Airbus Service Bulletin A320-25-1557, dated June 14, 2007; as applicable. The commenter stated that allowing only the replacement in accordance with Airbus Service Bulletin A320-53-1215, dated November 5, 2008, is more restrictive to operators than necessary for continued flight safety.

We disagree with the request to allow actions other than the replacement required by paragraph (j) of this AD. Doing the repair or replacement of the pyramid fitting in accordance with Airbus Service Bulletin A320-25A1555, dated June 14, 2007; or Airbus Service Bulletin A320-25-1557,

dated June 14, 2007; as applicable; would require also doing repetitive inspections. We can better ensure long-term continued operational safety by design changes to remove the source of the problem, rather than by repetitive inspections. Long-term inspections might not provide the degree of safety necessary for the transport airplane fleet. This determination, along with a better understanding of the human factors associated with numerous continual inspections, has led us to consider placing less emphasis on inspections and more emphasis on design improvements. The replacement required by paragraph (j) of the final rule is consistent with these conditions. However, under the provisions of paragraph (m) of the final rule, we will consider requests for alternative methods of compliance if sufficient data are submitted to substantiate that the alternative actions would provide an acceptable level of safety. We have not changed this AD in this regard.

## **Conclusion**

We reviewed the available data, including the comments received, 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 affects 678 products of U.S. registry. We also estimate that takes about 82 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts cost about \$2,592 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 \$6,483,036, or \$9,562 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:



**2010-24-07 Airbus:** Amendment 39-16526. Docket No. FAA-2008-0670; Directorate Identifier 2007-NM-339-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective January 11, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Airbus Model A318-111, A318-112, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231, and A321-232 airplanes, certificated in any category, all manufacturer serial numbers, except airplanes on which Airbus Modification 34804 has been embodied in production or on which Airbus Service Bulletins A320-25-1557 and A320-53-1215 have been done in service.

**Subject**

(d) Air Transport Association (ATA) of America Code 25: Equipment/Furnishings, and Code 53: Fuselage.

**Reason**

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

Damage to the lower lateral fittings of the 80VU rack, typically elongated holes, migrated bushes [bushings], and/or missing bolts have been reported in-service. In addition damage to the lower central support fitting (including cracking) has been reported.

In the worst case scenario a complete failure of the 80VU fittings in combination with a high load factor or strong vibration could lead to failure of the rack structure and/or computers or rupture/disconnection of the cable harnesses to one or more computers located in the 80VU. This rack contains computers for Flight Controls, Communication and Radio-navigation. These functions are duplicated across other racks but during critical phases of flight the multiple system failures/re-configuration may constitute an unsafe condition.

\* \* \* \* \*

## **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.

### **Repetitive Inspections of the 80V Rack Lower Lateral Fittings**

(g) Prior to the accumulation of 24,000 total flight cycles, or within 500 flight cycles after the effective date of this AD, whichever occurs later: Do a special detailed inspection of the 80VU rack lower lateral fittings for damage (e.g., broken fitting, missing bolts, migrated bushings, material burr, or rack in contact with the fitting) of the 80VU rack lower lateral fittings, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-25A1555, Revision 02, dated November 5, 2008. Repeat the inspection thereafter at the interval specified in paragraph (g)(1) or (g)(2) of this AD, as applicable. Modifying the 80VU lower lateral fittings, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-25-1557, Revision 02, dated November 5, 2008, terminates the inspection requirements of this paragraph.

(1) For airplanes on which the 80VU rack lower lateral fittings have not been replaced in accordance with the Airbus Mandatory Service Bulletin A320-25A1555: Repeat the inspection thereafter at intervals not to exceed 4,500 flight cycles.

(2) For airplanes on which the 80VU rack lower lateral fittings have been replaced in accordance with Airbus Mandatory Service Bulletin A320-25A1555: Do the next inspection within 24,000 flight cycles after doing the replacement and repeat the inspection thereafter at intervals not to exceed 4,500 flight cycles.

(h) If any damage is found during any inspection required by paragraph (g) of this AD, do all applicable corrective actions (inspection and/or repair) in accordance with the Accomplishment Instructions and timeframes given in Airbus Mandatory Service Bulletin A320-25A1555, Revision 02, dated November 5, 2008.

### **Repetitive Inspections of the 80V Rack Lower Central Support**

(i) Prior to the accumulation of 24,000 total flight cycles, or within 500 flight cycles after the effective date of this AD, whichever occurs later: Do a special detailed inspection of the 80VU rack lower central support for cracking, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-25A1555, Revision 02, dated November 5, 2008. Repeat the inspection thereafter at the interval specified in paragraph (i)(1) or (i)(2) of this AD, as applicable. Replacing the pyramid fitting on the 80VU rack with a new, reinforced fitting, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-53-1215, dated November 5, 2008, terminates the inspection requirements of this paragraph.

(1) For airplanes on which the 80VU rack lower central support has not been repaired or replaced in accordance with Airbus Mandatory Service Bulletin A320-25A1555 or Airbus Service Bulletin A320-25-1557: Repeat the inspection thereafter at the interval specified in paragraph (i)(1)(i) or (i)(1)(ii) of this AD, as applicable.

(i) For airplanes on which the lower central support has accumulated 30,000 total flight cycles or more: At intervals not to exceed 500 flight cycles.

(ii) For airplanes on which the lower central support has accumulated less than 30,000 total flight cycles: At intervals not to exceed 4,500 flight cycles, without exceeding 30,750 total flight cycles on the support for the first repetitive inspection.

(2) For airplanes on which the 80VU rack lower central support has been repaired or replaced in accordance with Airbus Mandatory Service Bulletin A320-25A1555 or Airbus Service Bulletin A320-25-1557: Do the next inspection within 24,000 flight cycles after the repair or replacement and

thereafter repeat the inspection at the interval specified in paragraph (i)(1)(i) or (i)(1)(ii) of this AD, as applicable.

(j) If any crack is found during any inspection required by paragraph (i) of this AD, before further flight, replace the pyramid fitting on the 80VU rack with a new, reinforced fitting, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-53-1215, dated November 5, 2008. Doing this replacement terminates the inspection requirements of paragraph (i) of this AD.

### **Optional Terminating Action**

(k) Doing the actions specified in paragraphs (k)(1) and (k)(2) of this AD terminates the requirements of paragraphs (g) and (i) of this AD.

(1) Replacing the pyramid fitting on the 80VU rack with a new, reinforced fitting, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-53-1215, dated November 5, 2008.

(2) Modifying the 80VU lower lateral fittings, in accordance with Airbus Service Bulletin A320-25-1557, Revision 02, dated November 5, 2008.

### **Credit for Actions Accomplished in Accordance With Previous Service Information**

(l) Actions done before the effective date of this AD in accordance with the service information identified in Table 1 of this AD are acceptable for compliance with the corresponding requirements of this AD.

**Table 1—Previous Revisions of Service Information**

<b>Service information</b>	<b>Revision level</b>	<b>Date</b>
Airbus Mandatory Service Bulletin A320–25A1555	01	February 18, 2008.
Airbus Service Bulletin A320–25A1555	Original	June 14, 2007.
Airbus Service Bulletin A320–25–1557	Original	June 14, 2007.
Airbus Service Bulletin A320–25–1557	01	February 7, 2008.

### **FAA AD Differences**

Note 1: This AD differs from the MCAI and/or service information as follows:

(1) Although the MCAI or service information allows further flight after cracks are found during compliance with the required action, paragraph (j) of this AD requires that you do a corrective action before further flight.

(2) Although the MCAI specifies doing a repair or replacement and repetitive inspections after the repair or replacement is done if cracking is found in the 80VU rack lower central support, paragraph (j) of this AD requires that you perform a replacement, which eliminates the need for further repetitive inspections of the part.

### **Other FAA AD Provisions**

(m) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANM-116, International Branch, 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: Tim Dulin,

Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2141; 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: 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 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave., SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

## Related Information

(n) Refer to MCAI EASA Airworthiness Directive 2007-0276R1, dated March 18, 2010, (corrected April 12, 2010), and the service information identified in Table 2 of this AD, for related information.

**Table 2—Related Service Information**

<b>Service information</b>	<b>Revision level</b>	<b>Date</b>
Airbus Mandatory Service Bulletin A320–25A1555	02	November 5, 2008.
Airbus Service Bulletin A320–25–1557	02	November 5, 2008.
Airbus Service Bulletin A320–53–1215	Original	November 5, 2008.

## Material Incorporated by Reference

(o) You must use the service information specified in paragraphs (o)(1) and (o)(2) of this AD, as applicable, unless the AD specifies otherwise.

(1) For the actions required by this AD: Airbus Mandatory Service Bulletin A320-25A1555, excluding Appendix 1, Revision 02, dated November 5, 2008; and Airbus Service Bulletin A320-53-1215, dated November 5, 2008.

(2) For the optional actions specified by this AD: Airbus Service Bulletin A320-25-1557, Revision 02, dated November 5, 2008; and Airbus Service Bulletin A320-53-1215, dated November 5, 2008.

(3) 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.

(4) For service information identified in this AD, contact Airbus, Airworthiness Office–EAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; e-mail account.airworth-eas@airbus.com; Internet <http://www.airbus.com>.

(5) 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.

(6) 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 15, 2010.

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