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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-23087; Directorate Identifier 2005-NM-225-AD; Amendment 39-14386; AD 2005-24-06]

RIN 2120-AA64

Airworthiness Directives; Airbus Model A318-100, A319-100, A320-200, A321-100, and A321-200 Series Airplanes, and Model A320-111 Airplanes

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

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Model A318-100, A319-100, A320-200, A321-100, and A321-200 series airplanes, and Model A320-111 airplanes. This AD requires an inspection to determine whether certain braking and steering control units (BSCUs) are installed or have ever been installed. For airplanes on which certain BSCUs are installed or have ever been installed, this AD requires an inspection of the nose landing gear (NLG) upper support and corrective action if necessary, and a check of the NLG strut inflation pressure and an adjustment if necessary. For some of these airplanes, this AD also requires a revision to the aircraft flight manual to incorporate an operating procedure to recover normal steering in the event of a steering failure. This AD results from a report of an incident where an airplane landed with the NLG turned 90 degrees from centerline. We are issuing this AD to prevent landings with the NLG turned 90 degrees from centerline, which could result in reduced controllability of the airplane.

DATES: This AD becomes effective November 30, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 30, 2005.

We must receive comments on this AD by January 23, 2006.

ADDRESSES: Use one of the following addresses to submit comments on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, room PL-401, Washington, DC 20590.
- Fax: (202) 493-2251.

- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
Contact Airbus, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Tim Dulin, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2141; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We have received a report that an Airbus Model A320 series airplane landed with the nose landing gear (NLG) turned 90 degrees from centerline. The airplane landed safely with no reported injuries, but the NLG tires were quickly deflated and torn apart, and both wheels were worn up to the wheel axle. A boroscopic inspection of the NLG shock absorber upper attachment area was carried out and indicated that the upper support was damaged, which was confirmed after the NLG was torn down. Two diagonally opposite lugs were found sheared-off and one additional lug found cracked.

The cause of the NLG turning 90 degrees has been determined to be a combination of two failures: a failure of the upper support lugs, which prevented the centering cams from keeping the NLG in the center position when the shock absorber was extended and the steering system was depressurized; and a failure of the braking and steering control unit (BSCU), which prevented the normal steering system from re-centering the NLG. The NLG upper support lugs failed due to cyclic loading of the anti-rotation device by a new pre-land steering check introduced with the BSCU standard enhanced manufacturing and maintainability (EMM) software logic, combined with high shock absorber pressure. The BSCU EMM failed due to the time it takes for the steering system to re-center the NLG on airplanes equipped with a steering system powered by the green hydraulic system. Airplanes with the steering system supplied by the yellow hydraulic system are capable of re-centering the nose landing gear even with broken upper support lugs.

Relevant Service Information

Airbus has issued Technical Note 957.1901/05, dated October 18, 2005, which describes procedures for performing a boroscope inspection of the NLG upper support (backplate) to detect ruptured anti-rotation lugs and repair if necessary.

Airbus has issued A318/A319/A320/A321 aircraft maintenance manual (AMM) Temporary Revision (TR) 12-001, dated November 13, 2005. The TR revises the data for Airbus A318/A319/A320/A321 AMM, Chapter 12, Subject 12-14-32, Revision 52, dated August 1, 2005, which describes procedures for checking the NLG strut inflation pressure and adjusting as applicable.

U.S. Type Certification of the Airplane

These airplane models are manufactured in France and are type-certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement.

FAA's Determination and Requirements of This AD

We are issuing this AD to prevent landings with the NLG turned 90 degrees from centerline, which could result in reduced controllability of the airplane. This AD requires an inspection to

determine whether certain BSCUs are installed or have ever been installed. For airplanes on which certain BSCUs are installed or have ever been installed, this AD requires a check of the NLG strut inflation pressure and an adjustment if necessary; and a boroscope inspection of the NLG upper support (backplate) to detect ruptured anti-rotation lugs, and corrective action if necessary. We consider a boroscope inspection necessary because it is the most effective means to detect a ruptured anti-rotation lug. The corrective action includes replacing the NLG with a serviceable NLG if the lugs are completely ruptured or contacting the FAA to determine whether replacement or continuing inspection is necessary if any other damage is found.

For some of these airplanes on which certain BSCUs are installed or have ever been installed, this AD also requires a revision to the aircraft flight manual to incorporate an operating procedure to recover normal steering in event of a steering failure (i.e. when a "L/G SHOCK ABSORBER FAULT" electronic centralized aircraft monitoring (ECAM) caution is triggered at any time in flight and the "WHEEL N/W STRG FAULT" or "WHEEL N.W. STEER FAULT" ECAM cautions appear after landing gear extension).

We have worked in conjunction with the European Aviation Safety Authority (EASA) (which is the airworthiness authority for the European Union (EU) Member States) and the Direction Générale de l'Aviation Civile (DGAC) (which is the airworthiness authority for France) to develop appropriate actions that will address the identified unsafe condition. We have been advised that EASA and the DGAC are considering issuing airworthiness directives with requirements similar to the requirements of this AD.

Further, although this AD requires a one-time boroscope inspection, EASA and the DGAC have indicated that they do not plan to require the one-time boroscope inspection in their initial airworthiness directive. Rather, they have indicated that they plan to include the boroscope inspection with a longer compliance time in a follow-on airworthiness directive. EASA and the DGAC are aware of this difference, as well as the possibility that this AD may be issued earlier than their airworthiness directives on this subject.

Interim Action

We consider this AD interim action. The investigation into why the nose wheels were turned 90 degrees from the runway centerline is ongoing. Once we have received any further results of the investigation, we may consider additional rulemaking.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD; therefore, providing notice and opportunity for public comment before the AD is issued is impracticable, and good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed in the ADDRESSES section. Include "Docket No. FAA-2005-23087; Directorate Identifier 2005-NM-225-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of that Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent

the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

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 have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

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. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-24-06 Airbus: Amendment 39-14386. Docket No. FAA-2005-23087; Directorate Identifier 2005-NM-225-AD.

Effective Date

- (a) This AD becomes effective November 30, 2005.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to all Airbus Model A318-111 and -112 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, and -231 airplanes; certificated in any category.

Unsafe Condition

(d) This AD results from a report of an incident where an airplane landed with the nose landing gear (NLG) turned 90 degrees from centerline. We are issuing this AD to prevent landings with the NLG turned 90 degrees from centerline, which could result in reduced controllability of the airplane.

Compliance

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

Records Review

(f) Within 5 days after the effective date of this AD, perform a records review to determine whether the airplane is equipped with or has ever been equipped with a braking and steering control unit (BSCU) part number (P/N) E21327001 (standard L4.1, Airbus Modification 26965) or P/N E21327003 (standard L4.5, Airbus Modification 33376).

(g) For airplanes on which a records review required by paragraph (f) of this AD conclusively determines that the airplane is not and never has been equipped with BSCU P/N E21327001 or P/N E21327003, no further action is required by this AD.

Airplane Flight Manual (AFM) Revision, Inspection, and Corrective Action

(h) For airplanes that are not specified in paragraph (g) of this AD and which do not have Airbus Modification 31152 incorporated in production (i.e. applicable only to aircraft with steering powered by the green hydraulic system): Within 10 days after the effective date of this AD, revise the Limitation Section of the Airbus A318/319/320/321 Aircraft Flight Manual (AFM) to include the following information. This may be done by inserting a copy of this AD into the AFM:

The ECAM message, in case of a nose wheel steering failure, will be worded as follows:

–"WHEEL N/W STRG FAULT" for aircraft with the FWC E3 and subsequent standards

–"WHEEL N.W. STEER FAULT" for aircraft with the FWC E2 Standard.

- If the L/G SHOCK ABSORBER FAULT ECAM caution is triggered at any time in flight, and the WHEEL N/W STRG FAULT ECAM caution is triggered after the landing gear extension:

- When all landing gear doors are indicated closed on ECAM WHEEL page, reset the BSCU:

–A/SKID&N/W STRG–OFF THEN ON

- If the WHEEL N/W STRG FAULT ECAM caution is no longer displayed, this indicates a successful nose wheel re-centering and steering recovery.

–Rearm the AUTO BRAKE, if necessary.

- If the WHEEL N/W STRG FAULT ECAM caution remains displayed, this indicates that the nose wheel steering remains lost, and that the nose wheels are not centered.

–During landing, delay nose wheel touchdown for as long as possible.

–Refer to the ECAM STATUS.

- If the WHEEL N/W STRG FAULT ECAM caution appears, without the L/G SHOCK ABSORBER FAULT ECAM caution:

–No specific crew action is requested by the WHEEL N/W STRG FAULT ECAM caution procedure.

–Refer to the ECAM STATUS.

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

(i) For airplanes that are not specified in paragraph (g) of this AD: At the times specified in paragraphs (i)(1) and (i)(2) of this AD, perform a boroscope inspection of the NLG upper support (backplate) to detect ruptured (completely broken) anti-rotation lugs, in accordance with Airbus Technical Note 957.1901/05, dated October 18, 2005; and check the NLG strut inflation pressure and adjust as applicable before further flight, according to a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the Direction Generale de l'Aviation Civile (DGAC) (or its delegated agent). Chapter 12, Subject 12-14-32 of the Airbus A318/A319/A320/A321 Aircraft Maintenance Manual (AMM), as revised by Airbus A318/A319/A320/A321 AMM Temporary Revision (TR) 12-001, dated November 13, 2005, is one approved method.

(1) Within 100 flight cycles following an electronic centralized aircraft monitoring (ECAM) caution "L/G SHOCK ABSORBER FAULT" associated with at least one of the centralized fault display system (CFDS) messages listed in paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this AD.

(i) "N L/G EXT PROX SNSR 24GA TGT POS."

(ii) "N L/G EXT PROX SNSR 25GA TGT POS."

(iii) "N L/G SHOCK ABSORBER FAULT 2526GM."

(2) Within 90 days after the effective date of this AD unless accomplished previously in accordance with paragraph (i)(1) of this AD.

(j) If any ruptured (completely broken) upper support anti-rotation lugs are found during the inspections required by paragraph (i) of this AD, before further flight, replace the NLG with a serviceable NLG according to a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the DGAC (or its delegated agent). Chapter 32 of the Airbus A318/A319/A320/A321 AMM is one approved method. If any other damage to the upper support lugs is found, before further flight, check whether the NLG wheels can be turned by hand without the compression of the shock absorber (i.e., without climbing the centering cam with the aircraft NLG on jacks) and the nose wheel steering disconnected from the electrical box 5GC. If the wheels can be turned, before further flight, replace the NLG with a serviceable NLG according to a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the DGAC (or its delegated agent). Chapter 32 of the Airbus A318/A319/A320/A321 AMM is one approved method. If the wheels cannot be turned, within 100 flight cycles accomplish corrective actions (which could include replacement or continuing inspections) in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Related Information

(l) None.

Material Incorporated by Reference

(m) You must use Airbus Technical Note 957.1901/05, dated October 18, 2005, to perform the actions that are required by this AD, unless the AD specifies otherwise. (The document number of the Airbus technical note is only specified on page 1 of the document.) The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Airbus, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on November 16, 2005.
Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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