ATTACHMENT 4

AIRWORTHINESS GROUP CHAIRMAN'S FACTUAL REPORT

NTSB No. CEN15MA290

Federal Aviation Administration Airworthiness Directive No. 2015-22-53
(7 Pages)

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-5806; Directorate Identifier 2015-SW-083-AD; Amendment 39-18331; AD 2015-22-53]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

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

ACTION: Final rule; request for comments.

SUMMARY: We are publishing a new airworthiness directive (AD) for Airbus Helicopters Model AS350B3 helicopters. This AD was sent previously to all known U.S. owners and operators of these helicopters and supersedes Emergency AD 2015-22-52, dated October 28, 2015. This AD requires revising the rotorcraft flight manual (RFM) to stop performing the yaw load compensator check during preflight procedures and instead perform it during post-flight procedures after rotor shut-down. This AD also requires the yaw servo hydraulic switch to be in the "ON" position before taking off. This AD is prompted by two accidents and one incident of Airbus Helicopters Model AS350B3 helicopters. From preliminary investigations, loss of tail rotor (T/R) control during takeoff was evident in each event. These actions are intended to prevent takeoff without hydraulic pressure in the T/R hydraulic system, loss of T/R flight control, and subsequent loss of control of the helicopter.

DATES: This AD becomes effective December 16, 2015 to all persons except those persons to whom it was made immediately effective by Emergency AD 2015-22-53, issued on October 30, 2015, which contains the requirements of this AD.

We must receive comments on this AD by February 1, 2016.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to http://www.regulations.gov. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590-0001.

- Hand Delivery: Deliver to the "Mail" address 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 by searching for and locating Docket No. FAA-2015-5806; 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 European Aviation Safety Agency (EASA) AD, the economic 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 service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at http://www.airbushelicopters.com/techpub. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

FOR FURTHER INFORMATION CONTACT: Stephen Barbini, Flight Test Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone (817) 222-5110; email stephen.barbini@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

Discussion

On October 28, 2015 we issued Emergency AD 2015-22-52 for Airbus Helicopters Model AS350B3 helicopters with a dual hydraulic system that prohibited performing the yaw load compensator check (collective switch) during preflight procedures and instead required performing it during post-flight procedures. Emergency AD 2015-22-52 also required the yaw servo hydraulic switch (collective switch) to be in the "ON" (forward) position before taking off. Emergency AD 2015-22-52 was sent previously to all known U.S. owners and operators of these helicopters. The actions in Emergency AD 2015-22-52 were intended to prevent takeoff without hydraulic pressure in the T/R hydraulic system, loss of T/R flight control, and subsequent loss of control of the helicopter.

Emergency AD 2015-22-52 was prompted by two accidents and one incident of Airbus Helicopters Model AS350B3 helicopters with a dual hydraulic system installed. From preliminary investigations, loss of T/R control during takeoff was evident in each event. Each event experienced a

counterclockwise rotational yaw immediately after takeoff. It was also noted that the anti-torque pedals felt jammed or locked in the neutral position by the pilots in the two non-fatal events. The conditions in the events are indicative of takeoffs without hydraulic T/R assistance caused by a lack of pressure in the T/R hydraulic system. When taking off without T/R hydraulic assistance with the switch on the collective grip in the "OFF" (aft) position, the yaw load compensator remains discharged and degrades the T/R hydraulic system, which significantly increases the pilot T/R control load and prevents sufficient T/R thrust for takeoff.

Based on the accidents and incident, EASA, which is the Technical Agent for the Member States of the European Union, issued EASA AD No. 2015-0178, dated August 26, 2015, to correct an unsafe condition for Airbus Helicopters Model AS 350 B3 helicopters, equipped with a dual hydraulic system identified as modification OP 3082 or OP 3346. EASA advises of a perceived loss of T/R control that mimics jamming during take-off if the T/R hydraulic preflight checks are not performed in accordance with the checklist in the RFM. According to EASA, performing the T/R hydraulic preflight checks improperly may result in reduced function of the T/R hydraulic system, thereby significantly increasing the T/R control load for the pilot.

After we issued Emergency AD 2015-22-52, we received comments noting an error in terminology and a defect in reporting compliance that resulted in confusion in how to comply with Emergency AD 2015-22-52. Specifically, we referred to the collective switch for the yaw load compensator check, when we should have referred to the ACCU TST switch. Activating the collective switch after rotor shut-down will have no effect due to the absence of hydraulic pressure in the system. We also omitted a method of recording compliance. Therefore, on October 30, 2015, we issued Emergency AD 2015-22-53 to supersede Emergency AD 2015-22-52 to correct the error in terminology and the defect in recording compliance. Emergency AD 2015-22-53 requires revising the normal operating procedures section of the RFM to prohibit performing the yaw load compensator check (ACCU TST switch) during preflight procedures and instead require performing it during post-flight procedures after rotor shut-down. Emergency AD 2015-22-53 also requires revising the RFM to state that the yaw servo hydraulic switch (collective switch) must be in the "ON" (forward) position before taking off. Emergency AD 2015-22-53 was also sent previously to all known U.S. owners and operators of these helicopters.

FAA's Determination

This helicopter has been approved by the aviation authority of France and is approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of this same type design.

Related Service Information

Airbus Helicopters issued Service Bulletin No. AS350-67.00.66, Revision 1, dated October 22, 2015 (SB AS350-67.00.66), which specifies inserting specific pages of the bulletin into the RFM. These pages revise the preflight and post-flight hydraulic checks by moving the T/R yaw load compensator check from preflight to post-flight. These pages also revise terminology within the flight manuals for the different engine configurations.

Airbus Helicopters also issued Safety Information Notice No. 2944-S-29, Revision 0, dated August 26, 2015 (SIN 2944-S-29), which warns that attempting to take off without T/R hydraulic assistance (which may be caused by the yaw servo hydraulic switch on the collective grip in the "OFF" (aft) position) might be incorrectly perceived as T/R control failure (jam), which could lead to loss of control of the helicopter if not quickly identified and corrected. SIN 2944-S-29 also advises of the RFM update that revises the run-up hydraulic check starting procedures to no longer specify "pressing" the yaw servo hydraulic switch. To mitigate this potential error, the yaw load compensator

check has been moved from preflight to post-flight procedures. Further, SIN 2944-S-29 states the yaw servo hydraulic switch, which is located on the collective grip, is also called the hydraulic pressure switch or hydraulic cut off switch in various RFMs.

AD Requirements

This AD requires, before further flight, revising the RFM to stop performing the yaw load compensator check (ACCU TST switch) during preflight procedures and instead perform the yaw load compensator check during post-flight procedures after rotor shut-down. This AD also requires revising the RFM to state that the yaw servo hydraulic switch (collective switch) must be in the "ON" (forward) position before taking off.

Differences Between This AD and the EASA AD

The EASA AD requires revising the RFM by incorporating procedures contained in Airbus Helicopters Service Bulletin No. AS350-67.00.66, Revision 0, dated August 26, 2015, and informing all flight crew of the RFM changes. This AD requires revising the RFM by inserting a copy of this AD or by making pen and ink changes.

Interim Action

We consider this AD to be an interim action. The design approval holder is currently developing a terminating action that will address the unsafe condition identified in this AD. Once this terminating action is developed, approved, and available, we might consider additional rulemaking.

Costs of Compliance

We estimate that this AD affects 427 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD at an average labor rate of $85 per work-hour. It takes about 0.5 work-hour to revise an RFM for a cost of $43 per helicopter and $18,361 for the U.S. fleet.

FAA's Justification and Determination of the Effective Date

Providing an opportunity for public comments prior to adopting these AD requirements would delay implementing the safety actions needed to correct this known unsafe condition. Therefore, we found and continue to find that the risk to the flying public justifies waiving notice and comment prior to the adoption of this rule because the previously described unsafe condition can adversely affect the controllability of the helicopter and the initial required action must be accomplished before further flight.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment before issuing this AD were impracticable and contrary to public interest and good cause existed to make the AD effective immediately by Emergency AD 2015-22-53, issued on October 30, 2015, to all known U.S. owners and operators of these helicopters. These conditions still exist and the AD is hereby published in the Federal Register as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13) to make it effective to all persons.

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, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

4. 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 an economic 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 airworthiness directive (AD):

2015-22-53 Airbus Helicopters: Amendment 39-18331; Docket No. FAA-2015-5806; Directorate Identifier 2015-SW-083-AD.

(a) Applicability

This AD applies to Airbus Helicopters Model AS350B3 helicopters with a dual hydraulic system installed, certificated in any category.

Note 1 to paragraph (a) of this AD: The dual hydraulic system for Model AS350B3 helicopters is referred to as Airbus modification OP 3082 or OP 3346.

(b) Unsafe Condition

This AD defines the unsafe condition as lack of hydraulic pressure in a tail rotor (T/R) hydraulic system. This condition could result in loss of T/R flight control and subsequent loss of control of the helicopter.

(c) Affected ADs

This AD supersedes Emergency AD 2015-22-52, Directorate Identifier 2015-SW-074-AD, dated October 28, 2015.

(d) Effective Date

This AD becomes effective December 16, 2015 to all persons except those persons to whom it was made immediately effective by Emergency AD 2015-22-53, issued on October 30, 2015, which contains the requirements of this AD.

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

Before further flight, insert a copy of this AD into the rotorcraft flight manual, Section 4 Normal Operating Procedures, or make pen and ink changes to the preflight and post-flight procedures as follows:

(1) Stop performing the yaw load compensator check (ACCU TST switch) during preflight procedures, and instead perform the yaw load compensator check during post-flight procedures after rotor shut-down.

(2) The yaw servo hydraulic switch (collective switch) must be in the "ON" (forward) position before takeoff.

Note 2 to paragraph (f)(2) of this AD: The yaw servo hydraulic switch is also called the hydraulic pressure switch or hydraulic cut off switch in various Airbus Helicopters rotorcraft flight manuals.

(g) Special Flight Permits

Special flight permits are prohibited.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Stephen Barbini, Flight Test Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

(i) Additional Information

(1) Airbus Helicopters Service Bulletin No. AS350-67.00.66, Revision 1, dated October 22, 2015, and Airbus Helicopters Safety Information Notice No. 2944-S-29, Revision 0, dated August 26, 2015, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at http://www.airbushelicopters.com/techpub. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2015-0178, dated August 26, 2015. You may view the EASA AD on the Internet at http://www.regulations.gov by searching for and locating it in Docket No. FAA-2015-5806.

(j) Subject

Joint Aircraft Service Component (JASC) Code: 2910, Main Hydraulic System.

Issued in Fort Worth, Texas, on November 13, 2015.
Lance T. Gant,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.