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[Page 53550-53553]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-25773; Directorate Identifier 2006-SW-16-AD; Amendment 39-14758; AD 2006-19-01]

RIN 2120-AA64

Airworthiness Directives; Eurocopter Model AS350B, B1, B2, B3, BA, D, and AS355E Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) for the specified Eurocopter helicopters. This action requires, within 10 hours time-in-service (TIS), inspecting the tapered housing of each main servo-control (MSC) for a crack. If no crack is found, this AD requires, before further flight, retorquing the upper ball-end attachment nut of the MSC. If a crack is found, this AD requires, before further flight, replacing the MSC with an airworthy MSC. This amendment is prompted by the discovery of cracks in the tapered housings of MSCs. The actions specified in this AD are intended to detect a crack in the MSC tapered housing and to prevent loss of the attachment of the MSC to the upper attachment yoke, loss of the main rotor control, and subsequent loss of control of the helicopter.

DATES: Effective September 27, 2006.

Comments for inclusion in the Rules Docket must be received on or before November 13, 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; or
- 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.

You may get the service information identified in this AD from American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005, telephone (972) 641-3460, fax (972) 641-3527.

Examining the Docket

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

FOR FURTHER INFORMATION CONTACT: Uday Garadi, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Regulations and Guidance Group, Fort Worth, Texas 76193-0110, telephone (817) 222-5123, fax (817) 222-5961.

SUPPLEMENTARY INFORMATION: This amendment adopts a new AD for the specified Eurocopter helicopters. This AD applies to MSCs not modified per MOD 073343 and on which the tightening torque of the attachment nut that secures the upper ball end has been increased by following MOD 073191 or complying with MET Work Card 67.30.00.402 since MET Revision 04-06 for Model AS350 helicopters and Revision 04.08 for Model AS355 helicopters. This action requires, within 10 hours TIS, inspecting the tapered housing of the MSC for a crack. If no crack is found, this AD requires before further flight, adjusting the torque of the upper ball-end attachment nut of the MSC to between 177-199 in-lbs (2-2.25 decanewton meters (daN·m)). If a crack is found, before further flight, this AD also requires replacing the MSC with an airworthy MSC. This amendment is prompted by the discovery of cracks in the tapered housings of MSCs. The condition, if not detected, could result in the loss of the attachment of the MSC to the upper attachment yoke, loss of main rotor control, and subsequent loss of control of the helicopter.

The European Aviation Safety Agency (EASA) notified us that an unsafe condition may exist on Eurocopter Model AS 350 and AS 355 helicopters. EASA advises of the discovery of cracks in the tapered housings of MSCs during scheduled inspections. EASA also advises that a very long crack in the tapered housing of an MSC can lead to loss of the attachment of the MSC concerned (sic) to the nonrotating swashplate and consequently loss of the helicopter.

Eurocopter has issued Alert Service Bulletin (ASB) Nos. 05.00.51 for Model AS350B, BA, BB, B1, B2, B3, and D helicopters, and 05.00.48 for Model AS355E helicopters, both dated February 27, 2006. The ASBs specify inspecting for a crack in the tapered housing of the MSC. The ASBs apply to all part numbers not modified per MOD 073343 and on which the tightening torque of the attachment nut that secures the upper ball end has been increased by following MOD 073191 or complying with MET Work Card 67.30.00.402 since MET Revision 04-06 for Model AS350 helicopters and Revision 04.08 for Model AS355 helicopters. The ASBs also specify replacing an MSC if you find a vertical crack 20 millimeters or more in length. The EASA has classified this ASB as mandatory and issued Emergency AD No. 2006-0055-E, dated March 1, 2006, to ensure the continued airworthiness of these helicopters in France. Although EASA's AD allows flight with certain cracks, this AD requires that you replace any cracked MSC with an airworthy MSC. This AD does not allow flight with any cracks on the MSC tapered housing.

These helicopter 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 agreement. Under this agreement, EASA has kept the FAA informed of the situation described above. We have examined EASA's findings, evaluated all pertinent information, and determined that AD action is necessary for products of these type designs that are certificated for operation in the United States.

This unsafe condition is likely to exist or develop on other helicopters of these same type designs. Therefore, we are issuing this AD to detect a crack in the tapered housing of an MSC and to prevent loss of the attachment of the MSC to the nonrotating swash plate (upper attachment yoke), loss of main rotor control, and subsequent loss of control of the helicopter. This AD requires the following actions:

- Within 10 hours TIS:
 - Disconnect the MSC from the servo-control distributor and the upper attachment yoke.
 - Cut the safety wire and remove it from the upper ball end of the attachment nut.
 - Loosen the nut to allow lifting of the positioning lock washer so the edge below the washer at the top of the tapered housing is visible around the entire periphery.
 - Visually inspect each MSC tapered housing for a crack using a 10-power or higher magnifying glass pay particular attention to certain areas.
 - Do not modify the length of the visible section of the upper ball end of the MSC.
- If you do not find a crack, before further flight:
 - Adjust the tightening torque on the attachment nut on the upper ball end of the MSC to between 177-199 in-lbs (2-2.25 decanewton meters (daN·m)).
 - Reattach the MSC to the servo control distributor and the upper attachment yoke.
- If you find any crack (oblique, horizontal, or vertical), before further flight, replace the MSC with an airworthy MSC and adjust the tightening torque of the attachment nut to between 177-199 in-lbs (2-2.25 decanewton meters (daN·m)).

One-time adjusting the tightening torque on the upper ball-end attachment nut of a non-cracked MSC or replacing a cracked MSC with an airworthy MSC with proper tightening torque applied to the upper ball-end attachment nut is terminating action for the requirements of this AD.

The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the controllability or structural integrity of parts installed on the helicopter. Inspecting the MSC tapered housing for a crack is required within 10 hours TIS. If no crack is found, the AD requires adjusting the tightening torque on the attachment nut on the upper ball end of the MSC before further flight. If a crack is found, the AD requires replacing the MSC with an airworthy MSC before further flight, and this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

We estimate that this AD will affect 616 helicopters. We estimate that it will take about 1 hour per helicopter to inspect for a crack and about 4 work hours to replace an MSC at an average labor rate of \$80 per work hour. Required parts will cost about \$9,000 per MSC. Based on these figures, we estimate the total cost impact of the AD on U.S. operators to be \$5,790,400, assuming 1 MSC is replaced on each helicopter.

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 written data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2006-25773; Directorate Identifier 2006-SW-16-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

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 our docket Web site, you can find and read the comments to any of our dockets, including the name of the individual who

sent the comment. 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>.

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 an economic evaluation of the estimated costs to comply with this AD. See the DMS to examine the economic evaluation.

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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

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



2006-19-01 Eurocopter: Amendment 39-14758. Docket No. FAA-2006-25773; Directorate Identifier 2006-SW-16-AD.

Applicability

Model AS350B, B1, B2, B3, BA, D, and AS355E helicopters, with a main servo control (MSC), all part numbers, installed, on which the tightening torque of the attachment nut that secures the upper ball end has been increased by following MOD 073191 or MET Work Card 67.30.00.402 since Revision 04-06 for the AS350 models and since Revision 04-08 for the AS355 models, but not modified per MOD 073343, certificated in any category.

Compliance

Required as indicated, unless accomplished previously.

To detect a crack in the MSC tapered housing and to prevent loss of the attachment of the MSC to the upper attachment yoke, loss of main rotor control, and subsequent loss of control of the helicopter, do the following:

- (a) Within 10 hours time-in-service (TIS):
 - (1) Disconnect each MSC from the servo-control distributor and the upper attachment yoke.
 - (2) Cut the safety wire and remove it from the upper ball end of the attachment nut.
 - (3) Loosen attachment nut "a" shown in Figure 1 of this AD and lift the positioning lock washer under the attachment nut so the edge below the lock washer at the top of the tapered housing is visible around the entire periphery.
 - (4) Visually inspect each MSC tapered housing for a crack using a 10-power or higher magnifying glass paying particular attention to area "L" and to the edge of the tapered housing located under the lock washer under attachment nut "a" as depicted in Figure 1 of this AD.

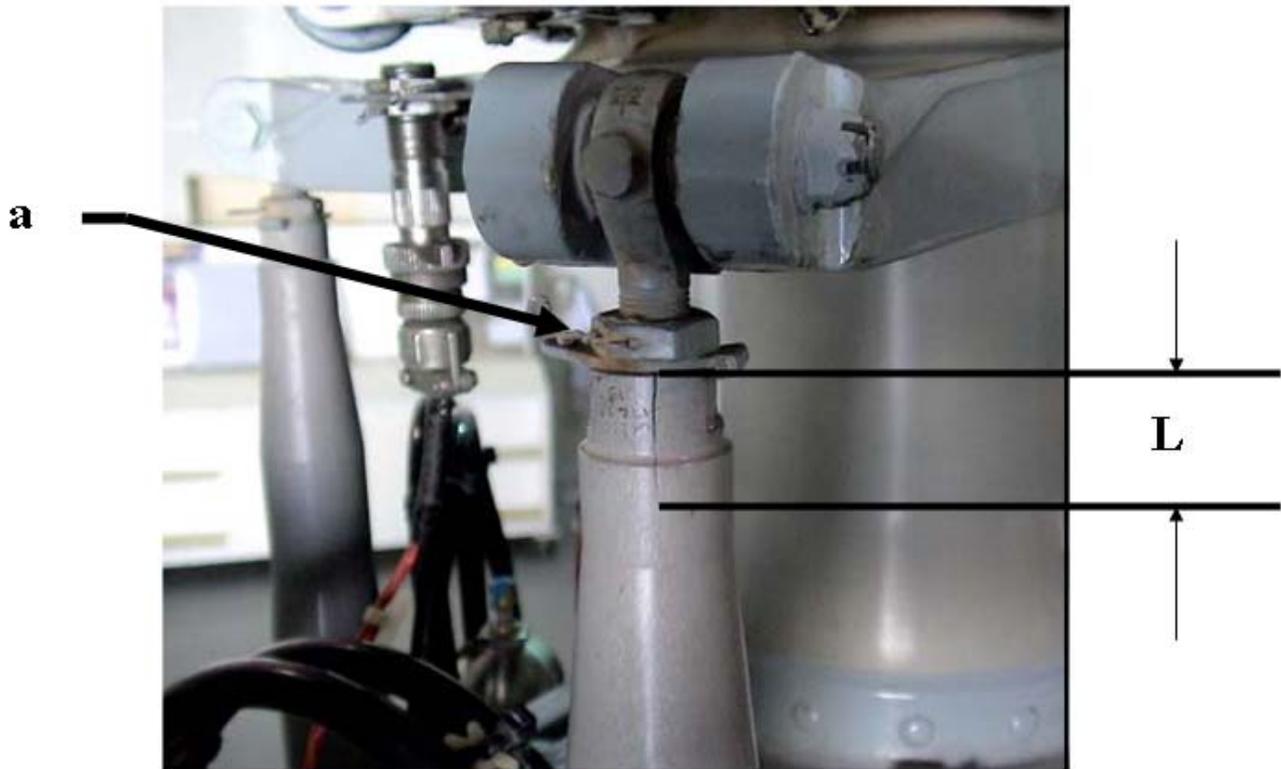


Figure 1

(5) Do not modify the length of the visible section of the upper ball end of the MSC.

Note 1: MET Work Card 67.30.00.402, paragraph 5.2, provides information concerning the positioning of the upper ball end of the MSC.

(b) If you do not find a crack, before further flight:

(1) Adjust the tightening torque on the attachment nut that secures the upper ball end of the MSC to between 177-199 in-lbs (2-2.25 decanewton meters (daN·m)).

(2) Install safety wire and apply sealant to the upper ball end by running a sealant bead on the attachment per the applicable maintenance work card(s).

(3) Reattach the MSC to the servo control distributor and the upper attachment yoke.

(c) If you find any crack (oblique, horizontal, or vertical), before further flight, replace the MSC with an airworthy MSC and adjust the tightening torque of the attachment nut to between 177-199 in-lb (2-2.25 daN·m)).

Note 2: Eurocopter ASBs 05.00.51 and 05.00.48 dated February 27, 2006, pertain to the subject of this AD.

Note 3: This AD differs from the European ASBs and the EASA AD in that we do not permit flight with known cracks in the MSC tapered housing.

(d) Adjusting the tightening torque on the upper ball-end attachment nut of a non-cracked MSC or replacing a cracked MSC with an airworthy MSC with 177-199 in-lb (2-2.25 daN·m) tightening torque applied to the upper ball-end attachment nut is terminating action for the requirements of this AD.

(e) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Safety Management Group, Rotorcraft Directorate, FAA, ATTN: Uday Garadi, Aviation Safety Engineer, Regulations and Guidance Group, Fort Worth, Texas 76193-0110, telephone (817) 222-5123, fax (817) 222-5961, for information about previously approved alternative methods of compliance.

(f) Special flight permits will not be issued.

(g) This amendment becomes effective on September 27, 2006.

Note 4: The subject of this AD is addressed in European Aviation Safety Agency Emergency AD No. 2006-0055-E, dated March 1, 2006.

Issued in Fort Worth, Texas, on September 1, 2006.

David A. Downey,
Manager, Rotorcraft Directorate, Aircraft Certification Service.
[FR Doc. 06-7560 Filed 9-11-06; 8:45 am]