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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-SW-10-AD; Amendment 39-13344; AD 2003-21-09]

RIN 2120-AA64

Airworthiness Directives; Eurocopter France Model AS355E, F, F1, F2, and N Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD) for the specified Eurocopter France (Eurocopter) model helicopters. The existing AD currently requires certain checks of the magnetic chip detector plug (chip detector) and the main gearbox (MGB) oil-sight glass; and certain inspections of the lubrication pump (pump) and replacing the MGB and the pump with an airworthy MGB and pump, if necessary. Also, the AD requires that a before a MGB or pump with any time-in-service (TIS) can be installed, it must meet the AD requirements. This amendment requires the same actions as the existing AD but corrects the wording to state that the check of the chip detector is for sludge rather than metal particles. This amendment is prompted by the need to correct the wording because the term "metal particles" may be misleading. The actions specified by this AD are intended to detect sludge on the chip detector, to prevent failure of the MGB pump, seizure of the MGB, loss of drive to an engine and main rotor, and subsequent loss of control of the helicopter.

DATES: Effective November 26, 2003.

FOR FURTHER INFORMATION CONTACT: Ed Cuevas, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Safety Management Group, Fort Worth, Texas 76193-0111, telephone (817) 222-5355, fax (817) 222-5961.

SUPPLEMENTARY INFORMATION: A proposal to amend 14 CFR part 39 by superseding AD 2002-21-51, Amendment 39-12982 (67 FR 77401, December 18, 2002) for the specified Eurocopter model helicopters was published in the Federal Register on July 16, 2003 (68 FR 41977). The action proposed to require checking the chip detector and the MGB oil-sight glass for dark oil; taking an oil sample if dark oil is observed; further inspection of the pump, if necessary; and replacing the MGB and the pump with an airworthy MGB and pump, if necessary. Also, the action proposed to require

that before a MGB or pump with any TIS could be installed, it must meet the requirements of the AD. The action also proposed to replace the words "metal particles" with the word "sludge" and to define "sludge." The term "sludge" is used to describe a deposit on the chip detector. This deposit may have both metallic and nonmetallic properties. It is typically dark in color and in the form of a film or paste, as compared to metal chips or particles normally found on the chip detector.

An owner/operator (pilot) holding at least a private pilot certificate may perform the visual checks for sludge on the chip detector and for dark oil in the MGB oil-sight glass and must enter compliance with those requirements into the helicopter maintenance records in accordance with 14 CFR 43.11 and 91.417(a)(2)(v). A pilot may perform these checks because they only involve visual checks for sludge on the chip detector, which can be removed without the use of tools, and for dark oil in the MGB oil-sight glass and can be performed equally well by a pilot or a mechanic.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs FAA's AD system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. Because we have now included this material in 14 CFR part 39, we no longer need to include it in each individual AD.

The FAA estimates that this AD will affect approximately 105 helicopters of U.S. registry. The FAA also estimates that it will take approximately 10 minutes to check the chip detector and the MGB oil sight glass, 4 work hours to remove the MGB and pump, 1 work hour to inspect the pump, and 4 work hours to install a serviceable MGB and pump. The average labor rate is $60 per work hour. Required parts will cost approximately $4000 for an overhauled pump and up to $60,000 for an overhauled MGB per helicopter. The manufacturer has represented to the FAA that the standard warranty applies if failure occurs within the first 2 years and operating time is less than 1000 hours. Based on these figures, the FAA estimates a total cost impact of the AD on U.S. operators to be $337,540 per year, assuming replacement of one MGB and pump on one helicopter per year and a daily check on all helicopters for 260 days per year.

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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); 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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

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 removing Amendment 39-12982 (67 FR 77401, December 18, 2002) and by adding a new airworthiness directive (AD), Amendment 39-13344, to read as follows:

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"

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).

2003-21-09 Eurocopter France: Amendment 39-13344. Docket No. 2003-SW-10-AD. Supersedes AD 2002-21-51, Amendment 39-12982, Docket No. 2002-SW-48-AD.

Applicability: Model AS355E, F, F1, F2, and N helicopters, with a main gearbox (MGB) lubrication pump (pump), part number 355A32-0700-00, -01, -01M, installed, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the MGB pump, seizure of the MGB, loss of drive to an engine and main rotor, and subsequent loss of control of the helicopter, accomplish the following:

(a) Before the first flight of each day and at intervals not to exceed 10 hours time-in-service (TIS), check the MGB magnetic chip detector plug (chip detector) for any sludge. Also, check for dark oil in the MGB oil-sight glass. An owner/operator (pilot) holding at least a private pilot certificate may perform this visual check and must enter compliance into the aircraft maintenance records in accordance with 14 CFR 43.11 and 91.417(a)(2)(v). "Sludge" is a deposit on the chip detector that is typically dark in color and in the form of a film or paste, as compared to metal chips or particles normally found on a chip detector. Sludge may have both metallic or nonmetallic properties, may consist of copper (pinion bearing), magnesium (pump case), and steel (pinion) from the oil pump, and a nonmetallic substance from the chemical breakdown of the oil as it interacts with the metal.

Note 1: Eurocopter France Alert Telex No. 05.00.40 R1, dated November 27, 2002, pertains to the subject of this AD.

(b) Before further flight, if any sludge is found on the chip detector, inspect the pump.

(c) Before further flight, if the oil appears dark in color when it is observed through the MGB oil-sight glass, take an oil sample. If the oil taken in the sample is dark or dark purple, before further flight, inspect the pump.

(d) While inspecting the pump, if you find any of the following, replace the MGB and the pump with an airworthy MGB and pump before further flight:

(1) Crank pin play,

(2) Out of round bronze bushing (A of Figure 1),

(3) Offset of the driven gear pinion,

(4) Metal chips, or

(5) Wear (C of Figure 1).

See the following Figure 1:

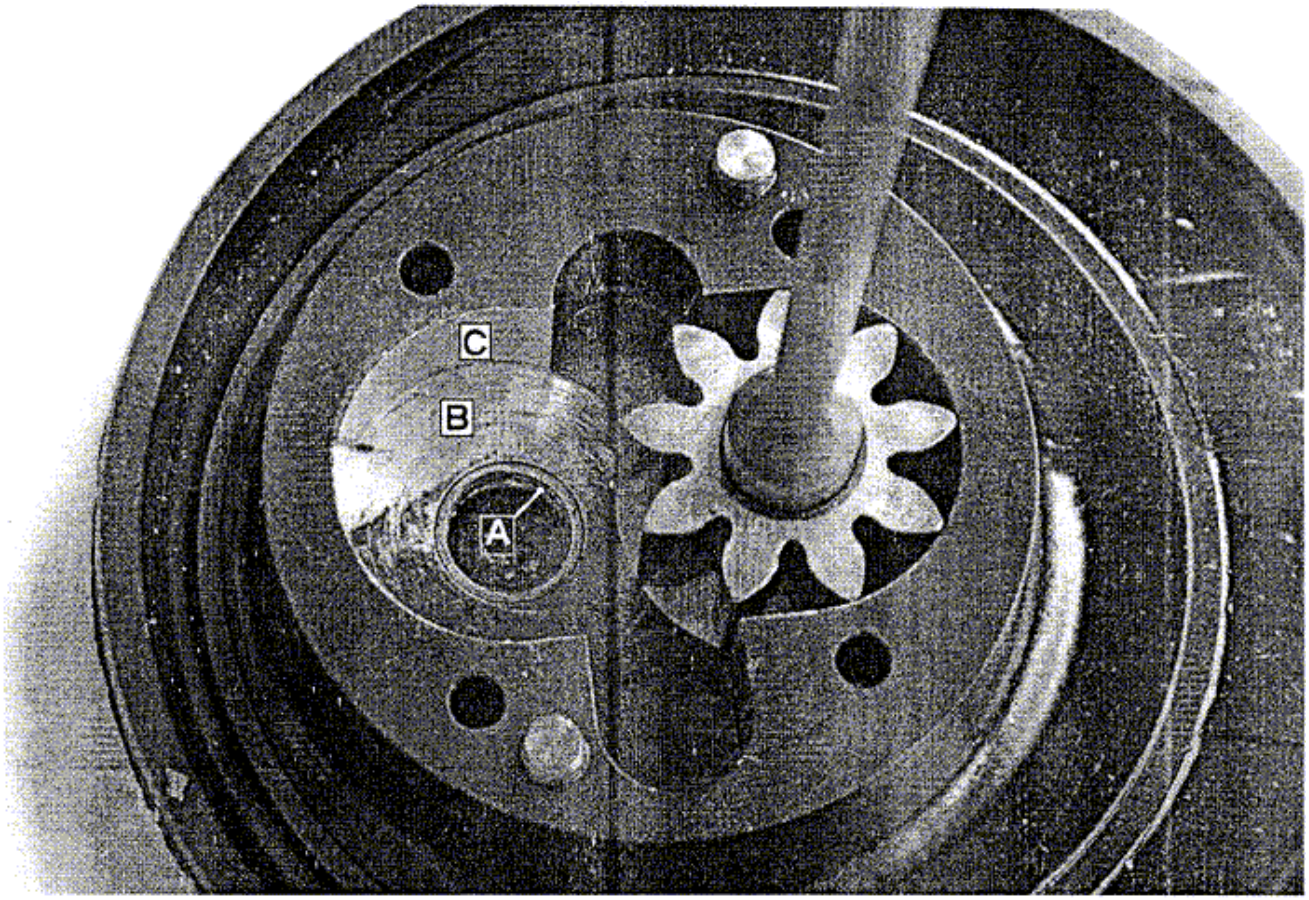


Figure 1

Note 2: If wear is present in the B area only as depicted in Figure 1, replacing the MGB and the pump is not required.

(e) Before installing a different MGB or a pump with any TIS, accomplish the requirements of paragraph (a) of this AD.

(f) 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 Safety Management Group, Rotorcraft Directorate, FAA, for information about previously approved alternative methods of compliance.

(g) This amendment becomes effective on November 26, 2003.

Note 3: The subject of this AD is addressed in Direction Generale De L'Aviation Civile (France) AD 2002-331-071(A) R1, dated January 22, 2003.

Issued in Fort Worth, Texas, on October 10, 2003.
David A. Downey,
Manager, Rotorcraft Directorate, Aircraft Certification Service.
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