



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1123; Project Identifier MCAI-2020-01294-R; Amendment 39-21448; AD 2021-05-05]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2016-23-05, which applied to certain Airbus Helicopters Model SA-365N1, AS-365N2, AS 365 N3, SA-366G1, EC 155B, and EC155B1 helicopters. AD 2016-23-05 required repetitive checks of the oil level of the tail rotor gearbox and, if necessary, filling the oil to the maximum level; and replacement of a certain control rod double bearing (bearing) with a new bearing. This AD retains the requirements of AD 2016-23-05 and also requires modifying the helicopter by replacing the tail gearbox (TGB) control shaft guide bushes; repetitive inspections of the TGB magnetic plug and corrective actions if necessary; repetitive replacements of the bearing; and modifying the helicopter by replacing the TGB; as specified in a European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, which is incorporated by reference. This AD also adds helicopters to the applicability. This AD was prompted by reports of occurrences of loss of yaw control due to failure of the TGB bearing. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this material on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1123.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1123; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kathleen Arrigotti, Aviation Safety Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3218; email kathleen.arrigotti@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2017-0125, dated July 21, 2017 (EASA AD 2017-0125) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Airbus Helicopters Model SA 365 N1, AS 365 N2, AS 365 N3, SA 366 G1, EC 155 B, and EC 155 B1 helicopters. EASA AD 2017-0125 supersedes EASA AD 2017-0007, dated January 13, 2017, which superseded EASA AD 2016-0097R1, dated May 25, 2016 (which corresponds to FAA AD 2016-23-05). EASA AD 2017-0125 adds helicopters to the applicability, adds repetitive inspections of the magnetic plug after bearing replacement, requires the use of the revised Airbus Helicopters Alert Service Bulletin (ASB) instructions, and requires replacement of the TGB with a modified unit, which terminates the repetitive inspections.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2016-23-05, Amendment 39-18712 (81 FR 85126, November 25, 2016) (AD 2016-23-05). AD 2016-23-05 applied to certain Airbus Helicopters Model SA-365N1, AS-365N2, AS 365 N3, SA-366G1, EC 155B, and EC155B1 helicopters. The NPRM published in the *Federal Register* on December 14, 2020 (85 FR 80689). The NPRM was prompted by a determination that additional inspections, replacements, and modifications are necessary to address the unsafe condition. The NPRM proposed to retain the requirements of AD 2016-23-05 and also require modifying the helicopter by replacing the TGB control shaft guide bushes; repetitive inspections of the TGB magnetic plug and corrective actions if necessary; repetitive replacements of the bearing; and modifying the helicopter by replacing the TGB; as specified in an EASA AD. The NPRM also proposed to add helicopters to the applicability.

The FAA is issuing this AD to address damage to the bearing, which could result in end play, loss of tail rotor pitch control, and subsequent loss of control of the helicopter. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

Update to the Costs of Compliance

The FAA has updated the costs for the new required actions and on-condition actions based on data received since the NPRM was issued.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes.

The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

EASA AD 2017-0125 describes procedures for modifying the helicopter by replacing TGB control shaft guide bushes, repetitive inspections (checks) of the oil level of the tail rotor gearbox and, if necessary, filling the oil to the maximum level, repetitive inspections of the TGB magnetic plug for the presence of particles and corrective actions if necessary (corrective actions include removing the TGB, complying with certain work cards to address particles and other conditions such as abrasions, scales, flakes, and

splinters, and replacing the bearing), repetitive replacements of the bearing; and modifying the helicopter by replacing the TGB.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Explanation of Retained Requirements

Although this AD does not explicitly restate the requirements of AD 2016-23-05, this AD retains certain requirements of AD 2016-23-05. Those requirements are referenced in paragraphs (2) and (5) of EASA AD 2017-0125, which, in turn, is referenced in paragraph (g) of this AD.

Costs of Compliance

The FAA estimates that this AD affects 52 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2016-23-05	17 work-hours X \$85 per hour = \$1,445	\$1,125	\$2,570	\$133,640
New actions	71 work-hours X \$85 per hour = \$6,035	Up to \$155,300	Up to \$161,335	Up to \$8,389,420

Estimated costs for optional actions

Labor cost	Parts cost	Cost per product
Up to 8 work-hours X \$85 per hour = \$680	\$0	\$680

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
Up to 4 work-hours X \$85 per hour = \$340	Up to \$1,395	Up to \$1,735

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in this cost estimate.

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.

The FAA is 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

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 this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, 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.

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 removing Airworthiness Directive (AD) 2016-23-05, Amendment 39-18712 (81 FR 85126, November 25, 2016), and adding the following new AD:

2021-05-05 **Airbus Helicopters:** Amendment 39-21448 Docket No. FAA-2020-1123; Project Identifier MCAI-2020-01294-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2016-23-05, Amendment 39-18712 (81 FR 85126, November 25, 2016) (AD 2016-23-05).

(c) Applicability

This AD applies to Airbus Helicopters Model SA-365N1, AS-365N2, AS 365 N3, SA-366G1, EC 155B, and EC155B1 helicopters, certificated in any category, all serial numbers.

(d) Subject

Joint Aircraft System Component (JASC) Code 65, Tail Rotor.

(e) Reason

This AD was prompted by reports of occurrences of loss of yaw control due to failure of the tail gearbox (TGB) control rod double bearing (bearing). This AD was also prompted by the determination that additional inspections, replacements, and modifications are necessary to address the unsafe condition. The FAA is issuing this AD to address damage to the bearing, which could result in end play, loss of tail rotor pitch control, and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2017-0125, dated July 21, 2017 (EASA AD 2017-0125).

(h) Exceptions to EASA AD 2017-0125

(1) Where EASA AD 2017-0125 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2017-0125 refers to June 4, 2011 (the effective date of EASA AD 2011-0105), this AD requires using the effective date of this AD.

(3) Where EASA AD 2017-0125 refers to May 25, 2016 (the effective date of EASA AD 2016-0197R1), this AD requires using the effective date of this AD.

(4) The “Remarks” section of EASA AD 2017-0125 does not apply to this AD.

(5) Where paragraph (2) of EASA AD 2017-0125 requires inspections (checks) to be done “in accordance with the instructions of Paragraph 3.B.1 of the applicable inspection ASB,” for this AD, those instructions are for reference only and are not required for the actions in paragraph (2) of EASA AD 2017-0125. The inspections (checks) required by paragraph (2) of EASA AD 2017-0125 may be performed by the owner/operator (pilot) holding at least a private pilot certificate and must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9 (a)(1) through (4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439.

(6) Where paragraph (5) of EASA AD 2017-0125 specifies to “accomplish the applicable corrective action(s) in accordance with the instructions of Paragraph 3.B.1 of the applicable inspection ASB,” for this AD, a qualified mechanic must add oil to the TGB to the “max” level if the oil level is not at maximum. The instructions are for reference only and are not required for the actions in paragraph (5) of EASA AD 2017-0125.

(7) Where EASA AD 2017-0125 refers to flight hours (FH), this AD requires using hours time-in-service.

(8) Where EASA AD 2017-0125 requires action after the last flight of the day or “ALF,” this AD requires those actions before the first flight of the day.

(9) Where the service information referred to in EASA AD 2017-0125 specifies to perform a metallurgical analysis and contact the manufacturer if collected particles are not clearly characterized, this AD does not require contacting the manufacturer to determine the characterization of the particles collected.

(10) Although service information referenced in EASA AD 2017-0125 specifies to scrap parts, this AD does not include that requirement.

(11) Although service information referenced in EASA AD 2017-0125 specifies reporting information to Airbus Helicopters and filling in a “particle detection” follow-up sheet, this AD does not include those requirements.

(12) Although service information referenced in EASA AD 2017-0125 specifies returning certain parts to an approved workshop, this AD does not include that requirement.

(13) Where paragraph (6) of EASA AD 2017-0125 refers to “any discrepancy,” for this AD, discrepancies include the presence of particles and other conditions such as abrasions, scales, flakes, and splinters.

(i) Alternative Methods of Compliance (AMOCs):

(1) The Manager, Strategic Policy Rotorcraft Section, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Strategic Policy Rotorcraft Section, send it to: Manager, Strategic Policy Rotorcraft Section, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110. Information may be emailed to: 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

For more information about this AD, contact Kathleen Arrigotti, Aviation Safety Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South

216th St., Des Moines, WA 98198; telephone and fax 206-231-3218; email

kathleen.arrigotti@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Aviation Safety Agency (EASA) AD 2017-0125, dated July 21, 2017.

(ii) [Reserved]

(3) For EASA AD 2017-0125, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1123.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 17, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-05142 Filed: 3/11/2021 8:45 am; Publication Date: 3/12/2021]