



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-0016; Project Identifier MCAI-2022-00416-R; Amendment 39-22506; AD 2023-14-06]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Helicopters Model EC120B, EC130B4, and EC130T2 helicopters. This AD was prompted by a report of corrosion detected on certain part-numbered landing gear assemblies. This AD requires, for helicopters with certain part-numbered landing gear assemblies installed, visually inspecting for cracks and corrosion; borescope inspecting; and if required, removing corrosion, measuring thickness, interpreting results of the measurements, applying chemical conversion coating and primer, and removing affected parts (landing gear assembly) and affected part sub-assemblies (front or rear crossbeam or left-hand or right-hand skid assembly) from service and replacing with airworthy parts. This AD will allow an affected part or affected part sub-assembly to be installed on a helicopter if certain actions in this AD are accomplished. 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 certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0016; 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, the European Union Aviation Safety Agency (EASA) AD, 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.

Material Incorporated by Reference:

- For service information identified in this final rule, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at airbus.com/en/products-services/helicopters/hcare-services/airbusworld.

- 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. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0016.

FOR FURTHER INFORMATION CONTACT: Stephanie Sunderbruch, Aviation Safety Engineer, FAA, 1600 Stewart Ave, Suite 410, Westbury, NY 11590; telephone (817) 222-4659; email: Stephanie.L.Sunderbruch@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Helicopters Model EC120B, EC130B4, and EC130T2 helicopters. The NPRM published in the *Federal Register* on January 19, 2023. The NPRM was prompted by EASA AD 2022-0053, dated March 23, 2022 (EASA AD 2022-0053), issued by EASA, which is the Technical Agent for the Member States of the European Union. EASA advises of an occurrence of corrosion found on a landing gear assembly of a Model EC 130 helicopter. EASA further advises that other helicopter models are affected by the same unsafe condition due to design similarity. This condition, if not addressed, could result in the landing gear collapsing, damage to the helicopter, and injury to occupants.

Accordingly, EASA AD 2022-0053 requires, for helicopters with certain part-numbered landing gear assemblies installed, a one-time visual inspection of the external areas of the landing gear tubes for corrosion and cracks, and a borescope inspection of the internal sides of the landing gear tubes for corrosion (including, but not limited to, leafing and exfoliant corrosion) and cracks. EASA AD 2022-0053 also requires contacting Airbus Helicopters for approved corrective action if any crack, or leafing or exfoliant corrosion, is found or if the remaining thickness of affected part sub-assemblies do not meet specified acceptability criteria during any of the inspections. EASA AD 2022-0053 allows replacing the affected part sub-assembly in lieu of contacting Airbus Helicopters for approved corrective action. EASA AD 2022-0053 also requires reporting inspection results to Airbus Helicopters within 30 days after the inspection or within 30 days after the effective date of EASA AD 2022-0053, whichever occurs later.

Additionally, EASA AD 2022-0053 allows credit for certain inspections and corrective actions if those actions were done before the effective date of EASA AD 2022-

0053, and allows an affected part or affected part sub-assembly to be installed on a helicopter if certain requirements of EASA AD 2022-0053 are met. EASA considers its AD an interim action and states that further AD action may follow.

In the NPRM, the FAA proposed to require, for helicopters with certain part-numbered landing gear assemblies installed, removing and cleaning certain parts; visually inspecting certain areas of the landing gear tubes for cracks and corrosion; and if any crack, leafing corrosion, or exfoliant corrosion is detected, removing certain parts from service and replacing with airworthy parts. If any corrosion other than leafing or exfoliant corrosion is detected, the NPRM proposed to require removing the corrosion.

The NPRM also proposed to require borescope inspecting the internal side of the landing gear tubes for cracks and corrosion. If any crack, leafing corrosion, or exfoliant corrosion is detected, the NPRM proposed to require removing any affected part from service and replacing it with an airworthy part. If any corrosion other than leafing or exfoliant corrosion is detected, the NPRM proposed to require removing the corrosion.

The NPRM also proposed, if any corrosion other than leafing or exfoliant corrosion is detected during any of the inspections, removing all corrosion and measuring the remaining thickness of the landing gear tubes and interpreting the results of the measurements. If the remaining thickness does not meet the permitted criteria as specified, the NPRM proposed to require removing each affected sub-assembly from service and replacing it with an airworthy part. If the remaining thickness meets the permitted criteria as specified, the NPRM proposed to require applying a chemical conversion coating and a double layer of primer.

Finally, the NPRM proposed to allow an affected part or affected part sub-assembly to be installed on a helicopter, if certain proposed requirements of the NPRM have been accomplished.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter, Air Methods.¹ The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Allow Credit For Previously Issued Service Information

Air Methods requested that the FAA allow credit for the inspections and corrective actions proposed in the NPRM, if these actions were performed in accordance with Revision 1 of the service information before the effective date of the AD. Air Methods added that Figure 4 of the service information required by this AD does not properly label "Zone B" and "Zone C," but commented that it considers the service information sufficiently adequate to identify the areas.

The FAA partially agrees. Paragraph (f) of this AD requires compliance with this AD within the compliance times specified, unless the actions have already been done. Therefore, this AD already permits credit for complying with the AD's required actions if those actions were performed before the effective date of this AD. However, the FAA disagrees with allowing credit for all of this AD's required actions if done in accordance with Revision 1 of the service information, before the effective date of this AD, because the corrective actions in Revision 1 of the service information differ from this AD's corrective actions. Operators may request approval of specific corrective actions as an alternative method of compliance (AMOC) under the provisions of paragraph (h) of this AD.

Comments Regarding Methods to Remove Corrosion

Air Methods stated that Revision 1 of the service information refers to the Standard Practices Manual (MTC) for procedures to remove corrosion and that the MTC includes details on important considerations when removing corrosion from aluminum parts. Air Methods further stated that the MTC contains safe procedures for corrosion

¹ This comment does not appear in the docket because it was marked "proprietary information."

removal based on service history. Lastly, Air Methods stated that the specific use of just a non-metal abrasive pad, as proposed in the NPRM, may not be adequate to remove corrosion in severe cases and asserted that restricting the corrosion removal procedure does not provide any measurable improvement to the level of safety. The FAA infers that Air Methods is requesting the FAA not limit corrosion removal to only using a non-metal abrasive pad.

The FAA agrees. The FAA has revised the required actions paragraph of this final rule by removing the requirement to use a non-metal abrasive pad, and only requires removing all corrosion from all zones.

Conclusion

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA of the unsafe condition described in its AD. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Airbus Helicopters Alert Service Bulletin (ASB) No. EC120-32A014 (EC120-32A014 Rev 1), for Model EC120B helicopters and Airbus Helicopters ASB No. EC130-32A013 (EC130-32A013 Rev 1), for Model EC130B4 and EC130T2 helicopters, both Revision 1, and both dated October 17, 2022. This service information includes Detail A Figure 3 (EC120-32A014 Rev 1) and Detail A Figure 4 (EC130-32A013 Rev 1), which identify the areas and zones to be inspected for cracks and corrosion (including, but not limited to leafing and exfoliant corrosion). This service

information also includes Table 3, which identifies the minimum material thickness permitted after corrosion is removed. Additionally, this service information specifies procedures for visually inspecting the external areas and borescope inspecting the internal areas of the landing gear tubes, removing corrosion, measuring thickness, interpreting results of the measurements, and applying a chemical conversion coating and primer.

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

Differences Between this AD and EASA AD 2022-0053

EASA AD 2022-0053 requires, for certain helicopters, the initial inspections to be completed within certain compliance times specified in Table 1 of EASA AD 2022-0053, whereas this AD requires the initial inspections to be completed within 13 months after the effective date of this AD. EASA AD 2022-0053 requires contacting Airbus Helicopters for repair instructions if any cracks, leafing corrosion, or exfoliant corrosion are found, or if the residual thickness of an affected part sub-assembly does not meet certain criteria, whereas this AD requires removing the affected part or part sub-assembly from service instead. EASA AD 2022-0053 allows credit for certain inspections and corrective actions if these requirements were accomplished in accordance with previously issued service information, whereas this AD does not allow credit for the inspections and corrective actions if previously issued service information was used. EASA AD 2022-0053 requires reporting the inspection results to Airbus Helicopters, whereas this AD does not require reporting.

Interim Action

The FAA considers that this AD is an interim action. Once final action has been identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD affects 353 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Removing and cleaning parts, and visually inspecting the external surface of each landing gear tube for cracks and corrosion takes about 2 work-hours for an estimated cost of \$170 per inspection, up to \$680 per helicopter (4 landing gear tubes per helicopter), and up to \$240,040 for the U.S. fleet.

Borescope inspecting the internal side of each landing gear tube for cracks and corrosion (including, but not limited to, leafing and exfoliant corrosion) takes about 1 work-hour for an estimated cost of \$85 per inspection, up to \$340 per helicopter (4 landing gear tubes per helicopter), and up to \$120,020 for the U.S. fleet.

If required, applying a chemical conversion coating and a double layer of primer takes about 2 work-hours and parts cost a minimal amount for an estimated cost of \$170 per helicopter and up to \$60,010 for the U.S. fleet.

If required, disassembling certain zones and removing corrosion takes about 1 work-hour for an estimated cost of \$85 per helicopter.

If required, measuring the thickness of the internal side of each landing gear tube and interpreting the results takes up to 1 work-hour for an estimated cost of \$85 per helicopter.

If required, replacing a landing gear assembly takes about 2 work-hours and parts cost up to \$106,612 for an estimated cost of up to \$106,782 per replacement.

If required, replacing a front crossbeam takes about 1 work-hour and parts cost up to \$9,081 for an estimated cost of up to \$9,166 per replacement.

If required, replacing a rear crossbeam takes about 1 work-hour and parts cost up to \$11,639 for an estimated cost of up to \$11,724 per replacement.

If required, replacing a right-hand or left-hand skid assembly takes about 1 work-hour and parts cost up to \$21,447 for an estimated cost of up to \$21,532 per skid assembly replacement.

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.

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:

2023-14-06 Airbus Helicopters Amendment 39-22506; Docket No. FAA-2023-0016;
Project Identifier MCAI-2022-00416-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

None.

(c) Applicability

This AD applies to all Airbus Helicopters Model EC120B, EC130B4, and EC130T2 helicopters, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 3213, Main Landing Gear Strut, Axle, Truck.

(e) Unsafe Condition

This AD was prompted by a report of corrosion detected on certain part-numbered landing gear assemblies. The FAA is issuing this AD to detect corrosion and cracks on the landing gear tubes. The unsafe condition, if not addressed, could result in the landing gear collapsing, damage to the helicopter, and injury to occupants.

(f) Compliance

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

(g) Required Actions

(1) Within 13 months after the effective date of this AD, for Model EC120B helicopters with landing gear assembly part number (P/N) C321A2106102, P/N C321A2501101, P/N C321A2501102, P/N C321A2601051AA, P/N C321A2601051CA, or P/N C321A2601052 installed, and for Model EC130B4 and EC130T2 helicopters with landing gear assembly P/N 350A41-0077-0201, P/N 350A41-0080-1102, P/N 350A41-0080-1103, P/N 350A41-0081-0201, P/N 350A41-0082-0101, or P/N 350A41-0082-0102 installed, except those having a date of first installation on a helicopter of February 16, 2022 or later; and for helicopters with a landing gear assembly having a P/N specified in this paragraph, with an unknown installation date, do the following:

(i) Remove the landing gear fairing from the rear crossbeam and clean the external areas of each of the landing gear tubes item a, item c, item d, and item e, including Zones B1, B2, C1, C2, D, E, F, and M as depicted in Detail A, Figure 3, and Details B and C, Figure 4 of Airbus Helicopters Alert Service Bulletin (ASB) No. EC120-32A014 (ASB EC120-32A014 Rev 1), or as depicted in Detail A, Figure 4, and Details B and C, Figure 5 of Airbus Helicopters ASB No. EC130-32A013 (ASB EC130-32A013 Rev 1), both Revision 1, and both dated October 17, 2022, as applicable to your model helicopter.

(ii) Visually inspect the external areas of each of the landing gear tubes item a, item c, item d, and item e, including Zones B1, B2, C1, C2, D, E, F, and M for corrosion (including, but not limited to leafing and exfoliant corrosion) and cracks.

(A) If any crack or leafing or exfoliant corrosion is detected, before further flight, remove the affected part from service and replace it with an airworthy part.

(B) If any corrosion is detected in Zone C1, C2, or E, other than leafing or exfoliant corrosion, before further flight, disassemble the landing gear and remove all corrosion from all zones.

(C) If any corrosion is detected in only Zone B1, B2, D, F, or M, other than leafing or exfoliant corrosion, before further flight, remove all corrosion from all zones.

(iii) Borescope inspect the internal side of each of the landing gear tubes item a, item c, item d, and item e, including Zones B1, B2, C1, C2, D, E, F, and M for corrosion (including, but not limited to leafing and exfoliant corrosion) and cracks.

(A) If any crack, leafing corrosion, or exfoliant corrosion is detected, before further flight, remove the affected part from service and replace it with an airworthy part.

(B) If any corrosion is detected in Zone C1, C2, or E, other than leafing or exfoliant corrosion, before further flight, disassemble the landing gear and remove all corrosion from all zones.

(C) If any corrosion is detected in only Zone B1, B2, D, F, or M, other than leafing or exfoliant corrosion, before further flight, remove all corrosion from all zones.

(iv) Before further flight after performing the inspections required by paragraphs (g)(1)(ii) and (iii) of this AD, if any corrosion was detected during any inspection required by paragraphs (g)(1)(ii) and (iii) of this AD other than leafing or exfoliant corrosion, using an ultrasonic thickness gauge, measure the remaining thickness of the landing gear tubes in the zones where any corrosion was removed. Interpret the results of the measurement using the criteria specified in Table 3 of ASB EC120-32A014 Rev 1 or Table 3 of ASB EC130-32A013 Rev 1, as applicable to your model helicopter. If the remaining thickness does not meet the permitted criteria as specified, before further flight, remove each affected sub-assembly from service and replace it with an airworthy part. If the remaining thickness meets the permitted criteria as specified, before further flight, accomplish the actions required by paragraph (g)(1)(v) of this AD.

(v) Apply a chemical conversion coating (Alodine 1200) or equivalent, and a double layer of chromate Primer P05 and Primer P20, or equivalent, below the collar in Zones F and M and to any reworked zone.

(2) For Model EC120B helicopters, as of the effective date of this AD, do not install landing gear assembly P/N C321A2106102, P/N C321A2501101, P/N C321A2501102, P/N C321A2601051AA, P/N C321A2601051CA, or P/N C321A2601052, previously installed with an unknown installation date or a date of first installation on a helicopter before February 16, 2022; and do not install a front crossbeam, rear crossbeam, left-hand (LH) skid assembly, or right-hand (RH) skid assembly having a P/N identified in Table 2 of ASB EC120-32A014 Rev 1, previously installed with an unknown installation date, or a date of first installation on a helicopter before February 16, 2022, on any helicopter; unless the actions required by paragraphs (g)(1)(i) through (v) of this AD, as applicable, have been accomplished on the part.

(3) For Model EC130B4 and EC130T2 helicopters, as of the effective date of this AD, do not install landing gear assembly P/N 350A41-0077-0201, P/N 350A41-0080-1102, P/N 350A41-0080-1103, P/N 350A41-0081-0201, P/N 350A41-0082-0101, or P/N 350A41-0082-0102, previously installed with an unknown installation date or a date of first installation on a helicopter before February 16, 2022, and do not install a front crossbeam, rear crossbeam, LH skid assembly, or RH skid assembly, having a P/N identified in Table 2 of ASB EC130-32A013 Rev 1, previously installed with an unknown installation date, or a date of first installation on a helicopter before February 16, 2022, on any helicopter, unless the actions required by paragraphs (g)(1)(i) through (v) of this AD, as applicable, have been accomplished on the part.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, 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 International Validation Branch, send it to the attention of the person identified in paragraph (i)(2) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@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.

(i) Additional Information

(1) Refer to European Union Aviation Safety Agency (EASA) AD 2022-0053, dated March 23, 2022, for related information. This EASA AD may be found in the AD docket at regulations.gov under Docket No. FAA-2023-0016.

(2) For more information about this AD, contact Stephanie Sunderbruch, Aviation Safety Engineer, FAA, 1600 Stewart Ave, Suite 410, Westbury, NY 11590; telephone (817) 222-4659; email: Stephanie.L.Sunderbruch@faa.gov.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference 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 the AD specifies otherwise.

(i) Airbus Helicopters Alert Service Bulletin (ASB) No. EC120-32A014, Revision 1, dated October 17, 2022.

(ii) Airbus Helicopters ASB No. EC130-32A013, Revision 1, dated October 17, 2022.

(3) For service information identified in this AD, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX, 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at airbus.com/en/products-services/helicopters/hcare-services/airbusworld.

(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.

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

Issued on July 12, 2023.

Victor Wicklund, Deputy Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2023-16555 Filed: 8/3/2023 8:45 am; Publication Date: 8/4/2023]