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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-1099; Product Identifier 2018-SW-026-AD; Amendment 39-21164; AD 2020-15-01]

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 Airbus Helicopters Model EC 155B and EC155B1 helicopters. This AD requires modifying the wiring of the attitude and heading reference system (AHRS) connector. This AD was prompted by a report of wiring of the AHRS contrary to approved design specifications. The actions of this AD are intended to address an unsafe condition on these products.

DATES: This AD is effective August 17, 2020.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of August 17, 2020.

ADDRESSES: For service information identified in this final rule, 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 https://www.airbus.com/helicopters/services/technical-support.html. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. It is also available on the internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2019-1099.

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-2019-1099; 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 AD, the European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, any service information that is incorporated by reference, any comments received, and other information. The street 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: George Schwab, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email .

SUPPLEMENTARY INFORMATION:

Discussion

On February 28, 2020, at 85 FR 11879, the FAA published a notice of proposed rulemaking (NPRM) in the Federal Register, which proposed to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Model EC 155B and EC155B1 helicopters. The NPRM proposed to require modifying the wiring at connector 11 ALPHA based on the helicopter configuration and in accordance with specified portions of the applicable service information. The proposed requirements were intended to correct the AHRS wiring, and prevent the display of misleading attitude and vertical speed information and subsequent loss of control of the helicopter in instrument meteorological conditions (IMC).

The NPRM was prompted by EASA AD No. 2018-0069, dated March 26, 2018, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Airbus Helicopters Model EC 155 B and EC 155 B1 helicopters. EASA advises that the AHRS1 and AHRS2 on Model EC 155-series helicopters use the same flight/ground signal contrary to the approved design specification, which requires the AHRS1 and AHRS2 to use independent signals to ensure redundancy. EASA states that if AHRS1 and AHRS2 both receive an incorrect “ground” status due to a single failure while in flight, it will generate an error in the computation of the attitude and vertical speed and, as a result, an incorrect display of these indications to the flight crew. EASA advises that this condition, if not corrected, could lead to erroneous attitude and vertical speed indications, resulting in increased workload for the flight crew and reduced control of the helicopter during flight in IMC.

Accordingly, the EASA AD requires modifying the connection of connector 11 ALPHA, and based on the helicopter configuration, also modifying the wiring to connector 11 ALPHA.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received comments from one commenter. The commenter commented in support of the NPRM.

FAA's Determination

The FAA has reviewed the relevant information and determined that an unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Differences Between This AD and the EASA AD

The compliance time for the EASA AD is within 7 or 12 months depending on helicopter configuration. The compliance time for this AD is before further flight in IMC or within 660 hours time-in-service, whichever occurs first.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Airbus Helicopters Alert Service Bulletin (ASB) No. EC155-34A033, Revision 2, dated January 30, 2018. This service information specifies re-allocating the electronic board output connections by modifying the wiring of connector 11 ALPHA for helicopters with modification (MOD) 0722B51 installed and modifying the wiring to connector 11 ALPHA for those helicopters that also have a combined voice and flight data recording system (MOD 0731B89) installed.

The FAA also reviewed Airbus Helicopters ASB No. EC155-34A037, Revision 0, dated February 19, 2018. This service information specifies installing MOD 0722B51 by modifying the wiring of connector 11 ALPHA to separate the flight/ground information so the left-hand landing gear flight information is also used by the automatic pilot system as well as but separately from the right-hand landing gear flight information. This service information also specifies re-allocating the electronic board output connections by modifying the wiring of connector 11 ALPHA.

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 the ADDRESSES section.

Other Related Service Information

The FAA also reviewed Airbus Helicopters ASB No. EC155-34A033, Revision 0, dated July 19, 2017, and Airbus Helicopters ASB No. EC155-34A033, Revision 1, dated October 9, 2017. Revisions 0 and 1 of this service information contain the same procedures for modifying the wiring as Revision 2. However, Revision 1 clarifies the applicable helicopter configurations and updates the post-modification testing procedures, and Revision 2 clarifies the post-modification test procedures and updates a figure.

Costs of Compliance

The FAA estimates that this AD affects 17 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at $85 per work-hour.

Modifying the wiring takes about 4 work-hours and parts cost about $20 for an estimated cost of $360 per helicopter and $6,120 for the U.S. fleet.

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 helicopters 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 adding the following new airworthiness directive (AD):

2020-15-01 Airbus Helicopters: Amendment 39-21164; Docket No. FAA-2019-1099; Product Identifier 2018-SW-026-AD.

(a) Applicability

This AD applies to Airbus Helicopters Model EC 155B and EC155B1 helicopters, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as incorrect wiring of an attitude and heading reference system (AHRS). This condition could result in the display of misleading attitude and vertical speed information, and subsequent loss of control of the helicopter in instrument meteorological conditions (IMC).

(c) Effective Date

This AD becomes effective August 17, 2020.

(d) 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.

(e) Required Actions

Before further flight in IMC or within 660 hours time-in-service, whichever occurs first:

(1) For helicopters with wiring change modification (MOD) 0722B51 installed, modify the wiring of connector 11 ALPHA as depicted in Figure 1 of Airbus Helicopters Alert Service Bulletin (ASB) No. EC155-34A033, Revision 2, dated January 30, 2018 (ASB EC155-34A033). If a combined voice and flight data recording system (MOD 0731B89) is installed, also modify the wiring to connector 11 ALPHA as depicted in Figure 2 of ASB EC155-34A033.

(2) For helicopters without wiring change MOD 0722B51 installed, modify the wiring of connector 11 ALPHA as depicted in Figure 1 and Figure 2 of Airbus Helicopters ASB No. EC155-34A037, Revision 0, dated February 19, 2018.

(f) Special Flight Permits

A special flight permit may be issued for operation under visual flight rules only.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: George Schwab, Aviation Safety Engineer, Safety Management Section, Rotorcraft

Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email .

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests 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.

(h) Additional Information

(1) Airbus Helicopters Alert Service Bulletin (ASB) No. EC155-34A033, Revision 0, dated July 19, 2017, and Airbus Helicopters ASB No. EC155-34A033, Revision 1, dated October 9, 2017, 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 https://www.airbus.com/helicopters/services/technical-support.html. You may view 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 (now European Union Aviation Safety Agency) (EASA) No. 2018-0069, dated March 26, 2018. You may view the EASA AD on the internet at https://www.regulations.gov in Docket No. FAA-2019-1099.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 3420, Attitude and Direction Data System.

(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. EC155-34A033, Revision 2, dated January 30, 2018.

(ii) Airbus Helicopters ASB No. EC155-34A037, Revision 0, dated February 19, 2018.

(3) For Airbus Helicopters 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 https://www.airbus.com/helicopters/services/technical-support.html.

(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 , or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on July 7, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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