



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0907; Product Identifier 2017-SW-072-AD; Amendment 39-21429; AD 2021-04-08]

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 AS350B3 helicopters. This AD requires modifying the electrical system of the throttle twist grip, inspecting the routing of a microswitch electrical harness, and correcting the electrical harness routing if it is incorrect. This AD was prompted by reports of the engine remaining in idle when the twist grip was turned from the “forced idle” position to the “flight” position. The actions of this AD are intended to address an 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 document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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-2020-0907.

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-2020-0907; 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: Ronnea Derby, Aviation Safety Engineer, Denver ACO Branch, FAA, 26805 E 68th Ave., Denver, CO 80249; telephone 303-342-1093; email ronnea.l.derby@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Model AS350B3 helicopters with a Turbomeca ARRIEL 2B engine installed. The NPRM published in the *Federal Register* on October 15, 2020 (85 FR 65285). The NPRM proposed to require, based on helicopter configuration, modifying the electrical system of the throttle twist grip. The proposed AD also proposed to require inspecting the routing of a microswitch electrical harness, and depending on the routing of that electrical harness, correcting the routing. The proposed requirements were intended to prevent failure of the electrical operation of the throttle twist grip, which can prevent switching from “IDLE” mode to “FLIGHT” mode. During autorotation training or during governor failure training (when the throttle grip is turned in the low flow direction), this condition prohibits recovery from a practice autorotation and compels the pilot to continue the autorotation to the ground. This condition could result in unintended touchdown to the ground at a flight-idle power setting, damage to the helicopter, and injury to occupants.

The NPRM was prompted by EASA AD No. 2017–0035, dated February 20, 2017 (EASA AD 2017–0035), to correct an unsafe condition for Airbus Helicopters (formerly Eurocopter) Model AS 350 B3 helicopters with ARRIEL 2B engines installed. EASA advises of an initial report of the microswitch pin jammed in the pushed-in position resulting in the engine remaining in idle when the twist grip had been turned back to the “flight” position during an autorotation training exercise. This condition could also occur during governor failure training when the twist grip is turned in the low flow rate direction. EASA also advises of two later reports of this condition, with one of those reports related to an incorrectly routed electrical harness. EASA advises that this condition, if not detected and corrected, could lead to reduced control of the helicopter.

EASA initially issued AD No. 2006–0094, dated April 21, 2006, which required repetitive testing of the microswitch and established a life limit for the microswitch. Subsequent EASA AD action required reducing that life limit, inspecting the travel of the collective lever, performing an additional check of the collective lever for free travel, and installing a terminating action modification that was available for certain helicopter configurations. That modification gave priority to the HydroMechanical Unit (HMU) flight position when the microswitch failed to operate correctly at forced idle. EASA most recently issued AD 2017–0035, which prompted this AD action, to include all of the previous AD requirements and expand the terminating action modification to other helicopter configurations.

Comments

The FAA gave the public the opportunity to participate in developing this final rule, but the FAA did not receive any comments on the NPRM or on the determination of the cost to the public.

FAA’s Determination

This helicopter has been approved by EASA and is 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 is issuing this AD after evaluating all of the information provided by EASA and determining the unsafe condition exists and is likely to exist or develop on other helicopters of the same type design and that air safety and the public interest require adopting the AD requirements as proposed, except for a minor editorial change. The FAA has determined that this minor editorial change is consistent with the intent that was proposed in the NPRM for addressing the unsafe condition and does not add any additional burden upon the public than was already proposed in the NPRM.

Differences Between this AD and the EASA AD

The EASA AD specifies a repetitive test of the microswitch, a life limit for the microswitch, and inspecting the travel of the collective lever, until the terminating action of modifying the electrical system of the throttle twist grip and inspecting the routing of a microswitch electrical harness are completed. This AD only requires modifying the electrical system of the throttle twist grip and inspecting the routing of a microswitch electrical harness. The EASA AD specifies performing that terminating action in a compliance time of calendar months. This AD requires performing the required actions before the next practice autorotation, before the next simulated governor failure, or within 330 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. AS350–67.00.43, Revision 3, dated June 16, 2016, which specifies procedures, based on different configurations, to modify the electrical operation to give priority to the HMU flight position when the microswitch does not operate correctly at forced idle (corresponds to Airbus Helicopters Modification (MOD) 073357). This service information also specifies instructions to inspect the routing of microswitch electrical harness number “53K”.

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 Eurocopter ASB No. 05.00.49, Revision 3, dated March 8, 2012. This service information specifies procedures, for helicopters without MOD 073357 installed, for repetitive testing of the microswitch, a life limit for the microswitch, inspecting the travel of the collective lever, and verifying correct wiring harness installation.

Costs of Compliance

The FAA estimates that this AD affects 517 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 electrical system and inspecting the electrical harness routing takes about 30 work-hours and parts will cost about \$9,692 for an estimated cost of \$12,242 per helicopter and \$6,329,114 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:
2021-04-08 **Airbus Helicopters**: Amendment 39-21429; Docket No. FAA-2020-0907;
Product Identifier 2017-SW-072-AD.

(a) Applicability

This airworthiness directive (AD) applies to Airbus Helicopters Model AS350B3 helicopters, certificated in any category, with a Turbomeca ARRIEL 2B engine installed.

(b) Unsafe Condition

This AD defines the unsafe condition as failure of the electrical operation of the throttle twist grip, which can prevent switching from “IDLE” mode to “FLIGHT” mode. During autorotation training or during governor failure training (when the throttle grip is turned in the low flow direction), this condition prohibits recovery from a practice autorotation and compels the pilot to continue the autorotation to the ground. This condition could result in unintended touchdown to the ground at a flight-idle power setting, damage to the helicopter, and injury to occupants.

(c) Effective Date

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

(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 the next practice autorotation, before the next simulated governor failure, or within 330 hours time-in-service, whichever occurs first, modify the electrical operation of the throttle twist grip to give priority to the HydroMechanical Unit flight position when the microswitch does not operate correctly at forced idle (corresponds to Airbus Helicopters Modification (MOD) 073357) as follows:

(1) For helicopters without MOD 073087 and without MOD 073135 installed:

(i) Install box “69K” on the Full Authority Digital Engine Control plate, relay “81K” on frame X1310, install fuses on the console end comprising circuit-breaker panels “31 ALPHA” and “32 ALPHA,” and modify the electrical wiring by following the Accomplishment Instructions, paragraph 3.B.2.a. of Airbus Helicopters Alert Service Bulletin No. AS350–67.00.43, Revision 3, dated June 16, 2016 (ASB AS350–67.00.43), except you are not required to discard parts.

(ii) Inspect the routing of microswitch electrical harness “53K” for correct installation by following paragraph 3.B.2.e. of ASB AS350–67.00.43. If the wiring routing is incorrect, before further flight, correct the wiring routing by following paragraph 3.B.2.f. of ASB AS350–67.00.43.

(2) For helicopters with MOD 073087 (series) and without MOD 073135 installed:

(i) Install relays “54K” and “81K” on frame X1310 and modify the electrical wiring by following paragraph 3.B.2.b. of ASB AS350–67.00.43.

(ii) Inspect the routing of microswitch electrical harness “53K” for correct installation by following paragraph 3.B.2.e. of ASB AS350–67.00.43. If the wiring routing is incorrect, before further flight, correct the wiring routing by following paragraph 3.B.2.f. of ASB AS350–67.00.43.

(3) For helicopters with MOD 073087 (retrofit) and without MOD 073135 installed:

(i) Install relay “81K” on frame X1310 and modify the electrical wiring by following paragraph 3.B.2.c. of ASB AS350–67.00.43.

(ii) Inspect the routing of microswitch electrical harness “53K” for correct installation by following paragraph 3.B.2.e. of ASB AS350–67.00.43. If the wiring routing is incorrect, before further flight, correct the wiring routing by following paragraph 3.B.2.f. of ASB AS350–67.00.43.

(4) For helicopters with MOD 073087 and with MOD 073135 installed:

(i) Install relay “81K” on frame X1310 and modify the electrical wiring by following paragraph 3.B.2.d. of ASB AS350–67.00.43.

(ii) Inspect the routing of microswitch electrical harness “53K” for correct installation by following paragraph 3.B.2.e. of ASB AS350–67.00.43. If the wiring routing is incorrect, before further flight, correct the wiring routing by following paragraph 3.B.2.f. of ASB AS350–67.00.43.

(5) For helicopters with MOD 073084 and with MOD 073222 installed:

(i) Install relay “81K” on frame X1310 and modify the electrical wiring by following paragraph 3.B.2.g. of ASB AS350–67.00.43, except you are not required to scrap parts.

(ii) Inspect the routing of microswitch electrical harness “53K” for correct

installation by following paragraph 3.B.2.e. of ASB AS350–67.00.43. If the wiring routing is incorrect, before further flight, correct the wiring routing by following paragraph 3.B.2.f. of ASB AS350–67.00.43.

(6) For helicopters with optional Autopilot “81K” and without MOD 073222 installed:

(i) Position relay “81K” on frame X1310 by following paragraph 3.B.2.h. of ASB AS350–67.00.43.

(ii) Inspect the routing of microswitch electrical harness “53K” for correct installation by following ASB AS350– 67.00.43, paragraph 3.B.2.e. If the wiring routing is incorrect, before further flight, correct the wiring routing by following paragraph 3.B.2.f. of ASB AS350–67.00.43.

(f) Special Flight Permits

Special flight permits are prohibited.

(g) 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; email 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.

(h) Additional Information

(1) Eurocopter Alert Service Bulletin No. 05.00.49, Revision 3, dated March 8, 2012, which is not incorporated by reference, contains 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 the referenced 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) AD No. 2017-0035, dated February 20, 2017. You may view the EASA AD on the internet at <https://www.regulations.gov> in the AD Docket.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 7697, Engine Control System Wiring.

(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 No. AS350-67.00.43, Revision 3, dated June 16, 2016.

(ii) [Reserved]

(3) For service information identified in this AD, 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 fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 4, 2021.

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

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