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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0912; Product Identifier 2015-SW-071-AD; Amendment 39-21492; AD 2021-07-15]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 82-20-05 for Societe Nationale Industrielle Aerospatiale (now Airbus Helicopters) Model AS-350 and AS-355 series helicopters. AD 82-20-05 required inspecting and establishing a life limit for the tail rotor (TR) drive shaft bearing (bearing). This new AD requires replacing certain part-numbered TR bearings with one part-numbered bearing and repetitively inspecting one part-numbered bearing. This AD was prompted by inconsistencies that have been identified between inspections and maintenance actions required by ADs and inspections and maintenance actions specified in the applicable maintenance manual. The actions of this AD are intended to address an unsafe condition on these products.

DATES: This AD is effective May 7, 2021.

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 this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

Examining the AD Docket

You may examine the AD docket on the internet at <https://www.regulations.gov> in Docket No. FAA-2020-0912; 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 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: Bang Nguyen, Aerospace Engineer, Structures Certification Section, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email bang.nguyen@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to remove AD 82-20-05, Amendment 39-4466 (47 FR 43018, September 30, 1982) (AD 82-20-05), and add a new AD. AD 82-20-05 applied to Societe Nationale Industrielle Aerospatiale (now Airbus Helicopters) Model AS-350 and AS-355 series helicopters. The NPRM published in the Federal Register on October 14, 2020 (85 FR 64995) and proposed to apply to Airbus Helicopters Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters with a bearing part number (P/N) 593404, 6007-2RS1MT47CA, P9107NPP7, 83A851BC3, or 83A851B-1C3, or manufacturer part number (MP/N) 704A33-651-010, 704A33-651-111, 704A33-651-143, or 704A33-651-181 installed. The NPRM proposed to require, within 100 hours time-in-service (TIS), and thereafter at intervals not to exceed 165 hours TIS, for helicopters with certain part-numbered bearings installed, inspecting each bearing holder damper bushing for wear, a crack, tears, and play between each bushing and support plate; each bearing holder for a crack, fretting, and corrosion around the attachment holes; and each rubber sleeve for rotation, crazing, play between the inner races and the rubber sleeve, and lack of integrity of the elastomer. Depending on the inspection results, the NPRM proposed to require removing certain parts from service. The NPRM also proposed to require making a mark with white paint on the rubber sleeves and on the shaft within 100 hours TIS. For helicopters with bearing P/N 6007-2RS1MT47CA, P9107NPP7, 83A851BC3, or 83A851B-1C3, or MP/N 704A33-651-010, 704A33-651-111, or 704A33-651-143 installed, the NPRM proposed to require removing those part numbered bearings from service and installing bearing P/N 593404 or MP/N 704A33-651-181. The NPRM also proposed to prohibit installing certain bearings on any helicopter.

The NPRM was prompted by EASA AD 2015-0195, dated September 23, 2015 (EASA AD 2015-0195), 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 AS 350 B, BA, BB, B1, B2, B3, and D, and AS 355 E, F, F1, F2, N, and NP helicopters with certain part numbered bearings installed. EASA advises that after inconsistencies were identified between inspections and maintenance actions required by French Civil Aviation Authority ADs and EASA ADs, Airbus Helicopters issued service information to specify replacing four different part numbered bearings with one bearing P/N 593404 (also listed as MP/N 704A33-651-181) and to provide inspection procedures for the new bearing. Accordingly, EASA AD 2015-0195 retains the inspections for the older design bearings, requires replacing the bearings with the new bearings, and requires repetitive inspections for the new bearings.

Comments

After the NPRM was published, the FAA received comments from two commenters.

Request

Both commenters stated that the recurring 165 hour TIS inspections for TR bearing P/N 593404 and MP/N 704A33-651-181 are already captured in the FAA-approved manufacturer Airworthiness Limitations Schedule (ALS) as a 150 hour recurring inspection, and should not be part of this AD.

One of the commenters added that the AD's recurring inspection would create a double sign-off and more paperwork.

The FAA disagrees. Operators may not have to follow the version of the ALS referred to by the commenters because operators might be following an older or newer version depending on the delivery date of the helicopter. Additionally, the repetitive inspections required by this AD must be accomplished at intervals not to exceed 165 hours TIS; if operators accomplish these inspections every 150 hours TIS as stated in the ALS, they are meeting the AD's required compliance time.

FAA's Determination

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 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 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 EASA AD requires replacing the older design bearings within 10 months, while this AD requires replacing the bearings within 100 hours TIS instead. The EASA AD applies to Model AS350BB helicopters, whereas this AD does not as this model helicopter is not FAA type-certificated. Finally, this AD applies to Model AS350C and AS350D1 helicopters as they have the same bearings installed, and the EASA AD does not.

Related Service Information

The FAA reviewed Airbus Helicopters Alert Service Bulletin (ASB) No. AS355-01.00.57, Revision 2, dated January 19, 2016, for Model AS355 helicopters, and ASB AS350-01.00.70, Revision 1, dated September 21, 2015, for Model AS350 helicopters. This service information describes procedures for inspecting bearing P/N 593404 and MP/N 704A33-651-181 for position, condition, and wear. This service information also advises customers that older designed bearings are not fit for flight, and specifies replacing the older designed bearings with new bearing P/N 593404 or MP/N 704A33-651-181. This service information also references procedures for repetitively inspecting the newer bearings.

Costs of Compliance

The FAA estimates that this AD will affect 915 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this AD.

For Model AS350 B, BA, B1, B2, B3, and C helicopters, inspecting the bearings takes about 2.5 work hours, for an estimated cost of \$213 per helicopter per inspection cycle. Replacing each bearing with a single part numbered bearing takes about 2.5 work hours and parts cost about \$1,225, for an estimated cost of \$1,438 per helicopter.

For Model AS350 D, D1, and AS355-series helicopters, inspecting the bearings takes about 3 work hours, for an estimated cost of \$255 per helicopter per inspection cycle. Replacing each bearing with a single part numbered bearing takes about 3 work hours and parts cost about \$1,470, for an estimated cost of \$1,725 per helicopter.

Making a mark with white paint on the rubber sleeves and shaft takes a minimal amount of time and has a nominal parts cost.

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

The FAA has determined that 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:
 - a. Removing Airworthiness Directive (AD) 82-20-05, Amendment 39-4466 (47 FR 43018, September 30, 1982); and
 - b. Adding the following new AD:



AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2021-07-15 Airbus Helicopters: Amendment 39-21492; Docket No. FAA-2020-0912; Product Identifier 2015-SW-071-AD.

(a) Applicability

This airworthiness directive (AD) applies to Airbus Helicopters Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters, certificated in any category, with a tail rotor (TR) drive shaft bearing (bearing) part number (P/N) 593404, 6007-2RS1MT47CA, P9107NPP7, 83A851BC3, or 83A851B-1C3, or manufacturer part number (MP/N) 704A33-651-010, 704A33-651-111, 704A33-651-143, or 704A33-651-181, installed.

(b) Unsafe Condition

This AD defines the unsafe condition as failure or seizure of a TR bearing, which if not corrected could result in loss of the TR drive and subsequent loss of control of the helicopter.

(c) Affected ADs

This AD replaces AD 82-20-05, Amendment 39-4466 (47 FR 43018, September 30, 1982).

(d) Effective Date

This AD becomes effective May 7, 2021.

(e) 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.

(f) Required Actions

(1) For helicopters with TR bearing P/N 593404 or MP/N 704A33-651-181 installed, within 100 hours time-in-service (TIS) and thereafter at intervals not to exceed 165 hours TIS:

(i) Inspect each bearing holder damper bushing for wear, a crack, tears, and play between each bushing and support plate. If there is any wear, a crack, tears, or play between the bushing and support plate, remove the bearing holder damper bushing from service.

(ii) Inspect each bearing holder for a crack, fretting, and corrosion around the attachment holes. If there is a crack, fretting, or corrosion, remove the bearing holder from service.

(iii) Inspect each rubber sleeve for rotation, crazing, play between the inner races and the rubber sleeve, and lack of integrity of the elastomer. For the purposes of this inspection, lack of integrity may be indicated by brittle or cracked rubber. If there is any rotation, crazing, play between the inner races and the rubber sleeve, or lack of integrity of the elastomer, remove the rubber sleeve from service.

(2) Within 100 hours TIS:

(i) Make a mark with white paint on the rubber sleeves and on the shaft.

(ii) For helicopters with TR shaft bearing P/N 6007-2RS1MT47CA, P9107NPP7, 83A851BC3, or 83A851B-1C3, or MP/N 704A33-651-010, 704A33-651-111, or 704A33-651-143 installed, remove the affected bearings from service and replace with bearing P/N 593404 or MP/N 704A33-651-181.

(3) After the effective date of this AD, do not install bearing P/N 6007-2RS1MT47CA, P9107NPP7, 83A851BC3, or 83A851B-1C3, or MP/N 704A33-651-010, 704A33-651-111, or 704A33-651-143 on any helicopter.

(g) 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: Bang Nguyen, Aerospace Engineer, Structures Certification Section, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; 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.

(h) Additional Information

(1) Airbus Helicopters Alert Service Bulletin (ASB) No. AS355-01.00.57, Revision 2, dated January 19, 2016, and Airbus Helicopter ASB No. AS350-01.00.70, Revision 1, dated September 21, 2015, 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) AD 2015-0195, dated September 23, 2015. You may view the EASA AD on the internet at <https://www.regulations.gov> in Docket FAA-2020-0912.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6510, Tail Rotor Drive Shaft.

Issued on March 25, 2021.

Gaetano A. Sciortino,
Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft
Certification Service.

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