



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2020-0912; Product Identifier 2015-SW-071-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede 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 requires inspecting and establishing a life limit for the tail rotor (TR) drive shaft bearing (bearing). Since the FAA issued AD 82-20-05, inconsistencies have been identified between inspections and maintenance actions required by ADs and inspections and maintenance actions specified in the applicable maintenance manual. This proposed AD would require replacing certain part-numbered TR bearings with one part-numbered bearing and repetitively inspecting one part-numbered bearing. The actions of this proposed AD are intended to address an unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <https://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **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-2020-0912; 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 proposed 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 listed above. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed 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.

**FOR FURTHER INFORMATION CONTACT:** David Hatfield, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5116; email david.hatfield@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

The FAA invites you to participate in this rulemaking by submitting written comments, data, or views. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

Except for Confidential Business Information as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will file in the docket all comments received, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, the FAA will consider all comments received on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The FAA may change this proposal in light of the comments received.

**Confidential Business Information**

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom

of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to David Hatfield, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5116; email david.hatfield@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Discussion**

The FAA issued AD 82-20-05, Amendment 39-4466 (47 FR 43018, September 30, 1982) (“AD 82-20-05”) for Societe Nationale Industrielle Aerospatiale (now Airbus Helicopters) Model AS-350 and AS-355 series helicopters. AD 82-20-05 requires repetitively inspecting bearing part number (P/N) SKF 6007-2RS1MT47CA and P/N AS704A33.651.010 to determine if the perpendicularity of the bearing relative to the shaft is within certain limits. AD 82-20-05 also establishes a life limit of 1,200 hours time-in-service (TIS) for the bearing and rubber sleeve.

AD 82-20-05 was prompted by reports of four accidents due to failure of the drive shaft on Aerospatiale (now Airbus Helicopters) AS-350 helicopters, and the resulting

corrective actions required through ADs issued by the French Airworthiness Authority. The actions in AD 82-20-05 are intended to prevent failure or seizure of a bearing.

#### **Actions Since AD 82-20-05 Was Issued**

Since the FAA issued AD 82-20-05, EASA, which is the Technical Agent for the Member States of the European Union, issued EASA AD No. 2015-0195, dated September 23, 2015 (EASA AD 2015-0195), 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 manufacturer part number (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.

#### **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 about the unsafe condition described in its AD. The FAA is proposing this AD after evaluating all known relevant information and determining that an unsafe condition is likely to exist or develop on other products of the same type designs.

### **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. The service information describes procedures for inspecting bearing P/N 593404 or 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.

### **Proposed AD Requirements**

This proposed AD would require within 100 hours TIS, and thereafter at intervals not to exceed 165 hours TIS, for helicopters with bearing P/N 593404 or MP/N 704A33-651-181 installed, inspecting each bearing holder damper bushing for wear, a crack, tears, and play between each bushing and support plate. This proposed AD would require inspecting each bearing holder for a crack, fretting, and corrosion around the attachment holes. This proposed AD would also require inspecting 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, this proposed AD would require removing certain parts from service. This proposed AD would also require, within 100 hours TIS, making a mark with white paint on the rubber sleeves and on the shaft, and for helicopters with affected TR drive shaft bearings P/N 6007-2RS1MT47CA, P9107NPP7, 83A851BC3, or 83A851B-1C3, or MP/N 704A33-651-010, 704A33-651-111, or

704A33-651-143 installed, removing the affected bearings from service and replacing with bearing P/N 593404 or MP/N 704A33-651-181. This proposed AD would prohibit installing certain bearings on any helicopter.

### **Differences between this Proposed AD and the EASA AD**

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

### **Costs of Compliance**

The FAA estimates that this proposed AD would affect 915 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this proposed AD. Labor costs are estimated at \$85 per work-hour.

For Model AS350 B, BA, B1, B2, B3, and C helicopters, inspecting the bearings would take 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 would take about 2.5 work-hours and parts would cost about \$1,225, for a cost of \$1,438 per helicopter.

For Model AS350 D, D1, and AS355-series helicopters, inspecting the bearings would take about 3 work-hours, for a cost of \$255 per helicopter per inspection cycle.

Replacing each bearing with a single part-numbered bearing would take about 3 work-hours and parts would cost about \$1,470, for a cost of \$1,725 per helicopter.

Making a mark with white paint on the rubber sleeves and shaft would take a minimal amount of time and have 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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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, I certify this proposed regulation:

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 Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

**Airbus Helicopters:** Docket No. FAA-2020-0912; Product Identifier 2015-SW-071-AD.

**(a) Applicability**

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

**(d) Comments Due Date**

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(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 affected TR drive shaft bearings 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, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: David Hatfield, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5116; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(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**

The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD No. 2015-0195, dated September 23, 2015. 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: 6510, Tail Rotor Drive Shaft.  
Issued on October 6, 2020.

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

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