



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2020-0847; Product Identifier 2018-SW-087-AD; Amendment 39-21434; AD 2021-04-13]

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 AS350B, AS350BA, AS350B1, AS350B2, AS350B3, and AS350D helicopters; Model AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters; and Model EC130 B4 and EC130 T2 helicopters. This AD requires a one-time inspection to verify the presence and correct installation of the main rotor mast (MRM) upper bearing retaining rings, a repetitive inspection of the sealant bead on the MRM for damage, and corrective actions if necessary. This AD was prompted by a report of a missing retaining ring of the inner race of the MRM upper bearing. 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 certain documents 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-2020-0847.

#### **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-2020-0847; 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:** Scott Franke, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email [scott.franke@faa.gov](mailto:scott.franke@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 all Airbus Helicopters Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, and AS350D helicopters; Model AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters; and Model EC130 B4 and EC130 T2 helicopters. The NPRM published in the *Federal Register* on September 21, 2020 (85 FR 59217). The NPRM proposed to require a one-time inspection to verify the presence and correct installation of the MRM upper bearing retaining rings, a repetitive inspection of the sealant bead on the MRM for damage, and corrective actions if necessary. The proposed requirements were intended to detect, and correct if applicable, a missing retaining ring of the inner race of the MRM upper bearing. The FAA is issuing this AD to address this condition, which, if not detected and corrected, can lead to damage to the MRM and surrounding elements, possibly resulting in loss of control of the helicopter.

The NPRM was prompted by EASA AD 2018-0206, dated September 20, 2018 (EASA AD 2018-0206), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for certain Airbus Helicopters Model AS350B, AS350BA, AS350BB, AS350B1, AS350B2, AS350B3, and AS350D helicopters; Model AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters; and Model EC130 B4 and EC130 T2 helicopters. Model AS355BB helicopters are not certificated by the FAA and are not included on the U.S. type certificate data sheet; this AD therefore does not include those helicopters in the applicability. EASA advises that during a scheduled inspection on an Airbus Helicopters Model AS350B3 helicopter, one of the two retaining rings of the inner race of the MRM upper bearing was found missing. These two retaining rings ensure that the inner race is correctly positioned with respect to the rollers, and, if one or both of these retaining rings

are missing, it can lead to an unlimited shift of the inner race and compromise the function of the MRM upper bearing. This condition, if not detected and corrected, can lead to damage to the MRM and surrounding elements, possibly resulting in loss of control of the helicopter.

Airbus Helicopters developed an inspection to check that the upper and lower retaining rings of the inner race of the MRM upper bearing are present and correctly installed. EASA determined that the same condition may exist or develop on Airbus Helicopters Model AS350 helicopters, Model AS355 helicopters, and Model EC130 helicopters because they share a similar design and supply chain. Until the check of the upper and lower bearing retaining rings is accomplished, EASA specifies that repetitive inspections of the MRM upper bearing sealant bead (sealant bead) should be accomplished to ensure the MRM remains serviceable. EASA considers its AD an interim measure pending further investigation results, and notes that further AD action may follow.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received 4 comments in support of the NPRM.

### **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 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.

### **Differences Between this AD and the EASA AD**

Although EASA AD 2018-0206 specifies accomplishing the inspection of the installation of the MRM upper bearing inner race retaining rings within 660 hours time in service (TIS) or 24 months, whichever occurs first, the FAA has determined that interval does not address the identified unsafe condition soon enough to ensure an adequate level of safety for the affected fleet. In developing an appropriate compliance time for this AD, the FAA considered the degree of urgency associated with the subject unsafe condition and the manufacturer's recommendation. In light of all of these factors, the FAA finds that a compliance time of within 660 hours TIS or 6 months, whichever occurs first, represents an appropriate interval of time for affected helicopters to continue to operate without compromising safety.

Although paragraph (5) of EASA AD 2018-0206 specifies that operators may contact the manufacturer for instructions if there are signs of degradation on the MRM inner race, paragraph (i)(3) of this AD requires operators to repair or replace the MRM if there is any degradation as indicated by damage to the retaining rings (including but not limited to cracks, scratches, and gouges), deterioration, or wear.

#### **Related Service Information Under 1 CFR part 51**

Airbus Helicopters has issued the following service information.

- Airbus Helicopters Alert Service Bulletin AS350-62.00.42, Revision 0, dated September 17, 2018.
- Airbus Helicopters Alert Service Bulletin AS355-62.00.37, Revision 0, dated September 17, 2018.
- Airbus Helicopters Alert Service Bulletin EC130-62A017, Revision 0, dated September 17, 2018.

This service information describes procedures for a one-time inspection to verify presence and correct installation of the MRM upper bearing retaining rings, a repetitive inspection of the sealant bead on the MRM for damage, and corrective actions. Damage

of the sealant bead includes flaws, cracks, folds, separation, or absence of the sealant bead. Corrective actions include repair and replacement. These documents are distinct since they apply to different helicopter models.

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.

**Costs of Compliance**

The FAA estimates that this AD affects 1,212 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

**Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Up to 30 work-hours X \$85 per hour = Up to \$2,550	\$0	Up to \$2,550	Up to \$3,090,600

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

**Estimated costs of on-condition actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Up to 80 work-hours X \$85 per hour = Up to \$6,800	Up to \$33,124	Up to \$39,924

**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.

2021-04-13 - **Airbus Helicopters:** Amendment 39-21434; Docket No. FAA-2020-0847;

Product Identifier 2018-SW-087-AD.

**(a) Effective Date**

This Airworthiness Directive (AD) becomes 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, certificated in any category, as identified in paragraphs (c)(1) through (3) of this AD.

(1) Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, and AS350D helicopters.

(2) Model AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters.

(3) Model EC130 B4 and EC130 T2 helicopters.

**(d) Subject**

Joint Aircraft Service Component (JASC) Code 6230, Main Rotor Mast Inner Race Rings.

**(e) Reason**

This AD was prompted by a report of a missing retaining ring of the inner race of the main rotor mast (MRM) upper bearing. The FAA is issuing this AD to address this condition, which, if not detected and corrected, can lead to damage to the MRM and surrounding elements, possibly resulting in loss of control of the helicopter.

**(f) 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.

**(g) Definitions**

(1) For the purposes of this AD, an affected part is any MRM having part number (P/N) 350A37-1290-XX (where XX can be any numerical combination) and a serial number as listed in Airbus Helicopters Alert Service Bulletin AS350-62.00.42, Revision 0, dated September 17, 2018; Airbus Helicopters Alert Service Bulletin AS355-62.00.37, Revision 0, dated September 17, 2018; or Airbus Helicopters Alert Service Bulletin EC130-62A017, Revision 0, dated September 17, 2018, as applicable to your model helicopter, unless the upper bearing inner race retaining rings are verified to be installed correctly as specified in the inspection required in paragraph (i)(1) of this AD.

(2) For the purposes of this AD, a Group 1 helicopter is one on which an affected part is installed.

(3) For the purposes of this AD, a Group 2 helicopter is one on which an affected part is not installed.

**(h) MRM Upper Sealant Bead Inspection**

(1) For Group 1 helicopters, within the compliance time specified in Figure 1 to paragraph (h) of this AD, and, thereafter, at intervals not to exceed 165 hours time-in-service (TIS): Inspect the MRM upper bearing sealant bead for damage in accordance with section 3.B.2.a of the Accomplishment Instructions of Airbus Helicopters Alert Service Bulletin AS350-62.00.42, Revision 0, dated September 17, 2018; Airbus Helicopters Alert Service Bulletin AS355-62.00.37, Revision 0, dated September 17, 2018; or Airbus Helicopters Alert Service Bulletin EC130-62A017, Revision 0, dated September 17, 2018, as applicable to your model helicopter, except you are not required

to discard the plastic clamps (Item vv). For the purposes of this inspection, damage may be indicated by flaws, cracks, folds, separation, or absence of the sealant bead.

**Figure 1 to paragraph (h) – Initial Inspection of MRM Upper Bearing Sealant Bead**

<b>Accumulated Hours TIS</b>	<b>Compliance Time</b>
Less than 115 hours TIS	Before exceeding 165 hours TIS
115 or more hours TIS	Within 50 hours TIS after the effective date of this AD

Note 1 to paragraph (h)(1): Unless specified otherwise, the hours TIS specified in figure 1 to paragraph (h) of this AD are those accumulated on the effective date of this AD by the helicopter since first flight.

(2) If, during any inspection of the MRM upper bearing sealant bead as required by paragraph (h)(1) of this AD, there is damage, before further flight, inspect the installation of the MRM upper bearing inner race retaining rings for discrepancies in accordance with paragraph (i)(1) of this AD.

**(i) MRM Inner Race Retaining Rings Inspection**

(1) For Group 1 Helicopters: Within 660 hours TIS or 6 months, whichever occurs first after the effective date of this AD: Inspect the installation of the MRM upper bearing inner race retaining rings for discrepancies in accordance with the Accomplishment Instructions of section 3.B.2.b of Airbus Helicopters Alert Service Bulletin AS350 62.00.42, Revision 0, dated September 17, 2018; Airbus Helicopters Alert Service Bulletin AS355-62.00.37, Revision 0, dated September 17, 2018; or Airbus Helicopters Alert Service Bulletin EC130-62A017, Revision 0, dated September 17, 2018, as applicable to your model helicopter, except you are not required to discard the plastic clamps (Item vv). For the purposes of this inspection, discrepancies may be indicated by incorrect positioning or missing rings.

(2) If, during the inspection required by paragraph (i)(1) of this AD there are any discrepancies, before further flight, remove the affected part, inspect the MRM inner race for degradation, and replace the retaining rings in accordance with the Accomplishment Instructions of section 3.B.2.c of Airbus Helicopters Alert Service Bulletin AS350 62.00.42, Revision 0, dated September 17, 2018; Airbus Helicopters Alert Service Bulletin AS355-62.00.37, Revision 0, dated September 17, 2018; or Airbus Helicopters Alert Service Bulletin EC130-62A017, Revision 0, dated September 17, 2018, as applicable to your model helicopter, except you are not required to return parts to Airbus Helicopters. For the purposes of this inspection, degradation is indicated by damage to the retaining rings (including but not limited to cracks, scratches, and gouges), deterioration, or wear.

(3) If, during the inspection of the MRM inner race, as required by paragraph (i)(2) of this AD, there is any degradation, before next flight, repair or replace the MRM.

**(j) Terminating Action**

Verification on a helicopter of correct installation of the MRM upper bearing inner race retaining rings, as required by paragraph (i)(1) of this AD, or corrective action on a helicopter, as specified in paragraphs (h)(2), (i)(2), or (i)(3) of this AD, as applicable, constitute terminating action for the repetitive inspections required by paragraph (h)(1) of this AD for that helicopter.

**(k) Parts Installation Prohibition**

As of the effective date of this AD, no person may install, on any helicopter, an affected part as identified in paragraph (g)(1) of this AD.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Scott Franke, Aviation Safety Engineer, International Validation Branch, General Aviation & Rotorcraft Unit, FAA, 10101 Hillwood Pkwy.,

Fort Worth, TX 76177; telephone 817-222-5110; email 9-AVS-AIR-730-

AMOC@faa.gov.

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

**(m) Related Information**

The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2018-0206, dated September 20, 2018. This EASA AD may be found in the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0847.

**(n) 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 AS350-62.00.42, Revision 0, dated September 17, 2018.

(ii) Airbus Helicopters Alert Service Bulletin AS355-62.00.37, Revision 0, dated September 17, 2018.

(iii) Airbus Helicopters Alert Service Bulletin EC130-62A017, Revision 0, dated September 17, 2018.

(3) For service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone 800-232-0323 or 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](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 8, 2021.

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

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