



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2021-0143; Product Identifier 2019-SW-024-AD; Amendment 39-21547; AD 2021-10-14]

RIN 2120-AA64

**Airworthiness Directives; Airbus Helicopters Deutschland GmbH Helicopters**

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Airbus Helicopters Deutschland GmbH Model BO-105A, BO-105C, BO-105S, and BO-105LS A-3 helicopters. This AD was prompted by the FAA's determination that aging of the elastomeric material in a tension torsion strap (TT-strap) could affect the structural characteristics of the TT-strap. This AD requires replacement of certain TT-straps with serviceable parts and implementation of a new storage life limit for TT-straps, as specified in a European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the 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 publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999

000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); Internet [www.easa.europa.eu](http://www.easa.europa.eu). You may find this material on the EASA website at <https://ad.easa.europa.eu>. You may view this material 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. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0143.

### **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-2021-0143; 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 final rule, any comments received, and other information. The 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:** Blaine Williams, Aviation Safety Engineer, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712 4137; telephone 562-627-5371; email [blaine.williams@faa.gov](mailto:blaine.williams@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Background**

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2019-0024, dated February 4, 2019 (EASA AD 2019-0024) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Airbus Helicopters Deutschland GmbH Model BO-105A, BO-105C, BO-105D, BO-105S, and BO-105LS A-3 helicopters. Model BO-105D 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.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Helicopters Deutschland GmbH Model BO-105A, BO-105C, BO-105S, and BO-105LS A-3 helicopters. The NPRM published in the *Federal Register* on March 12, 2021 (86 FR 14023). The NPRM was prompted by the FAA's determination that aging of the elastomeric material in a tension TT-strap could affect the structural characteristics of the TT-strap. The NPRM proposed to require replacement of certain TT-straps with serviceable parts and implementation of a new storage life limit for TT-straps, as specified in an EASA AD.

The FAA is issuing this AD to address aging of the elastomeric material in a TT-strap, which could lead to premature failure of a TT-strap, resulting in loss of control of the helicopter. See the MCAI for additional background information.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

### **Conclusion**

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

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

EASA AD 2019-0024 specifies procedures for replacing certain TT-straps with serviceable parts and requires a storage life limit for TT-straps. This material 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.

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

Although EASA AD 2019-0024 does not specify a life limit for the Lord TT-Straps part number (P/N) J17322-1 and P/N 117-14111, this AD does specify a life limit for those parts.

Where EASA AD 2019-0024 specifies that installation of a Lord TT-Strap is allowed provided the first flight of that helicopter after that installation is accomplished before the storage life of that Lord TT-Strap exceeds 5 years, for this AD, the installation of a Lord TT-Strap is allowed provided the first flight of that helicopter after that installation is accomplished before 5 years since the TT-strap's date of manufacture.

Where EASA AD 2019-0024 defines "serviceable part" as a Lord TT-Strap having a storage life not exceeding 5 years, for this AD, a serviceable part is Lord TT-straps P/N J17322-1 and P/N 117-14111 having less than 5 years since that TT-strap's date of manufacture.

Where EASA AD 2019-0024 specifies that the "cure date" of a TT-Strap can be determined using the information provided in the applicable service information specified in EASA AD 2019-0024, or contacting Airbus Helicopters for applicable instructions, for this AD, the option of contacting Airbus Helicopters is not required.

## **Costs of Compliance**

The FAA estimates that this AD affects 61 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

## Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
4 work-hours X \$85 per hour = \$340	Up to \$4,800	Up to \$5,140	Up to \$313,540

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in the cost estimate.

### 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

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.

### **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:

**2021-10-14 Airbus Helicopters Deutschland GmbH:** Amendment 39-21547; Docket No. FAA-2021-0143; Product Identifier 2019-SW-024-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD affects AD 2016-25-14, Amendment 39-18740 (81 FR 94944, December 27, 2016) (AD 2016-25-14).

#### **(c) Applicability**

This AD applies to Airbus Helicopters Deutschland GmbH Model BO-105A, BO-105C, BO-105S, and BO-105LS A-3 helicopters, certificated in any category, equipped with a tension torsion strap (TT-strap) as identified in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2019-0024, dated February 4, 2019 (EASA AD 2019-0024).

**(d) Subject**

Joint Aircraft System Component (JASC) Code 6200, Main Rotor System.

**(e) Reason**

This AD was prompted by the FAA's determination that aging of the elastomeric material in a TT-strap could affect the structural characteristics of the TT-strap. The FAA is issuing this AD to address aging of the elastomeric material in a TT-strap, which could lead to premature failure of a TT-strap, resulting in loss of control of the helicopter.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Requirements**

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2019-0024.

**(h) Exceptions to EASA AD 2019-0024**

(1) Where EASA AD 2019-0024 refers to its effective date, this AD requires using the effective date of this AD.

(2) The "Remarks" section of EASA AD 2019-0024 does not apply to this AD.

(3) Where EASA AD 2019-0024 and the service information referenced in EASA AD 2019-0024 specify contacting Airbus Helicopters Deutschland if the storage time for a TT-strap is equal to or greater than 5 years, this AD requires repair using a method approved by the Manager, International Validation Branch, FAA. For a repair method to be approved by the Manager, International Validation Branch, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(4) Although the service information referenced in EASA AD 2019-0024 specifies to scrap certain parts, this AD requires removing those parts from service instead.

(5) Where paragraph (1) of EASA AD 2019-0024 specifies to replace each Lord TT-Strap and Bendix TT-Strap “in accordance with the instructions of the applicable ASB,” the replacement must be done using FAA-approved procedures.

(6) Where EASA AD 2019-0024 refers to the airworthiness limitations items of the airworthiness limitations section of the aircraft maintenance manual (AMM) for the definition of service life limit (SLL), this AD requires using the life limits specified in paragraphs (h)(6)(i) through (iii) of this AD, as applicable:

(i) For Bendix TT-Strap part number (P/N) 2604067 and P/N 117-14110: Before 10 years or 40,000 flight cycles on the part, whichever occurs first.

(ii) For Bendix TT-Strap P/N 2602559 and P/N 2606576: Before 10 years, 2,400 hours time-in-service, or 40,000 flight cycles on the part, whichever occurs first.

(iii) For Lord TT-Strap P/N J17322-1 and P/N 117-14111: Before 12 years or 40,000 flight cycles on the part, whichever occurs first.

(7) Where paragraph (3) of EASA AD 2019-0024 specifies that installation of a Lord TT-Strap is allowed provided the first flight of that helicopter after that installation is accomplished before the storage life of that Lord TT-Strap exceeds 5 years, for this AD, the installation of a Lord TT-Strap is allowed provided the first flight of that helicopter after that installation is accomplished before 5 years since the TT-strap’s date of manufacture.

(8) Where EASA AD 2019-0024 defines “serviceable part” as a Lord TT-Strap having a storage life not exceeding 5 years, for this AD, a serviceable part is Lord TT- straps P/N J17322-1 and P/N 117-14111 having less than 5 years since that TT-strap’s date of manufacture.

(9) Where EASA AD 2019-0024 specifies that the “cure date” of a TT-Strap can be determined using the information provided in the applicable service information specified



in EASA AD 2019-0024, or contacting Airbus Helicopters for applicable instructions, for this AD, the option of contacting Airbus Helicopters is not required.

**(i) Repetitive Replacement**

After accomplishing the replacement specified in paragraph (1) of EASA AD 2019-0024, thereafter, replace the Lord TT-straps P/N J17322-1 and P/N 117-14111, at intervals not to exceed: Before 12 years or 40,000 flight cycles on the part, whichever occurs first.

**(j) Terminating Action for AD 2016-25-14**

For Model B0-105LS A-3 helicopters: After accomplishing the replacement specified in paragraph (1) of EASA AD 2019-0024 all of the actions required by AD 2016-15-14 are terminated for that helicopter only.

**(k) Special Flight Permit**

Special flight permits, as described in 14 CFR 21.197 and 21.199, are not allowed.

**(l) 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 the person identified in paragraph (m) of this AD. 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.

**(m) Related Information**

For more information about this AD, contact Blaine Williams, Aviation Safety Engineer, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712 4137; telephone 562-627-5371; email [blaine.williams@faa.gov](mailto:blaine.williams@faa.gov).

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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 this AD specifies otherwise.

(i) European Aviation Safety Agency (EASA) AD 2019-0024, dated February 4, 2019.

(ii) [Reserved]

(3) For EASA AD 2019-0024, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); Internet [www.easa.europa.eu](http://www.easa.europa.eu). You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(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. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0143.

(5) You may view this material 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 April 30, 2021.

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

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