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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1120; Project Identifier 2019-SW-056-AD; Amendment 39-21962; AD 2022-05-10]

RIN 2120-AA64

Airworthiness Directives; Goodrich Externally-Mounted Hoist Assemblies

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for various model helicopters with certain part-numbered Goodrich externally-mounted hoist assemblies (hoists) installed. This AD was prompted by hoists failing lower load limit inspections. This AD requires replacing unmodified hoists, installing placards, revising the existing Rotorcraft Flight Manual (RFM) for your helicopter, deactivating or removing a hoist if a partial peel out occurs, reviewing the helicopter's hoist slip load test records, repetitively inspecting the hoist cable and overload clutch (clutch), and reporting information to the manufacturer. This AD also requires establishing operating limitations on the hoist and prohibits installing an unmodified hoist. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective April 20, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of April 20, 2022.

ADDRESSES: For Goodrich service information identified in this final rule, contact Collins Aerospace; 2727 E Imperial Hwy., Brea, CA 92821; telephone (714) 984-1461; email GHW@collins.com; or at https://www.collinsaerospace.com/. 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 information on the availability of this material at the FAA, call (817) 222-5110. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2020-1120.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2020-1120; 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, the 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: Kristi Bradley, Program Manager, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to various model helicopters with certain part-numbered externally-mounted Goodrich hoists installed. The NPRM published in the Federal Register on December 11, 2020 (85 FR 79930). In the NPRM, the FAA proposed to require replacing unmodified hoists, installing placards, revising the existing RFM for your helicopter, deactivating or removing a hoist if a partial peel out occurs, reviewing the helicopter's hoist slip load test records, repetitively inspecting the hoist cable and clutch, and reporting information to the manufacturer. The NPRM was prompted by a series of EASA ADs, the most recent at that time being EASA AD 2015-0226R5, Revision 5, dated July 23, 2020 (EASA AD 2015-0226R5), to correct an unsafe condition for various model helicopters with a Goodrich externally-mounted hoist with one of the following part numbers (P/Ns) or base P/Ns installed: 42315, 42325, 44301-10-1, 44301-10-2, 44301-10-4, 44301-10-5, 44301-10-6, 44301-10-7, 44301-10-8, 44301-10-9, 44301-10-10, 44301-10-11, 44311, 44312, 44314, 44315, 44316, or 44318. EASA advised of an initial incident of a rescue hoist containing a dummy test load of 552 lbs. that reeled-out without command of the operator and impacted the ground during a maintenance check flight because the overload clutch had failed. EASA stated that this condition, if not detected and corrected, could lead to further cases of in-flight loss of the hoist load, possibly resulting in injury to persons on the ground or in a hoisting accident.

Accordingly, EASA AD 2015-0226R5 required a records review to determine if the cable had exceeded the allowable limit in previous load testing, a repetitive load check and test of the clutch slip value, removal or deactivation of a hoist that could not be tested due to lack of approved instructions, replacement of the old clutch P/N with a new clutch developed by Goodrich to mitigate some of the factors resulting in clutch degradation, periodic replacement of the hoist, reduction of the maximum allowable load on the hoist, addition of operational limitations to the RFM, and replacement of the hoist after a partial peel out. EASA AD 2015-0226R5 also prohibited the installation of a replacement cable that has exceeded the allowable limit in previous load testing. EASA considered AD 2015-0226R5 to be interim action and advised further AD action may follow.

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to various model helicopters with certain part-numbered externally-mounted Goodrich hoists installed. The SNPRM published in the Federal Register on September 30, 2021 (86 FR 54129). The SNPRM proposed to revise the NPRM by adding a figure and revising certain requirements, including changes to the temperatures in the maximum hoist load limitations and adding the cost of a (field) load check tool. The SNPRM was prompted by changes from the public comments, which expanded the scope of the NPRM.

Although the NPRM and SNPRM discussed the unsafe condition as described by EASA in EASA AD 2015-0226R5, the FAA based most of the proposed requirements in both the NPRM and the SNPRM on service information issued by Goodrich for all helicopter models with an affected hoist. For the replacement intervals proposed in paragraph (g)(1) of the NPRM and SNPRM, the FAA based those actions on portions of the EASA AD that are not model specific.

Actions Since the SNPRM Was Issued

Since the FAA issued the SNPRM, EASA has revised EASA AD 2015-0226R5 and issued EASA AD 2015-0226R6, Revision 6, dated December 8, 2021, and corrected December 20, 2021 (EASA AD 2015-0226R6). EASA AD 2015-0226R6 adds a new helicopter model-specific replacement/overhaul interval for affected hoists with a new overload clutch. After reviewing the changes in EASA AD 2015-0226R6, the FAA has determined that no changes to this AD are necessary.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Bell Textron Canada Limited (Bell Canada), Collins Aerospace, and Transport Canada. The following presents the comments received on the SNPRM and the FAA's response to each comment.

Request Regarding the Costs of Compliance

Collins Aerospace commented that two new potential costs could impact operators: Groundings from an inability to update the fleet and contract penalties for operational contracts requiring the use of a 600-lb rated hoist.

The cost analysis in AD rulemaking actions includes only the costs associated with complying with the AD, which does not include indirect costs such as down-time and loss of revenue.

Request To Change the AD for Bell Canada Model 429 and 430 Helicopters

Bell Canada and Transport Canada stated that, because Canada is the state of design for Model 429 and 430 helicopters, the FAA should review Transport Canada AD CF-2017-23, dated July 7, 2017 (Transport Canada AD CF-2017-23), and revise the FAA's proposed AD accordingly. The commenters stated that they discussed the corrective actions in Transport Canada AD CF-2017-23 and tailored its limitations and operating parameters specifically for Bell Canada Model 429 and 430 helicopters. Bell Canada stated that because the related EASA AD was issued unilaterally, the mitigations in Transport Canada AD CF-2017-23 are better suited for Model 429 and 430 helicopters than those in the EASA AD.

The FAA reviewed Transport Canada AD CF-2017-23, which is applicable to, and has some different requirements for, certain Bell Canada Model 429 and 430 helicopters. This FAA AD applies to affected Goodrich hoists, regardless of the model helicopter they are installed on, to address the risk to the fleet independent of the helicopter installation. Accordingly, the FAA based its AD on Goodrich's service information and not on any model-specific requirements. Operators may request approval of model-specific corrective actions as an alternative method of compliance (AMOC) under the provisions of paragraph (h) of this AD.

Request Regarding Compliance Time for Hoist Replacement

Collins Aerospace requested the FAA extend the compliance time for replacing an affected hoist with a hoist that has an improved overload clutch assembly from 12 months to 24 months. In support, Collins Aerospace stated 24 months is an acceptable time based on improved data from the initial load checks and subsequent checks with a load check tool. Additionally, Collins Aerospace stated it does not have the capacity to provide improved overload clutch assemblies for the entire fleet within 12 months.

The FAA agrees because no additional reports of low pulling hoists have been received since issuance of the SNPRM. The FAA has revised this final rule accordingly.

Request To Prohibit Maneuvering

In the SNPRM, the FAA proposed to require a placard and RFM limitation that warned the pilot about excessive maneuvering with a load on an extended cable and limited the maximum sustained bank angle to 20 degrees. Bell Canada stated that limits on bank angle (and pendulum angle) are difficult to monitor by aircrew and will increase crew workload, and therefore prohibiting maneuvering with load on extended cable is necessary to manage the risk of clutch slippage. The FAA infers that Bell Canada is requesting the FAA prohibit maneuvering with load on an extended cable for Model 429 and 430 helicopters.

The FAA disagrees with changing the flight limitation from a bank angle limit to a maneuvering prohibition. The FAA determined that limiting the bank angle in conjunction with a reduced maximum load mitigates the unsafe condition. The attitude indicator, which is used by the pilot to monitor the bank angle while maneuvering an external load, is in the pilot's normal field of view and is regularly monitored; therefore, any additional workload is minimal. The FAA does agree that requiring the aircrew to monitor the lateral pendulum angle of the hoist cable with respect to the helicopter's vertical axis would not be an acceptable limitation because it would not be measurable or enforceable.

Requests Regarding the Maximum Hoist Load Limitations

In the SNPRM, the FAA proposed to require a placard and revision to the RFM to reduce the weight limitations for the hoist load based on the outside air temperature. Bell Canada stated that the FAA's proposed limitations include a de-rating factor of 50 lbs, which is not warranted for Bell Canada Model 429 and 430 helicopters. In support, Bell Canada stated that the de-rating factor was established to accommodate certain maneuvering, which has been prohibited for the Bell Canada products.

The FAA determined the de-rating factor is necessary because it directly correlates to the bank angle limitation required by this AD.

Collins Aerospace requested the FAA change the proposed maximum hoist load limitations to distinguishing between non-modified hoists (without the number “4” as the first digit of its serial number (S/N)) and modified hoists with a new clutch (with the number “4” as the first digit of its S/N). Collins Aerospace stated that after EASA AD 2015-0226R1 was issued, Goodrich performed a series of characterization tests that demonstrated the performance envelope of the modified hoist in various conditions. According to Collins Aerospace, the results of these tests as documented in Goodrich Report No. 49000-1087, Revision A, dated July 31, 2017, indicate that margins are maintained with a less restrictive temperature limitation than those imposed on non-modified hoists.

As the FAA explained in the SNPRM, the FAA disagrees with requiring different maximum hoist load limitations for non-modified hoists and modified hoists. After reviewing the data in the report referenced by the commenter, the FAA determined it does not demonstrate with an acceptable level of confidence that less restrictive temperature limitations are appropriate for modified hoists.

Requests Regarding the Partial Peel Out Requirement

In the SNPRM, the FAA proposed to prohibit use of the hoist if a partial peel out occurs, through both a placard limitation and a requirement to deactivate or remove the hoist. Bell Canada requested the FAA remove the proposed placard requirement because it only requires that the pilot cease using the hoist before the next flight and does not provide crew instructions to be executed during the hoist operation.

The placard provides requirements for the crew following any partial peel out. The FAA determined that the most effective way to provide this information to the aircrew is through a placard.

In the SNPRM, the FAA proposed to define partial peel out as occurring when 20 inches or more of the hoist cable reels off of the cable drum in one clutch slip incident. Bell Canada requested the FAA change this definition to "approximately" 20 inches. Bell Canada stated that a finite 20 inches will be difficult to measure; "approximately 20 inches" would be consistent with the Goodrich service information.

A measurement of "approximately 20 inches" would be vague in that it may be interpreted in more than one way. The operator is capable of measuring 20 or more inches of the hoist cable by, for example, using slippage markings on the cable.

Conclusion

Affected helicopters include helicopters that have been approved by the aviation authorities of Canada, Italy, France, and Germany 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 reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for the changes described previously, this AD is adopted as proposed in the SNPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Goodrich Alert Service Bulletin No. ASB 44301-10-18, Revision 6, dated October 10, 2016, which specifies maximum hoist load limitations with respect to ambient temperature and describes actions and conditions that could reduce the capacity of the clutch. This service information also specifies procedures for inspecting the cable and inspecting the clutch by performing a cable conditioning lift and a hoist slip load test.

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.

Differences Between This AD and the EASA AD

EASA AD 2015-0226R5 requires repetitively replacing the hoist with a modified hoist, whereas this AD requires a one-time replacement of the hoist with a modified hoist that has the improved clutch assembly installed. EASA AD 2015-0226R5 requires adding a placard or operational limitation to the RFM warning that exceeding 15° of lateral pendulum angle/helicopter vertical axis can lead to clutch slippage, and this AD does not. EASA AD 2015-0226R5 requires adding an operating limitation to the RFM limiting the number of persons who can be hoisted, whereas this AD does not. This AD requires replacing the cable before the next hoist operation if a cable has previously been load-tested at more than 1,500 lbs or at an unknown weight during at least one cable pull, while EASA AD 2015-0226R5 requires this replacement during multiple cable pulls. This AD requires visually inspecting and measuring the diameter of the cable before and after performing a cable conditioning and a hoist slip load test, whereas EASA AD 2015-0226R5 does not. This AD requires performing the cable conditioning and hoist slip load test within 30 days after the effective date of this AD, unless already done within the last 6 calendar months, and thereafter at intervals not to exceed 6 months, 400 lifts, or 300 cycles. EASA AD 2015-0226R5 specifies performing the hoist slip load test according to the compliance time of the design approval holder instead. After the installation (not reinstallation) of a modified hoist, EASA AD 2015-0226R5 requires performing an initial hoist load check/test prior to hoisting operation, whereas this AD does not.

Interim Action

The FAA considers this AD an interim action. The inspection reports required by this AD will enable better insight into the condition of the hoists, and eventually be used to develop final action to address the unsafe condition. Once final action has been identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD affects 2,911 hoists installed on helicopters of U.S. Registry. Labor rates are estimated at $85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Replacing a clutch takes about 8 work-hours and parts cost about $24,000 for an estimated cost of $24,680 per hoist. Alternatively, replacing a hoist takes about 8 work-hours and parts cost about $200,000 for an estimated cost of $200,680 per hoist.

Revising the existing RFM for your helicopter and installing placards takes about 0.5 work-hour for an estimated cost of $43 per helicopter and $125,173 for the U.S. fleet.

Deactivating or removing a hoist that experiences a partial peel out takes about 2 work-hours for an estimated cost of $170.

Reviewing records takes about 0.5 work-hour for an estimated cost of $43 per helicopter and $125,173 for the U.S. fleet.

Inspecting the cable and performing a cable conditioning lift and hoist slip load test takes about 2 work-hours for an estimated cost of $170 per helicopter and $494,870 for the U.S. fleet per inspection cycle. A load check tool costs about $11,171. Reporting the hoist slip load test information takes about 0.25 work-hour for a cost of $21 per helicopter and $61,131 for the U.S. fleet per reporting cycle.

Replacing the cable takes about 3 work-hours and parts cost about $3,150 for a total replacement cost of $3,405 per hoist.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to take approximately 0.25 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

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:

2022-05-10 Goodrich Externally-Mounted Hoist Assemblies: Amendment 39-21962; Docket No. FAA-2020-1120; Project Identifier 2019-SW-056-AD.

(a) Effective Date

This airworthiness directive (AD) is effective April 20, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to helicopters, certificated in any category, with an externally-mounted Goodrich hoist assembly (hoist) with a part number (P/N) or base P/N listed under the Hoist Family column in Table 1 of Goodrich Alert Service Bulletin No. 44301-10-18, Revision 6, dated October 10, 2016 (ASB 44301-10-18 Rev 6), installed. An affected hoist may be installed on but not limited to the following:

Note 1 to the introductory text of paragraph (c): The hoist P/N may be included as a component of a different part-numbered kit.

(1) Airbus Helicopters (previously Eurocopter France) Model AS332L, AS332L1, AS332L2, AS350B2, AS350B3, AS365N3, and EC225LP helicopters;
(2) Airbus Helicopters Deutschland GmbH (AHD) (previously Eurocopter Deutschland GmbH) Model EC135P1, EC135P2, EC135P2+, EC135P3, EC135T1, EC135T2, EC135T2+, EC135T3, MBB-BK 117 C-2, and MBB-BK 117 D-2 helicopters;
(3) Bell Textron Canada Limited (previously Bell Helicopter Textron Canada Limited) Model 429 and 430 helicopters;
(4) Bell Textron Inc. (previously Bell Helicopter Textron Inc.) Model 205A, 205A-1, 205B, 212, 412, 412CF, and 412EP helicopters;
(5) Leonardo S.p.a. (previously Finmeccanica S.p.A., AgustaWestland S.p.A) Model A109, A109A, A109A II, A109C, A109E, A109K2, A109S, AB139, AB412, AB412 EP, AW109SP, and AW139 helicopters;
(6) MD Helicopters, Inc. (MDHI) Model MD900 helicopters;
(7) Transport and restricted category helicopters, originally manufactured by Sikorsky Aircraft Corporation, Models S-61A, S-61L, S-61N, S-76A, S-76B, S-76C, S-76D, and S-92A; and
(8) Restricted category Model HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P helicopters.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 2500, Cabin Equipment/Furnishings.

(e) Unsafe Condition

This AD was prompted by hoists failing lower load limit inspections. The FAA is issuing this AD to prevent failure of the hoist overload clutch. The unsafe condition, if not addressed, could result in an in-flight failure of the hoist, which could result in injury to a person being lifted.

(f) Compliance

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

(g) Required Actions

(1) For a hoist without the number "4" as the first digit of its serial number (S/N):

(i) For hoists that use operating hours to monitor hoist operation, within 24 months after the effective date of this AD or before the hoist accumulates 55 total hoist operating hours, whichever occurs first, replace the hoist. For purposes of this AD, hoist operating hours are counted anytime the hoist motor is operating.

(ii) For hoists that use hoist cycles (cycles) to monitor hoist operation, within 24 months after the effective date of this AD or before the hoist accumulates 1,200 total cycles, whichever occurs first, replace the hoist. For purposes of this AD, a cycle is counted anytime the cable is extended and then retracted a minimum of 16 feet (5 meters) during flight or on the ground, with or without a load.

(iii) For hoists that use hoist lifts (lifts) to monitor hoist operation, within 24 months after the effective date of this AD or before the hoist accumulates 1,600 total lifts, whichever occurs first, replace the hoist. For purposes of this AD, a lift is counted anytime the cable is unreeled or recovered or both with a load attached to the hook, regardless of the length of the cable that is deployed or recovered. An unreeling or recovery of the cable with no load on the hook is not a lift. If a load is applied for half an operation (i.e. unreeling or recovery), it must be counted as one lift.

(2) For all hoists identified in the introductory text of paragraph (c) of this AD, before further flight, install placards and revise the existing Rotorcraft Flight Manual (RFM) for your helicopter by inserting a copy of this AD or by making pen-and-ink changes in Section 2, Limitations, of the RFM Supplement for the hoist as follows:

(i) For 500 pound (lb) rated hoists, install a placard with the information in Figure 1 to paragraph (g)(2)(i) of this AD in full view of the hoist operator and add the information in Figure 1 to paragraph (g)(2)(i) of this AD to the existing RFM for your helicopter.

500 lb (227 kg) Rated Hoist

OAT above -4°F (-20°C): Maximum hoist load 450 lbs (204 kg)
OAT at or below -4°F (-20°C): Maximum hoist load 400 lbs (181 kg)

Figure 1 to Paragraph (g)(2)(i)

(ii) For 600 lb rated hoists, install a placard with the information in Figure 2 to paragraph (g)(2)(ii) of this AD in full view of the hoist operator and add the information in Figure 2 to paragraph (g)(2)(ii) of this AD to the existing RFM for your helicopter.

600 lb (272 kg) Rated Hoist

OAT above 32°F (0°C): Maximum hoist load 550 lbs (249 kg)
OAT at or below 32°F (0°C): Maximum hoist load 500 lbs (227 kg)

Figure 2 to Paragraph (g)(2)(ii)

(iii) For 500 and 600 lb rated hoists, install a placard with the information in Figure 3 to paragraph (g)(2)(iii) of this AD in full view of the pilot and add the information in Figure 3 to paragraph (g)(2)(iii) of this AD to the existing RFM for your helicopter.

Hoist Operations

Warning: Excessive maneuvering with extended cable and load on the hook may cause uncommanded peel out of the cable.

Maximum sustained bank angle in turn is 20°

Figure 3 to Paragraph (g)(2)(iii)

(iv) For 500 and 600 lb rated hoists, install a placard with the information in Figure 4 to paragraph (g)(2)(iv) of this AD in full view of the pilot and add the

information in Figure 4 to paragraph (g)(2)(iv) of this AD to the existing RFM for your helicopter.

Hoist - Partial Peel Out
If a partial peel out occurs, before next flight, cease using the hoist. A partial peel out occurs when 20 inches (0.5 meter) or more of the hoist cable reels off of the hoist cable drum in one overload clutch slip incident.

Figure 4 to Paragraph (g)(2)(iv)

(3) For all hoists identified in the introductory text of paragraph (c) of this AD, as of the effective date of this AD, if a partial peel out occurs, deactivate or remove the hoist from service before further flight. For purposes of this AD, a partial peel out occurs when 20 inches (0.5 meter) or more of the hoist cable reels off of the hoist cable drum in one overload clutch slip incident.

(4) For all hoists identified in the introductory text of paragraph (c) of this AD, within 30 days after the effective date of this AD, review the helicopter's hoist slip load test records. If the cable was load-tested at more than 1,500 lbs or at an unknown weight during one or more cable pulls, replace the cable with an airworthy cable before the next hoist operation.

(5) For all hoists identified in the introductory text of paragraph (c) of this AD, within 30 days after the effective date of this AD, unless already done within the last 6 calendar months, and thereafter at intervals not to exceed 6 months, 400 lifts, or 300 cycles, whichever occurs first:

(i) Visually inspect the first 18 inches (45 cm) of the cable from the hook assembly for broken wires and necked down sections. If there is a broken wire or necked down section, replace the cable with an airworthy cable before further flight.

(ii) Within the first 18 inches (45 cm) of the cable from the hook assembly, measure the diameter of the cable at the most necked down area. If the diameter measurement is less than 0.185 inch (4.7 mm), replace the cable with an airworthy cable before further flight.

(iii) Using load check tool P/N 49900-889-103 or 49900-889-104, perform a cable conditioning and a hoist slip load test by following the Accomplishment Instructions, paragraphs 3.C.(1) through 3.C.(3)(g) of ASB 44301-10-18 Rev 6. If the average of the five test values is less than the limit shown in Table 2 for 600 lb rated hoists or Table 3 for 500 lb rated hoists of ASB 44301-10-18 Rev 6, remove the hoist from service before further flight.

(iv) Visually inspect the first 30 feet (10 meters) of the cable from the hook assembly for broken wires, necked down sections, kinks, bird-caging, flattened areas, abrasion, and gouging. It is permissible for the cable to have a slight curve immediately after performing the hoist slip load test. If there is a broken wire, necked down section, kink, or any bird-caging; or if there is a flattened area, any abrasion, or a gouge that exceeds allowable limits, replace the cable with an airworthy cable before further flight.

(v) Repeat the actions specified in paragraphs (g)(5)(i) and (ii) of this AD. If there is a broken wire or necked down section or the cable diameter measurement is less than 0.185 inch (4.7 mm), replace the cable with an airworthy cable before further flight.

(6) Within 30 days after accomplishing the hoist slip load test, report the information requested in Appendix 1 to this AD by email to ASB.SIS-CA@utas.utc.com; or mail to Goodrich, Collins Aerospace; 2727 E. Imperial Hwy., Brea, CA 92821.

(7) As of the effective date of this AD, do not install as a replacement part or as an original installation an externally-mounted hoist with a P/N identified in the introductory text of paragraph (c) of this AD unless it has an improved overload clutch assembly with the number “4” as the first digit of the S/N.

(h) 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 (i)(1) 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.

(i) Related Information

(1) For more information about this AD, contact Kristi Bradley, Program Manager, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov.

(2) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2015-0226R5, Revision 5, dated July 23, 2020. You may view the EASA AD at https://www.regulations.gov in Docket No. FAA-2020-1120.

(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) Goodrich Alert Service Bulletin No. 44301-10-18, Revision 6, dated October 10, 2016.

(ii) [Reserved]

(3) For service information identified in this AD, contact Collins Aerospace; 2727 E Imperial Hwy., Brea, CA 92821; telephone (714) 984-1461; email GHW@collins.com; or at https://www.collinsaerospace.com/.

(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: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Appendix 1 to AD 2022-05-10

Hoist Slip Load Test Results (sample format)

Provide the following information by email to ASB.SIS-CA@utas.utc.com; or mail to Goodrich, Collins Aerospace; 2727 E Imperial Hwy., Brea, CA 92821.

Helicopter Owner/Operator Name:
Email Address:
Telephone Number:

Helicopter Model and Serial Number:

Hoist Part Number:
Hoist Serial Number:
Time since Last Hoist Overhaul (months):
Hoist Operating Hours:
Hoist Cycles:
Hoist Lifts:
Date and Location Test was Accomplished:
Point of Contact for Additional Information:
Air Temperature:
Gearbox Lubricant:
Hoist Slip Load Test Value 1:
Hoist Slip Load Test Value 2:
Hoist Slip Load Test Value 3:
Hoist Slip Load Test Value 4:
Hoist Slip Load Test Value 5:
Hoist Slip Load Test Averaged Test Value:
Any notes or comments:

Issued on February 23, 2022.
Derek Morgan,
Acting Director, Compliance & Airworthiness Division, Aircraft Certification Service.
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