EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2015-0160 **Date: 04 August 2015** Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EU 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EU 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:	**Type/Model designations:**
AGUSTAWESTLAND S.p.A.	AW109SP, AB/AW 139, AB412 and AW189
BELL HELICOPTER TEXTRON, Inc.	212, 214 and 412
BELL HELICOPTER TEXTRON CANADA Ltd.	429 and 430
AIRBUS HELICOPTERS	AS 365 N3, AS 332 L2, EC 225 LP and EC175 B
AIRBUS HELICOPTERS DEUTSCHLAND GmbH	MBB-BK 117, EC135 and EC635
MD HELICOPTERS, Inc.	MD900
SIKORSKY AIRCRAFT CORPORATION	S-61, S-76 and S-92A

TCDS Numbers:	EASA.IM.R.001, EASA.R.002, EASA.R.005, EASA.R.006, EASA.R.009, EASA.R.010, EASA.R.105, EASA.R.150, EASA.R.510 and EASA.IM.R.506; USA 1H15, EASA.IM.R.113, H19NM, H4SW and H6SW; Canada H-88; and Italy A 157.
Foreign AD:	This AD is related to FAA AD 2013-06-51 dated 28 June 2013.
Supersedure:	This AD supersedes EASA AD 2015-0069 dated 29 April 2015, including its Correction dated 30 April 2015.

ATA 25	**Equipment / Furnishings – Hoist – Test / Replacement**
Manufacturer(s):	AgustaWestland S.p.A.(AW), Bell Helicopter Textron Inc. (BHTI, formerly Bell Helicopters, Inc.), Bell Helicopter Textron Canada Ltd. (BHTC), Airbus Helicopters (AH, formerly Eurocopter, Eurocopter France, Aerospatiale), Airbus Helicopters Deutschland GmbH (AHD, formerly Eurocopter Deutschland GmbH), American Eurocopter (AEC), MD Helicopters, Inc. (MDHI, formerly McDonnell Douglas Helicopter Systems), Sikorsky Aircraft Corporation.
Applicability:	This AD applies to the following helicopters, when equipped with a Goodrich hoist having a Part Number (P/N) as listed in Table 1 of this AD: AW109SP, AB139, AW139, AB412 and AW189 (all Models) helicopters, all serial numbers (s/n); BHTI 212, 214 and 412 helicopters, all Models, all s/n; BHTC 429 and 430 helicopters, all s/n; AH AS 365 N3, AS 332 L2, EC225 LP and EC175 B helicopters, all s/n; AHD MBB-BK117 C-2 and D-2, EC135 and EC635 (all Models) helicopters, all s/n; MDHI MD900 helicopters, all s/n; and Sikorsky S-61 (all Models), S-76A, S-76B, S-76C and S-92A helicopters, all s/n.

Reason:	During a maintenance check flight with a MBB-BK 117 C-2 helicopter, a dummy load of 552 lb (250 kg) was picked up in order to conduct a “maximum load cycle” on the rescue hoist. The cable reeled-out without further command of the operator, causing the test dummy load to impact the ground. The results of further examinations on the subject hoist determined that the overload clutch had failed. The overload clutch design is common to all Goodrich externally mounted rescue hoists listed in Table 1 of this AD. 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. To address this unsafe condition, EASA issued a series of ADs (2013-0065-E, 2013-0077-E, 2013-0275, 2014-0201, 2014-0254 and 2015-0069, each new AD superseding the previous one) to require identification of the installed hoist and, for affected hoist installations, a repetitive load check/test of the slip value of the overload clutch. Operational and environmental limitations as well as a periodic replacement of the overload clutch have also been incorporated. Since EASA AD 2015-0069 was issued, AH, AHD and AW have revised their service publications. In addition, based on information from the field that the majority of overload clutches are set above their design specification and that environmental effects are likely to result in even higher slip points in operation, it has been decided to raise the operational note about functionality to the level of a caution on placard 1. Further testing results have concluded that cables having exceeded 1500 lb during two hoist load checks/tests can stay in operation until the next hoist load checks/test. The approval holders have removed in their service publications the instruction to return the clutch if it does not slip by 1500 lb. Due to the fact that the high limit of the clutch is not being tested, there is a potential for a no-slip condition to occur if an overload condition is realised in-flight. Potentially structural elements could then be stressed beyond certified limits, possibly leading to rupture or in case of a broken cable rebound, to the loss of the helicopter. Since the hoists were originally certified with an overload clutch the Agency considers that a no-slip tested overload clutch should be removed through the already implemented reduced Time Between Overhaul of the overload clutch assembly. For the reasons described above, this AD partially retains the requirements of EASA AD 2015-0069, which is superseded, introduces the changes described above, includes references to the latest service publications from AH, AHD and AW, and removes the lower load limits as previously provided in Appendix 1 of AD 2015-0069, as these are now in the referenced service publications. The rotorcraft design approval holders are reviewing the reported data from the field load checks to determine whether additional actions are necessary. This AD is still considered an interim action and further AD action may follow.
Effective Date:	18 August 2015
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) Within 10 hoist operating cycles or 13 hoist lifts (as applicable, see Note 1 of this AD) after the effective date of this AD, determine the P/N of the hoist installed on the helicopter and, if a Goodrich hoist is installed with a P/N listed in Table 1 of this AD, accomplish a records check to determine whether, during any previous hoist load check/test, a cable was load-tested (average of 5 pulls) at 1 500 lb [680 kg] or more. If any cable is identified to have exceeded this limit during three or more hoist load checks/tests, before next hoist operation, replace the affected cable with a serviceable cable. If any cable is identified to have exceeded this limit during two hoist load checks/tests, before the next hoist load check/test, replace the affected cable with a serviceable cable. For replacement of a cable, see figure 1 (flowchart) of this AD.

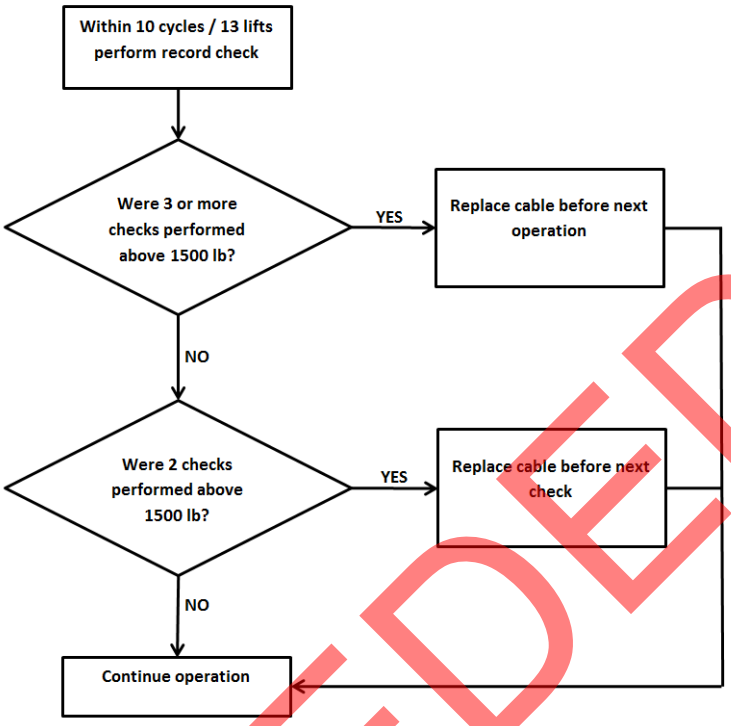

Figure 1

(2) Within 30 days after the effective date of this AD, accomplish an initial hoist load check/test in accordance with approved instructions from the helicopter manufacturer (type certificate holder), or from the hoist installation design approval holder (supplemental type certificate holder), as applicable to installation and helicopter type/model.

Table 1 – Affected Goodrich Hoists P/N

(all suffixes, unless specified)			
42315	44301-10-5	44301-10-10	44315
42325	44301-10-6	44301-10-11	44316
44301-10-1	44301-10-7	44311	44318
44301-10-2	44301-10-8	44312	
44301-10-4	44301-10-9	44314	

Note 1: Hoist operating cycles or hoist lifts are defined in the aircraft maintenance instructions. Whether hoist operating cycles or hoist lifts are being tracked as part of the aircraft maintenance instructions determines the applicable limits in this AD (cycles or lifts respectively).

(3) Within the time interval, or hoist operating cycles/hoist lifts specified in the approved instructions from the type certificate holder, or from the supplemental type certificate holder, as applicable, whichever occurs first after the initial load check as required by paragraph (2) of this AD, and, thereafter, at intervals not to exceed the values (calendar time, or hoist operating cycles/hoist lifts, whichever occurs first) as specified in those same instructions, as applicable, accomplish a hoist load check/test (see Note 1 of this AD) in accordance with the instructions for on-going testing.

(4) If, during any hoist load check/test as required by paragraph (2) or (3) of this AD, as applicable, the hoist fails the test, deactivate the hoist and, before next hoist operation, replace the hoist with a serviceable hoist, as defined in Table 2 of this AD.

Table 2 – Serviceable Goodrich Hoists

A hoist having a P/N not listed in Table 1 of this AD
A hoist having a P/N as listed in Table 1 of this AD, with an overload clutch assembly which has accumulated less than 24 months, or 1 200 hoist cycles/1 600 hoist lifts since new, or since last overhaul
A hoist having a P/N as listed in Table 1 of this AD, with an overload clutch assembly which has accumulated less than 24 months, or 1 200 hoist cycles/1 600 hoist lifts since 04 December 2013 [the effective date of EASA AD 2013-0275]

(5) If a hoist test as required by paragraph (2) or (3) of this AD cannot be accomplished for lack of approved instructions from the helicopter manufacturer (type certificate holder), or from the hoist installation design approval holder (supplemental type certificate holder), as applicable, before next hoist operation, remove or deactivate the hoist.

(6) Within 24 months, or 1 200 hoist operating cycles / 1 600 hoist lifts accumulated after 04 December 2013 [the effective date of EASA AD 2013-0275], or at the next scheduled hoist overhaul, whichever occurs first, and, thereafter, at intervals not to exceed 24 months, or 1 200 hoist operating cycles/1 600 hoist lifts, whichever occurs first, replace the hoist with a serviceable hoist, noting the installation requirements of paragraph (7) of this AD.

(7) From the effective date of this AD, it is allowed to install an affected Goodrich hoist, having a P/N as listed in Table 1 of this AD, on any helicopter, provided that it is a serviceable hoist, as defined in Table 2 of this AD and, prior to hoisting operation, the hoist has passed a test as specified in paragraph (2) of this AD. Following installation, the repetitive actions required by this AD must be accomplished.

(8) From the effective date of this AD, apply the hoist operation limitations as specified in Placards 1 and 2, or 1 and 3, of this AD, as applicable, and inform all flight crew members and hoist operators accordingly. Installation of these placards, in full view of the pilot(s) and/or hoist operator, as applicable, is acceptable to comply with the requirement of paragraph (8) of this AD. Alternatively, insertion of revised pages, if included in approved instructions from the type certificate holder, or from the supplemental type certificate holder, as applicable, into the applicable Rotorcraft Flight Manual (Supplement) is acceptable to comply with the requirement of paragraph (8) of this AD.

Placard 1 – Operational Limitations

Operation with extended cable and load on the hook:
- Maximum permissible bank angle in turn is 20°
- Warning: exceeding 15° of lateral pendulum angle/helicopter vertical axis can lead to clutch slippage

Caution: overload clutch is unlikely to function in case of overload

Placard 2 – For 600-lb [272 kg] rated hoists:

OAT at or above 0°C
- Maximum hoist load 600 lb [272 kg]

OAT between -20°C and 0°C
- Maximum hoist load 550 lb [249 kg]

OAT at or below -20°C
- Maximum hoist load 500 lb [227 kg]

	Placard 3 – For 500-lb [227 kg] rated hoists: **OAT at or above 0°C** - Maximum hoist load 500 lb [227 kg] **OAT between -20°C and 0°C** - Maximum hoist load 450 lb [204 kg] **OAT at or below -20°C** - Maximum hoist load 400 lb [181 kg] (9) From the effective date of this AD, if a partial peel out occurs as described in the approved instructions from the type certificate holder, or from the supplemental type certificate holder, as applicable, before next flight, remove or deactivate the hoist or, before next hoist operation, replace the hoist with a serviceable hoist, noting the installation requirements of paragraph (7) of this AD. (10) From the effective date of this AD, it is acceptable to install a replacement cable on a hoist / helicopter, provided that, prior to installation, it is determined that the cable was not previously load-tested at 1 500 lb [680 kg] or more. Note 2: For EC 225 LP, EC175 B, MBB-BK117 D-2 and AW189 helicopters, the applicable Component Maintenance Manual also contains relevant information for the subject addressed by this AD. The Airworthiness Limitations of the Instructions for Continued Airworthiness, if more stringent than this AD, remain applicable.
Ref. Publications:	AHD ASB No. MBB-BK117 C-2-85A-038, Revision 4, dated 10 June 2015. AHD ASB No. MBB-BK117 D-2-85A-004, original issue, dated 10 June 2015. AHD ASB No. EC135-85A-058, Revision 5, dated 10 June 2015. AH ASB No. AS365-25.01.25, Revision 5, dated 10 June 2015. AH ASB No. AS332-25.02.70, Revision 5, dated 10 June 2015. AH ASB No. EC225-25A133, Revision 5, dated 10 June 2015. AgustaWestland BT 139-430, original issue, dated 11 June 2015. AgustaWestland BT 109-095, original issue, dated 11 June 2015. AgustaWestland BT 189-028, original issue, dated 11 June 2015. Bell Helicopter Textron Canada Ltd.: None. Bell Helicopter Textron, Inc.: None. MD Helicopters, Inc.: None. Sikorsky Aircraft Corporation: None.
Remarks:	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this. 2. This AD was posted on 26 June 2015 as PAD 15-086 for consultation until 30 June 2015. The Comment Response Document can be found at http://ad.easa.europa.eu/. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact one of the following, as applicable to helicopter (TC holder) or hoist installation approval (STC holder): AgustaWestland S.p.A. Customer Support, Via del Gregge, 100 - 21015 Lonate Pozzolo (VA) – Italy Telephone + 39 0331 664600, Fax + 39 0331 664684 E-mail: custserv@agustawestland.com.

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