EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2014-0244 **Date: 07 November 2014** 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 EC 2042/2003 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 [EC 2042/2003 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 Names:	**Type/Model designation(s):**
SIKORSKY AIRCRAFT CORPORATION	Sikorsky S-76 and S-92A helicopters
BELL HELICOPTER TEXTRON, Inc.	BHTI 212, 214B, 214ST and 412 helicopters
BELL HELICOPTER TEXTRON CANADA Ltd.	BHTC 222, 230 and 430 helicopters

TCDS Numbers:	EASA.IM.R.001; USA H4SW, H6SW and H10SW; and Canada H-88.
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA AD 2014-0189 dated 28 August 2014.

ATA 25	**Equipment & Furnishings – Emergency Flotation System – Rotorcraft Flight Manual (Supplement)**
Manufacturer(s):	Sikorsky Aircraft Corporation (Sikorsky), Bell Helicopters Textron, Inc. (BHTI), (formerly Bell Helicopters, Inc.), Bell Helicopter Textron Canada Limited (BHTC)
Applicability:	Sikorsky S-76A, S-76B, S-76C and S-92A helicopters, all serial numbers (s/n), BHTI 212, 214B, 214B-1, 214ST, 412 and 412EP helicopters, all s/n, BHTC 222, 222B, 222U, 230 and 430 helicopters, all s/n, if equipped with an Emergency Flotation System (EFS), all part numbers, as approved optional kit for ditching provision from the helicopter Manufacturer or by a Supplemental Type Certificate (STC).
Reason:	For the vast majority of the time during public transport and commercial air offshore operations, operational regulations require the helicopter to be equipped with an approved Emergency Flotation System (EFS) to allow ditching, in case any technical failure of the helicopter would prevent continued safe flight. The EFS is certificated against airworthiness standards that require demonstrated helicopter ditching performance (i.e. water entry and flotation stability) under “reasonably probable water conditions”. This is defined as at least “sea state 4” water conditions and this has been the performance level to which many EFS designs have been substantiated. More recent designs have

	been demonstrated to meet the required performance in more severe sea state ranges. Although a demonstrated sea state limit is inherent to any certificated EFS, some operators perform offshore flights without operational restrictions, sometimes operating over sea conditions which are beyond the maximum demonstrated ditching performance of the EFS installed on the helicopter. These demonstrated limits, if unknown or disregarded at the time of planning a flight over water, could potentially result in an unsafe condition, should the aircraft ditch with a sea state beyond its demonstrated capabilities and possibly capsize. The EFS is usually described in the applicable Rotorcraft Flight Manual (RFM), or in a RFM Supplement (RFMS). EASA conducted a review of the RFM of non-European large rotorcraft primarily operated for offshore or other over-water operations to determine the information they contain pertaining to the various certificated EFSs. The results of that review identified that a disharmonized status existed before 2006, as the certification guidance material (Advisory Circular AC 29-2C) did not contain reference to any EFS sea state condition in the Limitations Section of the RFM(S). For some more recently certificated helicopters, the maximum ditching sea state demonstrated during EFS certification is referenced in the Limitations Section of the RFM. For some type designs, there is information in different sections of the RFM to indicate either an accurate sea state value or more general sea water surface description. However, for various other helicopter types, no EFS pertinent sea state information has been found. Prompted by this review, EASA issued AD 2014-0189 requiring amendment of the applicable RFM or RFMS to incorporate information pertaining to the sea state conditions demonstrated during EFS certification as helicopter ditching provisions. After that AD was issued, some typographical errors were reported from Table 1 of the AD as regards the S-92A helicopter model. In addition, EASA received several questions on the meaning for the demonstrated sea state information as incorporated in the Limitations Section of the RFM(S). These triggered the need to clarify that this is not intended as a new prohibiting airworthiness instruction. In line with AC 29-2C regulatory material, the information goes in the Limitations Section of the RFM(S). It aims however at being on one side mandatorily known by all operating those aircraft as specified in the AD, and on the other side to be accounted for by the operators when assessing safety of helicopter dispatch on any sea-state conditions. For the reasons described above, this AD retains the requirements of EASA AD 2014-0189, which is superseded, corrects the requirements for S-92A helicopters, and update the RFM(S) texts of the Appendixes of the AD.
Effective Date:	10 November 2014
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) For helicopters, except as specified in paragraph (2) of this AD, equipped with an EFS **as approved optional kit from the helicopter manufacturer**, within 3 months after 01 September 2014 [the effective date of EASA AD 2014-0189], amend the Limitations Section of the RFM(S) of the EFS by inserting a copy of Appendix 1 or 3 of EASA AD 2014-0189 (or its text), as applicable, and as specified in Table 1 of this AD.

This can also be accomplished by amendment of the Limitations Section of the RFM(S) of the EFS by inserting a copy of Appendix 1 or 3 (or its text), as applicable, of this AD, or by incorporating a later applicable RFM(S) approved revision containing text of equal effect to that in Appendix 1 or 3, as applicable, of this AD.

Table 1 - RFM(S) demonstrated Sea State

Helicopter Type / Model	Demonstrated Sea State	Appendix
Sikorsky S-76A, S-76B and S-76C	4	1
BHTI 212, 412 and 412EP	4	1
BHTI 214B, 214B-1 and 214ST	4	1
BHTC 222, 222B, 222U, 230 and 430	6	3

Note 1: For the purpose of this AD, “sea state” is a reference to the sea state codes from the World Meteorological Organization: sea state 4 describes a “Moderate” sea with significant wave height between 1,25 and 2,5 metres; sea state 5 describes a “Rough” sea with significant wave height between 2,5 and 4 metres; sea state 6 describes a “Very Rough” sea with significant wave height between 4 and 6 metres.

(2) For Sikorsky S-92A helicopters equipped with an EFS **as approved optional kit from the helicopter manufacturer**, within 20 days after the effective date of this AD, amend the Limitations Section of the RFM(S) of the EFS by inserting a copy of Appendix 2-A or 2-B of this AD (or its text), as applicable, and as specified in Table 2 of this AD.

This can also be accomplished by incorporating a later applicable RFM(S) approved revision containing text of equal effect to that in Appendix 2-A or 2-B, as applicable, of this AD.

Table 2 - Sikorsky S-92A RFM(S) demonstrated Sea State

Helicopter configuration	**Demonstrated Sea State** (depending on aircraft weight)	**Appendix**
3 floats	4 or 5	2-A
5 floats	4 or 6	2-B

(3) For helicopters equipped with EFS **as optional kit approved by an STC**, within 3 months after 01 September 2014 [the effective date of EASA AD 2014-0189], accomplish the following actions concurrently:

(3.1) Review the applicable RFM(S) of the EFS of the helicopter to determine if the Limitations Section includes the range of demonstrated sea state conditions.

(3.2) If, during the review as required by paragraph (3.1) of this AD, it is determined that the RFM(S) of the EFS does not include any sea state information, amend the Limitations Section of the RFM(S) by inserting a copy of Appendix 1 of EASA AD 2014-0189 (or its text) to include “sea state 4” information (see Note 1 of this AD).

This can also be accomplished by amendment of the Limitations Section of the RFM(S) of the EFS by inserting a copy of Appendix 1 (or its text) of this AD, or by incorporating a later applicable RFMS approved revision containing text of equal effect to that in Appendix 1 of this AD.

	Note 2: In case it can be demonstrated (e.g. by certificated data) that helicopter ditching performance for the installed EFS is higher than the sea state condition(s) quoted in the Appendices required to be inserted in the RFM(S) by this AD, EASA can approve Alternative Methods of Compliance (AMOC) to this AD to allow different RFM(S) information.
Ref. Publications:	None
Remarks:	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact the applicable design approval holder, or the modification design (STC) approval holder, as applicable: Sikorsky Aircraft Corporation, Commercial Product Support, 6900 Main Street, P.O. Box 9729, Stratford, Connecticut 06497-9129, USA. Tel.: +1-203-416-4299, E-mail: sikorskywcs@sikorsky.com. Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, Texas 76101, USA. Tel.: +1-817-280-3391, Fax: +1-817-280-6466. Bell Helicopter Textron Canada, Engineering Department, 12800 rue de l'Avenir, Mirabel, Québec J7J 1R4, Canada. Tel.: +1-450-971-6500, Fax: +1-450-437-6382. Note: At the time of issuance of this AD, EASA does not have information concerning existing EFS STC approvals that are validated for installation on helicopters registered in an EASA Member State.

Appendix 1: RFM(S) Amendment - Sea State 4 Information

Emergency Flotation System (EFS)

The EFS performance has been demonstrated for ditching up to **Sea State 4.**

The helicopter is certificated for ditching provided the following additional equipment is fitted and approved in accordance with relevant airworthiness requirement:

- Life rafts with survival equipment,
- Life preservers,
- Survival type emergency locator transmitter.

NOTE: The above information must be accounted for when assessing the helicopter dispatch on any sea-state conditions.

World Meteorological Organization standards describe **Sea State 4** as a "Moderate" sea with significant wave height between 1,25 and 2,5 metres.

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THIS PAGE MUST NOT BE REMOVED FROM THE FLIGHT MANUAL SUPPLEMENT (RFMS) UNTIL AN ALTERNATIVE RFMS REVISION IS APPROVED AND INCORPORATED IN THE FLIGHT MANUAL

Appendix 2-A: RFM(S) Amendment - S-92A with 3 floats - Sea State Information

Emergency Flotation System (EFS)
S-92A with 3 floats

For planned flight conditions at aircraft weights less than 18.590 lb/8.432 kg, the EFS performance has been demonstrated for ditching up to **Sea State 4.**

For planned flight conditions at aircraft weights equal to or more than 18.590 lb/8.432 kg, the EFS performance has been demonstrated for ditching up to **Sea State 5.**

The helicopter is certificated for ditching provided the following additional equipment is fitted and approved in accordance with relevant airworthiness requirement:

- Life rafts with survival equipment,
- Life preservers,
- Survival type emergency locator transmitter.

NOTE: The above information must be accounted for when assessing the helicopter dispatch on any sea-state conditions.

World Meteorological Organization standards describe **Sea State 4** as a “Moderate” sea with significant wave height between 1,25 and 2,5 metres and **Sea State 5** as a “Rough” sea with significant wave height between 2,5 and 4 metres.

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Appendix 2-B: RFM(S) Amendment - S-92A with 5 floats – Sea State Information

Emergency Flotation System (EFS)
S-92A with 5 floats

For planned flight conditions at aircraft weights less than 18.590 lb/8.432 kg, the EFS performance has been demonstrated for ditching up to **Sea State 5.**

For planned flight conditions at aircraft weights equal to or more than 18.590 lb/8.432 kg, the EFS performance has been demonstrated for ditching up to **Sea State 6.**

The helicopter is certificated for ditching provided the following additional equipment is fitted and approved in accordance with relevant airworthiness requirement:

- Life rafts with survival equipment,
- Life preservers,
- Survival type emergency locator transmitter.

NOTE: The above information must be accounted for when assessing the helicopter dispatch on any sea-state conditions.

World Meteorological Organization standards describe **Sea State 5** as a “Rough” sea with significant wave height between 2,5 and 4 metres and **Sea State 6** as a “Very Rough” sea with significant wave height between 4 and 6 metres.

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Appendix 3: RFM(S) Amendment - Sea State 6 Information

Emergency Flotation System (EFS)

The EFS performance has been demonstrated for ditching up to **Sea State 6.**

The helicopter is certificated for ditching provided the following additional equipment is fitted and approved in accordance with relevant airworthiness requirement:

- Life rafts with survival equipment,
- Life preservers,
- Survival type emergency locator transmitter.

NOTE: The above information must be accounted for when assessing the helicopter dispatch on any sea-state conditions.

World Meteorological Organization standards describe **Sea State 6** as a "Very Rough" sea with significant wave height between 4 and 6 metres.

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