

|   |  |
|---|--|
| <b>EASA</b>   | <b>NOTIFICATION OF A PROPOSAL TO ISSUE AN<br/>AIRWORTHINESS DIRECTIVE</b>  |
|    | <p><b>PAD No.: 14-130</b></p> <p><b>Date: 04 August 2014</b></p> <p>Note: This Proposed Airworthiness Directive (PAD) 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.</p>  |
| <p>In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.<br/>All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation closing date indicated.</p> |  |
| <p><b>Design Approval Holder Names:</b></p> <p>SIKORSKY AIRCRAFT CORPORATION<br/>BELL HELICOPTER TEXTRON, Inc.<br/>BELL HELICOPTER TEXTRON CANADA Ltd.</p>  | <p><b>Type/Model designation(s):</b></p> <p>Sikorsky S-76 and S-92A helicopters,<br/>BHTI 212, 214B, 214ST and 412 helicopters,<br/>BHTC 222, 230 and 430 helicopters</p>  |
| <p>TCDS Numbers: EASA.IM.R.001, USA H1NE, H4SW, H6SW, H10SW and Canada H-88.</p>  |  |
| <p>Foreign AD: Not applicable</p>   |  |
| <p>Supersedure: None</p>  |  |
| <b>ATA 25</b>   | <b>Equipment &amp; Furnishings – Emergency Floatation System – Rotorcraft Flight Manual (Supplement) Limitation</b>  |
| Manufacturer(s):  | Sikorsky Aircraft Corporation (Sikorsky), Bell Helicopters Textron, Inc. (BHTI), (formerly Bell Helicopters, Inc.), Bell Helicopter Textron Canada Limited (BHTC)  |
| Applicability:  | <p>Sikorsky S-76A, S-76B, S-76C and S-92A helicopters, all serial numbers (s/n),<br/>BHTI 212, 214B, 214B-1, 214ST, 412, 412CF and 412EP helicopters, all s/n,<br/>BHTC 222, 230 and 430 helicopters, all s/n,</p> <p>if equipped with an Emergency Floatation System (EFS), all part numbers, as approved optional kit for ditching provision from the helicopter Manufacturer or by a Supplemental Type Certificate (STC).</p>   |
| Reason:   | <p>Following recent public consultation of EASA PAD <a href="#">14-089</a> addressing the same safety issue for European (EU) large rotorcraft products, equivalent airworthiness actions are proposed with this PAD for non-EU large rotorcraft. The purpose is to gather further comments for those specific products. After completion of this second stage of public consultation and following analysis of all observations raised, EASA may decide to amend the actions proposed here-below as necessary. The Agency objective is to issue two distinct final EASA ADs, with the same effective date, for both EU and non-EU large rotorcraft.</p> |

|  |  |
|--|--|
|  | <p>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 EFS to allow ditching, in case any technical failure of the helicopter would prevent continued safe flight.</p> <p>The EFS is certificated against airworthiness standards that require demonstrated helicopter ditching performance (i.e. water entry and floatation 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.</p> <p>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.</p> <p>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.</p> <p>The EFS is usually described in the applicable Rotorcraft Flight Manual (RFM), or in a RFM Supplement (RFMS).</p> <p>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 did not contain reference to any EFS sea state condition in the Limitations Section of the RFM(S).</p> <p>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.</p> <p>For the reasons described above, this AD requires amendment of the applicable RFM or RFMS to incorporate information pertaining to the sea state conditions demonstrated during EFS certification as helicopter ditching provisions.</p> |
| Effective Date:                            | [TBD: 14 days after Final AD issue date]   |
| Required Action(s) and Compliance Time(s): | <p>Required as indicated, unless accomplished previously:</p> <p>(1) For helicopters equipped with an EFS <b>as approved optional kit from the helicopter manufacturer</b>, within 30 days after the effective date of this AD, amend the Limitations Section of the RFM or RFMS of the EFS by inserting a copy of Appendix 1, 2 or 3 of this AD (or its text), as applicable, as specified in Table 1 of this AD.</p> <p>This can also be accomplished by incorporating a later applicable RFM(S) approved revision containing text of equal effect to that in Appendix 1, 2 or 3, as applicable, of this AD.</p>   |

Table 1: RFM(S) demonstrated Sea State

| Helicopter Type/Models   | Demonstrated Sea States | AD Appendix |
|--|-------------------------|-------------|
| S-76A, S-76B and S-76C   | 4                       | 1           |
| S-92A with MTOW less than 18.590 lb/8.432 kg, <u>or</u> with 3 or 5 floats         | 4                       | 1           |
| S-92A with MTOW equal to or more than 18.590 lb/8.432 kg, <u>and</u> with 3 floats | 5                       | 2           |
| S-92A with MTOW equal to or more than 18.590 lb/8.432 kg, <u>and</u> with 5 floats | 6                       | 3           |
| BHTI 212, 412, 412CF and 412EP   | 4                       | 1           |
| BHTI 214B, 214B-1 and 214ST  | 4                       | 1           |
| BHTC 222, 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 helicopters equipped with EFS **as optional kit approved by a STC**, within 30 days after the effective date of the AD, accomplish the following actions concurrently:

- (2.1) Review the applicable RFMS of the EFS of the helicopter to determine if the Limitations Section includes the range of demonstrated sea state conditions.
- (2.2) If, during the review as required by paragraph (2.1) of this AD, it is determined that the RFMS of the EFS does not include any sea state information, amend the Limitations Section of the RFMS by inserting a copy of Appendix 1 of this AD (or its text) to include “sea state 4” certification criteria (see Note 1 of this AD).

This can also be accomplished by incorporating a later applicable RFMS approved revision containing text of equal effect to that in Appendix 1, 2 or 3, as applicable, 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) limitations.

|                    |  |
|--------------------|--|
| Ref. Publications: | None   |
| Remarks:           | <ol style="list-style-type: none"> <li>1. This Proposed AD will be closed for consultation on 18 August 2014.</li> <li>2. Enquiries regarding this PAD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>3. For any question concerning the technical content of the requirements in this PAD, please contact the applicable design approval holder, or the modification design (STC) approval holder, as applicable: <p>Sikorsky Aircraft Corporation, Commercial Product Support, 6900 Main Street, P.O. Box 9729, Stratford, Connecticut 06497-9129, USA.<br/>Telephone: +1-203-416-4299, E-mail: <a href="mailto:sikorskywcs@sikorsky.com">sikorskywcs@sikorsky.com</a>.</p> <p>Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, Texas 76101, USA.<br/>Telephone: +1-817-280-3391, Fax: +1-817-280-6466.</p> <p>Bell Helicopter Textron Canada, Engineering Department, 12800 rue de l'Avenir, Mirabel, Québec J7J 1R4, Canada.<br/>Telephone: +1-450-971-6500, Fax: +1-450-437-6382.</p> <p>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.</p> </li> </ol> |

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

**Emergency Floatation System (EFS) - Limitation****Certification Criteria:**

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

National Operational Rules apply for flight over water operations

**CAUTION**

**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: RFM(S) Amendment - Sea State 5 Limitation

**Emergency Floatation System (EFS) - Limitation****Certification Criteria:**

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

National Operational Rules apply for flight over water operations.

**CAUTION**

**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 3: RFM(S) Amendment - Sea State 6 Limitation

**Emergency Floatation System (EFS) - Limitation****Certification Criteria:**

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

National Operational Rules apply for flight over water operations.

**CAUTION**

**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**

-----