Safety Regulation Group
Safety Data

Follow-up Action on Occurrence Report

Follow-up Action on Occurrence Report

ACCIDENT TO EC225LP, G-REDU, AT APPROXIMATELY 500 METRES SOUTH OF THE ETAP PLATFORM IN THE NORTH SEA CENTRAL AREA ON 18 FEBRUARY 2009

CAA FACTOR NUMBER	:	F7/2011
FACTOR PUBLICATION DATE	:	21 September 2011
NATURE OF FLIGHT	:	Commercial Air Transport
CAA OCCURRENCE NUMBER	:	2009/01483
AAIB REPORT	:	Air Accident Report 1/2011

SYNOPSIS
From AAIB Report

The helicopter departed Aberdeen Airport at 1742 hrs on a scheduled flight to the Eastern Trough Area Project (ETAP). The flight consisted of three sectors with the first landing being made, at night, on the ETAP Central Production Facility platform. Weather conditions at the platform deteriorated after the aircraft departed Aberdeen; the visibility and cloud base were estimated as being 0.5 nm and 500 ft respectively. At 1835 hrs the flight crew made a visual approach to the platform during which the helicopter descended and impacted the surface of the sea. The helicopter remained upright, supported by its flotation equipment which had inflated automatically. All those onboard were able to evacuate the helicopter into its life rafts. Both air and maritime Search and Rescue (SAR) assets were used to recover the survivors.

FOLLOW UP ACTION

The four Safety Recommendations initially made in AAIB Special Bulletin S4/2009, published on 23 June 2009, contained three Recommendations directed at the CAA. These were addressed in CAA FACTOR F9/2009, published on 12 August 2009, the text for which is reproduced below:

Recommendation 2009-064

It is recommended that the Civil Aviation Authority review the carriage and use in commercial air transport helicopters of any radio location devices which do not form part of the aircraft's certificated equipment.

CAA Response

The CAA accepts this Recommendation. The CAA has reviewed the carriage and use of radio location devices, such as Personal Locator Beacons (PLB), in commercial air transport helicopters which do not form part of the aircraft's required equipment. The review has led to the development of CAA guidance material, already circulated to industry under cover of AIRCOM 2009/08, that enables operators to determine whether specific devices are acceptable for carriage.

This publication provides the initial response to each Safety Recommendation made by the Air Accidents Investigation Branch, Department of Transport Status 'CLOSED' or 'OPEN' indicates completion or not of all actions judged appropriate by the CAA in response to the Recommendation. It is published by the Safety Data, Safety Regulation Group, Civil Aviation Authority, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Tel: 01293 573220 Fax: 01293 573972 Email: sdd@caa.co.uk

The current status and the final responses to all safety recommendations are contained in an annual AAIB report titled ACCIDENTS INVESTIGATION BRANCH (AAIB) SAFETY RECOMMENDATIONS AND RESPONSES.

Acceptance of these devices is predicated on establishing a low risk of their inadvertent activation or by on-aircraft testing to show that transmissions from such devices do not cause interference with the aircraft or its systems.

These radio location devices are not intended for use on board the aircraft, being part of the offshore industry's overall safety strategy, and CAA's responsibilities are limited to the determination that the carriage and use of such devices does not cause interference with the aircraft or its systems. However, the CAA recognises that such devices may be used as a locating device for search and rescue purposes and has therefore issued guidance to operators to help ensure that transmissions from these devices do not compromise the operation of any Emergency Locator Transmitters (ELTs) required by the relevant aviation operating rules.

In addition, the CAA has issued a Flight Operations Communication (FODCOM 22/2009) which highlights the need for training in the use of emergency equipment such as ELT/PLB devices.

CAA Status - Closed

Recommendation 2009-065

It is recommended that the Civil Aviation Authority advise the European Aviation Safety Agency of the outcome of the review on the carriage and use in commercial air transport helicopters of any radio location devices which do not form part of the aircraft's certificated equipment.

CAA Response

The CAA accepts this Recommendation and has written to EASA on the subject of PLBs and provided a copy of both the AIRCOM and the FODCOM.

CAA Status - Closed

Recommendation 2009-066

It is recommended that European Aviation Safety Agency require manufacturers of Emergency Locator Transmitters (ELTs)/Personal Locator Beacons (PLBs) units to add details, where absent, of the correct use of the antenna to the instructions annotated on the body of such beacons.

CAA Response

This Recommendation is not addressed to the CAA.

CAA Status - Closed

Recommendation 2009-067

It is recommended that the Civil Aviation Authority ensure that all aspects of Emergency Locator Transmitters (ELTs)/Personal Locator Beacons (PLB) operation, particularly correct deployment of the antenna, are included and given appropriate emphasis in initial and recurrent commercial air transport flight crew training, as applicable.

CAA Response

The CAA accepts this Recommendation and has reminded operators that it is their responsibility to provide training to aircraft crews which should include relevant aspects of ELT/PLB use. The CAA has published FODCOM 22/2009 which highlights the pertinent circumstances of this accident and reminds operators to ensure that appropriate aspects of ELT/PLB operation are included and given due emphasis in initial and recurrent crew training. This includes specific guidance for flight crew training. The text of the FODCOM will eventually be included in CAP 768.

CAA Status - Closed

The 23 Safety Recommendations made by the AAIB in this report, following their investigations, are reproduced below, together with the CAA's responses.

Recommendation 2011-049

It is recommended that the Civil Aviation Authority re-emphasises to Oil and Gas UK that they adopt the guidance in Civil Aviation Publication (CAP) 437, entitled *Offshore Helicopter Landing Areas – Guidance on Standards,* insofar as personnel who are required to conduct weather observations from vessels and platforms equipped for helicopter offshore operations are suitably trained, qualified and provided with equipment that can accurately measure the cloud base and visibility, in order to provide more accurate weather reports to helicopter operators.

CAA Response

The CAA accepts this Recommendation and will by way of a letter re-emphasise to offshore helicopter operators and to Oil and Gas UK the guidance contained in CAP 437 on the provisions for accurate weather observations for helicopter offshore operations. The letter will be set by the end of October 2011.

CAA Status - Open

Recommendation 2011-050

It is recommended that the Civil Aviation Authority encourages commercial air transport helicopter operators to make optimum use of Automatic Flight Control Systems.

CAA Response

The CAA accepts this Recommendation and will through the means of an Information Notice encourage all commercial air transport helicopter operators to make optimum use of Automatic Flight Control Systems. The Information Notice will be published by the end of October 2011.

CAA Status - Open

Recommendation 2011-051

It is recommended that the Civil Aviation Authority ensures that commercial air transport offshore helicopter operators define specific offshore approach profiles, which include the parameters for a stabilised approach and the corrective action to be taken in the event of an unstable approach.

CAA Response

The CAA accepts this Recommendation in so far as it will review all commercial air transport offshore helicopter operators' operations manuals to ensure that they detail specific offshore approach profiles, including stable approach parameters, and the corrective action to be taken if an approach becomes unstable. This action will be completed by the end of October 2011.

CAA Status - Open

Recommendation 2011-052

It is recommended that the Civil Aviation Authority commissions a project to study the visual illusions that may be generated during offshore approaches to vessels or offshore installations, in poor visibility and at night, and publicises the findings.

CAA Response

The CAA does not accept this Recommendation. The CAA believes that retrofit of the new helideck lighting system covered by Recommendation 2011-053 will significantly reduce the potential for visual illusions. In combination with adherence to revised approach procedures, ideally using GPS instrument guidance (refer to Recommendation 2008-033) and associated approach profiles, the hazard presented by visual illusions will be adequately addressed in the CAA's view. The CAA is also leading a joint industry project to improve helicopter Terrain Awareness Warning Systems (HTAWS) which will address Recommendations 2011-060, 061, 062 and 063. HTAWS has the potential to provide an effective safety net to underpin the helideck lighting and GPS approach initiatives. In view of the foregoing, the CAA considers a study of visual illusions to be unnecessary but will recommend to offshore operators that the information contained in this AAIB Report is disseminated amongst crews.

CAA Status - Closed

Recommendation 2011-053

It is recommended that the Civil Aviation Authority amends Civil Aviation Publication (CAP) 437, *Offshore Helicopter Landing Areas – Guidance on Standards,* to encourage operators of vessels and offshore installations, equipped with helidecks, to adopt the new lighting standard, for which a draft specification has been published in Appendix E of CAP 437, once the specification has been finalised.

CAA Response

The CAA accepts this Recommendation and will amend CAP 437 once the specification has been finalised and encourage operators of vessels and offshore installations to apply these standards. The specification is expected to be defined by April 2012 after which the CAP will be amended.

CAA Status - Open

Recommendation 2011-054

It is recommended that the Civil Aviation Authority reviews the procedures specified by commercial air transport helicopter operators as to when a crew may, or should, suspend a radio altimeter aural or visual height warning.

CAA Response

The CAA accepts this Recommendation and will review the procedures specified by commercial air transport helicopter operators in their operations manuals as to when a crew may, or should, suspend a radio altimeter aural or visual height warning. This action will be completed by the end of October 2011.

CAA Status – Open

Recommendation 2011-055

It is recommended that the Civil Aviation Authority reviews commercial air transport offshore helicopter operators' procedures to ensure that an appropriate defined response is specified when a height warning is activated.

CAA Response

The CAA accepts this Recommendation and will review commercial air transport offshore helicopter operators' operations manuals to ensure that they include procedures specifying an appropriate defined response when a height warning is activated. This action will be completed by the end of October 2011.

CAA Status - Open

Recommendation 2011-056

It is recommended that the Civil Aviation Authority reviews the procedures set out by commercial air transport offshore helicopter operators to ensure that a member of the flight crew monitors the flight instruments during an approach in order to ensure a safe flight path.

CAA Response

The CAA accepts this Recommendation and will review commercial air transport offshore helicopter operators' operations manuals procedures to ensure that they include the requirement for a member of the flight crew to monitor the flight instruments during an approach in order to ensure a safe flight path. This action will be completed by the end of October 2011.

CAA Status - Open

Recommendation 2011-057

It is recommended that the International Civil Aviation Organisation introduces a Standard for crash-protected recordings of the operational status of Airborne Collision Avoidance System (ACAS) and Terrain Awareness and Warning System (TAWS) equipment, where fitted, on helicopters required to carry a flight data recorder.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-058

It is recommended that the European Aviation Safety Agency requires that crews of helicopters , fitted with a Terrain Awareness and Warning System, be provided with an immediate indication when the system becomes inoperative, fails, is inhibited or selected OFF.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-059

It is recommended that the European Aviation Safety Agency reviews the acceptability of crew-operated ON/OFF controls which can disable mandatory helicopter audio voice warnings.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-060

It is recommended that the Civil Aviation Authority reviews the guidance in Civil Aviation Publication (CAP) 562, *Civil Aircraft Airworthiness Information and Procedures, Part 11, Leaflet 11-35, Radio Altimeters and AVADS for Helicopters*, regarding the pre-set audio height warning that is triggered by the radio altimeter and may not be altered in flight, to ensure that crews are provided with adequate warning to take corrective action.

CAA Response

The CAA accepts this Recommendation and will, by 31 October 2011, review the guidance in Civil Aviation Publication (CAP) 562 Civil Aircraft Airworthiness Information and Procedures, regarding the content of the leaflet “Radio Altimeters and AVADs for Helicopters” (Leaflet 11-35 is now relocated in Book 2 as Leaflet 34-30) concerning the pre-set audio height warning that is triggered by the radio altimeter, to ensure that crews are provided with adequate warning to take corrective action.

CAA Status – Open

Recommendation 2011-061

It is recommended that the European Aviation Safety Agency ensures that helicopter performance is taken into consideration when determining the timeliness of warnings generated by Helicopter Terrain Awareness and Warning Systems.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-062

It is recommended that the European Aviation Safety Agency reviews the frequency of nuisance warnings generated by Terrain Awareness and Warning System equipment in offshore helicopter operations and takes appropriate action to improve the integrity of the system.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-063

It is recommended that the European Aviation Safety Agency, in conjunction with the Federal Aviation Administration, defines standards governing the content, accuracy and presentation of obstacles in the Terrain Awareness and Warning System obstacle database for helicopters operating in the offshore environment.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-064

It is recommended that the European Aviation Safety Agency establishes the feasibility of recording, in crash-protected memory, status indications from each avionic system on an aircraft.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status – Closed

Recommendation 2011-065

It is recommended that the European Aviation Safety Agency considers amending certification requirements for rotorcraft, that are certified in accordance with ditching provisions, to include a means of automatically inflating emergency flotation equipment following water entry.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-066

It is recommended that the European Aviation Safety Agency modifies European Technical Standard Order (ETSO) 2C70a and ETSO 2C505 to include a requirement for multi-seat liferafts, that do not automatically deploy their Sea Anchor, to include a label, visible from within the inflated liferaft, reminding the occupants when to deploy the Sea Anchor.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-067

It is recommended that the Federal Aviation Administration modifies Technical Standard Order (TSO) C70a to include a requirement for multi-seat liferafts, that do not automatically deploy their Sea Anchor, to include a label, visible from within the inflated liferaft, reminding the occupants when to deploy the Sea Anchor.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-068

It is recommended that the European Aviation Safety Agency requires Eurocopter to review the design of the fairings below the boarding steps on AS332 and EC225 series helicopters to reduce the possibility of fairings shattering during survivable water impact and presenting sharp projections capable of damaging liferafts.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-069

It is recommended that the European Aviation Safety Agency, in conjunction with the Federal Aviation Administration, review the design requirements and advisory material for helicopters to require ‘delethalisation’ of the fuselage to prevent damage to deploying and floating liferafts following a survivable water impact.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-070

It is recommended that the European Aviation Safety Agency ensures that a requirement is developed for all emergency equipment, stowed in deployable survival bags, to be capable of being easily accessed and utilised by the gloved hands of a liferaft occupant whilst in challenging survival situations when a liferaft may be subject to considerable motion in cold, wet and dark conditions.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed

Recommendation 2011-071

It is recommended that the European Aviation Safety Agency reviews the location and design of the components and installation features of Automatically Deployable Emergency Locator Transmitters and Crash Position Indicator units, when required to be fitted to offshore helicopters, to ensure the reliability of operation of such units during and after water impacts.

CAA Response

This Recommendation is not addressed to the CAA

CAA Status - Closed