

## Follow-up Action on Occurrence Report

### ACCIDENT TO EUROCOPTER EC135 T2+, G-SPAO, IN GLASGOW CITY CENTRE ON 29 NOVEMBER 2013

**CAA FACTOR NUMBER** : F6/2015  
**FACTOR PUBLICATION DATE** : 04 December 2015  
**TYPE OF FLIGHT** : Public Transport  
**CAA OCCURRENCE NUMBER** : 201315564  
**AAIB REPORT** : 3/2015

#### **SYNOPSIS**

From AAIB Report

The helicopter departed Glasgow City Heliport, approximately 1.5 nm west of the city centre on the north bank of the River Clyde, at 2044 hrs, in support of Police Scotland operations, with one pilot and two Police Observers on board. Initially, it conducted a 'non-routine' task south of Glasgow City Centre. Then it completed four 'routine' tasks; one in Dalkeith, Midlothian, and three others to the east of Glasgow, before heading back towards the heliport. When it was about 2.7 nm from the heliport, the right engine flamed out and the left engine flamed out shortly afterwards. An autorotation, flare recovery and landing was not achieved and the helicopter descended onto the roof of The Clutha Vaults Bar, which collapsed, in Glasgow City Centre. The three occupants in the helicopter and seven people in the bar were fatally injured. Eleven others in the bar were seriously injured. During subsequent examination of the helicopter 76 kg of fuel was recovered from the main fuel tank, however, both engine fuel supply tanks were found to have been empty at impact. It was deduced from wreckage examination and testing that both fuel transfer pumps in the main tank had been selected OFF for a sustained period, making the main tank fuel unusable.

#### **FOLLOW UP ACTION**

##### **Recommendation 2015-030**

It is recommended that, when the European Aviation Safety Agency requires a radio altimeter to be fitted to a helicopter operating under an Air Operator's Certificate, it also stipulates that the equipment is capable of being powered in all phases of flight, including emergency situations, without intervention by the crew.

#### **CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status – Closed**

### **Recommendation 2015-031**

It is recommended that, when the Civil Aviation Authority require a radio altimeter to be fitted to a helicopter operating under a Police Air Operator's Certificate, it also stipulates that the equipment is capable of being powered in all phases of flight, including emergency situations, without intervention by the crew.

#### **CAA Response**

The CAA accepts this recommendation and will review the requirements for the fitment of radio altimeters to helicopters operating under a Police Air Operator's Certificate, and where so required and subject to an impact assessment will amend the specifications to include the capability for the equipment to be powered in all phases of flight, including emergency situations, without intervention by the crew. Review and assessment for amendment to the specifications is expected to be completed by 3<sup>rd</sup> Quarter 2016.

**CAA Status - Open**

### **Recommendation 2015-032**

It is recommended that the Civil Aviation Authority requires all helicopters operating under a Police Air Operators Certificate, and first issued with an individual Certificate of Airworthiness before 1 January 2018, to be equipped with a recording capability that captures data, audio and images in crash survivable memory. They should, as far as reasonably practicable, record at least the parameters specified in The Air Navigation Order, Schedule 4, Scale SS(1) or SS(3) as appropriate. They should be capable of recording at least the last two hours of; (a) communications by the crew, including police observers carried in support of the helicopter's operation, and (b) images of the cockpit environment. The image recordings should have sufficient coverage, quality and frame rate characteristics to include actions by the crew, control selections and instrument displays that are not captured by the data recorder. The audio and image recorders should be capable of operating for at least 10 minutes after the loss of the normal electrical supply.

#### **CAA Response**

The CAA accepts this recommendation and, subject to an impact assessment and liaison with the police operators, will require all helicopters operating under a Police Air Operators Certificate with a maximum take-off mass (MTOM) of more than 2,730 kg and first issued with an individual Certificate of Airworthiness before 1 January 2018, to be equipped with a recording capability that captures data, audio and flight deck images in crash-survivable memory. In order to put any change into effect, the CAA will need to amend General Exemption E4111 for the fitment of recorders to helicopters with a MTOM between 2,730 and 3,175 kg and the requirements for police helicopters with a MTOM greater than 3,175 kg. The CAA will work with the affected operators to agree a means of compliance for individual types in line with ICAO standards and recommended practices and ensure that appropriate protection provisions are afforded for image recordings. The CAA will also review, and amend as necessary, associated CAPs and CAA Specifications, for flight recorders. Introduction of amended requirements is expected to be completed by 3<sup>rd</sup> Quarter 2016.

**CAA Status – Open**

### **Recommendation 2015-033**

It is recommended that the Civil Aviation Authority require all helicopters operating under a Police Air Operators Certificate, and first issued with an individual Certificate of Airworthiness on or after 1 January 2018, to be fitted with flight recorders that record data, audio and images in crash-survivable memory. These should record at least the parameters specified in The Air Navigation Order, Schedule 4, Scale SS(1) or SS(3), as appropriate. They should be capable of recording at least the last two hours of: (a) communications by the crew, including police observers carried in support of the helicopter's operation, and (b) cockpit image recordings. The image recordings should have sufficient coverage, quality and frame rate characteristics to include control selections and instrument displays that are not captured by the other data recorders. The audio and image recorders should be capable of operating for at least 10 minutes after the loss of the normal electrical supply.

### **CAA Response**

The CAA accepts this recommendation and, subject to an impact assessment and liaison with the police operators, will require all helicopters operating under a Police Air Operators Certificate and first issued with an individual Certificate of Airworthiness on or after 1 January 2018, to be equipped with a recording capability that captures data, audio and images in crash-survivable memory. To achieve this in the suggested timescale, the CAA will consider making a Direction to that effect but will also, as part of a wider review of the Air Navigation Order (ANO), prepare amendments to the flight recorder requirements that align with ICAO standards and recommended practices and European standards including the appropriate protection provisions for image recordings. The CAA would anticipate this change being addressed within the planned 2016 ANO amendment cycle.

**CAA Status - Open**

### **Recommendation 2015-034**

It is recommended that the Civil Aviation Authority considers applying the requirements of AAIB Safety Recommendation 2015 - 032 and AAIB Safety Recommendation 2015 - 033 to State aircraft not already covered by these Safety Recommendations.

### **CAA Response**

The CAA accepts this recommendation and will consider whether the requirements of AAIB Safety Recommendation 2015 - 032 and AAIB Safety Recommendation 2015 - 033 should be applied to civil registered State aircraft not already covered by these Safety Recommendations and in particular the suitability of the introduction and/or retrofitting of image recorders. Due to their size, all current civil Search and Rescue helicopters are fitted with flight data recorders and cockpit voice recorders. The CAA anticipates determination of this issue by 3<sup>rd</sup> Quarter 2016.

**CAA Status - Open**

**Recommendation 2015-035**

It is recommended that the European Aviation Safety Agency mandate the ICAO Annex 6 flight recorder requirements for all helicopter emergency medical service operations, regardless of aircraft weight. The last two hours of flight crew communications and cockpit area audio should be recorded. The cockpit area audio recording should continue for ten minutes after the loss of normal electrical power.

**CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status – Closed**

**Recommendation 2015-036**

It is recommended that the European Aviation Safety Agency mandate image flight recorder requirements for all helicopter emergency medical service operations, regardless of aircraft weight. The image recordings should have sufficient coverage, quality and frame rate characteristics to include actions by the crew, control selections and instrument displays that are not captured by a data recorder. The recording should be of the last two hours of operation, including at least 10 minutes after the loss of normal electrical power to the flight recorder.

**CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status – Closed**