

BULLETIN CORRECTION

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| AAIB File No: | EW/C2004/03/01 |
| Aircraft Type and Registration: | Agusta A109E, G-PWER |
| Date & Time (UTC): | 3 March 2004 at 1939 hrs |
| Location: | 1 mile east of Bournemouth (Hurn) Airport, Dorset |
| Information Source: | AAIB Field Investigation |

AAIB Bulletin No 6/2005, page 58 refers

Synopsis

The pilot was flying a visual approach to Bournemouth Airport in poor weather at night; radar data indicated that the aircraft was tracking the extended centreline of Runway 26 at between 800 to 1,000 feet amsl. The pilot declared that he was visual with the airport but, shortly afterwards, the radar data indicated that the aircraft had entered a turn to the left. The aircraft turned through about 540° before striking the ground, fatally injuring both the pilot and the passenger. The pilot had probably become disorientated, and his limited instrument flying background did not equip him to cope with the degraded visual environment. There was no evidence from the wreckage recovered of any mechanical failure or unauthorised interference with the aircraft or its systems that may have contributed to the accident.

Bulletin Correction

The Civil Aviation Authority have pointed out that the flying regulations referred to in the published report were not the relevant regulations because the helicopter involved in the accident was at no time subject to these Visual Flight Rules. Since the flight was flown at night the flight was conducted as a 'Special VFR flight' whilst in the Heathrow and Bournemouth control zones, and was subject to the Instrument Flight Rules when flying outside of the control zones. The relevant regulations are produced below.

Since the basis for the Safety Recommendation has now changed the revised wording of the Recommendation itself is also presented.

Flying Regulations

The rules of the air that relate to the circumstances of the accident are contained within The Rules of the Air Regulations 1996 which can be found at Section 2 of CAP 393.

The Rules

Rule 1 of the Rules defines a special VFR flight as:

“a flight made at any time in a control zone which is Class A airspace, or in any other control zone in Instrument Meteorological Conditions or at night, in respect of which the appropriate air traffic control unit has given permission for the flight to be made in accordance with special instructions given by that unit instead of in accordance with the Instrument Flight Rules and in the course of which flight the aircraft complies with any instructions given by that unit and remains clear of cloud and in sight of the surface;”

Rule 22 of the Rules provides:

Choice of VFR or IFR

(1) Subject to paragraph (2) and to the provisions of Rule 21 an aircraft shall always be flown in accordance with the Visual Flight Rules or the Instrument Flight Rules.

(2) In the United Kingdom an aircraft flying at night:

- (a) outside a control zone shall be flown in accordance with the Instrument Flight Rules;
- (b) in a control zone shall be flown in accordance with the Instrument Flight Rules unless it is flying on a special VFR flight.

Rule 28 of the Rules provides:

Instrument Flight Rules

(1) In relation to flights within controlled airspace rules 29, 31 and 32 shall be the Instrument Flight Rules.

(2) In relation to flights outside controlled airspace rules 29 and 30 shall be the Instrument Flight Rules.

Rule 29 of the Rules provides:

Minimum height

Without prejudice to the provisions of Rule 5, in order to comply with the Instrument Flight Rules an aircraft shall not fly at a height of less than 1000 feet above the highest obstacle within a distance of 5 nautical miles of the aircraft unless:

- (a) it is necessary for the aircraft to do so in order to take off or land;
- (b) the aircraft is flying on a route notified for the purposes of this rule;
- (c) the aircraft has been otherwise authorised by the competent authority; or
- (d) the aircraft is flying at an altitude not exceeding 3000 feet above mean sea level and remains clear of cloud and in sight of the surface.

Effects of the Rules

Outside controlled airspace

Flight at night outside controlled airspace such as a control zone must be conducted in accordance with the applicable Instrument Flight Rules which are Rules 29 and 30. However Rule 30 – the Quadrantal rule and semi-circular rule - only applies when flying above 3000 feet. Accordingly when flying below 3000 feet at night outside controlled airspace the applicable rule is Rule 29.

This normally requires the aircraft to be flown not less than a height of 1.000 feet above the highest obstacle within 5 nm of the aircraft.

This requirement does not apply when the aircraft is flying below 3000 feet and remains clear of cloud and in sight of the surface or if the aircraft is taking off or landing.

Within controlled airspace

When flying at night within controlled airspace the applicable Instrument Flight Rules are Rules 29, 31 and 32. Rule 31 relates to the provision of a flight plan and Rule 32 relates to position reports. Rule 22 (2) (b) however provides that an aircraft may instead comply with the requirements for a Special VFR flight in Rule 1. In particular it must comply with ATC instructions and remain clear of cloud and in sight of the surface.

Licence privileges

In addition to complying with the relevant Rules of the Air a pilot must also observe the privileges of his licence.

The privileges afforded by the pilot's UK ATPL (H) meant that as a private flight he was permitted to fly in IMC outside controlled airspace and IMC within certain categories of controlled airspace even though he did not hold an IR.

Safety Recommendation

Since the flight was flown at night the flight was conducted as a ‘Special VFR flight’ whilst in the Heathrow and Bournemouth control zones, and was subject to the Instrument Flight Rules when flying outside of the control zones; specifically taking advantage of the alleviation in Rule 29 (d). In either case the pilot was required to “remain clear of cloud and in sight of the surface”. In the deteriorating meteorological conditions the pilot of this helicopter either encountered a seriously degraded visual environment or inadvertently entered IMC and subsequently experienced spatial disorientation. The freedom for helicopters to remain clear of cloud and in sight of the surface when operating below 3,000 feet does

not provide an adequate margin of safety for preventing inadvertent IMC or spatial disorientation. It is therefore recommended that:

Safety Recommendation 2005-055

The Civil Aviation Authority should review the Rules of the Air and relevant regulations in their applicability to helicopters and should consider imposing minimum visibility requirements for day and night. These minima should afford an effective safety margin to prevent inadvertent flight in instrument meteorological condition or loss of adequate external visual references. The requirement for a clearly defined horizon, particularly over water or featureless terrain should also be considered.