

AAIB Bulletin S1/2018

SPECIAL

ACCIDENT

| | |
|--|--|
| Aircraft Type and Registration: | Agusta AW169, G-VSKP |
| No & Type of Engines: | 2 Pratt & Whitney Canada PW210A turboshaft engines |
| Year of Manufacture: | 2016 (Serial no: 69018) |
| Location | King Power Stadium, Leicester |
| Date & Time (UTC): | 27 October 2018 at 1937 hrs |
| Type of Flight: | Private |
| Persons on Board: | Crew - 1 Passengers - 4 |
| Injuries: | Crew - 1 (Fatal) Passengers - 4 (Fatal) |
| Nature of Damage: | Aircraft destroyed |
| Commander's Licence: | Airline Transport Pilot's Licence (A and H) |
| Commander's Age: | 53 years |
| Commander's Flying Experience: | To be confirmed Last 90 days - 40 hours Last 28 days - 7 hours |
| Information Source: | AAIB Field Investigation |

The investigation

The accident occurred at 1937¹ hours on 27 October 2018. This Special Bulletin is published to provide preliminary information gathered from the site investigation, subsequent technical investigation, recorded data, and other sources.

Footnote

¹ All times in this bulletin are UTC and have been taken from a variety of sources which have yet to be fully correlated. All times quoted should be taken as approximate at this stage.

This Special Bulletin contains facts which have been determined up to the time of issue. It is published to inform the aviation industry and the public of the general circumstances of accidents and serious incidents and should be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

In accordance with established international arrangements, the Agenzia Nazionale per la Sicurezza del Volo (ANSV) of Italy, representing the State of Design and Manufacture of the helicopter, appointed an Accredited Representative (Accrep) to participate in the investigation. The Accrep is supported by advisers from the helicopter manufacturer. The Transportation Safety Board of Canada, representing the State of Design and Manufacture for the helicopter's engines, has also appointed an Accrep. Experts have been appointed by the Aircraft Accident Investigation Committee of Thailand and the State Commission on Aircraft Accidents Investigation of Poland. The European Aviation Safety Agency (EASA), the UK Civil Aviation Authority (CAA) and the helicopter operator are also assisting the AAIB.

History of the flight

The helicopter took off on its first flight of the day from Fairoaks Airport, Surrey, at 1340 hrs on Saturday 27 October 2018. The pilot and one passenger were on board. At 1404 hrs the helicopter landed at London Heliport (Battersea) where three additional passengers boarded. The helicopter then lifted off from Battersea at 1414 hrs and flew to the Belvoir Drive Training Ground, Leicester, landing at 1459 hrs.

The helicopter was shut down at the training ground and all persons on board went to the King Power Stadium, Leicester. The pilot and one passenger returned to the training ground at 1837 hrs and at 1844 hrs the helicopter lifted off, with two persons on board, for the short flight to the King Power Stadium, 1 nm to the north.

The approach to the King Power Stadium was made from a southerly direction. After landing, the helicopter parked on the centre circle of the pitch, on a north-easterly heading, and was shut down at 1847 hrs. The pilot and passenger left the helicopter.

Between 1900 hrs and 1930 hrs the pilot and four passengers boarded the helicopter for a flight to London Stansted Airport. The helicopter started up at 1934 hrs and at 1937 hrs it lifted from the centre circle, yawed 15° left and moved forward a few metres.

The helicopter then began a climb on a rearward flight path² while maintaining a northerly heading. Gear retraction started as it passed through a height of approximately 320 ft. The climb then paused. Heading changes consistent with the direction of pedal movements were recorded initially, then the helicopter entered an increasing right yaw contrary to the pilot's left pedal command. The helicopter reached a radio height³ of approximately 430 ft before descending with a high rotation rate.

The helicopter struck the ground in an approximately upright position on a stepped concrete surface, with the landing gear retracted, and rolled onto its left side. The helicopter was rapidly engulfed in an intense post-impact fire. Stadium staff and emergency services were quickly at the scene but were not able to gain access to the helicopter because of the intensity of the fire.

Footnote

² A planned procedure.

³ Height determined by a radar altimeter system on the aircraft.

Weather

At the time of the accident the weather was clear with good visibility and no cloud below 1,000 ft. The general wind direction was north-westerly with a strength of 10 to 12 kt at the surface and around 25 to 30 kt at 1,000 ft.

Wreckage

The aircraft came to rest on an area of land adjacent to the football stadium car park. The post-impact fire resulted in substantial damage to the predominantly composite structure of the helicopter. Several sections of the airframe were almost completely consumed by the fire and large sections of the remaining fuselage suffered significant loss of structural integrity.

The wreckage was recovered to the AAIB's facilities in Hampshire, where detailed forensic assessment of the helicopter's structure and systems is ongoing.

Safety action

The manufacturer of the helicopter has issued Alert Service Bulletin (ASB) 169-120 for AW169 helicopters, giving instructions for a precautionary inspection of the tail rotor control assembly on all helicopters in the global fleet. The manufacturer also issued ASB 189-213 for AW189 helicopters, which have a similar tail rotor control system.

These inspections have been mandated by the EASA, in its capacity as the regulator responsible for the type design approval of the AW169 and AW189. Airworthiness Directive 2018-0241-E has been issued to accomplish this.

Ongoing investigation

The cause of the apparent loss of yaw control has yet to be determined. Investigation of the tail rotor control system is being carried out as a priority. The AAIB investigation will also continue to conduct a comprehensive examination of the helicopter wreckage, recovery and analysis of recorded data from the Combined Voice and Flight Data Recorder (CVFDR), aircraft systems and other sources, and an assessment of the operation, maintenance, design and manufacture of the aircraft. The AAIB will report any significant developments as the investigation progresses.

Published 14 November 2018.

AAIB investigations are conducted in accordance with Annex 13 to the ICAO Convention on International Civil Aviation, EU Regulation No 996/2010 and The Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2018.

The sole objective of the investigation of an accident or incident under these Regulations is the prevention of future accidents and incidents. It is not the purpose of such an investigation to apportion blame or liability.

Accordingly, it is inappropriate that AAIB reports should be used to assign fault or blame or determine liability, since neither the investigation nor the reporting process has been undertaken for that purpose.

Extracts may be published without specific permission providing that the source is duly acknowledged, the material is reproduced accurately and is not used in a derogatory manner or in a misleading context.
