

Chief Inspector of Accidents
Accident Investigation Division
Civil Aviation Department
46th Floor
Queensway Government Offices
66 Queensway
Hong Kong

Accident Bulletin 2/2010

Aircraft Type:	AgustaWestland AW139
Registration:	B-MHJ
Year of Manufacture:	2008
Number and Type of Engines:	Two Pratt & Whitney PT6C-67C turbo-shaft engines
Date and Time of Accident:	3 Jul 2010 at 0400 hours UTC (1200 hours local time)
Place of Accident:	About 370 m north-west of Sheung Wan / Sky Shuttle Heliport, Hong Kong (VHSS)
Nature of Accident:	Shortly after take-off from Sheung Wan / Sky Shuttle Heliport (ashore Victoria Harbour) for Macao, B-MHJ ditched into the harbour north-west of the heliport. All crew and passengers onboard survived and were rescued though some of them suffered from minor injuries.
Type of Flight:	Chartered Public Transport
Persons on Board:	Crew: 2 Passenger: 11
Fatalities:	Nil
Serious Injuries:	Crew: Nil Passenger: Nil
Captain's Licence:	Airline Transport Pilot's Licence (Helicopters)
Captain's Age:	45
Captain's Experience:	6 120 hours (of which 350 hours were on type)
Other Crew:	Cockpit: One First Officer Cabin: Nil
Sources of Information:	Inspector's Investigation

Helicopter Accident - 3 July 2010
AgustaWestland AW139 Registration Mark B-MHJ

(All times are in UTC. Hong Kong time is UTC+8 hours.)

1. East Asia Airlines is a helicopter operator established in Macao, China. It provides chartered passenger service between Macao and Hong Kong. On 3 July 2010, the accident flight EA 206A was operated by two pilots with 11 passengers onboard. The Actual Gross Weight of the helicopter before take-off was 5 971 kg, which was within the Maximum Gross Weight for Take-off / Landing of 6 400 kg for the helicopter. The helicopter was within both longitudinal and lateral centre of gravity limits.
2. The helicopter took off from Sheung Wan / Sky Shuttle Heliport in Hong Kong at 0400 hours. The departure was uneventful. The flight was conducted under Visual Flight Rules, which required the pilot to remain clear of cloud and in visual contact with the surface. At the time of the accident, the wind speed was 7 knots at a direction of 255 degrees. The visibility was more than 10 km.
3. The captain was the 'pilot flying' in the right seat. The first officer was the 'pilot not flying' in the left seat, assisting the captain in carrying out flight procedures. After departing from the heliport, the helicopter was climbing on a north-westerly heading. When passing approximately 350 feet Above Mean Sea Level at about 70 knots Indicated Airspeed, the crew had completed the post-takeoff checks. Shortly afterwards, both pilots heard a loud bang from the rear of the helicopter followed by airframe vibrations. At the same time, the captain found that he had no authority on the pedal controls and determined that the tail rotor of the helicopter had failed. Immediately, the captain put the helicopter into autorotation. Whilst in autorotation, he commanded the first officer to shut down both engines in accordance with the emergency procedures and the first officer carried out the commands accordingly. Also, the captain transmitted a 'MAYDAY' call. The captain made a controlled ditching with the helicopter maintained in level attitudes and low forward speed at touchdown. Once the helicopter touched the water, all the four emergency floats were inflated automatically. The time between the loud bang heard by the pilots and the touchdown on water was about 16 seconds.
4. After the helicopter was floating firmly on water, both pilots exited the cockpit expeditiously through the emergency exits on their respective cockpit doors. The

captain then opened the starboard passenger door from the outside. Both pilots instructed and assisted the passengers to evacuate from the helicopter. After ensuring that nobody was left onboard, the captain left the helicopter. All pilots and passengers were rescued by the nearby vessels. The 11 passengers were taken to hospital for medical examination. Six passengers received treatment for minor injuries. All passengers were discharged from hospital on the same day. The helicopter subsequently overturned and the entire fuselage became submerged but the emergency floats kept the helicopter floating upside down.

5. The Chief Inspector of Accidents has ordered an Inspector's Investigation into the cause of the accident in accordance with the Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Laws of Hong Kong, Chapter 448B). The investigation is being conducted by the Hong Kong Civil Aviation Department (CAD) with the assistance from the Civil Aviation Authority of Macao Special Administrative Region, Agenzia Nazionale per la Sicurezza del Volo of Italy, Air Accidents Investigation Branch (AAIB) of the United Kingdom, Transportation Safety Board of Canada and AgustaWestland, the manufacturer of the AW 139 helicopter.
6. In the evening of 3 July 2010, the helicopter was lifted out of water. The top section of the vertical fin, the tail rotor, the tail gearbox and the associated drive shaft, control rods and cover fairings of the helicopter were found missing. After extensive underwater search, the tail rotor and the tail gearbox were salvaged from the harbour on 14 July 2010 but one of the four blades of the tail rotor was still missing. Search of the remaining missing parts is on-going.
7. The accident investigation team conducted interviews with the captain, the first officer, some of the passengers and the command personnel of the Hong Kong Police Force, Fire Services Department and Marine Department who responded to the accident. The data recorded in the Multi-purpose Flight Recorder has been successfully downloaded for analysis. The Health and Usage Monitoring System memory card has been sent to AAIB for data download and analysis. The helicopter flight documents, maintenance records, weather information and radio communication recording with air traffic control have also been collected for investigation purposes. CAD has arranged the tail rotor and the tail gearbox to be sent to AAIB for examination, test and analysis.
8. Based on past experience, the investigation into accident of such scale is expected to take more than one year to complete. However, during the course of the investigation, should safety recommendations be considered necessary, they will be promulgated to the parties concerned before the final report is published.

This Bulletin contains facts relating to the accident as determined up to the time of issue. The information must be regarded as tentative and subject to alteration or correction if additional evidence becomes available.