

ACCIDENT

Aircraft Type and Registration:	DH87B Hornet Moth, G-ADLY	
No & Type of Engines:	1 De Havilland Gipsy Major 1C piston engine	
Year of Manufacture:	1935 (Serial no: 8020)	
Date & Time (UTC):	7 May 2018 at 0757 hrs	
Location:	Earls Colne, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Damage to the right landing gear struts and a small tear to the underside of the lower right wing fabric	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	56 years	
Commander's Flying Experience:	747 hours (of which 7 were on type) Last 90 days - 4 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB	

Synopsis

On takeoff, from Earls Colne, G-ADLY deviated from the runway centreline and contacted the PAPIs causing damage to the landing gear struts and wing fabric.

History of the flight

The previous day the aircraft had an uneventful flight from Langham, Norfolk to Earls Colne, Essex following completion of its annual maintenance check. On the day of the accident the aircraft was prepared for a flight to Goodwood, West Sussex. The sky was clear and wind calm.

The pilot taxied to the holding point of Runway 24 and commenced takeoff on the asphalt insert, which preceded normally for approximately 30 m. The tail began to rise as the aircraft accelerated. The pilot recalled making a right rudder and right differential brake input to maintain the aircraft heading, but described the right brake "snatching", causing the aircraft to veer right and pitch nose down. The pilot applied full left rudder and aft stick to correct this, which resulted in a large swing to the left taking the aircraft onto the grass to the south of the asphalt. The pilot regained directional control approximately 10 m into the grass and, having reached flying speed, was able to climb away. Before lifting off, the pilot felt a slight "bump" which he thought was the right landing gear contacting the edge of the asphalt runway.

The remainder of the flight to Goodwood was uneventful. On first contact with Goodwood the pilot requested the fire service attend the aircraft on landing because of the brake issue on takeoff. The landing was uneventful and the pilot brought the aircraft to a halt to the left of the runway.

On inspection, part of the PAPI structure from Earls Colne was found embedded in the right-wing root. The right undercarriage struts were damaged and there was a small tear in the underside of the bottom right wing fabric.

Aircraft information

The De Havilland Honet Moth is a single-engine biplane designed in 1934.

Each main wheel is fitted with a drum brake. Symmetric braking is achieved with a hand brake lever. Differential braking is achieved with rudder pedal deflection. As rudder pedal deflection increases it will begin to apply differential braking. Full pedal deflection will normally cause the brake to lock.

Airfield information

The grass Runway 06/24 at Earls Colne is 939 m long and 30 m wide, and has a 10 m wide asphalt insert.

Discussion

The pilot commented that the incident occurred because he over-corrected with left rudder and differential brake, causing the aircraft to deviate to the left.

The pilot elected to take off on the narrow asphalt insert because he had been advised that the grass was soft. However, after the accident he thought it would have been safer to take off on the grass where he had landed the previous day. The aircraft response to control inputs would have been slower on the grass and there is more space to manoeuvre.

The pilot had limited experience on the Hornet Moth but considerable tail wheel experience on the Pitts Special. He reflected that if he had been flying the Pitts Special he would have abandoned the takeoff, but, having never abandoned a takeoff in the Hornet Moth he did not consider this option.