

ACCIDENT

Aircraft Type and Registration:	EV-97 Teameurostar UK Eurostar, G-CDNG	
No & Type of Engines:	1 Rotax 912-UL piston engine	
Year of Manufacture:	2005 (Serial no: 2319)	
Date & Time (UTC):	14 March 2016 at 1310 hrs	
Location:	Cotswold Airport, Gloucestershire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Damage to landing gear, landing gear fixing points and fuselage floor	
Commander's Licence:	National Private Pilot's Licence	
Commander's Age:	71 years	
Commander's Flying Experience:	138 hours (of which 122 were on type) Last 90 days - 6 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

At the end of a flight from Shobdon Airfield to Cotswold Airport in clear but gusty conditions, the pilot landed heavily on Runway 08 after stalling in the flare. A cockpit video showed that no additional margin was added to the approach and landing speeds to allow for the gusting conditions. However, it is not conclusive that this was causal. The landing runway was wider than the runways familiar to the pilot which may have led to an illusion that the aircraft was lower than it actually was, resulting in the pilot flaring too high. Continued pitch input led to a stall resulting in the heavy landing.

The damage caused by the heavy landing did not prevent the aircraft being taxied clear. No injuries were sustained.

The pilot stated that he misjudged the flare and assessed that possible factors were the strong and gusting headwind and landing at an unfamiliar runway with an upslope.

History of the flight

The aircraft departed Shobdon Airfield at approximately 1200 hrs and flew to Cotswold Airport, an airfield unfamiliar to the pilot. During the landing on Runway 08, in clear but gusty conditions, the pilot reported that he flared too early and, with continued pitch-up input, stalled the aircraft, resulting in a heavy landing. The pilot was not injured and the

aircraft damage did not prevent him from taxiing off the runway. The right landing gear had deformed resulting in damage to its fixing points and penetration of the fuselage floor.

Gusting conditions

A cockpit video recording provided by the pilot indicated airspeeds for the approach, flare and touchdown were approximately 60 mph, 43 mph and 30 mph (post-stall) respectively. The METAR for RAF Fairford, 18km to the east, approximately 10 minutes earlier, reported the wind as, from 80° at 14 kt gusting 22 kt; a gusty headwind for Runway 08. CAA Safety Sense Leaflet 1e 'Good Airmanship', section 26 'Speed Control' states:

'b) When landing, aim for the flight handbook speed (or 1.3 times the stall speed with flap if none is published) over the threshold, and reduce speed in the round-out. If the head-wind is turbulent or gusty, add a margin of, say, 5 kt or half the gust factor, whichever is the greater.'

No margin above the speeds in the pilot handbook was used for the accident landing, but the video is inconclusive that this was a causal factor.

Unfamiliar airfield

The pilot had recently flown at Shobdon Airfield with an instructor to refresh his crosswind skills after a period without flying. Cotswold Airport Runway 08/26 is more than twice the width of Shobdon Airfield. Visual cues when landing on a runway that is wider than the pilot is familiar with can create the illusion that the aircraft is closer to the ground than it actually is. This can result in the pilot initiating the flare with too much height.

CAA Safety Sense Leaflet 1e 'Good Airmanship', section 29 'Circuit Procedure' states:

'f) Be aware of optical illusions at unfamiliar aerodromes with sloping runway or terrain, or with very long, or very wide, runways.'

Conclusion

The pilot flared too early during the landing and stalled the aircraft. Gusty conditions and/or illusions associated with an unfamiliar size of runway may have been a factor. The CAA Safety Sense Leaflet 1e 'Good Airmanship' provides guidance on both these topics.