

INCIDENT

Aircraft Type and Registration:	Pitts S-1E, G-LITZ	
No & Type of Engines:	1 Lycoming IO-360-B1B piston engine	
Category:	1.3	
Year of Manufacture:	1994	
Date & Time (UTC):	8 July 2005 at 1600 hrs	
Location:	Buckland Newton Airstrip, Dorset	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Upper and lower wings, engine, propeller, main and tail wheels damaged	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	45 years	
Commander's Flying Experience:	13,650 hours (of which 130 were on type) Last 90 days - 220 hours Last 28 days - 0 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

Whilst landing at a grass airstrip, the 'spade' fitted beneath the right aileron caught up in longer grass at the edge of the strip, causing the aircraft to ground loop.

History of flight

The pilot had visited the 700 m unlicensed grass airfield, five days prior to the accident and assessed it as suitable for operation of the aircraft. He landed on a heading of 247°, with reported wind conditions of 10 kt at 315°. The landing initially appeared normal but the pilot felt the aircraft 'dragging' to the right into the longer grass at the edge of the runway. It then ground looped, resulting in the propeller striking the ground together with both

right wing tips. The pilot reported that he did not feel or hear any impact immediately prior to the aircraft pulling to the right or any unusual feedback through the control column. It came to a halt upright at approximately 180° to the landing direction, ten feet off the right edge of the runway. The pilot was uninjured and the aircraft suffered damage to the upper and lower wings, undercarriage, engine and propeller.

Analysis

The aircraft had been modified by the addition of 'spades' on the ailerons on the lower wing. These devices extend between approximately six and ten inches below the

lower surface of the wings, dependant on aileron position. These 'spades' provide aerodynamic assistance to the pilot's aileron control inputs. The right aileron spade had broken from the aileron and was found approximately 50 m behind the aircraft's final resting place on the right edge of the runway.

Operation on a surface such as a grass results in irregular compressive undercarriage loads, and the possibility that the aircraft's wheels could run into depressions or over

tussocks. This would result in a reduction in the wing and 'spade' ground clearances. Aileron deflection and/or any roll input to counteract crosswind effects would further decrease these clearances.

It is likely that, given the nature of the operating surface, and from the information contained in the pilots report, at some point during the landing roll the right aileron spade ran through a section of longer grass, dragging the aircraft to the right and leading to the subsequent ground loop.