ACCIDENT

Aircraft Type and Registration:	Replica Sopwith Triplane, G-BOCK
No & Type of Engines:	1 Clerget Rotary 9B piston engine
Year of Manufacture:	1980 (Serial no: NAW-1)
Date & Time (UTC):	29 June 2014 at 1319 hrs
Location:	Old Warden Aerodrome, Bedfordshire
Type of Flight:	Aerial work
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Landing gear, wings, forward fuselage and propeller
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	62 years
Commander's Flying Experience:	12,800 hours (of which 11 were on type) Last 90 days - 17 hours Last 28 days - 3 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

During approach the left main wheel struck a metal gate in the airfield boundary fence and the aircraft pitched forward onto its nose. The pilot, who was uninjured, made the aircraft safe and vacated it with assistance. The aircraft suffered extensive damage to its undercarriage, wings, forward fuselage and propeller.

History of the flight

The Sopwith Triplane, a replica World War One aircraft, was participating in an air display.

The pilot, a qualified test pilot, provided the following handling notes. The Sopwith Triplane, in common with aircraft of the era, cannot tolerate any crosswind component on landing and must be landed exactly into wind. The approach is normally flown steeper than what would be considered normal in a more modern aircraft, with sideslip[1] used to reduce excess height. This is to ensure that in the event of engine stoppage the aircraft is still able to reach the intended landing point. The nose of the aircraft obstructs the pilots' view forward and down. Handling of the Clerget rotary engine during the approach, landing and go around is very different from that of a more modern engine, and requires considerable manipulation of the air, fuel and ignition controls throughout.

Footnote

[1] Sideslipping is a technique where the pilot cross-controls rudder and aileron to loose height.

The pilot took off from Runway 03 but during his display the wind backed and increased, so he elected to land into wind across the centre of the airfield. He reported that he established the aircraft on final approach and, before the airfield boundary fence disappeared from his view, he assessed that his projected flight path looked correct for a touchdown well clear of the fence. Video footage of the accident showed the aircraft rate of descent increase momentarily several times during the approach. The pilot advised that during this stage of the flight he was performing engine management tasks, and did not notice the loss of height. No longer able to see the fence, the pilot continued towards his initial aiming point but the flatter approach angle resulted in the aircraft's left main wheel striking the top rail of a tubular steel gate in the boundary fence. The pilot estimated the impact occurred at about 50 mph and the aircraft immediately pitched down onto the ground, stopping in a vertical position, resting on the engine and the leading edge of the top wing. The pilot made the aircraft safe and was quickly assisted from it. There was no obvious fuel leak and no fire.

The pilot considered that he escaped injury because he was wearing a properly adjusted four-point harness.