

ACCIDENT

Aircraft Type and Registration:	Jodel DR1050 Ambassadeur, G-AYLL	
No & Type of Engines:	1 Continental Motors Corp O-200-A piston engine	
Year of Manufacture:	1960 (Serial no: 11)	
Date & Time (UTC):	4 November 2014 at 1043 hrs	
Location:	Lee-on-the-Solent Airfield, Hampshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Fracture of rear fuselage	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	67 years	
Commander's Flying Experience:	870 hours (of which 295 were on type) Last 90 days - 2 hours Last 28 days - 0 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and additional inquiries by the AAIB	

Synopsis

Following an apparently normal touchdown, the pilot lost directional control of the aircraft, which departed onto the grass beside the runway. Inspection revealed a major failure of the rear fuselage. Although some deterioration of the wooden structure was present, it could not be determined whether this had been a causal factor in the loss of control or a consequence of the ground manoeuvre.

History of the flight

The aircraft was making an approach to land on Runway 35 at Lee-on-the-Solent Airfield. The wind was from 360° and calm as the aircraft approached at an airspeed of 60-65 mph and flared to a three-point touchdown with airbrakes extended. Shortly afterwards, during the landing ground roll, the aircraft started to swing to the right and the pilot corrected by applying left rudder. However, the aircraft continued to the left, leaving the paved surface and turning through approximately 270° before he regained control. The pilot applied power and regained the runway heading but taxied on the grass to the parking area in order to be clear of other departing traffic.

As the pilot shut down and vacated the aircraft, he saw that the rear fuselage had been badly damaged (Figure 1). He had not been aware of the severity of the damage until then.



Figure 1

G-AYLL showing damage to rear fuselage discovered after a ground loop landing incident.
(Photograph via pilot)

Discussion

Inspection of the runway revealed distinctive tailwheel tyre marks indicative of shimmy for some distance before the aircraft left the paved surface. Starting at a raised crack in the tarmac surface, the marks continued until the aircraft ran onto the grass, where the tailwheel had struck the remains of a concrete runway gutter.

The pilot was of the opinion that the tailwheel shimmy may have been precipitated by the runway surface condition and major damage caused by striking the exposed concrete debris at the side of the runway, but it could not be ruled out that the fuselage may have failed on touchdown, leading to shimmy and the loss of directional control. Several witnesses who supplied photographs of the rear fuselage to the AAIB commented that the wooden structure appeared wet with possible indications of a 'tidemark', suggesting that liquid water had been present over an extended period. The photographs also appeared to show that deterioration of some of the bonded joints had been present for some time prior to the accident.

The extent to which this deterioration may have contributed to a possible structural failure during an otherwise normal touchdown could not be determined. However, the Light Aircraft Association (LAA) advised that they intended to highlight the particular importance of close inspection of elderly wooden structures in a forthcoming edition of their journal *Light Aviation*.