

ACCIDENT

Aircraft Type and Registration:	Robin ATL, G-GFRO	
No & Type of Engines:	1 JPX 4T60/A piston engine	
Year of Manufacture:	1991 (Serial no: 64)	
Date & Time (UTC):	11 April 2015 at 1200 hrs	
Location:	Nympsfield gliding site, Gloucestershire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Nosewheel detached and propeller blade damaged	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	56 years	
Commander's Flying Experience:	8,388 hours (of which 1 was on type) Last 90 days - 154 hours Last 28 days - 53 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft was taking off from a grass gliding field, having abandoned a previous attempt due to an apparent lack of performance. Although the takeoff roll and lift off were normal, at about 100 ft agl the engine lost power, but sufficient power remained for the pilot to position the aircraft back for a normal approach and landing. However, he had to land in a different part of the site due to conflict with a landing glider and the nose landing gear detached as the aircraft travelled over some rough ground during the landing roll. Carburettor icing is suspected as the most probable cause of the power loss.

History of the flight

The pilot intended to perform a ferry flight as a favour for the new owner of the aircraft. He had performed a couple of short test flights the week before the accident under the supervision of the previous owner, who had warned him of the aircraft's susceptibility to carburettor icing. The forecast temperature and dewpoint were 15°C and 12°C, respectively.

For this trip, the pilot was accompanied by an engineer acting for the new owner. After warming the engine they attempted a takeoff, but aborted when the aircraft failed to accelerate sufficiently and had reached a pre-arranged marker. The two occupants decided that carburettor icing from the damp grass was the most probable cause and taxied back

with the carburettor heat applied. The carburettor heat was left on for a further 5 minutes before starting a second takeoff roll. This time the pilot confirmed that full rpm was achieved and the aircraft lifted off at the expected position. However, as they crossed the airfield perimeter at a height of 100 ft agl, the engine rpm dropped abruptly, prompting the pilot to select a field suitable for a forced landing in the valley below. Having made his choice, he selected carburettor heat, changed fuel tanks and checked that the fuel pump was selected on. The engine appeared to recover to full power, so the pilot started a gentle climb and turned back towards the airfield. The power reduced again and engine rpm fluctuated randomly between 2,700 (normal full power) and 2,200; this was just sufficient to maintain a shallow climb and the pilot was able to position the aircraft for a touchdown in the area of the field normally used for landing.

However, as he prepared to land, he was warned over the radio that a glider was below and slightly to his right. The pilot judged that a go-around would be too risky considering the unreliability of the engine, so he left power on and the flaps up in order to land long, clear of the normal glider area. When he reduced power to land, the engine power reduced dramatically to a sub-idle condition and stopped completely upon touchdown, which was otherwise smooth, in the middle of the airfield. After a ground roll of about 50 metres, the aircraft bounced heavily over a ridge and down into rougher ground, whereupon the nosewheel detached and then the nose landing gear leg collapsed.

The pilot reports that the engine generally, and the spark plugs and leads in particular, were examined, with no anomalies found. The fuel was sampled and found to be free of contaminants. Although it could not be proved, it was suspected that carburettor icing may have been responsible for the loss of power.