AAIB Bulletin: 2/2018	G-ODGC	EW/G2017/05/30
ACCIDENT		
Aircraft Type and Registration:	Eurofox 912(IS), G-ODGC	
No & Type of Engines:	1 Rotax 912 IS Sport piston engine	
Year of Manufacture:	2014 (Serial no: LAA 376-15274)	
Date & Time (UTC):	28 May 2017 at 0900 hrs	
Location:	Near Puddletown, Wareham, Dorset	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Propeller, landing gear, rear fuselage, fin and rudder	
Commander's Licence:	National Private Pilot's Licence	
Commander's Age:	78 years	
Commander's Flying Experience:	833 hours (of which 59 were on type) Last 90 days - 10 hours Last 28 days - 2 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The engine of the glider tug stopped abruptly at about 300 ft whilst launching a glider. The tug pilot released the glider's tow rope and turned back towards the airfield. Despite two attempts, he was unsuccessful in restarting the engine. The aircraft hit a tall shrub outside the airfield boundary which spun the aircraft and it landed backwards in long grass. The pilot was uninjured but the aircraft sustained significant damage.

The electronic injection engine had recently been installed in this aircraft to replace a carburetted one. The injected engine required a different engine restart procedure, and the pilot advised that he had forgotten to perform one step of the restart checklist in the limited time that he had had available.

History of the flight

The aircraft was operating as a glider tug. The engine stopped at about 300 ft after takeoff, having already initiated a right turn at about 150 ft. The tug pilot released the glider's tow rope and continued the turn back towards the airfield. He attempted to restart the engine twice but was unsuccessful. Short of the airfield boundary, the right wing hit a tall shrub and spun the aircraft before it landed, backwards, in long grass. The pilot was uninjured but the aircraft sustained significant damage. In the immediate aftermath, the pilot noted that the main fuel valve did not appear to have been quite vertical, but it is possible that it may have moved during the landing.

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Engine restart procedure

The electronic fuel injection engine had been recently installed in the aircraft, replacing the previous carburetted version. The different engine types have different engine restart procedures. For the injected engine, the pilot advised that the "backup battery" is turned OFF after start and, in order to restart an engine, the checklist requires this battery to be selected ON. The pilot stated that this procedure was different from all the other aircraft that he had flown and that, in the short time he had available, he had forgotten to carry out this particular checklist item.

The Light Aircraft Association, in their November 2017 edition of *'Light Aviation'* published an article about the increased complexity of this engine type and the importance of understanding it before flying. For this accident, it is not known whether a correctly-followed engine restart procedure would have been successful.

Engine and fuel

The engine was inspected at a repair facility where debris of unknown origin was found in, and removed from, the fuel pressure regulator. The engine was run and the repair facility reported no issues with its performance but a variation in fuel pressure led to a re-inspection of the fuel pressure regulator, where debris was again found; debris was also found in the fuel filters. Fuel tests indicated a higher than normal level of silicon but there is no evidence that this, or the presence of the debris, caused the engine to stop.

Turning back

The aircraft was already established in a right turn when the engine stopped and the pilot decided to continue the turn back towards the airfield. The AAIB has investigated a number of accidents where pilots have attempted to turn back following an engine failure after takeoff. Although it resulted in a landing outside the airfield boundary, the pilot, in this case, prevented the aircraft from stalling which would have been likely to have resulted in a more serious outcome.

BULLETIN CORRECTION

There was a typographical error in the Commander's Flying Experience on the first page of this report. The text should read:

'Last 90 days - 10 hours.'

The online version of this report was corrected on 8 February 2018.

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