

BULLETIN CORRECTION

Aircraft Type and Registration:	Druine D.31 Turbulent (modified), G-AREZ
Date & Time (UTC):	8 July 2021 at 1730 hrs
Location:	Easterton Airfield, Birnie, Elgin
Information Source:	Aircraft Accident Report Form submitted by the pilot and LAA Report

AAIB Bulletin No 2/2022, page 72 refers

Following publication of AAIB Bulletin 2/2022, the Light Aircraft Association (LAA) amended its report into this accident to reflect its updated view on the cause of the engine failure. Since the AAIB report was based on the LAA report, this correction reflects that change.

The following sections of the report have been amended:

Page 72: Synopsis (second paragraph)

Original text:

The loss of power was possibly caused by an interruption of electrical power to the ignition system.

Corrected text:

Although not positively determined, it appeared likely that a magnet detached from the propellor spinner back plate during takeoff, and this combined with incorrect wiring within the ignition system to stop the engine.

Page 75: Aircraft examination (second paragraph)

Original text:

The aircraft's ignition system was extensively examined and, while some loose connections were found, both ignition controllers passed bench tests. Hypotheses for the simultaneous failure of both electronic ignition controllers were considered, but no definitive cause for the engine failure was determined.

Corrected text:

The aircraft's ignition system was extensively examined and, while some loose connections were found, both Leburg ignition controllers passed bench tests. The Leburg controllers receive timing information from sensors which detect the passage of magnets fitted to the propellor spinner back plate. The spinner backplate was damaged and one of these magnets was missing. There was evidence it had not been effectively glued in position. The wires connecting the controller to the magnet sensors should be arranged so that the connector responding to north magnet pole in one wiring harness is connected to the sensor for a south magnet pole in the opposite controller

wiring harness. The controllers require an alternating sequence of poles passing the sensors, ie north–south-north-south, to operate correctly. If this sequence is not apparent the controller will not initiate the ignition spark.

Page 75: Aircraft examination (new third paragraph)

Corrected text:

In G-AREZ the wiring harness for both controllers were wired so the north magnet pole sensors were on identical connectors, so if a magnet was lost the engine would stop. The LAA Inspector made the following statement in his report: *'I believe that in-flight loss of one magnet during take-off, together with the unfortunate alignment of the aircraft's wiring between the controllers and their coils, is the most likely cause of the engine stop on Turbulent G-AREZ.'*

Page 76: Conclusion

Original text:

The engine suffered a total loss of power at low altitude, the cause of which was not positively determined. During a manoeuvre to avoid obstacles, the aircraft stalled and control was lost. The pilot suffered serious injuries during the touchdown and the aircraft was damaged beyond economic repair.

Corrected text:

The engine suffered a total loss of power at low altitude, the most likely cause of which was a loss of a magnet from a timing sensor, combined with incorrect wiring within the ignition system. During a manoeuvre to avoid obstacles, the aircraft stalled and control was lost. The pilot suffered serious injuries during the touchdown and the aircraft was damaged beyond economic repair.

The online version of this report was corrected when published on 17 March 2022.