SOUTH AFRICAN CIVIL AVIATION AUTHORITY

Section/division **Accident and Incident Investigations Division** Form Number: CA 12-57

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10048										
Classification	Accident		**Date**	8 October 2021		**Time**	1230Z				
Type of Operation	Private (Part 94)										
Location											
Place of Departure	George Airport (FAGG), Western Cape province			Place of Intended Landing			John Weston Airfield (FAZR), Northern Cape province				
Place of Accident	0.5nm from John Weston Airfield (FAZR), Northern Cape Province										
GPS Co-ordinates	Latitude	S 28° 44’ 46”		Longitude	E 24° 40’ 00”		Elevation	3950 ft			
Aircraft Information											
Registration	ZU-EFW										
Model/Make	Jabiru J430										
Damage to Aircraft	Substantial			Total Aircraft Hours			2378.1				
Pilot-in-command											
Licence Valid	Yes		Gender		Male		Age	48			
Licence Type	Private Pilot Licence (PPL) Aeroplane										
Total Hours on Type	82.7			Total Flying Hours			329.1				
People On-board	1 + 3	Injuries	0	Fatalities	0		Other (On Ground)	0			
What Happened											

On 8 October 2021, a pilot and three passengers on-board a Jabiru J430 aircraft with registration ZU-EFW took off on a cross-country private flight from George Airport (FAGG) in the Western Cape province with the intention to land at John Weston Airfield (FAZR) in the Northern Cape province. A fight plan was filed, and the flight was conducted under visual flight rules (VFR) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.

The pilot stated that the flight en route to FAZR was uneventful, however, during descent for Runway (RWY) 02 at approximately 100 feet (ft) above ground level (AGL), the engine began to run rough. The pilot decided to go-around as there was livestock (cattle) on the runway. The pilot applied full power, recording 3000 revolutions per minute (RPM) to climb, but the engine continued to run rough, however, not as severe as when the power was below 2100 RPM. The pilot continued on the circuit for his second attempt to land on RWY 02, but on base leg turn when the aircraft started to descend again,

the engine stopped completely. The pilot stated that there was enough glide distance to make it to the runway, although he still attempted to restart the engine but without success. On final approach, approximately 330 metres (m) from the threshold, the pilot encountered a downdraft which reduced the glide distance. The pilot then prepared for a forced landing on an open area just before the runway threshold. During the forced landing, the right main landing gear strut broke off and the right-side wing tip impacted the ground. The aircraft came to rest right-wing low. The right main landing gear strut was severed and the nose gear had collapsed during the accident sequence.

The aircraft sustained substantial damage to the undercarriage, right wing and right-wing elevator. The pilot and the passengers were not injured during the accident sequence.

Figure 1: Aerial view of the accident site. (Source: Google Earth)

Figure 2: The aircraft at the accident site. (Source: Pilot)

Post-accident inspection:

- The pilot took a photograph of the fuel gauge on the day of the accident to confirm that there was 39 litres of AVGAS on-board remaining post-accident.

Figure 3: Picture showing fuel gauge instrument after the accident. (Source: Pilot)

- Post-accident inspection of the engine revealed that both ignition coil leads had disconnected in-flight as a result of not being properly secured to cable ties.

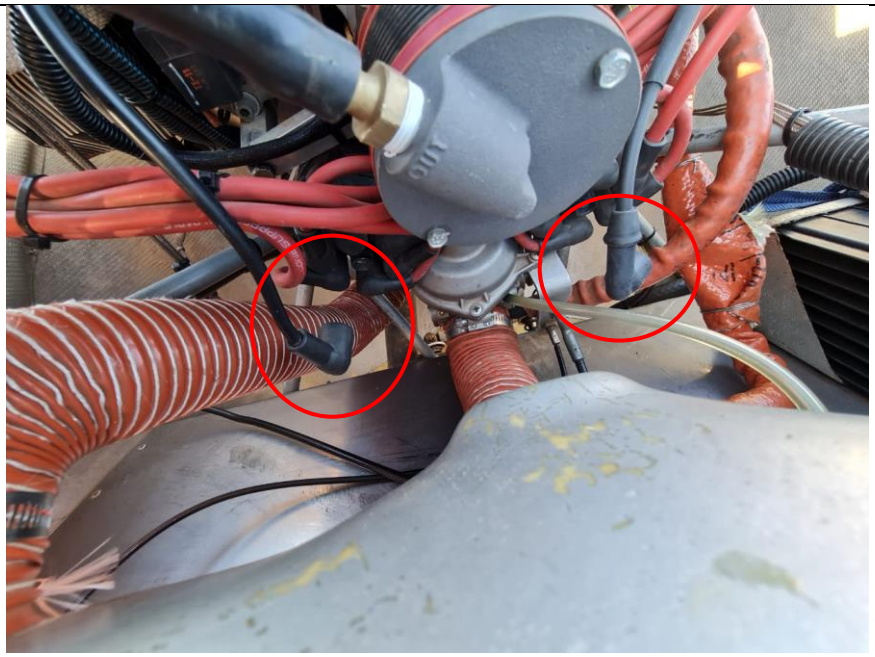

Figure 4: Disconnected ignition coil leads. (Source: Pilot)

- The last maintenance inspection of the aircraft was conducted earlier on the accident day, 8 October 2021. The aircraft was test run and it met all the parameters. It is probable that the Approved Person (AP) carrying out the maintenance reconnected both ignition coil leads but did not secure them in place with cable ties.

Probable cause:

It is likely that the aircraft lost forward speed which led to loss of height and a hard impact with the ground during a forced landing after an engine stoppage in-flight, caused by disconnected ignition coil leads.

Contributory factor:

It is likely that there was inadequate maintenance as the ignition leads were not properly secured to the spark plugs or that the ignition lead clips were not properly inspected to ensure that they were secured to the spark plugs.

Safety Action/s
None.
Safety Message and/or Safety Recommendation/s
None.
Purpose of the Investigation
In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and ***not to apportion blame or liability****.*

About this Report
Decisions regarding whether to investigate, and the scope of an investigation are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, no investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this brief report. The report has been compiled using information supplied in the initial notification, as well as follow-up information to bring awareness of potential safety issues to the industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar accident. *This report provides an opportunity to share safety message/s in the absence of an investigation.* *All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.*
Disclaimer
This report is produced without prejudice to the rights of the AIID, which are reserved.

This report is issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa