SOUTH AFRICAN CIVIL AVIATION AUTHORITY

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

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10071								
Classification	Accident	**Date**	9 November 2021	**Time**	1735Z				
Type of Operation	Private (Part 91)								
Location									
Place of Departure	Mossel Bay Aerodrome (FAMO), Western Cape Province	Place of Intended Landing	Mossel Bay Aerodrome (FAMO), Western Cape Province						
Place of Accident	Mossel Bay Aerodrome								
GPS Co-ordinates	Latitude	S34° 9" 42'	Longitude	E022° 3" 68'	Elevation	526 feet			
Aircraft Information									
Registration	ZS-IJL								
Model/Make	Bonanza K35								
Damage to Aircraft	Substantial	Total Aircraft Hours	3540.4						
Pilot-in-command									
Licence Type	Private Pilot Licence	Gender	Male	Age 60					
Licence Valid	Yes								
Total Hours on Type	1525	Total Flying Hours	1670.58						
People On-board	1+1	Injuries	0	Fatalities	0	Other (on ground)	0		

What Happened

On 9 November 2021 at 1725Z, a pilot and a passenger on-board a Bonanza K35 aircraft with registration ZS-IJL took off on a private flight from Mossel Bay Aerodrome (FAMO) in the Western Cape province with the intention to land at the same aerodrome. The flight was conducted under visual flight rules (VFR) by day and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended. According to the pilot, the aircraft had 3.5 hours of fuel endurance. The weight and balance were within the aircraft's limitations. The pilot stated that at approximately 1735Z during approach for landing at 70 knots and whilst on touchdown on Runway 10, the aircraft bounced, and he was unable to recover timeously, resulting in the aircraft veering off to the right-side of the runway. The nose wheel collapsed, and the propeller struck the ground. The aircraft came to a full stop approximately 1 metre (m) from the runway edge. Both occupants sustained no injuries. The aircraft sustained damages to the nose wheel and the propeller. The weather condition was fine with the wind calm and the temperature at 18°C at the time of the accident.

SRP date: 8 February 2022 Publication date: 9 February 2022

Figure 1: The file picture of the aircraft. (Source: Pilot)

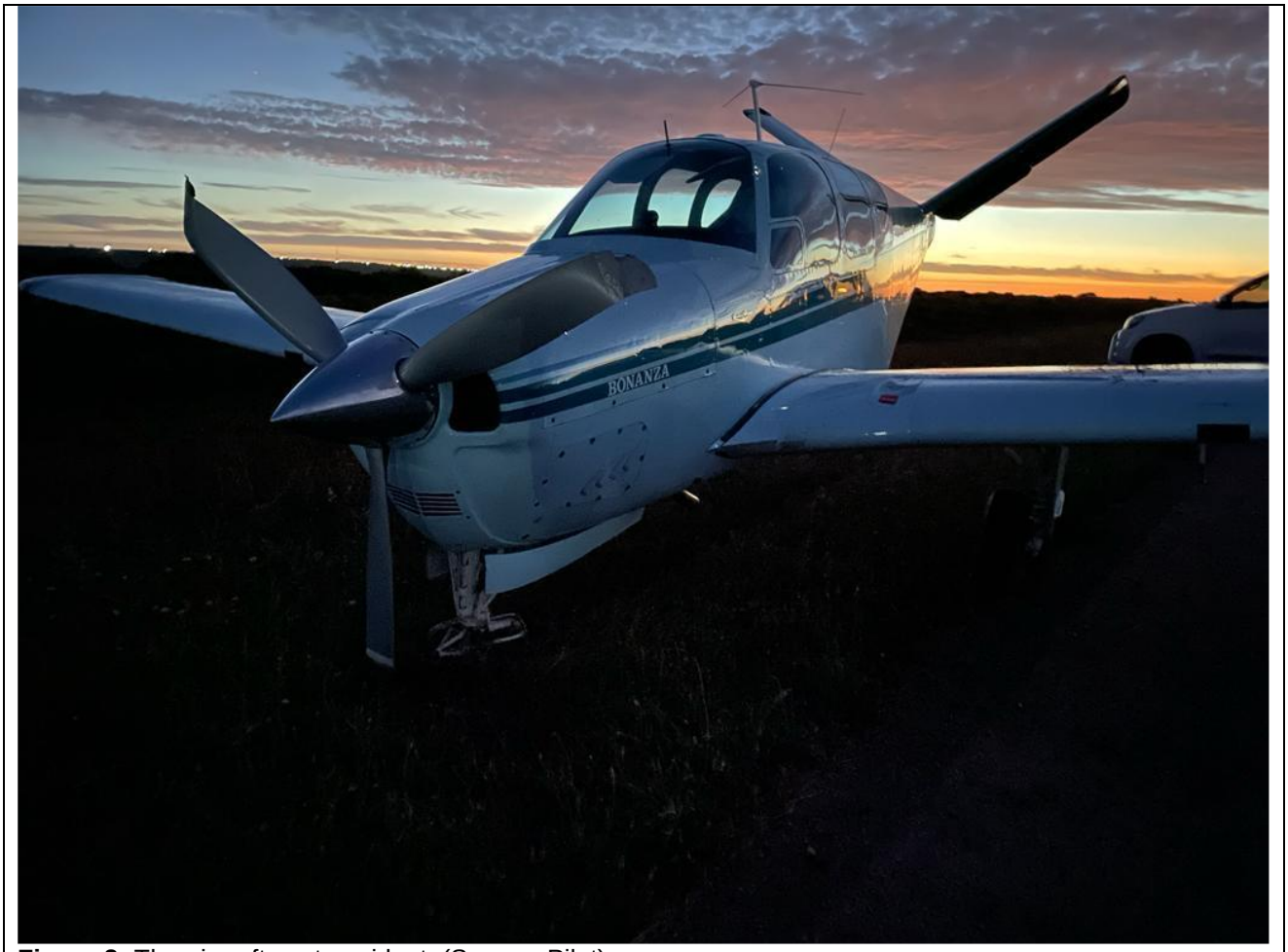

Figure 2: The aircraft post-accident. (Source: Pilot)

An extract from the Pilot's Operating Handbook POH):
Landing procedure for Bonanza K35

Before Landing
Seat Belts and shoulder Harnesses – Secure
All reclining seats must be in the upright position during the landing
Fuel selector valve – Select main tank more nearly full
Cowl flaps – As required
Mixture – Full rich (or as required by field elevation)
Landing and taxi lights - As required
Flaps – Down (observe maximum extension speed)
Airspeed –Establish landing approach speed
Propeller – High RPM

After landing
Landing and taxi lights – As required
Flaps up
Trim Tab – Set to 0°
Cowl flaps – Open

An extract from https://www.boldmethod.com/learn-to-fly/maneuvers/how-to-safely-and-smoothly-recover-from-a-bounced-landing-smoothly-safely/

What causes a Bounce?

Bad landings usually start in the pattern. If you cannot stabilise your approach to the runway early on, it is going to be much harder to grease a landing.

There are two primary causes of bounced landings: landing hard and landing too fast

If you have a high sink rate, your natural tendency is to pull back on the yoke as you quickly approach the ground. The result? Your angle-of-attack rapidly increases, creating enough lift to propel your plane back into the air. The faster you are, the more this is a problem, because you can create more lift.

In addition, if you touch down hard, your main gear hit the pavement and rebound you back into the air.

The harder you land, the higher you will bounce.

Recovery Options

If you bounce, the first thing you should do is hold back pressure to keep the aircraft in a nose-high landing attitude. You might need to release some back pressure on the yoke or stick if your nose is too high, but do not push the nose down. If you force the nose down, you could land even harder than the first time, or worse, land on your nose gear.

As you start descending back to the runway, you might also need to add some power to reduce your descent rate. But do not over-correct with power. Adding small amounts of power is all it takes to safely reduce your descent rate for a soft touchdown.

Probable cause:

The aircraft bounced during the landing phase and the pilot was unable to recover timeously; as a result, the aircraft veered off the runway.

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