AIRCRAFT INCIDENT SHORT REPORT

CA18/3/2/1193: ZU-IFA,

Date and time	:	13 February 2018
Occurrence category	:	Incident
Aircraft registration	:	ZU-IFA
Aircraft manufacturer and model	:	Airplane Factory, Sling 2
Last Point of departure	:	Morningstar airfield
Next point of intended landing	:	Morningstar airfield
Location of incident site with reference to easily defined geographical points (GPS readings if possible)	:	On a tar surfaced runway with GPS: S33°45'32.30", E18°32'53.54"
Meteorological Information	:	Wind direction: SSE, Wind speed: 5-7kt, Visibility: CAVOK
Type of operation	:	Private recreational flight
Persons on board	:	1
Injuries	:	0
Damage to aircraft	:	Substantial

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.

Purpose of the Investigation:

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (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 establish blame or liability.***

Disclaimer:

This report is produced without prejudice to the rights of the CAA, which are reserved

1. SYNOPSIS

1.1 The pilot who was the sole occupant on board the aircraft took off for a private recreational flight. During landing whilst at close proximity to the runway surface in a flaring stage, he stated that the aircraft suddenly lost height and dropped onto the runway. The aircraft subsequently bounced, whereupon the pilot lowered the nose in an attempt to get the aircraft back onto the runway as the forward speed was low.

1.2 The investigation revealed that the aircraft experienced a sudden loss of height, in an attempt to recover the pilot's handling technique of the aircraft landing contributed to the nose gear damage.

2. FACTUAL INFORMATION

2.1 The pilot, who was a PPL holder, being the sole occupant on board the aircraft, took off for a private recreational flight at approximately 0610Z. According to the available information, the pilot has a total of approximately 349.3 flying hours experience with a total of 175.6 hours on type. He returned 40 minutes later for landing. During landing, whilst in close proximity to the runway surface in a flaring stage, he stated that the aircraft suddenly lost height and dropped onto the runway. The aircraft subsequently bounced, whereupon the pilot lowered the nose in an attempt to get the aircraft back onto the runway as the forward speed was low. The nose gear contacted hard with the runway and then bent backward, causing the nose to drop, and allowing the propeller to strike the runway surface. The aircraft sustained damage to the nose gear and propeller blades. The pilot was not injured.

Figure 1: Shows damage on the propeller

Figure2: Nose landing gear bent backward

Figure 3: Nose gear mounting assembly damage

3. PROBABLE CAUSE/CONTRIBUTING FACTOR

3.1 The aircraft experienced a sudden loss of height, in an attempt to recover the pilot's handling technique of the aircraft landing contributed to the nose gear damage.

4. REFERENCES USED IN THE REPORT

4.1 The following information was extracted from the Air Pilot's Manual Volume 1.

4.1.1 Common faults during the landing

a. Every pilot learns how to land through experience. It is inevitable that many landings will be far from perfect, but progress will be made when you can recognise faults and correct them. Three very common faults are the balloon (when the aeroplane moves away from the ground before touchdown), the bounced landing (when it moves away from the ground after touchdown, perhaps after several touchdowns) and rounding out too high.

b. An inexperienced pilot should consider an immediate go-around following a bounce. With experience, however, a successful recovery from a bounce can be made (provided that the runway length is adequate) by relaxing the back pressure and adding power if necessary to reposition the aeroplane suitably to recommence the landing. Avoid pushing the nose down as a second bounced landing may result. Avoid a second touchdown on the nose wheel – a series of Kangaroo hops down the runway is not a desirable way to land an aeroplane! Prior to touchdown, make sure that the aeroplane is in the correct nose-high attitude (even if it is the second touchdown). Note: the more experienced you become, the less likely you are to find yourself bouncing, ballooning or rounding out too high. It is part of the average student pilot's lot to become somewhat of an expert at recovering from misjudged landings, but this phase will not last too long.

c. Things that go wrong

There is not a pilot who has not bounced on landing. This is caused by too high rate of descent or not holding off sufficiently. A small bounce can be recovered from, but if the pilot pushes forward the control stick, the outcome will be damage or destruction of the nose wheel. If in doubt, go about. The wheel barrow landing method: If you want to remain on good terms with your flying club don't ever wheelbarrow. If you bounce, NEVER put the nose down to try to hold it onto the ground. The aircraft's nose cannot carry the weight on first touch-down. It is likely to be broken off.

5. SAFETY RECOMMENDATION

5.1 None

6. ORGANISATION

6.1 The aircraft operator (owner) has not advised the AIID that they are taking any safety actions as a result of this occurrence:

7. TYPE OF SAFETY ACTION

7.1 None