

Australian Government Australian Transport Safety Bureau

Hard landing involving Maule MT-7, VH-DRS

near Noosa, Queensland, 16 May 2016

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Addendum

Page	Change	Date

Hard landing involving Maule MT-7, VH-DRS

What happened

On 16 May 2016, the pilot of a Maule MT-7-235 aircraft, registered VH-DRS, conducted a private flight from Greenfields airstrip (near Noosa), Queensland, with two passengers on board.

The aircraft departed Greenfields airstrip at about 1220 Eastern Standard Time (EST) and flew to Gympie ALA, where the aircraft was refuelled. The aircraft then departed from Gympie and flew north towards Maryborough before returning to Greenfields along a coastal route.

The aircraft joined the circuit at Greenfields on the downwind leg for runway 09. The pilot turned on to the final approach at about 800 ft above ground level, with an airspeed of about 70 kt. The pilot noticed they were getting low on the approach and at about 500 ft, they increased the power to regain their approach path. The pilot subsequently assessed that the aircraft was too high and lowered the nose to re-intercept the approach path.

The pilot flared the aircraft for landing, the aircraft landed heavily and bounced into the air. As the aircraft landed again, the nose wheel touched down first (before the main landing gear) with sufficient force that the nose wheel strut fractured. The nose landing gear and propeller then dug into the ground and the aircraft rotated over its nose and slid a short distance inverted before coming to rest.

The pilot and one passenger were uninjured, the other passenger sustained minor injuries, and the aircraft sustained substantial damage (Figure 1).



Figure 1: Accident site showing damage to VH-DRS

Source: Aircraft owner

Pilot comments

The pilot provided the following comments:

- they taxied the full length of the strip before departure from Greenfields and noted the grass surface was in good condition
- they had flown about five flights, totalling about 20 hours in the last 12 months
- the pilot's previous flight was about 4 to 5 weeks prior to the accident flight

- the pilot had not operated the Maule aircraft with more than one passenger on board prior to the accident flight
- the pilot thought that the higher all-up-weight of the aircraft with an extra passenger on board contributed to a higher sink rate on final than they expected
- the pilot commented that they should have performed a go-around, rather than continuing with the landing manoeuvre.

ATSB comment

Currency versus proficiency

At the time of the accident the pilot was current for passenger-carrying operations, having conducted at least three take-offs and three landings in the last 90 days. However, it was more than one month since their last flight, which was also a local area scenic flight. The take-off and landing phases of flight are critical phases of flight, since the aircraft is operating closer to the stall speed and with less height to recover from a control problem, relative to cruise flight. The requirement for three take-offs and three landings in the last 90 days is a regulatory requirement of currency, but this does not guarantee proficiency. When flying infrequently, proficiency in take-offs and landings can be improved by dedicating a portion of the flight to practicing circuits. The United States Federal Aviation Administration safety briefing September/October 2010 described this as 'imbuing the quantity of all your flying, however limited, with quality.'

Safety message

Go-around

The pilot commented that conducting a go-around could have prevented an unstable approach and initial bounce from escalating to an accident. General aviation pilots should set their own criteria for when to conduct a go-around manoeuvre, so that they can recognise and respond to the conditions in a timely manner. This will assist pilots to develop a mindset, which the Flight Safety Foundation (FSF) refers to as 'go-around-prepared'. <u>FSF Approach-and-landing Accident Reduction (ALAR) briefing note 6.1</u> emphasises the need to be 'go-around-prepared' or 'go-around-minded' because the execution of a go-around is an infrequent manoeuvre. <u>FSF ALAR briefing note 7.1</u> provides further information on unstable approaches and how to develop personal lines of defence.

General details

Occurrence details

Date and time:	16 May 2016 – 1545 EST		
Occurrence category:	Accident		
Primary occurrence type:	Hard Landing		
Location:	Greenfields airstrip, 18 km NW of Noosa ALA, Queensland		
	Latitude: 26° 17.60' S	Longitude: 152° 57.80' E	

Aircraft details

Manufacturer and model:	Maule Aircraft Corporation		
Registration:	VH-DRS		
Serial number:	18091C		
Type of operation:	Private – Pleasure/travel		
Persons on board:	Crew – 1	Passengers – 2	
Injuries:	Crew – 0	Passengers – 1 (Minor)	
Aircraft damage:	Substantial		

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to operations involving the travelling public.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, 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, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.