



Aviation Investigation Final Report

Location:	Flushing, Michigan	Accident Number:	CHI06LA137
Date & Time:	May 25, 2006, 21:15 Local	Registration:	N3010Q
Aircraft:	Maule MT-7-235	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The amphibian airplane sustained substantial damage when it nosed over during the landing roll on a soft, grass runway with the landing gear in the down position. The pilot reported he decided to land on the grass runway instead of the available asphalt runway because of favorable winds. The landing was normal until about 150 feet into the landing roll. The pilot reported that the small castoring wheels on the amphibian floats sank into the soft ground, and "caused our plane to pole-vault onto its tail." Inspection of the runway revealed that there was about 3/4 inch of standing water on the runway. The left and right landing gear drag braces and the left and right nose wheel castor housings were sent to the Materials Laboratory at the National Transportation Safety Board for inspection. The metallurgical inspection revealed that the fracture surfaces of the weld between the forward end of the struts, and the castor bodies exhibited deformation consistent with overstress with the nose wheel moving aft relative to the strut.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's selection of unsuitable terrain for landing, which resulted in the collapse of the amphibian float's nose wheels, and a nose over during the landing roll. Factors associated with the accident were the soft grass runway, and the collapse of the nose wheel fittings.

Findings

Occurrence #1: NOSE OVER

Phase of Operation: LANDING - ROLL

Findings

1. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - SELECTED - PILOT IN COMMAND
2. (F) TERRAIN CONDITION - SOFT
3. TERRAIN CONDITION - GRASS
4. (F) LANDING GEAR,NOSE GEAR ATTACH POINT - FAILURE,TOTAL
5. LANDING GEAR,NOSE GEAR ATTACH POINT - OVERLOAD

Factual Information

On May 25, 2006, at 2115 eastern daylight time, an amphibian equipped Maule MT-7-235, N3010Q, sustained substantial damage during landing roll on runway 9 (1,330 feet by 150 feet, grass) at the Dalton Airport (3DA), Flushing, Michigan. The pilot and one passenger were not injured. The 14 Code of Federal Regulations Part 91 personal flight departed Clare Municipal Airport (48D), Clare, Michigan, at 1955. Visual meteorological conditions prevailed at the time of the accident. No flight plan was filed.

The pilot reported that he checked the weather at Flint (FNT), Michigan, located about 6 nautical miles to the southeast. The pilot reported that the Automatic Terminal Information System (ATIS) indicated that the winds were from the east at 7 - 9 knots. The pilot elected to land on runway 9. Runway 18/36 at 3DA is an asphalt runway that is 2,510 feet by 50 feet.

The pilot reported that the landing was normal until about 150 feet into the landing rollout. The pilot reported that the small castoring wheels on the amphibian floats sank into the soft ground and "caused our plane to pole-vault onto its tail." The pilot reported that the inspection of the runway revealed that there was about 3/4 inch of standing water on the runway.

The amphibian airplane was equipped with model BF2750A Baumann floats. The left and right landing gear drag braces and the left and right nose wheel castor housings were sent to the Materials Laboratory at the National Transportation Safety Board for inspection. The metallurgical inspection revealed that the fracture surfaces of the weld between the forward end of the struts and the castor bodies exhibited deformation consistent with overstress with the nose wheel moving aft relative to the strut.

Pilot Information

Certificate:	Private	Age:	61, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	August 1, 2004
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 1, 2006
Flight Time:	1606 hours (Total, all aircraft), 162 hours (Total, this make and model), 1606 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Maule	Registration:	N3010Q
Model/Series:	MT-7-235	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	18014C
Landing Gear Type:	Retractable - ; Amphibian	Seats:	4
Date/Type of Last Inspection:	March 1, 2006 Annual	Certified Max Gross Wt.:	2750 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	533 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-540
Registered Owner:	Lois L. Montague	Rated Power:	235 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	FNT,782 ft msl	Distance from Accident Site:	6 Nautical Miles
Observation Time:	21:30 Local	Direction from Accident Site:	160°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 110 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.54 inches Hg	Temperature/Dew Point:	16°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Clare, MI (48D)	Type of Flight Plan Filed:	None
Destination:	Flushing, MI (3DA)	Type of Clearance:	None
Departure Time:	19:55 Local	Type of Airspace:	

Airport Information

Airport:	Dalton 3DA	Runway Surface Type:	Grass/turf
Airport Elevation:	733 ft msl	Runway Surface Condition:	Soft;Wet
Runway Used:	9	IFR Approach:	None
Runway Length/Width:	1330 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	43.054164,-83.807777

Administrative Information

Investigator In Charge (IIC):	Silliman, James
Additional Participating Persons:	Wayne Phillips; FAA-Detroit FSDO; Belleville, MI
Original Publish Date:	July 25, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=63811

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