National Transportation Safety Board
Aviation Accident Final Report

Location:	Littleton, NC	**Accident Number:**	ERA16LA181
Date & Time:	04/24/2016, 1500 EDT	**Registration:**	N367FS
Aircraft:	MAULE M 7-235B	**Aircraft Damage:**	Substantial
Defining Event:	Hard landing	**Injuries:**	3 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot had owned the amphibious airplane for 3 weeks, and had performed about 30 water landings in the airplane. The pilot stated that, during takeoff on the accident flight, the airplane was veering "severely" to the left; however, he continued the takeoff. The flight was unremarkable, and the pilot returned to the lake to land the airplane. Upon touchdown, the airplane veered to the left, nosed over, and came to rest inverted. The passenger stated that the airplane bounced during the landing, and a witness stated that the airplane landed "hard" on the water, bounced about 10 ft into the air, then impacted the water again. Examination of the left float skin revealed signatures consistent with overstress failure. It is likely that the pilot's hard, bounced landing resulted in the failure of the left float skin.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's improper landing flare, which resulted in a hard landing and subsequent damage to the left float.

Findings

Aircraft	Landing flare - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause)

Factual Information

On April 24, 2016, about 1500 eastern daylight time, an amphibious Maule M7 235-B, N367FS, was substantially damaged while attempting to land on a lake near Littleton, North Carolina. The private pilot and two passengers were not injured. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight, which departed the lake around 1445. The airplane was owned and operated by the pilot/owner and the flight was conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

According to the pilot, he owned the airplane for three weeks, and had performed about 30 water landings. He performed a preflight inspection, noted the tiedown ropes were tight, but did not find any other anomalies with the airplane. During the takeoff, the pilot noticed that the airplane was veering "severely" to the left; however, he continued the takeoff. The flight was unremarkable, and the pilot returned to the lake to land the airplane. The pilot performed a "normal" landing; however, when the airplane touched down, it veered to the left, nosed over, and came to rest in the water. The pilot and passengers egressed without incident.

According to a passenger, the airplane departed the lake and it was a "smooth" flight. When they returned to the lake to land, the "rear of the floats touched [the water] followed by a small hop."

According to a witness who was on the lake at the time of the accident, the airplane approached the lake "hot" and "hit the water hard." He watched the airplane bounce about 10 feet into the air and then impact the water again. Then, the wing tip struck the water and the airplane nosed over.

According to Federal Aviation Administration (FAA) records, the airplane was manufactured in 2005, was registered to the pilot in April 2016. It was equipped with a Lycoming O-540 series engine. According to airplane maintenance logbooks, the most recent annual inspection was completed on March 2, 2016, and at that time, the airplane had accumulated 1,090.8 hours of total time.

According to the pilot, he held a private pilot certificate for airplane single-engine land and single-engine sea. His most recent third-class medical certificate was issued on April 20, 2016. He reported 1,900 hours of flight experience, of which, 25 hours were in the same make and model as the accident airplane.

A postaccident examination of the airframe, by an FAA inspector, revealed that the bottom of the left float skin was partially separated along a rivet line. In addition, the left float was bent in a positive direction, about 20 degrees. The wings, rudder, and fuselage were substantially damaged in the accident sequence. Flight control continuity was confirmed from the cockpit to all control surfaces and the four landing gear tires were in the retracted position.

Sections of the left float skin were sent to the NTSB Materials Laboratory for further examination. The fracture surfaces were examined visually and exhibited a rough texture with

a dull luster. No evidence was noted of corrosion on the fracture surfaces. Overall, the fracture surfaces were consistent with failure from overstress on a thin-walled structure.

History of Flight

Landing-flare/touchdown	Hard landing (Defining event)
Landing-landing roll	Loss of control on ground Nose over/nose down

Pilot Information

Certificate:	Private	**Age:**	58, Male
Airplane Rating(s):	Single-engine Land; Single-engine Sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Without Waivers/Limitations	**Last FAA Medical Exam:**	04/20/2016
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	10/16/2014
Flight Time:	1900 hours (Total, all aircraft), 25 hours (Total, this make and model), 1850 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MAULE	**Registration:**	N367FS
Model/Series:	M 7-235B 235B	**Aircraft Category:**	Airplane
Year of Manufacture:	2005	**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	23089C
Landing Gear Type:	Amphibian;	**Seats:**	4
Date/Type of Last Inspection:	03/02/2016, Annual	**Certified Max Gross Wt.:**	2750 lbs
Time Since Last Inspection:	55 Hours	**Engines:**	1 Reciprocating
Airframe Total Time:	1090.8 Hours as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-540
Registered Owner:	On file	**Rated Power:**	235 hp
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	AVC, 442 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	1456 EDT	**Direction from Accident Site:**	333°
Lowest Cloud Condition:	Clear	**Visibility**	4 Miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	Calm /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.14 inches Hg	**Temperature/Dew Point:**	20°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Littleton, NC (NONE)	**Type of Flight Plan Filed:**	None
Destination:	Littleton, NC (NONE)	**Type of Clearance:**	None
Departure Time:	1445 EDT	**Type of Airspace:**	

Airport Information

Airport:	Lake (NONE)	**Runway Surface Type:**	Water
Airport Elevation:	190 ft	**Runway Surface Condition:**	Water--calm
Runway Used:	N/A	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Full Stop

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	36.479444, -77.923611 (est)

Administrative Information

Investigator In Charge (IIC):	Heidi Moats	**Report Date:**	05/01/2017
Additional Participating Persons:	Barry Blumquist; FAA/FSDO; Greensboro, NC		
Publish Date:	05/01/2017		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=93156		