



National Transportation Safety Board Aviation Accident Final Report

Location:	Mobile, AL	Accident Number:	ATL01LA101
Date & Time:	08/02/2001, 1130 CDT	Registration:	N7006A
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

On the second approach to land, the pilot elected to perform a touch-and-go landing with flaps retracted. As the pilot flared for the touchdown the airplane began to porpoise. When the airplane touched down, the pilot reported hearing a thud. Examination of the airplane failed to disclose a mechanical malfunction or a component failure. The airplane sustained structural damage to the nose gear assembly and engine firewall. The pilot reported that the landing winds were 180 degrees at 7 to 15 knots. runway 14.

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 that resulted in a hard landing. A factor was the pilot induced porpoise.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING

Findings

1. LANDING GEAR, NOSE GEAR - OVERLOAD
2. (F) PORPOISE/PILOT-INDUCED OSCILLATION - ENCOUNTERED - PILOT IN COMMAND
3. FUSELAGE, FIREWALL - OVERLOAD
4. (C) FLARE - IMPROPER - PILOT IN COMMAND

Factual Information

On August 2, 2001, about 1130 central daylight time, a Cessna 172, N7006A, landed hard at Mobile Regional Airport in Mobile, Alabama. The personal flight was conducted under the provisions of Title 14 CFR Part 91. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed. The airplane sustained substantial damage to the nose wheel assembly and firewall, and the private pilot and private-rated safety pilot reported no injuries. The flight departed Mobile Downtown Airport in Mobile, Alabama, at 1100.

The pilot was flying the airplane from the right seat and was practicing ILS approaches on runway 14; the safety pilot occupied the left seat. The pilot had executed one practice approach and was three miles from the airport on the second approach when the tower requested that the airplane maintain its speed. The pilot reported this speed to be 120 mph. The pilot requested and was granted a touch-and-go, and the pilot elected to perform the maneuver without flaps. The pilot stated, "As I was slowing the aircraft for landing and descending to the runway, I began porpoising, possibly from a gust. From that point forward, I am unclear as to what happened, except that my plane hit with a thud."

The post-accident examination of the airplane disclosed that the nose gear assembly and the engine firewall had sustained structural damage. The pilot did not report a mechanical problem with the airplane. The examination of the airplane also failed to disclose a mechanical malfunction or component failure. The pilot reported that the prevailing winds were 180 degrees at 7-14 knots. Runway 14 was the landing runway.

Review of the Mobile Regional Airport automated surface observation system 1056 central daylight time and 1156 central daylight time observations showed no wind gusts at the time of the accident.

Pilot Information

Certificate:	Private	Age:	64, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	01/11/2001
Occupational Pilot:		Last Flight Review or Equivalent:	11/01/1999
Flight Time:	740 hours (Total, all aircraft), 230 hours (Total, this make and model), 584 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N7006A
Model/Series:	172	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	29106
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	01/01/2001, Annual	Certified Max Gross Wt.:	2200 lbs
Time Since Last Inspection:	50 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3900 Hours at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-300A
Registered Owner:	On file	Rated Power:	145 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:	KMOB, 215 ft msl	Distance from Accident Site:	
Observation Time:	1056 CDT	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 3900 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	30°C / 21°C
Precipitation and Obscuration:			
Departure Point:	Mobile, AL (KBFM)	Type of Flight Plan Filed:	None
Destination:	Mobile, AL (KMOB)	Type of Clearance:	Unknown
Departure Time:	1100 CDT	Type of Airspace:	Class C

Airport Information

Airport:	Mobile Downtown Airport (KMOB)	Runway Surface Type:	Asphalt
Airport Elevation:	219 ft	Runway Surface Condition:	Dry
Runway Used:	14	IFR Approach:	ILS
Runway Length/Width:	8521 ft / 150 ft	VFR Approach/Landing:	Touch and Go

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:	

Administrative Information

Investigator In Charge (IIC):	Phillip Powell	Report Date:	02/20/2002
Additional Participating Persons:	Charlie Varano; FAA Birmingham FSDO-09; Vestavia Hills, AL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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