



Aviation Investigation Final Report

Location:	Englewood, Colorado	Accident Number:	CEN12LA485
Date & Time:	July 19, 2012, 11:09 Local	Registration:	N2609W
Aircraft:	Mooney M20E	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the airplane started to veer to the left during the landing roll. His attempts to use right rudder/steering input and asymmetric braking to maintain control were unsuccessful. The airplane subsequently departed the runway and encountered wet, muddy ground and then nosed over in a ditch. A postaccident examination of the nosewheel steering and the main landing gear brakes did not reveal any anomalies consistent with a loss of directional control. Airport operations personnel noted that the wind was light and the runway pavement was dry at the time of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of directional control during landing.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Directional control - Not attained/maintained
Environmental issues	Wet/muddy terrain - Contributed to outcome
Environmental issues	Sloped/uneven terrain - Contributed to outcome

Factual Information

History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Collision with terr/obj (non-CFIT)
Landing-landing roll	Landing gear collapse

On July 19, 2012, about 1109 mountain daylight time, a Mooney M20E, N2609W, was substantially damaged during a runway excursion while landing on runway 28 at the Centennial Airport (APA), Englewood, Colorado. The pilot and sole passenger were not injured. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, which was not operated on a flight plan. The flight originated from Pioneer Village Field Airport, Minden, Nebraska, about 0815.

The pilot reported that the airplane started to veer to the left while landing. His attempts to use right rudder/steering input and asymmetric braking to maintain control were unsuccessful. The airplane subsequently departed the runway pavement and encountered a ditch before coming to rest. He noted that the ground adjacent to the runway was muddy, which caused the airplane to yaw and increased the departure angle from the runway. In his written statement, the pilot noted there might have been a brake malfunction that precipitated the event.

An airport operations representative stated that the airplane departed the south side of runway 28 about 1,000 feet from the arrival end. It came to rest about 100 yards off the runway. The nose landing gear collapsed during the accident sequence. He noted that the wind was light and the pavement was dry at the time of the accident.

A postaccident examination revealed that the right wing spar was deformed in the area of the landing gear side brace attachment bracket, which would require a repair. Examination of the nosewheel steering and main landing gear brakes did not reveal any anomalies consistent with a loss of directional control.

At 1053, the recorded wind at APA was variable at 3 knots. At 1153, the recorded wind was from 140 degrees at 11 knots, gusting to 16 knots.

Pilot Information

Certificate:	Commercial	Age:	79, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	April 13, 2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 25, 2012
Flight Time:	5507 hours (Total, all aircraft), 970 hours (Total, this make and model), 3613 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	Registration:	N2609W
Model/Series:	M20E	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	956
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	May 30, 2012 Annual	Certified Max Gross Wt.:	2575 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3905 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	IO-360-A1A
Registered Owner:	On file	Rated Power:	180 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	APA,5885 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	10:53 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Few / 8000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.27 inches Hg	Temperature/Dew Point:	31°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Minden, NE (0V3)	Type of Flight Plan Filed:	None
Destination:	Denver, CO (APA)	Type of Clearance:	VFR
Departure Time:	08:15 Local	Type of Airspace:	

Airport Information

Airport:	Centennial APA	Runway Surface Type:	Asphalt
Airport Elevation:	5885 ft msl	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	None
Runway Length/Width:	4800 ft / 75 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:	39.570278,-104.849441(est)

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Tom Wiesner; FAA – Denver Flight Standards; Denver, CO
Original Publish Date:	February 14, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=84472

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