



Aviation Investigation Final Report

Location:	Boulder, Colorado	Accident Number:	DEN05LA140
Date & Time:	September 14, 2005, 15:45 Local	Registration:	N4807
Aircraft:	Cessna A185F	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

On the final approach leg, the airplane encountered "light to moderate" turbulence and the airspeed "dropped." The pilot stated that the airplane touched down on the right main landing gear and the airplane proceeded to bounce. Both main gears touched down on the wet runway and the airplane drifted from left to right. The airplane became airborne and "turned approximately 10 to 15 degrees to the right and almost instantly set back down on the runway." The pilot said he applied full right aileron and full left rudder and the airplane turned sharply to the right causing the left wing to scrape on the tarmac. The airplane exited the right side of the runway and came to rest oriented at a 90 degree angle to the runway approximately 30 feet from the edge of the runway. According to a pilot who witnessed the accident, he said the airplane landed with a "tailwind."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper flare which resulted in a hard landing and his subsequent failure to recover from the bounced landing. Contributing factors were the pilot's improper in-flight decision to land in deteriorating weather conditions, turbulence associated with thunderstorms, tailwind, and the wet runway.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (F) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (F) WEATHER CONDITION - TURBULENCE

Occurrence #2: HARD LANDING

Phase of Operation: LANDING

Findings

3. (C) FLARE - IMPROPER - PILOT IN COMMAND

Occurrence #3: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING

Findings

4. (C) RECOVERY FROM BOUNCED LANDING - NOT PERFORMED - PILOT IN COMMAND
5. (F) AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - WET
6. (F) WEATHER CONDITION - TAILWIND

Occurrence #4: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING

Findings

7. TERRAIN CONDITION - RUNWAY

Factual Information

On September 14, 2005, approximately 1545 mountain daylight time, a Cessna A185F, N4807, registered to and piloted by a private pilot, was substantially damaged when it ground looped during landing at Boulder Municipal Airport (1V5), Boulder, Colorado. Visual meteorological conditions prevailed at the time of the accident. The personal cross-country flight was being conducted under Title 14 CFR Part 91. An instrument flight rules (IFR) flight plan had been filed. The pilot and passenger were not injured. The flight departed Springfield, Missouri (SGF), approximately 1110.

According to the accident report submitted by the pilot, he was "routed" to the north as he approached Denver due to thunderstorm and traffic activity. Monitoring 1V5's automated weather observation station (AWOS), he learned there was lightning to the west. Approximately 12 miles out, the pilot was cleared to 1V5. "Denver asked if I wished to close my flight plan which I declined as I was concerned about the crosswind at 1V5, thinking I might have to divert to the Jefferson County Municipal Airport (BJC)." While monitoring AWOS, the wind shifted and lightning was reported to the north, south, and west. The pilot observed wind and rain as he approached 1V5 from the east. The pilot said he "joined on [a] left downwind leg for runway 08, checked the windsock and noted the wind to be a crosswind as reported on AWOS." While on the downwind leg, the airplane entered light rain. The pilot said the visibility was still "good", but he noticed heavier rain showers over 1V5. On final approach leg, the airplane encountered "light to moderate" turbulence and airspeed decayed. The airplane touched down on its right main landing gear and started bouncing. When both main gears touched down on the wet runway, the airplane drifted from left to right. The airplane became airborne and "turned approximately 10 to 15 degrees to the right and almost instantly put back on the runway." The pilot said he applied full right aileron and full left rudder and the airplane turned sharply to the right and the left wing scraped the tarmac. The airplane departed the right side of the runway and came to rest 30 feet off the edge and at a 90 degree angle to the runway. According to a pilot who witnessed the accident, the airplane landed with a "tailwind."

According to the pilot, the left wingtip was bent upwards approximately 5 degrees, the left outboard aileron tip sustained damage, the left main landing gear was bent, and the tip of the left elevator was bent up approximately 3 degrees.

Pilot Information

Certificate:	Private	Age:	57, 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 2 With waivers/limitations	Last FAA Medical Exam:	August 1, 2005
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	April 1, 2005
Flight Time:	1100 hours (Total, all aircraft), 218 hours (Total, this make and model), 906 hours (Pilot In Command, all aircraft), 101 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N4807
Model/Series:	A185F	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	18503532
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	October 1, 2004 Annual	Certified Max Gross Wt.:	3350 lbs
Time Since Last Inspection:	176.6 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	6053.9 Hrs	Engine Manufacturer:	Teledyne Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520-D
Registered Owner:	G-4 Air LLC.	Rated Power:	280 Horsepower
Operator:	Michael C. Gerhardt	Operating Certificate(s) Held:	None
Operator Does Business As:	G-4 Air LLC	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BJC,5670 ft msl	Distance from Accident Site:	9 Nautical Miles
Observation Time:	15:45 Local	Direction from Accident Site:	120°
Lowest Cloud Condition:	6000 ft AGL	Visibility	20 miles
Lowest Ceiling:	Broken / 6000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	18 knots / 22 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.1 inches Hg	Temperature/Dew Point:	12°C / 5°C
Precipitation and Obscuration:	In the vicinity - Thunderstorm - Rain		
Departure Point:	Springfield, MO (SGF)	Type of Flight Plan Filed:	IFR
Destination:	Boulder, CO (1V5)	Type of Clearance:	IFR
Departure Time:	11:10 Local	Type of Airspace:	

Airport Information

Airport:	Boulder Municipal Airport 1V5	Runway Surface Type:	Asphalt
Airport Elevation:	5288 ft msl	Runway Surface Condition:	Wet
Runway Used:	08	IFR Approach:	Visual
Runway Length/Width:	4100 ft / 75 ft	VFR Approach/Landing:	Traffic pattern

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:	40.039443,-105.22583

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Michael G Zadar; Denver Flight Standards District Office; Denver , CO
Original Publish Date:	March 28, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=62486

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