



Aviation Investigation Final Report

Location:	MONTROSE, Colorado	Accident Number:	DEN01LA023
Date & Time:	October 14, 2000, 08:30 Local	Registration:	N111KC
Aircraft:	Cessna 310N	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot said he encountered wind shear on short final and made a "very hard" landing. A National Climatic Data Center representative said that the winds at 0800 were from 150 degrees at 7 knots, and at 0900, calm. The pilot stated that a higher airspeed during landing flare could have prevented the accident. Following the event, the pilot flew the airplane for approximately 8 more hours when a mechanic discovered structural damage to the right wing.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inadequate airspeed on final approach which resulted in a hard landing. A contributing factor was wind shear.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (F) WEATHER CONDITION - WINDSHEAR
2. (C) AIRSPEED - INADEQUATE - PILOT IN COMMAND

Factual Information

On October 14, 2000, at approximately 0830 mountain daylight time, a Cessna 310N, N111KC, was substantially damaged during a hard landing at Montrose Regional Airport, Montrose, Colorado. The private pilot, the sole occupant in the airplane, was not injured. The pilot was operating the airplane under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the cross-country flight that originated 45 minutes before the accident from Aspen, Colorado. The pilot had not filed a flight plan.

According to the pilot, he encountered wind shear on short final and made a "very hard" landing. A National Climatic Data Center representative said that the winds in Montrose, Colorado, on October 14, 2000, at 0800 were from 150 degrees at 7 knots, and at 0900, calm. The pilot stated that "a higher speed into round-off/flare" could have prevented the accident.

Following this event, the pilot flew the airplane for approximately 8 more hours (until approximately December 1) when a mechanic discovered structural damage to the right wing.

Pilot Information

Certificate:	Private	Age:	42, Male
Airplane Rating(s):	Multi-engine land	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 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	February 15, 1999
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	626 hours (Total, all aircraft), 153 hours (Total, this make and model), 451 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N111KC
Model/Series:	310N 310N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	310N-0005
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	June 15, 2000 Annual	Certified Max Gross Wt.:	5200 lbs
Time Since Last Inspection:	148 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	3750 Hrs	Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	TIO-540
Registered Owner:	RUSSELL A. ANDREWS	Rated Power:	310 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MTJ ,5759 ft msl	Distance from Accident Site:	
Observation Time:	08:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	47°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ASPEN , CO (ASE)	Type of Flight Plan Filed:	None
Destination:	(MTJ)	Type of Clearance:	None
Departure Time:	07:45 Local	Type of Airspace:	Class C

Airport Information

Airport:	MONTROSE REGIONAL AIRPORT MTJ	Runway Surface Type:	Asphalt
Airport Elevation:	5759 ft msl	Runway Surface Condition:	Dry
Runway Used:	17	IFR Approach:	None
Runway Length/Width:	10000 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	38.490367,-107.870452(est)

Administrative Information

Investigator In Charge (IIC):	Struhsaker, James
Additional Participating Persons:	MIKE DAVEY; DENVER , CO
Original Publish Date:	November 1, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50778

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).