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