



# Aviation Investigation Factual Report

<b>Location:</b>	Lincoln, Nebraska	<b>Accident Number:</b>	CHI05CA092
<b>Date &amp; Time:</b>	April 10, 2005, 13:30 Local	<b>Registration:</b>	N21816
<b>Aircraft:</b>	Mooney M20M	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Factual Information

On April 10, 2005, at 1330 central daylight time, a Mooney M20M, N21816, sustained substantial damage during recovery from a loss of control when the airplane encountered severe turbulence at 16,000 feet mean sea level (msl) and recovered at 6,000 feet msl before executing a precautionary landing at Lincoln Airport (LNK), Lincoln, Nebraska. The commercial pilot was not injured. The 14 CFR Part 91 business flight departed Columbia, Missouri, on an instrument flight rules (IFR) flight plan at 1130, and was en route to Scottsbluff, Nebraska, to refuel before proceeding to Portland, Oregon, the final destination. Instrument meteorological conditions (IMC) prevailed at the time of the encounter with turbulence.

The pilot reported that a thorough pre-flight weather briefing was obtained from the Columbia, Missouri, Flight Service Station (FSS). Due to severe weather reported in Kansas and Colorado, the pilot filed a route of flight that was further north through Nebraska.

The pilot reported, "While in level cruise flight in IMC at 16,000' I suddenly encountered an unanticipated severe downdraft that caused a temporary loss of control of the aircraft. The plane was suddenly in a rapidly descending spiral. I was able to regain control and level off at 6,000' in VMC. After re-establishing contact with Minneapolis Center I diverted to Lincoln, NE (KLNK), the nearest suitable airport." The pilot also reported, "The approach and landing were uneventful. Gear-down indications were normal. However, when turning off Runway 18 onto the taxiway the right main gear collapsed."

A Federal Aviation Administration inspector examined the airplane. The inspection revealed that the right landing gear had collapsed, the wing spar was bent, and the wings were wrinkled. The pilot reported to the inspector that the landing gear circuit breaker had popped after the recovery from the encounter with turbulence.

A Mooney Airplane Company representative reported that the damage to the airplane indicated that the airplane experienced about 12g's of force during the recovery from the turbulence event.

The pilot reported that the storm scope on the airplane was very reliable and that it did not indicate any severe weather at the time of the upset. The storm scope was tested by a repair facility after the accident and it performed within normal specifications.

The Columbia FSS reported that no pilot reports (PIREPS) along the pilot's route of flight were available at the time of the weather brief. The reported severe weather was located over Kansas at the time of the brief.

A review of the air traffic control (ATC) tapes from Minneapolis Center revealed that the ATC

controller and the pilot did not have any communications about turbulence or severe weather prior to the upset occurring.

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	68, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3	<b>Last FAA Medical Exam:</b>	April 16, 2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	3902 hours (Total, all aircraft), 722 hours (Total, this make and model), 24 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Mooney	<b>Registration:</b>	N21816
<b>Model/Series:</b>	M20M	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	27-0277
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>		<b>Certified Max Gross Wt.:</b>	3368 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>		<b>Engine Model/Series:</b>	TIO-540-AF1B
<b>Registered Owner:</b>	Wings Northwest LLC	<b>Rated Power:</b>	270 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Columbia, MO (COU )	Type of Flight Plan Filed:	IFR
Destination:	Scottsbluff, NE (BFF )	Type of Clearance:	IFR
Departure Time:	11:30 Local	Type of Airspace:	Class E

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	
Total Injuries:	1 None	Latitude, Longitude:	40.850833,-96.759162

## Administrative Information

**Investigator In Charge (IIC):** Silliman, James

**Additional Participating Persons:**

**Report Date:** April 28, 2005

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:** This accident report documents the factual circumstances of this accident as described to the NTSB.

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=61364>

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