



Aviation Investigation Final Report

Location:	BROOMFIELD, Colorado	Accident Number:	DEN93LA013
Date & Time:	November 20, 1992, 18:40 Local	Registration:	N473FW
Aircraft:	MITSUBISHI MU-2B-25	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

IN PREPARATION FOR A CROSS COUNTRY FLIGHT WITH TAKEOFF OCCURRING DURING A SNOW STORM, THE AIRCRAFT WAS LOADED IN THE HANGAR AND TOWED OUT BY FBO PERSONNEL. FOLLOWING THE TOW, THE TORQUE LINK WAS NOT PROPERLY CONNECTED AND SEPARATED DURING THE TAKEOFF RUN. DUE TO A LOSS OF NOSE WHEEL STEERING, THE TAKEOFF WAS ABORTED. THE AIRCRAFT DEPARTED THE SIDE OF THE RUNWAY DURING THE ABORT AND THE NOSE WHEEL WAS SHEARED OFF CAUSING DAMAGE TO BOTH ENGINES, WINGS, THE FUSELAGE, AND LANDING GEAR.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
 A FAILURE BY FBO PERSONNEL TO PROPERLY CONNECT THE NOSE WHEEL TORQUE LINK AFTER TOWING THE AIRCRAFT.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
 Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. WEATHER CONDITION - SNOW
2. (C) LANDING GEAR,STEERING SYSTEM - DISCONNECTED
3. (C) PROPER ASSISTANCE - NOT PERFORMED - FBO PERSONNEL

Occurrence #2: NOSE GEAR COLLAPSED
Phase of Operation: TAKEOFF - ABORTED

Findings

4. TERRAIN CONDITION - SNOW COVERED

Factual Information

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	44, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 13, 1992
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	13753 hours (Total, all aircraft), 4200 hours (Total, this make and model), 1346 hours (Pilot In Command, all aircraft), 59 hours (Last 90 days, all aircraft), 31 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MITSUBISHI	Registration:	N473FW
Model/Series:	MU-2B-25 MU-2B-25	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	269
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	September 23, 1991 100 hour	Certified Max Gross Wt.:	9200 lbs
Time Since Last Inspection:	60 Hrs	Engines:	2 Turbo prop
Airframe Total Time:	3406 Hrs	Engine Manufacturer:	GARRETT
ELT:	Installed, not activated	Engine Model/Series:	TPE331-6
Registered Owner:	WAYNE C. MUHLER	Rated Power:	725 Horsepower
Operator:	WAYNE C. MUHLER	Operating Certificate(s) Held:	None
Operator Does Business As:	MUHL AIR	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:	BJC ,5657 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	18:55 Local	Direction from Accident Site:	70°
Lowest Cloud Condition:	Unknown	Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	0°C / -7°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	(BJC)	Type of Flight Plan Filed:	IFR
Destination:	LAS VEGAS , NV (LAS)	Type of Clearance:	IFR
Departure Time:	18:40 Local	Type of Airspace:	Class E

Airport Information

Airport:	JEFFERSON COUNTY BJC	Runway Surface Type:	Asphalt
Airport Elevation:	5658 ft msl	Runway Surface Condition:	Slush covered;Snow
Runway Used:	29	IFR Approach:	
Runway Length/Width:	9000 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	39.940322,-105.060623(est)

Administrative Information

Investigator In Charge (IIC):	Wiemeyer, Norman
Additional Participating Persons:	BUDDY MAKIN; DENVER , CO
Original Publish Date:	September 14, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=18263

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