



Aviation Investigation Final Report

Location:	HARWOOD, North Dakota	Accident Number:	DEN87LA154
Date & Time:	June 7, 1987, 14:00 Local	Registration:	N6933U
Aircraft:	MOONEY M20E	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PLT WAS LANDING HIS MOONEY M20E ON A PRIVATE GRASS AIRSTRIP. HE SAID HE LOWERED THE MANUAL LANDING GEAR AND THOUGHT HE FELT THE THUMBLOCK SNAP INTO PLACE. UPON TOUCHDOWN THE LANDING GEAR FOLDED UP AND THE ACFT SLID TO A STOP, RESULTING IN SUBSTANTIAL DAMAGE. THE OWNER'S MANUAL CAUTIONS PLTS TO MAKE THREE CHECKS TO ASCERTAIN THAT THE LANDING GEAR IS DOWN AND LOCKED: 1. PHYSICAL THUMBLOCK CHECK; 2. VISUAL GEAR LIGHT CHECK; 3. AUDIBLE GEAR HORN CHECK FROM RETARDED THROTTLE. ASKED IF HE AHD CHECKED TO SEE IF HE HAD A SAFE/GEAR DOWN AND LOCKED GREEN LIGHT INDICATION, THE PLT SAID HE THOUGHT HE HAD. HE SAID HE DIDN'T REMEMBER IF THE GEAR UNSAFE WARNING HORN EVER SOUNDED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: COMPLETE GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

- Findings
1. GEAR EXTENSION - PERFORMED - PILOT IN COMMAND

2. (C) GEAR DOWN AND LOCKED - NOT IDENTIFIED - PILOT IN COMMAND
3. (C) CHECKLIST - NOT USED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Private	Age:	36, 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 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 30, 1987
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	350 hours (Total, all aircraft), 350 hours (Total, this make and model), 240 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MOONEY	Registration:	N6933U
Model/Series:	M20E M20E	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	303
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	March 2, 1987 Annual	Certified Max Gross Wt.:	2575 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2745 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	IO-360-A1A
Registered Owner:	KEITH W. SCHONERT	Rated Power:	200 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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	280°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WEST FARGO , ND (D54)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:30 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Grass/turf
Airport Elevation:	900 ft msl	Runway Surface Condition:	Dry
Runway Used:	29	IFR Approach:	None
Runway Length/Width:	1900 ft / 50 ft	VFR Approach/Landing:	Full stop;Straight-in

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:	46.979454,-96.869873(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	WESTON F EDWARDS; FARGO , ND
Original Publish Date:	May 9, 1988
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=17247

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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](#).