



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | KERRVILLE, Texas | Accident Number: | FTW87LA024 |
| Date & Time: | December 1, 1986, 18:00 Local | Registration: | N1970Y |
| Aircraft: | MOONEY M20D | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 Serious |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

THE PILOT WAS UNABLE TO EXTEND THE LANDING GEAR IN PREPARATION FOR LANDING. TROUBLESHOOTING AND SEVERAL ATTEMPTS TO EXTEND THE GEAR FAILED. THE PILOT THEN MADE A 360 DEGREE TURN OVER THE AIRPORT TO LOSE ALTITUDE DURING WHICH, HE SECURED THE ENGINE AND STOPPED THE PROPELLER IN A HORIZONTAL POSITION TO MINIMIZE DAMAGE. THE PILOT REALIZED AFTER 270 DEGREES OF TURN THAT INSUFFICIENT ALTITUDE REMAINED TO REACH THE RUNWAY. THE AIRCRAFT WAS SUBSEQUENTLY LANDED ON ROUGH TERRAIN SHORT OF RUNWAY 30. POST ACCIDENT INSPECTION REVEALED THE NOSE GEAR TIRE WAS HANGING UP ON THE GEAR DOOR DURING EXTENSION. THE NOSE GEAR TIRE WAS FOUND TO BE INFLATED TO 40 PSI. THE MAINTENANCE MANUAL CALL FOR AN INFLATION PRESSURE OF 30 PSI.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH

Findings

1. (C) LANDING GEAR, NOSE GEAR - MOVEMENT RESTRICTED

2. (C) GEAR EXTENSION - NOT POSSIBLE - PILOT IN COMMAND
3. (C) LANDING GEAR, TIRE - JAMMED
4. (C) LANDING GEAR, TIRE - PRESSURE EXCESSIVE

Occurrence #2: UNDERSHOOT

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

5. (F) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
6. (F) ALTITUDE - INADEQUATE - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

7. (F) TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

Pilot Information

| | | | |
|----------------------------------|--|--|------------------|
| Certificate: | Commercial | Age: | 63, 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-w/ waivers/lim | Last FAA Medical Exam: | October 21, 1986 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 3816 hours (Total, all aircraft), 1394 hours (Total, this make and model), 3753 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--|---------------------------------------|-----------------|
| Aircraft Make: | MOONEY | Registration: | N1970Y |
| Model/Series: | M20D M20D | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 235 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | November 11, 1986 Annual | Certified Max Gross Wt.: | 2575 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 2835 Hrs | Engine Manufacturer: | LYCOMING |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | O-360-A2D |
| Registered Owner: | CHESTER N. STEELE | Rated Power: | 180 Horsepower |
| Operator: | | Operating Certificate(s) Held: | None |
| Operator Does Business As: | | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|-------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | SAT ,809 ft msl | Distance from Accident Site: | 91 Nautical Miles |
| Observation Time: | 17:54 Local | Direction from Accident Site: | 129° |
| Lowest Cloud Condition: | Clear | Visibility | 20 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 7 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 340° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 12°C / -1°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | SAN ANTONIO , TX (SAT) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 17:00 Local | Type of Airspace: | Class G |

Airport Information

| | | | |
|-----------------------------|------------------|----------------------------------|---------------------------|
| Airport: | KERRVILLE ERV | Runway Surface Type: | |
| Airport Elevation: | 1616 ft msl | Runway Surface Condition: | |
| Runway Used: | 30 | IFR Approach: | None |
| Runway Length/Width: | 4400 ft / 100 ft | VFR Approach/Landing: | Full stop;Traffic pattern |

Wreckage and Impact Information

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|----------------------------|-----------|-----------------------------|---------------------------|
| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Serious | Latitude, Longitude: | 29.439281,-98.459327(est) |

Administrative Information

Investigator In Charge (IIC): Dickens, U

Additional Participating Persons: FREDERICK E DRYDEN; SAN ANTONIO , TX

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=22303>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).