



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|----------------------------|
| Location: | RED BAY, Alabama | Accident Number: | ATL84LA214 |
| Date & Time: | July 1, 1984, 18:00 Local | Registration: | N3207F |
| Aircraft: | MOONEY M-20F | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 Serious, 1 Minor, 2 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

THE ACFT LANDED GEAR UP SHORT OF THE RWY IN AN ATTEMPT TO RETURN TO THE RWY AFTER A POWER LOSS AT LOW ALT. DURING TAKEOFF THE ARPT MANAGER SAID THE ENGINE SOUND CHANGE WAS CONSISTENT WITH POWER LOSS FROM FUEL STARVATION. FAA DID A POST ACCIDENT ENGINE TEST RUN AND HAD TO RUN THE ENGINE RICH WITH BOOST PUMP ON TO KEEP IT RUNNING. THE FUEL SYSTEM WAS EXAMINED TO DETERMINE WHY IT WAS RUNNING LEAN. THE FUEL INJECTOR INLET SCREEN SHOWED EVIDENCE OF CORROSION AND RUST. FUEL FLOW WAS FOUND TO BE LEAN. INJECTORS AND FLOW DIVIDER WERE REMOVED FOR A CHECK. THE INJECTOR WAS FOUND TO BE CONTAMINATED WITH DIRT, RUST AND WATER. THE THROTTLE LINKAGE WAS WORN AND BINDING. THE IDLE MIXTURE SETTING WAS ADJUSTED TO THE LEAN SIDE. WHEN THE FUEL INJECTOR WAS REINSTALLED, THE ENGINE RAN ROUGH AND RICH. LEANED WITH THE MIXTURE CONTROL THE ENGINE RAN SMOOTHLY AT ALL SETTINGS. THERE WAS NO PROBLEM WITH THE THROTTLE LINKAGE.

Probable Cause and Findings

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

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) FUEL SYSTEM,INJECTOR - FOREIGN OBJECT
2. (C) FUEL SYSTEM,INJECTOR - BLOCKED(PARTIAL)
3. (F) FLUID,FUEL - WATER
4. (F) FLUID,FUEL - CONTAMINATION
5. (C) FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

6. (F) WHEELS UP LANDING - INTENTIONAL - PILOT IN COMMAND
7. OBJECT - FENCE

Factual Information

Pilot Information

| | | | |
|----------------------------------|---|--|---------------|
| Certificate: | Private | Age: | 56, Male |
| Airplane Rating(s): | Single-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--w/ waivers/lim | Last FAA Medical Exam: | April 9, 1984 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 468 hours (Total, all aircraft), 92 hours (Total, this make and model), 428 hours (Pilot In Command, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|---|---|-----------------|
| Aircraft Make: | MOONEY | Registration: | N3207F |
| Model/Series: | M-20F M-20F | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 670361 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | August 22, 1983 Annual | Certified Max Gross Wt.: | 2740 lbs |
| Time Since Last Inspection: | 95 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 2383 Hrs | Engine Manufacturer: | LYCOMING |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | IO-360-A1A |
| Registered Owner: | HORACE V. MORROW | Rated Power: | 200 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: | MSC | Distance from Accident Site: | |
| Observation Time: | 17:50 Local | Direction from Accident Site: | |
| Lowest Cloud Condition: | Scattered / 5000 ft AGL | Visibility | 7 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 7 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 300° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 29°C / 16°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | | Type of Flight Plan Filed: | None |
| Destination: | SIKESTON , MO (SIK) | Type of Clearance: | None |
| Departure Time: | 18:00 Local | Type of Airspace: | Class G |

Airport Information

| | | | |
|-----------------------------|-------------|----------------------------------|----------------|
| Airport: | | Runway Surface Type: | |
| Airport Elevation: | 0 ft msl | Runway Surface Condition: | |
| Runway Used: | 0 | IFR Approach: | None |
| Runway Length/Width: | 0 ft / 0 ft | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

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|----------------------------|----------------------------|-----------------------------|---------------------------|
| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 Minor, 2 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Serious, 1 Minor, 2 None | Latitude, Longitude: | 34.430942,-88.129722(est) |

Administrative Information

Investigator In Charge (IIC): Drake, John

Additional Participating Persons: JOHNNY R HARDY; BIRMINGHAM , AL
HARLEY B PICKETT; BIRMINGHAM , AL
LEONARD R ABBOTT; ATLANTA , GA

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=6490>

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](#).