



National Transportation Safety Board Aviation Accident Factual Report

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|-------------------------|----------------------|-------------------------|-------------|
| Location: | Lafayette, IN | Accident Number: | CHI08CA035 |
| Date & Time: | 11/01/2007, 1714 EDT | Registration: | N5912Q |
| Aircraft: | Mooney M20E | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |

Flight Conducted Under: Part 91: General Aviation - Business

The airplane was in cruise flight at 6,500 feet when the engine began to run roughly. The pilot verified both magnetos were functioning properly, switched fuel tanks, and manipulated the throttle without any improvement in engine operation. He informed air traffic control of the loss of engine power and was subsequently cleared to land at an airport about 8 nm north of his position. The engine continued to run roughly as he maneuvered for the airport. The airplane impacted rising terrain that preceded the runway threshold. The airplane came to rest within 100 feet of the threshold. The airplane received substantial damage to the right wing and engine firewall. The nose and right main landing gear collapsed during the landing. The left main landing gear remained fully extended. Examination of the engine revealed that the number 3 cylinder had separated from the engine case. Further examination showed that the number 3 connecting rod had separated from the crankshaft. The connecting rod cap, two rod bolts, and two nuts were found separated inside the engine case. One of the rod bolts was bent and fractured approximately mid-span. One-half of this bolt remained with the rod cap. The bolt's fracture surface exhibited a cup/cone shape, consistent with an overload failure. The threaded region of this bolt was undamaged. One of the nuts had undamaged threads. The first three threads adjacent to the flat side of the remaining nut were damaged. The remaining rod bolt was intact, but the three threads from the end were damaged consistent with the damage noted on the second nut. The last engine overhaul was completed on November 19, 1972. The engine had accumulated 820 hours since that overhaul.

Pilot Information

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| Certificate: | Private | Age: | 58, Male |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | Seatbelt |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 With Waivers/Limitations | Last FAA Medical Exam: | 06/01/2006 |
| Occupational Pilot: | | Last Flight Review or Equivalent: | 07/01/2006 |
| Flight Time: | 855 hours (Total, all aircraft), 46 hours (Total, this make and model), 11 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|------------------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Mooney | Registration: | N5912Q |
| Model/Series: | M20E | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Utility | Serial Number: | 821 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | 05/01/2007, Annual | Certified Max Gross Wt.: | 2575 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 1794.4 Hours as of last inspection | Engine Manufacturer: | Lycoming |
| ELT: | Installed, not activated | Engine Model/Series: | IO-360-A1A |
| Registered Owner: | G & W Aviation, LLC | Rated Power: | 200 hp |
| Operator: | G & W Aviation, LLC | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | LAF, 606 ft msl | Distance from Accident Site: | |
| Observation Time: | 1654 EDT | Direction from Accident Site: | |
| Lowest Cloud Condition: | Clear | Visibility | 10 Miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 5 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 360° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30.25 inches Hg | Temperature/Dew Point: | 12° C / -6° C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | La Porte, IN (PPO) | Type of Flight Plan Filed: | None |
| Destination: | Springfield, TN (M91) | Type of Clearance: | VFR |
| Departure Time: | 1600 EDT | Type of Airspace: | |

Airport Information

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|----------------------|---------------------------------|---------------------------|----------------|
| Airport: | Purdue University Airport (LAF) | Runway Surface Type: | Asphalt |
| Airport Elevation: | 606 ft | Runway Surface Condition: | Dry |
| Runway Used: | 5 | IFR Approach: | None |
| Runway Length/Width: | 4225 ft / 1288 ft | VFR Approach/Landing: | Forced Landing |

Wreckage and Impact Information

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|---------------------|--------|----------------------|-----------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | N/A | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 40.412222, -86.936944 |

Administrative Information

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| Investigator In Charge (IIC): | Andrew T Fox |
| Additional Participating Persons: | Randy A Shafer; Federal Aviation Administration, Indianapolis FSDO; Indianapolis, IN |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . |