



National Transportation Safety Board Aviation Accident Data Summary

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|--------------------------------|--------------------------------------|-------------------------|-----------------|
| Location: | Manitowoc, WI | Accident Number: | CEN16LA296 |
| Date & Time: | 07/30/2016, 1230 CDT | Registration: | N5294K |
| Aircraft: | RYAN NAVION B | Injuries: | 1 Minor, 1 None |
| Flight Conducted Under: | Part 91: General Aviation - Personal | | |

Analysis

According to the private pilot, the engine run-up, taxi to the runway, and takeoff were normal. After establishing a positive climb rate, the pilot retracted the landing gear. Shortly after the gear retraction, the engine lost total power. The pilot quickly tried to restart the engine without success and then conducted a forced landing on the remaining runway. The airplane impacted the side of the runway and came to rest upright.

An examination of the engine revealed no anomalies. No fuel was found in the fuel lines from the firewall to the engine fuel system components. The fuel selector valve and gascolator were removed for further examination and testing. A vacuum test of the fuel selector valve revealed no anomalies. The gascolator exhibited fuel staining on the top of the casting. A vacuum test of the gascolator revealed that it leaked severely due to degraded rubber gaskets. It is likely that the leaks in the gascolator allowed air to enter the fuel system and resulted in the loss of engine power. The pilot stated that he typically needed to use the electric fuel boost pump in the low position to keep the engine running smoothly during the run-up and taxi until the engine reached normal operating temperature, which was contrary to the airplane checklist that was provided by the pilot.

Flight Events

Initial climb - Fuel starvation
Initial climb - Loss of engine power (total)
Initial climb - Collision with terr/obj (non-CFIT)

Probable Cause

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

A leak in the gascolator due to degraded rubber gaskets, which allowed air to enter the fuel system and resulted in fuel starvation and a total loss of engine power during takeoff.

Findings

Aircraft-Aircraft systems-Fuel system-Fuel filter-strainer-Damaged/degraded - C
Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid level - C
Personnel issues-Task performance-Maintenance-Repair-Maintenance personnel

Pilot Information

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|---------------------------|--|-----------------------|------|
| Certificate: | Private | Age: | 44 |
| Airplane Rating(s): | Single-engine Land | Instrument Rating(s): | None |
| Other Aircraft Rating(s): | None | Instructor Rating(s): | None |
| Flight Time: | 390 hours (Total, all aircraft), 13 hours (Total, this make and model), 332 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------|--------------------------------------|----------------------|--------------------|
| Aircraft Make: | RYAN | Registration: | N5294K |
| Model/Series: | NAVION B B | Engines: | 1 Reciprocating |
| Operator: | On file | Engine Manufacturer: | Continental Motors |
| Operating Certificate(s) Held: | None | Engine Model/Series: | IO-550-B |
| Flight Conducted Under: | Part 91: General Aviation - Personal | | |

Meteorological Information and Flight Plan

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|----------------------------------|---------------------|------------------------------|---------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | | Weather Information Source: | Pilot |
| Lowest Ceiling: | None | Wind Speed/Gusts, Direction: | 8 knots / , 90° |
| Temperature: | 22° C | Visibility | 10 Miles |
| Precipitation and Obscuration: | No Precipitation | | |
| Departure Point: | Manitowoc, WI (MTW) | Destination: | Manitowoc, WI (MTW) |

Airport Information

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|----------------------|--------------------------------|---------------------------|---------|
| Airport: | Manitowoc County Airport (MTW) | Runway Surface Type: | Asphalt |
| Runway Used: | 7 | Runway Surface Condition: | Dry |
| Runway Length/Width: | 3341 ft / 100 ft | | |

Wreckage and Impact Information

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|----------------------|-----------------------|---------------------|-------------|
| Crew Injuries: | 1 Minor | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Latitude, Longitude: | 44.129722, -87.682500 | | |

Administrative Information

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|-------------------------------|---|---------------|------------|
| Investigator In Charge (IIC): | Aaron M Sauer | Adopted Date: | 05/01/2017 |
| Note: | The NTSB did not travel to the scene of this accident. | | |
| Investigation Docket: | http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93728 | | |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.