



National Transportation Safety Board Aviation Accident Data Summary

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|--------------------------------|--------------------------------------|-------------------------|------------|
| Location: | HOULTON, WI | Accident Number: | CHI00LA034 |
| Date & Time: | 12/01/1999, 1105 CST | Registration: | N2005J |
| Aircraft: | Taylorcraft F-21 | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General Aviation - Personal | | |

Analysis

The pilot reported, 'The engine developed a bad noise and vibration so I turned it off and looked for a place to land.' He landed in a farm field and the landing gear collapsed during rollout. The inspection of the engine revealed the #1 connecting rod was detached from the crankshaft and the connecting rod cap was missing. One rod cap bolt was intact although bent, and no nut was found on the bolt. The other rod cap bolt was broken with the nut portion missing. The #1 cylinder crankshaft journal was inspected. No discoloring, significant scoring, or other damage was noted. The rod bolts and nuts for cylinders 2, 3, and 4 were inspected for proper installation and torque. All nuts appeared to be properly installed. The nuts were torque checked at 40 lbs. No nuts moved at this torque setting. The overhauled engine had been installed on the airplane on July 15, 1998. The airplane had been flown approximately 50 hours since the major overhaul.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the mechanic failed to torque the rod cap bolt during the major engine overhaul. Factors relating to the accident included the rough field and the collapsed landing gear.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: UNKNOWN

Findings

1. ENGINE ASSEMBLY,CONNECTING ROD BOLT - LOOSE PART/BOLT/NUT/CLAMP/ETC
2. (C) MAINTENANCE,OVERHAUL,MAJOR - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. ENGINE ASSEMBLY,CONNECTING ROD BOLT - FAILURE,TOTAL

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

Occurrence #3: GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Pilot Information

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|----------------------------------|---|------------------------------|------------------------|
| Certificate: | Commercial | Age: | 70 |
| Airplane Rating(s): | Single-engine Land | Instrument Rating(s): | Airplane |
| Other Aircraft Rating(s): | None | Instructor Rating(s): | Airplane Single-engine |
| Flight Time: | 2026 hours (Total, all aircraft), 654 hours (Total, this make and model), 1836 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|---------------------------------------|--------------------------------------|-----------------------------|-----------------|
| Aircraft Make: | Taylorcraft | Registration: | N2005J |
| Model/Series: | F-21 F-21 | Engines: | 1 Reciprocating |
| Operator: | DALE O. RUPP | Engine Manufacturer: | Lycoming |
| Operating Certificate(s) Held: | None | Engine Model/Series: | O-235-L2C |
| 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: | , 0 ft msl | Weather Information Source: | Pilot |
| Lowest Ceiling: | None / 0 ft agl | Wind Speed/Gusts, Direction: | 2 knots / , 50° |
| Temperature: | 6° C | Visibility | 10 Miles |
| Precipitation and Obscuration: | | | |
| Departure Point: | LAKE ELMO, MI (21D) | Destination: | |

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 |
| Latitude, Longitude: | | | |

Administrative Information

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|--------------------------------------|--|----------------------|------------|
| Investigator In Charge (IIC): | JIM SILLIMAN | Adopted Date: | 03/02/2001 |
| 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 pubin@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . | | |

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