



# National Transportation Safety Board Aviation Accident Final Report

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|                                |   |                         |             |
|--------------------------------|---|-------------------------|-------------|
| <b>Location:</b>               | Hamilton, MT                                  | <b>Accident Number:</b> | SEA07LA114  |
| <b>Date &amp; Time:</b>        | 04/28/2007, 1105 MDT                          | <b>Registration:</b>    | N634MA      |
| <b>Aircraft:</b>               | Britten-Norman BN-2A-20                       | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         |   | <b>Injuries:</b>        | 1 Minor     |
| <b>Flight Conducted Under:</b> | Part 135: Air Taxi & Commuter - Non-scheduled |                         |             |

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## Analysis

During the initial climb after takeoff, just after the aircraft passed 400 feet above ground level (agl), the pilot shut off the fuel boost pumps in preparation for the en route climb. Soon thereafter, one of the engines lost power without warning, and because he was carrying a heavy load, he immediately feathered the propeller and started looking for a place to put the aircraft down. Because there was rising terrain and scattered houses south of the airport, he had to maneuver to get to an open area. During the forced landing on the uneven terrain, one of the landing gear legs collapsed, and the aircraft impacted the terrain and slid into a power pole. A post-accident teardown inspection of the engine and the aircraft systems did not reveal any anomalies that would have resulted in the failure of the engine that lost power.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of power in one engine, for undetermined reasons, soon after establishing the takeoff departure climb. Factors include rough/uneven terrain.

## Findings

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Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED  
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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY  
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Occurrence #3: GEAR COLLAPSED  
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

### Findings

2. (F) TERRAIN CONDITION - ROUGH/UNEVEN

## Factual Information

On April 28, 2007, at 1105 mountain daylight time, a Britten-Noman BN-2A-20, N634MA, experienced a gear collapse during an engine-out forced landing about two miles south of Ravalli County Airport, Hamilton, Montana. The airline transport pilot, who was the sole occupant, received minor injuries, and the aircraft, which is operated by McCall Aviation, McCall, Idaho, sustained substantial damage. The 14 CFR Part 135 cargo flight was departing for Selway Lodge, Idaho, and was being operated in visual meteorological conditions. The aircraft was on a company VFR flight plan, and there was no report of an ELT activation.

According to the pilot, during the initial climb after takeoff, as he was passing 400 feet above ground level (agl), he shut off the fuel boost pumps in preparation for the en route climb. Soon thereafter, one of the engines quit without warning, and because he was carrying a heavy load, he immediately feathered the propeller and started looking for a place to put the aircraft down. Because there was rising terrain and scattered houses south of the airport, he had to maneuver to get to an open area. During the forced landing on the uneven terrain, one of the landing gear legs collapsed, and the aircraft impacted the terrain and then slid into a power poll.

A post-accident teardown inspection of the engine and the aircraft systems did not reveal any anomalies that would have resulted in the failure of the engine that lost power.

## Pilot Information

|                                  |   |  |                            |
|----------------------------------|---|--|----------------------------|
| <b>Certificate:</b>              | Airline Transport   | <b>Age:</b>                              | 61, Male                   |
| <b>Airplane Rating(s):</b>       | Multi-engine Land; Single-engine Land   | <b>Seat Occupied:</b>                    | Left                       |
| <b>Other Aircraft Rating(s):</b> | None  | <b>Restraint Used:</b>                   | Seatbelt, Shoulder harness |
| <b>Instrument Rating(s):</b>     | Airplane  | <b>Second Pilot Present:</b>             | No                         |
| <b>Instructor Rating(s):</b>     | None  | <b>Toxicology Performed:</b>             | No                         |
| <b>Medical Certification:</b>    | Class 2 With Waivers/Limitations  | <b>Last FAA Medical Exam:</b>            | 03/01/2007                 |
| <b>Occupational Pilot:</b>       |   | <b>Last Flight Review or Equivalent:</b> | 08/01/2006                 |
| <b>Flight Time:</b>              | 13000 hours (Total, all aircraft), 2750 hours (Total, this make and model), 12500 hours (Pilot In Command, all aircraft), 36 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft) |  |                            |

## Aircraft and Owner/Operator Information

|                               |                                      |                                |                          |
|-------------------------------|--------------------------------------|--------------------------------|--------------------------|
| Aircraft Make:                | Britten-Norman                       | Registration:                  | N634MA                   |
| Model/Series:                 | BN-2A-20                             | Aircraft Category:             | Airplane                 |
| Year of Manufacture:          |                                      | Amateur Built:                 | No                       |
| Airworthiness Certificate:    | Normal                               | Serial Number:                 | 464                      |
| Landing Gear Type:            | Tricycle                             | Seats:                         | 2                        |
| Date/Type of Last Inspection: | 03/01/2007, Continuous Airworthiness | Certified Max Gross Wt.:       | 6560 lbs                 |
| Time Since Last Inspection:   |                                      | Engines:                       | 2 Reciprocating          |
| Airframe Total Time:          | 16257 Hours at time of accident      | Engine Manufacturer:           | Lycoming                 |
| ELT:                          | Installed, not activated             | Engine Model/Series:           | IO-540-K1B5              |
| Registered Owner:             | Wilderness Aircraft, LLC             | Rated Power:                   | 300 hp                   |
| Operator:                     | McCall Aviation                      | Operating Certificate(s) Held: | On-demand Air Taxi (135) |
| Operator Does Business As:    | McCall Air                           | Operator Designator Code:      |                          |

## Meteorological Information and Flight Plan

|                                  |                                  |                                      |             |
|----------------------------------|----------------------------------|--------------------------------------|-------------|
| Conditions at Accident Site:     | Visual Conditions                | Condition of Light:                  | Day         |
| Observation Facility, Elevation: |                                  | Distance from Accident Site:         |             |
| Observation Time:                |                                  | Direction from Accident Site:        |             |
| Lowest Cloud Condition:          | Clear                            | Visibility                           | 10 Miles    |
| Lowest Ceiling:                  | None                             | Visibility (RVR):                    |             |
| Wind Speed/Gusts:                | Calm /                           | Turbulence Type Forecast/Actual:     | /           |
| Wind Direction:                  |                                  | Turbulence Severity Forecast/Actual: | /           |
| Altimeter Setting:               |                                  | Temperature/Dew Point:               | 16° C       |
| Precipitation and Obscuration:   | No Obscuration; No Precipitation |                                      |             |
| Departure Point:                 | Hamilton, MT (6S5)               | Type of Flight Plan Filed:           | Company VFR |
| Destination:                     | Selway Lodge, ID                 | Type of Clearance:                   | None        |
| Departure Time:                  | MDT                              | Type of Airspace:                    |             |

## Airport Information

|                      |                              |                           |      |
|----------------------|------------------------------|---------------------------|------|
| Airport:             | Ravalli County Airport (6S5) | Runway Surface Type:      |      |
| Airport Elevation:   | 3642 ft                      | Runway Surface Condition: |      |
| Runway Used:         |                              | IFR Approach:             | None |
| Runway Length/Width: |                              | VFR Approach/Landing:     | None |

## Wreckage and Impact Information

|                            |         |                             |                        |
|----------------------------|---------|-----------------------------|------------------------|
| <b>Crew Injuries:</b>      | 1 Minor | <b>Aircraft Damage:</b>     | Substantial            |
| <b>Passenger Injuries:</b> | N/A     | <b>Aircraft Fire:</b>       | None                   |
| <b>Ground Injuries:</b>    | N/A     | <b>Aircraft Explosion:</b>  | None                   |
| <b>Total Injuries:</b>     | 1 Minor | <b>Latitude, Longitude:</b> | 46.255556, -114.123611 |

## Administrative Information

|  |  |                     |            |
|--|--|---------------------|------------|
| <b>Investigator In Charge (IIC):</b>     | Orrin K Anderson   | <b>Report Date:</b> | 12/20/2007 |
| <b>Additional Participating Persons:</b> | Gerry Byrd; Helena FSDO  |                     |            |
| <b>Publish Date:</b>                     |  |                     |            |
| <b>Investigation Docket:</b>             | 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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.ntsbt.gov/pubdms/">http://dms.ntsbt.gov/pubdms/</a> . |                     |            |

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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. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).