



# National Transportation Safety Board Aviation Accident Factual Report

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<b>Location:</b>	Kalispell, MT	<b>Accident Number:</b>	SEA07LA002
<b>Date &amp; Time:</b>	10/01/2006, 1800 MDT	<b>Registration:</b>	N1920E
<b>Aircraft:</b>	Cessna 340A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None

**Flight Conducted Under:** Part 91: General Aviation - Instructional

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On October 1, 2006, approximately 1800 mountain daylight time, a Cessna 340A, N1920E, sustained substantial damage following an emergency landing as a result of the airplane's nose landing gear failing to extend prior to landing at the Glacier Park International Airport (GPI), Kalispell, Montana. The left seat airline transport-rated student and the right seat commercial-rated flight instructor pilot were not injured. Visual meteorological conditions prevailed for the 14 CFR Part 91 instructional flight, and a flight plan was not filed. The local flight departed GPI about 1630.

In a statement submitted to the NTSB investigator-in-charge (IIC), the pilot-rated student reported that after taking off, the landing gear retracted normally. The pilot-rated student stated that during the subsequent practice instrument approach the landing gear was extended during the initial configuration, and retracted again during the missed approach procedure; the extension and retraction were both normal. The pilot-rated student revealed that while configuring during the second practice instrument approach, and during the landing gear extension sequence, "We heard a loud bang in the nose of the aircraft. I looked at [the instructor] and then at the landing gear lights. We saw the main gear lights come on but no nose gear light, and the [nose] gear unsafe light remained on." The pilot-rated student and instructor then referred to the airplane's Pilot Operating Handbook, carried out the emergency landing gear checklist, but were unable to extend the nose gear to the down and locked position. After doing two flybys in close proximity to the Federal Aviation Administration control tower, tower personnel confirmed that both main landing gear were down, while the nose landing gear remained in the retracted position. After shutting both engines down on short final, the pilot-rated student landed the airplane on Runway 02. The airplane came to rest approximately 2,000 feet down the runway, resting on its nose and both main landing gear.

The IIC retained the adjusting bellcrank from the nose landing gear retraction linkage, which was subsequently sent to the NTSB Materials Laboratory in Washington, D.C., for examination. An NTSB Senior Materials Engineer reported that the bellcrank was fractured at the upper end where the fork bolt is normally inserted, and that the fracture features were uniform light gray and rough, consistent with overstress fracture. The engineer stated that the upper piece of the bellcrank was also cracked and deformed, with the greatest crack opening

distance located at the forward end of the bellcrank, with corresponding upward deformation at the upper side of the piece adjacent to the crack. The lower piece of the bellcrank contained portions of the forwardmost 6 threads for attaching the fork bolt, with thread peaks on the lower piece of the bellcrank deformed to the aft. (Refer to the Materials Laboratory Factual Report for a detailed description of the examination.)

### Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land; Single-engine Sea	<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>	Yes
<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>	06/01/2005
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	08/01/2005
<b>Flight Time:</b>	3600 hours (Total, all aircraft), 1200 hours (Total, this make and model), 3500 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft)		

### Flight Instructor Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	69, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With Waivers/Limitations	<b>Last FAA Medical Exam:</b>	06/01/2006
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N1920E
<b>Model/Series:</b>	340A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	340A0669
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	03/01/2006, Annual	<b>Certified Max Gross Wt.:</b>	5990 lbs
<b>Time Since Last Inspection:</b>	3.4 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	6648.2 Hours as of last inspection	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TSIO-520
<b>Registered Owner:</b>	Northwestern Tire Inc.	<b>Rated Power:</b>	310 hp
<b>Operator:</b>	James D. Roth	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	GPI, 2977 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	1755 MDT	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 Miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	Variable	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.83 inches Hg	<b>Temperature/Dew Point:</b>	19° C / -1° C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Kalispell, MT (GPI)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Kalispell, MT (GPI)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	1630 MDT	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Glacier Park Intl Airport (GPI)	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	2977 ft	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	02	<b>IFR Approach:</b>	ILS; Practice; Visual
<b>Runway Length/Width:</b>	9007 ft / 150 ft	<b>VFR Approach/Landing:</b>	Straight-in

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<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>	2 None	<b>Latitude, Longitude:</b>	48.310556, -114.255000

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Thomas M Little
<b>Additional Participating Persons:</b>	Len Wheeler; Federal Aviation Administration; Helena, MT Bob Speicher; Federal Aviation Administration; Helena, MT
<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:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .