



# Aviation Investigation Final Report

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<b>Location:</b>	Caldwell, Idaho	<b>Accident Number:</b>	WPR10CA442
<b>Date &amp; Time:</b>	August 31, 2010, 16:30 Local	<b>Registration:</b>	N1534C
<b>Aircraft:</b>	Schweizer 269C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

The purpose of the flight was for the helicopter-rated instructor pilot receiving instruction to become more familiar with the accident make and model helicopter. The intention of the flight instructor giving instruction was to demonstrate an autorotation on takeoff at low altitude, with the student following along on the controls. After ascending to an altitude of about 150 feet and an airspeed of about 50 knots, the instructor explained to the student that he was going to lower collective, but would not add cyclic to maintain airspeed. The instructor stated, "I lowered collective and could feel him [the student] on the collective, so I knew he was there. I then put right pedal in, split the needles, and then felt him [the student] pull back on the cyclic and pull up on the collective. I said '...no, push down,' and I forced the cyclic forward." The flight instructor said that the rotor RPM had by then decayed outside of normal parameters and that the student kept pulling up on the collective. "I tried to roll on power and force the cyclic forward, but we were descending too fast." The student stated that during the demonstration he looked down at the rotor RPM and noticed that it was about 320 RPM, and that it stayed that low as the helicopter approached the ground. The student stated that he repeatedly told him [the flight instructor giving instruction] "low RPM" at least 5 times. The student added that after the hard landing the instructor told him that he [the student] had grabbed the controls because the helicopter didn't pitch forward like he had intended it to do. The student stated, "I told him I hadn't touched any of the controls and the reason he had no control was probably because the rotor RPM was so low." An examination of the airframe by a Federal Aviation Administration inspector did not reveal any pre-impact anomalies. Additionally, neither pilot reported a malfunction of the airframe or engine.

## Probable Cause and Findings

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

The failure of both pilots to maintain adequate main rotor RPM, the flight instructor's delayed remedial actions, and inadequate supervision of the flight.

## Findings

<b>Aircraft</b>	Prop/rotor parameters - Not attained/maintained
<b>Personnel issues</b>	Monitoring other person - Instructor/check pilot
<b>Personnel issues</b>	Delayed action - Instructor/check pilot

## Factual Information

### History of Flight

<b>Approach</b>	Loss of control in flight (Defining event)
<b>Approach</b>	Attempted remediation/recovery
<b>Landing-flare/touchdown</b>	Hard landing

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	43, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	October 13, 2009
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	July 7, 2010
<b>Flight Time:</b>	427 hours (Total, all aircraft), 380 hours (Total, this make and model)		

### Student pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	25, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	270 hours (Total, all aircraft), 7 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Schweizer	<b>Registration:</b>	N1534C
<b>Model/Series:</b>	269C UNDESIGNAT	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	S1877
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	July 11, 2010 Annual	<b>Certified Max Gross Wt.:</b>	2050 lbs
<b>Time Since Last Inspection:</b>	55 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2348 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	HIO-360 D1A
<b>Registered Owner:</b>	Elkhorn Aviation Inc. dba Baker Aircraft	<b>Rated Power:</b>	
<b>Operator:</b>	Elkhorn Aviation Inc. dba Baker Aircraft	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	EUL,2432 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	16:35 Local	<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>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	100°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.09 inches Hg	<b>Temperature/Dew Point:</b>	21°C / 4°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Caldwell, ID (EUL )	<b>Type of Flight Plan Filed:</b>	Unknown
<b>Destination:</b>	Caldwell, ID (EUL )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Caldwell Industrial EUL	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	2432 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	12	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5500 ft / 100 ft	<b>VFR Approach/Landing:</b>	Simulated forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<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>	43.641944,-116.635833(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Little, Thomas
<b>Additional Participating Persons:</b>	Keith Rittenberry; Federal Aviation Administration; Boise, ID
<b>Original Publish Date:</b>	December 20, 2010
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=77159">https://data.nts.gov/Docket?ProjectID=77159</a>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).