		NTSB ID: WPR09LA323		Aircraft Registration Number: N87487	
		Occurrence Date: 07/01/2009		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Burley	State ID	Zip Code 83318	Local Time 0930	Time Zone MDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 1			
Aircraft Information Summary					
Aircraft Manufacturer REPUBLIC		Model/Series RC-3		Type of Aircraft Airplane	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On July 1, 2009, at 0930 mountain daylight time, a Republic RC-3 airplane, N87487, was substantially damaged when it struck power lines during takeoff initial climb from the Burley Municipal Airport (BYI), Burley, Idaho. The airplane was registered to and operated by the student pilot under the provisions of Title 14 Code of Federal Regulations Part 91. The certificated flight instructor sustained serious injuries and the student pilot sustained minor injuries. Visual meteorological conditions prevailed and no flight plan was filed for the cross-country flight. The instructional flight was originating at the time of the accident with an intended destination of Caldwell, Idaho.</p> <p>In a written statement, the student pilot reported that upon arrival to a fixed base operator (FBO) located at BYI, the flight instructor requested that the airplane be serviced with 30 gallons of fuel. The flight instructor and student pilot then borrowed a "courtesy vehicle" and went to a nearby café for breakfast. The student pilot stated that upon returning to the airport, he "found that the attendant had serviced N87487 with 67.70gl [gallons] (full capacity) of fuel." The student pilot added that the flight instructor said "we should be ok" after he asked if there "was any way of siphoning out the excess fuel." The student pilot and flight instructor conducted a "quick preflight" prior to departure.</p> <p>The student pilot further reported that prior to takeoff, "the engine sounded normal and the run-up went fine." After verifying the wind direction, the student pilot taxied to runway 24 and proceeded to take off. During the takeoff roll, the airplane became airborne about three-quarters of the way down the runway. As the airplane climbed to about 100 feet above ground level (agl), "it seemed like it wasn't climbing well." The flight instructor verified the throttle, mixture, and propeller control lever positions and noted "no change in the airplane's climb performance." The student pilot stated that the airplane overflew a set of trees and "started to settle as if the airplane was within dead air." Subsequently, the airplane struck a set of power lines about 60-feet in height, 0.7 miles west of the departure end of the runway and impacted the ground.</p> <p>In a written statement, the flight instructor reported that prior to arriving at BYI they refueled at the Preston Municipal Airport (U10), Preston, Idaho. Prior to departing Preston, the flight instructor performed "a performance calculation to determine that the aircraft would perform at that runway and elevation." During the flight, he noticed the "fuel gauge was low" and decided to land in Burley "to put on some fuel." The flight instructor further reported that after the student pilot was notified that the airplane had been topped off with fuel, he "ran the numbers in [his] head and determined it would be fine because of the same conditions that were present at Preston, Idaho."</p> <p>After completing a normal run up, the student taxied the airplane into position at the end of runway 24, ensuring to use all of the runway available. The flight instructor instructed the student to hold the brakes and verify that the engine was producing at least 2,300 rpm. As the</p>					
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FACTUAL REPORT

AVIATION

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Narrative (Continued)

airplane began the take off roll the flight instructor noted that all engine gauges were indicating normally. The student rotated the airplane at 70 miles per hour (mph) and continued to climb out at 80 mph. The flight instructor stated that upon reaching 100 to 150 feet agl, "the airplane quit climbing" as they maintained airspeed of 80 mph. Shortly after, the flight instructor observed the airspeed beginning to decrease and the airplane began to descend. The flight instructor took control of the airplane and told the student that there were power lines in their flight path and to brace for impact. Subsequently, the airplane impacted the power lines and "pitched downwards directly into the vacant lot."

A witness, an airline transport rated pilot, who was located on the ramp of BYI, reported that the airplane appeared to be accelerating down runway 24 at a very slow rate. The witness estimated that the airplane used between 85 to 90 percent of the available runway before it rotated. The witness stated that the airplane was "climbing at an extremely slow rate." As the airplane was about one-quarter to one-half mile from the departure end of the runway, the witness estimated it was about 60 to 80 feet agl. The witness further reported that it appeared "the pilot attempted to increase the rate of climb twice," which resulted in the airplane's "left wing starting to dip as it appeared to be approaching a stall."

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that the empennage was separated from the fuselage aft of the cabin area. The vertical stabilizer and rudder were structurally damaged. Flight control continuity was established from the cockpit controls to all primary flight control surfaces. The engine remained attached to the airframe. Engine control continuity was also established and the positions of the controls matched the throttle and mixture controls in the cockpit. The inspector reported that the fuel samples taken from the aircraft and the refueling facility were free of contamination. Examination of the engine and airframe revealed no mechanical anomalies that would have precluded normal operation.


The Burley Municipal Airport's reported field elevation is 4,150 feet mean sea level (msl). Runway 24 is a 4,067-foot long and 75-foot wide asphalt runway, which features a 0.2 percent upward gradient.


The Automatic Surface Observation System (ASOS) at BYI reported at 0853, wind from 260 degrees at 7 knots, visibility 10 statute miles, few clouds at 11,100 feet agl, temperature 19 degrees Celsius, dew point 8 degrees Celsius, and an altimeter setting of 30.04 inches of Mercury.

Using a Safety Board computer program, the Safety Board investigator-in-charge (IIC) calculated the density altitude to be 5,581 feet and the pressure altitude to be 4,040 feet. Using the "Distance Required to Takeoff and Clear 50' Obstacle" performance chart for a Republic RC-3 equipped with a Franklin engine, reported weather conditions, reported weight of the airplane, and the calculated pressure altitude, the IIC calculated the distance required for take off and climb to clear a 50 ft obstacle was 3,921 feet on a paved runway surface with the landing gear down and flaps up. The published maximum gross weight of the airplane is 3,150 pounds. The student pilot and flight instructor reported that the weight of the airplane at the time of the accident was 3,150 pounds.

The Preston Airport (U10), Preston, Idaho, is at a recorded field elevation of 4,728 feet msl. U10 is equipped with two runways, 3/21, a 3,457-foot long asphalt runway, and 16/34, a 2,437 gravel runway. Both runways feature a 0.3 percent gradient. The closest weather reporting station to U10 was located 20 miles south at the Logan-Cache Airport, Logan, Utah. Recorded weather reports indicate that the morning of July 1, between 0451 to 0751, temperatures varied from 16 degrees Celsius and 18 degrees Celsius.

Updated on Nov 20 2009 5:58PM

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: WPR09LA323			
		Occurrence Date: 07/01/2009			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
Burley Municipal Airport	BYI	4150 Ft. MSL	24	4067	75
Runway Surface Type: Asphalt					
Runway Surface Condition: Dry					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: None					
Aircraft Information					
Aircraft Manufacturer		Model/Series		Serial Number	
REPUBLIC		RC-3		38	
Airworthiness Certificate(s): Normal					
Landing Gear Type:					
Amateur Built Acft? No	Number of Seats: 4	Certified Max Gross Wt.	3150 LBS	Number of Engines: 1	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Reciprocating	FRANKLIN	6A8 SERIES	215 HP		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Annual	06/2009	15 Hours	1192 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner		Street Address			
Ken Paulsen		City		State	Zip Code
		Klamath Falls		OR	97603
Operator of Aircraft		Street Address			
Ken Paulsen		City		State	Zip Code
		Klamath Falls		OR	97603
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Instructional					
FACTUAL REPORT - AVIATION					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: WPR09LA323
	Occurrence Date: 07/01/2009
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 46
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Sex: M	Seat Occupied: Left	Occupational Pilot? No	Certificate Number: On File
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Certificate(s): Student

Airplane Rating(s): None

Rotorcraft/Glider/LTA: None

Instrument Rating(s): None

Instructor Rating(s): None

Current Biennial Flight Review?

Medical Cert.: Class 3	Medical Cert. Status: Without Waivers/Limitations	Date of Last Medical Exam: 12/2007
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	23	5								
Pilot In Command(PIC)										
Instructor										
Instruction Received										
Last 90 Days	23									
Last 30 Days										
Last 24 Hours										

Seatbelt Used? Yes	Shoulder Harness Used? N/A	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: Unknown

Departure Point Same as Accident/Incident Location	State	Airport Identifier	Departure Time 0930	Time Zone MDT
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Destination Caldwell	State ID	Airport Identifier EUL	
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Type of Clearance: None

Type of Airspace:

Weather Information

Source of Wx Information:

Unknown

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: WPR09LA323
	Occurrence Date: 07/01/2009
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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
BYI	0853	MDT	4150 Ft. MSL	1 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Few			11000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None			Ft. AGL	Visibility: 10 SM	Altimeter: 30.04 "Hg
Temperature: 19 °C	Dew Point: 8 °C	Weather Conditions at Accident Site: Visual Conditions			
Wind Direction: 260	Wind Speed: 7	Wind Gusts:			
Visibility (RVR): Ft.	Visibility (RVV) SM				
Precip and/or Obscuration: No Obscuration; No Precipitation					

Accident Information

Aircraft Damage: Substantial	Aircraft Fire: None	Aircraft Explosion: None
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- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot					
Second Pilot					
Student Pilot			1		1
Flight Instructor		1			1
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -		1	1		2
Other Ground					
- GRAND TOTAL -		1	1		2

National Transportation Safety Board

FACTUAL REPORT
AVIATION



NTSB ID: WPR09LA323

Occurrence Date: 07/01/2009

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Joshua Cawthra

Additional Persons Participating in This Accident/Incident Investigation:

Craig Carroll
Federal Aviation Administration
Boise, ID