		NTSB ID: LAX96FA290		Aircraft Registration Number: N57438	
		Occurrence Date: 07/25/1996		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place MOUND HOUSE		State NV	Zip Code 89701	Local Time 0906	Time Zone PDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Bellanca		Model/Series 8KCAB		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
History of Flight					
<p>On July 25, 1996, at 0906 hours Pacific daylight time, a Bellanca 8KCAB, N57438, collided with a tree and crashed in the rear yard of Canyon Construction Company, Mound House, Nevada. The pilots were conducting a local visual flight rules instructional flight. The airplane, registered to the pilot's son, was destroyed by the impact forces and resulting postimpact fire. The certificated airline transport pilot/flight instructor sustained serious injuries and the dual student sustained fatal injuries. Visual meteorological conditions prevailed. The flight originated at Carson City Airport, Carson City, Nevada, at 0850.</p> <p>The airport refueler reported that he fueled the airplane with 16 gallons of fuel (8 gallons in each wing tank) before the flight departed. The refueler said that both pilots were conducting an extensive preflight inspection while he was fueling the airplane. He also said that both tanks were less than full after he completed the fueling.</p> <p>Safety Board investigators interviewed several ground witnesses. They reported they were standing in their company's yard (located about 3/4 mile south/southeast of the crash site) and observed the airplane fly over their building in a westerly direction. The airplane was between 30 to 40 feet above the building and the engine was not producing power. The airplane turned to the north and lined up with a dirt road and then suddenly nosed down and struck the road. The engine power suddenly increased and the airplane entered into a 30-degree nose-up attitude and banked sharply (about 90 degrees) to the right. The engine sounded normal and there was no sputtering or cutting out sounds. The airplane disappeared from their view momentarily and then they saw the airplane's tail raise and the airplane flipped over and burst into flames.</p> <p>Another ground witness reported that he was driving a skip loader about 1 mile west of the crash site when he saw a dust cloud. He then observed the airplane bounce twice and then erupt in a ball of flames. The witnesses did not hear any engine sounds and said that he was wearing ear plugs.</p> <p>The pilot reported in a telephone interview conducted on July 26, 1996, at 1015, that he was giving his daughter a flight lesson. He said that before the accident they were performing a simulated emergency forced landing to a dirt road. He said that he allowed his daughter to get "too low" and that he attempted to recover from the maneuver, but without success. The airplane struck the ground and he immediately applied power. The engine responded normally, but the airplane's rate of climb was insufficient to clear the tree. He also said that the airplane did not experience any preimpact malfunctions or failures.</p>					
Crew Information					
The pilot-in-command (PIC) holds an airline transport pilot certificate with an airplane					

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: LAX96FA290

Occurrence Date: 07/25/1996

Occurrence Type: Accident

Narrative (Continued)

multiengine land and several large airplane type ratings; the certificate is endorsed for commercial privileges in airplane single engine land and sea ratings. He also holds a certified flight instructor certificate with ratings for airplane single engine, multiengine, and instruments, and a second-class medical certificate. The medical certificate was issued on July 10, 1996, and contains a "must wear hearing aid" limitation endorsement.

Safety Board investigators did not obtain the pilot's flight hours logbook. The flight hours reflected on page 3 of this report were obtained from the FAA. The pilot noted on his last medical application form that he had accrued 24,900 hours. The PIC's son, the owner of the airplane, said that his father told him that he renewed his flight instructor's certificate about 2 weeks before the accident. The FAA records, however, do not show that the PIC received a new flight instructor's certificate. A renewed certificate is not reflected in the records for about 120 days.

The dual student held a student pilot/third-class medical certificate. The student pilot received the certificate on July 10, 1996. The medical certificate contains a "must wear corrective lenses" limitation endorsement.

Safety Board investigators did not obtain the student pilot's logbook. The dual student noted on her third-class medical application form that she had accrued 10 flight hours. A Lyon County Sheriff's Deputy told Safety Board investigators that airport personnel told him that the student pilot soloed the airplane about a week before the accident. The pilot's son confirmed this statement.

Aircraft Information

The airplane owner said that the airplane's maintenance logbooks were in the airplane. Safety Board investigators found logbook remnants at the accident site. According to the owner, the airplane received its last annual inspection sometime in August 1995. The inspection was accomplished by Scottsdale Flyer's, Scottsdale, Arizona.

Scottsdale Flyer's owner provided the Safety Board with all of the maintenance records he had in connection with the maintenance the company performed on the airplane. The records show that the last annual/100-hour inspection was performed on August 22, 1995. At the time of the inspection, the engine and the airframe accrued 1,076.3 hours.

The accident site elevation is about 5,000 feet mean sea level. Safety Board investigators calculated the density altitude to be about 7,500 feet.

According to a New American Champion Company representative, the accident airplane make and model average empty weight is about 1,150 pounds. The maximum allowable gross weight is 1,800 pounds. Safety Board investigators estimated the takeoff weight to be about 1,686 pounds. The pilot and student weights were obtained from their FAA medical records and the fuel quantity was estimated at 20 gallons (1/2 full).

Meteorological Information

There is no surface weather reporting facility at the accident site. The weather data reflected on page 3 of this report were obtained from the pilot. According to the ground witnesses, the skies were clear with unrestricted visibility, the surface winds were from the west at 5 knots, and the surface temperature was about 75 degrees Fahrenheit.

Fire

Personnel from the Canyon Construction Company extinguished the fire before the Lyon County Fire

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: LAX96FA290

Occurrence Date: 07/25/1996

Occurrence Type: Accident

Narrative (Continued)

Department personnel arrived.

Wreckage and Impact Information

The airplane came to rest, inverted, in the rear (western section) of a construction yard. The fuselage was found resting on its right side against a "skimmer" (a lean-to type shed). The ground roll path area is level, but the southern end slopes downward about 10 degrees. The northern end of the ground path is separated from the rear of the construction yard with several concrete barrier sections weighing about 2 tons each. The main wreckage area is about 4 feet lower than the airplane's ground path area.

Safety Board investigators found the forward section of the right main wheel fairing next to the dirt road. The airplane's propeller initially struck a pinon tree about 528 feet south/southwest of the main wreckage site. Scattered tree branches were found between 20 to 25 feet north of the tree. The ground scars and a witness observation show that after striking the tree, the airplane bounced twice on the ground and then collided with a concrete barrier section. A concrete barrier section moved about 2 feet and contained the airplane's right wheel imprint on its southern facing side. After colliding with the barrier, the airplane flipped over and came to rest in the construction yard.

Both landing gear wheel pants were found along the airplane's ground path near their associated wheel ground imprints. Both main landing gears were found next to the southern side of the concrete barriers. Examination of the landing gears attach bolts fractured surfaces displayed characteristics of a tensile overload separation.

The entire airplane was incinerated by the postcrash fire. All the airplane's major components and flight control surfaces were found at the main wreckage area. Safety Board investigators established continuity of the flight control surfaces to the cabin/cockpit area.

Both wings separated from their respective attach points, but were found next to the fuselage. The left wing fuel tank was destroyed by the fire; the right wing tank, however, contained about a gallon of blue colored (100 octane) fuel. The fuel was free of contaminates.

The instrument panel and its associated instruments were destroyed.

The engine sustained extensive postimpact fire damage. The oil pan was destroyed. Continuity of the engine gear and valve train assembly was established. All the cylinders except the No. 2 cylinder developed thumb compression when the crankshaft was rotated. The forward section of the No. 2 cylinder contained a 2-inch diameter hole.

The engine pressure relief valve was intact.

Both magnetos were fire damaged and could not be functionally tested. The Nos. 1 and 3 upper spark plugs were oil soaked. The Nos. 2 and 4 upper spark plugs displayed normal operating signatures. The No. 4 spark plug center electrode displayed prominent ovaling signatures.

The fuel control servo was destroyed. The mixture attach arm was found seized near the full rich position. The fuel flow divider diaphragm was intact. The fuel injector lines were unobstructed.

Medical & Pathological Information

Toxicology examinations were not conducted on the pilot, nor were they requested.

Additional Information

National Transportation Safety Board

FACTUAL REPORT

AVIATION

SAFETY BOARD


NTSB ID: LAX96FA290


Occurrence Date: 07/25/1996

Occurrence Type: Accident

Narrative (Continued)

The airplane was released to the registered owner on August 1, 1996. The airframe and engine were at Dave Monti Aircraft Rebuild, Minden Airport, Minden, Nevada, when they were released.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: LAX96FA290			
		Occurrence Date: 07/25/1996			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition: Dry					
Type Instrument Approach: NONE					
VFR Approach/Landing: Simulated Forced Landing; Touch and Go					
Aircraft Information					
Aircraft Manufacturer Bellanca		Model/Series 8KCAB		Serial Number 89-73	
Airworthiness Certificate(s): Acrobatic; Normal; Utility					
Landing Gear Type: Tailwheel					
Homebuilt Aircraft? No	Number of Seats: 2	Certified Max Gross Wt. 1800 LBS	Number of Engines: 1		
Engine Type: Reciprocating	Engine Manufacturer: Lycoming	Model/Series: AEIO-320-E1A	Rated Power: 150 HP		
- Aircraft Inspection Information					
Type of Last Inspection Annual	Date of Last Inspection 08/1995	Time Since Last Inspection Hours	Airframe Total Time Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated? No	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner BRADLEY B. BAILEY		Street Address 5157 ASPENVIEW DRIVE			
		City RENO	State NV	Zip Code 89523	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
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					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: LAX96FA290
	Occurrence Date: 07/25/1996
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 66
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Sex: M	Seat Occupied: Rear	Principal Profession: Retired	Certificate Number: On File
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Certificate(s): Airline Transport; Flight Instructor

Airplane Rating(s): Single-engine Land; Single-engine Sea

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane

Type Rating/Endorsement for Accident/Incident Aircraft?	Current Biennial Flight Review?
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Medical Cert.: Class 2	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 07/1996
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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	24900									
Pilot In Command(PIC)										
Instructor										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

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

Type of Flight Plan Filed: None

Departure Point CARSON CITY	State NV	Airport Identifier O04	Departure Time 0850	Time Zone PDT
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Destination Local Flight	State	Airport Identifier	
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Type of Clearance: None

Type of Airspace: Class G

Weather Information

Source of Briefing:
No record of briefing

Method of Briefing:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: LAX96FA290
	Occurrence Date: 07/25/1996
	Occurrence Type: Accident

Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
	0000		0 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None			0 Ft. AGL	Visibility: 50 SM	Altimeter: "Hg
Temperature: 24 °C	Dew Point:	°C	Wind Direction: 270		Density Altitude: 7500 Ft.
Wind Speed: 5	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0	SM	Intensity of Precipitation: Unknown		
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information

Aircraft Damage: Destroyed	Aircraft Fire: Ground	Aircraft Explosion: Ground
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Classification: U.S. Registered/U.S. Soil

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot		1			1
Second Pilot					
Student Pilot	1				1
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -	1	1			2
Other Ground	0	0	0		0
- GRAND TOTAL -	1	1	0		2

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: LAX96FA290

Occurrence Date: 07/25/1996

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

A. D. LLORENTE

Additional Persons Participating in This Accident/Incident Investigation:

FRED B TWIGGE
FAA, WP-RNO-FSDO
RENO, NV 89502