



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Ama, Louisiana	<b>Accident Number:</b>	CEN09LA538
<b>Date &amp; Time:</b>	August 23, 2009, 16:30 Local	<b>Registration:</b>	N352JB
<b>Aircraft:</b>	BROWN JOSEPH B JR RV-6	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The pilot was anxious about flying the airplane and had elected to hire a flight instructor for further training. According to a witness, the airplane taxied from the hangar to the end of the runway. The airplane remained at the departure end of the runway for several minutes consistent with performing a before-takeoff check. The airplane initiated a takeoff roll and shortly thereafter veered off of the runway to the left. The airplane then struck several trees head on and was immediately engulfed in flames. An examination of the airplane, engine, and related systems revealed no anomalies that would have affected the takeoff.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain directional control during takeoff.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	Directional control - Not attained/maintained

# Factual Information

## History of Flight

Takeoff	Loss of control on ground (Defining event)
Post-impact	Fire/smoke (post-impact)

### HISTORY OF FLIGHT

On August 23, 2009, approximately 1630 central daylight time, a Brown RV-6, N352JB, was substantially damaged when it impacted a tree during the takeoff roll at St. Charles Airport (LS40), Ama, Louisiana. A post impact fire ensued. Visual meteorological conditions prevailed at the time of the accident. The instructional flight was being conducted under the provisions of Title 14 Code of Federal Regulations Part 91 without a flight plan. The private pilot and commercial certificated flight instructor were fatally injured. The local flight was originating at the time of the accident.

According to local law enforcement, the private pilot was anxious about flying the airplane, and had elected to hire a flight instructor for further training. According to a witness, the airplane taxied from the hangar to the end of runway 35. The airplane remained at the departure end of the runway for several minutes consistent with performing a before takeoff check. The airplane initiated a takeoff roll and shortly thereafter, veered off of the runway to the left. The witness lost sight of the airplane and shortly thereafter observed smoke, in the vicinity of where the airplane disappeared, shortly thereafter.

According to local law enforcement, the airplane impacted a tree head on. A ground scar, consistent in width with the landing gear, departed the runway edge and extended 315 feet to the point of impact. The wreckage was recovered for further examination.

### PERSONNEL INFORMATION

The private pilot, age 61, held a private pilot certificate with an airplane single-engine land rating, last issued on December 24, 1977. He was issued a third class airman medical certificate on June 5, 2007. The certificate contained the limitation "must wear corrective lenses."

A review of the pilot's logbook indicated that he had logged no less than 361 hours total time; 31 hours of which were logged in the make and model of the accident airplane. The last flight logged was October 17, 2008. He successfully completed the requirements of a flight review on February 27, 2007, and received a tailwheel endorsement on July 14, 2001.

The flight instructor, age 42, held a commercial pilot certificate with an airplane single-, and

multiengine (limited to center thrust) land, rotorcraft helicopter, and airplane and helicopter instrument ratings last issued on October 25, 2005. In addition, he held a flight instructor certificate with airplane single engine privileges. He was issued a second class airman medical certificate in December of 2008. The certificate contained no limitations.

A review of the flight instructor's logbook indicated that the flight instructor had logged no less than 3,760 hours total time; 0.6 hours of which were logged in the make and model of the accident airplane.

#### AIRCRAFT INFORMATION

The accident airplane, a Joseph B Brown Jr. RV-6 (serial number 23804), was manufactured in 2002. It was registered with the Federal Aviation Administration on an experimental airworthiness certificate for amateur built operations. A Lycoming O-320-H2AD engine rated at 160 horsepower at 2,700 rpm powered the airplane. The engine was equipped with a two-blade, wooden Aymar-Demuth propeller.

The airplane was registered to and operated by the pilot, and was maintained under a conditional inspection program. A review of the maintenance records indicated that a condition inspection had been completed at an airframe total time of 388 hours. This logbook entry was not dated. The last dated maintenance entry was dated June 14, 2009, at which time "conditional inspection" had been completed at tachometer time of 385 hours and an airframe total time of 382.6 hours.

#### METEOROLOGICAL INFORMATION

The closest official weather observation station was Louis Armstrong New Orleans International Airport (KMSY), New Orleans, Louisiana, located 3 nautical miles (nm) northeast of the accident site. The elevation of the weather observation station was 4 feet mean sea level. The routine aviation weather report (METAR) for KMSY, issued at 1553, reported, winds 350 degrees at 5 knots, visibility 10 miles; sky condition, few 25,000; temperature 29 degrees Celsius (C); dew point 14 degrees C; altimeter 29.98 inches of Mercury.

#### AIRPORT INFORMATION

St. Charles Airport is a private, uncontrolled airport, situated one mile southeast of Ama, Louisiana, at a surveyed elevation of 13 feet. The airport had one runway, runway 17/35 (3,900 feet by 125 feet, turf).

#### WRECKAGE AND IMPACT INFORMATION

The accident site was located on a private airfield, in trees to the left side of the departure runway. The accident site was at an elevation of 13 feet mean sea level.

## MEDICAL AND PATHOLOGICAL INFORMATION

The New Orleans Forensic Center – New Orleans Coroner’s Office performed the autopsy on the pilot on August 24, 2009. The autopsy report concluded that the cause of death was “partial incineration from fire secondary to [the] airplane crash.”

The FAA’s Civil Aerospace Medical Institute, Oklahoma City, Oklahoma, performed toxicological tests on specimens that were collected during the autopsy (CAMI Reference #200900200002). The blood test revealed 21 percent carbon monoxide; however, it was negative for cyanide, ethanol, and drugs. Testing of the urine revealed naproxen; however, it was negative for all other tests.

The New Orleans Forensic Center – New Orleans Coroner’s Office performed the autopsy on the flight instructor on August 24, 2009. The autopsy report concluded that the cause of death was “partial incineration from fire secondary to [the] airplane crash.”

The FAA’s Civil Aerospace Medical Institute, Oklahoma City, Oklahoma, performed toxicological tests on specimens that were collected during the autopsy (CAMI Reference #200900200001). The blood test revealed a level of 24 percent carbon monoxide. Results were negative for the remaining tests conducted.

## TESTS AND RESEARCH

The airplane was examined under the auspices of the Safety Board investigator-in-charge on September 28, 2009. The wreckage was contained on an open flatbed trailer and three rubber containers. Both the right and left wing assemblies and the engine assembly were separated from the fuselage for transportation purposes.

The forward portion of the fuselage, including the cabin area, canopy, and instrument panel were charred, melted, and partially consumed by fire.

The right rudder cable was continuous from the rudder control surface forward to the rudder pedal. The cable had been cut near the rudder pedal for recovery purposes. The left rudder cable was continuous from the rudder forward towards the rudder pedal. The cable separated from the forward portion. Both sections were retained for further examination.

The elevator push/pull tube was continuous forward from the elevator to the control “horn.” The point of separation was consistent with exposure to heat and fire. The second portion was continuous from the control horn forward to the control stick. The second separation point was consistent with exposure to heat and fire.

The empennage, to include the right and left horizontal stabilizer and elevator, vertical stabilizer, rudder, and tail wheel assembly remained attached to the aft portion of the fuselage. The trailing edge of both the right and left elevator assembly exhibited a slight wrinkle. The

rudder and vertical stabilizer was unremarkable. The tail wheel controls were continuous.

The right wing exhibited aft crushing four feet six inches inboard from the wing tip. The crush area measured 15 inches wide and was crushed aft 17.5 inches. The flap position could not be determined. The fuel tank was compromised. The skin inboard of the crush was charred, melted, and partially consumed by fire. The aileron control tube was continuous from the aileron, inboard to the fuel tank area where the remains of the control tube were melted.

The left wing exhibited aft crushing six feet seven inches inboard from the wing tip. The crush area measured four feet in diameter and was crushed two feet aft into the spar. The spar was bowed aft. The fuel tank was compromised. The wing exhibited exposure to heat and fire. The aileron control tube was continuous from the wing root to the aileron control. The fuel tank was compromised.

Both propeller blades separated from the propeller hub and were splintered. Three inches of blade remained on either side of the spinner plate. The cowling surrounding the engine was charred, melted, and partially consumed by fire.

The right gear leg remained attached to the airframe. The tire had been partially melted. The brake line was continuous; the brake assembly was unremarkable aside from damage due to exposure to heat and fire. The left landing gear leg separated partially from the airframe. The tire was consumed by fire. The FAA, shortly following the accident, had disassembled the brake assembly; however, did not note any anomalies.

#### Rudder Cable Examination

The rudder cable was sent to the Materials Laboratory in Washington, D.C., for further examination. The separation surface exhibited signatures consistent with an overload event or separation. There was no evidence of any preexisting defect or damage.

#### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 5, 2007
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	February 27, 2007
<b>Flight Time:</b>	361 hours (Total, all aircraft), 31 hours (Total, this make and model), 321 hours (Pilot In Command, all aircraft)		

## Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	42,Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	December 10, 2008
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	May 1, 2009
<b>Flight Time:</b>	3763 hours (Total, all aircraft), 1162 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BROWN JOSEPH B JR	<b>Registration:</b>	N352JB
<b>Model/Series:</b>	RV-6	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	23804
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	June 30, 2009 Condition	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	388 Hrs as of last inspection	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-320 SERIES
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	On file	<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>	KMSY,13 ft msl	<b>Distance from Accident Site:</b>	3 Nautical Miles
<b>Observation Time:</b>	15:53 Local	<b>Direction from Accident Site:</b>	330°
<b>Lowest Cloud Condition:</b>	Few / 25000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.97 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 14°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Ama, LA (LS40)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Ama, LA (LS40)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	St. Charles Airport LS40	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	13 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	35	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3900 ft / 125 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Fatal	<b>Latitude, Longitude:</b>	29.951944,-90.286109(est)

## Administrative Information

**Investigator In Charge (IIC):** Rodi, Jennifer

**Additional Participating Persons:** Glen Longnion; FAA Flight Standards District Office; Baton Rouge, LA

**Original Publish Date:** April 22, 2010

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=74582>

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