



## National Transportation Safety Board Aviation Accident Factual Report

---

<b>Location:</b>	Joshua Tree, CA	<b>Accident Number:</b>	LAX02LA076
<b>Date &amp; Time:</b>	02/03/2002, 0953 PST	<b>Registration:</b>	N9DD
<b>Aircraft:</b>	Beech 95-B55	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

---

On February 3, 2002, at 0953 Pacific standard time, a Beech 95-B55, N9DD, landed off-airport at Joshua Tree, California, while on final approach to Hi Desert Airport. The private pilot and one passenger were not injured. The aircraft was substantially damaged. The personal flight was operated by the owner under 14 CFR Part 91, and departed Santa Monica, California, at 0850. Visual meteorological conditions prevailed and no flight plan was filed.

The owner of the Joshua Tree Airport told the Safety Board investigator he heard the airplane approaching and lose power on one engine while on downwind leg, and the second engine while on final approach. He then heard the airplane crash, called 911 on the telephone, and then went to the accident site. He said that the entire airplane, including both wings, was heavily damaged. He removed the two fuel caps on the right wing and observed no fuel in the tanks. He removed the fuel tank cap on the left, main tank (marked "37 gallons"), and found the tank nearly full of a clear blue fluid that looked and smelled like avgas. The left auxiliary tank appeared to be empty. In the cockpit, both fuel selectors were pointed toward their respective main tank.

The pilot told the Safety Board investigator that he had about 600 hours experience in the airplane, and he knew that the fuel gauges were functional and accurate because he had, on occasion, used fuel down to a low amount before switching tanks. Since the completion of the recent annual Inspection, the plane had flown a trip of about 4 hours duration from Santa Monica to Monterey and back, as well as a short 10-minute maintenance flight with his mechanic. The airplane had four fuel tanks, a left and right main tank and a left and right auxiliary tank, totaling 136 gallons of usable fuel. A typical fuel flow is 36 gallons per hour (total). The airplane was last fueled ("topped-off") prior to departing Monterey. The return trip from Monterey was about 1.5-hour duration and included use of the auxiliary fuel. On the accident flight, from Santa Monica to Joshua Tree, he said the fuel selectors remained on the main tanks the entire flight, which took about 45 minutes.

The pilot said that on downwind leg for landing on runway 24, he had throttled back the engines to 18 inches of manifold pressure. The left engine started "surging," it did not quit entirely, and there wasn't much yaw associated with the surging due to the low manifold

pressure setting. He glanced at the fuel quantity gauges and saw they were between 1/4 and 1/2. He concluded the problem was not fuel, as that agreed with his assessment of fuel remaining. Because he was close to the airport, and only 1,000 feet agl, he chose to shutdown and feather the left engine and turned the left fuel selector "off." He increased right engine manifold pressure to 20 inches, which held the plane's altitude with little yaw. He made a wide base leg for the airport and lowered the landing gear as the airplane was turning final. Within 10 seconds of lowering the landing gear, the right engine lost power. He attempted at that time to restart the left engine by turning the left fuel selector back to the main tank, pushing left propeller and throttle controls full forward, turning the boost pump on, and engaging the engine starter. The attempt was unsuccessful, and rather than continuing to analyze the fuel system, he elected to "fly the airplane." As he rolled the wings level on final approach, the right engine seemed to regain power but the airplane was slow and at low altitude (he estimated 500 feet agl), and he elected to make an off-airport landing.

The airplane was examined by the Safety Board investigator at the facilities of Air Transport in Phoenix, Arizona, on February 25 and 26, 2002.

The left engine was installed on a test stand and run. The intake manifold balance tube exhibited crushing and was punctured at two locations that were sealed with duct tape. The oil sump exhibited a dent and small puncture in the right, rear corner, accompanied by oil seepage that was not repaired. Oil dripped from the puncture at the rate of about 1 drop each 10 seconds. The oil dipstick showed there were 8 quarts of oil remaining in the engine and none was added for the engine run. The right rear intake manifold elbow was crushed and the corresponding part from the right-hand engine was removed and installed for the engine run. All four engine mounts were broken in the "I" section and were replaced with serviceable mounts. The two exhaust pipes were cut off approximately 12 inches from the discharge end in order to enable the engine to be installed on the test stand and clear the mounting rails of the stand. The aircraft's propeller was removed from the engine and a borrowed, 2-blade propeller was installed for the test run. The engine started after about 15 seconds of cranking and priming. The engine ran smoothly and was operated from idle to approximately 2000 rpm.

The right engine was installed on the same test stand and run with the same results. The four broken engine mounts were replaced, the right-rear intake manifold elbow was reinstalled, the exhaust pipe ends were cut to fit the test stand, and the same propeller was installed prior to running the engine.

The airplane was equipped with 3-blade propellers. The left propeller, when viewed from the front, exhibited a smooth, uniform, aft bending of about 45 degrees over the outer half span of two of the blades. The outer half span of these two blades exhibited a pattern of scratch marks on the front side of the blade extending diagonally across them. The third blade was bent smoothly aft about 10 degrees over its entire span and exhibited a shiny, polished appearance to the leading edge near the tip. The three blades appeared to be in the normal flight (unfeathered) position, and the hub mechanism was tight when the blades were twisted by hand.

All three blades of the right propeller exhibited abrasion, chordwise scratches and were rolled and twisted aft, outboard of the midspan. One blade was rolled up about 180 degrees, another about 150 degrees, and the third about 90 degrees. There was a modest amount of torsional twisting. The three blades appeared to be in the normal flight (unfeathered) position, and the hub mechanism was tight when the blades were twisted by hand.

The airplane was equipped with four fuel tanks; a left and right main tank of 37-gallon (usable) capacity and, outboard of the main tank in each wing, an auxiliary tank of 31 gallons (usable) capacity. Two fuel gauges on the instrument panel display fuel quantity in either the two main tanks or the two auxiliary tanks, depending upon the position of a selector switch located on the lower left sub-panel, which is selected by the pilot. Two fuel selectors are located on a floor console of the cockpit, in front of and between the front seats. The pilot can select to feed fuel to each engine from its respective main or auxiliary tank or to crossfeed fuel to either engine from the opposite main tank. The Raytheon Aircraft Company party representative confirmed that it is possible, on this model airplane, to select fuel to supply the engines from one set of tanks (main or auxiliary) while the fuel quantity gauges indicate quantity in the other set of tanks.

Examination of the wings revealed no visual punctures or breaches in the fuel cells and there were no visible external fuel stains. The fuel system vents were open when blown through and the main sump fuel screens were clear. In the cockpit the fuel selectors were in the main tank position for each engine and the fuel quantity selector switch was in the main tank position. The fuel boost pump switches were in the "low" position.

The operator of the retrieval company that picked up the aircraft reported no evidence of fuel leakage at the site. He reported draining 23 gallons of fuel from each main tank; however, the left auxiliary tank contained 1/2 gallon of fuel and the right auxiliary tank contained about 1/2 cup of fuel. The Raytheon Aircraft Company party representative said the differing quantities reportedly observed by the airport operator earlier were likely due to the airplane resting in an unlevel attitude.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	39, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<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 3 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	07/12/2000
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	08/19/2001
<b>Flight Time:</b>	1077 hours (Total, all aircraft), 620 hours (Total, this make and model), 25 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

## Other Flight Crew Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	54, Male
<b>Airplane Rating(s):</b>	Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<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 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	05/04/2000
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	06/04/2001
<b>Flight Time:</b>	1048 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N9DD
<b>Model/Series:</b>	95-B55	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	TC-1585
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	01/25/2002, Annual	<b>Certified Max Gross Wt.:</b>	5100 lbs
<b>Time Since Last Inspection:</b>	5 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	4075 Hours at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-520-E
<b>Registered Owner:</b>	David S. Blakeslee	<b>Rated Power:</b>	285 hp
<b>Operator:</b>	David S. Blakeslee	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PSP, 474 ft msl	Distance from Accident Site:	23 Nautical Miles
Observation Time:	0953 PST	Direction from Accident Site:	200°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.27 inches Hg	Temperature/Dew Point:	17° C / -9° C
Precipitation and Obscuration:			
Departure Point:	Santa Monica, CA (SMO)	Type of Flight Plan Filed:	None
Destination:	Joshua Tree, CA (L80)	Type of Clearance:	None
Departure Time:	0850 PST	Type of Airspace:	Class G

## Airport Information

Airport:	Hi Desert (L80)	Runway Surface Type:	Asphalt
Airport Elevation:	2464 ft	Runway Surface Condition:	Dry
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	2493 ft / 50 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	RICHARD B PARKER
Additional Participating Persons:	James F Coughran; FAA Flt Stnds Dist Office; Riverside, CA Robert L Ramey; Raytheon Aircraft Company; Wichita, KS Michael J Grimes; Teledyne Continental Motors; Mobile, AL
Investigation Docket:	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:pubinq@ntsb.gov">pubinq@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> .