



## National Transportation Safety Board Aviation Accident Factual Report

---

<b>Location:</b>	Bakersfield, CA	<b>Accident Number:</b>	WPR17LA059
<b>Date &amp; Time:</b>	01/31/2017, 1640 PST	<b>Registration:</b>	N711YK
<b>Aircraft:</b>	BEECH E 55	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

---

On January 31, 2017, about 1640 Pacific standard time, a Beech E-55 airplane, N711YK, was substantially damaged when it impacted terrain during an attempted go-around at the Meadows Field Airport (BFL), Bakersfield, California. The commercial pilot sustained minor injuries. The airplane was registered to Sanbarcollbuscom Inc. and operated by the California Aeronautical University as a Title 14 *Code of Federal Regulations* Part 91 personal flight. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight which originated from BFL about 1530.

The pilot reported that the purpose of the flight was to break in the recently installed rebuilt left engine, which was being done at a full power setting. Following the uneventful flight, he entered the airport traffic pattern on an extended final for runway 30R. As the airplane crossed over the runway threshold and the pilot reduced power, the airplane began to settle into ground effect. The pilot stated that he thought the airplane settled lower than normal and that he decided to initiate a go-around to troubleshoot the landing gear. Upon the application of power, the right engine responded, however, when the left engine did not respond the airplane immediately rolled to the left. Despite reducing power and applying control inputs, the airplane continued to yaw to the left and impacted terrain.

Examination of the airplane by a Federal Aviation Administration inspector revealed that both wings and the fuselage were substantially damaged. The wreckage was recovered to a secure location for further examination.

Examination of the recovered wreckage revealed that the left and right engines were separated from the wings and both wings were separated from the fuselage. Examination of the airframe revealed that both the left and right auxiliary fuel boost pumps were in the "off" position. However, photos provided by airport management shortly after the accident showed the left fuel boost pump in the LOW position and the right fuel boost pump in a position consistent with OFF. The left auxiliary fuel pump was retained for further examination. Both the left and right engines were shipped to the facilities of Continental Motors Inc., Mobile, Alabama, for further examination.

The left engine, a Continental IO-520-CB (8), was mostly intact. The starter and vacuum pump were separated from their mounts. Impact damage was observed to the wye adapter, and both induction elbows. Impact damage was observed to the exhaust. The engine was installed in an engine test cell. A normal start on the first attempt was obtained without hesitation or stumbling in observed RPM. The engine was run at various power settings for 20 minutes with no fluctuations in engine RPM. The engine throttle was rapidly advanced from idle to full throttle five times where it performed normally without any hesitation, stumbling or interruption in power. The engine was shut down normally by moving the mixture to idle cut off.

The right engine, a Continental IO-520-C was mostly intact. The starter was separated. The left magneto rotated freely by hand amongst its attach point. Both securing nuts were found loose and not torqued. Without adjusting the magneto, the engine was installed in an engine test cell. A normal start on the first attempt was obtained without hesitation or stumbling in observed RPM. The engine was run at various power settings for 20 minutes with no fluctuations in engine RPM. The engine throttle was rapidly advanced from idle to full throttle five times where it performed normally without any hesitation, stumbling or interruption in power. The engine was shut down normally by moving the mixture to idle cut off.

No mechanical anomalies were revealed that would have precluded normal operation of either engine. For further information regarding the engine runs, see the attached engine run reports within the public docket for this accident.

The left airframe auxiliary fuel boost pump was removed and subsequently shipped to CJ Aviation, Miami, Florida, for further testing. On April 10, 2019, the fuel pump was examined under the supervision of an NTSB investigator. The fuel pump was placed on a test bench, and operationally tested to the limits noted on the manufacturers data plate, which noted flow rates for low boost, at 5 psi, a minimum of 20 gallons per hour (gph) and high boost, at 21 psi, a minimum of 35 gph. During initial tests in the high boost setting, fluid was observed leaking from the outlet fitting. At a pressure of 21 psi, the unit flowed 27.7 gph. The pump was placed in the low boost setting, liquid remained leaking from the outlet fitting. At a pressure of 5 psi, the unit flowed 43.2 gph. The outlet fitting was removed, and the O-ring was found damaged. A new O-ring was installed, and the fuel pump was tested in low and high settings again. The high boost setting at a pressure of 21 psi produced a fuel flow rate of 39 gph, and the low boost setting, at a pressure of 5 psi, produced a flow rate of 45.1 gph. For further information, see the auxiliary fuel pump examination report within the public docket for this accident.

The pilot operating handbook for the accident airplane outlines in Section IV, Normal Procedures, Before Takeoff, the auxiliary fuel pumps shall be in the OFF position (if ambient temperature is 90<sup>o</sup>F or above, use LOW pressure boost). For the Before Landing Checklist, the fuel boost pumps shall be in the OFF position or LOW as per ambient temperature. The manual further states in Section VIII, System Descriptions, "...In high ambient temperatures, low pressure should be used for ground operation, take-off, and climb" in addition to "...the high pressure position should not be selected while the engine is operating except in the event of engine driven pump failure, since the high pressure mostly supplies a greater pressure than can be accepted by the injector system for a reduced power condition."

Review of supplied airframe and engine maintenance records did not contain any entries pertaining to the airframe fuel pump.

The reported temperature at BFL about 14 minutes after the accident was 64°F.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	71, 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>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Without Waivers/Limitations	<b>Last FAA Medical Exam:</b>	06/25/2015
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	01/01/2017
<b>Flight Time:</b>	8056 hours (Total, all aircraft), 1581 hours (Total, this make and model), 8056 hours (Pilot In Command, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BEECH	<b>Registration:</b>	N711YK
<b>Model/Series:</b>	E 55 UNDESIGNAT	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1973	<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	TE-922
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	03/01/2016, Annual	<b>Certified Max Gross Wt.:</b>	5302 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	Reciprocating
<b>Airframe Total Time:</b>	8012.6 Hours as of last inspection	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-520-CB
<b>Registered Owner:</b>	Sanbarcollbuscom	<b>Rated Power:</b>	285 hp
<b>Operator:</b>	California Aeronautical University	<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:	KBFL, 492 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0054 UTC	Direction from Accident Site:	17°
Lowest Cloud Condition:	Clear	Visibility	5 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.06 inches Hg	Temperature/Dew Point:	18° C / 7° C
Precipitation and Obscuration:	Haze; No Precipitation		
Departure Point:	Bakersfield, CA (BFL)	Type of Flight Plan Filed:	None
Destination:	Bakersfield, CA (BFL)	Type of Clearance:	None
Departure Time:	1530 PST	Type of Airspace:	Class D

## Airport Information

Airport:	MEADOWS FIELD (BFL)	Runway Surface Type:	Asphalt
Airport Elevation:	509 ft	Runway Surface Condition:	Dry
Runway Used:	30R	IFR Approach:	None
Runway Length/Width:	10849 ft / 150 ft	VFR Approach/Landing:	Straight-in

## Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	35.431389, -119.055000 (est)

## Administrative Information

Investigator In Charge (IIC):	Joshua Cawthra
Additional Participating Persons:	Troy Wise; Federal Aviation Administration; Fresno, CA Mike Council; Continental Motors Inc.; Mobile, AL
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=94681">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=94681</a>