



National Transportation Safety Board Aviation Accident Factual Report

Location:	Statesville, NC	Accident Number:	ERA18LA038
Date & Time:	11/17/2017, 1215 EST	Registration:	N592SS
Aircraft:	BEECH B 55	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (partial)	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

On November 17, 2017, about 1215 eastern standard time, a Beech B55, N592SS, was substantially damaged during a forced landing after takeoff from Statesville Regional Airport (SVH), Statesville, North Carolina. The private pilot and certified flight instructor were not injured. The airplane was privately owned and operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as an instructional flight. Visual meteorological conditions prevailed at the time, and no flight plan was filed for the local flight.

According to the private pilot, he was conducting a flight review with a flight instructor. After completing various flight maneuvers in the area, the pilot proceeded to Mid-Carolina Regional Airport (RUQ), Salisbury, North Carolina and practiced an ILS approach to runway 20. After a full stop landing, the pilot departed RUQ and returned to SVH. Upon landing on runway 10, the private pilot raised the flaps and slowly applied full power on both throttles for a touch-and-go landing. Both engines were producing full power and he rotated just above 90 knots indicated airspeed. After liftoff, he noted a change in engine sound as the left engine stopped producing power and the airplane yawed to the left. The airplane descended, bounced on the runway and collided with a ditch before skidding to a stop on the edge of the taxiway.

Inspection of the airplane by a Federal Aviation Inspector revealed that the fuselage was buckled. Inspection of the fuel system, flight controls and flight control surfaces revealed no anomalies. The airplane was recovered for further examination.

Examination of the right engine revealed no preimpact anomalies that would have precluded normal operation. Examination of the right engine propeller revealed no preimpact anomalies that would have precluded normal operation.

Examination of the left engine revealed four broken engine mounts and minor dents in the engine oil sump. The oil rod was removed, and the oil level appeared to be slightly over 12 quarts. This engine utilized a 12-quart capacity sump. The top sparkplugs were removed, inspected and found to be dark in color but "normal" when compared to a Champion Spark Plug "Check-A-Plug" chart. Each electrode and center insulator were dark and sooty. A borescope inspection of the cylinders revealed no anomalies. All six cylinders produced thumb

compression when the engine crankshaft was manually rotated. The left and right magnetos produced spark at the individual ignition leads when the engine crankshaft was manually rotated. The magneto impulse couplers could be heard as the engine was manually rotated. The engine timing was found set at 23 degrees (the engine data plate specified 20 degrees). The fuel control (throttle body) fuel screen was removed and inspected. Fuel was noted when the screen was removed from the body of the fuel control. No contamination was noted. The fuel injectors were removed, inspected and no anomalies were noted.

During a postaccident test run of the left engine, the engine would run to full power; however, when rapidly moving the throttle from idle to full power, the engine stopped. When the throttle was slowly advanced from idle, the engine continued to run. Additionally, during the magneto check at about 2,100 rpm, the engine slowly stopped when the left magneto was selected. The left magneto was replaced and the test was repeated. When the right magneto was selected, the engine again slowly stopped producing power. After the engine run, the fuel control, fuel pump, and fuel manifold were bench tested. The test revealed that at the lower throttle angles (low power settings), the mixture was excessively rich. After the bench test, the fuel pump was disassembled because a small weep of fuel from the back of the pump was observed during the test. The fuel pump's diaphragm appeared to be in good condition with no anomalies noted.

A review of the maintenance records revealed that the left engine had been overhauled in January 2017, which included the installation of an overhauled manifold valve and the fuel control, which had also been overhauled in January 2017. Both parts came with a caution tag that stated: "Adjustment of the engine fuel system must be accomplished prior to the release of the aircraft to service." The maintenance logs further noted that the overhauled left and right engines were reinstalled onto the accident airplane in February 2017. The log entry documenting the reinstallation stated, in-part, "Test ran engines to verify operation and set idle speed and mixture and check for leaks." The left engine's most recent annual/100-hour inspection was completed on October 12, 2017, about 62 hours after the engine overhaul.

Pilot Information

Certificate:	Private	Age:	60, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	07/17/2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 2834 hours (Total, all aircraft), 200 hours (Total, this make and model), 2705 hours (Pilot In Command, all aircraft)		

Flight Instructor Information

Certificate:	Flight Instructor; Commercial	Age:	66, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	05/01/2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 10120 hours (Total, all aircraft), 2 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N592SS
Model/Series:	B 55 A	Aircraft Category:	Airplane
Year of Manufacture:	1981	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	TC2375
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	10/16/2017, Annual	Certified Max Gross Wt.:	5000 lbs
Time Since Last Inspection:	78 Hours	Engines:	2 Reciprocating
Airframe Total Time:	4531 Hours as of last inspection	Engine Manufacturer:	Continental
ELT:	C91A installed, not activated	Engine Model/Series:	IO 470 L (21A)
Registered Owner:	On file	Rated Power:	260 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SVH, 967 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1205 EST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/ 3 knots	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.19 inches Hg	Temperature/Dew Point:	12° C / 3° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Statesville, NC (SVH)	Type of Flight Plan Filed:	None
Destination:	Statesville, NC (SVH)	Type of Clearance:	None
Departure Time:	1205 EST	Type of Airspace:	Class G; Demo Area

Airport Information

Airport:	STATESVILLE RGNL (SVH)	Runway Surface Type:	Asphalt
Airport Elevation:	967 ft	Runway Surface Condition:	Dry
Runway Used:	10	IFR Approach:	None
Runway Length/Width:	7000 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	35.766111, -80.965556 (est)

Administrative Information

Investigator In Charge (IIC):	Eric Alleyne
Additional Participating Persons:	Eric Newsom; FAA/FSDO; Charlotte, NC John Kent; Continental Motors; Mobile, AL
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=96407