Aviation Investigation Final Report

Location:	Harmon, Illinois	**Accident Number:**	CHI06LA220
Date & Time:	July 27, 2006, 08:40 Local	**Registration:**	N127W
Aircraft:	Beech 95-B55	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was damaged during a forced landing following a complete loss of engine power on both engines. The pilot reported that the right engine lost power first followed by the left engine. The pilot reported that he began the flight with 70 gallons of fuel and that the fuel gauges indicated that fuel remained at the time the engine stopped producing power. Postaccident examination of the airplane revealed that no usable fuel remained in the airplane. Subsequent testing of the fuel gauges indicated the gauges functioned properly.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The exhaustion of the fuel supply due to the pilot's failure to ensure an adequate suppy of fuel for the flight.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE

Findings
1. (C) FLUID,FUEL - EXHAUSTION
2. (C) FUEL SUPPLY - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
3. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT
On July 27, 2006, at 0840 central daylight time (cdt), a Beech model 95-B55, N127W, piloted by a commercial pilot, sustained substantial damage during a forced landing following a loss of engine power while in a holding pattern following a missed approach to runway 25 at the Whiteside County Airport (SQI), Sterling/Rock Falls, Illinois. The 14 CFR Part 91 flight was operating in instrument meteorological conditions on an instrument flight rules (IFR) flight plan. The pilot received serious injuries. The flight originated from the Waukegan Regional Airport (UGN), Waukegan, Illinois, about 0700. The intended destination filed on the pilot's instrument flight plan was the Dixon Municipal Airport (C73), Dixon, Illinois.

The pilot reported that he filed an instrument flight plan from UGN to C73 and departed on that flight about 0700. He stated that when the airplane was about 30 miles from SQI, he obtained the local weather via the airport's automated weather observing system (AWOS). He stated that the reported weather consisted of a 400-foot ceiling and 2 to 3 miles of visibility. The pilot reported that he requested and executed the instrument landing system (ILS) approach to SQI, which ended in the pilot executing the missed approach procedure. He reported that he then requested to remain in the holding pattern to wait for improved weather. While holding, the right engine lost power and the pilot switched from the auxiliary fuel tank to the main fuel tanks and attempted to re-start the engine, which was not successful. A short time later, the left engine lost power and the pilot declared an emergency. The pilot stated that he descended through the overcast until he was able to see the ground, at about 100 feet above ground level, and has no further recollection of the events of the flight.

In his filed report and during a telephone interview, the pilot reported that he believed that he had 70 gallons of fuel available for the flight. He further stated that when the power loss occurred the fuel gauges showed the "main tanks indicated slightly below 1/4 and auxiliary tanks at 1/3."

PERSONNEL INFORMATION
The pilot held a commercial pilot certificate with single-engine land, multiengine land, and instrument airplane ratings. The pilot's most recent third class medical certificate was issued on March 22, 2005, and listed the limitation that the pilot have glasses available for near vision.

The pilot reported having a total of 1,785 hours of flight experience including 1,286 in the same make and model as the accident airplane.

AIRCRAFT INFORMATION
The airplane was a 1969 Beechcraft 95-B55 Baron, serial number TC-1274. It was a low-wing, multiengine, retractable landing gear, monoplane of predominately aluminum construction.

The airplane was configured to seat 6 occupants including the pilot. The airplane was powered by two Continental IO-470 engines each rated to produce 260 horsepower.

METEOROLOGICAL INFORMATION

The weather reporting station located at SQI recorded the weather at 0815 as: Wind - 080 degrees at 4 knots; Visibility - 1 and 1/4 statute mile; Ceiling - Overcast at 200 feet above ground level (AGL); Temperature - 23 degrees Celsius; Dew Point - 22 degrees Celsius; Altimeter setting - 29.82 inches of Mercury.

At 0835 the weather was: Wind - 060 degrees at 4 knots; Visibility - 1/2 statute mile; Ceiling - Overcast at 100 feet AGL; Temperature - 23 degrees Celsius; Dew Point - 23 degrees Celsius; Altimeter setting - 29.82 inches of Mercury.

At 0855 the weather was: Wind - 060 degrees at 4 knots; Visibility - 1 statute mile; Ceiling - Overcast at 100 feet AGL; Temperature - 23 degrees Celsius; Dew Point - 23 degrees Celsius; Altimeter setting - 29.83 inches of Mercury.

AIDS TO NAVIGATION

SQI was equipped with an ILS approach to runway 25. The approach procedure lists a touch down zone elevation of 647 feet above mean sea level (MSL), and a decision height of 847 feet MSL for straight in ILS approaches. The missed approach procedure listed is a straight ahead climb to 2,000 feet MSL followed by a climbing right turn to 2,700 feet MSL and direct to the POLO very high frequency omnidirectional range (VOR) station located 24 degrees magnetic and 15 nautical miles from SQI. Upon reaching POLO, a holding pattern on the 265 degree radial with right turns was indicated.

COMMUNICATIONS

While in the holding pattern, the pilot reported an emergency and requested to go to the nearest airport with visual flight rules (VFR) weather conditions. The controller asked if the pilot was able to make it to the Quad Cities and the pilot responded that he was not. The pilot then requested the ILS runway 25 approach to SQI and was cleared for the approach.

WRECKAGE AND IMPACT INFORMATION

Post accident examination of the airplane revealed no usable fuel present in the fuel tanks at the scene. First responders to the accident scene had made cuts to the aircraft fuselage for occupant extraction. In order to prevent short-circuiting of the electrical system, the battery cables were also disconnected. On-scene examination of the fuel quantity indicator readings was not preformed.

TESTS AND RESEARCH

After being recovered from the accident site, the airplane was transported to SQI. In September 2007, under the direction of the NTSB investigator in charge, a mechanic from a fixed base operator at SQI performed checks of the airplane's fuel quantity indicating system.

The mechanic confirmed that the resting position of the gauges was below empty without battery power supplied to the system. The mechanic then applied power to the aircraft using a 24-volt battery charger. The mechanic then powered up the aircraft and noted that the fuel quantity gauge needles had risen to the empty position. The mechanic also noted that many of the airplane's other systems were powering up during the examination of the fuel gauges.

Pilot Information

Certificate:	Commercial	**Age:**	57,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	March 1, 2005
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1785 hours (Total, all aircraft), 1286 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N127W
Model/Series:	95-B55	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	TC-1274
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	5100 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-470
Registered Owner:	On file	**Rated Power:**	260 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SQI,647 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	08:35 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Unknown	**Visibility**	0.5 miles
Lowest Ceiling:	Overcast / 100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	60°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.81 inches Hg	**Temperature/Dew Point:**	23°C / 23°C
Precipitation and Obscuration:			
Departure Point:	CHICAGO/WAUKEGA, IL (UGN)	**Type of Flight Plan Filed:**	IFR
Destination:	DIXON, IL (C73)	**Type of Clearance:**	IFR
Departure Time:	07:00 Local	**Type of Airspace:**	

Airport Information

Airport:	WHITESIDE CO ARPT-JOS H BITTOR SQI	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	ILS
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	41.758056,-89.582496

Administrative Information

Investigator In Charge (IIC):	Brannen, John
Additional Participating Persons:	Jim Kennedy; Dupage FSDO, West Chicago, IL
Original Publish Date:	November 29, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=64273