

Aviation Investigation Final Report

Location:	Racine, Wisconsin	Accident Number:	CHI02LA118
Date & Time:	April 30, 2002, 08:10 Local	Registration:	N6RP
Aircraft:	Cessna 120	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane struck a building during a forced landing following a loss of engine power during a landing approach. The pilot said that when he was 6.5 - 7 miles from his destination, he switched to the right fuel tank. He said the right fuel tank was "fullest". He reported that the engine stopped developing power as he neared the base leg of the traffic pattern. He said the power loss happened as he was making a power reduction. The pilot said that he verified the carburetor heat and magneto switch positions and he then attempted to restart the engine. The pilot stated that he had applied carburetor heat at, "...midpoint on downwind." The pilot said that he was in an area with, "...too many homes between [his] loaction and the [airport]." No anomalies were found with respect to the airframe, engine, or systems that could be identified as existing prior to impact. The weather at the destination airport listed a temperature of 9 degrees Celsius and a dew point of 1 degrees Celsius. According to a carburetor icing probability chart, the temperature and dew point were in the range of serious icing at descent power or moderate icing at cruise power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The inadequate weather evaluation and delayed application of carburetor heat by the pilot, and the unsuitable terrain encountered during the forced landing. The carburetor icing conditions and the low altitude were factors.

Findings

Occurrence #1: LOSS OF ENGINE POWER Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS 2. (C) WEATHER EVALUATION - INADEQUATE - PILOT IN COMMAND

3. (C) PROCEDURES/DIRECTIVES - DELAYED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED

5. (F) ALTITUDE - LOW

Factual Information

On April 30, 2002, at 0810 central daylight time, a Cessna 120, N6RP, piloted by a private pilot, was substantailly damaged when it struck a building while approaching to land on runway 32 (4,423 feet by 100 feet, asphalt), at the John H. Batten Airport (RAC), Racine, Wisconsin. The pilot reported that, while in the traffic pattern, the engine lost power. The 14 CFR Part 91 personal flight was operated in visual meteorological conditions, and was not on a flight plan. The pilot, who was the sole occupant, received minor injuries. The local flight originated from the Sylvania Airport, Sturtevant, Wisconsin, at 0730.

In his written statement, the pilot said he took off at 0730 to, "...continue my break-in of my newly overhauled engine. This flight was the 7th hour since [major overhaul]." The pilot said that he decided to fly the airplane to RAC. He said that when he was 6.5 to 7 miles southwest of RAC he switched to the right fuel tank. He said the right fuel tank was "fullest". The pilot said that the the engine stopped developing power in the traffic pattern as he approached a position 45 degrees from his intended touchdown point. He said the power loss happened as he was making a power reduction. The pilot said that he verified the carburetor heat and magneto switch positions and he then attempted to restart the engine. The pilot stated that he had applied carburetor heat at, "...midpoint on downwind." The pilot said that he was in an area with, "...too many homes between [his] location and the [airport]." The airplane struck a building during the forced landing.

A postaccident examination of the airplane was conducted by a Federal Aviation Administration inspector. Fuel was found in both wing fuel tanks. The fuel selector and fuel lines were examined and no blockage or other pre-impact anomalies were found. No fuel contamination was found. Engine valve train continuity was established by rotating the engine crankshaft. "Thumb" compression was exhibited on all cylinders. Spark was observed for the top spark plug leads during engine rotation. The magneto switch was checked with a multimeter and no disrepencies were found. The carburetor was broken loose from the induction manifold. No other anomalies were found with respect to the carburetor. No anomalies were found with respect to the airframe, engine, or systems that could be identified as existing prior to impact.

The weather at RAC at 0753 was: Winds - 290 degrees magnetic at 11 knots; Visibility - 10 statute miles; Sky condition - clear; Temperature - 9 degrees Celsius; Dew Point - 1 degree Celsius; Altimeter setting - 29.91 inches of Mercury.

According to a carburetor icing probability chart, the temperature and dew point were in the range of serious icing at descent power or moderate icing at cruise power.

The Federal Aviation Administration and Teledyne Continental Motors were parties to the

investigation.

Pilot Information

Certificate:	Private	Age:	61,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medicalw/ waivers/lim	Last FAA Medical Exam:	July 3, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	June 24, 2001
Flight Time:	432 hours (Total, all aircraft), 24 hours (Total, this make and model), 341 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6RP
Model/Series:	120	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	12635
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	April 3, 2002 Annual	Certified Max Gross Wt.:	1450 lbs
Time Since Last Inspection:	7 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2526 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	C85-12F
Registered Owner:	Eugene A. DeGrazia	Rated Power:	85 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KRAC,674 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	07:53 Local	Direction from Accident Site:	315°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.9 inches Hg	Temperature/Dew Point:	9°C / 1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	STURTEVANT, WI (C89)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	07:30 Local	Type of Airspace:	Class E

Airport Information

Airport:	JOHN H BATTEN RAC	Runway Surface Type:	Asphalt
Airport Elevation:	674 ft msl	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	4423 ft / 100 ft	VFR Approach/Landing:	Forced landing;Traffic

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	42.749374,-87.81044(est)

Administrative Information

Investigator In Charge (IIC):	BRANNEN, JOHN
Additional Participating Persons:	Dennis Grimslid; FAA-Milwaukee, Wisconsin-FSDO; Milwaukee, WI Robert Boyle; Teledyne Continental Motors; Arvada, CO
Original Publish Date:	August 28, 2002
Last Revision Date:	
Investigation Class:	<u>Class</u>
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=54612

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