



Aviation Investigation Final Report

Location:	MOORESVILLE, North Carolina	Accident Number:	ATL95LA167
Date & Time:	September 10, 1995, 10:30 Local	Registration:	N1474N
Aircraft:	PIPER J3C-65	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that engine power decreased smoothly in cruise flight, at a power setting of 2100 RPM. The carburetor heat was applied for about one minute, then removed. He slowed the airplane down and executed an intentional stall into the trees. The weather at the time of the accident was favorable for the formation of carburetor ice, and the pilot said that he did not receive a weather briefing. Later, the pilot stated that he believed that carburetor ice had formed because during the engine teardown there was a lot of moisture in the carburetor.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper use of the carburetor heat resulting in the formation of carburetor ice and subsequent loss of engine power.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE

Findings

1. (C) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. PREFLIGHT BRIEFING SERVICE - NOT USED - PILOT IN COMMAND
3. (C) CARBURETOR HEAT - IMPROPER USE OF - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - EMERGENCY

Findings

4. OBJECT - TREE(S)

Factual Information

On September 10, 1995, about 1030 eastern daylight time, a Piper J3C-65, N1474N, collided with trees during a forced landing near Mooresville, North Carolina. The airplane was operated by the pilot/owner under the provisions of 14 CFR Part 91, and visual flight rules. Visual meteorological conditions prevailed. A flight plan was not filed for the personal, local flight. There were no injuries to the private pilot nor his passenger, and the airplane was substantially damaged. Origination of the flight was Bradford Field, a private airstrip, near Huntersville, North Carolina, about 45 minutes prior to the accident.

The pilot reported that they were in cruise flight, about 1400 feet msl (700-800 agl) when the engine lost power. Engine power decreased smoothly, he reported. Carburetor heat was applied for about one minute, then removed, just before an intentional stall into a pine forest, at very slow speed. Immediately prior to the loss of power, the engine was being operated at 2100 rpm. Local temperature and dew point was 76 and 66 degrees F., respectively. (See attached icing probability curves).

The on-scene investigation revealed 1/2 tank of fuel in the main, 5 gallons in the reserve tank, engine oil satisfactory, and throttle linkage intact. The engine examination disclosed heavy soot deposits on the spark plugs, moisture in the carburetor, and the fuel free from containments. The engine operated properly at all power settings during the functional examination. The pilot later stated that he believed carburetor icing had caused the loss of engine power.

Pilot Information

Certificate:	Private	Age:	53, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Rear
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 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	June 12, 1995
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1007 hours (Total, all aircraft), 87 hours (Total, this make and model), 23 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N1474N
Model/Series:	J3C-65 J3C-65	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	23140
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	April 1, 1995 Annual	Certified Max Gross Wt.:	1400 lbs
Time Since Last Inspection:	17 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	CONTINENTAL
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	C-85-12
Registered Owner:	JOHN F HACKENBERG	Rated Power:	85 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CLT ,749 ft msl	Distance from Accident Site:	25 Nautical Miles
Observation Time:	09:50 Local	Direction from Accident Site:	30°
Lowest Cloud Condition:	Scattered / 25000 ft AGL	Visibility	6 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	2°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	24°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	HUNTERSVILLE , NC (PVT)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	Forced landing

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:	35.570968,-80.8097(est)

Administrative Information

Investigator In Charge (IIC): Hicks, Preston

Additional Participating Persons: LEON MCRAE;

Original Publish Date: April 1, 1996

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=3623>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).