



Aviation Investigation Final Report

Location:	Toms River, New Jersey	Accident Number:	NYC06LA167
Date & Time:	July 1, 2006, 12:45 Local	Registration:	N50619
Aircraft:	Bellanca 7GCBC	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Banner tow		

Analysis

While in cruise flight, at an altitude of 1,000 feet, the airplane's engine lost power. The pilot applied full throttle; however, the engine failed to respond, and the airplane continued to lose altitude and airspeed. At an altitude of 800 feet, the pilot applied carburetor heat and looked for a place to land. He performed a forced landing on a road, during which the airplane impacted a road sign. Examination of the airplane revealed the throttle and carburetor heat controls were observed in the off position, and approximately 17 gallons of fuel was drained from the airplane, with no contamination observed. Fuel was also observed in the carburetor bowl, gascolator, and fuel lines. The throttle, mixture, and carburetor heat control linkages were connected and operated smoothly. The throttle and carburetor heat controls were observed in the off position. The engine was test run on the airframe. It started normally and was operated between 1500 and 1700 RPM. During the test run, operational checks of the magnetos, mixture and carburetor heat controls revealed no anomalies. Interpolation of a carburetor icing probability chart revealed that atmospheric conditions were conducive to "icing at glide or cruise power."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Carburetor icing, and the pilot's delayed application of carburetor heat, which resulted in a loss of engine power, and subsequent force landing. A factor in the accident was carburetor icing conditions.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: MANEUVERING

Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) FUEL SYSTEM,CARBURETOR - ICE
3. (C) CARBURETOR HEAT - DELAYED - PILOT IN COMMAND

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

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

Findings

4. OBJECT - SIGN

Factual Information

On July 1, 2006, at 1245 eastern daylight time, a Bellanca 7GCBC, N50619, was substantially damaged during a forced landing in Toms River, New Jersey. The certificated commercial pilot was not injured. Visual meteorological conditions prevailed for the local banner towing flight conducted under 14 CFR Part 91.

According to the pilot, as he was flying westbound at an altitude of 1,000 feet, the airplane's engine lost power. The pilot applied full throttle; however, the engine did not respond, and the airplane continued to lose altitude and airspeed. At an altitude of 800 feet, the pilot applied carburetor heat and looked for a place to land. He performed a forced landing on a road, during which the airplane impacted a road sign. The airplane subsequently spun around, the landing gear impacted a curb, and the airplane skidded to a stop in a grass area.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that approximately 17 gallons of fuel were drained from the airplane, with no contamination observed. Fuel was also observed in the carburetor bowl, gascolator, and fuel lines. The throttle, mixture, and carburetor heat control linkages were connected and operated smoothly. The throttle and carburetor heat controls were observed in the off position.

The engine was test run on the airframe. It started normally and was operated between 1500 and 1700 RPM. During the test run, operational checks of the magnetos, mixture and carburetor heat controls revealed no anomalies.

Weather reported at McGuire Air Force Base, Wrightstown, New Jersey, approximately 22 miles to the northwest, at 1255, included winds from 290 degrees at 7 knots, visibility 7 miles, scattered clouds at 5,000 feet, temperature 84 degrees Fahrenheit, dew point 61 degrees Fahrenheit, and an altimeter setting of 30.16 inches of mercury.

Interpolation of a carburetor icing probability chart revealed that atmospheric conditions were conducive to "light icing at glide or cruise power."

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	47, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	May 1, 2006
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2645 hours (Total, all aircraft), 37 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bellanca	Registration:	N50619
Model/Series:	7GCBC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1171-79
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	August 1, 2005 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:	Island Aerial Ads	Rated Power:	150 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:	WRI,131 ft msl	Distance from Accident Site:	18 Nautical Miles
Observation Time:	12:55 Local	Direction from Accident Site:	290°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	Visibility	7 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.15 inches Hg	Temperature/Dew Point:	29°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Linden , NJ (LDJ)	Type of Flight Plan Filed:	None
Destination:	(LDJ)	Type of Clearance:	None
Departure Time:	12:00 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.955554,-74.202224

Administrative Information

Investigator In Charge (IIC):	Andrews, Jill
Additional Participating Persons:	Ernie Scardecchio; FAA/FSDO; Philadelphia, PA
Original Publish Date:	July 25, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=64037

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](#).