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.

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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