Aviation Investigation Final Report

Location:	Middletown, Rhode Island	**Accident Number:**	NYC01FA109
Date & Time:	April 28, 2001, 09:30 Local	**Registration:**	N55588
Aircraft:	Beech A-36	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

After departure, the pilot contacted air traffic control and stated, "I've got a bit of a problem here on takeoff I'm gonna have to go back and close a cowl flap." A witness observed the airplane flying low and slow, about 200 feet above the ground, on a tight downwind leg for the runway. When the airplane turned onto the base leg, it was about 100 feet above the ground, "still flying very slow on the verge of a stall." The airplane then nosed over, "picked up airspeed," and turned sharply to the left at an angle of about 70 degrees. As the airplane passed the extended centerline of the runway, it leveled off and full power was applied to the engine. The airplane then descended, and impacted buckets of rope dip, which was a black waterbased protective coating for rope, and barrels of nautical lines, before coming to rest upright against metal lobster traps located in a field. Examination of the wreckage revealed that the upper left hand side cowling was observed opened and undamaged. Examination of the latching mechanism for the left hand side cowling revealed no damage to the forward latch. The rear latch exhibited damage to one half of the clamshell. Rope dip was observed on the upper half of the left hand cowling cover, the left hand side of the engine crankcase, and on the rearward section of the left hand side bottom cowling. No rope dip was observed on the right hand side engine cowling or crankcase. The pilot had flown with a flight instructor 5 days prior to the accident. During that flight, the flight instructor observed that the left side engine cowl cover "became loose and opened all the way," while the airplane was on the ground. The pilot remarked to the flight instructor that he thought he had secured it. He then shut the engine down, and re-secured the cowl cover. While the airplane was in maintenance the day prior to the accident, the pilot mentioned to a mechanic that he had been having problems with the left engine cowling cover; however, the mechanic did not observe any abnormalities with the cover. The recorded winds about the time of the accident were from 360 degrees at 12 knots, gusting to 21 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain airspeed while landing.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CLIMB

Findings
1. COOLING SYSTEM,COWLING - NOT SECURED

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: LANDING

Findings
2. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
3. STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
4. TERRAIN CONDITION - OPEN FIELD

Factual Information

HISTORY OF FLIGHT

On April 28, 2001, about 0930 eastern daylight time, a Beechcraft A-36, N55588, was destroyed after impacting terrain while landing at the Newport State Airport (UUU), Middletown, Rhode Island. The certificated commercial pilot and passenger were fatally injured. Visual meteorological conditions prevailed and an instrument flight rules (IFR) flight plan was filed for the personal flight conducted under 14 CFR Part 91.

Review of recorded communications between the pilot and Clearance Delivery, revealed that the pilot requested, and received, an IFR clearance to Frederick Municipal Airport, Frederick, Maryland. The pilot then departed from UUU and contacted Providence Departure Control. During the initial contact with the controller, the pilot stated:

"I've got a bit of a problem here on takeoff I'm gonna have to go back and close a cowl flap."

The controller acknowledged the transmission and asked the pilot if he needed any assistance.

The pilot replied "negative, I'm just gonna land and be back off in a minute or two."

The controller cleared the pilot for a visual approach and to advise when he was ready to depart again.

The pilot then stated, "Newport State traffic Bonanza triple five double eight I'm making a rather emergency landing at 4 at Newport."

The controller advised the pilot that he was broadcasting on approach frequency.

No further transmissions were received from the pilot.

Another pilot, who was preparing to takeoff from UUU, heard the accident pilot transmit over the common traffic advisory frequency that he was returning to land to close a cowling flap. The witness observed the airplane flying low and slow, about 200 feet above the ground, on a tight downwind leg for runway 04. When the airplane turned onto the base leg, it was about 100 feet above the ground, "still flying very slow on the verge of a stall." The airplane then nosed over, "picked up airspeed," and turned sharply to the left at an angle of about 70 degrees. As the airplane passed the extended centerline of the runway, it leveled off and full power was applied to the engine. The airplane then descended and impacted the ground in a flat attitude.

A second witness, who was observing airplanes at UUU, stated that the accident airplane departed from runway 04, and about 1 minute later, radioed that he was returning to land. The witness observed the airplane at a very low altitude, about 100-300 feet above the ground. As the airplane turned onto a base leg, it sounded like it had gone to full power and turned steeply towards the runway. The airplane then "stalled" and crashed off the airport property.

A third witness, who was located at a car dealership 1/2 mile west of UUU, stated that he observed the airplane flying about 200 feet above the ground, "trying to bank to the left apparently to go back to the airport." The airplane's speed appeared to be "half that of the other airplanes" he had seen takeoff at UUU. The airplane continued towards the airport, losing altitude, until descending below the tree line, where the witness lost sight of it.

The accident occurred during the hours of daylight, located at 41 degrees, 31 minutes north latitude, 71 degrees, 16 minutes west longitude, at an elevation of 162 feet msl.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with ratings for single-engine and multi-engine land, and instrument airplane. Review of the pilot's logbook revealed that he had accumulated about 2,360 hours of total flight experience, with 692 hours in make and model.

The pilot's most recent Federal Aviation Administration (FAA) third class medical certificate was issued on November 5, 1999.

AIRCRAFT INFORMATION

The owner of a maintenance shop where the airplane was maintained stated that his company had conducted a 50-hour inspection of the airplane "very recently." Included in the inspection was an oil change. He further stated that the pilot mentioned to a mechanic that he had been having problems with the left side engine cowling cover; however, the mechanic did not observe any abnormalities with the cover.

Review of the airplane's maintenance records did not reveal any notations referencing the engine cowling cover or it's latches. The last recorded maintenance was dated on April 27, 2001, referencing the changing of the engine oil and oil filter.

METEOROLOGICAL INFORMATION

The recorded UUU winds at 0953 were from 360 degrees at 12 knots, gusting to 21 knots.

WRECKAGE AND IMPACT INFORMATION

The accident site was located in a field about 1/4 mile from the approach end of runway 04,

and on a 200-degree magnetic bearing from the airport. The airplane impacted buckets of rope dip, which was a black waterbased protective coating for rope, and barrels of nautical lines, before coming to rest upright against metal lobster traps. The airplane wreckage was on a magnetic heading of about 130 degrees.

The wreckage was examined on April 28 and 29, 2001. With the exception of the engine, a post crash fire consumed the airplane. All major components of the airplane were accounted for at the accident site.

The upper left hand side cowling was observed opened and undamaged. The bottom half of the cowling was crushed. Examination of the latching mechanism for the cowling revealed no damage to the forward latch. The rear latch exhibited damage to one half of the clamshell.

The upper right hand side cowling was observed secured to the bottom half of the cowling. Examination of the latching mechanism for the cowling revealed no damage to the either the forward or rear latches.

Rope dip was observed on the upper half of the left hand cowling cover, the left hand side of the engine crankcase, and on the rearward section of the left hand side bottom cowling. No rope dip was observed on the right hand side engine cowling or crankcase.

Flight control continuity was confirmed from the elevator, rudder, and aileron control surfaces to the cabin area.

The top six spark plugs were removed from the engine; their electrodes were intact and light gray in color. The left and right magnetos were removed from the engine and when rotated, a spark was observed from all leads.

The propeller assembly remained attached to the engine. One propeller was partially melted. The remaining portion of the blade was twisted. The second blade had its tip separated. The remaining portion of the blade displayed twisting and chord wise scratches. The third blade was intact and bent back under the wreckage.

The flap selector, located on the instrument panel, was in the retracted position. The right wing flap actuator was observed in the retracted position, and the left wing flap actuator was destroyed.

The landing gear selector was observed in the retracted position. The left, right and nose landing gear were found in the retracted position.

MEDICAL AND PATHOLOGICAL INFORMATION

The State of Rhode Island and Providence Plantations, Department of Health, Office of Medical Examiners, Providence, Rhode Island, performed an autopsy on the pilot, on May 1, 2001.

The FAA Toxicology and Accident Research Laboratory, Oklahoma City, Oklahoma conducted toxicological testing on the pilot.

ADDITIONAL INFORMATION

According to the pilot's flight instructor, she had conducted an instructional flight in the accident airplane, with the pilot, on the April 23, 2001. The flight, which was flown from the Taunton Municipal Airport (TAN), Taunton, Massachusetts, was part of an FAA Wings Program. The flight instructor did not observe the pilot check the oil level or open the engine cowling covers during the pre-flight inspection at TAN. The flight instructor also stated that she did not open the cowl covers during the preflight. As the airplane was started on the ramp at TAN, the left side engine cowl cover "became loose and opened all the way." The pilot remarked to the flight instructor that he thought he had secured it. He then shut the engine down, and re-secured the cowl cover. The engine was restarted and the flight was conducted uneventfully.

The flight instructor said that she had flown in the accident airplane on numerous occasions and never observed problems with any of the passenger entry doors. She did not recall the pilot ever reporting any problems with the doors.

According to the FAA Flying Handbook, "The turn to the final approach should also be sufficiently above the airport elevation to permit a final approach long enough for the pilot to accurately estimate the resultant point of touchdown, while maintaining the proper approach airspeed. This will require careful planning as to the starting point and the radius of the turn. Normally, it is recommended that the angle of bank not exceed a medium bank because the steeper the angle of bank, the higher the airspeed at which the airplane stalls. Since the base-to-final turn is made at a relatively low altitude, it is important that a stall not occur at this point. If an extremely steep bank is needed to prevent overshooting the proper final approach path, it is advisable to discontinue the approach, go around, and plan to start the turn earlier on the next approach rather than risk a hazardous situation."

Wreckage Release

The airplane wreckage was released on April 30, 2001, to a representative of the owners insurance company.

Pilot Information

Certificate:	Commercial	**Age:**	68,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:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	November 5, 1999
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	August 31, 2000
Flight Time:	2360 hours (Total, all aircraft), 692 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N55588
Model/Series:	A-36	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	E-2518
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	July 21, 2000 Annual	**Certified Max Gross Wt.:**	3663 lbs
Time Since Last Inspection:	93 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1573 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-550-B
Registered Owner:	Robert V. Kahle	**Rated Power:**	300 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:	UUU,172 ft msl	**Distance from Accident Site:**	
Observation Time:	09:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots / 21 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.12 inches Hg	**Temperature/Dew Point:**	12°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Middletown, RI (UUU)	**Type of Flight Plan Filed:**	IFR
Destination:	Frederick, MD (FDK)	**Type of Clearance:**	IFR
Departure Time:	09:28 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Newport State Airport UUU	**Runway Surface Type:**	Asphalt
Airport Elevation:	172 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	04	**IFR Approach:**	Visual
Runway Length/Width:	2999 ft / 75 ft	**VFR Approach/Landing:**	Full stop;Precautionary landing;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	41.523612,-71.283058

Administrative Information

Investigator In Charge (IIC):	Demko, Stephen
Additional Participating Persons:	William Stevens; FAA; Bedford, MA Paul Yoos; Raytheon Aircraft Company; Witchita, KS Alvan S Moder; Rhode Island Aeronautics; Warwick, RI
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Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52150