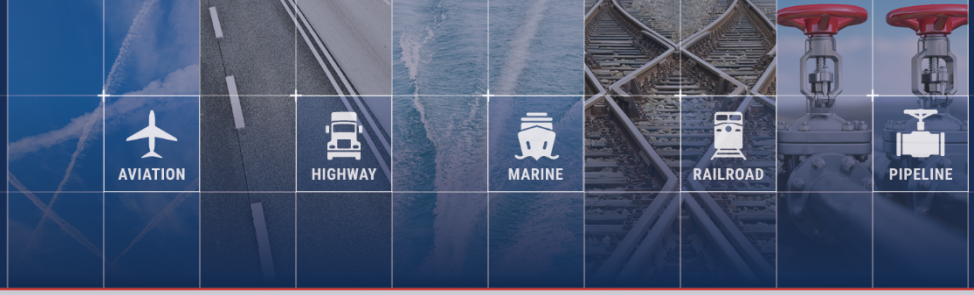


# Aviation Investigation Final Report

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|---|---|---|---|
| **Location:** | AMITYVILLE, New York | **Accident Number:** | NYC95LA008 |
| **Date & Time:** | October 12, 1994, 12:27 Local | **Registration:** | N601AV |
| **Aircraft:** | BEECH A36 | **Aircraft Damage:** | Substantial |
| **Defining Event:** | | **Injuries:** | 2 Serious |
| **Flight Conducted Under:** | Part 91: General aviation | | |

## Analysis

The pilot was receiving a re-examination checkride by a FAA inspector when the accident occurred. The flight was conducted in the traffic pattern for runway 01 at Republic Airport (FRG) for the purpose of doing touch-and-go landings on runway 01. While on base leg, the inspector simulated a loss of engine power by retarding the throttle. The pilot stated that he did the emergency procedure for the loss of power, and when he was instructed to advance the power, the engine did not respond. The pilot reported that the fuel pressure gage was indicating in the green arc range. The inspector turned the auxiliary fuel pump on, but the loss of power continued. The inspector took control of the airplane and did a forced landing into a reservoir. The examination of the airplane did not disclose evidence of mechanical malfunction. The airplane was placarded to takeoff and land with aux fuel pump off, except in case of loss of fuel pressure. The approved airplane flight manual indicates the emergency procedure for loss of engine power is to check the fuel flow gage and if fuel is abnormally low to turn the aux fuel pump on then off if performance does not improve in a few moments.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for undetermined reasons. Also causal was the inspector's improper inflight decision to simulate an emergency beyong the gliding distance to a suitable landing area.

## Findings

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

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED
2. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - FAA INSPECTOR
3. EMERGENCY PROCEDURE - IMPROPER - FAA INSPECTOR
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Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY
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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING

Findings
4. TERRAIN CONDITION - RAVINE
5. UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA

## Factual Information

On October 12, 1994 about 1227 eastern daylight time, N601AV, a Beech A36 airplane, lost engine power and was forced landed at Amityville, New York. Visual meteorological conditions existed. The certificated private pilot and the FAA Inspector were seriously injured. The airplane was substantially damaged. The flight originated at Republic Airport, Farmingdale, New York. The flight was operated under 14 CFR Part 91.

The pilot was receiving a re-examination checkride by the FAA Inspector when the accident occurred. The pilot and inspector were conducting flight in the traffic pattern for runway 01 at Republic Airport. The inspector retarded the throttle to simulate a loss of engine power and afterward the throttle was advanced to increase power, but the engine did not respond. The inspector took control of the airplane and he did a forced landing in a reservoir located in a residential area, about 0.5 mile southeast of the runway.

According to the pilot, the airplane was on extended downwind to the runway, just turning base leg at approximately 900 feet, when the inspector closed the throttle to idle. The pilot stated he observed manifold pressure drop below the green arc, and he started doing engine failure procedures and headed directly for the airport. He realized that he would not make the airport, so he decided to add power. The engine did not respond to throttle movement, and the inspector took controlof the airplane. The pilot reported that he switched fuel tanks per the inspector's instruction. The pilot stated that the inspector turned the fuel pump on, although the fuel pressure was in the green arc. He stated the inspector "put the aircraft into a stall and crashed the aircraft."

According to the FAA inspector, when he retarded the throttle, he felt the airplane was within gliding distance to the airport. When he realized the engine power could not be restored and he took control of the airplane. He indicated that he activated the fuel boost pump, but he does not recall what the fuel pressure was beforehand.

The airplane was examined at the accident site by the FAA on October 12, 1994; the airplane was examined by the NTSB at Republic Airport on October 18, 1995. The FAA examination determined the fuel boost pump switch was in the "on" position. The engine examination confirmed drive train continuity, magneto sparking, spark plug operation, fuel in the lines to the fuel manifold distributor valve, cylinder compression, and attachment of powerplant controls between the throttle quadrant to the applicable engine mounted accessories. Also, a visual check was negative for the presence of water contamination. Evidence of mechanical malfunction was not disclosed during the examination.

According to the FAA approved Airplane Flight Manual (AFM) for the Beech A-36 airplane the following, in part, is stated for the auxiliary fuel pump:

The electric auxiliary fuel pump is controlled by the ON- OFF toggle switch on the control console and provides pressure for starting and emergency operation. Immediately after starting, the auxiliary fuel pump can be used to purge the system of vapor caused by an extremely high ambient temperature or a start with the engine hot. The auxiliary fuel pump provides for near maximum engine fuel requirements, should the engine driven pump fail.

According to the AFM, the airplane is to be placarded to state in part:

AUX FUEL PUMP OPERATION Take-Off and Land With Aux Fuel Pump Off Except In Case Of Loss of Fuel Press

The emergency procedures stated in the AFM for loss of engine power states, in part, the following:

1. Fuel Flow Gage - Check

If fuel flow is abnormally low: a. Mixture - Full Rich b. Auxiliary Fuel Pump - On (then Off if performance does not improve in a few moments)

## Pilot Information

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|---|---|---|---|
| **Certificate:** | Private | **Age:** | 37,Male |
| **Airplane Rating(s):** | None | **Seat Occupied:** | Left |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | |
| **Instrument Rating(s):** | Airplane | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | No |
| **Medical Certification:** | Class 3 Valid Medical--no waivers/lim. | **Last FAA Medical Exam:** | June 25, 1993 |
| **Occupational Pilot:** | UNK | **Last Flight Review or Equivalent:** | |
| **Flight Time:** | 318 hours (Total, all aircraft), 4 hours (Total, this make and model), 244 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

## Aircraft and Owner/Operator Information

| | | | |
|---|---|---|---|
| **Aircraft Make:** | BEECH | **Registration:** | N601AV |
| **Model/Series:** | A36 A36 | **Aircraft Category:** | Airplane |
| **Year of Manufacture:** | | **Amateur Built:** | |
| **Airworthiness Certificate:** | Normal | **Serial Number:** | E-1763 |
| **Landing Gear Type:** | Retractable - Tricycle | **Seats:** | 6 |
| **Date/Type of Last Inspection:** | September 13, 1994 100 hour | **Certified Max Gross Wt.:** | 3600 lbs |
| **Time Since Last Inspection:** | 100 Hrs | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | 1628 Hrs | **Engine Manufacturer:** | CONTINENTAL |
| **ELT:** | Installed, activated, did not aid in locating accident | **Engine Model/Series:** | IO-520 |
| **Registered Owner:** | AIRCRAFT LEASING INC. | **Rated Power:** | 285 Horsepower |
| **Operator:** | FLIGHTWAYS | **Operating Certificate(s) Held:** | None |
| **Operator Does Business As:** | | **Operator Designator Code:** | |

## Meteorological Information and Flight Plan

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|---|---|---|---|
| **Conditions at Accident Site:** | Visual (VMC) | **Condition of Light:** | Day |
| **Observation Facility, Elevation:** | FRG ,81 ft msl | **Distance from Accident Site:** | 1 Nautical Miles |
| **Observation Time:** | 12:26 Local | **Direction from Accident Site:** | 345° |
| **Lowest Cloud Condition:** | Clear | **Visibility** | 30 miles |
| **Lowest Ceiling:** | None | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 8 knots / | **Turbulence Type Forecast/Actual:** | / |
| **Wind Direction:** | 10° | **Turbulence Severity Forecast/Actual:** | / |
| **Altimeter Setting:** | 30 inches Hg | **Temperature/Dew Point:** | 14°C / 1°C |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | FARMINGDALE , NY (FRG ) | **Type of Flight Plan Filed:** | None |
| **Destination:** | | **Type of Clearance:** | None |
| **Departure Time:** | 12:00 Local | **Type of Airspace:** | Class D |

## Airport Information

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|---|---|---|---|
| **Airport:** | REPUBLIC AIRPORT FRG | **Runway Surface Type:** | Asphalt |
| **Airport Elevation:** | 81 ft msl | **Runway Surface Condition:** | Dry |
| **Runway Used:** | 19 | **IFR Approach:** | None |
| **Runway Length/Width:** | | **VFR Approach/Landing:** | Forced landing;Simulated forced landing;Traffic pattern |

## Wreckage and Impact Information

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|---|---|---|---|
| **Crew Injuries:** | 2 Serious | **Aircraft Damage:** | Substantial |
| **Passenger Injuries:** | | **Aircraft Fire:** | None |
| **Ground Injuries:** | N/A | **Aircraft Explosion:** | None |
| **Total Injuries:** | 2 Serious | **Latitude, Longitude:** | 40.659133,-73.409904(est) |

## Administrative Information

| | |
|---|---|
| **Investigator In Charge (IIC):** | Jones, Dennis |
| **Additional Participating Persons:** | EDWARD HARABUSH; VALLEY STREAM , NY<br>NATALE BRUZZESE; VALLEY STREAM , NY<br>GEORGE HOLLINGSWORTH; MOBILE , AL<br>PAUL YOOS; WICHITA , KS |
| **Original Publish Date:** | January 19, 1996 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class |
| **Note:** | |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=38884 |