# Aviation Investigation Final Report

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| **Location:** | Ravenna, Ohio | **Accident Number:** | CHI07LA096 |
| **Date & Time:** | March 28, 2007, 19:45 Local | **Registration:** | N992DC |
| **Aircraft:** | Alon A2 | **Aircraft Damage:** | Substantial |
| **Defining Event:** | | **Injuries:** | 2 Minor |
| **Flight Conducted Under:** | Part 91: General aviation - Personal | | |

## Analysis

The pilot reported that the fuel tanks were filled at the departure airport. His accident report, in part, stated, "Engine quit - tried to restart engine but failed - Passenger who is an airline pilot with more experience asked for permission to assume [pilot in command], which I consented. We radioed [approach control] of our dilemma and for a heading to the nearest airport ... - we landed 1 mile short of [the closest airport] in a field where we hit a ditch, impacting hard, spun around and came to an abrupt stop." An examination of the wreckage revealed no pre-impact anomalies. The carburetor heat was found in the off position. Weather about 51 minutes prior to the accident was: Wind 050 degrees at 12 knots; visibility 10 statute miles; sky condition clear; temperature 14 degrees C; dew point 1 degree C; altimeter 30.27 inches of mercury. Weather about 9 minutes after the accident was: Wind 040 degrees at 8 knots; visibility 10 statute miles; sky condition clear; temperature 12 degrees C; dew point -1 degree C; altimeter 30.30 inches of mercury. The local temperature and dew point at the time of the accident were plotted on a Transport Canada carburetor-icing chart. Their intersection fell in the serious icing-descent power area. Neither the pilot nor the pilot rated passenger's written accident reports listed the use of carburetor heat. The pilot was asked in a telephone interview about it and he reported that carburetor heat was used during the forced landing.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to use carburetor heat in cruise flight. Carburetor icing conditions and a ditch were factors.

## Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE

Findings
1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) CARBURETOR HEAT - NOT USED - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING
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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings
3. (F) TERRAIN CONDITION - DITCH

## Factual Information

On March 28, 2007, about 1945 eastern daylight time, an Alon A2, N992DC, operated by a private pilot, sustained substantial damage on impact with terrain during a forced landing following an in-flight loss of engine power during cruise near Ravenna, Ohio. The personal flight was operating under 14 Code of Federal Regulations Part 91. The pilot and pilot rated passenger sustained minor injuries. Visual meteorological conditions prevailed at the time of the accident. No flight plan was on file. The flight originated from the Youngstown-Warren Regional Airport (YNG), near Vienna, Ohio, about 1930, and was destined for the Akron Fulton International Airport (AKR), near Akron, Ohio.

Transcripts from the Federal Aviation Administration (FAA) approach control frequency for the Akron-Canton Airport (CAK) showed that the flight contacted approach about 1939 and the pilot requested flight following. About 1940, the pilot requested a heading to the nearest airport and reported a loss of engine power. About 1941, the flight was given a heading for the Portage County Airport and the pilot reported that the airplane was at 3,500 feet above mean sea level. About 1943, the pilot reported that the fuel tanks were full. About 1945, the pilot stated, "two delta charlie is going to have to put into a field."

The pilot reported that the fuel tanks were filled at YNG. His accident report, in part, stated:

> Requested flight following from CAK - ... engine quit - tried to restart engine but failed - Passenger who is an airline pilot with more experience asked for permission to assume [pilot in command], which I consented. We radioed CAK of our dilemma and for a heading to the nearest airport which was 29G - we landed 1 mile short of 29G in a field where we hit a ditch, impacting hard, spun around and came to an abrupt stop.

FAA inspectors examined the wreckage. No pre-impact anomalies were detected. The carburetor heat was found in the off position.

At 1854, the recorded weather at AKR was: Wind 050 degrees at 12 knots; visibility 10 statute miles; sky condition clear; temperature 14 degrees C; dew point 1 degree C; altimeter 30.27 inches of mercury.

At 1954, the recorded weather at AKR was: Wind 040 degrees at 8 knots; visibility 10 statute miles; sky condition clear; temperature 12 degrees C; dew point -1 degree C; altimeter 30.30 inches of mercury.

The local temperature and dew point at the time of the accident were plotted on a Transport Canada carburetor-icing chart. Their intersection fell in the serious icing-descent power area.

Neither the pilot nor the pilot rated passenger's written accident reports listed the use of carburetor heat. The pilot was asked in a telephone interview about it and he reported that carburetor heat was used during the forced landing.

## Pilot Information

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| **Certificate:** | Private | **Age:** | 59,Male |
| **Airplane Rating(s):** | Single-engine land | **Seat Occupied:** | Left |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | |
| **Instrument Rating(s):** | None | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | No |
| **Medical Certification:** | Class 3 Without waivers/limitations | **Last FAA Medical Exam:** | March 1, 2007 |
| **Occupational Pilot:** | No | **Last Flight Review or Equivalent:** | August 1, 2005 |
| **Flight Time:** | 297 hours (Total, all aircraft), 203 hours (Total, this make and model), 297 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

## Other flight crew Information

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|---|---|---|---|
| **Certificate:** | Airline transport; Flight instructor | **Age:** | 30,Male |
| **Airplane Rating(s):** | Single-engine land; Multi-engine land | **Seat Occupied:** | Right |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | |
| **Instrument Rating(s):** | Airplane | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | Airplane multi-engine; Airplane single-engine; Instrument airplane | **Toxicology Performed:** | No |
| **Medical Certification:** | Class 1 Without waivers/limitations | **Last FAA Medical Exam:** | August 1, 2006 |
| **Occupational Pilot:** | Yes | **Last Flight Review or Equivalent:** | December 1, 2006 |
| **Flight Time:** | 6649 hours (Total, all aircraft), 153 hours (Total, this make and model), 1318 hours (Pilot In Command, all aircraft), 201 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft) | | |

## Aircraft and Owner/Operator Information

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|---|---|---|---|
| **Aircraft Make:** | Alon | **Registration:** | N992DC |
| **Model/Series:** | A2 | **Aircraft Category:** | Airplane |
| **Year of Manufacture:** | | **Amateur Built:** | |
| **Airworthiness Certificate:** | Normal | **Serial Number:** | A-210 |
| **Landing Gear Type:** | Tricycle | **Seats:** | 2 |
| **Date/Type of Last Inspection:** | September 1, 2006 Annual | **Certified Max Gross Wt.:** | 1450 lbs |
| **Time Since Last Inspection:** | 25 Hrs | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | 1237.33 Hrs at time of accident | **Engine Manufacturer:** | Continental |
| **ELT:** | Installed, activated, aided in locating accident | **Engine Model/Series:** | C90-16F |
| **Registered Owner:** | On file | **Rated Power:** | 90 Horsepower |
| **Operator:** | On file | **Operating Certificate(s) Held:** | None |

## Meteorological Information and Flight Plan

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| **Conditions at Accident Site:** | Visual (VMC) | **Condition of Light:** | Dusk |
| **Observation Facility, Elevation:** | AKR,1067 ft msl | **Distance from Accident Site:** | 14 Nautical Miles |
| **Observation Time:** | 19:54 Local | **Direction from Accident Site:** | 225° |
| **Lowest Cloud Condition:** | Clear | **Visibility** | 10 miles |
| **Lowest Ceiling:** | None | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 8 knots / | **Turbulence Type Forecast/Actual:** | / |
| **Wind Direction:** | 40° | **Turbulence Severity Forecast/Actual:** | / |
| **Altimeter Setting:** | 30.31 inches Hg | **Temperature/Dew Point:** | 12°C / -1°C |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | Vienna, OH (YNG ) | **Type of Flight Plan Filed:** | None |
| **Destination:** | AKRON, OH (AKR ) | **Type of Clearance:** | VFR |
| **Departure Time:** | 19:30 Local | **Type of Airspace:** | |

## Airport Information

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|---|---|---|---|
| **Airport:** | AKRON FULTON INTL AKR | **Runway Surface Type:** | |
| **Airport Elevation:** | 1067 ft msl | **Runway Surface Condition:** | |
| **Runway Used:** | | **IFR Approach:** | None |
| **Runway Length/Width:** | | **VFR Approach/Landing:** | Forced landing |

## Wreckage and Impact Information

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|---|---|---|---|
| **Crew Injuries:** | 1 Minor | **Aircraft Damage:** | Substantial |
| **Passenger Injuries:** | 1 Minor | **Aircraft Fire:** | None |
| **Ground Injuries:** | N/A | **Aircraft Explosion:** | None |
| **Total Injuries:** | 2 Minor | **Latitude, Longitude:** | |

## Administrative Information

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| **Investigator In Charge (IIC):** | Malinowski, Edward |
| **Additional Participating Persons:** | Robert W Dale; Federal Aviation Administration; Cleveland, OH |
| **Original Publish Date:** | February 28, 2008 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class |
| **Note:** | |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=65501 |