Aviation Investigation Final Report

Location:	MINIER, Illinois	**Accident Number:**	CHI01LA023
Date & Time:	October 23, 2000, 16:00 Local	**Registration:**	N94176
Aircraft:	Ercoupe 415-E	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane encountered an in-flight loss of engine power and sustained substantial damage on contact with terrain during a forced landing in a plowed field. The pilot was uninjured. The pilot stated, "The takeoff went normal, power from engine was 2350 RPM at full throttle fuel pressure guage showed 4.5 "(p.s.i.). At 70 M.P.H. climb speed, the engine lost power at approx. 300 ft. A.G.L. applied carb heat, pumped the throttle, ck. elect. pump on O.K. - no power - turned 45 [degrees] landed. In field. (Plowed fld.)" An on-scene examination of the airplane revealed no anomalies. All the spark plugs were found covered with "black soot looking deposits." The temperature was 24 degrees C and the dew point was 16 degrees C. A copy of a Transport Canada Carburetor Icing chart was reviewed. The temperature and dew point were plotted on the chart and their intersection falls in the moderate icing - cruise power or serious icing - descent power area of the chart.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the carburetor ice and after takeoff, the unsuitable terrain the pilot encountered during the forced landing. Factors were the carburetor icing conditions and the plowed field condition.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. CARBURETOR HEAT - NOT USED - PILOT IN COMMAND
3. (C) FUEL SYSTEM,CARBURETOR - ICE

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings
4. (F) TERRAIN CONDITION - PLOWED/FURROWED
5. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED - PILOT IN COMMAND

Factual Information

On October 23, 2000, about 1600 central daylight time, an Ercoupe 415-E, N94176, piloted by a commercial pilot, encountered an in-flight loss of engine power and sustained substantial damage on contact with terrain during a forced landing in a plowed field near Minier, Illinois. The personal flight was operating under 14 CFR Part 91. Visual meteorological conditions prevailed at the time of the accident. No flight plan was on file. The pilot was uninjured. The flight was on initial climbout from the Illinois Valley Parachute Club Airport, near Minier, Illinois and was destined for Capital Airport, near Springfield, Illinois.

The pilot stated, "The takeoff went as normal, power from engine was 2350 RPM at full throttle[.] Fuel pressure guage showed 4.5 "(p.s.i.). At 70 M.P.H. climb speed, the engine lost power at approx. 300 ft. A.G.L.[.] Applied carb heat, pumped the throttle, ck. elect. pump on O.K. - no power - turned 45 [degrees] landed. In field. (Plowed fld.)"

A Federal Aviation Administration inspector performed an on-scene examination of the airplane. No anomalies were listed in the inspector's statement. All the spark plugs were found covered with "black soot looking deposits."

At 1550, the Central Illinois Regional Airport at Bloomington-Normal Airport, near Bloomington/Normal, Illinois, weather observation was: Wind 200 degrees at 5 knots; visibility 7 statute miles; sky condition broken 9,000 feet overcast 18,000 feet; temperature 24 degrees C; dew point 16 degrees C; altimeter 30.38 inches of mercury.

A copy of a Transport Canada Carburetor Icing chart was reviewed. The temperature and dew point were plotted on the chart and their intersection falls in the moderate icing - cruise power or serious icing - descent power area of the chart. See appended icing chart.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	66,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	December 10, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	6756 hours (Total, all aircraft), 650 hours (Total, this make and model), 6570 hours (Pilot In Command, all aircraft), 54 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:	Ercoupe	**Registration:**	N94176
Model/Series:	415-E 415-E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1499
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	November 15, 1999 Annual	**Certified Max Gross Wt.:**	1405 lbs
Time Since Last Inspection:	97 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3615 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	C85-12F
Registered Owner:	THOMAS T. FITZGERALD	**Rated Power:**	85 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BMI ,871 ft msl	**Distance from Accident Site:**	20 Nautical Miles
Observation Time:	15:50 Local	**Direction from Accident Site:**	79°
Lowest Cloud Condition:	Unknown	**Visibility**	7 miles
Lowest Ceiling:	Broken / 9000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	75°C / 61°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, IL (81IL)	**Type of Flight Plan Filed:**	None
Destination:	SPRINGFIELD , IL (SPI)	**Type of Clearance:**	None
Departure Time:	16:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	IL VALLEY PARACHUTE CLUB 81IL	**Runway Surface Type:**	
Airport Elevation:	646 ft msl	**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

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:**	40.430015,-89.310234(est)

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	DAVID SLAYBAUGH; SPRINGFIELD , IL
Original Publish Date:	October 23, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50544

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.