



# Aviation Investigation Final Report

<b>Location:</b>	Brighton, Michigan	<b>Accident Number:</b>	CHI07CA110
<b>Date &amp; Time:</b>	April 21, 2007, 13:40 Local	<b>Registration:</b>	N99811
<b>Aircraft:</b>	Engineering & Research Ercoupe 415-C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The airplane impacted terrain while on final approach to runway 22 (3,120 feet by 24 feet, asphalt). The student pilot stated that the airplane "was caught in a downdraft/wind shear and was not able to clear perimeter fence, even with application of full power." The pilot reported there was a small valley to the northeast of the airport which "probably caused the downdraft." An on-scene investigation revealed that the airplane impacted the radio-antenna of a passenger vehicle operating on the road adjacent to the airport. The airplane then impacted a rising embankment and proceeded through the airport perimeter fence, coming to rest short of the approach threshold. The student pilot was flying with an expired 90 day solo endorsement and did not have a medical certificate. The student pilot was operating the airplane as a light-sport pilot. A local weather reporting station reported the winds were from 260 magnetic degrees at 4 knots at the time of the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The student pilot's failure to maintain proper glidepath to the runway. Contributing factors to the accident included the passenger vehicle, the rising embankment, and the airport perimeter fence.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) PROPER GLIDEPATH - NOT MAINTAINED - PILOT IN COMMAND
2. (F) OBJECT - VEHICLE

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

3. (F) TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT
4. (F) OBJECT - FENCE

## Factual Information

The airplane impacted terrain while on final approach to runway 22 (3,120 feet by 24 feet, asphalt). The student pilot stated that the airplane "was caught in a downdraft/wind shear and was not able to clear perimeter fence, even with application of full power." The pilot reported there was a small valley to the northeast of the airport which "probably caused the downdraft." An on-scene investigation revealed that the airplane impacted the radio-antenna of a passenger vehicle operating on the road adjacent to the airport. The airplane then impacted a rising embankment and proceeded through the airport perimeter fence, coming to rest short of the approach threshold. The student pilot was flying with an expired 90 day solo endorsement and did not have a medical certificate. The student pilot was operating the airplane as a light-sport pilot. A local weather reporting station reported the winds were from 260 magnetic degrees at 4 knots at the time of the accident.

### Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	72, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	None None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	103 hours (Total, all aircraft), 73 hours (Total, this make and model), 56 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Engineering & Research	<b>Registration:</b>	N99811
<b>Model/Series:</b>	Ercoupe 415-C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	2434
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 1, 2006 Annual	<b>Certified Max Gross Wt.:</b>	1260 lbs
<b>Time Since Last Inspection:</b>	42 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	C85
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	85 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	OZW,962 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	13:35 Local	<b>Direction from Accident Site:</b>	292°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.22 inches Hg	<b>Temperature/Dew Point:</b>	21°C / -2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Brighton, MI (45G )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(45G )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:20 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Brighton Airport 45G	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	22	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3120 ft / 24 ft	<b>VFR Approach/Landing:</b>	Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	42.893611,-83.998886

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Fox, Andrew
<b>Additional Participating Persons:</b>	Serge Cote; Federal Aviation Administration, Detroit FSDO; Detroit, MI
<b>Original Publish Date:</b>	June 27, 2007
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=65667">https://data.nts.gov/Docket?ProjectID=65667</a>

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