



National Transportation Safety Board Aviation Accident Final Report

Location:	LAKE CITY, MI	Accident Number:	CHI98LA002
Date & Time:	10/01/1997, 1830 EDT	Registration:	N19006
Aircraft:	Mikowski CHALLENGER II S	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot departed the airport for a short local flight. The pilot stated he throttled back and could no longer maintain control of the aircraft. He said he tried to increase the power, but the engine quit. He descended in a left bank into trees. The previous day the pilot added a door kit to the aircraft. The manufacturer of the kit recommends adding a rudder trim tab to the aircraft. No trim tab was found. Examination revealed that the fuel in the tank had 'excessive oil to fuel ratio.' The engine run unsuccessful until the spark plugs were changed.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the improper oil to gas mixture in the fuel during refueling and the pilot did not follow the written instructions from the kit manufacturer. Factors contributing to the accident were the pilot could not maintain directional control and the low altitude.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. (F) DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND
 2. (C) INSTRUCTIONS, WRITTEN/VERBAL - NOT FOLLOWED - PILOT IN COMMAND
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Occurrence #2: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: MANEUVERING

Findings

3. (C) FLUID, FUEL - IMPROPER
 4. (F) ALTITUDE/CLEARANCE - LOW - PILOT IN COMMAND
 5. (C) REFUELING - IMPROPER - PILOT IN COMMAND
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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - UNCONTROLLED

Findings

6. OBJECT - TREE(S)
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On October 1, 1997, at 1830 eastern daylight time (edt), a Mikowski Challenger II S, N19006, owned and piloted by a private pilot, was destroyed when it collided with the terrain shortly after takeoff. The pilot reported serious injuries. Visual meteorological conditions prevailed at the time of the accident. The personal 14 CFR Part 91 flight was not operating on a flight plan. The flight departed Home Acres Sky Ranch Airport, Lake City, Michigan, at 1828 edt.

In the pilot's written statement he said he took off to fly over a farm field. The pilot said he "throttled back a little and started a shallow left turn." He stated as he tried to get out of the bank, the airplane would not respond. The pilot said he then "tried to give it more power and the engine quit." He said the airplane "continued in the downward left spiral until it hit a tree."

Several witnesses saw and heard the crash. One witness stated he "...observed an airplane that was flying really low to the trees and then [he saw] the airplane make a U-turn..." and crash into trees. Other witnesses only heard the aircraft engine quit and heard the tree impact.

The owner/pilot of the aircraft reported putting a Challenger II door kit on his aircraft the day prior to the accident. A notice that comes with the kit states that there will be right rudder trim necessary when flying the aircraft with the doors installed. The manufacturer of the kit recommends adding a 6-inch by 3-inch trim tab on the rudder, which should be "deflected to the left about 20 to 30 degrees." No trim tab was found on the aircraft.

A test of the engine by Optimus Aircraft Service of Lake City, Michigan, witnessed by two inspectors with the Federal Aviation Administration (FAA) Grand Rapids FSDO, found the fuel in the tank had an "excessive oil to fuel ratio." An attempt to run the engine was not successful with the original spark plugs. New spark plugs were installed in the engine and the engine ran normal.

Pilot Information

Certificate:	Private	Age:	70, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/07/1996
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	135 hours (Total, all aircraft), 11 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mikowski	Registration:	N19006
Model/Series:	CHALLENGER II S CHALLENGER	Aircraft Category:	Ultralight
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	CH20391
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	64 Hours	Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	521
Registered Owner:	DALE JUNIOR SOLEM	Rated Power:	64 hp
Operator:	DALE JUNIOR SOLEM	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CAD, 1307 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1920 EDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	7 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	8°C / 4°C
Precipitation and Obscuration:			
Departure Point:	(Y91)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1828 CDT	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): TODD J CARLSON **Report Date:** 02/28/2000

Additional Participating Persons: WILLIAM W BEST; GRAND RAPIDS, MI

Publish Date:

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).