



Aviation Investigation Final Report

Location:	TRAVERSE CITY, Michigan	Accident Number:	CHI98FAMS1
Date & Time:	July 3, 1998, 18:45 Local	Registration:	N7868M
Aircraft:	Aero Vodochody Aero. Works L-39C	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane took off at 1831 edt. At 1844 edt, the tower controller asked the pilot of the airplane for a position report. The pilot replied that he was 27 miles northeast of the airport tracking the 246 degree radial. The pilot told the tower that he would call them again when he got within five miles [of the airport]. The airplane was tracked by air traffic control radar making a turn and tracking due west at 300 miles per hour. The airplane was tracked to a position of 344 degrees at 31.1 miles off the Traverse City (TVC) VOR. Radar contact was lost as the airplane approached South Fox Island (TVC VOR 177 degree radial at 9.6 miles). One minute and 20 seconds after radar contact was lost, a fast moving primary target was tracked to a position 9 miles north of South Fox Island, where the target was lost. A search for the airplane was initiated at 2057 edt. On July 4, 1998, at 2235 edt, search operations were suspended.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Undetermined.

Findings

Occurrence #1: MISSING AIRCRAFT
Phase of Operation: CRUISE

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Factual Information

On July 3, 1998, at 1845 eastern daylight time (edt), an Aero Vodochody L-39C, N7868M, operated by a commercial pilot, was reported missing over Lake Michigan, in the vicinity west-northwest of Traverse City, Michigan. Visual meteorological conditions prevailed at the time of the accident. The flight was being conducted under 14 CFR Part 91. There was no flight plan on file. The pilot and pilot-rated passenger on board have not been found. The local flight departed from the Cherry Capital Airport, Traverse City, Michigan, at 1831 edt.

The airplane had been flown from Quincy, Illinois, to Traverse City, Michigan, earlier that day, for the purpose of performing exhibition flights in the National Cherry Festival Airshow, scheduled for July 4-5, 1998. A student at Northwestern Michigan College said that the airplane arrived at Cherry Capital Airport at approximately 1710 edt.

A witness at Harbor Air, a fixed base operator on the Cherry Capital Airport, said that following its arrival, the airplane was fueled with 183 gallons of Phillips 66 jet fuel.

The Director of the Aviation Division at Northwestern Michigan College said that the college had worked with the Cherry Festival coordinators for several years, housing visiting airplanes used in the airshow. Because of this, arrangements were made so that he and the passenger of the missing airplane (an instructor pilot, also employed by the college), could ride in the L-39C, and a Migoyan-Gurevich (MiG)-21, also owned and operated by Air USA, Incorporated. The witness said that he went up in the MiG- 21, taking off at around 1900 edt. The L-39C took off before him. When he got back at approximately 2000 edt, the witness discovered that the L-39C was overdue to arrive back at the airport.

The Manager at the Cherry Capital Airport Air Traffic Control Tower (ATCT) said that the airplane took off at 1831 edt. At 1844 edt, the tower controller asked the pilot of the airplane for a position report. The pilot answered that he was 27 miles northeast of the airport tracking the 246 degree radial. The pilot told the tower that he would call them again when he got within five miles [of the airport].

Shortly following the pilot's radio transmission, the airplane was tracked by ATCT radar making a turn and tracking due west at 300 miles per hour. The airplane was tracked to a position off of the Traverse City (TVC) VOR of 344 degrees at 31.1 miles. Radar contact was lost as the airplane approached South Fox Island (TVC VOR 177 degree radial at 9.6 miles). One minute and 20 seconds after radar contact was lost, a fast moving primary target was tracked to a position 9 miles north of South Fox Island, where the target was lost.

At 2057 edt, the U. S. Coast Guard initiated search and rescue operations for the missing airplane. U. S Coast Guard, U. S. Navy, and Canadian Forces resources (air and sea) were used

in the search. An area of approximately 2,300 square nautical miles of Lake Michigan extending from Frankfort, Michigan, north to the southern shoreline of the Upper Peninsula, near Port Island, Michigan, was searched. The search included North and South Manitou Islands, Fox Island, Beaver Island, High Island, and Gull Island. On July 4, 1998, at 2235 edt, search operations were suspended.

The L-39C airplane was manufactured by the Aero Vodochody Company, in what is now the Czech Republic, in 1984. It was used as a primary, tandem-seat, military-jet training aircraft for the former Warsaw pact nations. The airplane was registered to Air USA, Incorporated, on October 4, 1995, operating under the registration number N7868M. The airplane was issued a special airworthiness certificate, experimental category, on April 4, 1998. The airplane was being used for exhibition purposes, and was scheduled to appear at airshows through September of 1998.

Pilot Information

Certificate:	Commercial	Age:	49, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	March 27, 1998
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	5500 hours (Total, all aircraft), 35 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Vodochody Aero. Works	Registration:	N7868M
Model/Series:	L-39C L-39C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	482846
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	April 24, 1998 Annual	Certified Max Gross Wt.:	10400 lbs
Time Since Last Inspection:	40 Hrs	Engines:	1 Turbo fan
Airframe Total Time:	954 Hrs	Engine Manufacturer:	Ivchenco
ELT:	Not installed	Engine Model/Series:	AI-25TL
Registered Owner:	AIR USA, INC.	Rated Power:	3792 Lbs thrust
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:	TVC ,624 ft msl	Distance from Accident Site:	34 Nautical Miles
Observation Time:	18:45 Local	Direction from Accident Site:	159°
Lowest Cloud Condition:	Scattered / 5500 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 11000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	21°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(TVC)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	18:31 Local	Type of Airspace:	Class D

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	
Ground Injuries:	N/A	Aircraft Explosion:	
Total Injuries:	2 Fatal	Latitude, Longitude:	44.760887,-85.699188(est)

Administrative Information

Investigator In Charge (IIC): Bowling, David

Additional Participating Persons: VITO CARELLO; GRAND RAPIDS , MI
ROBERT E SCOTT; SPRINGFIELD , IL

Original Publish Date: February 15, 2001

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=10744>

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](#).