



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Frankston, TX	<b>Accident Number:</b>	CEN12FA152
<b>Date &amp; Time:</b>	02/08/2012, 1200 CST	<b>Registration:</b>	N8293J
<b>Aircraft:</b>	VARGA AIRCRAFT CORP. 2150A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot was returning from a cross-country flight. The airplane was overdue, and a search was initiated. The airplane was located in a lake short of the pilot's destination airport. There were no reported witnesses to the accident. The airplane's canopy was found locked in the open position, the pilot's seat belts were unlatched, the fuel shut-off valves and ignition switch were in the "OFF" position, and the battery and avionics switches were also in the off position. The throttle was found full open, the mixture control was full rich, and the carburetor heat was in the cold position. The airplane was recovered, and the engine was test run. The engine started and ran; no preimpact abnormalities with the airplane or engine were found. The medical examiner noted the pilot's cause of death as "drowning, hypothermia, and minor blunt force injuries." The weather in the area was clear with light wind; however, the temperature and dew point indicated that the airplane was operating in an area that was associated with a serious risk of carburetor ice accumulation at cruise power settings. Based on the location of the destination airport, weather, and the airplane's condition and location, it is likely that the pilot had not applied carburetor heat, and the airplane experienced a loss of engine power due to carburetor ice. The pilot then had to ditch the airplane in the lake. The loss of engine power was likely due to carburetor ice.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power due to carburetor ice, which resulted in the pilot ditching the airplane into the lake. Contributing to the accident was the pilot's decision not to apply carburetor heat.

## Findings

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<b>Personnel issues</b>	Use of equip/system - Pilot (Factor)
<b>Environmental issues</b>	Conducive to carburetor icing - Effect on operation (Cause)

## Factual Information

### HISTORY OF FLIGHT

On February 8, 2012, approximately 1200 central standard time, a Varga Aircraft Corporation 2150A single-engine airplane, N8293J, impacted Lake Palestine, while approaching the Aero Estates Airport (T25), Frankston, Texas. The airplane sustained minor damage and the private rated pilot, the sole occupant, was fatality injured. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal cross-country flight. Visual flight rules (VFR) meteorological conditions prevailed and a VFR flight plan was not filed. The flight originated from the Cherokee County Airport (JSO), Jacksonville, Texas.

The pilot departed T25 earlier in the day with the intent of refueling the airplane. Fuel records at JSO reveal that about 1045, the airplane was serviced with about 18 gallons of fuel and then was seen departing the airport, headed north. When the pilot did not return home, an ALNOT (Alert Notice) for a missing aircraft was issued and a search was initiated. The airplane was located on February 9th, just off shore of Lake Palestine, in approximately 18 feet of water.

Once the airplane was retrieved from the lake, the National Transportation Safety Board (NTSB) Investigator-In-Charge (IIC) and inspectors from the Federal Aviation Administration (FAA), examined the airplane wreckage on site. A visual examination of the airplane and engine revealed minor damage to the airplane and no discrepancies with the engine.

### PERSONNEL INFORMATION

The pilot held a private pilot certificate for airplane single-engine, multi-engine land, with instrument airplane ratings. The pilot also held a mechanic certificate with airframe and powerplant ratings. His third-class FAA medical was issued on April 04, 2011. According to the pilot's log book, he had approximately 5,575 total flight hours.

### AIRCRAFT INFORMATION

The accident airplane was a Varga 2150A, which is an all metal, low wing, tandem two-seat airplane, with fixed tricycle landing gear. The airplane was powered by a reciprocating Lycoming O-320 engine that developed 150 horsepower. The airplane was not equipped with a carburetor ice indicator.

### METEOROLOGICAL INFORMATION

At 1135, the automated weather station at JSO, located about 16 miles southeast of the accident site, reported the wind from 030 degrees at 6 knots, temperature 48 degrees Fahrenheit (F), dew point 37 degrees Fahrenheit, (F), visibility 10 miles, a clear sky, and an altimeter pressure setting 30.44 inches of mercury.

At 1153, the automated weather station at Tyler Pounds Regional airport, located about 17 miles north of the accident site, reported the wind from 290 degrees at 5 knots, temperature 48 degrees F, dew point 37 degrees F, visibility 10 miles, sky overcast at 2,500 feet, and an

altimeter pressure setting 30.46 inches of mercury.

At 1135, the automated weather station at Palestine Municipal airport, located about 22 miles southwest of the accident site, reported the wind from 350 degrees at 5 knots, temperature 52 degrees F, dew point 39 degrees F, visibility 10 miles, a clear sky, and an altimeter pressure setting 30.45 inches of mercury.

The carburetor icing probability chart included in Federal Aviation Administration Special Airworthiness Information Bulletin No. CE-09-35, Carburetor Icing Prevention, indicated that the airplane was operating in an area that was associated with a serious risk of carburetor ice accumulation at cruise power settings.

#### COMMUNICATIONS & RADAR INFORMATION

Both JSO and T25 do not have operating control towers and pilots are advised to use CTAF (Common Traffic Advisory Frequency) for communication. The pilot was not in contact with air traffic control/radar service and no distress call from the pilot was reported.

#### WRECKAGE AND IMPACT INFORMATION

The NTSB IIC, and inspectors from the FAA, examined the airplane wreckage on site. After retrieval from water, the airplane placed on shore; the airplane's canopy was found locked in the open position and the pilot's seat belts were unlatched. Additionally, the examination revealed that the fuel shut-off valves and ignition switch were in the "OFF" position, the battery and avionics switches were also in the off position. The throttle was found full open, mixture control was found set to full rich, and the carburetor heat was in the cold position. The airplane was then relocated to salvage facility. To preserve the engine for a later examination, both magnetos were removed from the engine, the oil was drained from the engine and replaced with new oil, the lower sparkplugs were removed, and the carburetor bowl and gascolator were drained.

#### MEDICAL AND PATHOLOGICAL INFORMATION

The Southwestern Institute of Forensic Sciences, Office of the Medical Examiner, Dallas, Texas, conducted an autopsy on the pilot. The cause of death was determined to be "drowning, hypothermia, and minor blunt force injuries".

The FAA Toxicology Accident Research Library, Oklahoma City, Oklahoma, conducted toxicological testing. The results were negative for tested drugs.

#### TEST AND RESEARCH

A follow-up examination of the aircraft wreckage was conducted at a salvage facility by the NTSB IIC and an FAA inspector. The airplane's lower engine cowling had sustained damage during the accident, resulting in damage to the carburetor's airbox. In order to perform an engine run, the airbox was removed, the magnetos were re-installed, and the carburetor bowl was drained of remaining water. The battery was installed and fuel was connected to the

airplane's left side fuel line. The engine started and operated on both the left and right magnetos. The engine was shut down, and the fuel was switched to the right side fuel lines. The engine started again and operated on both magnetos. No pre-impact abnormalities were noted with the engine or airframe.

## History of Flight

Enroute	Fuel related Loss of engine power (total) (Defining event)
Emergency descent	Ditching

## Pilot Information

Certificate:	Private	Age:	85, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Without Waivers/Limitations	Last FAA Medical Exam:	04/20/2011
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	5575 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	VARGA AIRCRAFT CORP.	Registration:	N8293J
Model/Series:	2150A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	VAC-139-79
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	05/23/2011, Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1831 Hours as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	O-320
Registered Owner:	On file	Rated Power:	150 hp
Operator:	On file	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KJSO	Distance from Accident Site:	17 Nautical Miles
Observation Time:	1135 CST	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.44 inches Hg	Temperature/Dew Point:	9°C / 3°C
Precipitation and Obscuration:	No Precipitation		
Departure Point:	Jacksonville, TX (JSO)	Type of Flight Plan Filed:	None
Destination:	Frankston, TX (T25)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	32.077500, -95.436944 (est)

## Administrative Information

Investigator In Charge (IIC):	Craig Hatch	Report Date:	02/27/2013
Additional Participating Persons:	Gavin Hill; FAA FSDO; Dallas, TX John Butler; Lycoming Aircraft engines; Arlington, TX		
Publish Date:	02/27/2013		
Investigation Docket:	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=82857">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=82857</a>		

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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](#).