



# Aviation Investigation Final Report

<b>Location:</b>	Plainwell, Michigan	<b>Accident Number:</b>	CEN11FA663
<b>Date &amp; Time:</b>	September 23, 2011, 08:53 Local	<b>Registration:</b>	N54WB
<b>Aircraft:</b>	Thorp T-18	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Controlled flight into terr/obj (CFIT)	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The accident airplane was the second airplane in a flight of two airplanes on approach to the destination. The pilot in the first airplane stated that there were no radio transmissions by the accident pilot of any mechanical malfunctions and that the accident pilot asked him to keep up his speed on final. The visibility on approach was about 3 miles. A witness observed that the second airplane was close to the first airplane and that both airplanes were “quite” low on approach. He indicated that the accident airplane impacted a semitrailer and “flipped” into the ditch embankment west of the runway. A ground fire ensued when the airplane impacted terrain. A postaccident examination of the wreckage revealed no preimpact anomalies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot did not maintain clearance from a semitrailer along the approach path.

## Findings

<b>Personnel issues</b>	Lack of action - Pilot
<b>Environmental issues</b>	Ground vehicle - Contributed to outcome
<b>Aircraft</b>	Altitude - Not attained/maintained

## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Controlled flight into terr/obj (CFIT) (Defining event)
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#### HISTORY OF FLIGHT

On September 23, 2011, about 0853 eastern daylight time, N54WB, an experimental amateur-built Thorp T-18, owned and operated by the private pilot, sustained substantial damage when it impacted a semi-trailer and terrain while on approach to runway 9 at the Plainwell Municipal Airport (61D), near Plainwell, Michigan. A ground fire occurred. The pilot was fatally injured. Visual meteorological conditions prevailed at the time of the personal flight. The flight originated from the Tulip City Airport, near Holland, Michigan, about 0830.

The accident airplane was the second airplane in a flight of two airplanes destined for 61D. The pilot in the first airplane stated that there were no radio transmissions by the accident pilot of any mechanical malfunctions and that the accident pilot asked him to keep up his speed on final. He stated that there was a haze layer that he had to fly through which was located about 400 feet above ground level. The haze layer was localized around the river and airport. He stated that the visibility under the haze layer was about three miles.

A witness, working on a bridge near the accident site, reported to the Michigan Highway Police that he observed that the second plane was close to the first airplane. He stated that both airplanes were "quite" low on approach. He indicated that the accident airplane impacted the semitrailer and "flipped" into the ditch embankment west of runway 9.

Another witness who was in a southbound vehicle saw the airplane impact the semitrailer. This witness indicated the visibility was "good" and that he did not see any fog.

A ground fire ensued when the airplane impacted terrain.

#### PERSONNEL INFORMATION

The pilot, age 73, held a private pilot certificate with single-engine land and instrument airplane ratings. His most recent medical certificate was a third class issued on July 20, 2011, without any limitations. A family member estimated that the pilot had accumulated approximately 1,921 hours of total flight time and 1,311 hours of total flight time in the accident airplane.

#### AIRCRAFT INFORMATION

The plans to build the accident airplane were sold to the pilot on September 27, 1974. A logbook endorsement showed that the last condition inspection was completed on March 2, 2011. There were no airframe hours listed in that endorsement entry. However, a family member indicated that the airplane accumulated about 1,311 hours of total flight time.

## METEOROLOGICAL INFORMATION

At 0853, the recorded weather at the Kalamazoo/Battle Creek International Airport, located about 15 nautical miles and 165 degrees from the accident site, was: wind calm; visibility 6 statute miles; present weather mist; sky condition clear; temperature 11 degrees C; dew point 9 degrees C; altimeter 30.09 inches of mercury.

## AIRPORT INFORMATION

61D is a public, non-towered, airport located about 2 miles north of Plainwell, Michigan, at a surveyed elevation of 722 feet above mean sea level. The airport featured two runways: 9/27 and 1/19.

Runway 9, which was 2,650 feet by 50 feet dry asphalt, had a 17-foot road, 201 feet from the runway end, a 4-foot fence, 50 feet from the runway end; and a 17-foot road, 140 feet from the runway end entries listed as obstructions. The runway had 191 foot displaced threshold.

## WRECKAGE AND IMPACT INFORMATION

An on-scene examination of the wreckage was conducted. All of the flight control surfaces were found with the wreckage. The cabin area was melted, charred, and deformed consistent with involvement with a ground fire. The outer portions of the flight controls' push-pull tubes were intact and their respective control surface moved when the tubes were moved by hand. The rudder control cables were intact and the rudder moved when the cables were moved by hand. No flight control preimpact anomalies were detected. The engine produced a thumb compression at all cylinders when the propeller was rotated by hand. The magneto sustained fire damage and its internal distributor gear was melted. The magneto produced spark at its center electrode when it was rotated by hand. The mechanical fuel pump ejected a liquid when its pump lever was manipulated by hand. No engine preimpact anomalies were detected.

## MEDICAL AND PATHOLOGICAL INFORMATION

The Allegan County Medical Examiner arranged for an autopsy to be performed on the pilot. The autopsy listed the cause of death as smoke and soot inhalation and thermal burns.

The FAA Civil Aerospace Medical Institute prepared a Final Forensic Toxicology Accident Report. The report was negative for the tests performed.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	73, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	July 20, 2011
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	January 27, 2009
<b>Flight Time:</b>	1921 hours (Total, all aircraft), 1311 hours (Total, this make and model)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Thorp	<b>Registration:</b>	N54WB
<b>Model/Series:</b>	T-18	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	1026
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	May 2, 2011 Condition	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Superior Air Parts, Inc.
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	O-360-B1C3
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	185 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>	AZO,874 ft msl	<b>Distance from Accident Site:</b>	15 Nautical Miles
<b>Observation Time:</b>	08:53 Local	<b>Direction from Accident Site:</b>	165°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	6 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.09 inches Hg	<b>Temperature/Dew Point:</b>	11°C / 9°C
<b>Precipitation and Obscuration:</b>	N/A - None - Mist		
<b>Departure Point:</b>	Holland, MI (BIV )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Plainwell, MI (61D )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:30 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Plainwell Municipal Airport 61D	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	722 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	09	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2650 ft / 50 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	42.467777,-85.648056(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Malinowski, Edward
<b>Additional Participating Persons:</b>	Ralph Payne; Federal Aviation Administration; Grand Rapids, MI
<b>Original Publish Date:</b>	May 21, 2012
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=81876">https://data.nts.gov/Docket?ProjectID=81876</a>

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