



# Aviation Investigation Final Report

<b>Location:</b>	Gilmer, Texas	<b>Accident Number:</b>	CEN12LA566
<b>Date &amp; Time:</b>	August 21, 2012, 17:40 Local	<b>Registration:</b>	N2443
<b>Aircraft:</b>	Thorp T-18	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel starvation	<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

Shortly after takeoff, the engine lost power, and the pilot performed a forced landing to wooded terrain. Examination of the engine revealed the fuel line from the fuel pump to the metering unit was disconnected at the metering unit. This disconnection would result in a loss of engine power. No additional anomalies were noted during the airframe and engine examination.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The disconnected metering unit fuel line, which resulted in a loss of engine power.

## Findings

<b>Aircraft</b>	Fuel distribution - Incorrect service/maintenance
<b>Aircraft</b>	Fuel distribution - Malfunction
<b>Personnel issues</b>	Installation - Maintenance personnel

## Factual Information

### History of Flight

<b>Initial climb</b>	Fuel starvation (Defining event)
<b>Emergency descent</b>	Collision with terr/obj (non-CFIT)

On August 21, 2012, approximately 1740 central daylight time, a Thorp T-18 experimental amateur-built airplane, N2443, sustained substantial damage when it impacted terrain during an attempted takeoff from Gilmer Municipal Airport (JXI), Gilmer, Texas. The airline transport pilot sustained minor injuries, and the pilot-rated passenger sustained serious injuries. The airplane was registered to McClendon Associates and operated by the pilot under the provisions of the 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, which was not operated on a flight plan. The flight was destined for Denton, Texas.

According to the pilot, the fuel tanks were 3/4 full. Prior to takeoff, the pilot completed an engine run up with no problems noted. Shortly after takeoff, the engine rpm rolled back from 2,300 to 1,500 rpm. The pilot attempted to restore engine power; however, he was unsuccessful. The pilot executed a forced landing to tree-covered terrain. The airplane impacted several trees and came to rest upright.

A review of the engine maintenance records showed the engine underwent a conditional inspection on September 1, 2011, at a tachometer time of 930.9 hours. The engine was overhauled on March 23, 2003, at a tachometer time of 593.4 hours.

On September 21, 2012, at the facilities of Air Salvage of Dallas, Lancaster, Texas, the engine was examined under the supervision of a Federal Aviation Administration inspector. Examination of the engine revealed that the fuel line from the fuel pump to the metering unit was disconnected at the metering unit. No other anomalies were noted with the engine during the examination.

## Pilot Information

<b>Certificate:</b>	Airline transport; Commercial	<b>Age:</b>	58, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Glider	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 9, 2011
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	September 10, 2011
<b>Flight Time:</b>	11000 hours (Total, all aircraft), 60 hours (Total, this make and model), 8000 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Thorp	<b>Registration:</b>	N2443
<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>	536
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	September 1, 2011 Condition	<b>Certified Max Gross Wt.:</b>	1600 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	780 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental Motors, Inc.
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-346-A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	165 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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	28°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Gilmer, TX (JXI)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Denton, TX (DTO)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	17:40 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Gilmer Municipal Airport JXI	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Serious	<b>Latitude, Longitude:</b>	32.697776,-94.948608(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Sauer, Aaron
<b>Additional Participating Persons:</b>	Chris Doherty; Federal Aviation Administration; Dallas, TX John Kent; Continental Motors; Mobile, AL
<b>Original Publish Date:</b>	January 31, 2013
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=84768">https://data.ntsb.gov/Docket?ProjectID=84768</a>

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