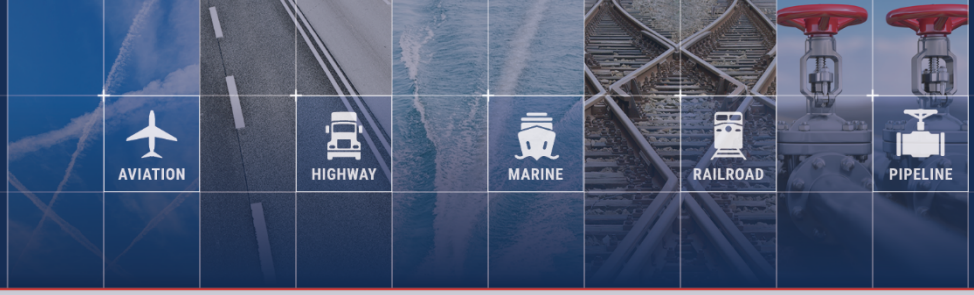

Aviation Investigation Final Report

Location:	Willcox, Arizona	**Accident Number:**	WPR10LA429
Date & Time:	August 26, 2010, 09:20 Local	**Registration:**	N467JF
Aircraft:	FINNEY THORP T-18	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was observed in the traffic pattern, about 500 feet above ground level, when it made a steep left turn to enter the downwind leg. The turn continued as the airplane entered a left descending spiral until it impacted the ground in a nose-low attitude. Postaccident examination of the airframe and engine revealed no evidence of a mechanical malfunction or failure that would have precluded normal operation.

The Pilot Operating Handbook for the airplane indicated that the airplane has an abrupt stall with a tendency to drop a wing, especially if the airplane is in an uncoordinated turn during the stall. There is very little warning preceding the stall. Stall recovery can be quickly affected by releasing back pressure on the stick; however, a secondary stall may occur if the stick is brought back abruptly after recovery without sufficient airspeed. It is likely that during the initial steep turn, the airplane entered an aerodynamic stall from which the pilot was unable to recover at the low altitude.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain sufficient airspeed during a steep turn and at a low altitude in the traffic pattern, which resulted in an aerodynamic stall.

Findings

Aircraft	Airspeed - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Maneuvering-low-alt flying	Aerodynamic stall/spin
Approach-VFR pattern downwind	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

HISTORY OR FLIGHT

On August 26, 2010, about 0920 mountain standard time, an experimental amateur-built Finney Thorp, T-18, N467JF, descended into terrain following an in-flight loss of control while entering the downwind leg of the traffic pattern at the Cochise County Airport (P33) Willcox, Arizona. The airplane was substantially damaged and the private pilot and passenger were fatally injured. The pilot/owner was operating the airplane under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed at the time of the personal cross country flight and no flight plan was filed. The flight originated from San Diego, California, at an undetermined time with an intended destination of P33.

A witness, who was a Certified Flight Instructor (CFI) that was flying in an airplane about 500 feet above the accident airplane, reported observing the airplane entering the traffic pattern while flying about 500 feet above ground level (agl). The airplane was observed entering a steep left turn to the downwind leg for runway 03 and subsequently entered a left descending spiral until it impacted the ground in a nose low attitude. Another witness, located at the airport, observed the accident airplane's engine power up and the airplane initiate a left turn around midfield.

Personnel monitoring the airport's common traffic advisory frequency (CTAF) reported hearing an unintelligible distress radio transmission around the time of the accident.

WRECKAGE DOCUMENTATION

A Federal Aviation Administration (FAA) inspector examined the airplane at the accident site. The airplane's wings were bent and the forward portion of the fuselage was crushed aft. No evidence of a preimpact engine malfunction was noted. All of the flight control surfaces remained attached to their respective mounts with the exception of the right flap which was only attached by the outboard hinge and exhibited impact damage. A separation was found in the left aileron's push-pull control tube which separated it from the control stick bell crack.

The left aileron push-pull control tube rod end bearing and jam nut where the separation was observed was sent to the National Transportation Safety Board (NTSB) Materials laboratory

for further analysis. According to a Senior Metallurgist, optical examination of the fracture surface revealed that the separation of the aileron push-pull control tube rod end and jam nut was consistent with an overstress load. The Senior Metallurgist also observed no indication of progressive cracking or significant corrosion around the fracture surface. The surrounding structure housing the left aileron push-pull control tube rod end bearing and jam nut was buckled near the point of separation. An examination report is contained in the public docket for this accident.

MEDICAL INFORMATION

The Cochise County Office of the Medical Examiner reported that the cause of death to the pilot was a result of multiple blunt force injuries.

Toxicological samples were sent to the Federal Aviation Administration, Civil Aeromedical Institute, Oklahoma City, Oklahoma. The examination was negative for all tested substances.

ADDITIONAL INFORMATION

The Pilot Operating Handbook for the T-18 indicated that the airplane has an abrupt stall with a tendency to drop a wing, especially if uncoordinated during the stall. There is very little warning preceding the stall. Stall recovery can be quickly effected by releasing back pressure on the stick, however a secondary stall may occur when the stick is brought back after recovery from the initial stall. If the stick is brought back too abruptly, without sufficient airspeed, a secondary stall will occur.

Pilot Information

Certificate:	Private	**Age:**	46,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	June 11, 2010
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	June 11, 2010
Flight Time:	(Estimated) 500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	FINNEY THORP	**Registration:**	N467JF
Model/Series:	T-18	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	467
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	1650 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-320 SERIES
Registered Owner:	SALE REPORTED	**Rated Power:**	180 Horsepower
Operator:	Glen Slagoske	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 10000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots / 15 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	45°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	27°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	San Diego, CA (MYF)	**Type of Flight Plan Filed:**	None
Destination:	Willcox, AZ (P33)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Cochise County P33	**Runway Surface Type:**	Asphalt
Airport Elevation:	4187 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	03	**IFR Approach:**	None
Runway Length/Width:	6095 ft / 75 ft	**VFR Approach/Landing:**	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	32.245555,-109.894721(est)

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Jeff A Miller; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	January 15, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=77099