## National Transportation Safety Board PRELIMINARY REPORT AVIATION

NTSB ID: CEN14FA014 Most Critical Injury: Fatal

Occurrence Date: 10/21/2013 Investigated By: NTSB

AVIATION						3 , =			
			Occurrence Type: Accident						
Location/Time									
Nearest City/Place		State	Zip Code	Local Time	)	Time Zone			
Huntsville		AR	72740	1405		CDT			
Aircraft Information									
Registration Number	Aircraft Manufacturer					Model/Series Number			
N888TP	PIPER PA 32R-301/301								
Type of Aircraft: Airplane	Amateur Built Aircraft?								
Injury Summary:	Fatal	2	Serious Minor		Minor		None		

Revenue Sightseeing Flight: No Air Medical Transport Flight: No

## Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

\*\*\* Note: NTSB investigators either traveled in support of this investigation or conducted a significant amount of investigative work without any travel, and used data obtained from various sources to prepare this aircraft accident report. \*\*\*

On October 21, 2013, about 1405 central daylight time, a Piper PA-32R-301 airplane, N888TP, impacted trees and terrain during a descent from cruise near Huntsville, Arkansas. The pilot and passenger sustained fatal injuries. The airplane was destroyed. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Day visual flight rules (VFR) conditions prevailed for the flight, which did not operate on a VFR flight plan. The flight originated from the Thomas C Russell Field Airport (ALX), near Alexander City, Alabama, about 1045, and was destined for the Claremore Regional Airport (GCM), near Claremore, Oklahoma.

The pilot was en route to GCM where he requested and was given VFR flight following. According to preliminary information, the pilot advised air traffic controllers of weather along his route of flight. A controller gave the pilot headings to fly around the weather. The airplane was observed to descend at a high rate of speed following the turn and no further radio contact was established with the pilot.

The Madison County Sheriff's Office was subsequently advised of coordinates for a possible airplane down. A search was conducted and responders using an emergency locator transmitter detector located the wreckage about 0845 on October 22, 2013.

The pilot held a Federal Aviation Administration (FAA) private pilot certificate with an airplane single engine land rating which was issued on April 25, 2013. He held a FAA Third Class Medical Certificate dated January 23, 2013, with a limitation to wear corrective lenses. The pilot reported on the application for that medical certificate that he had accumulated 45 hours of total flight time and 5 hours of flight time in the previous six months. The pilot reported to his airplane's insurance company that he had accumulated 204 hours of total flight time and accumulated 16 hours of flight time in the PA-32R-301 as of October 3, 2013.

N888TP was a 1997 Piper PA-32R-301 airplane with serial number 3246090. The airplane was a low-wing, all-metal, single-engine, six-place monoplane. It had a retractable tricycle landing gear configuration, and was powered by a fuel injected six-cylinder, Lycoming IO-540-KlG5 engine, bearing serial number L-26058-48A, and marked as producing 300-horsepower at 2,700 rpm. An airplane logbook endorsement showed that the airplane's last annual inspection was completed on September 16, 2013, and that the airplane had accumulated 2325.3 hours of total time. According to the fueling records, the airplane's fuel tanks were serviced with 57.74 gallons of aviation gasoline on October 18, 2013, at ALX.

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## Narrative (Continued)

The airplane wreckage was found about 13 miles south of Huntsville, Arkansas.€ It was situated about 1.4 miles and 305 degrees from the intersection of Madison County Road 5320 and Arkansas Highway 23. The wreckage was fragmented in an area that was tree covered, hilly, and had rocky terrain. The first observed impact to trees was found below the crest of a hill and the wreckage debris path extended down the hill about 450 feet to the hill's base. The debris pattern exhibited a general heading of approximately 255 degrees from the initial tree impact. Trees that were struck during the impact sequence exhibited witness marks to include broken branches, uprooted bases, and toppled over trunks in the direction of the debris pattern.

A postaccident on-scene investigation was conducted. All major components of the airplane were accounted for at the accident site. The left wing and right wings were fragmented during the impact sequence. Components from both wings to include their wingtip, aileron, flap, landing gear, and control cables were found along the debris field. All damage and separations were consistent with overload. Control cable separations exhibited a broomstrawed appearance consistent with overload separation. All fuel tanks were fragmented and no fuel was noted. Trees and ground areas exhibited discoloring and charring consistent with post impact ground fires.

The empennage was found fragmented along the debris path. The largest section consisted of sections of the horizontal stabilator, vertical stabilizer, and the lower portion of the rudder. The left side of the stabilator and outboard portion of the right side were separated and were found along the debris path. Both stabilator control cable attach fittings were noted. One cable had separated from the swaged ball on the end of the cable and the other cable had a broomstrawed separation. Both rudder cables were secure to the rudder bellcrank and continuous to the forward fuselage area where both had broomstrawed separations. The stabilator hinge and stop bolts were in place and secure. The balance tube was in place with weights secure. The rudder bellcrank was partially separated from the rudder. The lower hinge bolt and stop bolts were in place and secure. The pitch trim drum showed three threads upper extension which would have been consistent with a trim tab position of about two degrees of the available five degrees nose down trim. The fuselage was fragmented by multiple impacts with trees and terrain. Airplane fuselage parts and contents to include seats, instrument panels, luggage, window and door openings, and control cables were found along the debris path. The instrument panel's instruments were fragmented. The airspeed indicator's face was the only remaining instrument in the panel and its needle was resting near 200 knots.

The engine was separated from its engine mount and the engine was found near the bottom of the hill by the end of the debris path. The propeller and the rear mounted accessories were separated from the engine. Both magnetos were found in the debris path. One magneto exhibited spark when its impulse coupling was rotated by hand. The other magneto did not produce spark when rotated by hand and disassembly revealed a separation in the distributor gear. That gear separation was consistent with impact damage. The engine crankshaft was rotated by pry-bar and its continuity as verified. The camshaft gear was also rotated by pry-bar and movement of some of its valves was observed. Impact damage to some push rods precluded full camshaft rotation.

Portions of the propeller hub and its two retained blades were buried in the ground with a tree trunk covering one blade. One blade was separated from the hub and the blade was found down the hill in the debris path. The propeller blades exhibited s-shaped bending. The propeller attach studs remained in the crankshaft flange. The propeller hub boltholes were deformed in a pattern that was opposite the direction or rotation.

No airframe or engine pre-impact anomalies were detected that would have precluded normal operations.

Updated on Nov 4 2013 12:31PM

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ÁVIATION

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PRELIMINARY REPORT AVIATION		Occurrence Date: 10/21/2013									
		Occurrence Type: Accident									
Other Aircraft Involved											
Registration Number	Aircraft Manufacturer						Model/Series Number				
Accident Information											
I				dent C	Occurred Durin	ng:					
Crew Name					Certificate No.			Injury			
Pilot								-atal			
2	2										
3											
4											
5	5										
6											
Operator Information											
Name Operator Designator Code Doing Business As Pilot											
Street Address City PR				ty RYOF							
-Type of Certificate(s) Held: None											
Air Carrier Operating Certificate(s):											
Operating Certificate:					Operator Certificate:						
Regulation Flight Conducted Under: Part 91: General Aviation											
Type of Flight Operations Conducted: Personal											
Flight Plan/Itinerary											
Type of Flight Plan Filed: None											
Last Departure Point					State	Airport	Identifier				
ALEXANDER CITY					AL	ALX					
Destination					State	l '	port Identifier				
CLAREMORE					ОК	GCM					
Weather Information											
Investigator's Source: Flight Service Station				Faci	Facility ID: KFYV Observation Time (Local): 1853			3			
Sky/Lowest Cloud Condition: Scattered				800 Ft. /	AGL						
Lowest Ceiling: Broken		1800 F	Ft. AGL	V	isibility:	5	SM	Altin	neter:	30.08	"Hg
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Occurrence Date: 10/21/2013

TREE TOTAL			Crice Date: 10/21/2013						
AVIATION			ence Type: Accident						
Weather Information (Continued from page 2)									
Temperature: 10 °C	Dew Point:	9°C V	Wind Direction:						
Wind Speed: Calm Kts	. Gusts: ł	Kts. V	Weather Conditions at Accident S	onditions					
Administration Data									
Notification From ACE ROC				Date					
FAA District Office/Coordinator Federal Aviation Administrat Karen D. Gattis			Investigator-In-Charge (IIC) Edward F. Malinowski						
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