

FIELD NOTES NTSB Accident Number WPR17FA024

DATE November 21, 2016

ACCIDENT

Location:	Elko, NV
Date:	11/18/2016
Time:	1920 PST
Aircraft:	Piper PA31T Cheyenne II
Registration	N779MF

PARTICIPANTS

Chris Shaver
Air Safety Investigator
National Transportation Safety Board

Gerald Rose
Inspector
Federal Aviation Administration

Aaron Southerland
Inspector
Federal Aviation Administration

Mike McClure
ASI
Piper Aircraft

On November 18, 2016, about 1920 pacific standard time, a Piper PA31T "Cheyenne II" airplane, N779MF, was destroyed following a loss of control during initial climb from the Elko Regional Airport, Elko, Nevada. The pilot, two medical crewmembers and one patient sustained fatal injuries. The airplane was being operated as an air medical patient transport flight by American Med Flight, Inc. under the provisions of Title 14 Code of Federal Regulations Part 135. Visual meteorological conditions prevailed and an FAA instrument flight plan was filed but had not been activated.

Investigators arrived on scene on the afternoon of November 19. The wreckage was consumed by a post impact fire. The occupants had been removed by first responders.

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Witnesses stated that they saw the airplane taxi onto runway 06 for departure. One witness said that during the engine start on the ramp, that the second engine that was started took an unusually long time to start, and in his opinion did not sound normal after the start sequence. The airplane taxied to the runway and departed. During the initial climb, witnesses stated that the airplane stopped climbing and started drifting to the left then made an abrupt left bank and rapid descent. The witnesses said that the airplane descended and impacted into a parking lot about .5 miles from the departure end of the runway and immediately burst into flames. Several secondary explosions happened after impact as a result of medical compressed gas bottles and several vehicles that were consumed by the post impact fire.

1. Occupants:

4 people - fatal

2. Wreckage Information

Left Wing

The left-wing displayed substantial thermal damage from the post impact fire. The wing was separated from the fuselage and pushed to the aft and away from the fuselage by impact with a pick-up truck in the parking lot. The tip of the wing showed some impact damage and the wing tip tank was separated and found about 30 feet in front and to the left of the wing. The fuel tanks were consumed. The wing root and wing attach areas were mostly consumed. The landing gear was in the retracted and locked position

The aileron was separated and found about 30 feet in front and to the left of the wing. The flap was in place, partially melted but secure in the retracted position. The aileron control cable was secure to the aileron bellcrank and continuous to the aileron control wheel chain. The balance cable was secure to the bellcrank and continuous to the wing root area where it displayed a broomstrawed separation consistent with overload.

The engine was separated from the wing and found in the back of a pick-up truck immediately adjacent to the left wing.

Right Wing

The right wing was found in position adjacent to the fuselage. The wing displayed substantial thermal damage from the post impact fire. The forward, aft and main wing attachment points were consumed. The fuel tanks were consumed. The tip tank was separated and found about 80 feet in front of the wing. The landing gear was in the retracted and locked position. The flap is in place and in the retracted position. The aileron was in place and secure at the inboard end. The other two hinge points were impact separated. The aileron trim tab was in place. The trim tab drum inner shaft extension showed no threads forward extension and 6 threads aft extension.

The aileron control cable was secure to the bellcrank and the continuous to the aileron control wheel chain in the cockpit. The balance cable was secure to the bellcrank and

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separated near the wing root area. The separation displayed broomstaving consistent with overload.

Empennage

The empennage assembly was in place and secure. The vertical stabilizer and rudder was secure at all hinge points. Both rudder cables were secure to the rudder bellcrank. Rudder stop bolts were in place. Both rudder cables were continuous to the rudder bar in the cockpit. The rudder was displaced to the right and the rudder trim tab displaced to the left. The rudder trim drum inner shaft showed 6 threads forward extension and 7 threads aft extension.

The horizontal stabilizer was secure and in place. The left side tip area displayed impact damage and was bent upward. The outboard hinge points were separated from the impact. The elevator was secure at the remaining hinge point. Both trim tabs are secure. The right side adjustable tab trim drum inner shaft displayed about 1 thread forward extension and about 7 threads aft extension.

The elevator push-pull tube was secure at both ends. Both the upper and lower elevator cables are secured to the elevator bellcrank and continuous to the elevator sector on the control wheel shaft. In the cockpit.

The SAS (Stability Augmentation System) cylinder displayed the normal 8-inch actuator extension. The SAS servo arm was down.

Fuselage

The fuselage displayed substantial thermal damage and the skin was mostly consumed down to the floorboards and aft to the aft fuselage bulkhead.

The pilot and co-pilot seats were mostly consumed leaving only the lower seat frames. The pilot side seatbelt was latched and the shoulder harness was secure to the lap belt. The right side seat belt was not fastened. The position of the seats in the cabin area was undetermined as they were consumed and not noted. The position of the stretcher is unknown. A large oxygen cylinder from the medical area exploded during the fire and was found about 60 feet away from the main wreckage.

A small piece of nose skin was noted from the right lower side which showed impact damage consistent with a initial contact angle of about 35 degrees. This angle was also similar to the damage noted on the tip tanks.

Several smart phones and iPads were found in the wreckage and all had incurred substantial thermal damage and rendered no useful information. The remaining instruments and quadrant controls were documented but all had incurred substantial impact and/or thermal damage.

The quadrant assembly displayed substantial impact damage and was bent over to the right side. The pedestal engine controls were buried under debris. All engine control cables were secured to the control levers. The condition levers, on the right side of the quadrant, appeared to be near the forward position. The right-side prop lever appeared to be at

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about the $\frac{3}{4}$ forward position while the left side was at about the $\frac{1}{4}$ forward position. The left side power lever was at about the three quarters forward and right side about half forward position.

The engine gauges were photo documented.

3. Engine and Propeller

Left Engine

The left PT6A-28 engine, S/N PC-E-52075, was separated from the wing and found in the rear of a pick-up truck which was parked in the lot. The engine displayed substantial thermal damage but no external indication of catastrophic failure.

Right Engine

The right PT6A-28 engine, S/N PC-E-52069, was in position in front of the wing but most of the nacelle aft of the firewall had been consumed. The engine displayed substantial thermal damage but no indication of any catastrophic failure was noted. The propeller was separated aft of the engine propeller flange. The separation displayed sharp 45 degree edges and was peaked consistent with torsional separation.

Left Propeller

The propeller was secure to the propeller flange. The propeller dome was separated and found beneath the propeller with the springs. One blade had been separated. The separated blade showed impact damage to the tip but no significant rotational damage. The remaining two blades were mostly melted leaving about 12 inches of blade remaining with the hub. The blades appeared to be in the normal operating range and were not feathered.

Right Propeller

The separated propeller, with two blades in place, was found along the debris path prior to the main wreckage. The dome was separated with the springs and they also were found along the debris path near the propeller. The two blades in the hub as well as the separated blade all displayed substantial rotational damage with chordwise scratches, leading edge nicks, cuts and gouges.