



National Transportation Safety Board Aviation Accident Data Summary

Location:	Reno, NV	Accident Number:	WPR16FA178
Date & Time:	09/11/2016, 1813 PDT	Registration:	N821ET
Aircraft:	PIPER PA 28R-201T	Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot and two passengers were departing on a cross-country flight to transfer the rear-seat passenger to California, where a series of warrants had been issued for her arrest. A California-based bail bondsman was seated in the front right seat and the pilot was seated in the front left seat. The arrested passenger was restrained on the rear left seat by the lap belt.

Witnesses, surveillance camera footage, and recorded data from on board the airplane indicated that the airplane began its takeoff roll and climbed to about 200 ft above ground level (agl) before leveling off. One witness stated that the airplane immediately began to rock its wings, and the nose pitched up to a high angle and remained in that attitude as the airplane continued to fly over the runway. About 2/3 of the way down the runway, the airplane began to veer right of the runway centerline and entered a right, descending turn. The last recorded data showed the airplane in a 41° right bank with a 64° nose-down attitude. The airplane impacted a lamppost, vehicles, and the ground in a parking lot with the landing gear extended.

Postaccident examination did not reveal any anomalies with the airframe or engine that would have precluded normal operation. Sound spectrum analysis of the background noise recorded during the pilot's radio transmissions, along with examination of the propeller's internal and external witness signatures, revealed that the engine was likely producing takeoff power throughout the flight. The rear-seat passenger was found buckled in her seat after the accident; her legs were cuffed by leg-chains, and her hands were cuffed to her waist through a belly chain, thus, there was no evidence to suggest that the rear seat passenger interfered with the flight.

The pilot fueled the airplane almost to capacity before he definitively established the total weight of all occupants for the accident flight. Furthermore, he added more fuel than originally requested to avoid paying a facility fee to the fixed base operator (FBO). Further, the pilot's statements to FBO personnel indicated that he was concerned about the airplane being overweight. Although the pilot could have defueled the airplane in order to remain within weight and balance limitations, this would have been a time-consuming process, and it is likely that he felt pressured to proceed with the flight as planned in order to return the passenger to California that evening. Also, the time spent defueling would have resulted in the flight taking place in night conditions over mountainous, dark, uninhabited terrain.

The airplane was about 178 lbs over its maximum gross weight and loaded at or just beyond its aft center of gravity limit when it departed on the flight. Under such conditions, the airplane likely encountered longitudinal instability during takeoff and altitude and pitch oscillations. Strong gusty wind conditions and high density altitude (6,900 ft) further exasperated the situation and likely resulted in the pilot's difficulty controlling the airplane during the initial climb, which ultimately led to a loss of control.

The airplane was fitted with an aftermarket turbo intercooler system. Its manufacturer did not provide specific performance data, instead stating that the engine performance would have been "equal to or better than" standard equipment. It is possible that the pilot felt this system would have given the airplane increased performance capability.

Toxicology testing indicated the pilot had recently used 3 separate opioid drugs in addition to a sedating benzodiazepine (diazepam), and either meprobamate or its parent drug, carisoprodol. Although medical records indicated that the pilot had at one point been prescribed one opioid (oxycodone) and carisoprodol, the nearly simultaneous use of three separate opioids strongly suggests that he was misusing these substances. All of these medications are sedating and carry specific warnings against using them in combination. While the levels identified in cavity blood may be higher or lower than antemortem drug levels, the toxicology tests suggest that the pilot had 4 impairing substances in his blood at the time of the accident, and it is likely that his use of the combination of impairing medications contributed to his poor decision-making and willingness to attempt/proceed with the flight as planned.

Flight Events

Prior to flight - Aircraft loading event
Initial climb - Inflight upset
Initial climb - Loss of control in flight
Emergency descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's decision to depart with the airplane loaded above its maximum gross weight and at or just beyond its aft center of gravity limitations, which resulted in a loss of control during the initial climb. Contributing to the accident was the pressure to complete the flight as planned, and the pilot's use of multiple impairing drugs, which degraded his decision-making.

Findings

Aircraft-Aircraft oper/perf/capability-Aircraft capability-Maximum weight-Capability exceeded - C
Aircraft-Aircraft oper/perf/capability-Aircraft capability-CG/weight distribution-Capability exceeded - C
Personnel issues-Task performance-Planning/preparation-Weight/balance calculations-Pilot - C
Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
Personnel issues-Physical-Impairment/incapacitation-Prescription medication-Pilot - F
Environmental issues-Task environment-Pressures/demands-Time/schedule pressure-Decision related to condition - F

Pilot Information

Certificate:	Private	Age:	57
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	(Estimated) 769 hours (Total, all aircraft), 216 hours (Total, this make and model), 16.2 hours (Last 90 days, all aircraft), 6.5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N821ET
Model/Series:	PA 28R-201T 201T	Engines:	1 Reciprocating
Operator:	On file	Engine Manufacturer:	Continental Motors
Operating Certificate(s) Held:	None	Engine Model/Series:	TSIO360-KBcFB
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KRNO, 4400 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	14 knots / 23 knots, 270°
Temperature:	28° C	Visibility:	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Reno, NV (RNO)	Destination:	SAN CARLOS, CA (SQL)

Airport Information

Airport:	RENO/TAHOE INTL (RNO)	Runway Surface Type:	Concrete
Runway Used:	25	Runway Surface Condition:	Dry
Runway Length/Width:	6102 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	39.503889, -119.776667		

Administrative Information

Investigator In Charge (IIC):	Eliott Simpson	Adopted Date:	02/26/2019
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93987		

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