



Aviation Investigation Final Report

Location:	Needles, California	Accident Number:	LAX08LA266
Date & Time:	August 12, 2008, 08:05 Local	Registration:	N3156B
Aircraft:	Bowman Titan Tornado II	Aircraft Damage:	Substantial
Defining Event:	Low altitude operation/event	Injuries:	1 Fatal, 3 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses reported that the airplane flew about 10 feet above a truck traveling southbound on a highway. It was then observed flying straight and level at low altitude over the two-lane highway, the propeller was turning, and the airplane did not appear to be in distress. Two miles later, a witness saw the airplane make a sharp left turn eastbound to line up with the westbound lanes of a perpendicular interstate highway. Ground scars showed that during the turn the left wing of the airplane contacted the shoulder of the highway prior to the airplane colliding head-on with a westbound car in the number one lane. No evidence of a mechanical malfunction or failure of the engine was found during postaccident inspection of the engine. There were numerous suitable areas for landing on and adjacent to the southbound highway prior to reaching the interstate highway. The pilot's autopsy report noted evidence of severe coronary artery disease treated with bypass surgery and stent placement. The pilot also had a history of high blood pressure and non-insulin dependent diabetes. It could not be determined whether the pilot was intending to land on the highway, or if his medical conditions played any role in the accident events. The pilot did not hold a current medical certificate.

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 clearance from a vehicle during a low-altitude flight over a highway.

Findings

Personnel issues	Monitoring environment - Pilot
Environmental issues	Ground vehicle - Contributed to outcome
Aircraft	Altitude - Not attained/maintained

Factual Information

History of Flight

Maneuvering-low-alt flying

Low altitude operation/event (Defining event)

On August 12, 2008, about 0805 Pacific daylight time (PDT), a Bowman Titan Tornado II, N3156B, collided with a car on Interstate 40 during a low altitude maneuver near Needles, California. The pilot was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The private pilot was killed, and the three occupants in the car sustained minor injuries. The airplane sustained substantial damage to the fuselage. The flight departed from an unknown location at an unknown time. Visual meteorological conditions prevailed, and no flight plan had been filed.

A witness reported that he was driving a tractor-trailer truck southbound on highway US 95. About 2 miles north of Interstate 40 (I-40), a southbound airplane flew about 10 feet above his truck. It was flying straight and level, and did not appear to be in distress. The propeller was turning, but the witness did not recall hearing the sounds of the engine. The airplane made a sharp left turn as it approached I-40, and then he lost sight of it.

The driver of a car headed westbound on I-40 stated that she was in the number one lane, and traveling about 70 miles per hour. The airplane suddenly appeared in front of her as it approached from the opposite direction. It was in a left wing low position, and about 3 feet off the ground. She was unable to avoid colliding with it.

A witness driving behind the accident car observed the airplane as it was flying about 30 feet above ground level in a southerly direction. He said that it made a hard left turn, and thought that the pilot was trying to land on the highway. It lost altitude prior to the collision; he could not tell if the engine was running.

The California Highway Patrol (CHP) documented the scene of the accident. Their report noted ground scars that indicated that the left wing of the airplane contacted the shoulder of the highway prior to colliding with the car.

The terrain surrounding the interstate was open, uneven desert terrain. A visual examination revealed that US 95 was a straight and flat two-lane asphalt highway for approximately 1/2 miles on the north side of the I-40 interchange with open gravel areas several lanes wide on both sides for the last 1/4 mile. There were no overhead power lines.

A friend of the family related to the CHP that the pilot based the airplane at Eagle Field, Mojave Valley, Arizona. Eagle Field was about 080 degrees at 7 nautical miles from the accident site. The pilot did not build the airplane; he purchased it about 18 months prior to the accident. The

engine was a Subaru EA81 with a Rotary International propeller reduction system and an Ellison throttle body carburetor. It had a Tennessee wood two-blade propeller with a urethane leading edge.

The Titan Aircraft website noted that the airplane's landing roll distance was 250 feet. It indicated that the solo stall speed was 35 miles per hour. The single-engine airplane had a high wing, and a pusher propeller mounted on the wing aft of the cabin.

The National Transportation Safety Board investigator-in-charge (IIC) examined the engine. He removed the valve covers, and rotated the crankshaft with the propeller. The crankshaft rotated freely, and there were no metallic sounds. The exhaust and intake valves moved approximately the same amount of lift, and the IIC obtained thumb compression on all cylinders. The spark plugs electrodes were clean with no mechanical deformation; they were of similar shape, and had similar gaps. They were gray, which corresponded to normal operation according to the Champion Aviation Check-A-Plug AV-27 Chart. The rotor cap on the ignition system sustained crush damage, and the system could not be tested.

A review of the 65-year-old private pilot's logbook indicated a total flight time of 1,678 hours in all aircraft, with 12 hours in the make and model airplane involved in the accident. The pilot's last issuance of a medical certificate was in November 1997.

An autopsy was performed on the pilot by the San Bernardino County Coroner. The report noted evidence of severe coronary artery disease treated with bypass surgery and stent placement, and a history of high blood pressure and non-insulin dependent diabetes. The cause of death was attributed to multiple blunt force injuries.

Toxicological samples were sent to the Federal Aviation Administration Civil Aeromedical Institute, Oklahoma City, Oklahoma. The findings were positive for metoprolol detected in the liver and lungs.

Pilot Information

Certificate:	Private	Age:	65, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
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 3 Without waivers/limitations	Last FAA Medical Exam:	November 1, 1997
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1678 hours (Total, all aircraft), 12 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bowman	Registration:	N3156B
Model/Series:	Titan Tornado II	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	D95XXXC0HK0176
Landing Gear Type:	Tricycle	Seats:	1
Date/Type of Last Inspection:	June 3, 2008 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	89 Hrs as of last inspection	Engine Manufacturer:	Suburu
ELT:	Installed, not activated	Engine Model/Series:	EA81
Registered Owner:	Gene A. Sheets	Rated Power:	72 Horsepower
Operator:	Gene A. Sheets	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KEED,983 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	07:56 Local	Direction from Accident Site:	80°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.77 inches Hg	Temperature/Dew Point:	32°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Unknown	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:		Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	3 Minor	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 3 Minor	Latitude, Longitude:	34.878887,-114.751945

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	Ron Williams; Federal Aviation Administration; Las Vegas, NV
Original Publish Date:	August 13, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=68685

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).