



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

January 30, 2017

AIRFRAME AND ENGINE EXAMINATION SUMMARY

WPR17LA053

This document contains 7 embedded photos.

A. ACCIDENT

Location:	Buckeye, Arizona
Date:	January 14, 2017
Aircraft:	N6366B; Cessna T210M
NTSB Investigator-in-Charge:	Andrew Swick

B. PARTICIPANTS

Andrew Swick-NTSB IIC
Craig Roberts-FAA

C. SUMMARY

On January 14, 2017 about 1400 mountain standard time, a Cessna T210M, N6366B, sustained substantial damage during a runway excursion and subsequent noseover, after landing on runway 17 at the Buckeye Municipal Airport (BXX), Buckeye, Arizona. The private pilot was the sole person on board and was seriously injured. The aircraft was registered to Six Six Bravo Inc, and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed for the flight; no flight plan was filed for the local flight. The flight originated from BXX at an unknown time.

According to a family member, the pilot stated that the airplane veered to the left during landing roll, and he used right controls to compensate. He further stated that he collided with an object that resulted in the noseover.

A witness located at the airport heard the airplane performing touch-and-goes prior to the accident, but did not see the accident sequence. The witness stated there were tire marks veering left from the runway centerline, about 1,400 feet from the approach end. The tire marks continued about 500 feet before entering the runway safety area, crossing over taxiway D, and reentering the runway safety area on the other side where the airplane came to rest inverted.

The wreckage was relocated to a secure facility for further examination.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

Examination of the recovered airframe revealed that forward fuselage near the upper side of the firewall and the aft fuselage were buckled. The engine and propeller assembly remained attached to the airplane and the propeller blades had impact damage. The wings, horizontal and vertical stabilizers, elevator and rudder were removed from the main wreckage during the recovery process. The wings were buckled near their midsections and the outboard leading edge of the left wing was bent downward. The rudder and vertical stabilizer were crushed downward during the accident sequence. The left entry door hinges and frame were damaged.



Figure 1-Follow-up Examination, Main Wreckage

The forward seatbelts were undamaged and both forward seat positions had ‘Saf-T-Stop’ devices installed on the inboard seat rails.

The emergency locator transmitter (ELT) was secure and undamaged. According to first responders, the ELT was activated during the accident sequence.

Rudder control cable and elevator control continuity was established from the cabin controls to the stabilizer attachment area.



Figure 2-Engine and Propeller Assembly

The propeller assembly remained attached to the main wreckage and had impact damage. The spinner was crushed at the tip and the blades had leading edge damage at the tips and were bent aft near the midsections.



Figure 3-Nose Landing Gear

The nose landing gear separated from the main wreckage. The shimmy dampener fracture separated near aft rod end with overload signatures at the separation surface. The lower trunnion and upper trunnion assemblies fracture separated with surface signatures consistent with overload. The torque upper link assembly was also fracture separated with surface signatures consistent with overload. The wheel hub and hub cap had impact damage. The tire was deflated and had impact marks on the sidewall.



Figure 4-Nose Landing Gear Steering

Steering control continuity was established from the rudder pedals controls to the steering whiffletree assembly [control quadrant]. The whiffletree support structure has impact damage. The shimmy dampener rod end remained attached to the whiffletree and is fracture separated at the rod. The nose landing gear upper trunnion support brackets are fracture separated.

The airplane was supported off the ground while the main gear wheels were rotated by hand. The wheels rotated freely with light rubbing of the brake pads on the brake rotor. The brake rotor had normal wear patterns and no heavy grooves. The brake pads had minimal wear.

While the wheels were rotated by hand, brake pressure was added through the brake pedals. No anomalies were noted.



Figure 5-Left Main Gear

The tread of the left main tire has minimal wear and damage shown centered in the photo above. The damage is about 3 inches in diameter and consists of small multidirectional lacerations.



Figure 6-Right Main Gear

The right main had minimal wear and was undamaged.

2.0 Engine Examination

Examination of the Continental TSIO-520-R engine revealed no anomalies. The upper spark plugs were removed from the engine. The spark plugs electrodes had normal/worn out wear conditions when compared to a Champion AV-27 comparison chart. The electrode areas had light grey deposits. The crankshaft was rotated by hand and magneto impulse coupling engagement was verified. Cylinder thumb compression was obtained from all cylinders during the crankshaft rotation.



Figure 7-Engine Examination

Submitted by: Andrew Swick