

Inspectors Statement
04/14/2011
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On March 12 and 13, 2011, I examined the wreckage of N3547C, a PA 31-350. At the time of my examination the aircraft was located at the Aero Industries facility in Richmond, Virginia. The aircraft had been relocated to a flatbed trailer.

The overall condition of the aircraft, as examined, indicated that it appeared to have impacted the ground in a relatively wings level, zero pitch attitude. The aircraft exhibited extensive fire damage. Large portions of the lower fuselage skin as well as most upper wing panels were destroyed by fire. The cabin floor was covered with ply-wood and appeared to be scorched but no extensive fire damage. The fuselage skin aft of the rear cabin bulkhead was completely destroyed by fire as well as the vertical and horizontal stabilizer skins.

A portion of the vertical stabilizer spar containing the rudder trim actuator and both forward and aft horizontal stabilizer spars were present including the portion containing the elevator trim actuator. Measurements taken of the elevator trim actuator indicated a neutral trim position. The elevator control tube was present and was sheared approximately 24 inches from the forward attach point. The elevator bungee spring was present and intact and remained attached to the rear bracket. This assembly was found separated from the airframe. The remains of the left and right elevators did not indicate any pre impact/fire damage and all hinge points from the attachment at the horizontal stabilizer were present and in working order.

A check of control cable continuity from the separation point of the tail aft of the rear cabin bulkhead forward found no indications of pre crash failure. The control cables aft of the rear cabin bulkhead area appeared to all be present and all ends exhibited broom-straw type separation. Aileron cable continuity from the control yokes to the left and right bellcranks was confirmed. Both left and right aileron attach points had separated from the wing brackets due to rivet shear. Both left and right aileron control rod ends were also found to be broken at the threaded portion (control surface end).

The aircraft wing flaps were in the up position as was the cockpit control.

The aircraft landing gear was in the up position with inner and outer gear doors having no indication of an in transit type situation. The cockpit control appeared to be in the down position.

Both left and right propellers exhibited s bending with blade separation. A check of the turbo chargers found them to move freely.

The left and right cowlings appeared to have been locked with several of the lower latch pins pulling from the cowling (appears to be post crash).