

PA31-350 / N3547C / SN: 31-8052018

ACCIDENT DATE: 4/11/2011@ 2130EDT LOCAL AT RICHMOND, VA

OFF-SITE INVESTIGATION FIELD NOTES.

FUSELAGE:

The airframe was lying diagonally on a flat-bed trailer, which was positioned in the corner of a hangar. The fuselage was completely destroyed by ground impact and post impact ground fire. The right sidewall was concave from impact. The formal interior had been removed for the ability to haul cargo. It was gutted by post impact ground fire. All side windows exhibited thermal damage. Both of the windshields remained intact and were thermal damaged. The instrument panel was compressed forward and exhibited thermal damage. All instruments were intact in the panel and were thermal damaged and offered relative little useful information. The pilot side "crew" entry door was removed by first responders.

The pilot and co-pilot seats were attached to the floor tracks. They were bent right and were thermally damaged. The pilots control wheel shaft was severed by first responders. The pilot seat restraints were removed by first responders. They exhibited thermal damage. Both engine's power controls were intact in the quadrant. They were stiff in operation. Their movement was minimal. The left throttle's position was a knob length behind the right throttle's position. Both throttles were at the forward position range. Both propeller controls were at the full forward position. The left engine mixture control was positioned full forward and the right engine mixture control was positioned aft at the mid-travel position. All noted switches were thermally damaged. The co-pilot's control wheel was intact and was thermally damaged. Trim wheels: elevator, trim, rudder trim and aileron trim were impact damaged and exhibited limited movement. Control cable continuity was traced forward to the quadrant where they were mounted from the tail section. Limited movement noted in disrupted area of fuselage floor.

The forward baggage door was separated from the nose section and exhibited impact and post impact fire damage. The radome was destroyed by impact and post impact fire damage. The aft cabin and aft cargo door were impact and post impact fire damaged, The aft cabin area was fitted with a plywood floor and aluminum sheet overlay walls. There was approximately 70lbs of medical waste located in that area, with urine and blood sample in vials that were damaged.

Empennage:

The left and right horizontal stabilizers were completely separated from the fuselage and exhibited impact and post impact fire damage. The elevator torque

tube was impact and heat damaged. The main stabilizers spars were destroyed by post impact fire. The elevators were destroyed by post impact fire damage. The elevator trim drum was jack screw was measured .3, which equates to a neutral elevator trim setting. The rudder sector was intact with control cables attached . The stops were intact with thermal damage noted. Control cable continuity was traced forward.

Wings:

The left wing was partially attached at the wing root. It was completely destroyed by impact and post impact ground fire. All fuel caps were in place and noted to be locked. All fuel bladders were breached and destroyed by post ground impact fire damage. The left flap was attached and destroyed by post impact ground fire. It appeared to be in the up position. The left aileron was attached by it's outboard hinge. It was destroyed by post impact ground fire. The left main gear was in the up position. The engine nacelle was destroyed by post impact ground fire. The aileron balance weight was noted. Control cable continuity was traced to the cabin area. No examination of the engine / propeller was attempted. The engine was separated from the nacelle firewall. Both units were impact and post impact fire damaged as were the cowlings. The power controls were impact and post impact fires damaged and were in limited view on the flatbed trailer.

The right wing was partially attached at the root. The wing was bent upward at approximately mid-span. The aileron was attached and impact and post impact fire damaged. The balance weight was noted. The flap was attached and in the up position. It was completely destroyed by impact and post impact fire damage. The main gear and inboard door were attached and in the up position. The nacelle was destroyed by impact and post impact fire damage. The fuel tanks were breached and destroyed by post impact fire damage. Control cable continuity was traced to the forward cabin. The engine was attached to the nacelle fire wall. No examination of the engine / propeller was attempted. Both were noted to be impact and post impact fire damaged as were the cowlings. The power controls were impact and post impact fire damaged and in limited view on the flatbed trailer and appeared to be in the components vicinity.

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