

Summary of Aircraft Examination

NATIONAL TRANSPORTATION SAFETY BOARD Office of Aviation Safety Washington, DC 20594

SUMMARY OF AIRCRAFT EXAMINATION

-- CEN20LA248 --

A. ACCIDENT

Location: Zavalla, Texas
Date: June 27, 2020

B. OVERVIEW

On June 27, 2020, about 0153 central daylight time, a Piper PA-32R airplane, N315AM, was destroyed when it was involved in an accident at a private airstrip near Zavalla, Texas. The non-certificated pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

C. PARTICIPANTS

Representatives from the FAA and Piper Aircraft participated in a wreckage examination at the accident site on June 28, 2020.

D. SUMMARY OF EXAMINATION

Review of the airframe and engine logbooks indicated the last annual inspection occurred on September 28, 2017 and the last maintenance entry was recorded on March 22, 2018. The engine was overhauled on September 2, 2016. Only the cover of the engine logbook was found in the debris field. The propeller logbook was not observed in the debris field wreckage.

Fuselage

The fuselage was upright and facing about 90° to the right from the debris line heading. The upper portion of the fuselage was largely consumed by fire from the forward baggage compartment to the aft baggage compartment. All six seat frames appeared to be in their proper locations within the fuselage. All the seat upholstery and cushion materials were consumed. All the seat belt webbing materials were consumed. The fuel selector handle and torque tubes were continuous to the fuel selector valve. The fuel selector handle position could not be determined. The fuel selector valve and strainer bowl were fire damaged. The fuel selector valve appeared to be near the RIGHT MAIN position, but the detents were not discernable when rotating the lever to the other positions. The aileron cables remained attached to the forward chain segment and were continuous to the aileron bell cranks. The rudder cables remained attached to the rudder pedal torque tubes in the cockpit. The stabilator cables moved in conjunction with movement of the tee-bar in the cockpit.

Left Wing

The left wing was separated from the fuselage at the wing root and lay upside down on the left side of the fuselage. The left wing was further separated chordwise about mid-span with leading edge damage consistent with tree impacts. The inboard portion of the wing including the main landing gear and the flap were lying on top of the outboard fragment of the right wing. The flap remained partially attached to inboard wing fragment and was impact and fire damaged. The main landing gear appeared to be in the extended position

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and exhibited impact and fire damage. The outboard portion of the left wing, including the aileron, was also located on the left side of the fuselage. The aileron cables were continuous to the aileron bellcrank. The bellcrank was impact damaged. The aileron, which remained partially attached to the outboard wing fragment, was impact and fire damaged. The pitot mast remained installed at its mount and was covered in soot. Both lift detectors remained in the leading edge. A fuel filler cap was observed installed in its filler neck opening and was separated from the surrounding structure due to thermal damage.

Right Wing

The right wing was separated from the fuselage at the wing root and was located on the left side of the fuselage. The right wing was further separated chordwise about mid-span. Both the inboard and outboard portions of the right wing exhibited fire damage throughout. The main landing gear appeared to be in the extended position. The tire and wheel assembly were consumed and no longer attached to the strut assembly. The aileron cables were continuous to the bellcrank. The right aileron remained attached to the outboard portion of the wing and connected to the bellcrank pushrod.

Empennage

The vertical stabilizer remained attached to the tailcone and the rudder remained attached to the vertical stabilizer. The rudder cables remained attached to the rudder horn and the stops were intact. The stabilator remained attached to the aft tailcone bulkhead. The right side of the stabilator, including the trim tab, remained attached but exhibited impact damage throughout. The left side of the stabilator, including the trim tab, impact damaged and separated chordwise about mid-span. A portion of the left side trim tab was located at the base of the trees at the beginning of the debris field. The outboard end of the left side of the stabilator, outboard of the trim tab, was also located along the debris field. The stabilator cables remained attached to the stabilator balance tube. The stabilator jackscrew was extended above the drum with about 10 threads exposed which corresponds to a partial aircraft nose up trim setting.

Engine

The engine came to rest upside down just forward of the fuselage and forward baggage area. The engine exhibited impact to the lower components and extensive fire damage to the aft end and accessories. The magnetos were not observed. The fuel servo was partially consumed by fire. The engine driven fuel pump was fire damaged. The accessory section housing of the engine was mostly consumed by fire. A tow-truck was brought in and the engine was lifted with a strap around the propeller hub. The crankshaft could not be rotated manually. The top spark plugs were removed and examined. The spark plugs appeared normal when compared to the Champion check-a-plug reference card.

Propeller

The propeller remained attached to the crankshaft propeller flange and all three blades remained captured in the propeller hub. The spinner exhibited impact damage to the nose. One of the three blades exhibited forward bending about mid-span through about 90° and polishing of the leading edge. Another blade was rotated in the hub beyond normal limits and exhibited aft bending and twisting near the tip. The third blade exhibited aft bending and twisting along its span with polishing on the cambered face and leading edge.

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