



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

April 22, 2021

AIRFRAME EXAMINATION SUMMARY REPORT

WPR20LA308

This document contains 13 embedded photos.

A. ACCIDENT

Location: Billings, CA
Date: September 12, 2020
Aircraft: N7602Y
NTSB IIC: Samantha Link

Preliminary Report:

On September 12, 2020 about 1143 mountain daylight time, a Piper PA-30 airplane, N7602Y, was destroyed when it was involved in an accident near the Billings Logan International Airport (BIL). The airline transport pilot was seriously injured. The airplane was operated as a Title 14 Code of Federal Regulations (CFR) Part 91 personal flight.

The airplane departed Lake Elmo Airport (21D), St. Paul, Minnesota and was destined for BIL. According to the FAA, the pilot contacted the BIL air traffic control tower asking for clearance to land on runway 28. In addition, the pilot mentioned that the airplane had one engine “out,” but did not share details, nor did he declare an emergency. As the airplane was on short final, the pilot made another radio call to tower indicating that he lost the second engine. The airplane landed short of the runway against a cliffside.

The airplane has been recovered for further examination.

B. PARTICIPANTS

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C. SUMMARY

Examination of the airframe and engine was conducted at the Hanser’s Wrecker Company in Billings, Montana, on April 22, 2021. The examination of the airplane revealed no evidence of preaccident mechanical malfunctions or anomalies that would have precluded normal operation.

D. AIRFRAME EXAMINATION

The airplane was positioned on pallets during the examination. The empennage, aft fuselage, right outboard wing and sections of the forward fuselage separated from the main wreckage. The empennage was separated, and flight control cables were cut during the wreckage recovery process. The left wing had impact damage and was folded over the top of the midsection of the wing. The cabin entry door was not attached to the cabin and the windshield was broken. The main landing gear had impact damage and remained loosely attached. The engines remained attached to their engine mounts and were secured to the wing structure. The cowlings remained attached and secured. The propeller assemblies including the spinners had impact damage.



Figure 1-Main wreckage positioned during the examination.

Flight Controls

Flight control cable continuity was obtained from the rudder and elevators to the cabin controls. The rudder and elevator cables were cut during the wreckage recovery process. Flight control cable continuity was obtained from the left aileron to the cabin controls. Flight control cable continuity was obtained from the right aileron through tension overload separations, to the cabin controls. The flaps were found in the retracted position.



Figure 2-Empennage and aft fuselage.



Figure 3-Left wing.



Figure 4-Right wing.

Fuel System

The right-wing outboard tank cap was found loose in the filler neck. The cap was removed, and the lever arm worked normally. The cap seal was pliable and undamaged. The tank bladder was not in its inboard bay area and was breached. The right-wing inboard, left-wing inboard, and left-wing outboard tank caps were loose in their filler necks and removed. The cap seals were pliable and undamaged. The tank bladders were empty. The fuel strainers were drained, and a small amount of uncontaminated fuel exited. The strainer bowls were removed, and no anomalies were noted. The fuel selector valve handles were undamaged. The selector valve handles moved freely by hand and detents were normal. The auxiliary pumps would not operate when the switches were positioned to 'ON.' The aircraft structure near the auxiliary pumps was pushed aft into the pump's location. The pumps were unable to be removed due to airframe deformation.



Figure 5: Fuel Strainers

E. Engine Examinations

Right Engine

The upper engine and nose cowling were removed from the right engine. The right engine was undamaged and contained about 7 quarts of oil. There was no damage to the accessory section of the engine. The upper spark plugs were removed and the finewire electrode areas had light grey deposits and normal wear conditions. The cylinder rocker covers were removed, and the overhead components were undamaged and lubricated with a light brown oil. The crankshaft was rotated by hand from the propeller assembly and thumb compression was attained from each cylinder. During the crankshaft rotation, normal cylinder overhead valve movement was noted during the crankshaft rotation. Also, the magneto impulse couplings engaged, and spark was obtained from each of the ignition lead ends. The left and right engine magneto switches (4) on the instrument panel were switched to the 'ON' position prior to the magneto operational check.



Figure 6-Right Engine



Figure 7-Right engine upper sparkplugs.



Figure 8-Right engine cylinder overhead.

Left Engine

The upper engine and nose cowling were removed from the left engine. The left engine was undamaged and contained about 7 quarts of oil. There was no damage to the accessory section of the engine. The upper spark plugs were removed and the finewire electrode areas had light grey deposits and normal wear conditions. The cylinder rocker covers were removed, and the overhead components were undamaged and lubricated with a light brown oil. The crankshaft was rotated by hand from the propeller assembly and thumb compression was attained from each cylinder. During the crankshaft rotation, normal cylinder overhead valve movement was noted during the crankshaft rotation. Also, the magneto impulse couplings engaged and spark was obtained from each of the ignition lead ends. The left and right engine magneto switches (4) on the instrument panel were switched to the 'ON' position prior to the magneto operational check.



Figure 9-Left Engine



Figure 10-Left engine upper sparkplugs.



Figure 11-Left engine cylinder overhead.

F. Propeller Assemblies

The propeller assemblies remained attached to each engine and were not removed during the examination. The right propeller assembly was found in the feathered position and one blade was bent near its midsection. The bent blade had multidirectional scuffing near its leading edge. The other blade was damaged consistent with the relocation of the wreckage. The spinner had impact damage to one side.



Figure 12-Right propeller assembly.

The left propeller blade assembly was found in the low pitch position and one blade was bent aft near the shank. The bent blade was scuffed on its cambered side and near the leading edge. The other blade was unremarkable.



Figure 13-Left propeller assembly.

Submitted by: Andrew Swick