



Federal Aviation Administration

Memorandum

Date: June 23, 2020
To: Jorge L. Echegoyen, SO-63 Aviation Safety Inspector
From: Andres A. Santos, SO-63 Aviation Safety Inspector
Subject: Piper Aztec N14181 Accident on 06/02/2020

ANDRES A. SANTOS
Signature of Andres A. Santos

Overview:

FAA Inspector assigned to provide technical support to N14181 accident investigation.

Purpose/Goal:

Share FAA Airworthiness Inspector Field Notes

Summary:

- Accident Date: 06/02/2020
- Crash Site: .5 mile N/E of TJIG Airport, San Juan Puerto Rico
- NTSB # ERA20LA202

Aircraft and major components identification Data.

- Registration: **N14181**
- Model: PA-23-250-6PCLLM
- S/N: 27-4746
- Total Aircraft Time: **6100.3**
- Total landings: **4657**
- Last Annual Inspection: **08/23/2019**
- Hours since last annual inspection: **5.4**

LH Engine

-Model: IO-540C4B5
-S/N: L-10995-48
-Time since Overhaul: **124.8**
-Years since Overhaul: **9**

RH Engine

-Model: IO-540-C4B5
-S/N: RL-6978-48
-Time since overhaul: **5.4**
-Years since overhaul: **1**

LH Propeller

-Model: HCE2YR2RBSF
-S/N: BP10275B
-Time since overhaul: **5.4**
-Years since overhaul: **1**

RH Propeller

-Model: HCE2YK2RBF
-S/N: BP194
-Time since overhaul: **5.4**
-Years since overhaul: **1**

Last Maintenance Information

08-23-2019: Most recent Annual Inspection on Airframe. TAT recorded as 6,094.9 hours.

05- 28, 2020: Last recorded maintenance work: Alteration Removal and installation of avionics equipment. The installation consisted of an Air Data and Attitude Heading Reference System instrument package, audio panel system, one GPS nav/comm radio, one nav/comm radio with no GPS, and the associated installation components. Weight and balance updated by calculation.

Maintenance Records

Obtained, review in progress.

Wreckage Examination

Fuselage suffered substantial damage on nose left area, windshield broken; Tail boom detached from rib on left side and bent to the left, right middle fuselage bent in to the cabin, pushed by the right wing.

Left hand wing detached from fuselage, cables and lines cut during recovery of the wreckage.

Left hand wing with substantial damage on leading edge area, other damage caused during recovery of wreckage.

Right hand wing attached to the fuselage.

Right hand wing heavily damage on leading edge area, other damage caused during recovery of wreckage.

Left Propeller blades bent backwards. Low pitch position.

Right Propeller with one blade twist bent, consistent with rotation impact damage. Low pitch position.

Right engine mount tubing fracture (Top Right side), apparently due to high impact damage during crash.

Both engines where attached to the wings. All engine major parts were accounted.

All three landing gears appear extended.

Landing gear handle appears to be in neutral position.

Checks and Inspection

Airframe and engine fieldwork performed by Piper Aircraft accident investigator representative.

Performed flight controls continuity check, no issues found. Believe that the damage found on Right aileron control, bell crank rod is result of high impact during the crash. On the left wing, cables cut during recovery of the wreckage.

Elevator trim, nose up position.

Left Engine

All pipes and hoses for the fuel system on left side were tight.

Fuel collected from Left side pipes tested for water, test revealed no water contamination.

Left engine throttle control disconnected from servo unit control due to retainer ball joint fracture, apparently caused by high impact during the crash. Hardware attached. (Fracture retainer ball joint, will be sent to laboratory test)

Left wing fuel selector valve cable tear off consistently by damage caused by the wing detachment. Hardware attached.

Left engine fuel Booster pump removed, applied 12v power source and found that motor rotates normal.

Left engine Fuel injectors removed and visually inspected, found that #2 and #4 were restricted (will be sent to laboratory test).

Left engine rotates freely; intake and exhaust valves have movement.

Accessory gearbox rotates normal.

Left engine cylinders showed to have compression.

Left engine driven pump removed. Opened pump for visual inspection, internal components seen normal (removed for laboratory test).

Left engine top sparks plugs removed for inspection, seem to be normal. (Pictures taken)

Removed left engine fuel manifold, fuel found on inlet, no evidence of water contamination.

Inspected left propeller governor, no leaks and control cable connected to arm.

Left engine Magnetos tight. Removed performed visual inspection, rotate and confirm that were producing sparks.

Left engine mount tubing slightly bent on the left top side apparently by impact damage.

Left engine servo unit removed.

Performed left engine controls continuity check, no discrepancies.

Removed left propeller governor for inspection, shaft normal, and screen was clean, rotated pumping oil.

Left inboard fuel tank quantity sender tested empty- .6 ohms

Full - 33.0 ohms

Left outboard fuel tank quantity sender tested empty- .3 ohms

Full - 36.0 ohms

Left inboard tank finger strainer check-Clean

Left outboard finger strainer check- Clean

Left Nacelle tank finger strainer check- Clean

Right Engine

Performed right engine controls continuity check, no discrepancies.

Right engine mount tubing fracture, apparently due to high impact damage.

Right engine rotates freely; intake and exhaust valves have movement. Accessory gearbox rotates normal.

Right engine Magnetos tight. Timing verified, no issues found.

Performed right engine controls continuity check, no discrepancies.

Documents

Airworthiness and Registration Certificates onboard the aircraft and current.

The Airplane Flight Manual onboard the aircraft, does not match the registration number and serial number of the aircraft.

Latest Weight and Balance report or information not found onboard the aircraft.

List of parts for Lab. Analysis requested by the NTSB Investigator.

- LH Fuel Boost Pump
 - P/N B8001-G
 - S/N 81308
- Servo to engine driven fuel line
 - P/N 624623-6-0210
- Firewall to engine driven Pump line
 - P/N 111F502-6S-0210
- Engine driven pump
 - Model 13840-03
- Fuel Servo Unit
 - Model RSA-5A01
 - P/N 2524213-10
 - S/N 75083
- Fuel manifold group
 - Servo to manifold valve (orange line) P/N 124F001-4CR0140
 - Valve P/N 186757
 - Valve to injectors (black line) P/N 1114174S0274

At this phase of the investigation, no airworthiness issue relevant to the accident identified.