

N7337D / SN: 22-5126 / Piper PA-22-250

Engine Examination: 4 March, 2022 / 8:00 am thru 12:00 pm (4 hours)

Johnny Victory [A&P/FAA Inspector]

Arrived [REDACTED] Lonoke Arkansas [Don Adamson (A&P/IA)(92nd West Aviation Inc.)) at 8:00 am.

Assisted Don Adamson in performance of the following:

Visual Evaluation:

- Engine/aircraft did not experience any fire damage, pre- or post-accident.
- Engine mounts were still connected, but were severely bent/compromised on the left side.
- Engine accessories were still attached and secure in their mounts.
- All fuel and oil lines were secure.
- All engine controls were intact and continuity was confirmed.
- Engine oil level was normal.
- Gascolator – bowl was loose [from accident] but contained small amount of fuel [aprox. ½ full]. No contamination noted. Noted smell of automotive gasoline.

Prior to Rotating Crankshaft:

- Disconnected ignition leads, removed spark plugs.
- Spark plug electrodes were intact with the exception of the #4 lower that had a minor chip.
- Removed and inspected vacuum pump with no abnormalities noted. [Left Lower Mount Nut Loose]

Internal Continuity:

- Verified all pistons were moving within cylinders and each of the accessory gears were moving.
- Verified rocker arm movements were normal.
- Verified "THUMB" compression on each cylinder
- UNABLE to verify sparks on any ignition harness leads [no spark produced]
- Verified magneto timing.

Induction / Exhaust System:

- Verified air intake tubes and air filter screen intact, but damaged during accident.
- Verified exhaust system was in good condition, but damaged during accident. Still connected at all points; no evidence of oil film or soot noted. [Muffler had been changed in annual 0.8 hours prior to accident]

Ignition System / Magnetos:

- Right Magneto – Non-Impulse Coupling – Produced spark when rotated by hand. Slight oil film inside of cap, but lead connections were clean/no signs of oil.
- Left Magneto – Impulse Coupling – Did not produce spark when rotated by hand.
 - Inspected points – Appeared normal
 - Confirmed timing [alignment of "red" mark on gear] prior to disassembly
 - Inspected internal components – All appeared normal
- Ignition Harnesses were intact, in good condition, and appeared to have not sustained any damage from accident.

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- Spark Plugs [All Gaps Appeared Normal]:
 - #1 Upper – Tan color, appeared normal
 - #1 Lower – Oil in cylinder [from being right nose down at accident]; cleaned of oil and appeared normal.
 - #2 Upper – Tan color, appeared normal
 - #2 Lower – Tan color, appeared normal
 - #3 Upper – Black color, appeared to be fouled/not firing
 - #3 Lower – Oil in cylinder [from being right nose down at accident]; cleaned and appeared the same as the #3 Upper [Black color, appeared to be fouled/not firing].
 - #4 Upper – Tan color, appeared normal
 - #4 Lower – Tan color, minor chipping to ceramic.

Carburetor:

- Verified fuel lines were intact; main line into carburetor appeared new/good condition.
- Attempted to drain fuel – bowl was empty [about 1 teaspoon of fuel]
- Removed from engine [Left Forward / Right Rear mount nuts loose]
- Verified throttle arm functioned normally
- Verified accelerator pump operated normally. [Did not have any fuel in it, indicating lack of fuel in carburetor]
- Verified fuel inlet screen was clean.
- Disassembled and verified float, needle valve, needle valve seat, and float bowl were all in good condition. [Bowl / components extremely clean – looked new]

Oil Screen: Removed and verified no metal particles.

Alternator/Generator: Verified intact, but had been impacted and pushed rearward approximately 1 inch.

Propeller Assembly:

- Appeared that it was not rotating at impact. One blade bent rearward, one blade no damage.
- Removed spinner and propeller; starter gear was broken into 4 pieces from the impact.

Completed evaluation at 12:00 pm, and departed.

JOHNNY C VICTORY
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