



Memorandum For Record

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NTSB Accident Number: ERA21LA068

Examination of the cockpit which was fragmented revealed the following:

Landing gear selector handle - UP position (matches the gear actuator position)

Flap indicator - UP position (matches the left flap actuator position)

Airspeed Indicator – 215 MPH¹

Manifold pressure – 23 inches of Mercury (inHg)

Garmin G5 in multiple pieces -retained for read-out by NTSB. It did not have a SD card installed so no data was recorded.

Heading Indicator – Not located

Digital tachometer - damaged

Engine controls - forward

Fuel Selector – Separated and found towards the end of the wreckage path. The handle was missing and the shaft was bent. It was in an intermediate (non-operating) position. The fuel strainer screen was removed and it was clear of debris.

Electric Fuel Pump – Located in main impact crater with a portion of instrument panel wrapped around it.

Throttle Control – Continuity from cockpit to end where fractured.

Mixture Control – Continuity from cockpit to mixture control lever which was fractured.

Propeller Control – Continuity from cockpit to rod end at governor attach.

Examination of the Continental IO-550-B (4) engine, serial number 675267, revealed the propeller remained attached and the engine sustained significant impact damage. The piston and cylinder of the propeller were separated. The pressure pump was attached to a generator which had separated from the engine. The top of the pressure pump was removed, and the rotor was cracked but otherwise intact, and the rotor vanes were intact. Based on length of vanes, the

¹ According to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual, Va is 152 MPH, Vno is 190 MPH, and Vne is 225 MPH.

pump appeared new. The engine accessory crankcase was fractured in multiple locations. Both mufflers were separated, only one still had the exhaust pipes attached. Both mufflers appeared to be in good shape and did not exhibit any cracking or blockage.

The throttle body and metering valve, and manifold valve were separated from the engine. The throttle plate was bound and was in the wide-open position. The fuel filter was clean. All supply hoses were separated from the metering valve. The throttle body was clear of obstructions. The position of the mixture control was not determined.

The engine-driven fuel pump was separated from the engine and the drive coupling was not located.

Both magnetos were separated and only the cap of 1 magneto remained. All ignition leads except the bottom for cylinder Nos. 1, 3 and 5 were damaged/broken. The spark plugs were visually inspected using Champion Aviation Check-A-Plug chart with the following results:

1T – Normal wear. Dry. Light Tan Color

1B – Not accessed.

3T - Normal wear. Dry. Light Tan Color

3B - Normal wear. Dry. Light Tan Color

5T - Normal wear. Dry. Light Tan Color

5B - Normal wear. Dry. Light Tan Color

2T - Not accessed.

2B – Normal Wear. Dark. Oil soaked.

4T - Not accessed.

4B – Normal Wear. Dark. Oil soaked.

6T - Not accessed.

6B - Not accessed.

The oil pump remained attached to the engine and was not removed. The accessory housing was fractured in that area. The oil filter which was separated from the engine was cut open and no ferrous particles were noted. An oil suction screen was not installed.

The exhaust stacks on the left side of the engine (cylinders 2, 4, and 6) were impact separated while the exhaust stacks on the right side of the engine (cylinders 1, 3, and 5) were partially pulled from the cylinders.