



Memorandum For Record

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NTSB Accident Number: ERA21FA346

Examination of the accident site was conducted by NTSB, Textron Aviation, and personnel from the Federal Aviation Administration (FAA).

Examination of the impacted powerline pole revealed it was marked with data tag "15490." The outboard end of the right inboard flap was located in a swamp east of the impacted powerline pole. The location precluded photographing it in-situ. Additional airplane wreckage was located on the ground in close proximity to the impacted powerline pole.

Examination of the area north of the impacted pole revealed ground scars on grass about 850 ft from the damaged pole. The ground scars or energy path were oriented on a magnetic heading of 036°. The airplane impacted a building about 245 ft from the location of the ground scar. The aft empennage of the airplane came to rest inverted on a magnetic heading of 130° outside of the building at 41.69815° north and -072.86298° west, while the heat damaged cockpit and cabin were noted just inside the impacted building. The wing which exhibited extensive impact and fire damage was located in and immediately outside the building. Fuel blight was noted on the left side of the energy path while fire damage was noted beginning about 25 ft from the initial impact with the vertical stabilizer and continued to the wreckage.

The first ground scar associated with the vertical stabilizer was located at 41.69761° north and -72.86326° west longitude. Red colored lens and top of the vertical fairing were located in the impact crater. The energy scar from the vertical stabilizer arched to the right consistent with a right yaw. Ground scars from the right horizontal stabilizer and right wing were located further along the accident site on the left side of the energy path. A ground scar left of the energy path associated with the right engine was located about 20 ft from the start of the ground scar from the vertical stabilizer while a ground scar right of the energy path associated with the left engine was located about 22 ft from the start of the ground scar from the vertical stabilizer. The engine ground scars were about 1 ft deep. The outboard section of the right elevator was noted about 52 ft along the energy path and 22 ft right of the energy path centerline. A wingskin piece located 86 ft along and 13 ft left of the energy path was marked with "RDR 161338?61" with the

underlined digit difficult to determine. The piece was also marked with part number 6688025-6. The energy path was littered with upper cabin material consistent with the airplane being inverted at impact.

Examination of the airplane revealed the wings, cockpit, and cabin were damaged and/or consumed by the postcrash fire. Pieces of flight controls were located along the energy path. The first FAA inspector on-scene reported the APU/ACM access door was closed and latched, but during his subsequent inspection he opened it. All primary and secondary flight control surfaces, or the remains of them were accounted for at the accident site. Both wingtips, the radar antenna, the top of the vertical stabilizer and rudder, ends of both horizontal stabilizers and elevators were accounted for at the accident site.

Examination of the flight controls for roll, pitch, and yaw revealed no evidence of preimpact failure or malfunction. The flight control pushrods and/or cables exhibited either tension overload, shear, or were cut for recovery. Although both flap actuators were located, the position of the hydraulically positioned flaps at each actuator could not be determined. Both speedbrakes were retracted. The two-position horizontal stabilizer was positioned to takeoff/land. Examination of the separated section of left aileron with trim tab actuator installed revealed the actuator was extended 2.5 inches which was beyond the maximum tab trailing edge up limit. Both trim cables remained attached but exhibited tension overload. The left and right elevator trim tab actuators each measured 2.5 inches which were also beyond the maximum travel limit. The rudder trim tab actuator measured 1.9 inches extended and the rods were straight; that measurement equated to neutral.

Examination of the parking brake handle revealed it remained partially attached to the tilt panel by the pilot's left knee. The handle was extended about 2.5 inches. No impact damage was noted to the knob of the handle. The extended shaft was covered in soot along its length and the threaded portion of the support tube was sheared and bent in the threaded portion, thus trapping the handle position.