



The National Transportation Safety Board

Office of Aviation Safety
Central Region
Memorandum for the Record
Recovered Parts Examination
CEN17FA248
Catawba Wisconsin
July 1 2017

On February 5, 2019, under the supervision of the NTSB, an examination of recovered parts from the in-flight breakup was conducted at Wentworth Aircraft Recovery, Lakeville, Minnesota. The parts had been collected by the local sheriff department from July 2017 through October of 2018.

The recovered components from the sheriff included the vertical stabilizer, two flaps, the left aileron, the rudder trim tab, cowlings/nacelle pieces from both engines, two nose baggage doors, a portion of the right magneto from the left engine, a piece of the propeller governor, and pieces of the radome. Their description is below and illustrated in green in Figures 1 and 2.

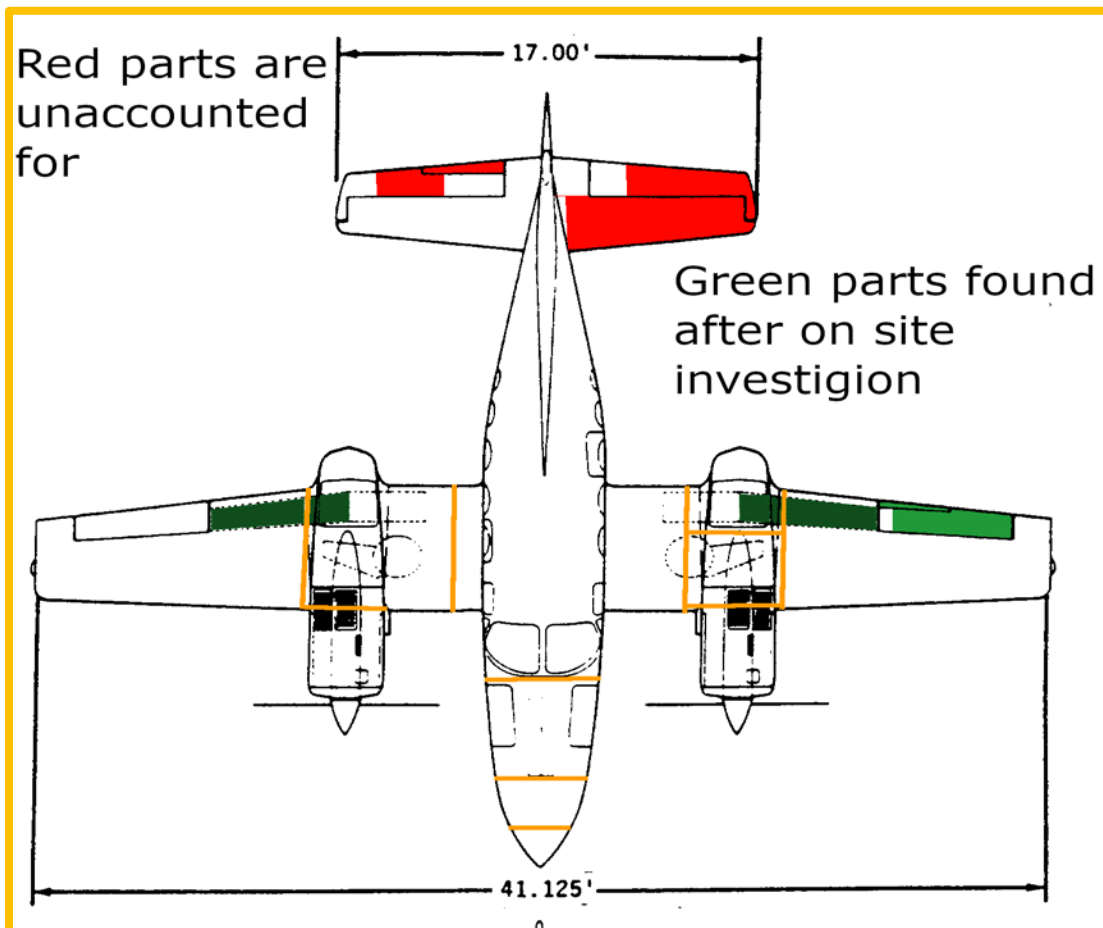
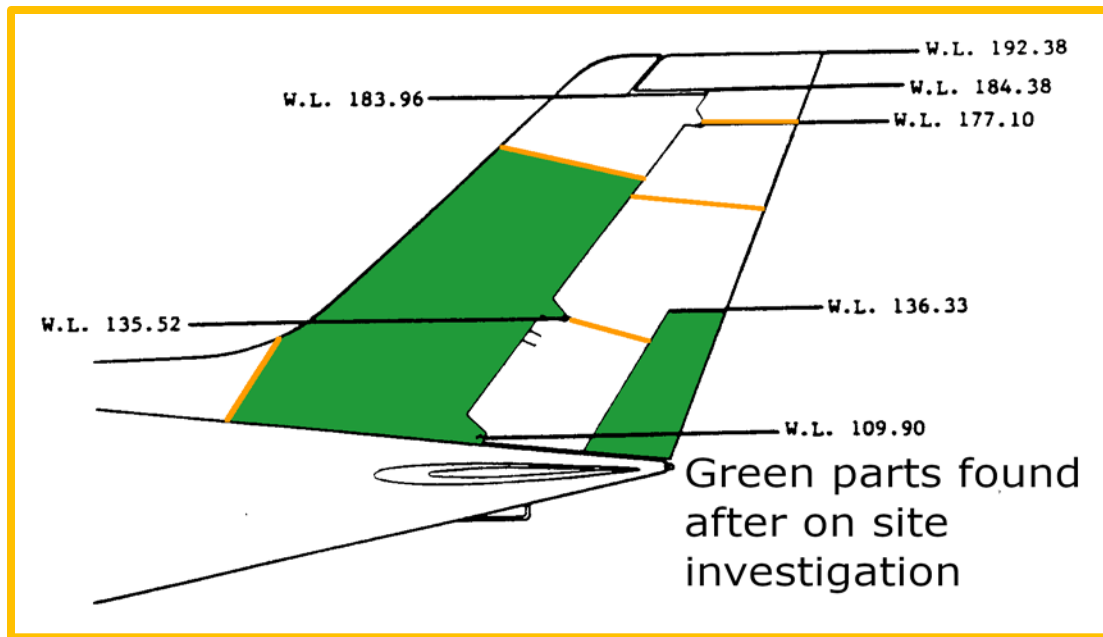
The vertical stabilizer (11-16-17) was marked "55B" in grey and blue paint. The upper portion, starting about waterline 160, separated and the sheet metal was torn in that location. The leading edge contained the rubber deice boot; the boot was torn at the upper separation point and was otherwise unremarkable. The lower sheet metal along the lower leading edge was torn on the right side. Both turnbuckles for the cable control remained attached and were damaged. The trim tab actuator remained attached. The actuator measured at 2 in. consistent with 0° to 5° tab left or neutral trim.

The rudder trim tab (1-16-17) included the entire hinge. The sheet metal was torn on both sides and bent to the right at midspan.

Flap A consisted of two pieces. Piece A1 (11-2-17) was about 40 in. at its longest point along the leading edge and about 25 in. at the trailing edge. The sheet metal was torn at a 45° angle. The leading edge of the piece had the push/pull tube still attached. The sheet metal was torn in this area. Piece A2 (5-6-18) was about 19 in. along the leading edge and about 31 in. at the trailing edge above the stiffener. The trailing edge stiffener for the entire flap assembly remained attached. The sheet metal was torn at a 45° angle which corresponded to the tear on piece A1.

Flap B (11-2-17) was bent about midspan. The sheet metal was torn in several locations along the leading edge; both at the bend and adjacent to the push/pull tube attach bracket. The tube was separated. The separation signatures were consistent with overload.

The left aileron (10-16-17) assembly included the trim tab. The left aileron (10-16-17), sans about 12 inches of the inboard piece, exhibited crushing along the leading edge. The static wick remained attached at the trailing edge. The trim tab separated at the hinge and was bent and twisted.



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