

From: [Kramer Donald](#)
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Subject: NTSB Materials Laboratory Email Factual Report - ERA18FA232 - Island Pond, VT - August 25, 2018 - Piper PA-22-150, N6936B
Date: Friday, October 12, 2018 2:46:06 PM

ACCIDENT INFORMATION:

Place: Island Pond, VT
Date: August 25, 2018
Vehicle: Piper PA-22-150, N6936B
NTSB No.: ERA18FA232
Investigator: Leah Read, ASI-ERA

COMPONENTS EXAMINED:

Section of fractured left aileron cable, turnbuckle with missing barrel, and section of cut chain.

DETAILS OF THE EXAMINATION:

A section of a fractured left aileron control cable was submitted to the NTSB Materials Laboratory for examination. The cable fracture was located approximately 15 inch from a looped end. The looped end was inserted through an eye at one end of a turnbuckle assembly. The turnbuckle connected the cable to a chain, a section of which had been cut to facilitate removal from the aircraft wreckage.

The turnbuckle assembly originally included a brass barrel adjuster. The barrel was missing, however the safety wire was still present. Examination of the turnbuckle threads indicated pieces of brass material still attached to the threads in a few locations. The threaded rod ends were examined for any indication of damage or deformation but none were found. The threaded sections each measured approximately 0.51 inch with 32 threads per inch.

Visual examination of the cable fracture indicated that a group of three wire strands near the fracture were bent inward toward the center of the cable. The wire strands on the opposite side (also near the fracture) were bent laterally toward the circumferential direction. The cable was rusted and corroded along its entire length including at the fracture making it difficult to assess the fracture morphology of many of the wires. The individual wires that could be examined exhibited 45 degree shear planes or a necked appearance, consistent with either cutting in shear or tensile overstress. Taken as a whole, the features were consistent with an overload fracture of the cable under a combination of shear and torsion loads.

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