



MEMORANDUM FOR RECORD

Robert Gretz
Senior Air Safety Investigator
Eastern Region Aviation

Wreckage Examination
Date: November 2, 2017
Location: Anglin Aircraft Recovery
NTSB Accident Number: ERA18FA006

Narrative:

The engine had separated from the airframe during the accident sequence. The engine was equipped with a four-blade wooden propeller and two blade roots remained attached to the propeller hub. The valve covers were removed and oil was noted throughout the engine. The top spark plugs were removed and the propeller was rotated by hand. Camshaft, crankshaft, and valve train continuity was confirmed to the rear accessory section. Thumb compression was attained on all cylinders. Borescope examination of cylinders was unremarkable for the pistons and valves. The bottom spark plugs were then removed from the engine. All spark plug electrodes were intact and no damage was noted. The engine driven fuel pump was removed from the engine. The screws that attached the engine driven fuel pump to the engine were noted to be finger tight, as were the screws that secured the pump; however, when the pump was disassembled, disintegration of the internal components was noted, consistent with thermal damage. The carburetor was disassembled, its plastic floats were melted and needle was intact. The fuel inlet screen to the carburetor was present and exhibited some debris consistent with fire damage. The oil filter was opened and no contamination was observed. Both magnetos sustained thermal damage and did not produce spark when rotated via an electric drill. The oil suction screen was absent of debris.

Approximately 145 feet of towrope was recovered at the accident site and about 5 feet of rope at the Tost reel was presumed consumed by fire. Additionally, about 10 feet of rope was consumed by fire aft of the towplane at the accident scene. The other (glider) end of the towrope appeared separated and a section of that rope was retained for further examination. The Tost weak link ring assembly was not located. The towrope adjacent to the guillotine was examined further and no guillotine or other marks were noted on the towrope.

The four-point harness inertia reel had sustained impact and fire damage. The lock control was in the full aft position and would not move. The cable was fully retracted to the stop in the inertia

lock reel and would only move about 1/8-inch. The cable had separated at a length consistent with the 90° pulley wheel and the pulley wheel remained intact and attached to the airframe.