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Subject: CEN22FA376, Wreckage Examination
Contact: Mitchell Gallo

A follow-up examination of the wreckage was performed with the Federal Aviation Administration and Textron Aviation at Beagles Aircraft Service, Greeley, Colorado.

The aircraft instrument panel and cockpit sustained accident impact damage.

The tachometer indicated 1,561.6 and the hour meter indicated 1,176.2.

Throttle, mixture, and propeller control continuity from the cockpit controls to their respective engine accessories was confirmed. The throttle and propeller control knobs were fully forward. The mixture control knob was about 1 in from its fully forward position.

Flight control continuity from all the flight control surfaces to the cockpit controls was confirmed. The elevator trim actuator was in the approximately neutral position. The cockpit wing flap selector sustained accident impact damage and was positioned between UP and 10°; the wing flap motor/actuator was in the fully retracted/UP position.

Both wing fuel cap diaphragms were intact and pliable. The underlying vent holes of both caps were not obstructed.

The cockpit fuel selector handle was positioned to the BOTH position on the fuel selector placard plate. The fuel selector handle was separated from the fuel selector assembly valve stem due to accident impact damage that encompassed the area around the fuel selector. The fuel lines leading to the fuel selector were attached

and secure and without evidence of fuel leakage. The fuel selector valve was between the LEFT and OFF detents. The fuel selector valve assembly did not contain debris.

The aircraft fuel system was modified with a header tank as part of a supplemental type certificate. The fuel lines leading to the header tank were intact and secure with no evidence of fuel leakage. The header tank was not ruptured and had an approximate volume of 2 - 2.5 qts. The header tank contents were drained, which revealed a total of approximately 1 pt of liquid consistent in color and smell with 100 low lead aviation fuel.

The fuel lines leading to the gascolator were intact and secure with no evidence of leakage. Disassembly of the gascolator revealed that it contained a liquid that was about 1/16 of the volume of the gascolator bowl, and the liquid was consistent with 100 low lead aviation fuel. The gascolator bowl and gascolator screen did not contain debris.

The electric fuel pump contained about 1/8 of its volume of a liquid consistent with 100 low lead aviation fuel. The electric fuel pump operated when connected to an electrical source. There was no fuel of downstream of the gascolator.

The top spark plugs were removed and exhibited normal features. The engine was then rotated through by hand, during which drive train and valve train continuity to the engine accessory section was confirmed.

The propeller was separated from its hub due to overstress. The propeller blades exhibited rotation features due to rotation on impact with terrain.

The magnetos were attached and secured to their engine mounting pads and sustained accident impact damage. The engine driven fuel pump, fuel distribution valve with lines and injectors, and magnetos were removed for functional testing on a test stand.