



RECORD OF EXAMINATION

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NTSB Accident Number: CEN18LA287

Narrative:

A post-accident examination of the accident site by a Federal Aviation Administration inspector revealed that the airplane was resting on a flat and dry dirt field with the landing gear retracted and the flaps extended to the full flap, 30-degree position. The FAA inspector stated that it had not rained for about six weeks and the surface was hard and its surface was in a condition as some turf airstrips. The master switch, ignition key switch, boost pump switch, and the fuel selector were in the OFF positions. The throttle and propeller controls were in the full forward positions. The mixture control was near the idle cutoff position. The left and right fuel tanks were each about ½ full of liquid consistent with 100 low lead aviation fuel.

Following recovery of the airplane to a salvage facility, the engine with the airframe were secured to a trailer and the propeller replaced in preparation for and engine test run under the supervision of a National Transportation Safety Board Air Safety Investigator. The fuel supply to the engine was plumbed into the left wing tank fuel lines. The top spark plugs were removed and exhibited features consistent with normal operation. The plugs were then reinstalled. The engine was primed using the electric boost pump and was started immediately and allowed to warm up. The propeller was cycled at an engine speed of 1,000 rpm. A magneto check was performed at an engine speed of 1,800 rpm and the corresponding reduction in speed was approximately 125 rpm. There were no anomalies when engine power was increased to full power. The external fuel supply was then plumbed into the right wing fuel tank lines and a second test run was performed with similar results. Both test runs were about 5-6 minutes in duration. There were no fuel system leaks noted during the test runs.

The fuel selector was removed, and its examination revealed no blockage and no mechanical anomalies that would have precluded normal operation.

The fuel pump, fuel servo, and manifold valve were removed for subsequent flow testing at Continental Motors under the supervision of an NTSB Air Safety Investigator. Testing of the fuel pump revealed that the pump produced adequate fuel flow and pressure for an IO-470 engine. Bench testing of the fuel

servo and the manifold valve yielded results that did not meet factory specifications for a new part; fuel injection systems must be set up and adjusted to each individual engine and airframe combination. The throttle body/metering unit had a leak during bench testing. The leak during bench testing emanated from an internal O-ring. There were no leaks from the throttle body/metering unit during the engine test run.

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