



MEMORANDUM FOR RECORD

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Wreckage Examination

Date: March 15, 2017

Location: Anglin Aircraft Recovery

NTSB Accident Number: ERA17LA110

Narrative:

The engine was separated from the airframe for examination. The valve covers were removed and oil was noted throughout the engine. Approximately ½ ounce of fuel was recovered from the fuel servo and ¼ ounce was recovered from the engine driven fuel pump. The fuel was blue, clear, and consistent with 100-low-lead aviation gasoline. When the engine driven fuel pump was actuated by hand, suction and compression were confirmed at the inlet and outlet port. The top spark plugs were removed and their electrodes were intact. When the propeller was rotated by hand, camshaft, crankshaft, and valve train continuity were confirmed to the rear accessory section. Thumb compression was attained on the No. 1 and No. 4 cylinders. The No. 2 cylinder was impact damaged and the No. 3 cylinder exhibited a small hole near the intake manifold of the cylinder. Removal of the No. 3 cylinder revealed that the intake valve had separated and the valve stem was recovered in the oil pan. The remainder of the No. 3 valve was recovered from its intake manifold. The No. 3 cylinder was retained for further examination. Further examination of the engine case revealed that all eight hydraulic lifters were installed 180 degrees opposite proper installation per the maintenance manual.

The oil suction screen was removed and some metallic contamination was observed in the screen. The oil filter was opened and also contained metallic contamination. A timing check of the magnetos revealed that they were near their specification of 20 degrees prior to top dead center. Both magnetos produced spark at all leads when rotated by hand.

The electric fuel pump activated when connected to a battery and the fuel selector was found positioned to the right main fuel tank.