



MEMORANDUM FOR RECORD

Brian C. Rayner
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Eastern Region Aviation

Date: 10/19/2023
Subject: ERA22LA380, Cessna 150F, N8797G, FAA Engine Examination
Contact: Juan Garcia - FAA Aviation Safety Inspector
Philip Grice – Manager, Field Product Performance, Continental
Aerospace Technologies

The airplane experienced a loss of engine power and was damaged in the subsequent forced landing. Before the engine exam was completed, and without benefit of an NTSB Form 6120.15, Release of Aircraft Wreckage, the insurance carrier for the airplane sold the wreckage. The buyer, unaware that the airplane had been retained as evidence, began disassembling the airplane for the sale of its parts. Before the airplane was located, and arrangements could be made for an engine exam to be completed, the airplane's buyer had partially disassembled the engine.

Mr. Garcia visited the facility where the airplane was located and performed an examination of the engine as found. In summary:

Brian briefing on engine inspection:

Engine was in a cargo container partially dissembled, no propeller rotation of engine crankshaft with metal rod. Engine rotation found smooth with no issues, no compression due to removal of upper cylinder spark plugs, cylinder covers, push rods and rocker assemblies. Spark plugs removed from upper casing, unable to determine which cylinders removed from same, with push rods and rocker assemblies Four spark plugs found oily, carbon buildup, corroded and contaminated. Left magneto missing plug wires pulled from magneto, right magneto wires still installed, unable to determine magneto operation due to unable to turn crankshaft with enough rotation to initiate spark. Engine carburetor missing from engine shear off from engine intake manifold. Cylinder number one with crack located upper cylinder housing at the rocker assembly's connection section, crack

extends the full length across mounting pin section, bushings found loose due expansion from crack.

The enclosed was examined by the manager of product field performance for the engine manufacturer who stated the exhaust valve in the Number 3 cylinder was stuck in the open position. With the rockers removed, both valves should be pressed closed by valve spring tension. The exhaust valve stuck in the open position would result in a substantial power loss.

Further, he stated that bushings were not installed in the rocker boxes of the cylinders at the factory. The bushings pictured in the Number One cylinder rocker box reflect a repair had been performed on the cylinder at some time in its service life. According to the manager, the loose bushing would adversely affect the dry lifter clearance and adversely affect valve performance.



Photo 1 – View of Number 3 Cylinder, Engine Case, and Propeller Flange (FAA)



Photo 2 – View of Rocker Arms and Pushrods as Found (FAA)

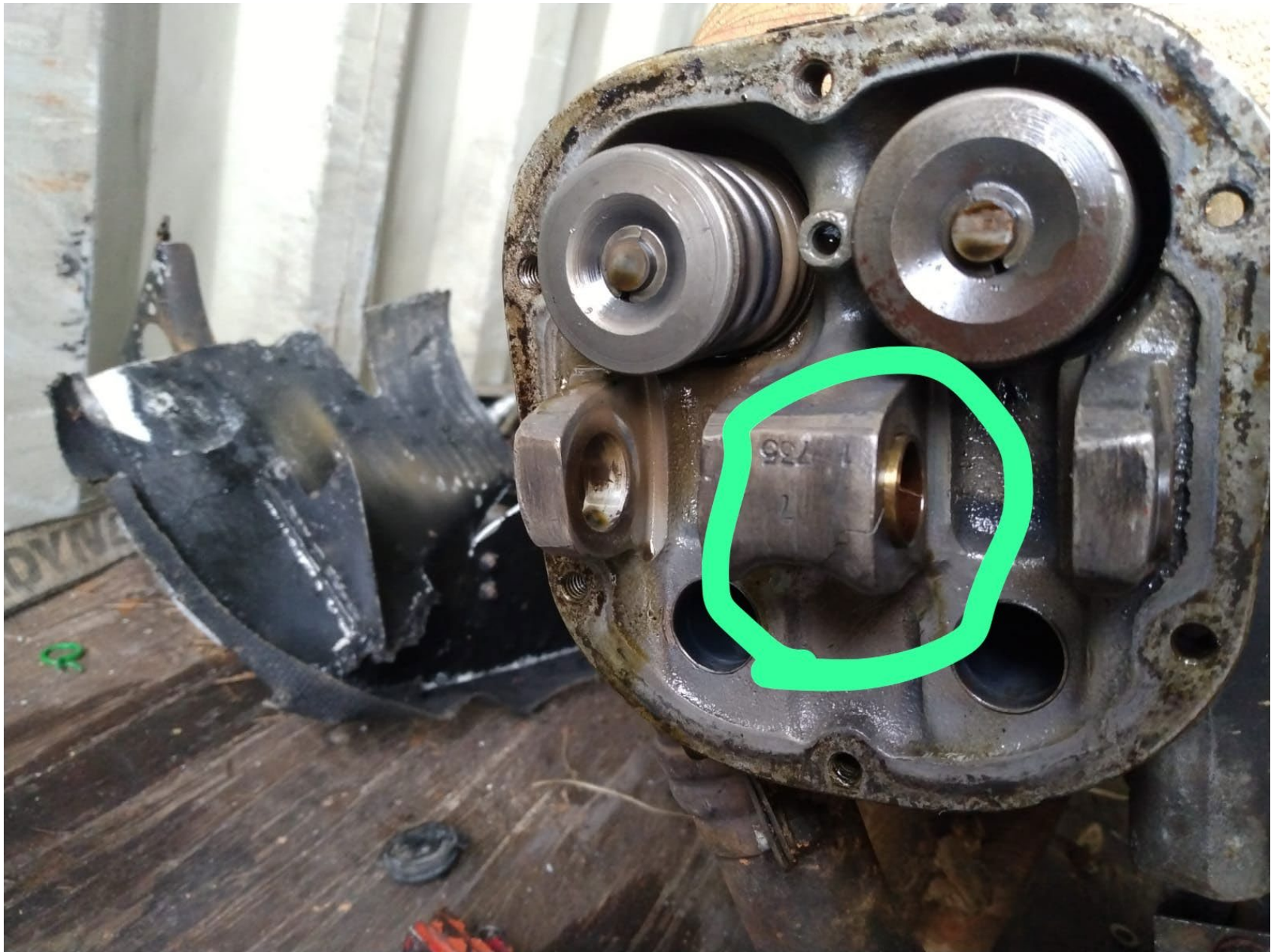


Photo 3 – View of Number One Cylinder with Highlighted (Cracked) Rocker Box (FAA)