

INSPECTORS STATEMENT

J.D. Nichols PMI

Atlanta FSDO

December 9, 2015

N334CM

Cirrus Design SR22

Serial Number 0952

2618.1 Total Time

I was requested by Atlanta Flight Standards District Office management to participate in the engine analysis of N334CM at Atlanta Air Salvage located in Griffin Georgia on November 18 2015. In attendance was John Kent representing Continental Motors, Brad Miller representing Cirrus Aircraft, David Huie representing Old Republic Aerospace (limited participation) and Eric Alleyne for the NTSB.

The aircraft was transported by and arrived at Atlanta Air Salvage on November 15 on a flatbed trailer; the aircraft remained on the trailer for the remainder of the investigation.

On the initial look, the aircraft appeared to have sustained heavy damage from the ballistic chute deployment and subsequent reported ground incident; the MFD, PFD and radios were not installed in the aircraft (it was determined that the MFD may have been removed prior to the accident flight for maintenance), the nose gear and cowling were intact although damaged, pictures were taken to document the aircraft as it was presented.

The engine is a Continental model IO-550-N, serial number 917213 with 2618.1 hours total time and 112.1 hours since major overhaul. The engine mount was fractured and severed at the two airframe top attach points, the bottom (gear) attach point was intact; however there was firewall damage in the form of buckling about midway between top and bottom attach points. The engine appeared to be intact with all accessories, wiring, and plumbing attached, the propeller however had damaged (bent) blades that appeared to be caused by static forces rather than dynamic impact forces. Engine oil was checked at the dip stick and was found to have approx. 6 quarts indicated; the oil appeared normal in color without evidence of overheating or foreign matter. The engine turned by hand and compression was felt in all cylinders.

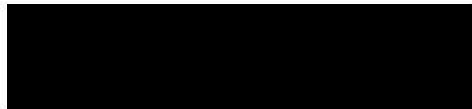
The engine spark plugs were removed and inspected, all the top plugs appeared to be running rich with the number 6 plug wet with oil, bottom plugs were normal in appearance. The cylinders were borescoped and appeared normal and unremarkable. The continuity of the mixture, throttle and propeller controls were verified with no discrepancies noted. The engine was considered safe for a run attempt. In preparation for the test run a slave propeller was installed, a temporary fuel supply was connected to the fuel selector valve and the battery was reinstalled.

The engine started immediately without difficulty (three blades), the engine rpm was limited to about 1000/1200 due to the engine mount condition, the engine ran smooth without hesitation and followed throttle movement, it was noted that the manifold pressure / fuel flow gauge was inoperative. The Cirrus representative troubleshot the problem to the gauge, a replacement was sourced from Atlanta

Air salvage and installed, on the second start attempt the starter failed, the starter was replaced with a salvaged unit, and after replenishing the fuel supply the engine was restarted and ran normally, all engine indications were within limits. Total engine run time was approx. 10 minutes.

The intake runner for numbers 1 and 3 cylinder was noted to be chaffed by the alternate air door control cable, the intake runners were removed and inspected and found not to be compromised (see pictures), however this was an impending critical engine maintenance issue.

The NTSB has elected to have the engine removed and sent to Continental motors in Mobile Alabama for full power engine tests on an instrumented test cell, according to the Continental representative, scheduling limitations will put this out until sometime early next year. NFE.

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J.D. Nichols