



Air Tractor, Inc.
Accident Investigation

ENGINE REMOVAL NOTES

NTSB Accident Number:

CEN17LA284

Date & Location of Accident:

18 Jul 2017
Reyno, Arkansas

NTSB REQUESTED CONFIDENTIAL:

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PREPARED BY:

Kyle Schroeder
Air Tractor, Inc.





Example of AT-802A

The information contained in this report is recorded as the result of an engine removal from aircraft 802A-0714 (N816FF). This aircraft was located at the Air Tractor facilities in Olney, TX. Under the direction of the NTSB IIC, Todd Fox, and the supervision of Tony Leinneweber, FAA Lubbock FSDO, the engine was removed on August 1, 2017 and crated for transport to Pratt & Whitney, Canada.

Persons present for the engine removal were:

Tony Leinneweber	FAA Lubbock FSDO
Kyle Schroeder	Air Tractor Accident Investigation
Robert Salyers	Air Tractor Quality Control Manager
Jim Pollard	Air Tractor Production Leadman
James Malone, Jr.	Air Tractor Mechanic (Engine Installation)

The aircraft wreckage had been placed in a storage area of the Air Tractor factory and had been segregated from other aircraft parts. Signage was posted to indicate that this wreckage was sensitive and could not be handled without permission of the NTSB. In addition, the area was roped off with yellow CAUTION tape to further isolate the wreckage (Photos 1 and 2).



Photo 1 - Quarantined Wreckage



Photo 2 - Do not Disturb Tag

Component Serial Numbers were identified as follows:

Pratt & Whitney, Canada PT6A-65AG Engine S/N: PCE-PN0314 B/S: 1102	Woodward Overspeed Governor P/N: 66503-210960-01 S/N: 20847964
Woodward Propeller Governor P/N: 66503-8210-034 S/N: 20708948 Rev: N	Woodward Fuel Control Unit P/N: 8063-641 S/N: 20850816

Before engine removal, the engine rigging was checked. Photos and video were taken throughout the process. The propeller had been removed during unloading so the rigging of the FCU beta valve (flush) could not be confirmed during this exam. This confirmation had been made previously during the on-scene examination by Mr. Bill Kelly of the Little Rock FSDO and Mr. Robert Salyers of Air Tractor.

Power Lever - The power lever properly moved the input arm on the Fuel Control Unit (FCU) through its full range of motion with no binding, rubbing, or jamming. The FCU input arm properly contacted each control stop on the FCU. The control stops were safety wired and did not appear to have been tampered with. The power controls cam box moved freely through its range with control movement and the guide pin was located at the "track point" of the cam when the cockpit control was at the idle stop.

Propeller Lever - The propeller lever properly moved the input arm on the top of the Propeller Governor through its full range of motion with no binding, rubbing, or jamming. The Propeller Governor Input arm contacted each stop and properly activated the feathering plunger when the cockpit control was placed in the Feather position. The stop on the Propeller Governor was properly safety wired and did not appear to have been tampered with.

Start Control - The start control lever ("condition lever") control properly moved the FCU lever through its full range of motion with no binding, rubbing, or jamming. The FCU lever properly moved the plunger to at the cut-off position and properly made contact with the FCU input arm at the Flight Idle position.

Two things were noted during the examination:

1. This aircraft was equipped with an aftermarket hydraulic installation that had displaced the electrical cables coming from the engine Starter/Generator. These cables were deflected downward within one inch of the engine power controls. These cables were not supported and moderate hand pressure could deflect the cable into the power controls. No signs of contact between the cables and the power controls were obvious. (See Photo 3)
2. The aircraft radio stack had been removed from the radio console. This had been done prior to arrival at Air Tractor. (See Photo 4)

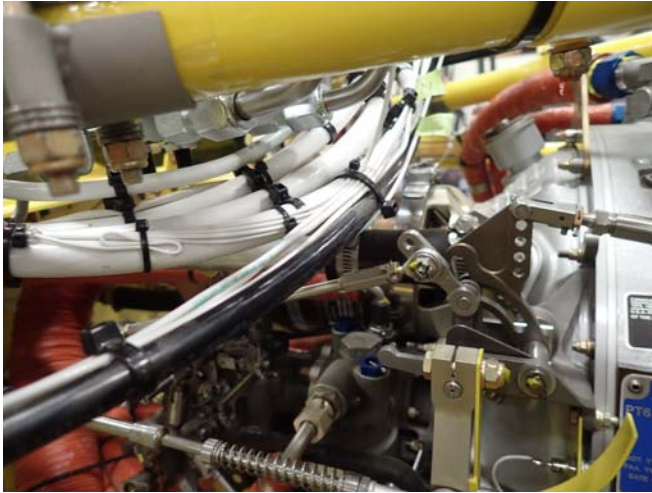


Photo 3 - Cabling routed near engine controls



Photo 4 - Cockpit with no radios installed

Yellow torque seal was freshly applied to the four nuts securing the Propeller Governor (Photo 7). The Propeller Governor was not removed from the engine (Photo 5 & 6). The Propeller Overspeed Governor was not disturbed except that the upper-forward mounting nut had to be removed for the removal of a ground wire ring terminal (Photo 6). The nut was reinstalled.



Photo 5 - Propeller Governor as installed

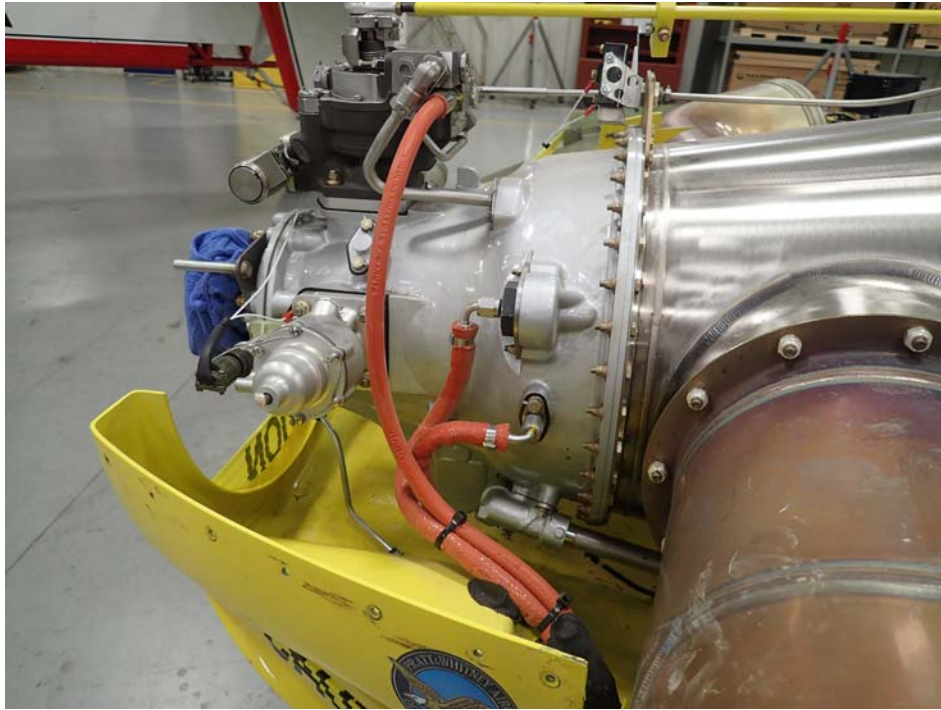


Photo 6 - Propeller Governor and Overspeed Governor



**Photo 7 - Yellow Torque Seal added to nuts on Propeller Governor
Lefthand side shown, Righthand side similar.**

The flexible Py line that connects the FCU to the propeller governor was checked for security. Both ends of the Py line were connected with a line of torque seal applied (from initial production - see Photo 8 & 9). The forward end of Py line was removed from the Propeller Governor and capped. The fitting had been tight prior to removal. The entire length of the Py line was inspected and no gouges, cuts, or abrasions were noted. The Py line was coiled and remained installed at the FCU.

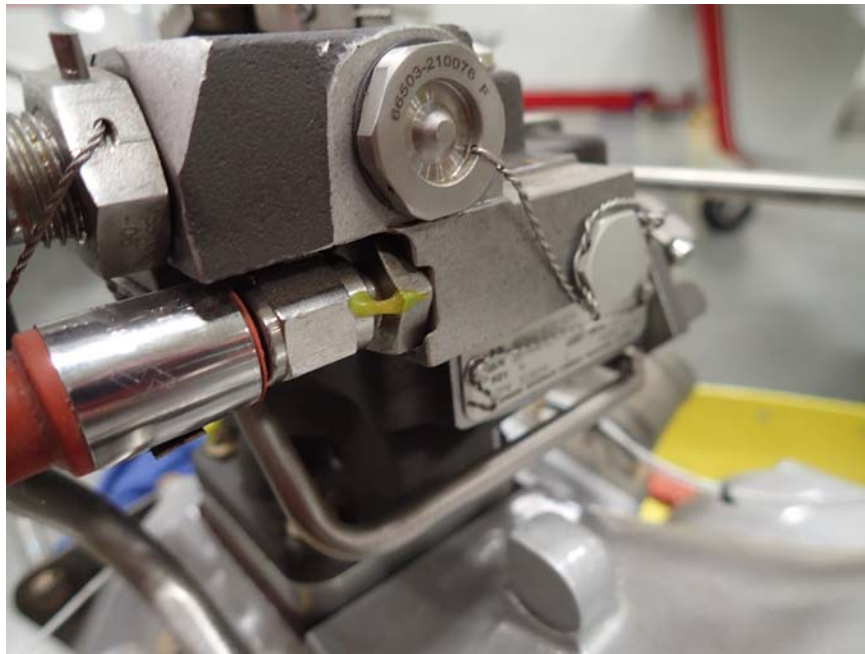


Photo 8 - Forward end of Py line attached at Propeller Governor



Photo 9 - Aft end of Py line attached at Fuel Control Unit

Engine oil was drained from the oil lines when the lines were disconnected from the engine. The oil was clean and clear with no contamination noted. The oil was not drained from the engine and the oil dipstick showed a level roughly corresponding with the number "2" on the dipstick.

The engine starter/generator was removed from the engine and retained with the aircraft wreckage (see Photo 10). The engine pad was covered with the proper cover plate (yellow). The air conditioning compressor was removed from the engine, but the drive pad assembly remained installed.

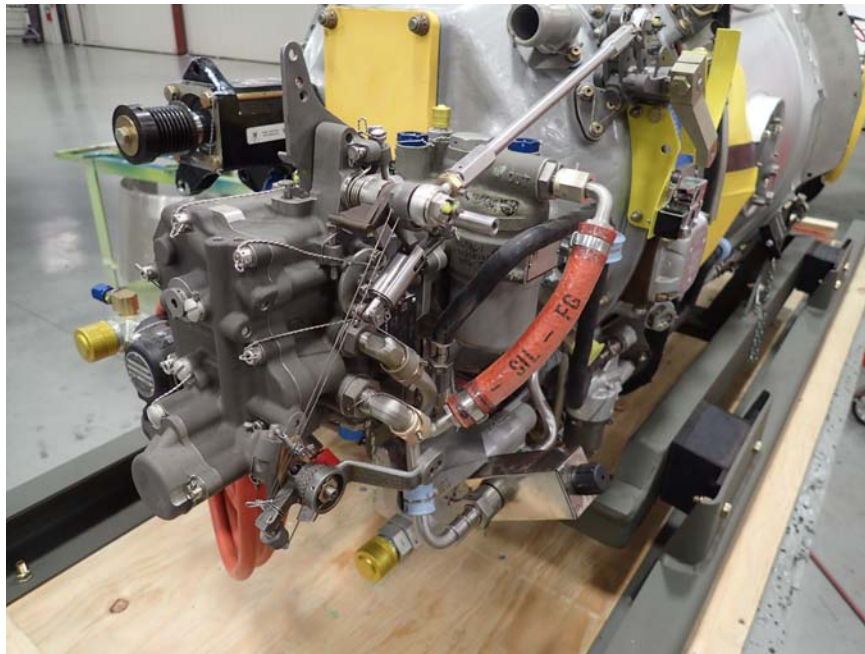


Photo 10 - Fuel Control Unit shown after engine placed on shipping skid

All engine openings were plugged or covered to prevent contamination.
The engine removal was completed and the engine was placed on a Pratt & Whitney PT6A shipping skid.

Work commenced at approximately 10:00am CDT and was concluded at approximately 3:30pm CDT.