

HONEYWELL WRECKAGE REVIEW NOTES
Celina, OH
Grumman G-164B, Registration N8376K
May 27, 2021
NTSB Investigation CEN21LA237

On May 27, 2021, a Grumman G-164B Agricultural aircraft crashed inverted into a waterway shortly after takeoff from the Lakefield Airport near Celina, Ohio. The aircraft was conducting aerial application in the area. The pilot sustained serious injuries. Aircraft damage was substantial. The aircraft was relocated to a hangar at the Lakefield Airport where a wreckage review was conducted on June 18, 2021. Representatives of Honeywell, Hartzell, FAA-FSDO Columbus, and the airport manager attended the review.

The aircraft was stored in a hangar on the airport property ([Figure 1](#)). The data plate on the aircraft identified the aircraft as G-164B, Serial No. 675B ([Figure 2](#)). The engine remained in the airframe with the side cowling removed. The propeller was removed for disassembly inspection ([Figure 3](#) and [Figure 4](#)). The remaining cowlings were removed ([Figure 5](#)) and the engine inspected prior to removal from the airframe.

The following observations of the engine were noted.

- The engine was intact with no evidence of impact or fire damage ([Figure 6](#)).
- The engine data plate identified the engine as ([Figure 7](#))
 - o TPE3311-1-151A
 - o Part No. 893250-2
 - o Serial No. P-92143
- Starter shaft was sheared ([Figure 8](#)) with the spline end remaining in gearbox ([Figure 9](#)). The starter remained with aircraft and was not returned with the engine.
- The Beta tube was broken forward of the propeller flange ([Figure 10](#) and [Figure 11](#)).
- Linkage to propeller pitch control (PPC) was not connected.
 - o Bracket was off the PPC spline shaft ([Figure 12](#) and [Figure 13](#)).
 - o Bolt does not appear to be tight and no safety wire was present ([Figure 14](#)).
 - o PPC was at approx. 30 degrees ([Figure 15](#)).
- FCU was at 9 degrees on speed input ([Figure 16](#)) and 28 on Power Lever ([Figure 17](#)).
- Gearbox oil bypass popped / actuated ([Figure 18](#)).
- FSOV index mark on the shaft was at top, 0 degrees ([Figure 19](#)).
 - o Arm at 10 o'clock ALF
- Aft mount bolt was sheared with head and nut missing ([Figure 20](#)).
 - o Remainder of bolt stayed in plenum ([Figure 21](#)).
- Gearbox studs for fuel pump mount slightly pulled, creating a gap between the fuel pump and gearbox housing ([Figure 22](#)).
 - o Pump and FCU was slightly loose to gearbox
 - o FCU and pump interface appears to be tight
- Power lever in cockpit at red hatched area on scale next to lever ([Figure 23](#)).
- Speed lever slightly aft of power lever ([Figure 23](#)).

- With the speed lever in the full aft position,
 - o FCU 6 – 8 degrees
- The linkage for the PLA was reconnected to PPC and the power lever was actuated:
 - o Full forward, PPC at 100, FCU at 98
 - o Full aft, PPC 4, FCU 0
- The engine turbine rotated freely with the propeller.
- There was no bending of first stage compressor impeller blades observed ([Figure 24](#)).
- The third stage turbine rotor was intact however; the blades tips were white in color ([Figure 25](#)).

The bracket for the power lever linkage to the propeller pitch control was removed from the aircraft ([Figure 26](#)) and placed with the engine in the engine shipping container ([Figure 27](#) - [Figure 29](#)) for return to Honeywell facility in Phoenix, AZ



Figure 1. Grumman G-164 Registration N83476K



Figure 2. Grumman G-164B Registration N8376K



Figure 3. Grumman G-164B Registration N8376K



Figure 4. Grumman G-164B Registration N8376K Propeller



Figure 5. Engine S/N P-92143 Installed in Airframe



Figure 6. Engine S/N P-92143



Figure 7. Engine S/N P-92143 Data Plate



Figure 8. Engine SN P-92143 Starter Shaft



Figure 9. Engine SN P-92143 Starter Shaft



Figure 10. Engine SN P-92143 Beta Tube



Figure 11. Engine SN P-92143 Beta Tube



Figure 12. Engine SN P-92143 Propeller Pitch Control Linkage

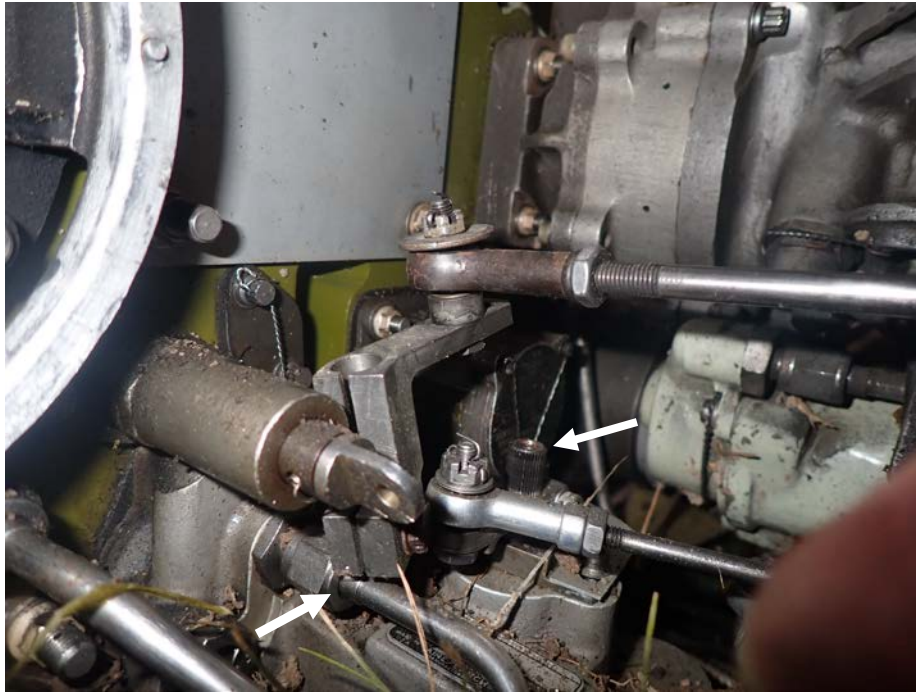


Figure 13. Engine SN P-92143 Propeller Pitch Control Linkage



Figure 14. Engine S/N P-92143 Propeller Pitch Control Linkage



Figure 15. Engine S/N P-92143 Propeller Pitch Control



Figure 16. Engine S/N P-92143 Fuel Control Unit



Figure 17. Engine S/N P-92143 Fuel Control Unit



Figure 18. Engine S/N P-92143 Oil Filter Bypass Indicator



Figure 19. Engine S/N P-92143 Fuel Shut Off Valve



Figure 20. Engine S/N P-92143 Rear Mount

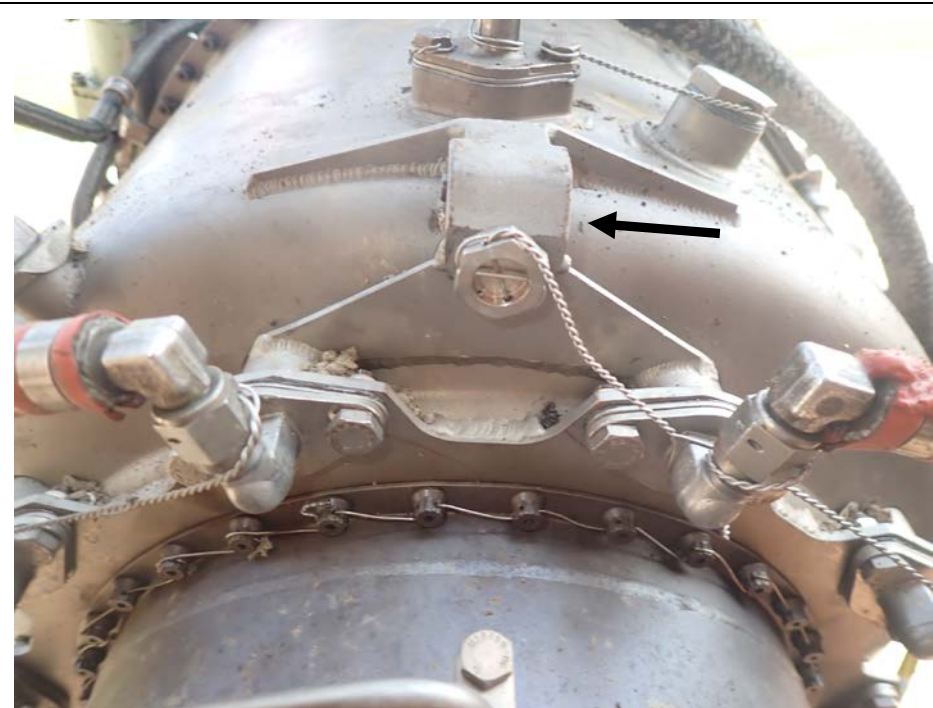


Figure 21. Engine S/N P-92143 Rear Mount



Figure 22. Engine S/N P-92143 Fuel Pump Mount to Gear Mount



Figure 23. Grumman G-164B Registration N8376K Power and Speed Levers



Figure 24. Engine S/N P-92143 First-Stage Impeller



Figure 25. Engine S/N P-92143 Third Stage Turbine Rotor



Figure 26. Engine S/N P-92143 Propeller Pitch Control Linkage Bracket



Figure 27. Engine S/N P-92143 Propeller Pitch Control Linkage Bracket



Figure 28. Engine S/N P-92143



Figure 29. Engine S/N P-92143