



MEMORANDUM FOR RECORD

Eleazar Nepomuceno
Aviation Accident Investigator
National Transportation Safety Board
Office of Aviation Safety – Western Pacific Region

NTSB Accident Number: WPR21LA208
Aircraft Registration & Make/Model: N975016; 1942 Boeing PT-17 Stearman
Accident Location: Hollister, CA
Accident Date: 5/26/2021

Narrative:

The following is a synopsis of the information provided by Wings West Governor Exchange & Overhaul, Inc. on August 23, 2021.

The following report is in reference to a Propeller Governor Inspection on a model Hamilton Standard 1Q12-G serial# 15663.

Wings West received the above governor on July 22, 2021 for Inspection and functionality as per request from NTSB, the findings are as follows:

- Data tags were hard to read but we were able to confirm the model 1Q12-G Serial Number: 15663
- Unit also had attached the drive pad which Wings West removed to inspect the governor.
- Gears turned freely and no apparent damage to the unit itself, no metal or contaminants evident in oil expelled from governor with gear rotation.
- Flyweight assembly was intact and had vent holes in flyweight cup and toes move freely, pilot valve comes out smoothly, no missing balls in thrust bearing.
- Rust starting to become visible in relief valve and flyweight, has not seemed to inhibit operation. Upon inspection relief spring (51737) appears to have been ground down (no pieces recovered in governor) as opposed to breakage.

Test of Propeller Governor on test bench:

- Measure a high rpm of 2400 (should be 2300, as per specifications)

- Relief pressure set at 125# (should be 200#, as per specifications)
- Feathered at 1200 rpm
- Internal Leakage within limits at 8 qph (quarts per hour)
- Pumping capacity at 10 qpm {quarts per minute} both normal.
- After partial reseal and putting a correct spring in the rpm of the governor was more reactive (than with the 125# spring) and other than normal wear and tear this was the only thing out of normal. In my opinion the pressure in the governor was not enough to control the pitch of the propeller in this circumstance.
- A 200# spring was installed in the propeller governor (51737) and tested the governor; the rpm came right up to speed as opposed to slowly coming to speed with the 125# spring.

Disassembled unit (head piece intact) and returned to NTSB.