



Memorandum for Record

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National Transportation Safety Board
Investigator in Charge

NTSB Accident Number: WPR19LA087
Aircraft Registration & Make/Model: N506PH / MD Helicopter 369E
Accident Location: Kukuihaele, HI.
Accident Date: 2/21/2019

An email, dated July 26, 2021, from the Director of Maintenance, Paradise Helicopters, provided the steps the mechanic took when performing the engine wash of N506PH. See Figure 1.

The mechanic who performed the engine wash reported the following steps were taken :

1. Removed and capped the bleed valve line, Pc line and the governor tee.
2. Blocked off the Bleed Valve with the wedge tool.
3. Removed the turbine drain line
4. Connected the soap solution hose to the aircraft
5. Pulled the igniter circuit breaker and made sure the anti-ice was off.
6. Started spraying the soap solution a few seconds before motoring the starter, then motored the starter for 10 seconds while monitoring the N1 RPM to ensure it doesn't go more than 10%.
7. Stopped motoring the starter once the engine reached 10% N1 and let the engine spool down.
8. Removed the soap bottle and hose from the aircraft.
9. Installed the distilled water hose to the aircraft rinse fitting.
10. Removed the cap from the pc line.
11. Started spraying the distilled water in the engine a few seconds before motoring the starter, then motored the starter for 10 seconds while monitoring the N1 to ensure it doesn't go over 10%.
12. Stopped motoring the starter after the 10 seconds when the engine N1 reached 10%.
13. Watched the soap solution drain out of the engine. Repeated the rinse step until I saw freshwater and no soap coming out of the engine drain.
14. Disconnected the water bottle from the aircraft rinse fitting.
15. Once the water stopped dripping out of the turbine drain I reconnected the drain line.
16. Removed the governor tee cap and reconnected all the lines that had been disconnected.
17. Removed the wedge from the bleed valve and reconnected the line.
18. Engine run up was done after this for around 10-12 minutes at 100% on the ground while a leak check was conducted due to completion of the 300 hour inspection.

We have mechanics who are run-up trained and qualified for these aircraft and they are annually re-qualified. Please let me know if you need any additional information. Thank you!

Figure 1. Excerpt from an email from the DoM, itemizing the actions of the mechanic who performed the engine wash on the accident helicopter.