



US Forest Service Aviation TECH BULLETIN



No. FSTB 24-01

November 30, 2023

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Subject: UH-60/S-70 Operational Engine Health Indicator Test/Anti-Ice Bleed and Start Valve Check

Area of Concern: Helicopter power assurance check requirements (contractual) vs. HIT check requirements (Rotorcraft Flight Manual)

Distribution: All Helicopter Operations

Discussion: During contract compliance reviews in 2023, a U.S. Forest Service Quality Assurance Team identified vendors who were not completing the required Operational Engine Health Indicator Test (HIT)/Anti-Ice checks during the “First Flight of the Day” engine runup. These requirements are outlined in the aircraft’s Rotorcraft Flight Manual (RFM).

Interagency aviation contracts require helicopter vendors to submit power assurance checks to the government on the first day of availability and to complete and record every 10 hours of flight thereafter. This documentation allows for a review of and trend analysis of aircraft health and performance, however this 10-hour frequency requirement does NOT permit deviations from the RFM requirement to conduct HIT/ANTI-ICE checks during the first flight of the day engine run-up procedures.

The government expects HIT/ANT-ICE checks to be performed prior to the first flight of the day in accordance with the RFM. Where conditions prevent this, provisions in the RFM allow a vendor to defer the HIT/ANTI-ICE check for maximum of 5 hours while operating in adverse conditions (such as dust, desert, coastal beach area, dry riverbeds) until a suitable location is found to perform the test.

The HIT/ANTI-ICE check is an indication of engine health, as well as a procedure to determine engine anti-ice, engine inlet anti-ice and start valve malfunctions which can cause power losses up to 40% maximum torque available and lead to engine flameout.

Finally, as the Forest Service continues to modernize its contracted fleets, unique power assurance check requirements and procedures are inevitable and must be understood to ensure effective monitoring of engine health.

RECOMMENDATIONS:

- Helicopter Managers should utilize this technical bulletin to brief UH-60 / S-70 vendors.
- Helicopter Managers must understand their assigned aircraft and discuss HIT & power assurance check processes, frequency, and engine health trending with the vendors.
- HIT & power assurance check logs can be documented in a variety of ways. Helicopter Managers should consider hard copy and/or digital records provided they are readily accessible.

Questions or further need of clarification can be directed to a Forest Service Helicopter Inspector Pilot.

/s/ Beau Dobberstein

Beau Dobberstein
Branch Chief, Rotor Wing
USDA Forest Service

/s/ Lori Clark

Lori Clark
Branch Chief, Aviation Safety
Management Systems
USDA Forest Service