

D. Helicopter Turbine Engine Power Check (HCM-4). (See Exhibit A-4.)

1. Purpose. The purpose is to gather engine performance data which, when graphed with subsequent power checks, may indicate power fluctuations that potentially could lead to engine failure.
2. → Applicability. This form is optional. The vendor or agency Pilot is required to complete the power check every 10 hours of flight for all fire exclusive-use and fire CWN helicopters and for project exclusive-use contracts. A power assurance check shall be accomplished on the first day of operation, and thereafter within each 10-hour interval of contracted flight operation unless prohibited by environmental conditions (i.e. weather, smoke). The power assurance check shall be accomplished by the contractor in accordance with the Rotorcraft Flight Manual or approved company performance monitoring program. The results shall be recorded and kept in the helicopter or at the Assigned Work Location. A current record of the power assurance checks will be maintained with the aircraft. Helicopters with power output below the minimum published performance charts shall be removed from service. The below-minimum power condition shall be corrected before return to service and contract availability.”
3. Responsibility and Instructions For Completion. See Exhibit A-4. The Pilot is responsible for completing the form and furnishing a copy to the Helicopter Manager.

Record outside air temperature (O.A.T.) and pressure altitude. Since power check procedures differ according to make and model of aircraft, refer to the Flight Manual and record appropriate readings according to procedures specified.

Chart definitions are as follows:

- O.A.T = Outside Air Temperature
- N1 = Gas Producer Speed
- N2 = Engine RPM
- T.O.T. = Turbine Outlet Temperature
- T.P.T. = Tail Pipe Temperature
- I.T.T. = Inter Turbine Temperature
- Type of Check = Hover
- Performance Reading = TOT/ITT values and/or % of RPM from aircraft instruments
- Chart Reading = TOT/ITT values and/or % of RPM from performance chart
- Margin Difference = The difference between the aircraft performance and chart values

→ Results of the chart reading will be recorded and retained according to the contract requirements.

4. Routing and Filing. The Pilot furnishes the Helicopter Manager with a copy of the Power Trend Analysis; it becomes part of the Contract File.
5. Posting. None.
6. → Related Forms. Information may be transferred to Form HCM-5, Helicopter Turbine Engine Performance Analysis Chart. The Helicopter Manager should document discrepancies on the agency incident/hazard report and on Form HCM-1, Aircraft Contract Daily Diary.

Exhibit A-4: Form HCM-4 Helicopter Turbine Engine Power Check

HELICOPTER TURBINE ENGINE POWER CHECK

Date:	Aircraft Make/Model:	N#:
Pilot:		Vendor:
Engine Number:		HOBBS Meter:

*Item	Value	Type of Check:
OAT:		
PA:		
Torque:		
Temp:		Performance Reading:
N1/NG:		
N2:		
		Chart Reading:
		Margin Difference:
Correction Factor:		

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*Use only items applicable to type of helicopter

HCM-4 (01/05) *OPTIONAL

E. Helicopter Turbine Engine Power Trend Analysis Chart (HCM-5). (See Exhibit A-5.)

1. Purpose. The purpose is to graph the data collected every 10 hours from Form HCM-4, Helicopter Turbine Engine Power Check. When graphed with subsequent power checks, power fluctuations that might lead to engine failure may be indicated.
2. Applicability. This form is optional. The Information on this form is required to be maintained in accordance with the procurement document.
3. Responsibility and Instructions for Completion. See Exhibit A-5. The Pilot is responsible for graphing the data.
4. Routing and Filing. None.
5. Posting. The graph should be posted at the permanent helibase and taken with the service truck (not the helicopter) on off-unit incidents or projects.
6. Related Forms. Form HCM-4, Helicopter Turbine Engine Power Check, is utilized to record values for input to the Trend Analysis.

The Helicopter Manager should document discrepancies on the agency incident/hazard report and note them on Form HCM-1, Aircraft Contract Daily Diary.

