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 **BOEING**

SPECIAL FOCUS PM HARDWARE UPDATE



ARMY PHOTO BY SFC ROBERT C. BROGAN

Left: Iraqi soldiers exit a CH-47D and take up positions around the perimeter of their landing zone at the commencement of a Dec. 6 operation. More than 55,000 flight hours were logged by Chinooks in support of major theater operations as Operations Enduring Freedom and Iraqi Freedom and earthquake relief in Pakistan.

Below: A Chinook hovers over an external load ready when cleared to lift. The Cargo Project Manager's Office is working issues, such as a redesigned cargo hook, to extend the service life of the D model to 2018.

all CH-47 life cycle management personnel has improved communications and provided quicker response times to support the fleet.

Modernizations, improvements and upgrades continue to be integrated into the legacy D-model Chinooks.

Integration of the third generation of Blue Force Tracker and the common missile warning system (CMWS) are two examples of improvements currently being installed on the CH-47D.

More improvements on the horizon include installation of the EPUSHA pump which provides electrical power instead of manpower to "prime" the start accumulator for the auxiliary power unit.

In addition, the Cargo PMO is fielding a new crashworthy crew seat for crewmembers in the aircraft cabin.

Longer term development projects for the CH-47D include an improved electronic control unit for the engines, a redesigned cargo hook and an improved engine tailcone designed to improve the survivability characteristics of the Chinook.

Condition Based Maintenance, Health Usage and Monitoring System

The CBM initiative is a risk reduction approach to aircraft maintenance.

The key to the success of CBM is to identify component degradation to preclude a failure from actually occurring.

In support of the CBM initiative, PM Cargo is developing a HUMS for the CH-47 aircraft.

The CH-47 HUMS will provide real time monitoring and status reporting of critical components on the aircraft.

The information provided by this system will allow maintainers and



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operators to identify problematic areas on the aircraft so the appropriate corrective action can be accomplished.

Digital collection of the HUMS data and comparisons of that data over a period of time will become the baseline for CBM.

Analysis of the data collected will provide essential information required to identify failure rate trends of several key components.

Once these trends have been identified, the aircraft maintenance plan will be adjusted to repair or replace these items prior to their actual failure thus eliminating the propagation of these failures to other components.

PM Cargo continues in their efforts to develop and field a complete data collection and analysis system to meet the goals and challenges of CBM.

Summary

The primary mission of the CH-47 PMO is to provide one face to the field to support and sustain the Chinook helicopter fleet.

The Cargo PM and all Team Chinook members are excited about

the promising future of the Chinook program.

The modernized CH-47F is now an Army reality. The legacy CH-47D aircraft will remain a part of Army aviation for a decade to come.

The challenges of fielding, maintaining and sustaining both aircraft are many, but the Chinook community is eager to take on these challenges.

We are embracing the concept and implementation for CBM and we are committed to further reducing the burden on the American Soldier.

We are proud of the outstanding Chinook legacy that has been in the making for over four decades.

We are determined to maintain the high standards established by our predecessors and we are looking forward to continuing that legacy with the modernized CH-47F.



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