

UH-60 Recapitalization (Recap)— Black Hawk's Cornerstone for Fleet Sustainment

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The UH-60 Recap Program was initiated in 2002 with the induction of the first UH-60A aircraft at Corpus Christi Army Depot (CCAD), TX, and continues today as the fundamental tenet of sustaining an aging Black Hawk fleet. The program was initiated as a recap/rebuild effort, which is, in short, a complete overhaul of the aircraft including replacement of all dynamic components, structural/electrical enhancement and repair, and delivery of a like-new UH-60A with an objective of 10 years' additional service life. To date, more than 140 UH-60As have been recapped and delivered to many state Army National Guard (ARNG) units, the U.S. Army Reserve, and the U.S. Army Aviation Warfighting Center at Fort Rucker, AL.

A U.S. Army UH-60A Black Hawk medical evacuation (MEDEVAC) helicopter with Charlie Co., 3rd Battalion, 25th Aviation Regiment, Forward Support MEDEVAC Team, flies over an Iraqi town along the Tigris River Oct. 22, 2009. To date, more than 140 UH-60A aircraft have been recapped and delivered. (Photo by U.S. Navy PO1 Carmichael Yepez, Joint Combat Camera Center Iraq.)

The Beginning—UH-60A to A Recap

The benefit of recap/rebuild is clear. Many of the recapped aircraft delivered to the ARNG have been deployed to theater in support of *Operations Enduring* and *Iraqi Freedom* (OEF/OIF). The Utility Helicopters Project Office (UHPO) conducted detailed monitoring of eight of these aircraft and found that they experienced a fully mission-capable rate that is 11 percent higher than UH-60As in the same units that had not been recapped. Additionally, since 2003, the UHPO has monitored two UH-60A recapped aircraft at Fort Rucker for reliability, availability, and maintainability. Six years and counting into the comparison, the recapped aircraft continue to demonstrate the following improved performance relative to two non-recapped aircraft monitored at the same location for the same period:

- 16 percent reduction in unscheduled maintenance ratio.
- 46 percent improvement in mean time between mission aborts.
- 58 percent improvement in mean time between mission-affecting failures.
- 17 percent improvement in mean time between essential maintenance actions.
- 25 percent improvement in mean time between system failures.

The benefit of a recapped aircraft is also not lost on the ultimate customer, the Soldier. User feedback is consistently

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very positive and, at the same time, rewarding to the men and women of CCAD, the UHPO, and Sikorsky Aircraft Corp.—all of whom make this possible. In the words of CPT Paul Saiz, Aviation Maintenance Officer, New Mexico ARNG, who accepted and flew home another recapped UH-60A, “[It is] another great product.”

Moving Forward—The Next Chapter in UH-60 Recap

In July 2007, CCAD, in partnership with the UHPO; the Aviation and Missile Command; the Aviation and Missile Research, Development, and Engineering Center (AMRDEC); and Sikorsky Aircraft Corp., inducted a prototype UH-60A aircraft to be recapped and upgraded to the UH-60L configuration. The initiative was unprecedented in Army aviation acquisition. The UH-60L capability is a force multiplier in overseas contingency operations, delivering and supporting the most capable, reliable, and sustainable weapons platform to the battlefield. UH-60A to L recap/upgrade, program-matically known as the UH-60A to A to L Recap Program, leverages the proven reliability and sustainability

benefits realized with the UH-60A to A recap/rebuild, and provides enhanced warfighting capability with the performance improvements of the UH-60L. Those capability improvements include:

- Increased range and lift capability for high/hot combat missions.
- Increased engine torque under extreme drag conditions.
- Increased contingency power for emergency conditions.
- Increased sling load mission capability.

These improvements are gained by incorporating the handful of configuration upgrades associated with the UH-60L, such as the T700-701D engine, improved durability gear box, 9,000-pound cargo hook, and associated structural and electrical platform modifications required to apply these upgrades to a UH-60A. The end product is a UH-60L, a step further toward the divestiture of UH-60As from the utility helicopter fleet. The benefit of reduced operations and sustainment burden with a 2-model fleet (UH-60L and M) will be significant. The benefits of performance, reliability, and sustainability improvement, coupled with a reduced cost-per-flight-hour for the UH-60L over the UH-60A, and other tangible benefits such as obsolescence preemption and unscheduled maintenance avoidance, reinforce the merit of this effort.

The UH-60A to A to L recap prototype successfully completed the flight test phase of recap and was “sold” in August 2008. This milestone culminated the demonstration and validation of the engineering, configuration definition, and work instructions required to recap



A first production UH-60A to A to L lifts off the flight line at CCAD en route to the Delaware ARNG. (U.S. Army photo by Ed Mickley, CCAD Public Affairs Officer (PAO).)

and upgrade a UH-60A to UH-60L, and paved the way for the next phase of Black Hawk fleet sustainment—the induction, recap, and upgrade of 38 UH-60As to UH-60Ls per year beginning with FY09. In June 2009, the first production UH-60A to A to L aircraft was delivered to the Delaware ARNG, establishing steady state A to A to L recap operations at CCAD.

Capacity Expansion— Keeping Up With Demand

With the viability and benefit of UH-60A to A to L recap established and proven, the demand to induct old, tired, yet still in service, UH-60As for return of a like-new UH-60L has grown exponentially. From other government agencies to foreign allies, many entities beyond the U.S. Army employ UH-60As in their fleets, and most of these are the oldest UH-60As out there. To preserve 100 percent CCAD capacity to meet the Army's demand for recap as highest priority, and yet also meet this external demand, the UHPO has embarked on an initiative to stand up a dual source capability to execute UH-60A to A to L recap. Through leveraging the unique technical expertise and manufacturing capability of Sikorsky Aircraft Corp., original equipment manufacturer of the UH-60, that effort is well underway at Sikorsky's field operations center at Chase Field, TX. The first of two Department of Homeland Security Customs and Border Protection aircraft currently in process of A to A to L recap at Chase Field were completed in February 2010. Completion of these aircraft will validate the capability of Chase Field



Co-pilot WO2 Jay Falkenburg pre-flights the first production UH-60L Black Hawk to roll out of CCAD. (U.S. Army photo by Ed Mickley, CCAD PAO.)

as a dual source for UH-60A to A to L recap for non-Army aircraft and overflow Army aircraft at CCAD.

The Next Chapter—UH-60L to L Recap

As UH-60As are steadily exhausted from the fleet through a combination of A to A to L recap and divestiture, the next target in the life-cycle sustainment of Black Hawks will be the aging UH-60Ls. To that end, the UHPO plans to induct a UH-60L to L prototype at CCAD in late FY10 for execution during FY11, with recurring L to L recap slated to begin in FY12. UH-60A to A to L recap and L to L recap will operate in parallel through at least FY15.

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