

Light Utility Helicopter (LUH)

Executive Summary

- During 2008, the Army initiated efforts to adequately address deficiencies from the 2007 DOT&E test report. In 2007, DOT&E found that the UH-72A Lakota Light Utility Helicopter (LUH) is effective in the performance of light utility missions, but is not effective for use in hot environments or for medical evacuation of two litter patients requiring critical medical care. The LUH is effective for air movement and aerial sustainment missions. The LUH demonstrated performance and mission effectiveness over the Kiowa (OH-58A/C) and Huey (UH-1H) aircraft it will replace.
- The Army is modifying all LUHs to a standard configuration with solar shades and an improved ventilation system to alleviate high cockpit and cabin temperatures on all 345 aircraft. These solutions allow the LUH to operate with acceptable internal temperatures in all mission configurations.
- DOT&E observed follow-on testing during May 2008 at the National Training Center, Fort Irwin, California. The Army will add a Medical Mission Support Kit for all 81 MEDEVAC LUHs. This kit allows for more litter space and equipment storage and vastly improves the flight medic's ability to adequately perform or sustain critical medical care on one litter patient while another litter patient is aboard.

System

- The UH-72A Lakota LUH is a commercial aircraft derived from the Eurocopter 145 aircraft, certified by the Federal Aviation Administration (FAA) for use in civil airspace. The Army intends to employ the LUH worldwide, in non-hostile operational environments.
- The Army certified the LUH for instrument flight with a GPS to operate in day, night, and adverse weather conditions.
- The LUH is compatible with night vision goggles; nuclear, biological, and chemical (NBC) gear; and the Air Warrior ensemble. The LUH mission equipment packages include a 600-pound capacity hoist, fire bucket, slings for external loads, and patient litters.
- The Army is procuring 345 systems (beginning in May 2007) to replace UH-1H and OH-58 A and C aircraft in the Active



Army and National Guard inventory. On September 30, 2008, the Army accepted the 42nd LUH and plans to take delivery of an additional 43 aircraft during 2009 to complete an 85 aircraft contract. Fielded locations include Fort Irwin, California; Fort Eustis, Virginia; Fort Polk, Louisiana; Tupelo, Mississippi; and Fort Indiantown Gap, Pennsylvania.

Mission

- LUH-equipped units will provide general aviation support, respond to terrorist events, conduct civil search and rescue, support damage assessment, support test and training centers, perform medical evacuation, and provide support to counter drug operations.
- LUH units will conduct general administrative aviation and aerial sustainment missions, and execute tasks as part of an integrated effort with joint forces, government agencies, and nongovernmental organizations.
- LUH units will perform Homeland Security and medical evacuation missions in permissive environments.

Prime Contractors

- EADS North America
- Eurocopter

Activity

- During 2008, the Army initiated efforts to adequately address deficiencies from the 2007 DOT&E test report. DOT&E monitored Army modification efforts and testing to alleviate high cockpit and cabin temperatures and installation of the MEDEVAC Equipment Storage and Mounting kit.
- The Army began installation of Environmental Control Units (ECUs) on all MEDEVAC and VIP aircraft. All future MEDEVAC and VIP LUHs will have ECUs prior to delivery.
- The Army plans to modify the standard mission configuration on all 345 aircraft to include solar shades over the pilot

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seats, cabin window pop-out vents, cockpit window vent air deflectors, cabin door locks, and cockpit door spoiler kits that allow flight with the cabin doors open.

- DOT&E observed follow-on testing during May 2008 at the National Training Center, Fort Irwin, California. The Army will add a Medical Mission Support Kit for all 81 MEDEVAC LUHs. This kit includes exterior lighting for the rear cabin and tail rotor area and interior night vision goggle lighting over the patient loading area; Teflon litter rails to facilitate litter loading and unloading; overhead rails to hold intravenous bags; and wall mounted provisions for medical equipment and oxygen bottles on the rear clamshell doors.
- The LUH Program Office initiated installation of ARC-231 radios in all UH-72A aircraft with certification flights scheduled for 1QFY09. The ARC-231 radio provides for simultaneous and secure communications. The Program Office will retrofit all fielded aircraft.

Assessment

- Army efforts to alleviate high cockpit and cabin temperatures and installation of the MEDEVAC Equipment Storage and Mounting Kit adequately address deficiencies.
- Installation of solar shades over the pilot seats, cabin window pop-out vents, cockpit window vent air deflectors, cabin door locks, and cockpit door spoiler kits that allow flight with the cabin doors open allow the LUH to operate with acceptable internal temperatures in all mission configurations.
- Follow-on testing during May 2008 at the National Training Center, Fort Irwin, California of the Medical Mission Support Kit adequately addressed LUH MEDEVAC deficiencies. The original DOT&E assessment concluded that there was

insufficient room for providing critical medical care such as defibrillation or cardiopulmonary resuscitation for one litter-bound patient when another litter patient is aboard. This kit allows for more litter space and equipment storage and vastly improves the flight medic's ability to adequately perform or sustain critical medical care on one litter patient while another litter patient is aboard.

- LUH aircrews, wearing the Army's Air Warrior ensemble and when operating with chemical mask and night vision goggles, are afforded adequate protection in the event of an emergency. The FAA has certified that the LUH meets standards for crashworthiness.
- The Army began the Aircraft and Power Plant (A&P) certification program and has certified 18 A&P aircraft mechanics for the National Guard. The LUH Program Office conducted a logistics demonstration that validated the hybrid maintenance concept. This assessment determined that the tools, test equipment, and training provided to National Guard units would be sufficient to maintain the aircraft.
- During FY08, the Army reviewed the pilot training provided to LUH aircrew. This review validated that the LUH training program was adequate for Army operators.

Recommendations

- Status of Previous Recommendations. The Army addressed all previous recommendations.
- FY08 Recommendation.
 1. The Army should relocate the first aid kit and fire extinguisher to enhance crew access during emergency situations.