U.S. Army Evaluates New Fuel Tank For AH-64D Apache Longbows; Internal Unit Offers Greater Range, Increased Safety in Combat

The U.S. Army and The Boeing Company are evaluating a new crashworthy, ballistically self-sealing internal auxiliary fuel tank for the AH-64D Apache Longbow multi-mission combat helicopter.

The Boeing Company and Robertson Aviation, LLC, of Tempe, Ariz., have been working together informally to develop the innovative 130-gallon internal nitrogen-inerted tank. The tank fits into the Apache's ammunition bay and is interchangeable with the Apache's ammunition storage magazine. U.S. Army officials are beginning to coordinate a formal test and qualification program.

Jack Rutherford, the Boeing project manager who is leading the effort to integrate the tank into the Apache Longbow, said only minor modifications to the fuselage would be needed if the Army likes the new fuel tank.

"This ballistically self-sealing tank would allow field commanders to use all four weapons pylons to carry ordnance on long-range missions," he said.

Current extended missions now require a 230-gallon external, pylon-mounted fuel tank, which was not designed to be crash survivable or ballistically tolerant. The external tank replaces ordnance that normally would be carried on the pylon. Without an external fuel tank, the Apache Longbow can be armed with 16 Hellfire missiles, 76 70 mm rockets or a combination of both.

Apache Longbows equipped with the fuel tank would give up the ability to carry 1,200 rounds of 30 mm ammunition, but still would be able to carry nearly 100 rounds of 30 mm ammunition for area weapon support, Rutherford said.

Two crew members can install or remove the tank or the magazine in less than 30 minutes using the Apache magazine and auxiliary tank transfer system, known as AMATTS. Both the crashworthy tank and the AMATTS ground handling device were developed by Robertson Aviation.

Rutherford said the internal auxiliary fuel system would free the Apache's wing stores on deep penetration missions, provide a safer auxiliary fuel solution for combat and training missions, and reduce operating and support costs by eliminating asymmetrical loads caused by using a single external auxiliary fuel tank.

A pre-production system is expected to be tested next year in Mesa by Boeing on the Apache Longbow. A second pre-production system, which was designed for international AH-64As, is being flight tested on an Apache flown by the 1-151st Attack Helicopter Battalion of the South Carolina Army National Guard.

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