Comanche Filter Meets Test of Contaminated Battlefield

The filter that will allow the Boeing Sikorsky RAH-66 Comanche helicopter to operate on deadly, contaminated battlefields has been successfully integrated into the aircraft's environmental control system.

Engineers successfully tested the latest version of Comanche's Pressure Swing Adsorber (PSA) gas separating unit, which purges chemical and biological impurities that could threaten the lives of the aircrew. Adsorption is a process of gas separation. The Comanche PSA combines chemical agent and water vapor removal units into a single system.

Full-scale proof-of-concept testing at team member Hamilton Standard demonstrated the combined removal of water vapor and simulated chemical contaminants, nerve gases and blood agents. The test results -- under humid conditions -- exceeded the performance requirements established for the Comanche program. Humidity tends to diminish performance of standard filters.

As a result, the Comanche environmental control system, which provides heating, cooling and ventilation, now provides filtration in the lethal chemical and biological warfare scenario.

The Comanche program worked closely with U.S. Army Edgewood Research Development Engineering Center (ERDEC) in Maryland and Pall Aeropower, the Florida firm that fabricated the test units. Engineers are now doing detail design work of flight hardware, with an eye on installation of the system in the year 2000.

A prototype environmental unit is aboard Comanche Aircraft No. 1, currently undergoing flight test at West Palm Beach, Fla. That unit removes water vapor, but not chemicals.

Designed to replace the Army's current Vietnam-vintage scout and light attack helicopter fleet, the Comanche will provide U.S. forces with a major advantage in any future conflicts by supplying them with accurate, timely tactical battlefield intelligence. The Boeing Sikorsky RAH-66 Comanche is the U.S. Army's 21st century combat helicopter, in development by U.S. Army Aviation and a team of leading aerospace companies headed by Sikorsky Aircraft Corporation, of Stratford, Conn., a subsidiary of United Technologies Corporation, and Boeing Philadelphia, a unit of The Boeing Company.

###

For further information:
Jack Satterfield
The Boeing Company
610-591-8399
John.Satterfield@Boeing.com
William Tuttle
Sikorsky Aircraft
203-386-3829
B.Tuttle@Sikorsky.com