

CV-22 SHINES IN COMBAT SEARCH AND RESCUE STUDY

An independent analysis of V-22 effectiveness in the Combat Search and Rescue (CSAR) mission, performed by the UK MoD's Defence Evaluation and Research Agency (DERA) and the U.S.-based study house, ANSER Corporation, concluded that the V-22 was 3 to 7 times more effective in the mission, even under a set of assumptions that heavily favored the current USAF HH-60G helicopter.

It also suggested that the Osprey would be dramatically more efficient. For example, it required only 8 V-22s to satisfy the peak rescue demand of the major theater war base case versus the need for 24 H-60s and 35 C-130 refuellers to provide the same level of response capability.

Released in late September, the study was sponsored by the Bell Boeing tiltrotor team with the objective of providing some "base case metrics" that might be useful to the USAF as it assesses its CSAR mission modernization requirements.

"Most operators can intuitively appreciate that an aircraft that is self-deployable, twice as fast as helicopters, with three to four times the range, and significantly more survivability is going to be a superior Combat Rescue platform," said Greg McAdams, V-22 Business Develop-

see DERA, page 2.

OSPREY POPULATION GROWS AT NAVY TEST FACILITY

Third V-22 Tiltrotor Delivered To Testers

The third of four Bell Boeing V-22 Osprey tiltrotor aircraft built to production standards was delivered Oct. 30 to the V-22 Integrated Test Team at the Patuxent River Naval Air Warfare Test Center in Maryland, following a flight from the Bell Helicopter Textron plant in Fort Worth, Texas.

Air Force Major Tom Currie and Marine Capt. Bill Witzig, pilots with the Military Operational Test Team, left Bell on the morning of Oct. 29 and arrived in Patuxent River at 3 p.m. EST the following day. The 1,217 nautical mile trip included an overnight refueling stop in Nashville, Tenn.

V-22 number 9 will be used for propulsion system surveys and performance demonstrations, fuel system tests and to validate the aircraft's Forward Looking Infrared (FLIR), navigation and other mission equipment systems. Following that, the aircraft will be used for operational evaluations by a team of service pilots, maintainers and logistics personnel. Finally, in 1999, the aircraft will be brought back to the assembly facility for remanufacture into a CV-22 configuration. The CV-22 is the Special Operations Command (SOCOM) variant of the Osprey which will be operated by the U.S. Air Force Special Operations Command (AFSOC). It then will be used for SOCOM operational evaluations in the 2001 timeframe.

While aircraft number 9 was being prepared for its cross-country flight, technicians were also busy conducting the first of a planned series of 72
see No. 9, page 2.



Osprey number 9 enroute from Arlington, Texas, to Patuxent River NAS, Md.

No. 9, cont. from page 1.

tests of Osprey number 10's blade-fold/wing-stow system.

"These initial tests were accomplished without a hitch," said Yale Cason, director of V-22 manufacturing at Bell. "We fully expect the remaining tests to be completed the same way...perfectly."

The Osprey is able to fold itself into a small package that can be delivered by elevator to the maintenance hangars below the decks of amphibious assault ships. It does this by folding the rotor blades over the wings, tilting the nacelles to the airplane mode position and rotating the wing 90 degrees so that it fits directly over the fuselage, making the width of the aircraft no wider than its horizontal stabilizer. □

INTERNATIONAL V-22

The United Kingdom's naval forces much anticipated Future Amphibious Support Helicopter (FASH) Request For Information (RFI) has arrived at Bell Boeing and the tiltrotor team is preparing a response. Technical and cost data will be provided that will allow the U.K. FASH team to conduct a Cost and Operational Effectiveness and Investment Analysis (COEIA).

The U.K. requirement is for an advanced, ship-based rotorcraft to perform over-the-horizon combat assault and combat support and shares similarities with the U.S. Marine Corps MV-22 requirements. The FASH aircraft will replace aging Sea King helicopters.

Responses to the RFI are due by January 31. □



Civil Tiltrotor Stars At Dubai Air Show

The Bell Boeing 609 full scale mockup was displayed at the Dubai Air Show held in Dubai, United Arab Emirates, from November 16-21. In its first appearance in the region, it generated enormous interest and provided the 609 program with extensive press coverage in local and show papers, TV and radio.

The show also was the backdrop for the announcement of the formation of the world's first tiltrotor operating company, to be known as Petroleum Tiltrotors International (PTI). The company, a joint venture of a wealthy businessman, Sheikh Sultan Mejeren, and the Dubai-based, government-owned company, Oilfield Supply Centers, ordered a second 609 at the show. Sultan previously had ordered one aircraft.

PTI plans to offer offshore transportation to oil fields throughout the world and provide VIP charter services to selected clients.

In addition to the PTI news, Bell Boeing conducted hundreds of presentations to potential buyers, ranging from wealthy individuals to military/police officers from

all the region's states, including Kuwait, Saudi Arabia, Oman, UAE. The show also drew a large number of corporate operators from Europe and the Middle East.

In addition, a number of senior U.S. officials were present at the show and visited the 609 display, including Army Generals Snyder and Bergson; FAA Deputy Administrator (nominee) George Donohue; and, Commerce Secretary William J. Daley. □

DERA, cont. from page 1.

ment manager at Boeing, "but what was lacking in the discussion was a set of rigorously derived metrics that suggest just how superior the technology is. That's why we elected to sponsor this independent effort. And that's also why we elected to go with DERA and approved their selection of ANSER Corp. to do the bulk of the analysis. We knew those two organizations could produce a top quality, highly credible analysis that the customer could find useful as a starting point."

A summary of the study can be obtained by contacting the "Osprey Fax" editor. □

CV-22 COMPLETES CREW SYSTEMS CDR

The Special Operations Command (SOCOM) Osprey, the CV-22, successfully completed its Crew Systems Critical Design Review (CDR) in late October 1997.

John Buyers, Bell Boeing program office director said, "This is the successful culmination of nearly two years of effort to design the controls and displays for the unique Air Force Special Operations (AFSOC) mission

and equipment."

There are only two action items, to be resolved in the following weeks.

A major contributor to the success of the design was the use of simulation with Air Force pilots at the controls of the CV-22 full-fidelity simulator in Fort Worth to validate the design.

The next step is the release of

the Crew Systems Design Definition Document to the Avionics and Software Integrated Product Teams to implement the design. This is scheduled for November, with a minor update in January.

AFSOC LtCol. Jim Teeple complimented the team for its dedication to the development of the CV-22, and called the Osprey 'a national asset.' □

V-22 EMD FLIGHT TEST STATUS; as of 12/15/97

AIRCRAFT #7	63 Flights	106.9 Hours	TOTAL V-22 Flight Time To Date:	1,371.1 hrs.
AIRCRAFT #8	30 Flights	54.7 Hours	Maximum Airspeed Attained:	342 kt.
AIRCEAFT #9	14 Flights	25.3 Hours	Maximum Altitude Attained:	21,500 ft.
AIRCRAFT #10	-----	-----	Maximum Take Off Gross Weight:	57,600 lb.
TOTALS	107 Flights	186.9 Hours		



U.S. Senator Strom Thurman (D-SC) chats with ITT personnel during a visit to the V-22 Integrated Test Team facility at Patuxent River, Md., Nov. 23, 1997.

The Tiltrotor Times is published by Boeing Philadelphia and Bell Helicopter, Textron. Editor-in-chief: Norb Josten; Production Editor: Doug Kinneard. Information contained herein is compiled from unclassified and open sources and does not represent official positions of the Companies. Comments, suggestions or material for use in Tiltrotor Times or Osprey Fax maybe forwarded to Norb Josten, Boeing Philadelphia, M/S P23-00, PO Box 16858, Philadelphia, PA 19142, USA. Tel (610) 591-5749, Fax 591-8022.

For more information, see the web sites at: <http://www.boeing.com/rotorcraft/military/v22>, or <http://www.bellhelicopter.textron.com/index.html>