V-22 Flight Test Surges Forward

With nearly 500 flight hours on the four Engineering and Manufacturing Development (EMD) aircraft and more than 1,660 flight hours in all, flight testing the Osprey is quickly moving forward. The Bell Boeing people testing the V-22 have many milestones to be proud of, but the hard work continues.

All major full-scale development (FSD) and risk reduction loads issues have been resolved on these EMD aircraft, according to Phil Dunford, Integrated Test Team (ITT) director. The test program is at the end of the envelope expansion phase. After the current configuration update, the flight load survey phase of testing will begin, which verifies all the envelope expansion tests with the aircraft in the final production configuration - the way it will be delivered to the fleet. This phase serves as a type of final exam following envelope expansion. In the meantime, plenty of pilot training is taking place in aircraft 9 and 10, and external load testing is scheduled for aircraft 8 later this summer. The Multi-service Operational Test Team (MOTT) will begin its operational testing, called OT-II D, in September and complete it at the end of October.

The Bell Boeing ITT at Patuxent River is responsible for qualifying the V-22 EMD aircraft before turning them over to the MOTT for operational suitability testing.

"Our test event completion rate and overall productivity are progressing very rapidly," said Dunford. "For example, the team logged 65 hours of flight testing in the first two weeks of June -- 100 flight hours over a 30-day period since Memorial Day. This was achieved with outstanding team work, and everyone here can be proud of that."

In other reports, the ITT shows aircraft 10 completed 11.8 hours of flying in one week. It also has logged more than eight flight hours during one flying day, as has aircraft 9. During a two-week period recently, aircraft 9 flew 28 hours.

"We always knew our airplanes could perform at these rates," said Jim Morris, vice president and general manager, Boeing Philadelphia, where all fuselages are designed and built. "Now that we've achieved it, we just need to keep up the good work."

The achievements are impressive, with the envelope expansion phase of testing now complete. Airspeed during flight tests has reached 342 knots; maximum take-off gross weight has reached the specification requirement of 60,500 pounds; and altitude expansion has met its 25,000-foot service-ceiling goal. The flight test and support crews are very excited about the progress. Enthusiasm and morale are equally high at Patuxent River.

"The V-22 is quickly becoming known by the test pilots and the operational pilots in the test team as an enjoyable aircraft to fly," said Tom Macdonald, ITT chief test pilot. "They discover its excellent handling qualities in all of its flight modes (airplane, hover, conversion), and are excited about flying each day." The V-22 is maneuverable and has a friendly cockpit with superb night flying qualities while using night vision goggles (NVGs), according to pilots on the team.

Some of the operational testing events that have been accomplished include formation flying, simulated aerial refueling, confined area landings during day and night, downwash evaluations and NVG flights.

"I'm very happy with the program, and we've had some really good weeks over the past couple months," said John Buyers, Program Office director. "We've been grounded by some bad weather, but with configuration updates completed on the aircraft, we now have aircraft 9 and 10 tracking right on or ahead of schedule for operational testing. Aircraft 7 and 8 are demonstrating 15 to 18 flight hours per month."

The Bell Boeing Tiltrotor Team, comprised of Bell Helicopter Textron in Fort Worth, Texas, and The Boeing Company in Philadelphia, developed the V-22 tiltrotor for the U.S. Marine Corps, Air Force Special Operations Command and the Navy. Bell Helicopter Textron is a wholly owned subsidiary of Textron, Inc. of Providence, R. I.

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