Boeing Splices Second Production V-22 Osprey Fuselage

Three fuselage sections were joined to form the second production Bell-Boeing V-22 Osprey May 28 at the Boeing facility in suburban Philadelphia. The fuselage will be shipped to Bell Helicopter in Fort Worth, Texas, for the wing-to-fuselage mate process marking final assembly. This aircraft, Osprey No. 12, is the second of five production aircraft in Low Rate Initial Production (LRIP) Lot I.

Following operational testing by a joint service test team, it will go into the first Marine Corps tiltrotor training squadron at the Marine Corps Air Station in New River, N.C.

"The completion of this aircraft's basic airframe demonstrates that the program has moved from development into its production phase," said John Buyers, Bell Boeing program director. "These (LRIP Lot 1) fuselages incorporate lessons learned during the Osprey's Full Scale Development and Engineering and Manufacturing Development (EMD) phases and pioneering advances in manufacturing technology. The production is on schedule and on cost, while flight testing of EMD aircraft also continues at Patuxent River Naval Air Station, Md."

The use of manufacturing automation, integrated product teams and the advanced technology assembly system have produced a high-quality, high-precision product. "We have a robust, repeatable process that yields an excellent fit and finish with reduced manufacturing and assembly errors," said Buyers.

The splicing took place with no out of sequence work, and the fuselage was assembled to a tolerance of one-tenth inch, or the thickness of a matchbook cover. This is one example of the efficiency of the Osprey's cutting-edge manufacturing processes.

The fuselage was first built in three major pieces: the forward section, including the cockpit and avionics/electronics racks; the center section, consisting of the main cabin, landing gear and wing attachment points; and the aft fuselage, which holds the rear ramp and empennage or tail attachment points. Wiring and other systems are installed in these sections prior to splicing. Final hook up of wiring and hydraulic lines will be done after splicing is complete. Delivery of Osprey No. 12 to the customer at Patuxent River is scheduled for August 1999.

EMD aircraft numbers 7-10 have flown about 400 hours, achieving such milestones as a 3.9 G load factor at 260 knots, 60,500 pounds maximum takeoff gross weight, 25,000 feet in altitude, a maximum speed of 342 knots and night flights using night vision goggles. V-22s have also participated in extensive ground-based and shipboard tests for a total of more than 1,560 flight hours.

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

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