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The Bell Boeing V-22 Aircraft No. 7 lifted skyward for the first time today, marking the beginning of the versatile tiltrotor aircraft's flight test program.

The aircraft, and three other Engineering and Manufacturing Development aircraft that will take flight throughout the coming year, will conduct initial envelope expansion at Bell Helicopter Textron's Flight Research Center prior to ferrying to the Navy's Patuxent River Naval Air Station Air Warfare Center in Maryland for intensive operational testing.

Aircraft No. 7 is expected to be flown to Patuxent River NAS in March.

The flight involved two vertical takeoffs and landings as well as assorted tests of components. Prior to the flight, numerous checks for aircraft stability were conducted as well as slow-speed taxi tests. Integrated Test Team experimental test pilots Tom Macdonald and Jim Lindsey flew the aircraft's maiden voyage. Once airborne in a hover, the new Osprey performed various control reversals and pedal turns up to 360 degrees. Following the successful flight, the aircraft was taken into its hangar for preparation for its next flight which will include sideward and rearward flight and additional tests in the hover mode in and out of ground effect. Additional ground testing also will be accomplished by taxiing up to 60 knots in speed.

Team leaders praise new V-22 "You couldn't have asked for a better first flight," said Bell Boeing TiltRotor Team Director Stuart Dodge. "Today's flight demonstrated the resolve that the team has in making the best aircraft possible for the military. In four short years, the team redesigned the aircraft using newly available technologies and assembled it using new and innovative manufacturing techniques. "Factor in the aggressive assembly schedule and significantly reduced costs," Dodge continued, "and you've got an airplane that meets defense mission and cost requirements."

Costs reduced but much more possible The baseline cost for the V-22 at the conclusion of the original full-scale development program in the early 1990s was \$41.8 million each. By incorporating new technologies and techniques, the cost was reduced to \$32.2 million, with a target cost of \$29.4 million. Accelerating the production to more economical numbers (36 per year and multi-year contracting) could save billions more.

Primary missions for the aircraft include: combat assault and assault support, combat troop lift, special operations, combat search and rescue, internal and external cargo lift, and self-deployment. Secondary missions include: aeromedical evacuation, pre-assault raids and tactical recovery of aircraft and personnel.

Tiltrotor technology offers unique capabilities The V-22 is an aircraft that doesn't need a runway. The V-22 is a revolutionary, advanced technology, vertical and short takeoff and land (VSTOL), multi-purpose aircraft with excellent high-speed cruise performance. It performs a wide range of VSTOL missions as effectively as a conventional helicopter while achieving the long-range cruise efficiencies of a twin turboprop aircraft.

The Marines require 425 aircraft, Special Operations Forces need 50 and the Navy 48. First delivery to the Marines is expected in 1999 with initial operating capability in 2001.

The V-22 is being produced by the tiltrotor team of Bell Helicopter Textron Inc., Fort Worth, Tex., and Boeing Defense & Space Group, Helicopters Division, Philadelphia, Pa., for Naval Air Systems Command, Crystal City, Va.

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