



Photo by LtCol Ron Culp

A V-22 Osprey prepares to land on the deck of the USS Saipan during shipboard operations in 1999. The Osprey has not flown since a mishap grounded the fleet in December 2000.

MV-22 Osprey cleared for flight test

After a recent Defense Acquisition Board meeting with U.S. Navy, Marine Corps and V-22 program officials, the Pentagon's top acquisition authority indicated during a media roundtable that the U.S. Navy is now free to decide the course of action for the aircraft and its upcoming flight test program.

Undersecretary of Defense for Acquisition, Technology and Logistics Pete Aldridge explained that similar reviews would occur, "at any time during the flight test period as events and need dictate, and prior to a decision to increase the production rate."

The flight test plan, he said, will rigorously test all operational maneuvers, including vortex ring state, shipboard suitability and a number of other concerns raised during the Osprey's hiatus.

"The flight test plan looks very good to me," he explained. "I was worried that they

were going to put the hard stuff at the end. They're not. They're going to bring it up [to the front of the program]."

Aldridge emphasized that the program, which will look to determine the V-22's reliability, safety and operational suitability, will be driven by events, not by a schedule.

The Osprey has been grounded since December 2000. It will return to the air sometime in May when aircraft No. 10 performs a series of basic aerial maneuvers above Naval Air Station, Patuxent River, Md.

Despite having reservations about the program, Aldridge said that he is willing to "keep an open mind." The future of the V-22 Osprey, he added, can only be proven through continued flight test.

"If it performs as predicted...and all those conditions we've outlined [are met]," he said. "Then [the V-22] has a transformational capability for the Marine Corps."

CV-22 test team prepares to return to air

By Leigh Anne Bierstine
Air Force Flight Test Center Public Affairs

A diverse team of flight test experts are working toward a common goal at Edwards Air Force Base, Calif. Pilots from the test and operational worlds, along with a cadre of handpicked engineers and mechanics, are preparing the CV-22 to resume flight-testing at Edwards in July.

Flight tests of the Air Force version were halted after a December 2000 crash of the V-22 grounded the entire Osprey fleet.

Since that time, the integrated test force at Edwards has been working to correct the issues identified through a Marine Corps operational evaluation and the Defense Department's blue ribbon panel of experts.

The secretary of defense formed the independent panel of defense and industry experts after the December 2000 crash to evalu-

ate whether the program should go forward and if so what areas needed to be corrected.

Today, the CV-22 test team is set to resume the engineering, manufacturing and development, or EMD, phase of the CV-22 acquisition program. Before the flight test program resumes, the test team will perform the necessary flight checks to wring out the aircraft and ensure all maintenance actions taken were performed properly.

Testing will pick up where it left off in 2000 with an emphasis on the aircraft's radar capabilities, said Maj. Todd Lovell, commander of the 18 Flight Test Squadron's Detachment 1 at Edwards. The 18 FLTS is a Special Operations test squadron based at Hurlburt Field, Fla. Lovell and his team are working with the Air Force Operational Test and Evaluation Center's Detachment 5 and

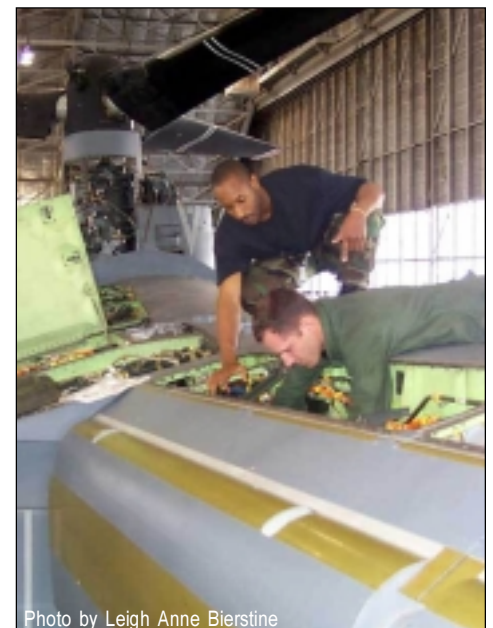


Photo by Leigh Anne Bierstine

Staff Sgts. Byron Grandy-Richardson (left) and Joseph Shulte, both from the CV-22 Integrated Test Force at Edwards AFB, work on the hydraulics and electrical systems inside a CV-22 wing cove.



PM Perspective: Osprey ready for new beginning

By Mike Tkach
Vice President, Program Director
V-22 Program Office, Pax River, Md.

The next few months will be an exciting time for the V-22 Osprey and the people who work on the program. Teamwork and communication will be crucial as we begin the most important phase in the program's long history.

The Undersecretary of Defense for Acquisition, Technology and Logistics Pete Aldridge has given us clearance to re-engage our flight test program. The first flight of aircraft No. 10 will occur in late May. Since our program is driven by events and not a rigid schedule, our return to flight process will be conducted safely, thoroughly and efficiently. We're treating the return to flight as if it's the first time a V-22 has ever flown.

The flight test program is going to be one of the most rigorous programs in aviation history. At its conclusion, we will have proven that the Osprey can and will be a tremendous asset to the United States armed forces.

You have probably seen quite a few positive stories in the news lately about the things we have done to prepare the aircraft for its return to flight. This good news can be attributed to implementing our Integrated Process Team (IPT) structure over the past 18

months and to the significant changes made to the aircraft.

The Defense Department has given us a golden opportunity to prove that the Osprey is indeed revolutionary. We've worked hard over the last several years on this program. It is now time to demonstrate to our current, and potential future, customers that we have both a robust aircraft design that is ready for operational use and an organizational structure in place to produce it.

This is a new beginning for Team Osprey. Let's make it a success!



Osprey squadron sees value in training services

By Dan Rowe, Marty Kaminsky and Mike Goloff,
V-22 Maintenance Technicians

A team of 36 skilled Bell Boeing flight line aircraft mechanics and avionics technicians is making life easier for members of the first operational training and maintenance Osprey squadron.

The contractor-staffed Operational Maintenance and Training (OMT) team has worked closely with Marine Medium Tiltrotor Training Squadron 204 (VMMT-204), Marine Corps Air Station, New River, N.C., to provide first-rate maintenance and technical support of the MV-22 Osprey.

The OMT team, in place since June 1999, collectively possesses more than 400 years of aviation maintenance experience.

The Bell Boeing team provides VMMT-204 with scheduled and unscheduled maintenance of the MV-22 in an integrated, seamless environment. The basic concept of OMT is to support the Marine's daily workload in each of the work centers.

The team brings a variety of technical skills to VMMT-204, including licensed airframe and powerplant mechanics, FCC-licensed avionics technicians, advanced composite repair technicians and non-destructive inspection technicians. Team members routinely provide New River's Osprey Support Center and Bell Boeing with valuable maintenance-related information that helps improve aircraft supportability and reliability. The OMT team also helps develop and write lesson plans for the squadron.

"A heavy investment needs to be made in V-22 OMT," said Col. Richard Dunnivan, commanding officer, VMMT-204. "OMT team members possess the technical expertise to provide continuity as new Marines cycle through the training squadron. OMT team members also mentor the younger Marines and train them to perform daily aircraft maintenance."

The OMT team provides organizational, intermediate and depot-level support, including flight line services, maintenance action documentation and on-board maintenance flights. The OMT team has assisted during MV-22 Operational Evaluation, the Interactive Electronic Technical Manual verification effort and fielded aircraft modifications. The team also has augmented the maintenance efforts at Naval Air Station, Patuxent River, Md., and Edwards Air Force Base, Calif., in support of upcoming flight test operations.



Photo by LtCol Ron Culp

Despite taking hundreds of rolls of photos, the above shot remains Lt. Col. Culp's favorite for both artistic and sentimental reasons. He remembers and honors his fallen friends through his photography.

Photos a 'snap' for Osprey pilot

By Doug Holmes
Production Editor, Osprey Facts

Lt. Col. Ron "Curly" Culp (USMC) has seen some incredible things during his 18-year military career, and he has the pictures to prove it.

Culp, one of only a handful of fully qualified Marine Corps Osprey pilots, is a self-trained amateur photographer who has been snapping photos since he enlisted. A CH-46 "Phrog" pilot by trade, he joined the Osprey program in 1997 when the Marine Corps announced that it was looking for the first six V-22 operational test pilots.

"Flying the MV-22 is comparable to trading in your old clunker for a sports car." —

Lt. Col. Ron "Curly" Culp

"I couldn't wait to be involved with an aircraft that's so vital to the future of Marine Corps aviation," explained the 43-year-old Florida native. "After 14 years flying the 'Phrog,' I was ready for something new."

After a stint at Naval Air Station, Patuxent River, Md., with the Multi-Service Operational Test Team, Culp joined the Marine Medium Tiltrotor Training Squadron 204 (VMMT-204), Marine Corps Air Station, New River, N.C., where he now serves as an Operations Officer

in charge of squadron flight operations. VMMT-204, also known as the "Raptors," is the first ever MV-22 training squadron.

Culp has participated in and photographed almost every key flight test event since 1997, including Operational Evaluation (OPEVAL) and various shipboard operations. During OPEVAL alone, he shot more than 45 rolls of film.

"I started taking photos of the V-22 as soon as I arrived at Pax River, and I haven't put my camera down since," he said. "Being a Marine Corps pilot, few people have the chance to see what I see. This is good way to share my experiences."

Culp's photos have appeared in V-22 marketing material, military base newspapers and have even graced the cover of *Jane's Defence Weekly*—a major international trade magazine.

He credits his success to trial and error and lessons from his mother, who worked as a newspaper reporter.

"I don't use fancy equipment or digital cameras," said Culp, who uses a Minolta 800 and basic Kodak film. "All of the people at the photo shop definitely know my name."

When he joined the V-22 program, there were very few photographs of the

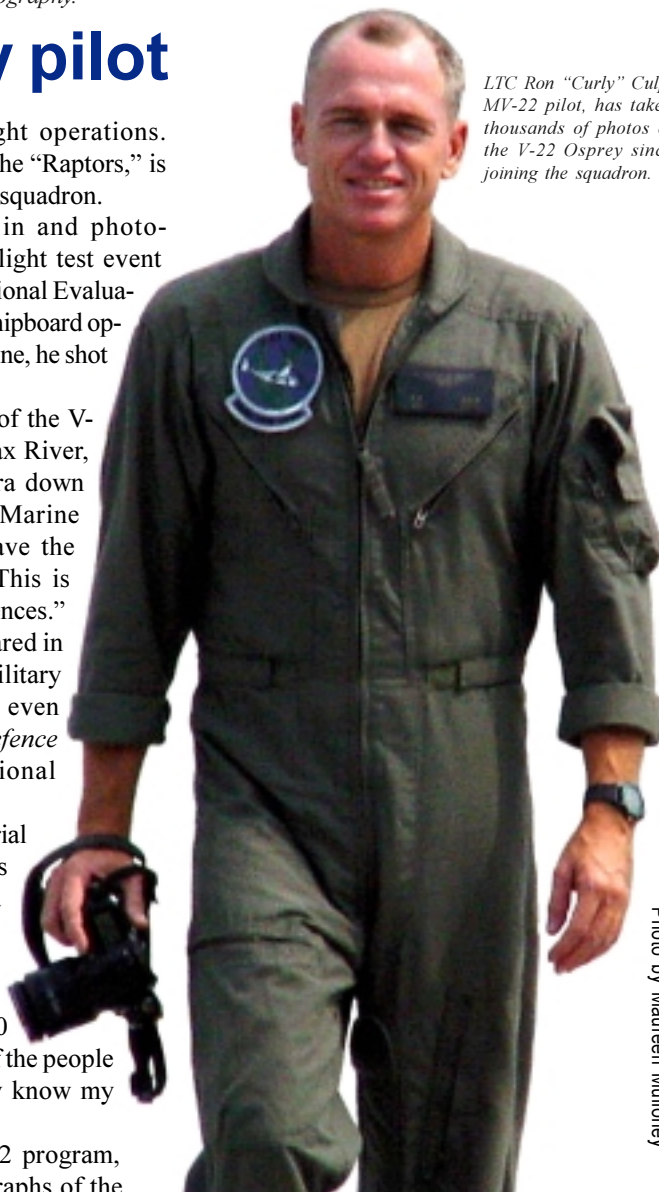
aircraft available. Thanks in part to his work, the program now has an extensive catalog of Osprey images that show its performance capabilities. When challenged, program officials have used his images to help combat myths about the Osprey.

"It's important to document the aircraft's accomplishments," he noted. "If someone says that the Osprey can't aerial refuel, I have a photo to prove them wrong. It's vital that we show the world what it can do."

Since joining the program, Culp has flown more than 220 hours in nearly every environment. No matter how many hours he logs, Culp will always remember his first time at the Osprey's controls.

"I couldn't get the grin off my face," he recalled of a brief flight from Patuxent River, Md., to Quantico, Va. "The V-22 is state-of-the-art. As soon as you release the brakes and add power during a short take-off, you

— Culp continued, Page 4



LTC Ron "Curly" Culp, MV-22 pilot, has taken thousands of photos of the V-22 Osprey since joining the squadron.

Photo by Maureen Mulloney

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the 418th Flight Test Squadron both at Edwards.

“Because the aircraft hasn’t flown since late 2000, we will have two initial shake-down flights,” Lovell said. “After that, we will resume developmental testing with a goal of moving the program towards operational tests scheduled for 2006.”

Once testing resumes, Lovell said the CV-22 team will focus on electronic counter measure and terrain-following tests. The operational pilot added that Edwards is the perfect location to conduct CV-22 flight-testing because the ranges are already set up for terrain-following testing and they are in close proximity to the Western Test Range and the Navy’s China Lake test ranges.

In the meantime, CV-22 mechanics and engineers at Edwards continue to correct the issues outlined by the DOD.

According to Tech. Sgt. John Lysaght, a structural mechanic with the CV-22 test force at Edwards, much of the test team’s work is focused on tubing and wires that were posi-

tioned too closely to other materials in the aircraft. The close proximity of the wires eventually led to chaffing. Mechanics working on the two test aircraft at Edwards have been changing the routing and placement of the wires to create a free zone around them, Lysaght said.

He added the down time has given the mechanics working on the CV-22 a unique opportunity to provide input.

“We know this aircraft more intimately because we’ve been involved in improving the design aspects from day one,” Lysaght said. “We are getting in there and getting things changed. This results in better tech data for the crews who will be maintaining this aircraft and it means a safer aircraft for those who will be flying it.”

Lysaght said the challenge once flying resumes this summer will be to maintain the aircraft on a daily basis.

“Right now we are in a reengineering effort and are used to working off of blue prints instead of the tech data that we use to maintain the aircraft and generate sorties every day,” he said. “But I have no doubt this is something we can overcome.”

Part of the solution is the experience each

of the test force’s 60 maintainers brings to the fight.

Staff Sgt. David Stephens, a tiltrotor journeyman working on the CV-22, notes that everyone working around him in the Osprey hangar has been “handpicked.” The tour is a special duty assignment and most of the mechanics working on the re-design of the CV-22 at Edwards have extensive helicopter experience. Until recently, the lowest ranking enlisted member on the CV-22 floor was a staff sergeant.

Like the pilots and flight engineers assigned to the CV-22, the maintainers come from an array of operational and flight test backgrounds.

In addition, about 20 contractors from Bell and Boeing also support the integrated test force. All work to support the V-22 Osprey System Program Office at Naval Air Station, Patuxant River, Md.

The Air Force has plans to acquire 50 CV-22 Ospreys to replace its fleet of MH-53J Pave Low helicopters used to insert and extract special operations forces from hostile areas. The first production aircraft are slated to the 58th Training Squadron at Kirtland AFB, N.M., where they will be used for CV-22 advanced aircrew training.



Photo by LtCol Ron Culp

Lt. Col. Ron Culp has taken thousands of photos of the Osprey since joining the program in 1997. His photography has been used to dispell various myths about the V-22 Osprey, including the aircraft’s aerial refueling capability (shown above), shipboard compatibility and downwash.

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really get thrown back in your seat as the aircraft rapidly accelerates down the runway. Despite my experiences as a helicopter pilot and in the V-22 simulator, nothing could of prepared me for the thrill of flying this bird. I am constantly amazed at what it can do.

“Flying the MV-22 is comparable to trading in your old clunker for a sports car,” Culp continued. “The MV-22 is fast and extremely fun to fly. By combining the versatility of a helicopter and the efficiency of a turbo prop, the V-22 is the tri-athlete of all military aircraft. The Osprey can insert our fighting forces swiftly, from much greater ranges, with little warning and complete the mission in less than one period of darkness. The MV-22 will greatly enhance our military effectiveness and help ensure combat success.”

Culp is leaving VMMT-204 this summer to spend a year in Okinawa, Japan, where he will fill a staff position at the USMC Wing Headquarters. He plans to return to the Osprey squadron immediately thereafter and hopes to stay with the program for as long as the Corps will allow.

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