

# VMMT-204 TRAINS TILTROTOR CREWS

Story and Photos by Rick Llinares



**M**arine Medium Tiltrotor Training Squadron (VMMT) 204, MCAS New River, N.C., operates 29 MV-22 Ospreys, and trains all V-22 aircrew members and maintainers. Thirty instructor pilots from the Marine Corps, along with four IPs from the Air Force and one from the Navy, and train personnel from each service in the Osprey. Aviation photojournalist Rick Llinares interviewed Maj. Rob Freeland, a VMMT-204 instructor pilot and the squadron aircraft maintenance officer, about flying and training in the Osprey.

**Q: How does the MV-22 compare to the CH-46?**

**A:** The CH-46 can quickly land on the exact spot you just flew over a moment ago at 120 knots. The CH-46 is quicker in moving around to a landing zone from inside a half mile away. The MV-22, however, is much quicker getting to that spot from many miles away. With the Osprey we can also get in with much less noise, and the enemy would not have as much notice of our arrival because we are quieter. I did notice that the brownout our pilots experience while landing in desert conditions is less challenging in the MV-



22 compared to the CH-46. With the CH-46, you might incur a complete brownout at 15 feet and not regain visibility of the ground until you are 5 feet off the deck. With the MV-22, brownout begins at a higher altitude but you regain your sight picture of the ground while at a higher altitude, typically 15 to 20 feet. While it may look like a huge dust cloud from outside the Osprey, the rotor wash is so strong that visibility for the pilots is good.

**Q: How does the Osprey handle specific aspects of flying such as refueling, formation flying, and shipboard operations?**

A: It is easy to keep station on other aircraft while flying in formation in the Osprey. This is largely due to the automation of the digital flight control system. Initially there was some concern that formation flying might be challenging due to the high task loads on the aircrews that is faced by the rotary community, but this has not been the case at all. Similarly, refueling in the Osprey off Marine Corps KC-130s is very easy. The MV-22 is very smooth and once in a level platform it is easy to get positioned laterally and horizontally; it simply takes a slight power input to engage the basket. Unlike the CH-53, there is no cyclic input, you just need to add power. I have found flying around the boat to be pretty easy as well. The Osprey is so versatile, it can hold above the ship in airplane mode easily and loiter for quite some time. The Osprey burns half the fuel in airplane mode as it does in conversion mode.

**Q: What is the most challenging aspect of flying the Osprey?**

A: Initially I found shipboard deck landings while flying on night vision goggles a bit challenging, especially the rolling of the deck in high sea states. Even in high seas with the deck rolling there is a slight pause of maybe five seconds every half minute which is predictable and is the optimal point to land. You don't want to chase the deck. The MV-22 requires smaller inputs than other rotary platforms, and its smooth handling characteristics and tremendous power help in this area.

**Q: Describe some of the unique aspects of training in the Osprey.**

A: The Osprey is a turboprop that can hover, and we train with that in mind. Although we need to spend some time in the bounce pattern giving the students a chance to "train their thumbs" (manipulating the nacelle wheel to



Left and above, VMMT-204 Ospreys fly near MCAS New River, N.C.

change the angle of the nacelles), we push a great deal of our training to higher altitudes. The challenge, and exciting part, really, is to transition from the higher altitudes to a landing zone or to low altitude tactics flight. We can change states very quickly, so going from high airspeed and altitude in airplane mode through conversion mode down onto the deck in full rotary mode happens very fast. The Osprey is also unique compared to current rotary- and fixed-wing aircraft in that it uses a thrust control lever (TCL) that takes the place of a collective in the case of a helicopter or throttle of a fixed wing aircraft. The flight control software, which interfaces between the TCL and the engines, does all the work and is simply amazing.

**Q: How long does it take a new student to get proficient in the Osprey?**

A: Having done many aircraft commander flight-check rides I can say it takes between 70 and 100 hours for new guys to get comfortable in the Osprey. This depends on the student of course. The high levels of automation in the Osprey, especially with the digital flight controls, makes division of tasks pretty straightforward. For those students coming from slightly more advanced and automated aircraft like the C-130 or CH-53 it is a bit easier than for those coming from aircraft like the UH-1 or CH-46. Systems and tilt-rotor knowledge is climbing within the FRS training program so with new students it is largely a matter of aeronautical experience. ✈️

Rick Llinares is a professional photojournalist specializing in aviation.

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