

## **F-35 Lightning II Program**

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## WASP PREPARES FOR JOINT STRIKE FIGHTER

SOURCE: Navy News; Petty Officer 1<sup>st</sup> Class Justin K. Thomas

ATLANTIC OCEAN - The crew of the amphibious assault ship USS Wasp (LHD 1) is preparing the ship to become the first at-sea test platform for the U.S. Navy's test variant of the F-35B Lightning II Joint Strike Fighter (JSF).

Recently, four members of Wasp's Air Department traveled to one of the Navy's premier test facilities at Naval Air Station Patuxent River, Md., to help give them a good idea of what WASP can expect when testing begins. The group consisted of Cmdr. Stephen McKone, Wasp's Air Boss; Lt. Michael Curcio, Wasp's Aircraft Handling Officer and F-35B Ship Integration Project Officer; Ens. Maguel Brooks, Wasp's Air Bos'n; and Senior Chief Aviation Boatswain's Mate (Handler) Richard McCray.

"The F-35B is a really unique aircraft," said Lt. Curcio. "It possesses characteristics on par with our legacy fighter/attack aircraft; it is the first Short Take Off/Vertical Landing (STOVL) aircraft to possess both stealth and supersonic capability. This aircraft alone has the potential to completely revitalize the utility of large-deck amphibious platforms by adding significant strike capability to their resumes."

The F-35B will replace the Department of Navy's current Vertical and /or Short Take Off/Landing (VSTOL) aircraft, the AV-8B Harrier. The Harrier has been in the U.S. arsenal since 1984 and has been extensively used during both Persian Gulf Wars. It is also assigned to Marine Air Groups (MAGs) and Marine Expeditionary Units to support Marines on the ground and to facilitate amphibious assault operations around the globe.

During Wasp's four-month maintenance availability conducted earlier this year, major modifications were completed to various elements of the ship including the flight deck and combat systems equipment. These modifications included moving the flight deck's "Tram Line," or yellow line, which is used by pilots to guide them when performing short landings, closer to the port side of the ship. Also, the aft NATO Sea sparrow missile launcher mount was removed and replaced with a "dummy" launcher.

"The ship has had a few physical changes made to it," said Curcio. "Some of these are necessary to accommodate the physical differences between the Harrier and the F-35B, while others will help the engineers to collect data on both the ship's effect on the aircraft and the aircraft's effect on the ship. For example, the flight deck tramline was shifted slightly to port to accommodate the F-35B's larger wingspan, while the operational aft NATO Sea Sparrow launcher was replaced with an a test launcher laced with sensors to measure heat, vibrations, overpressure, and sound levels."

Many places aboard Wasp will be tested for a wide range of reasons in support of the F-35B. Some of these spaces will be tested for heat stress and other hazards.

"The Engineering Log Room will be looked at closely by the flight test engineers," said Curcio. "The area above the log room is one of the primary landing spots for the aircraft and will be subjected to the most stress. We want to know exactly how much heat and sound is transmitted through the flight deck and into that space to see if there will be any issues for those crew members who regularly work in there."

In addition to the ship itself being prepared for this momentous occasion, Wasp Aviation Boatswain's Mates (AB) from Air Department will also attend training at Naval Air Station Patuxent River, Md.

"We will take a contingent of AB's to Pax River with us to work with the real-life jets that will be flying out," said Curcio. "So they can practice every evolution that could possibly happen on the flight deck, both planned and contingency, during flight test operations.

According to Curcio, only five F-35B test aircraft have been delivered to flight test operations at Pax River from the factory. These prototypes are the product of millions of man hours of work and represent the full ingenuity and industrial strength of the United States.

"Though they cost a lot, one cannot really put a price tag on the capability they will bring to the fleet," said Curcio. "They are truly priceless and the goal is to have absolutely no surprises when it comes to operating them at sea. The Wasp Air Department team will be prepared to address any situation, routine or emergency."

As Wasp and her crew prepare to help test one of the worlds most technologically advanced jet fighters, Curico realizes that this will be a tremendous team effort.

"With any new piece of equipment being tested, there will some road blocks," said Curico. "Since the crew will be working together on this, Wasp will be writing the book on how to operate the Joint Strike Fighter at sea."