



F-35 Lightning II Program

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F - 3 5 T E A M H I T S W E A P O N S T E S T I N G M A R K

NAVAL AIR SYSTEMS COMMAND, PATUXENT RIVER, Md. – After ejecting a 500-pound bomb from F-35B test aircraft BF-3, the test team took a collective breath, and watched as it hurtled toward the concrete deck.

Coming to rest in the foam covering the pit floor, the March 29 “pit drop” marked the end of two weeks of testing nine different weapons combinations inside the Joint Strike Fighter’s two internal weapons bays.

“Completion of these weapons ejections into the pit gets us closer to in-flight release of weapons from the F-35,” said Navy Capt. Erik Etz, director of test and evaluation for F-35 naval variants. “It’s another step in expansion of the F-35’s warfighting capabilities.”

Weapons pit-drop testing collects data to measure stresses on the airframe and adjacent stores, ensures proper weapon and suspension equipment function, and validates the separation models for the munitions’ ejection characteristics, including trajectories and velocities.

“We pushed the team pretty hard on those runs to get everything done,” said John Fahnestock, lead government weapons engineer. “We’ll spend some time going through the data to validate our models, but so far it looks good.”

From the cockpit, the pit drops demonstrated minimal effects of weapons launches from the F-35B’s left and right internal bays.

“Having the test weapons on board isn’t really noticeable from the seat,” said Marine Corps test pilot Lt. Col. Matthew Taylor. “But what’s great about the team’s accomplishment is that we’re making progress toward delivering a warfighting aircraft to the fleet.”

Testing included inert versions of the GBU-12 Laser-Guided Bomb, the 1,000-pound GBU-32 Joint Direct Attack Munition and the AIM-120 Advanced Medium-Range Air-to-Air Missile.

More weapons testing on the F-35B and F-35C carrier variant is ongoing at Naval Air Station Patuxent River. Current test events including pit drops, captive carry and instrumented weapons environmental flights, lead up to flight separation testing scheduled for later this year.

The F-35B variant of the Joint Strike Fighter for the U.S. Marine Corps is capable of short take-offs and vertical landings for use on amphibious ships or expeditionary airfields to provide air power to the Marine Air-Ground Task Force. The F-35B is undergoing test and evaluation at NAS Patuxent River prior to delivery to the fleet.



Time lapse images show an inert, instrumented GBU-32 GPS-guided bomb falling from F-35B test aircraft BF-3 into a test pit March 13. The F-35 integrated test team at Naval Air Station (NAS) Patuxent River, Md., is executing the weapons testing schedule for the Joint Strike Fighter this year, leading up to in-flight separation testing. The F-35B variant of the Joint Strike Fighter for the U.S. Marine Corps is capable of short take-offs and vertical landings for use on amphibious ships or expeditionary airfields to provide air power to the Marine Air-Ground Task Force. The F-35B is undergoing test and evaluation at NAS Patuxent River prior to delivery to the fleet. (Photo courtesy of Lockheed Martin)