

F-35C completes first jet blast deflector testing

NAVAL AIR SYSTEMS COMMAND, PATUXENT RIVER, Md. – Using F-35C test aircraft CF-2, the F-35 integrated test force based at Naval Air Station Patuxent River collaborated with the aircraft launch and recovery engineering team at Joint Base McGuire-Dix-Lakehurst to complete the first jet blast deflector (JBD) testing July 8.

The JBD testing collected data on the effects of the F-35C engine exhaust on fleet-representative 4- and 6-panel JBD units and the flight deck in front of the JBDs, measuring temperatures, pressures, sound levels and velocities to collect environmental data and validate a JBD cooling panel configuration model.

“From an aircraft perspective, the testing went without a hitch,” said Tom Briggs, air vehicle engineering lead. “We adjusted to weather delays to complete forty test points on schedule, all because of the teamwork between the ITF, Lakehurst and industry crews.”

Each Nimitz-class aircraft carrier has a JBD for each of its four catapults. The size, cooling configuration and angle to the catapult vary slightly between the four, so the test team had to repeat various tests – military and limited afterburner power takeoffs – for the various JBD configurations.

“We’ve learned a lot and our technical capabilities have expanded immensely since the original JBD testing for the F/A-18 about ten years ago,” said Kathy Donnelly, senior executive for aircraft launch, recovery and support equipment engineering at Lakehurst. “We’re able to bring in a lot more rigor to the F-35C testing so the fleet will be well prepared for its introduction.”

With greater technical capabilities today, the single aircraft JBD testing will be repeated with an F/A-18 to collect the same data. This will allow for comparison between the two aircraft and the development of a combined cooling model for the entire fleet.

The test team also collaborated with Naval Sea Systems Command during the testing to measure the effects of heat on the flight deck.

Future carrier suitability testing is scheduled for later this summer, including JBD testing with two aircraft, catapult launches and arrestments in preparation for initial ship trials in 2013.

The F-35C is the carrier variant of the Joint Strike Fighter, unique from the F-35B and F-35A with its larger wing surfaces and reinforced landing gear for the demanding carrier environment. The F-35C is undergoing test and evaluation at NAS Patuxent River prior to delivery to the fleet.

LAKEHURST, N.J. – F-35C test aircraft CF-2 in position for jet blast deflector testing at Joint Base McGuire-Dix-Lakehurst July 7th. The F-35 Integrated Test Force from Naval Air Station Patuxent River worked with Aircraft Launch and Recovery Engineering from Lakehurst and Naval Sea Systems Command to collect temperature, pressures, sound and other data to check the modeling of deflector cooling setup for the F-35. Completion of the first jet blast deflector testing represents another step toward initial ship trials scheduled for 2013. The F-35C is the carrier variant of the Joint Strike Fighter, unique from the F-35B and F-35A with its larger wing surfaces and reinforced landing gear for the demanding carrier environment. The F-35C is undergoing test and evaluation at NAS Patuxent River prior to delivery to the fleet.

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