

## Photo Release -- Northrop Grumman Increases Production Rate for F-35 Center Fuselages

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## Focus on Affordability, Training Helps Smooth Transition to Higher Ramp Rates

PALMDALE, Calif., Sept. 10, 2015 (GLOBE NEWSWIRE) -- Northrop Grumman Corporation (NYSE:NOC) is again increasing the rate at which it produces center fuselages for the F-35 Lightning II program.

Photos accompanying this release are available at: <a href="http://media.globenewswire.com/noc/mediagallery.html?pkgid=35970">http://media.globenewswire.com/noc/mediagallery.html?pkgid=35970</a>

On Aug. 11, the company began producing the center fuselage for BK-10 – the 10th F-35B variant for the United Kingdom – with a shorter production interval (PI) that will shave almost a month and a half off the time needed to produce the fuselage.

The new three-day PI, down from the four-day PI that's been in effect since last August, will enable Northrop Grumman to produce a center fuselage in just over 10 months compared to the approximately 11½ months needed currently. The production interval is the average number of work days between starts or completions of center fuselage.

"This increase in tempo on our F-35 Integrated Assembly Line [IAL] is part of a coordinated, pre-planned effort by Northrop Grumman and its suppliers to help meet rising F-35 production requirements," said Brian Chappel, vice president and F-35 program manager, Northrop Grumman Aerospace Systems. "It also reflects our steady progress increasing the efficiency of the production line, and the size and skills of our workforce."

One of the company's final activities under the four-day PI, he noted, was the completion of the 200<sup>th</sup> center fuselage, AF-97, the 97th F-35A variant for the U.S. Air Force. That hardware was delivered July 29.

The PI on Northrop Grumman's IAL has dropped steadily from an initial level of approximately eight days when the line first opened in March 2011 to the current three. Under the F-35 full rate production plan, it would drop to approximately 1.5 work days in 2018.

According to David Tracy, director of Northrop Grumman's F-35 center fuselage integrated product team, it will take approximately nine months for the new PI to be fully implemented on the IAL.

"We'll change to a three-day PI station by station as BK-10 moves down the line," he explains. "In parallel, our customers will be preparing to begin receiving our center fuselages on a three-day interval as well. When BK-10 is complete, the IAL will be fully converted to a three-day PI. At that point, we'll start delivering center fuselages at the rate of one every three work days."

The Northrop Grumman-developed IAL, which was named assembly line of the year in 2013 by Assembly magazine, makes heavy use of robotics and automation. It allows the company to produce F-35 center fuselages with levels of engineering precision, quality and manufacturing efficiency not achievable using conventional manual production methods.

As a principal member of the Lockheed Martin-led F-35 industry team, Northrop Grumman performs a significant share of the work required to develop and produce all three variants of the jet. Besides producing the F-35 center fuselage, the company designed and produces the aircraft's radar and other key electro-optical and communications subsystems; develops mission systems and mission-planning software; leads the team's development of pilot and maintenance training systems.

Northrop Grumman produces all of its F-35 center fuselages on the Integrated Assembly Line in Palmdale, Calif., voted Assembly Plant of the Year in 2013 by Assembly Magazine.



Northrop Grumman quality team performs final inspection of AF-97, the 200th F-35 center fuselage produced by the company at its Palmdale Aircraft Integration Center of Excellence.

software; leads the team's development of pilot and maintenance training system courseware; and manages the team's use, support and maintenance of low-observable technologies.

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