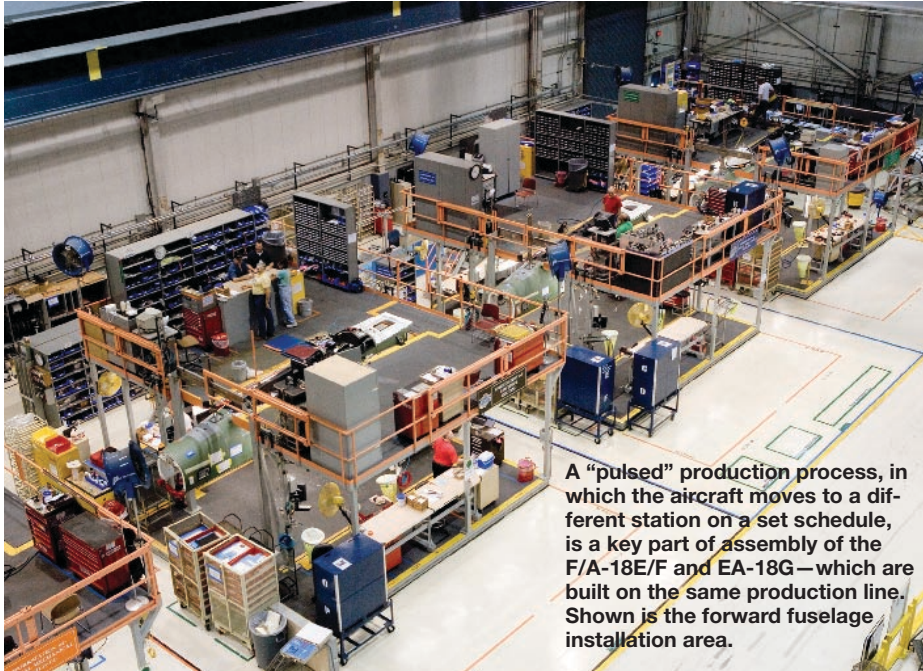


Two birds, one stone

Building EA-18G, F/A-18 on same line has benefits



A “pulsed” production process, in which the aircraft moves to a different station on a set schedule, is a key part of assembly of the F/A-18E/F and EA-18G—which are built on the same production line. Shown is the forward fuselage installation area.

RICH RAU PHOTO

By KATHY COOK

When Boeing employees were told they’d be building the EA-18G Growler fighter plane on the F/A-18E/F Super Hornet assembly line in St. Louis, they rose to the challenge.

The effort helps extend the Super Hornet line, saves time and money for the U.S. Navy customer, and helped Boeing win the \$1.2 billion EA-18G Growler system development and demonstration contract. In addition, this activity supports Boeing’s Lean+ and Global Sourcing growth and productivity initiatives.

Building the Growler—an electronic warfare version of the F/A-18F fighter/attack aircraft—on the Super Hornet assembly line wouldn’t seem daunting if you looked no further than the planes’ exteriors (see box below). But they are different aircraft with distinct missions. The Super Hornet carries weapons for air-to-air and air-to-ground missions. The Growler has advanced sensor systems for its airborne electronic attack mission—jamming or suppressing enemy radar and communications, to protect friendly assets.

The project team had two key goals,

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said Dave Cowell, a Boeing associate technical fellow and a lead on the team: Build the Growler on the existing Super Hornet line and at the same pace, and make the aircraft—F/A-18E, F/A-18F and EA-18G—as common as possible.

For instance, the team worked to make changes to the F/A-18E/F airframe to accommodate extra wiring and new hardware for the EA-18G. The idea: If an airframe change was required for the Growler, the same change would be made, wherever possible, to the Super Hornet.

This helped in two ways. “If you’re building 42 aircraft, and 30 of those are Super Hornets and 12 are Growlers, you can order 42 of the same part, rather than 30 of one and 12 of the other, and you’re going to get a better price,” said Cowell. “But another, less obvious benefit is that fewer unique parts reduce the chance of getting the wrong part.”

Team involvement was a key component in the program’s success, said Cowell and Kim Declue, Assembly general foreman. When the aircraft started down the assembly line, Declue and the production supervision staff made sure they had knowledgeable workers in the right places. Also, the High Performance Work Organizations worked with engineers and planners to figure out where to fit in the extra work. (An HPWO is a group of co-workers who are responsible for a common function or product and exercise self-determination in improving quality and process efficiency.)

“Together, the mechanics and engineers reviewed the models. The mechanics knew what work was coming and could offer suggestions on how to do some things better, explain why some things wouldn’t work, and come up with a plan that made sense for everyone,” Declue said. ■

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A closer look

Both the F/A-18F and the EA-18G are two-seat aircraft that have the same wings and tail hook. But if you look closely, there are some key differences. Here are a few of them.

- **Wingtips:** The F/A-18F has a missile launcher—a thin rail with a pointed front. The EA-18G has ALQ-218 pods, a blunt-end cylindrical attachment with fins; this provides emitter identification and location, among other capabilities.
- **Gun:** The F/A-18F has a gun in the forward fuselage, and the gun’s cover on the top of the fuselage has holes. The EA-18G has no gun (in order to make room for advanced avionics), so the cover has no holes.
- **Visual Identification Lights:** The F/A-18F has a single-flash pattern for daytime landing and a triple-flash pattern at night. The EA-18G has a double-flash pattern for day and night landing.