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PHOTO: Boeing South Carolina Final Assembly manufacturing technicians Chris Bermensolo, left, and Sang Nguyen use a training module. A computer-generated simulation details the workflow. **ALAN MARTS/BOEING; GRAPHIC: DAVID HENGY/BOEING**

Sharing the dream

Training and knowledge transfer will be key to assembly of 787s at Boeing South Carolina *By Rob Gross*

When the first 787 Dreamliner to be assembled by Boeing South Carolina enters line Position 0 later this year, it will be the first time since B-52 production ended in 1962 that Boeing has operated assembly lines in multiple locations for the same airplane model.

But a new approach to prepare the workforce in South Carolina for the start of 787 final assembly is unlike anything that could have been envisioned back then.

High-definition video, computer simulations, 3-D imaging and online training will give employees a significant understanding of how the 787 is built before they begin assembly of the first plane.

“It’s an approach to training that has almost unlimited potential, and with the help of our partners across the Boeing enterprise we’re continually working to make it even more effective,” said Marco Cavazzoni, Boeing South Carolina vice president and general manager for Final Assembly and Delivery.

The training program is known as Installation Plan Knowledge Transfer, or IPKT. It’s a comprehensive set of Web-based training tools designed to familiarize final assembly teammates with the data and materials they’ll be required to know and use in production.

“We think that Installation Plan Knowledge Transfer is going to give us a tremendous ability to come down the learning curve

at a faster pace and we’re already seeing some evidence of that,” Cavazzoni added.

“One of my favorite things about the training is all our teammates will use it to gain a detailed knowledge of our product.”

Starting with approximately 2,600 installation plan documents that dictate the 787 build process, the North Charleston team augments them with photos, high-definition video, computer simulation and 3-D images that demonstrate the “how to.”

All Final Assembly and Delivery teammates, including mechanics, support personnel and managers, will complete the training to ensure a detailed understanding of 787 final assembly processes.

Quizzes, based on the training content, are assigned to team members according to the final assembly or delivery position on which they work or which they will support. Passing all tests with a score of 100 percent will be a prerequisite for all team members before work begins on an actual airplane later this year.

The kind of collaboration across Boeing that brought the Installation Plan Knowledge Transfer program into being continues to guide its evolution.

“Our Creative Services and Final Assembly teams in Everett, Wash., are providing high-def video that demonstrates the excellence in final assembly techniques established there,” said Sarah Hogenson, Boeing South Carolina Final Assembly Industrial Engineering senior leader, who heads the project.

Manufacturing Engineering in Everett created the final assembly installation plans, she said, and Manufacturing engineers in Huntington Beach, Calif., and Everett are supporting development of virtual simulations. Web support comes from Huntington Beach, too. People at Everett Material Management, Learning, Training and Development, and the Boeing South Carolina Training organization also are contributing to the effort.

While the training is in its early stages, its developers have high hopes for the future.

“It is a brand-new way of thinking and of using technology to train our people,” Hogenson said. “It’s really exciting. We’re developing new solutions that answer the question of how we can be smart about learning how to support the airplane-build process.” ■

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