

Let's get



Daniel Zwink (left), Quality process team leader and machinist, and John Conant, machinist, examine the workmanship on a 777 part at Boeing Fabrication's Emergent Operations site in Auburn, Wash.

JIM COLEY PHOTO

In Auburn, employees take charge of quality and make huge strides

By KATHRINE BECK

“I get employees who come up and want to argue,” said Daniel Zwink happily.

Zwink is the quality process team leader in Boeing Fabrication Auburn Machining/Emergent Operations, an area at the Auburn, Wash., site that makes production parts as well as emergent parts—one-of-a-kind replacement machined parts manufactured on an emergency basis to keep commercial airplane production lines moving.

“They’ll come up and argue about a \$79 scrap rate charged to them and say, ‘We shouldn’t have been charged for this.’ And I’m thinking, ‘That’s great!’ Those are involved employees,” Zwink said.

The scrap rate is an important part of how the organization measures waste and rework. And ever since Zwink spearheaded an all-out effort to get employees involved in quality, that scrap rate has plummeted. It’s gone down 33 percent in three years and it’s still moving south.

It’s an especially notable accomplishment because avoiding rework and waste is particularly challenging in an area where one-of-a-kind and last-minute parts are being built. Employees are working under time pressure and they have to make every part right the first time.

FOSTERING COMPETITIVENESS

To save time, everyone works the process concurrently as much as possible. The Screening group gets the job committed, Planning sets the manufacturing steps, Supply Chain Management sets up the order release and materials, Numerically Controlled Programming prepares the data sets, Quality Assurance prepares for final inspection, and then the

involved

machinist starts manufacturing the part.

“It’s an environment that fosters competitiveness for the good of the customer,” said Mike LeClair, senior manager, Emergent Operations.

When asked about quality, Emergent Operations machinist Gary Atkins, working on a splice fitter for a 767, laughed and said, “You know what drives quality around here? You don’t want to scrap a part in front of your peers.”

Building on that professional pride, the organization has developed a quality process that includes all work areas and job functions.

It’s based on the idea that the only people who can achieve first-pass quality are the people who do the work. “Improvements are usually best made by those who are doing the job, and that is exactly what is taking place in our organization,” LeClair said.

WORKING TOGETHER COUNTS

Zwink, a journeyman machinist who’s also received two years of Leadership Development Program training, said that the basis of the new approach was to work together.

“We created a quality focal for each area, then formed a team with all the quality focals, and we included people from Engineering, Quality Assurance, Planning and Programming,” he said. “The cross-functional team is expected to quickly address quality issues as they arise.”

Last month the team celebrated a month-long quality campaign with coffee mugs for crews, light blue shirts with a quality message for focals, posters, contests—and a quality newspaper including obituaries for defective parts.

“We all work together,” Zwink said. “We made the inspectors part of the team. Now, they let us know right up front if there’s a problem. Before, they’d write something up and we’d find out later. The quicker you can address a quality issue, the better you fix it.”

The inspectors agree that things have changed for the better. Quality Assurance

inspector Barbara Jones said, “I’ve really seen so much progress. It’s wonderful how QA and the shop work together. It’s not ‘us’ and ‘them.’”

Zwink said another important part of a successful quality program is getting solid information to the shop floor. Quality focals on his team have weekly meetings with crews. “We go over every single defect that area had for the previous week. Nothing is missed. And we have the meeting whether the manager is there or not. This whole thing is a real grassroots effort,” he said.

The weekly meetings include detailed information about the past week’s defects, photos or drawings of the affected parts, and the cost in dollars of the defects. The process also sets targets that are easily understood by everyone involved.

And, there’s a reward system in place, with special lunches in honor of achieving monthly quality targets.

Crews are well aware of the targets and of their performance. One reason: Zwink’s hand-crafted “defect visibility machine,” a device he designed and built that uses color-coded poker chips and plastic tubes to display just how the area is doing in terms of quality—and how close they are to getting the three green chips in a row that means a catered lunch.

“The reason we’re able to get all these areas involved is because we developed ways to get the data stream to the crew, giving them all the information so they know exactly what things they need to fix,” Zwink said.

And it’s because the data is available to everyone that Zwink sometimes finds himself in an argument about quality data—like a \$79 scrap rate. And why he’s happy to hear the complaining.



John Conant, machinist in Boeing's Fabrication manufacturing business unit located in Auburn, Wash., uses a micrometer to check parts measurements for the 777.

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“I’m just the facilitator,” Zwink said. “We developed a process to get the shop employees involved and taking ownership of their own quality. It’s amazing how we’ve turned things around.”

His first-line supervisor, Loren Neighbors, said the key to success was employee involvement in the solution.

“It’s got to be from the bottom up, not the top down. People really need to be involved,” he said. “These guys are the ones who can make improvements. . . . Our quality progress is astounding.” ■

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