PHOTO ILLUSTRATION: The 747-8 Intercontinental, shown in this artist's concept, is significantly changed from the 747-400 and features a new wing, engine and interior. AIRPLANE GRAPHIC: BOEING; SKY PHOTO: SHUTTERSTOCK **(Insets)** 747-8I team members, from left, Donnie Gilbertson, functional test mechanic; Jaylene Pederson, sealer; Hoang-Bao Mang, systems installations mechanic; and Jarmaal Quinn, mechanic.

Labor of love

After years of hard work, excited employees take great pride in new 747-8 Intercontinental

By Deborah Feldman and photos by Bob Ferguson

It was a moment permeated with pride, excitement and, for some, even relief.

When the 747-8 Intercontinental was finally unveiled last month before thousands of the Boeing employees who labored to create it, most of those in the crowded bay of the Everett, Wash., plant probably felt a personal connection to the massive, awe-inspiring flying machine.

Boeing's newest passenger jetliner is the culmination of more than five years of long hours, immeasurable enthusiasm and no shortage of angst. It is also testament to the skill and determination of countless men and women.

Wing line mechanic Mike Herman could have been speaking for many when he made clear what he has put into the Intercontinental program: "All of me," he said.

"I dream about it. I take it home with me," he explained. "I think about what I'm going to do the next day."

Herman knows well how great an impression a 747 can make. A 23-year Boeing veteran, with fine laugh lines around his eyes and a gray-flecked goatee, he still has a faded Polaroid photo that was snapped back in 1977. It shows him as a 10-year-old boy standing inside Chicago's O'Hare airport with his mother and brother. They are dwarfed by the nose of a 747 looming at the window behind them.

PHOTOS: (Top) Wing and fuselage sections of a 747-8 Intercontinental are shown in the early stages of final assembly at Boeing's Everett, Wash., plant. **(Insets)** 747-8I team members, from left, Tony Krause, systems installations mechanic; mechanics at work; Andrew Behar, aircraft maintenance technician; and Solomon Mekuria (left) and Timothy Smart, both aircraft maintenance technicians.

And he still vividly remembers how he felt boarding that airplane.

"I was just so in awe over the 'bigness' of the plane," he recalled. "It was kind of intimidating looking down this big tube and it was just so long. It seemed like it went forever."

Herman's fellow mechanic, Shawn Halpin, has been with Boeing just three years. But it's long enough for him to feel ownership in the Intercontinental, too.

"When it's standing at the end of the runway and you know that you crawled around on the inside of that wing for a couple of weeks, or the inboard engines are hanging off the structure that you put in … you have a lot of pride in that!" Halpin said.

Years of engineering occurred before the 747-8 Intercontinental moved into Herman and Halpin's capable hands.

That was Brian Thorpe's realm. The 747-8 airframe leader said his experience on the Intercontinental was unlike any airplane program he's worked in more than 32 years at Boeing.

And he's worked them all.

"The work statement we were looking at five years ago versus what we have today is significantly different," Thorpe said, comparing recent life on the program to a marathon. A brown bowl at his side in the second-floor office of the Everett factory seems to offer testament: A giant bottle of Tums and packets of Tylenol are surrounded by individually wrapped Life Saver candies.

"We started out pretty fast," he explained. "We had a huge challenge with respect to schedule, and we kept running into hills along the way. Whether it's work statement, whether it's staffing, it has just been really hard."

With the unveiling of the new jet behind him, both relief and reward are in sight.

"Now we see the finish line, and it's out in the factory," Thorpe said. "It's coming together. It's a beautiful airplane."

Employees involved in creating the Intercontinental rose to meet the challenges time and again, Thorpe said. Team members were filled with determination, and they learned from experience on the 747-8 Freighter, which required additional

resources and engineering work that delayed both models.

Even so, the engineers didn't slow their pace.

A sheet of paper tacked to Thorpe's cubicle wall trumpets the unprecedented accomplishment of Intercontinental engineers. They achieved 100 percent on-time release performance from June 2008 onward. More than 11,000 assignments were completed on time.

"I've never seen anything like this before," Thorpe said. "Not one was late."

One team, headed by engineering manager Mark Clayton, was at risk of being the first in 30 weeks to miss a deadline. Clayton had gone home, his engineers confident they would make their deadline. The project was practically complete.

When he returned the next morning, three teammates were already there.

"It started to dawn on me that they were in the same clothes they'd been in the night before," Clayton said. "They were just so determined to keep the record alive!"

Engineer Paul Radebaugh downplayed the all-nighter he pulled.

"We weren't planning on spending the night," he said. "We just kept getting closer and closer and then it was morning. … I didn't want my team to be the one to miss the date."

From her cubicle on the third floor of the factory, Elizabeth Lund, deputy manager for the 747-8, sits almost nose to nose with 747s that are under construction. Lund explained that her experience with the 747-8 program isn't what she expected when she joined the group last August.

"When I came in, I was really expecting a team that was down and discouraged," she admitted.

That's not at all what she discovered.

"I found ... a team that was incredibly technically strong," Lund said. "They were addressing the challenges and the issues. They had good plans, they were optimistic and they are so talented."

She also pointed out that the 747-8 team carried an incredibly heavy workload as they set about designing the Intercontinental

PHOTOS: (Top) Boeing's largest-ever passenger airplane, the 747-8 Intercontinental is 250 feet (76 meters) long, or about 18 feet (5.6 meters) longer than the 747-400. **(Insets)** 747-8I team members, from left, Henderson Chan, systems installations mechanic; Warren Hatfield, systems installations mechanic; Sal Cuilty, mechanic; and Corey Stalcup, systems installations mechanic.

PHOTOS: (Top) The first 747-8 Intercontinental, with colorful new "sunrise" livery, is unveiled in February at the Everett, Wash., factory. **(Insets)** Among the crowd of 10,000 celebrating the 747-8 Intercontinental unveiling were Boeing employees, their families, friends and retirees—including Joe Sutter, third from left, who led the team known as The Incredibles that developed the first 747 in the 1960s.

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– Brian Thorpe, 747-8 Intercontinental airframe lead

while simultaneously finishing and certifying the freighter.

"It's hard to focus on a brand-new product when you've still got another one you're trying to certify," she said. "The team's done a great job with that as well. You know, I tell everyone that 2011 will be the year of the 747-8, and I truly think it is."

Herman, the mechanic, would agree.

"It's just going to fly like a dream," he said. "I can't wait. I hope I get to fly on one!"

Until then, he'll keep building 747-8s that will inspire a new generation of airplane enthusiasts.

"Yeah," he said, ruminating about other children experiencing the 747 as he once did. "Isn't that something?" ■

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