

# Speed to spare

*When customers need parts for Boeing airplanes, the Spares Distribution Center delivers*

*By Stephanie A. Miller and photos by Bob Ferguson*

It's a support network that spans the globe—for Boeing airplanes. Nearly 13,000 Boeing commercial jetliners are in service around the world, and those airplanes need support and spare parts. Making sure they get what they need quickly involves hundreds of Boeing employees and a material management distribution system that serves more than 600 airlines and about 1,400 customers.

In a typical week, some 25,000 shipments go out from eight world-wide Boeing facilities, the largest of which is the Spares Distribution Center, or SDC, near Seattle.

"The SDC is where the rubber hits the road," said Bill Brill, a Global Logistics specialist at the center. "We get to execute the plan and deliver parts to our customers and help keep their aircraft making revenue."

Under the center's sprawling 15-acre (6-hectare) roof, not far from the south end of the runways at Seattle-Tacoma International Airport, are millions of spare parts. Some are as big as a 777 thrust reverser, which is deployed on the engine to slow the airplane after landing. Others are so tiny, "you almost need a magnifying glass to see them," said Jeannene Willging, team lead for Inventory Operations, Carousel. The 54 computer-activated carousels at the center store and pick some 100,000 part numbers.

"It always amazes me that a teeny part is holding up a plane somewhere, whether it be in the factory or in flight," Willging said.

Opened in 1993, the Seattle center covers just over 700,000 square feet (65,000 square meters). An automated conveyor system more than two miles (three kilometers) long carries parts to and from their proper storage bins. Many of those parts are kept in 24 high-bay bins, each 60 feet (18 meters) high and 320 feet (100 meters) long. Employees

**PHOTO:** Dan Spears, a team lead in Heavy Crating, operates a stacker while moving parts to another section of the Spares Distribution Center.



**“Any customer, anywhere in the world, can order a part from us anytime, day or night, any day of the week or weekend, and our teams spring into action.”**

—Brett Nichols, operations manager for the Spares Distribution Center

**PHOTOS: (Below)** Shipping and distribution facilitators John Murray, from left, Paul Seaman and Greg Young use hybrid machines to enter high-bay rows to pick parts. **(Insets, from left)** John Murray; Carl Ward, left, IT global infrastructure engagement, and Paul Seaman; shipping and distribution facilitator Martin Hamilton; and Greg Young.



operate hydraulic-powered lifts to fetch or store parts in those bins.

The Seattle center shipped 800,000 customer orders in 2010.

Depending on the size and weight of the part, a wooden crate or cardboard box is constructed inside the center for shipment. Recently, employees shipped a 767 wing skin to a customer in a box they made measuring 76 feet (23 meters) long.

The most urgent request the center handles involves an airplane on ground, or AOG. A plane can't fly—or make money for the customer—until it is repaired. An AOG order can be processed and out the door within four hours. Routine orders can be shipped the next business day.

Boeing teams are on call and ready to travel to any location to assess the damage to an aircraft on the ground, make a repair estimate, and stay and do the repairs if the customer asks. Sometimes, it might mean sleeping in tents for weeks or longer if the site is remote.

“The incident repair orders are interesting because they can include anything—tents, portable toilets, generators and other items for the crews that are repairing aircraft out in the field,” Brill said. “It is not just parts going out.”

Boeing's other distribution locations are in Los Angeles, Atlanta, Dallas, London, Singapore and Beijing, as well as Dubai in the United Arab Emirates. In Long Beach, Calif., the Emergent Build Center supports the majority of customer requests for spare parts for out-of-production Boeing planes.

Along with the Spares Distribution Center in Seattle, they all play important roles in helping Commercial Aviation Services support Boeing customers.

Brett Nichols, operations manager for the Spares Distribution Center, noted that the facility never shuts down.

“Any customer, anywhere in the world,” he said, “can order a part from us anytime, day or night, any day of the week or weekend, and our teams spring into action striving to get that customer their order as quickly as we possibly can so they can continue running their business of flying.” ■

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***“The purpose of the SDC is simple:  
To get the right part to the right  
place at the right time.*”**

*– Dale Wilkinson, vice president of Material Service*

**PHOTOS: (Above)** Dave Smith, shipping and distribution facilitator, and Brett Nichols, Spares Distribution Center operations manager, meet in the bulk storage area to locate a part for a customer. **(Insets, from left)** Shipping and distribution facilitators Yu Tse, Patty Triplett, Keith Haynes and Brian Morley.







**PHOTOS: (Above)** Paul Seaman, shipping and distribution facilitator, in a high-bay hybrid machine. The high-bay area can get dark between rows, so machines have their own lighting to help staff pick parts. **(Insets, from left)** Amado Hardi, repair station mechanic, and Dennis Malloy, shipping and distribution facilitator.

