

# Aerospace Manufacturing in Oregon: A Small Industry with a Large Footprint

by [Amy Vander Vliet](#)

Published Jun-21-2007

Aerospace manufacturing probably doesn't spring to mind when compiling a list of Oregon's major industries, and with good reason. It employs fewer than 3,000 people, less than one percent of the state's total employment and a drop in the bucket compared to nearby Washington and California, who collectively employ nearly 150,000, or nearly 1 out of every 3 aerospace jobs in the nation.

Nonetheless, this sector provides well-paying jobs from Portland to Bend, Eugene to Elgin. And when you dig deeper, you'll find thousands more jobs at hundreds of Oregon companies that supply the local and global aerospace industry with products ranging from engine parts and propellers to sun visors and overhead call buttons.

## Overview: Small but Diverse

Four major components of aviation – scheduled airline service, general aviation, helicopters, and military – have a manufacturing presence in Oregon.

The commercial airline component of the aerospace industry is concentrated in the Portland metro area (Graph 1), where Boeing's 1.3-million-square-foot Gresham plant provides 1,550 jobs churning out stabilizers, landing gear, engine mounts, and other components for final assembly up in Washington. Another Portland manufacturer, PECO, Inc. makes reading lights, air nozzles, emergency oxygen units, and call buttons above passenger seats and similar assemblies in lavatories and attendant rest areas.

Deschutes County is the hub of Oregon's general aviation manufacturing. General aviation aircraft range from the small two-seaters designed for leisure use to corporate jets designed for business transport. The dominant firm, Columbia Aircraft, manufactures a variety of technically-advanced small aircraft. Epic Air makes a six-seat plane and just recently introduced a new jet. In total, the county's aerospace manufacturers employed nearly 900 people in 2006.

In the Southern part of the state, Erickson Air-Crane manufactures, operates, and maintains a fleet of heavy-duty helicopters which are capable of lifting up to 25,000 pounds and widely used in logging, firefighting, and construction. The company employs over 400 people.

The state also has a small military aerospace presence. For example, Clackamas-based Oregon Iron Works helped design an unmanned sea plane for the U.S. Navy and produces components for the Ground Based Missile Defense Program. But in terms of spending, the military plays less of a role in Oregon than in most other states. We rank second lowest in the nation in per capita defense spending, and the bulk of this money was spent outside the manufacturing sector.

## High Wages

Wages in Oregon's aerospace manufacturing industry in 2006 average \$61,100, 62 percent higher than the \$37,704 average for all private-sector industries. It is the best-paying industry (Graph 2) within the broader transportation equipment manufacturing sector. Its average pay is higher than all but three of Oregon's 21 broader manufacturing industries, those three being high tech, paper manufacturing, and

primary metals.

## **A Small Industry That Makes Big Waves**

For every person employed at an Oregon aircraft/parts manufacturing facility, there are several more employed at companies that supply the local and global aerospace sector with an array of parts and services. Boeing alone has 308 suppliers in Oregon, pumping \$174 million into the state's economy over the last year.

A few of the large suppliers include PCC Structural, a Portland-based metals firm employing over 2,500 statewide (including 200 in Redmond) that manufactures, among other things, structural castings for commercial jet engines. Further down the Willamette Valley, ATI Wah Chang in Albany (employment of 1,000-plus) has a division that produces custom shapes for aerospace.

Medium-sized suppliers include Pacific Cast Technologies, also in Albany, which provides the commercial and military aerospace manufacturers with airframe, launch vehicle, and turbine engine structural components. They employ close to 300 people. Meggitt Silicone Products, a 200-employee facility in McMinnville manufactures complex aerodynamic seals for both the commercial and military aerospace industry. OECO, LLC, based in Milwaukie, is a 300-employee firm that supplies the commercial and defense aerospace industry with power supply and magnetics products.

And there are dozens of small Oregon companies in the aircraft manufacturing supply chain. A few include: Max-Viz, making infrared systems for small aircraft; Schmitt Industries, designing and manufacturing systems for aerospace (and auto) manufacturers; Mountain High Equipment & Supply, producing oxygen systems for non-pressurized aircraft; Precise Flight, Inc., manufacturing aircraft safety modification parts; and Electronics International, producing electronics systems for general aviation aircraft... to name a few.

Even Oregon high tech companies are in on the aerospace action. At Merix, a circuit board company based in Forest Grove, aviation and aerospace account for two percent of revenue. Tektronix makes test and measurement equipment for a wide variety of industries, including aerospace. Mentor Graphics produces design tools for aerospace.

A McMinnville aviation services company, Evergreen International, is contracted by Boeing to fly huge, specially modified cargo planes around the world collecting parts used to make the new 787 Dreamliner.

## **Recent Trends**

The national aerospace manufacturing sector took a nosedive in the aftermath of 9/11, which was made worse by weakening global economies (Graph 3). Oregon also suffered a downturn, declining by 25 percent (-600 jobs) between 2001 and 2003. Our percentage loss was greater than the nation's, most likely due to our close economic ties to Washington State's aerospace industry, which also declined faster than the nation.

Since bottoming out in 2003, we've added almost 900 jobs or 45 percent to the industry, outpacing both the nation and Washington. While we certainly benefited from growth and recovery in the national and international commercial airline industry, our general aviation segment played a significant role as well. Columbia Aircraft alone added hundreds of jobs in 2005 and 2006.

## **Today and Tomorrow**

Orders, sales, profits, and backlogs have reached all-time highs at the nation's aircraft manufacturers. Boeing received orders for 92 commercial aircraft in May, almost triple the year-ago figure of 33. And major supplier Precision Castparts recently reported the best quarter in company history due to

continued strength in the commercial aerospace market.

"It's exciting," says Ralph Cole, VP and industry analyst at Portland-based Ferguson Wellman Capital Management. "This cycle is longer than past cycles, and it's global in nature." The overseas market has supported Boeing over the past few years, but now domestic commercial carriers are emerging from bankruptcy and replacing aging fleets. According to Mr. Cole, this will extend the rally.

The outlook is positive through at least 2010. The Aerospace Industries Association forecasts industry sales to grow by six percent to a record \$195.4 billion this year. As in 2006, growth will be fueled by civil aircraft, engines, and parts. The current backlog of commercial aircraft orders means that the sector will continue to grow for at least 3 or 4 more years.

Oregon will partake in the party. Boeing's new 787 Dreamliner, entering service in 2008, is allegedly the fastest-selling commercial airplane in history. The company has racked up nearly 600 orders from at least 44 different customers. Oregon's Gresham plant makes brackets, engine mounts, wing flap controls, and other critical parts for the plane. Other Oregon companies, including PCC Structural, also supply parts and services for the new aircraft.

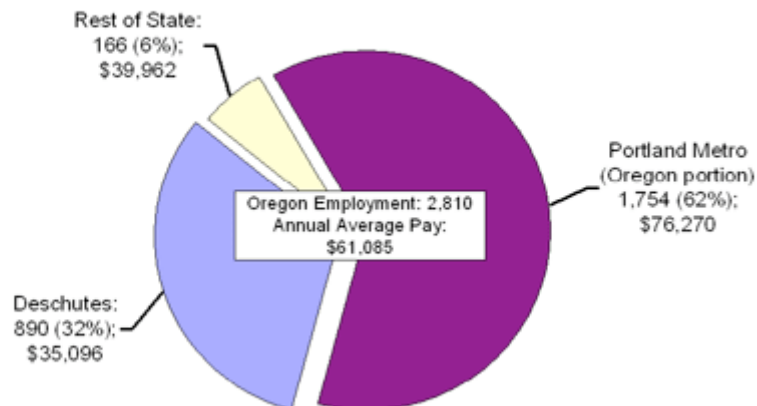
In related news, Pacific Cast Technologies plans to build a new state-of-the-art casting furnace at its Albany plant in response to growing demand for aerospace titanium castings. Also in Albany, Wah Chang was recently awarded a large contract according to a company official, and could be hiring more workers.

## Graying of the Workforce

Looking further out, the current growth cycle is bound to end although it's difficult to predict exactly when. One thing is certain – the industry will soon be facing a retirement "brain drain." According to the Aerospace Industries Association, 55 percent of workers in the industry are over the age of 45; up from a 38 percent share in 1992. There's been a corresponding and dramatic decline in the 25-to-34 year old bracket, from 27 percent of the workforce to 15.

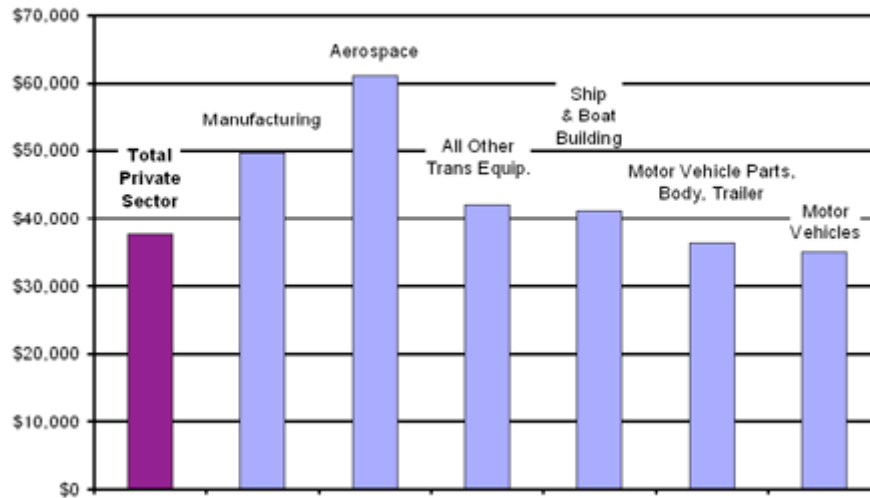
Companies across the country, including Boeing's Gresham plant where the average age is 47, are developing ways to attract and retain young workers, including creative recruitment strategies, internships, and accelerated training programs.

**Graph 1**  
**Oregon Aerospace Manufacturing**  
**Average Annual Employment and Pay by Region: 2006**



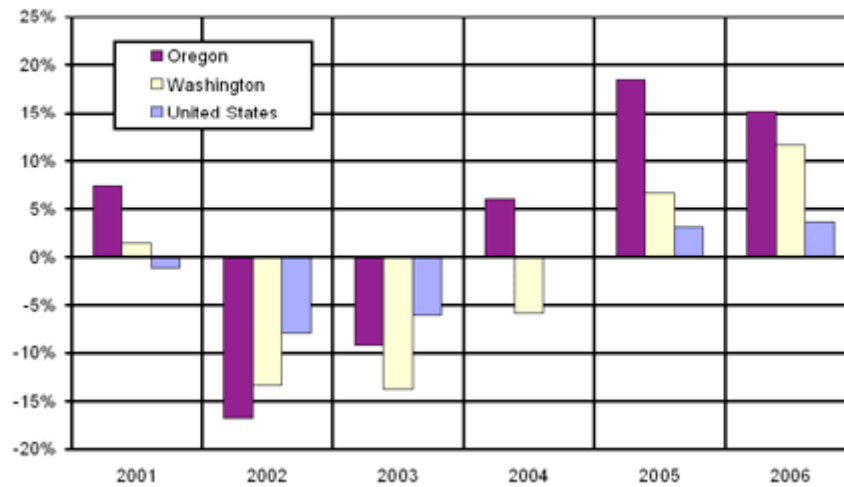
**Graph 2**

**2006 Average Annual Pay: Oregon**



**Graph 3**

**Annual Job Growth in Aerospace Manufacturing  
Oregon, Washington, U.S.: 2001-2006**



Source: U.S. Bureau of Labor Statistics

