

Efficiency, Quality Gains Put AeroCision on Upward Flight Path

The Hartford Courant: By MARA LEE maralee@courant.com

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CHESTER — The power of Boeing to insist on lower prices by its supply chain is so great that the Federal Reserve mentioned it as a factor in the Northeast's regional economy.

Even for suppliers who don't directly sell to the Boeing or Airbus duopoly, what the government called "exceptional pressure" rolls downhill.

"We're spending colossal amounts of time in wringing costs out of the product," said Andrew Gibson, CEO of AeroCision, an aerospace engine parts manufacturer. In the past two years, the pressure from engine makers to lower costs has intensified, he said.

Engine manufacturers sign 3 to 10-year contracts with suppliers such as AeroCision, and require that those suppliers sell the part for 3 percent to 5 percent less each year.

Since AeroCision does not control how the part is designed — so it cannot control materials costs — the only ways to control costs are by reducing the amount of time it takes to produce each part, or the amount of labor that goes into it, or moving labor to lower-cost countries.

AeroCision does all three.

Engine makers usually give most of the orders for any given part to one factory, Gibson said. A second factory chosen to make the part reduces risk for the engine-maker — and provides another way to pressure the supply chain on costs.



Machinist Lyle Schieman, left, and Process Engineer Michael Murphy, right, discuss product operations at AeroCision, an aerospace engine component manufacturer in Chester, CT on Monday, July 14, 2014. With Rolls-Royce and Honeywell as their major customers, AeroCision is one of a few manufacturers in Connecticut that doesn't sell to Pratt & Whitney. (Daniel Owen / Hartford Courant / July 30, 2014)

"You hope to acquire between 70 to 80 percent of a part [run]," Gibson said. "If your cost is not competitive, they'll toggle it over. We're not in the business to be a backup."

The plant, bought by Houston investor Patrick Bromley in 2005, has 64 workers, 30 percent fewer than under the previous ownership, even as sales have grown.

AeroCision has moved up the value chain in the complexity of the precision rings it makes, so the value of those parts has risen.

When Gibson took over in 2008, the average price of a part AeroCision made was less than \$400. Now it's between \$6,000 and \$8,000.

Sales in 2014 are projected to be the same level as 2013, Gibson said. In 2013, he said, AeroCision had between \$15 million and \$20 million in revenue.

"We are doing more than double the productivity," Gibson said. Half of those savings went to Rolls-Royce and other customers. The rest was used to buy machines that allow more of the work to be automated, to wage increases, and to health care increases.

"None of it's going back in our pocket. We put it all back in," Bromley said.

One of the major capital costs was opening a plant in Bangalore, India. Its production began in July. AeroCision is a 50/50 partner with a local family that had been doing automobile manufacturing for decades.

"Presently, we're finishing the parts here in America, but that will change," Gibson said.



Machinist Douglas Rosen cleans off an Inconel Complex Ring, a hot section jet engine component, at AeroCision, an aerospace engine component manufacturer in Chester, CT on Monday, July 14, 2014. With Rolls-Royce and Honeywell as their major customers, AeroCision is one of a few manufacturers in Connecticut that doesn't sell to Pratt & Whitney. (Daniel Owen / Hartford Courant / July 30, 2014)

Sandra O'Day, a global buyer with Honeywell, said she has been working with AeroCision for eight years, so she has seen the plant both before and after Gibson became a partner in the firm.

Under the previous management, she said, she had to fly to Connecticut every week from Phoenix because of problems with bad parts and unmet delivery deadlines.

"It's a different company, totally. Andrew, he worked wonders with that company. He has transformed that company," she said. "Employees were very dissatisfied, they had no benefits. It was a very bad atmosphere, you could just feel it when you walked in. It's completely the opposite now."

There are 15 employees in India, but with a building as large as the one in Chester, "we can grow and grow and grow there." By the end of 2016, Aerocision expects to have 50 workers in India.

Aerospace manufacturing has been moving to Poland, Mexico and China, but Aerocision found India attractive both because it is in Asia, near one of Rolls-Royce's assembly centers in Singapore, and because there is no language barrier.

Opening in India will not mean less employment in Connecticut. AeroCision expects to need five new employees in the state in 2015 and 15 more in 2016. The company is planning for a second shift.

AeroCision is unusual among aerospace firms in turning to India — though some other small aerospace companies added capacity in Poland and Mexico years ago.

Gibson said that since its customers want to split production between Western countries and low-cost countries, Connecticut can land more work when AeroCision bids with both factories in a package. Gibson said the company's revenue goal is to double sales in the next four years.



Koldo Beristain, 77, has been a Machinist for over twenty-five years with AeroCision in Chester, CT on Monday, July 14, 2014. With sixty years of experience as a machinist, Beristain is a valued member of the AeroCision team and inspects components of the jet engine before they continue to the next step in the process. (Daniel Owen / Hartford Courant / July 30, 2014)

One of the companies that has been increasing its orders with AeroCision over the last half-dozen years is Honeywell, which makes engines for helicopters, Abrams tanks and airplanes.

"They have impeccable quality and their on-time delivery is 100 percent," she said.

Gibson said the company's delivery score was 30 percent on time when he came on board.

Most Connecticut aerospace manufacturing executives complain they cannot find men with the right work ethic and skills at the price they want to pay. Gibson said they used to have a similar attitude, that they only wanted hires who knew how to step in and perform on Day 1.

But over the years, they have decided that mentoring and formal classes are worth the investment. If machinists take the certification classes, they get paid a 10 percent premium, and 30 percent of the machinists have passed the tests.

"Our secret weapon is our people," Gibson said.

As quality has improved, the big three engine makers are General Electric, Rolls-Royce and Pratt & Whitney. Rolls-Royce is AeroCision's biggest customer, accounting for 55 percent of sales, and General Electric just purchased its first part with the firm.

Gibson believes he's the only aerospace factory in the state that does not sell to any United Technologies Corp. division. Gibson said the company had some Pratt business more than 30 years ago. "One day we'll approach Pratt & Whitney."



CEO of AeroCision, Andrew Gibson, center, and Chairman, Patrick Bromley, left, pose for a portrait in their facility in Chester, CT on Monday, July 14, 2014. With sixty-four employees in Connecticut and fifteen in India, AeroCision, an aerospace engine component manufacturer, supplies its products to corporations such as Rolls-Royce and Honeywell, and has recently added General Electric to that list. (Daniel Owen / Hartford Courant / July 30, 2014)

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