



Machining

## The Challenges of Retaining Aerospace Machinists

Don Sears | Jul 10, 2018

Aerospace is one hot industry, but hiring and retaining machinists can be tough for smaller players. We talked with Rusty Gwyn, owner of General Machine-Diecron, to find out what it's really like for one job shop.

Pike County is 219 square miles and has only one red light in the whole county, according to Rusty Gwyn, owner of **General Machine-Diecron**, a machine shop in Griffin, Georgia, which is about 40 miles due south from Atlanta. Since 1977, this 27-person job shop has been machining parts for a variety of industries, but in more recent times it has had a major focus on making parts for the aerospace industry.

"It's about 60 percent of our business today," says Gwyn. "The other 30 percent is electrical switch work—with about 10 percent in other miscellaneous parts."

Aerospace is a very hot industry, which means there are job options for experienced machinists and technicians. Boeing, for example, has been growing at record pace with profits of \$8.2 billion last year, which was up from \$4.9 billion in 2016, according to *The Seattle Times*.

The challenge is in how to best retain the experienced aero parts-makers and CNC programmers. The larger companies can throw a fair amount of money and benefits at the problem—and employees can share in the benefits of productivity. In the Seattle area alone, 66,000 machinists at Boeing **saw their bonuses double** in 2017.

Rural Georgia, however, is not Seattle, Wichita or Dallas—which are hotbeds of aerospace manufacturing for the major OEMs and subcontractors in aviation and defense, says Gwyn. His company's locale helps families in the area stay close to each other. With good schools and strong property values, there is high demand to live in Pike County.

"In this area, there's a lot of construction work, which is good when you can get it but doesn't guarantee full-time hours every week," says Gwyn. "We can guarantee steady, 40-hour-a-week work in a clean, safe and air-conditioned environment—and we have 401(k), vacation time and insurance."

But being close to Atlanta is a blessing and a curse, Gwyn admits. It's just far enough away to be a difficult commute if you live in Pike County. Yet, the big city is not far enough away for experienced machinists to ladder up jobs at the major aviators, where there is always demand.

There is an inherent competition between larger and smaller players for talent—and in his case, can make it difficult to recruit experienced machinists out of technical colleges. Why? Because after the five-year mark and official certification, most of those machinists are out the door to take jobs at the larger players, Gwyn explains. He is not complaining in the least about it and does not blame machinists for trying to better their careers and earnings. It's just tough for his company to build a strong, core team if his job shop is seen as a temporary steppingstone, Gwyn says.

"I don't really recruit a lot of people out of the technical colleges," says Gwyn. That's not to say that he doesn't at all. Recruiting and retaining aerospace machinists is a challenge for smaller shops, but it's not impossible. He recently hired a new machinist from a tech school, and the knowledge the newer employee is bringing, especially with newer machining practices and programming, is helping his business.

But taking on a technical college recruit requires the right amount of vetting, trust and communication. Gwyn is looking for a longer commitment than five years from anyone he hires.

His long-term employees see an annual performance-based raise structure that includes self-evaluation. He's investing in his people for many years—using today's best machining practices.

***Want to learn how other precision shops are handling the skills gap? Read the article "Q&A: How to Recruit, Train and Retain Top Machining and Manufacturing Talent."***

## Embracing All Resources: Technical High Schools, Trade Schools, Nearby Colleges

Similar to General Machine-Diecron's move to use an apprentice program with its regional college—other precision manufacturing shops *are making similar inroads*. LeanWerks, in Ogden, Utah, works very closely with local colleges and takes advantage of industry advocacy programs including one with the local chapter of the *National Tooling and Machining Association*. In 2014, the Northern Utah chapter of the NTMA was awarded a \$150,000 workforce development grant which LeanWerks used to help develop an apprenticeship program.

"Every year, the skills gap is an issue for us manufacturers," says Reid Leland, president and founder of LeanWerks. "Regardless, we have to take responsibility for our workforce. We can't make excuses for not having good people—we have to be active in our communities, helping to grow and attract talent."

LeanWerks has a very structured apprenticeship program that includes in-house video training mixed with on-the-job work. LeanWerks did get help from organizations such as Tooling U-SME and others.

But what about training for experienced machinists?

"Talented machinists have a lot of options right now and can work anywhere they want," says Leland. "It's important that we do our part to keep them here."

To that end, Leland's training program has 10 job levels, so more experienced machinists can also learn and participate if they have the desire. In the case of General Machine-Diecron, owner Rusty Gwyn says he is considering making continuing education a mandatory thing every year, and the company will pay for it. He sees a big need for more experience with Mastercam programming software in his shop—and is confident his crew will take advantage of the benefit.

"You can't be a cheapskate in this business," says Gwyn. "You have to invest in it if you want to keep going."

## Today's Aerospace Machining Conundrum: To Craft Parts Manually or to Program the CNC to Make the Parts?

The biggest skills gap issue in today's machining resides in CNC programming, according to Gwyn. He believes most job shops are experiencing talent gaps because of one simple reason: The rise of button pushing and automation.

Gwyn explains that when they hire new people without a lot of experience, they train them on all the machines so that they will understand and learn from more experienced machinists. Some of the more

experienced machinists in his shop love the craft of building parts manually—and doing it themselves on all sides on traditional machines—rather than just pushing a button. These veteran machinists feel like the automation aspect of CNC machining uses less of their part-making brain and takes the craft out of the work, Gwyn explains. But it's hard to deny the output benefits that come from newer technologies.

"We tell them, if you want to make \$100K in this building you can, but you have to make your mind up [about programming]," says Gwyn. "That kind of [job] position is available, but that is the bottleneck right now in every job shop in America."

Gwyn stresses this important distinction, too: New machinists need to have a background as a parts-maker. It's not that simple to build parts and think in the three dimensions, understand the tooling, its wear and use—and all the nuances of making parts. Inexperienced machinists who have only been exposed to CNCs and programming don't really know about parts-making without the right experience, Gwyn asserts.

How do you get that experience? Training. General Machine-Diecron is working with local schools, including *Griffin Region College and Career Academy*, which has a paid apprenticeship program for high school juniors and seniors under its precision manufacturing and maintenance "pathways" program. The school vets students looking for hands-on experience. General Machine-Diecron plans to implement the program for one to two apprentices who will be mentored by experienced machinists alongside classroom curriculum.

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Rusty Gwyn

Owner, General Machine-Diecron

## **Aerospace Machining Gives New Life to the Next Generation in Precision Manufacturing**

The value of making more parts according to efficient cycle times is a major part of the business of today's machining. Gwyn worked at General Machines for 16 years before moving into a leadership role, and worked only in a limited capacity with aerospace parts the first five to seven years. But after his father retired, Gwyn had a vision: He felt aerospace was a good direction to go to help the business grow, but admits he did not have the conventional tool-maker and machinist passion like his dad.

"I didn't have the background for it," says Gwyn. "I tinkered with aero, and started learning. And then I figured out how to estimate cycle times. It's pretty cut and dry now. It used to be elaborate." He likens aircraft machining to framing a house. There is volume and speed—and the finesse work comes after that.

"What I like about aircraft work from a business standpoint is that it is repetitive," says Gwyn. "There's good volume—and there's a lot of aluminum, which is good because it's not horrible on your machines." That translates to a long machine life—so equipment investments go a long way.

General Machine-Diecron is no slouch in terms of its machining technology, either: The company has four 5-axis CNC machines and three 3-axis machines—and next year will have a brand-new, 12-table pallet system from Mazak, which will "make things a lot more fluid," says Gwyn. "We'll be able to sell a machine, too, which will reduce our overhead and see our costs go way down ... I wish I had invested in this technology 10 years ago."

*What kind of challenges does your company face in retaining machinists? Share your thoughts.*

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