

Don't Tap the Glass

A deep-sea dive into Delta Gear, one of Michigan's premier aerospace gear manufacturers

Erik Schmidt, Assistant Editor

Behind a thick sheet of unblemished glass that stretches from wall-to-wall, ceiling-to-floor at Delta Gear, just south of a shop lined with ultramodern grinding machines whirring away, is Scott Sakuta's aquarium.

It's a great, big tank, flooded in azure and seeped slightly in the oceanic hues of aquamarine, sea foam and sapphire. Sakuta, director of operations at Delta Gear, sits back in his chair and watches as all sorts of majestic salt water perciformes swim by.

First comes a lemon shark, stocky and powerful and the color of unripe citrus; next a streamlined blue marlin, its spear-like snout brandished proudly like a fencer's foil; and then an inland tarpon, green-backed with streaks of silver shining through rows of scales; and lastly, a white marlin, Sakuta's uncatchable unicorn — the one fish that has somehow eluded his reel.

The collection of billfish and shallow-water sharks swirl around Sakuta's head, a static school of portraits wrangled together by a famous artist named Stanley Meltzoff and imprisoned peacefully on canvas prints — an art gallery 10,000 leagues under the sea yet somehow right at home inside the pristine gear shop located in Livonia, MI.

Sakuta was basically baptized in the scalding sparks of a high-powered gear grinding machines — his father, Bob, has been in the industry for over three decades and little Scott spent his formative years sweeping shop floors when he misbehaved at school — but it's fair to say that gears weren't his first love.

That would be fishing.

And even though it would seem that Sakuta's two main interests mix about as well as a swordfish in a sandstorm, it hasn't stopped him from bringing a little piece of the high seas into the decidedly dry land of Delta.

"I thinking bringing some of your personality to work is probably a benefit because people ultimately know my interests and my passions, and it encourages me to know theirs," Scott Sakuta says. "It breaks down a communication barrier."

If anything, Sakuta's fish bowl takes Delta — a manufacturer of high-precision aerospace gears, shafts and assemblies — and brings it down a little bit closer to sea level.

'Some Place Special'

It should be noted that the aquarium didn't always exist.

Five years ago, before an extensive remodel, Delta Gear could have been considered more or less comparable with any other plant in the country. Now it's something else entirely.

"I was in awe," says vice president of sales Bryan Barlow on his first trip to Delta. "My jaw dropped. It's stunning — you walk in and see this beautifully contemporary lobby, and then you look past the receptionist and you see the floor-to-ceiling, side-to-side glass wall that overlooks the shop.

"And what it overlooks is the most state-of-the-art gear manufacturing facility probably in Michigan. For a gear guy, it's quite impressive."

What is perhaps the most noticeable thing about Delta is just how *noticeable* everything really is — natural light pours in from giant paneled windows high above the sunken shop floor and illuminates every Reishauer and Kapp and Klingelnberg machine.

"Before you even hit the floor you can already see the state-of-the-art gear grinding equipment as far as the



A painting of a tarpon by William Lawrence that hangs in the office of Scott Sakuta, Delta Gear director of operations.

eye can see," Barlow says. "That's what really caught my attention as soon as I walked in."

Barlow, who has been working in the aerospace gear industry since 1984, was hired at Delta in April and — not to discredit other companies he's worked with — immediately noticed a distinct dissimilarity with the way Delta conducts its business.



It's a fish of a different color, so to speak.

"From the moment you walk in the front door you know you're some place special," Barlow says. "It defines '5S'; it defines what customers want. Customers want to see brightly lit; they want to see brand new machinery; they want to see people working; they want to see a hospital clean environment; they want to see that their parts are being handled carefully and correctly. I think Delta defines that.

"When you check a machine at the Delta facility you don't see oil on the floor. You don't see chips on the floor. There's no oil mist in the air. It's hospital clean all the time and we don't do that just for a customer tour—we live it."

Steve Rouillard, vice president of engineering—who much like Sakuta, grew up sweeping floors at his father's shop and has been in the industry nearly his whole life—was similarly impressed.

"When I walked in here I was just blown away," he says. "It's a gorgeous facility: clean, people are friendly and it's just a really nice place to work."

Of course, the shiny outer coating of Delta would be worthless if what lay underneath wasn't something of substance. But since 2004, Delta Gear



The front of Delta Gear's building in Livonia, MI.

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Delta Gear's newly remodeled lobby.

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(formerly Tifco Gage & Gear), has operated as a truly world-class aerospace gear facility, according to Sakuta.

"We specialize in complex turbine engine gearing, helicopter drive system gearing, actuation gearing and landing gear components," Barlow says.

Unlike most other suppliers, Delta prides itself on trying to keep as much of the manufacturing operation in-house.

"We do outsource the heat treat, plating and shot peen processes, but

we do not outsource super-finishing," Barlow says. "The super-finishing on our pump gears for example is done in-house. We developed our own proprietary process — our secret manufacturing methodology if you will — and we have two machines that do that." "Pump gears are typically made out of very exotic materials — CPM-10V and some other new materials that are out now — and that's one of our niches," Barlow says. "That's one of the things that differentiates us. A lot of compa-

nies make pump gears, but we make very complex, very difficult, pain-in-the-neck pump gears, and we do it day in and day out and we do it very successfully.

Another complex machining process that Delta specializes in is aerospace spiral bevel gears. Sister plant Delta Research — managed by Bob Sakuta's son-in-law Tony Werschky, vice president of operations — manufactures turbine engine and helicopter drive system spiral bevel gears utilizing their new Klingelberg closed loop system.

"Typically, if customers have a new gear or gearbox development program, they're coming to us," Barlow says. "Why? Because we're the best."

A Punch to the Face

The general atmosphere at Delta doesn't quite feel like a leisurely fishing trip, but it's in the same body of water. It all starts with Bob and Scott, the father and son who bonded years ago with fishing reels in their hands and have tried to bring that same, warm, welcoming way of life from the lake to the gear shop.

It's the reason for Sakuta's aquarium. "[The fish paintings by Meltzoff and William Lawrence] can spool some of the great conversations I have with people in my office," Scott Sakuta says. "People will say, 'You have fish on the wall, do you like beer?'"

Sakuta recalls a story, one that he regales visitors with as they sit in his of-

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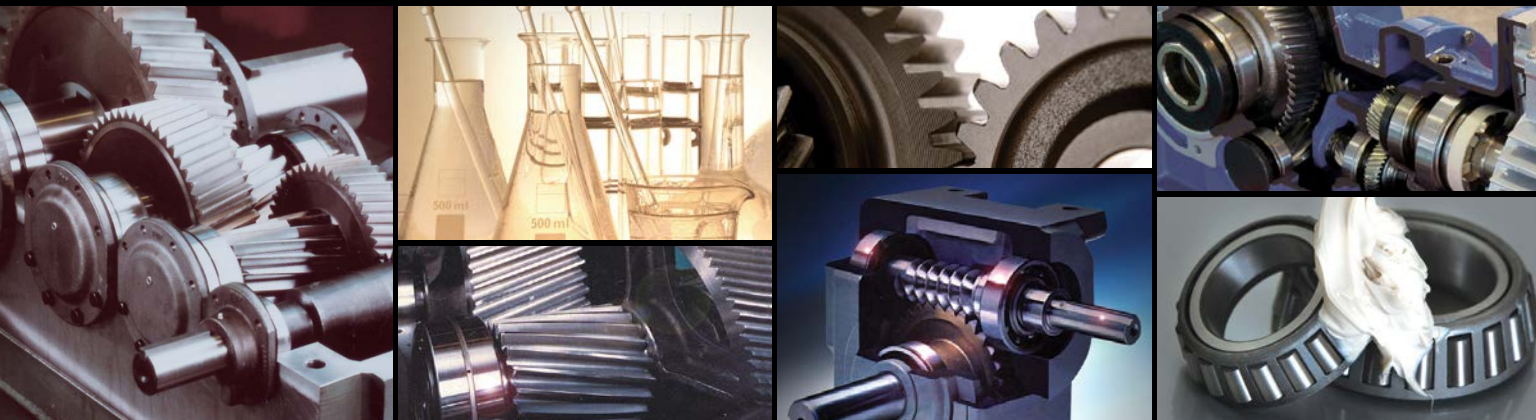
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fice while they're surrounded by creatures staring back at them with adipose eyelids.

"I was tarpon fishing with my dad and we had some of his business associates with us and an employee with Delta Research," he says. "My dad had caught a tarpon and we had fought the fish and got it into the boat. I'm generally the [person] to handle the fish because I've been around big fish more than others.

"The fish was around 150 pounds and I got it to the side of the boat,

grabbed ahold of its jaw and took the hook out — and this is all at night and everyone is very excited because it's a pretty big accomplishment to catch one of these fish and release it. When you catch a fish, you want to revive the fish because the fish gets tired and you want to make sure a shark doesn't eat it or something.

"So I'm trying to hold the fish and revive it so it can be released safely. The fish started to move and point its head towards me. I'm leaning over the boat,

and the fish jumped and hit me right in the face — it was like being punched by a 150-pound punch. I saw stars and I almost went over the side of the boat.

"When I came back to work I had a big black eye and a big scratch, because this tarpon had just punched me in the face."

In some sort of masochistic tribute, a stormy blue painting of a large tarpon propelling forcefully out of the water like a torpedo with gills hangs in Sakuta's office along with the rest of his collection — a stinging reminder to what can happen if you get too complacent.

"Right now, Delta is positioning itself," Barlow says. "We're in a very good position with the depth of talent that we have — whether we're talking about manufacturing, engineering, program management, sales, and so forth. We have a lot of strengths for an aerospace gear manufacturing company. The owners have strategic plans to strengthen our position even further. Competitors would be hard-pressed to match what we have going on right now."

One of the other unique attributes and undeniable strengths of Delta is that it exists as a trichotomy: three separate, individually operated companies — Delta Gear, Delta Research

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and Delta Inspection — with distinct objectives and endgames and minimal operational overlap.

Delta Gear and Delta Inspection operate out of the same, newer facility in Livonia, while Delta Research exists in the original building founded by Scott Sakuta's grandfather Alex in 1952.

"Delta Research is primarily into automotive, gearboxes, agricultural, heavy duty equipment, machining and industrial — anything that needs to be machined," Scott Sakuta says. "They're doing a lot of quick prototyping for car companies. The majority of their business is automotive, or anything that would not fly.

"Delta Gear spawned off from the aerospace company that was Tifco. Our main, core business is aircraft components or aircraft hydraulic systems or fuel systems.

"And Delta Inspection is a gear-orientated, third party inspection company. Our main focus there is the inspection, sorting and qualifying of the gears that are produced by outside customers. I think that's pretty unique. Whereas most third party inspections just have CMMs, where they would just be checking dimensions with a CMM, we actually scan the gear teeth on gear machines. We're a little bit of a hybrid."

According to Barlow, Delta has seven CMM machines that come in varying sizes and dimensions. That falls in line with Delta's modus operandi of staying up-to-date with the market's latest technology.

"It's another differentiator," Barlow says. "We have two, newer Kapp grinders with a third one on the way; new Reishauer gear grinders; the new Kapp KX 500 Flex gear grinder; the new Klingelberg bevel grinder, a Viper 500 gear grinder, which is one of the first

in the country. We like to be the first in the industry to have the latest and best technology."

Breaking the Barrier

Barlow likes to compare Delta's collection of "best in class" gear grinders to owning high-end sports cars like Lamborghini and Ferrari. It's no secret: Delta's mission is to have the most impressive garage on the block.

"We're kind of the leader in new technology," Scott Sakuta says. "We're



Delta Gear's shop floor.



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pretty active in what the next equipment feature we'll include, whether that's stock removal features or the ability to do more complex gear geometries on the equipment. So I think our investment in the new gear equipment in the industry sets us apart from some competition.

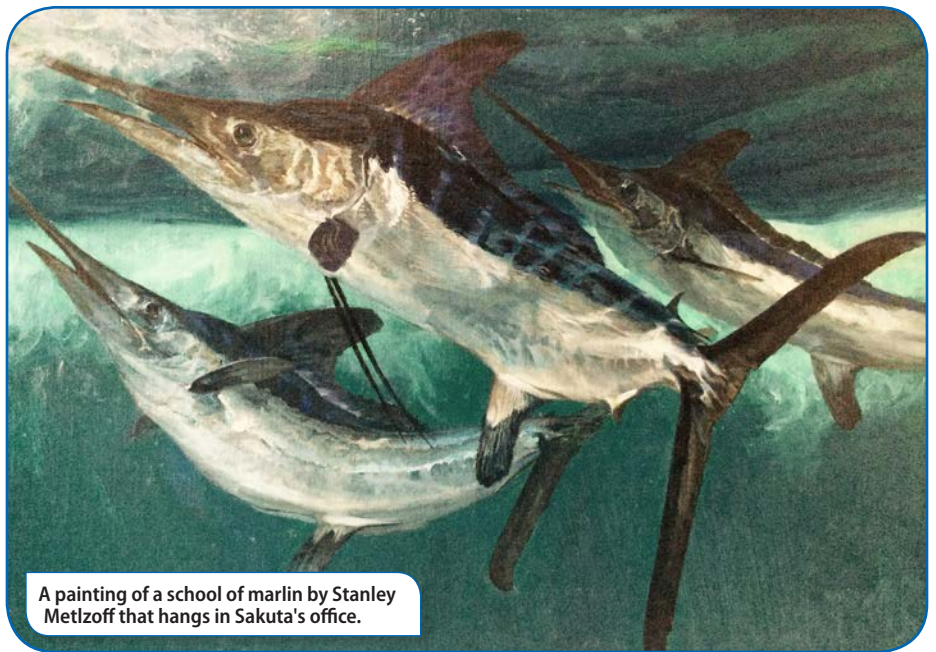
"And that's difficult in aerospace because people say, 'That's how it was done in the '50s and that's how we want it done. We're trying to break that barrier, coming up with more precise, quicker ways to produce parts than the way they did years and years ago.'"

Delta sets aside a large percentage of their annual revenue to purchase new equipment every year, and that allows the company to always be up-to-date with the best machinery on the market. Most of the machines on Delta's floor are only a few years old or newer.

"The thing that makes Delta shine above the others is they're on top of the latest and greatest technology," Rouillard says. "They're on the cutting edge of everything. To quantify that, they have 11 CNC grinders in this company, all less than five years old.

"When Bob buys a machine, he buys every single option available just in case he might need it—which is extremely intelligent to do that. Past companies I've worked at do not do that. They buy the machine and then don't tool it up right, and then you don't get your bang for your buck."

Adds Barlow: "It's clearly evident that we have our act together," he says. "Every part—not just a couple parts—is handled extremely well. There are special or custom foam holders for every



A painting of a school of marlin by Stanley Metzliff that hangs in Sakuta's office.

part so nothing can touch. We don't have problems with nicks or chips or dings.

"We just don't have that issue at Delta because of the care we put into it."

As much as Delta puts the emphasis on its machines, that devote care and attention of the little details begins and ends with Delta's employees

"Our employees are what set us apart," Barlow says. "From the time you meet the people in the office and the management team and the employees on the shop floor—our employees on the shop floor say hello; they reach out to you; they talk to you; they're interested in showing visitors and customers what they're doing. They're interested in it because they care.

"Attitude is everything. When you walk in and talk to people at Delta Gear you can feel the difference. The morale here is very positive and it's a can-do attitude from everyone from the janitor to the CEO."

Of course, that brings us back to the Sakutas—and, conversely, fishing, which seems to tie this whole story together like a long piece of monofilament fishing line.

"Being in Michigan and surrounded by the

Great Lakes, some of my earliest memories with my dad are of fishing," Scott Sakuta says. "We fished for years and years together and we fished the lakes and rivers of Michigan. Probably right around 2003 we started to investigate the warmer, more exotic climate fish."

Sakuta said he doesn't fish as much as he would like these days because "he's been so busy working and growing [Delta]," but he still makes a few trips a year—oftentimes with fellow employees.

His favorite thing to catch: good times.

"You know, I can't say I have a favorite fish," he said. "I just think the memories of being there with my dad and—we've taken employees on trips to foreign countries and fished for exotic fish—it's just about being there with people.

"I don't have a favorite. They're all great. It's just about who I was with and how it was done."

And if Delta had a catchphrase—a clever little saying displayed above the entranceway to their facility—that would probably be it.

But they don't need one. They have the lobby, and Sakuta's under-the-sea office, and that giant, wall-to-wall window that proudly displays the shop floor—and to understand the difference at Delta, all you need to do is look through it.

Just don't tap the glass. **PTE**



Delta Gear's Reishauer RZ 260 gear grinding machine.