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Charles V. Tines / The Detroit News

Dave Archer founded Archetype Joint earlier this year to validate and test the nuts, bolts and other structures that hold things together.

Local spotlight

Business focuses on nuts and bolts

Orion Township's Archetype Joint tests fasteners to avoid warranty costs, recalls.

By Neal Haldane / Special to The Detroit News

ORION TOWNSHIP -- Dave Archer knows few people find fasteners fascinating.

"All a joint can do is dissatisfy people," said Archer, a design and manufacturing engineer who founded Archetype Joint earlier this year to validate and test the nuts, bolts and other structures that hold things together. "They are not going to make you love a person's product. If you designed a great joint that doesn't fall apart, no one will say you did a good job."

But if a joint fails, people notice, costs increase, and companies need solutions and Archer said that's where Archetype Joint fits in.

"These nuts and bolts and joints are one of the key factors in the product and cost of recalls," said Archer, who added that up to 70 percent of warranty costs and 20 percent of product recalls are related to fasteners and joint design. "Products tend to fail at a joint between two pieces rather than the piece itself."

Before forming Archetype Joint, Archer consulted with a wide range of clients, including Ford, Whirlpool, Motorola, Boeing and Textron and worked at Munro & Associates, a process consulting firm in Troy that maintains an association with Archetype for assistance with fastening issues.

Corporate downsizing has left many manufacturers without the ability to conduct this type of work, said Al McCarty of Munro & Associates.

"Many of the larger companies have lost the little buckets of expertise necessary to do some of these things," McCarty said. "Now, they need to buy this expertise as they need it. They can't afford to have a fastening expert on staff all year."

Many manufacturers also have farmed this work out to suppliers that may need this expertise to keep costs down and improve quality, said Erich Merkle, director of forecasting for IRN, a consulting firm serving auto suppliers.

"The best way you can make an impact is to figure out ways to reduce warranty costs," Merkle said. "A lot of suppliers are being asked to share the burden of warranty costs, which is a greater risk for the supply base. They are looking for ways to reduce that risk."

In addition to testing junctions, Archetype Joint also can help clients develop and design fasteners for use in automotive, aerospace and other applications. Archer said the fact that Archetype is independent and not connected with a fastener manufacturer or supplier of test or installations equipment eliminates any potential conflict of interest.

And with that focus, it often makes sense to outsource this type of work, said Rodolfo Limas, a product engineer with Thyssen Krupp Budd in Troy, who has used Archetype before.

"We don't do it all the time as he would," Limas said. "We have those capabilities, but they are typically doing other validation work. Having someone who specializes, we are able to get more one-on-one consultation and reports out of it."

In the near future, Archer plans to raise awareness of his firm and how Archetype Joint can improve the quality of a wide range of nuts and bolts products.

"Let your guys concentrate on the features that make your product stand out," he said. "We'll concentrate on the dull stuff."

Neal Haldane is a Metro Detroit freelance writer.

Archetype Joint

What: Joint design, testing and validation

Founded: April

Headquarters: Orion Township

Employees: Three

Information:

www.archetypejoint.com