The All-New Tacoma Isn’t a Miracle, It Just Seems Like One

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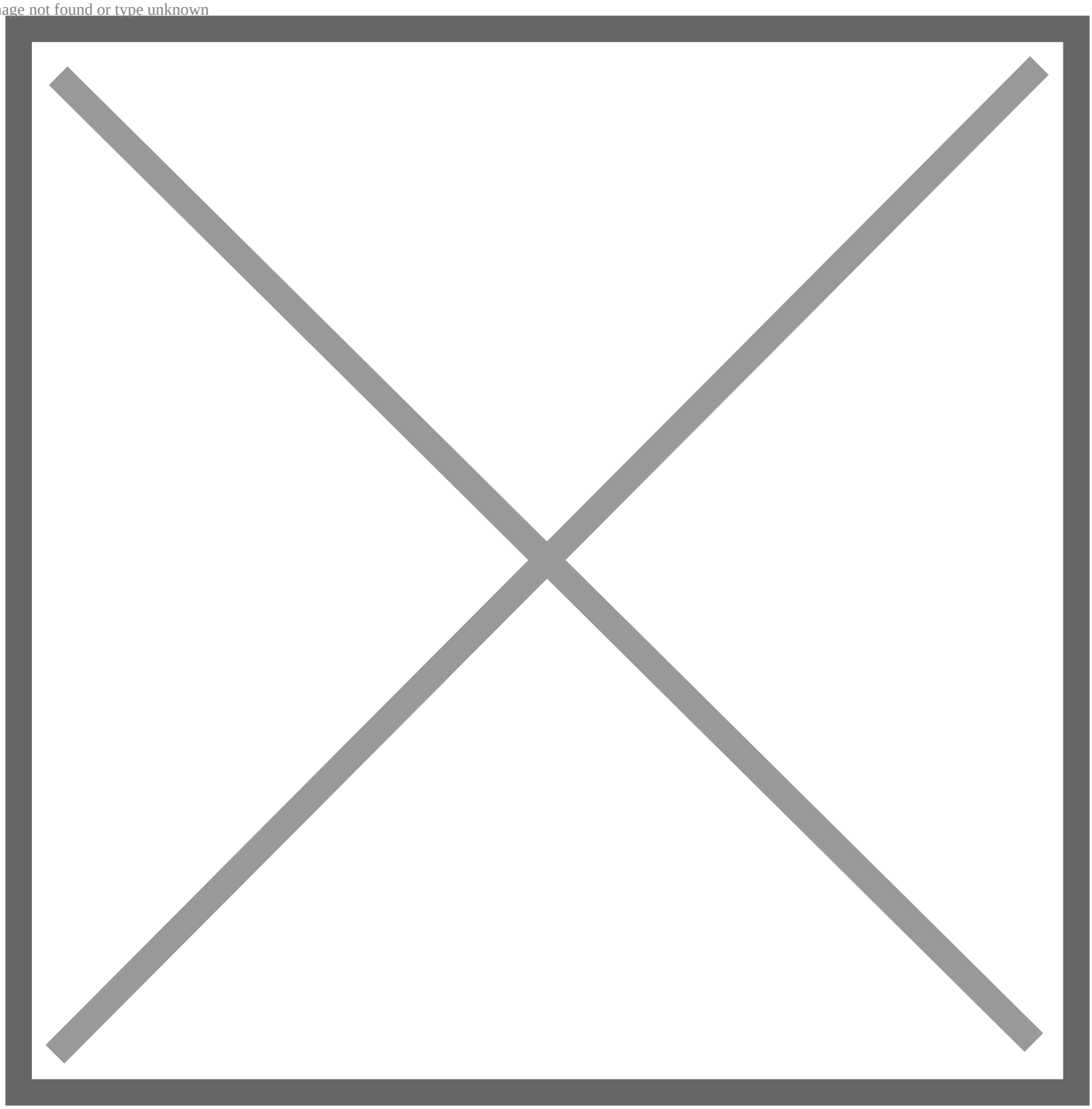

The 2024 Tacoma didn’t arrive via miracle. But it’s OK if you might think that.

A global pandemic didn't make development easy. Monumental expectations and the largest prototype build TMNA R&D has ever taken on presented challenges that needed impeccable judgment to solve.

But did it take a miracle to navigate these choppy waters? Nope. It was something more fundamental.

"It was commitment," says Tacoma Chief Engineer Sheldon Brown. "It was perseverance and ingenuity. And a little bit of brute force."

And last week, after more than four years of development, Brown and his incredible team showed off the result: a revolutionary mid-size truck that has both highway travelers and off-road enthusiasts salivating.

North American Structural Reform Takes Root

Tacoma's stage was set by the successful development of the current generation Tundra.

The difference between that Tundra and previous vehicles developed at TMNA R&D was North American Structural Reform (NASR) — the idea that TMNA would have more control over the development of vehicles for the North American market.

"The purpose of NASR is to leverage an agile TMNA to quickly respond to customer needs while improving our capability from the planning to development stages," says Shinichi Yasui, executive vice president of TMNA R&D and chief technology officer.

In short, Toyota Motor Corporation (TMC) recognized that decisions for primarily North American vehicles — like Tacoma and Tundra — should be made primarily in North America. Major decisions that used to come from Japan now come from TMNA R&D headquarters in York Township, Michigan, and TMNA headquarters in Plano, Texas.

And if Tundra was proof of concept, Tacoma was the flex. The difference between "We think we can do this" and "Look what we can do."

"Tundra was a big step and Tacoma was the next big step," Brown says. "NASR is all about us taking the reins for Tacoma, leading the development, leading everything from the initial project planning to the cost analysis to the development of the final product. We own this product."

Meeting the Challenge

Chief engineer is a job that comes with great responsibility — and great pressure — especially for a Tacoma that in so many ways defines Toyota's success in North America. But Brown — in his first chief engineer job for a major model change — and his entire team met the pressure head on.

"You realize just what a big vehicle it is and how important it is to the market," Brown says. "So, it's an incredible honor to be chief engineer and oversee this amazing team — which is truly responsible for the success of this truck. But it's also a bit of a daunting task. Some nights you're sitting up going 'man, we cannot screw this up.'"

Brown and the Z team (the R&D moniker given to vehicle development teams) didn't screw this up. From working with Calty on an eye-catching and purposeful design, to the removable JBL® speaker, to the innovative, first of its kind IsoDynamic Performance seat standard on Tacoma TRD Pro, this Tacoma will change off-roading and become a lifestyle definer for its customers.

Development ramped up in March 2020, the exact time COVID forced the world to shut down. Luckily, TMNA R&D had already begun implementing measures for engineers to work from home. But while they would normally hammer out the details in conference rooms face-to-face, the minds behind the all-new Tacoma were creating America's favorite mid-size truck through conference calls taken from home offices. But no cause for concern there.

"It's amazing how much all of this was done from home," says Tina Brinkel, senior program manager. "We did all of the engineering planning remotely. But we were able to pivot and modify our processes to design and develop this truck. With hurdles that large, you begin to see the resiliency of your teammates. We were able to get it done to our standard."

The Biggest Prototype Build Ever Seen

Like her teammates, Brinkel wore many hats on the Tacoma project. And that includes overseeing preparation for the Tacoma prototype build.

For four months in late 2022 and early 2023, 473 employees from TMNA R&D and Toyota's manufacturing plants in Kentucky, Texas, Guanajuato and Baja California congregated at TMNA R&D headquarters to build 401 Tacoma prototypes for testing, the most units ever for a TMNA R&D prototype build.

"The idea behind our One Truck Team is that we are each responsible to one another to ensure the successful execution of the project," Brown says. "Our responsibilities don't begin and end with tightly drawn boundaries. We recognize that we are independent and must overlap."

That philosophy showed through in this build. Employees from the Mexico plants observed intently, becoming subject matter experts on the assembly process.

"The build was very successful," says Randy Badia, executive program manager. "We were able to keep on schedule. We had to plan for those unique challenges, but we still had to continue the build and keep the vehicles moving down the line to get it out to the end user to be able to do those evaluations. That's the job we had to do for our customers."

It's those customers that will ultimately decide the success of the all-new Tacoma. But it's a good bet that this truck will be warmly received by the masses.

One case study comes from within. Ko Yanai is an executive program manager on assignment at TMNA R&D from TMC. Like Brinkel and Badia, he worked on many aspects of Tacoma, from cost planning to design to the marketing plan. Along the way, he was converted into a Tacoma fan.

"This truck is exciting," Yanai says. "I want to use it for camping, off roading and fishing. And it looks great, too. I love this Tacoma."

Toyota is betting customers will, too.