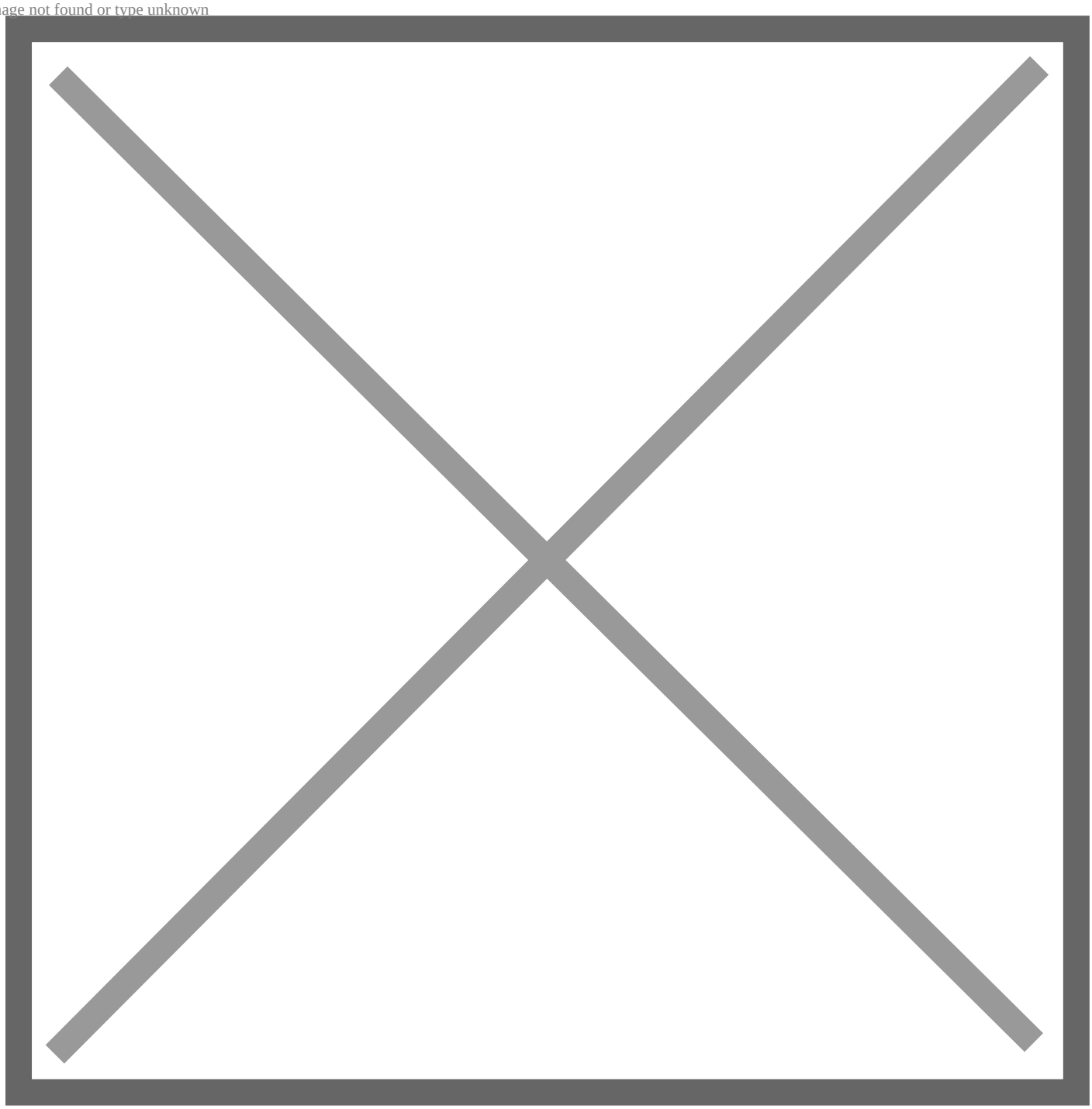
The Truck Whisperer

September 06, 2016

Image not found or type unknown



At the Toyota Technical Center in York Township, Mich., Mike Sweers serves as the chief engineer for both the Tundra and Tacoma. Take a ride to Southeastern Michigan to find out a little more about the life of a chief engineer and what goes into making Toyota trucks the toughest on the road.

Exactly what do you do?
A chief engineer's responsibility is really the vehicle from the start to the finish of its life cycle. What I mean by that is as we start with the vehicle concept, looking at what the customer wants, needs, desires, and how that vehicle fits into their daily life and how we – as Akio Toyoda would say – make our customer smile. So that involves collecting data from Product Planning, Marketing and other groups.

We meet with evaluation groups so we can understand how a customer would use the vehicle in the segment. Since I'm in charge of trucks, it's how would a full-sized truck customer use this truck instead of a compact truck customer. What do they do with them? From a daily driver, to weekends, to the guy who goes out and races his truck in the desert or rock climbs. How do we fit each one of those customers' needs? Or do we pick a specific portion of that segment and focus our product on them?

From there we have to work out the investment, figure out the business case for the vehicle and get it approved by the board of directors.
So before we can ever start designing the vehicle, we go through all these steps.

So when it starts, you have nothing really?
It depends. If it's a brand new concept vehicle or a brand new segment, it's different. We have to understand what we're trying to sell. Trucks are a very well established segment. And how you treat that segment or how you break into that segment may be completely different. For Tundra, it's more of what we call a niche truck. The opposite of that is Tacoma. We are the leader in that segment. And how we approach each vehicle is a little different. We can be a little polarizing, a little daring on Tundra because it's a niche vehicle. With Tacoma, we need to make sure we are satisfying that segment so we remain the leader in that segment itself. So we're looking at the demographics, making sure we're meeting our customers' needs. For me, I'm a truck guy, so I have a personal interest in it because I always drive trucks. So it's very important to me that I have a product that we're putting out that I'm excited to drive as well.

So what is the difference between a Tundra customer and an F-150 customer?
A Tundra customer is really buying the truck because they know that truck is going to last. It has the lowest cost of ownership. It has the highest residual value in the market. And that supports the fact that the customer will get a high-quality product. In the full-sized segment, the number one reason is capability, "What can I tow? What can I haul?" But it's also kind of a reflection of the owner itself. Tundra owners are saying, "I bought the best. I can do whatever my neighbor's F-150 can do, but I know it's going to last forever."

Do sales factor into how you approach these things?
Sales factor in all the time. At the end of the day, we have to sell our product. We're going up against the best-selling vehicle in the country, but how we do it is with QDR, styling, by making sure we're meeting our customers' requirements for wants needs and desire.

What is the design process like?
As we move into design, we get into daily activities with the engineers. How are we going to put the vehicle together? What combinations go together? We work with TEMA production engineering. We work with purchasing every day, cost planning every day. We need to make sure we're hitting design targets. And we're still working with styling, and the goal is that the initial sketch everyone agreed to is what we want to hit. So trying to find new ways of manufacturing and making sure we can still build the product.

Then we go into tooling. Once we move into tooling, we go to the plant and ask if they can build it. The last thing we want to do is give them something that is not easily built or can't be built repeatedly. That affects our quality. Or a big area we have to be cautious of, especially with the plants in Baja and Texas that are running full capacity, is that we're not creating ergonomic issues for the line operator. We don't want anyone to get hurt putting our vehicles together.

It’s a big team effort. But if we consider ourselves an orchestra, my role is the conductor: getting people from all parts of the company to talk together. Everybody does their job, but I need to make sure everyone is doing their job with consideration of everyone else’s job.

What’s important to doing your job well?

To me, the key to being a good chief engineer is to be a customer. So if I have to change the oil, can I get to the oil filter without running oil all over the place? We had a van when my kids were young and I had to make everyone go inside when I’d change the oil on it because it was a 90-minute affair and an hour of that was cleaning up the oil. It would infuriate me, and that’s something I think about. Even when we go down to the plant, one thing I tell our engineers is, “If you wouldn’t want to do that job for eight hours a day, then don’t ask somebody else to do that job.”