The All-New 2024 Toyota Tacoma - A Chat with Jess Buck, Senior Vehicle Performance Development Engineer

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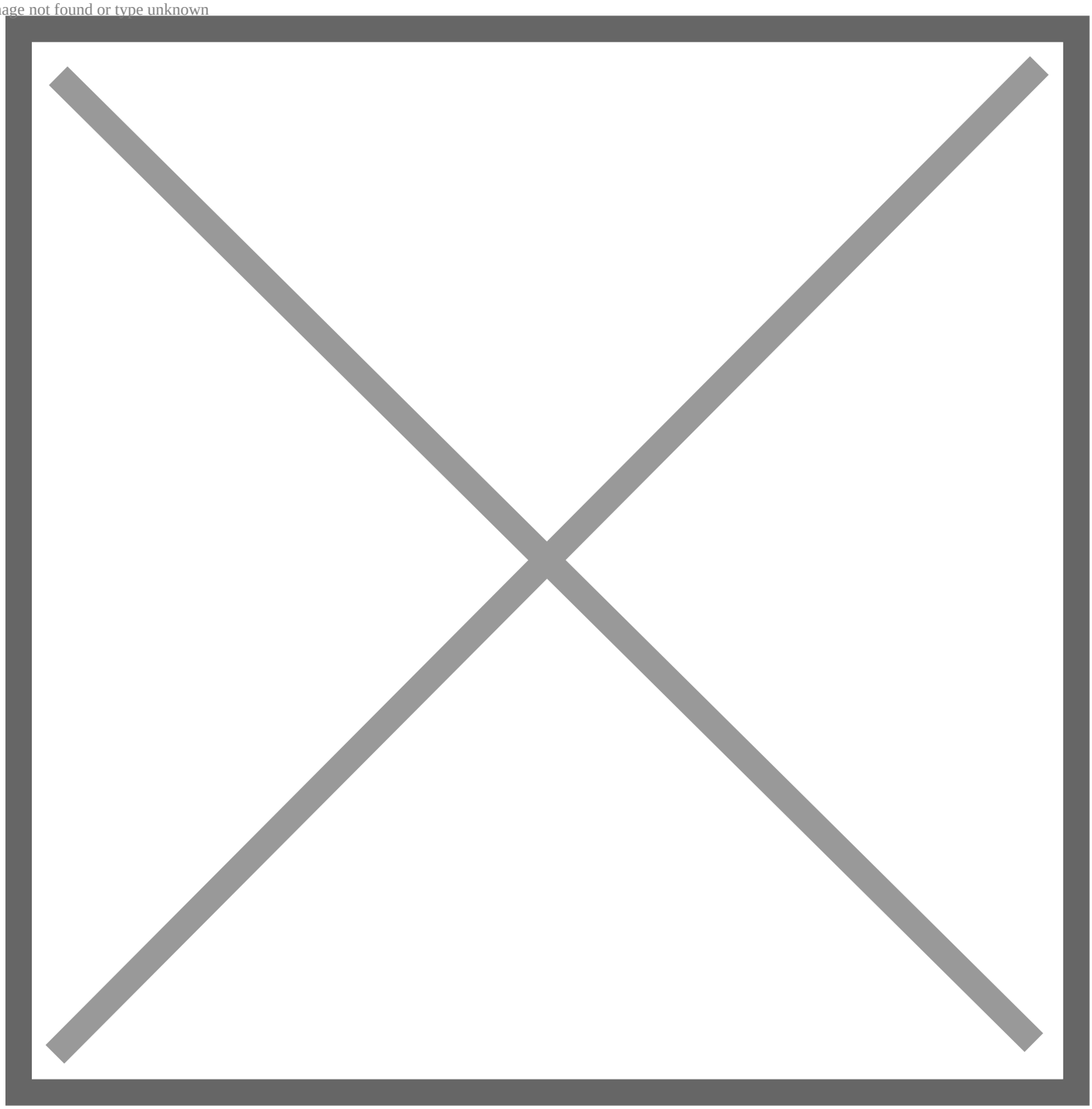

How long have you been with Toyota? Have you always been in this particular role?

This July, I will have been with Toyota for eight years! I haven't always been in this role and the journey to it was a bit unusual. In 2015, I started working in Toyota Motor North America, Research and Development's (TMNA R&D) crash safety department, with a focus on advanced development (preparing for new evaluation methods and contributing to industry working groups). The work was fascinating and rewarding, but after laying my projects out visually and considering my career goals, I felt it would be valuable to get experience in other parts of TMNA R&D. I sought out opportunities that aligned with my goals, moving to paint design in 2019, and to ride and handling in 2020.

How would you describe your role? What are your responsibilities?

Amazing, that's how I'd describe it! My responsibility has been to develop the dynamic performance of the all-new Tacoma — specifically how comfortable the ride is, and how well it handles in both standard and off-road driving scenes. With strong support from our Performance, Analysis and Evaluation (PAE) team, I conducted spring and absorber tunings for the base grades (SR/SR5 with rear leaf spring suspension, SR/SR5 with rear coil spring suspension) and the gas Sport grade. I also lead our simulation activities, confirming all possible build conditions in order to meet our routine and emergency handling performance targets. With extensive track time and the opportunities to take this truck off-road, I have a nice balance of vehicle and office seat time!

Tell us about any projects you've been working on recently.

The all-new Tacoma, of course! The current generation is a hit with customers for several reasons, including the reliability, off-road capability, and the sleek body styling. And we've improved on all those things. One of the neat things about this development and about the resulting product, is that there's intentional, clear performance variations based on the grade. With different technology approaches and tuning goals, the Tacoma grades are part of a family – you can tell they're closely related, but each has a unique personality. Here's my brief take on the family dynamic (pun intended):

- The base grades are great, reliable trucks with improved ride and handling.
- The Sport grade is specifically tuned to bring a smile to the drivers' faces. With the stiff suspension, you feel connected to the road and confident in the truck.
- The Off-Road Package (ORP) will comfortably get you over or through various terrains, and the on-road comfort is plush.
- The Limited grade is the best of both worlds, with the adaptive variable suspension allowing you to get the benefits of the Sport grade or the benefits of a plush ride with the flip of a switch.

How would you say your role produces happiness or helps your colleagues and/or customers?

One of the great things about my work is that customers experience the results every time they drive their vehicle. I believe the all-new Tacoma has a grade for everyone – when customers find the Tacoma that best aligns with their needs and driving styles, I think they will thoroughly enjoy the dynamic experience.

What have you learned since starting at Toyota? How have you evolved as an employee and as a person?

In eight years with Toyota, I've developed my technical understanding of our design and evaluation processes, and learned how people are integral to bringing everything together. I've grown immensely through my volunteering activities with Women Influencing and Impacting Toyota (WIIT, an employee resource group), serving as a grief facilitator for a local healing center, and by reflecting on my experiences.

Here are a few key things I've learned as a Toyota employee:

- Ask questions. It’s valuable for negotiations to understand what the other party wants or needs. It’s also valuable to learn as much as you can from subject matter experts.
- Speak confidently on your work and projects. If it’s your work, you are the expert on it.
- Identify your core values and goals so you have them as your North Star during all your decision-making.
- Get active outside of your specific role and develop a broad network.

What do you like to do outside of work? Do you have any interesting hobbies or passions?

I recently built a house and have several projects there I’ll be spending the summer working on, most of them involving yardwork: creating a fun, safe outdoor space for my dog, Artemis, building and planting a garden, and trying to grow an acre of alternative groundcovers to reduce my water consumption and yard maintenance needs.

With my position, I’ve been able to develop my driving skills on and off-road, and I really enjoy any opportunity I get to practice and learn more in those realms. I’ve started getting involved with the TMNA R&D Motorsports team to continue to learn more about racing, vehicle maintenance, and to get some more seat time!

I have two nephews and a niece that I love spending time with. My oldest nephew is obsessed with dinosaurs, so I took him to U of M’s Museum of Natural History last fall. This summer, I hope to host them in Ypsilanti and continue to get them excited about learning!

It’s been a while since I’ve gone on an international vacation, but I hope to do more traveling this and next year. My favorite trip thus far was to Iceland — it’s a beautiful, but very cold place to visit in December!

What do you love about working for Toyota?

Toyota provides so many opportunities for those who seek them out. I’ve been able to do lateral moves and to find a position that I deeply enjoy, while developing valuable skills along the way. Additionally, the team I’m currently on has the best culture of inclusivity. Knowing that the company is always working to improve diversity, equity, and inclusion for all is encouraging and gives me confidence in our future.