Toyota’s NACS Migration is About More than Just the Charging Plug

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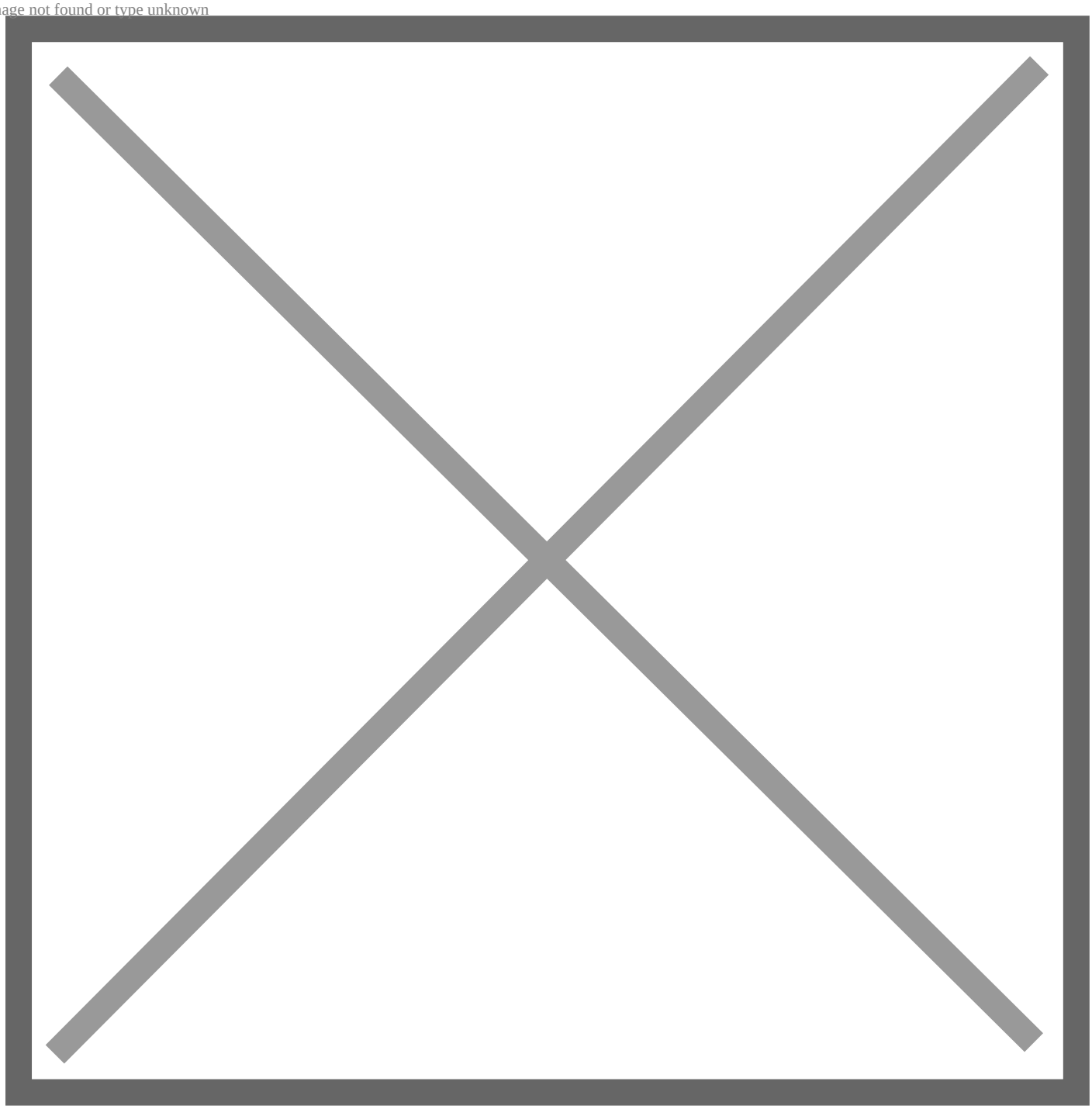
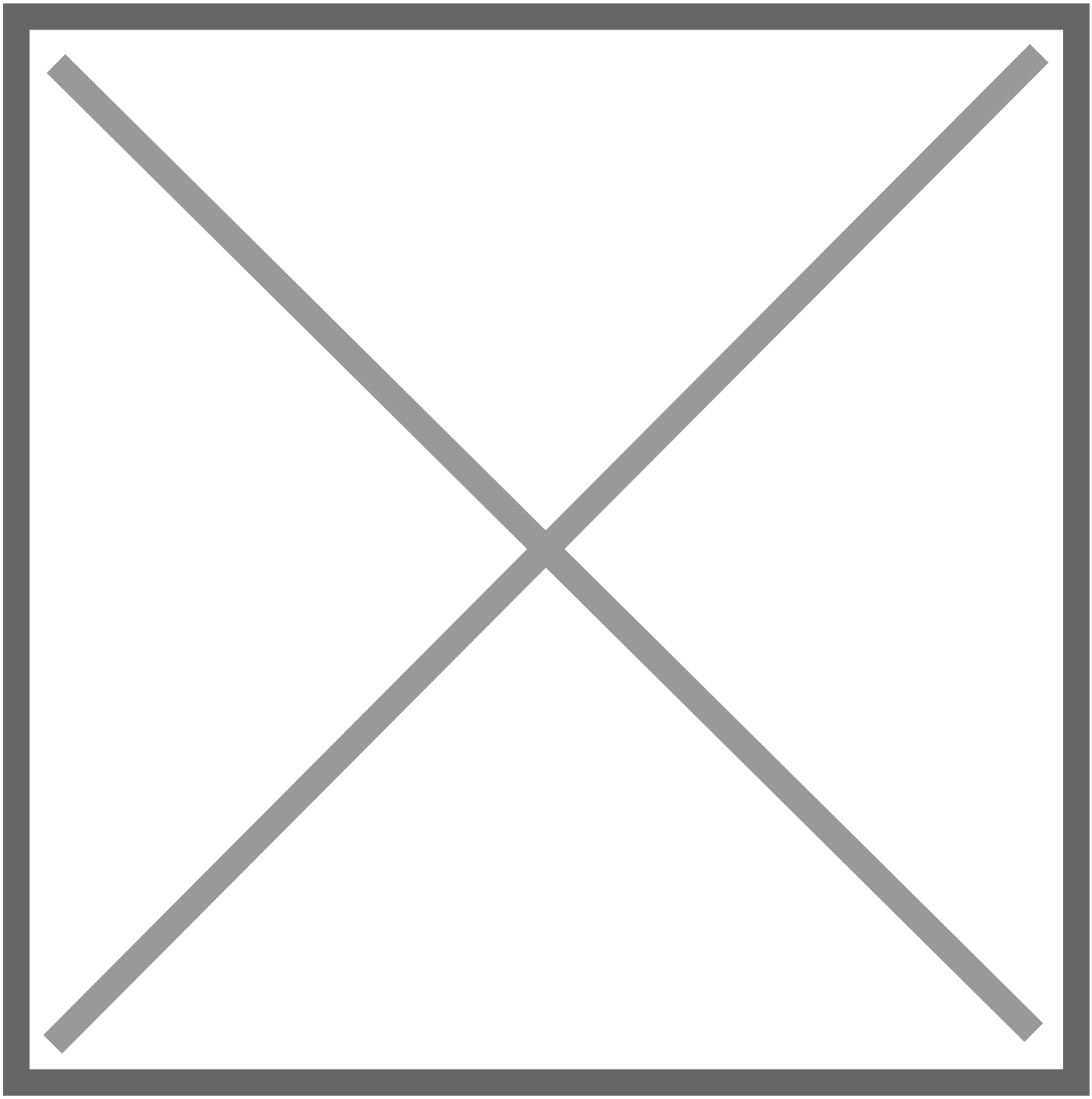


Toyota always strives to focus on its customers’ voice and anticipate their needs.

So, when Toyota caught wind of an industry-wide movement to adopt a quickly proliferating electric vehicle charging standard called the North American Charging System (NACS), it triggered a fast-paced pivot to deliver accessibility to this NACS charging ecosystem to benefit its customers.

This is the story of how that happened.

NACS became an official Society of Automotive Engineers charging standard in 2024. In an effort to expedite the shift, Toyota could have served NACS customers with off-the-shelf equipment already in the market. Instead, it took the opportunity to engineer equipment that met Toyota’s standards for quality, durability and reliability.



The 2026 Lexus RZ is the first Lexus BEV to come standard with a NACS inlet.

As a result, owners of the 2026 Toyota bZ and 2023-25 Toyota bZ4X, as well as the 2023-26 Lexus RZ, are among the first Toyota and Lexus drivers to reap the benefits of engineers' efforts, gaining access to the Tesla Supercharger DC fast charger network. This access to more than 27,500 Tesla Superchargers more than doubles the number of public DC fast charging locations for Toyota and Lexus BEV drivers.

The significant updates that allowed Toyota and Lexus to take advantage of NACS took an all-hands effort from Powertrain Electrification, the Advanced Product Planning Office, Service Parts and Accessories, Electric Vehicle Charging Solutions, R&D, and Quality, among others.

“This engineering team was the first in Toyota Motor North America to ever be involved in this kind of part development,” said Haley Antoine, senior engineer in Toyota’s Michigan-based Advanced Product Planning Office. “We had to build a consensus among all the stakeholders in the company, from Styling to Purchasing to Enterprise Strategy & Solutions.”

For more information about NACS Migration, please watch the video below.

Instead of using charging products already on the market, the TMNA teams chose to co-develop with their supplier new Toyota- and Lexus-exclusive parts to bring the equipment to Toyota’s exacting standards. Toyota engineers designed and developed adapter plugs and dual-voltage home chargers, tested the parts to ensure they performed to Toyota standards, solved manufacturing issues and worked within the strict boundaries of industry-best practices and regulations.

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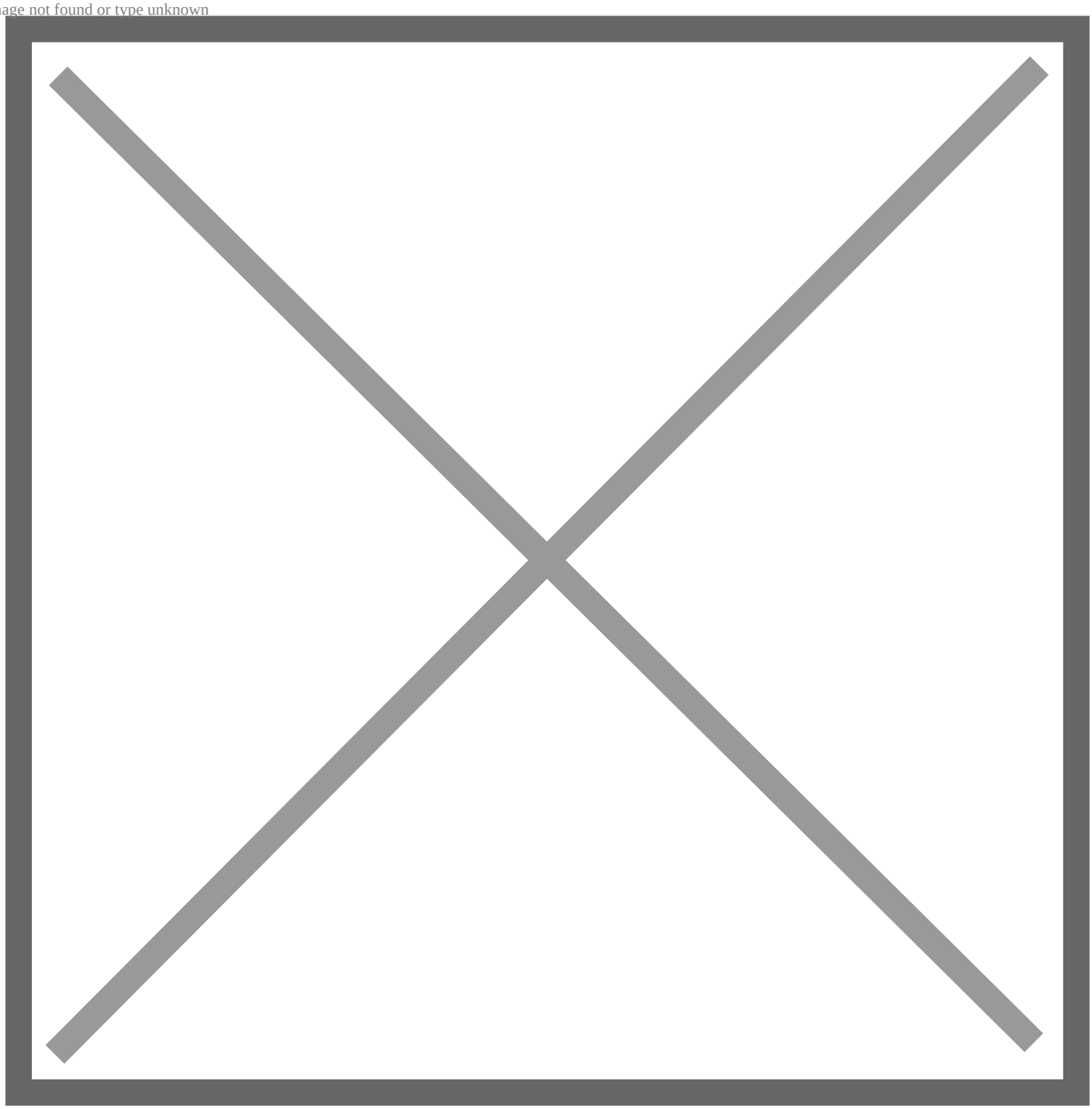

The 2026 Toyota and Lexus BEV models feature complimentary charging adapters (one set per VIN), allowing them to charge at DC fast charge at both CCS and NACS stations.

Toyota engineers wanted to ensure the hardware could survive the rigors of the real world, so the teams created their own testing criteria, including operating in extreme temperatures and climate conditions and edge cases like a person tripping over a plugged-in charging cable or a driver running over the adapter with a two-ton battery electric vehicle (BEV). Engineers even spilled hazardous chemicals on the plug and adapter, dropped charging

adapter units on a concrete floor while frozen, and cycled adapters thousands of times after being dropped in muddy saltwater.

“Our adapters have really been put through their paces,” said Dan Cressman, senior powertrain electrification engineer at Toyota R&D. “We’re confident our customers are going to get world-class equipment.”

Outside of the quality and construction itself, Toyota also designed its Combined Charging System-to-NACS adapter with an all-new, patent-pending interlocking mechanism specifically designed to ensure a strong connection for Toyota and Lexus BEVs, the adapter, and a charger.

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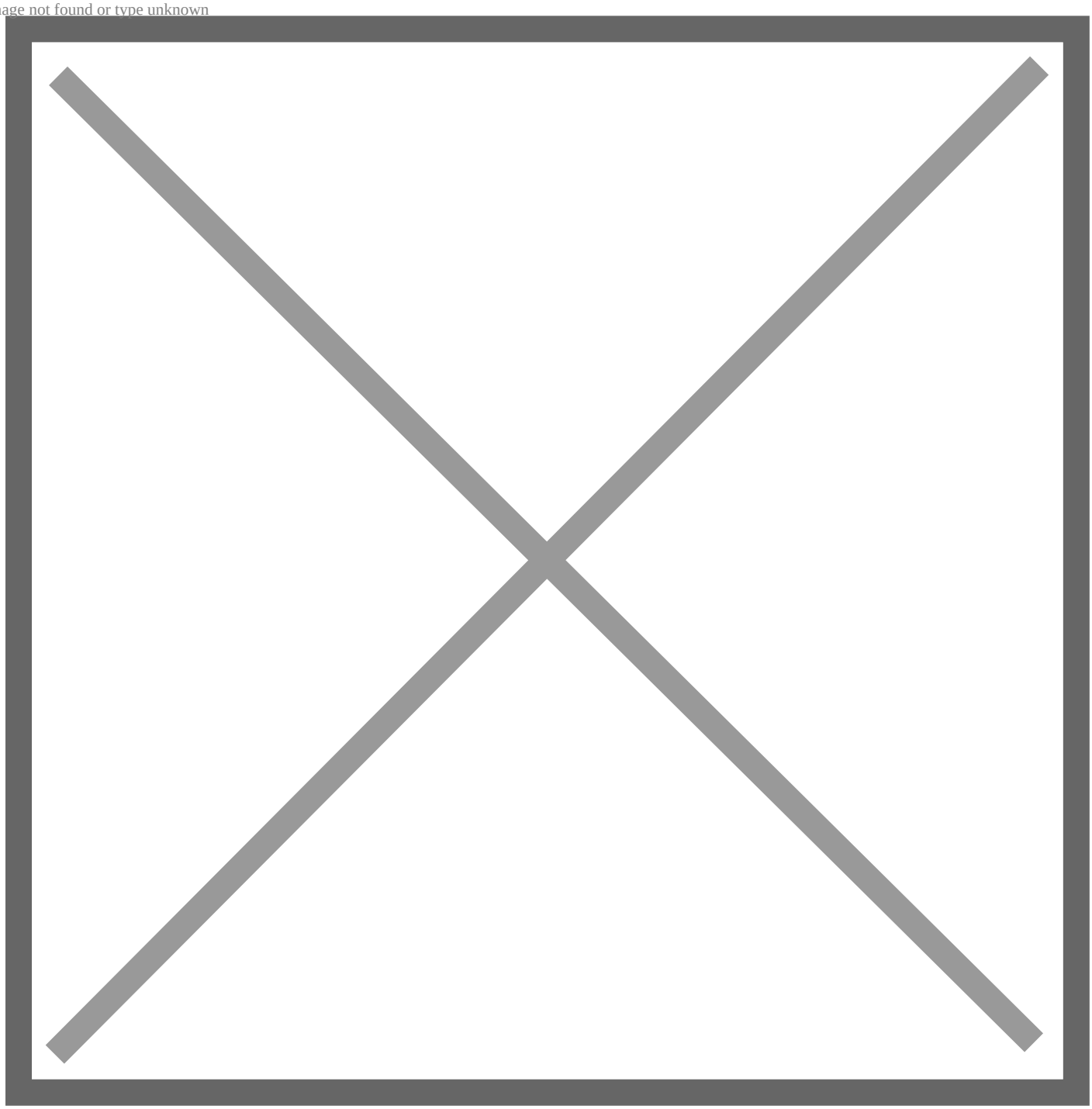

Toyota’s new dual-voltage charging cable, designed by Calty Design Research, is finished in Toyota’s Windchill Pearl color.

Separately, for the new dual-voltage charging cord that comes with every 2026 Toyota or Lexus BEV, teams once again decided on a different approach. Rather than using an off-the-shelf part, the engineers went a step further, commissioning Toyota’s Calty design studio to create unique designs for Toyota and Lexus customers.

The Toyota unit shimmers in Windchill Pearl; the Lexus dual-voltage charger comes in a distinctive deep blue with a bronze-finished herringbone overlay.

“We’re striving to continuously improve our customers’ charging experience,” said Charles Watt, senior powertrain electrification engineer at Toyota R&D. “This hardware can help provide improved access to charging at home or on the road.”

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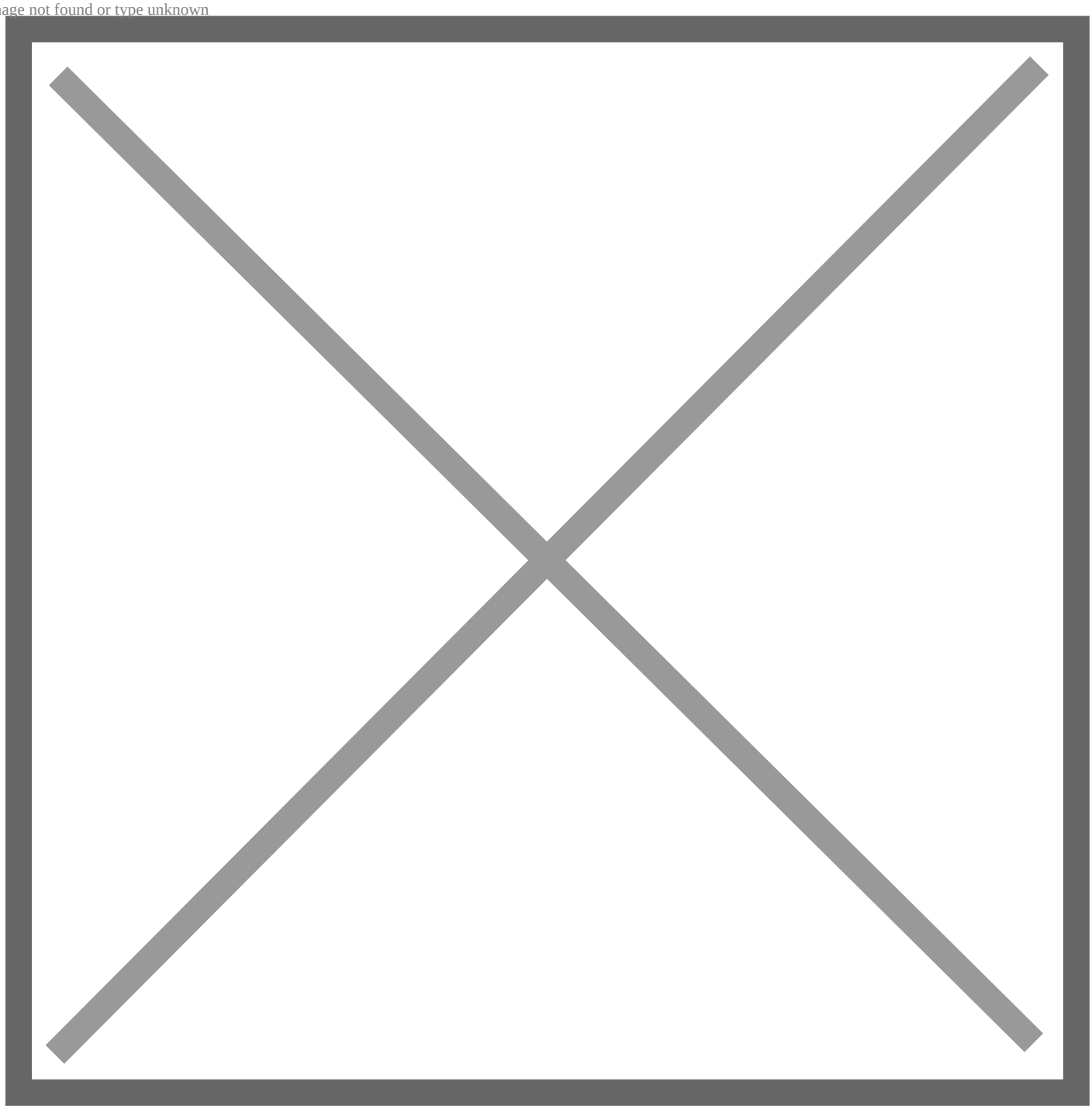

Concept artwork of the new dual-voltage home chargers, courtesy of Calty Design Research.

The dual-voltage chargers complement not just the BEVs themselves but also brand ecosystems in a way that's more like your smartphone's matching earbuds than another gray box and cord that may otherwise come with a vehicle.

Beyond aesthetics, all accessory parts come with the support of Toyota's warranty coverage, giving the customer peace of mind to ensure that everything works well, according to Taylor Whitt, a former manager on the Electric Vehicle Charging Solutions team.

"We put a lot of work into this Toyota- and Lexus-approved adapter that we are providing to our customers," Whitt said. "We know we'll have done our homework right when the adapter and dual-voltage plug are out there in the real world, providing a seamless experience that makes our customers' lives easier."