Craig Scott's Port of Call

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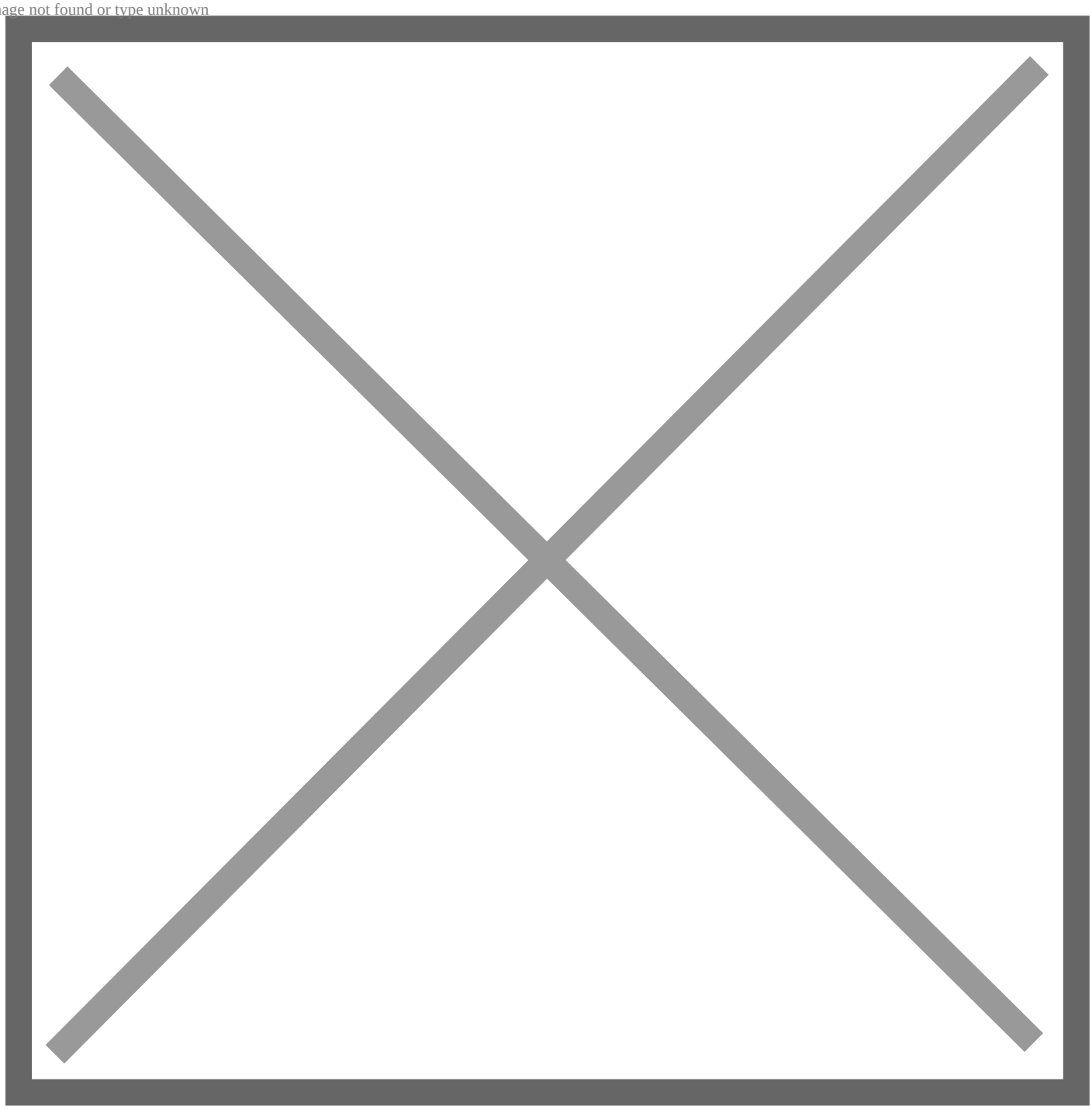

As Director of the Advanced Technologies Group for Toyota Motor North America, Craig Scott is used to facing challenges. In addition to overseeing product planning for Project Portal, the world’s first Class 8 heavy duty fuel cell truck pilot program, Scott also led the early development of hydrogen fuel cell vehicles in the United

States including the introduction of the Toyota Mirai. In support of both light and heavy duty vehicle programs and Toyota's 2050 Enviornment Challenge, Craig also oversees all U.S. hydrogen infrastructure development and the Long Beach tri-generation plant bringing 100% renewable power and hydrogen to the Ports of Los Angeles and Long Beach. On a recent weekend, Scott was asked to explain hydrogen fuel cells and Project Portal to a roomful of quizzical kids ages 6 to 14 using illustrations created by *New Yorker* artist Marcellus Hall. Scott handled the challenge gracefully and with humor.

How do you make hydrogen? asked one child. "When cows poop or when you put things into landfills," Scott replied, "It creates methane, or CH4. That's a molecule with four atoms of hydrogen. So we can take hydrogen out of the waste and generate fuel not only for cars and trucks, but also electricity to power your city or your home."

Does the H stand for happy? wondered another. "I think the H should stand for 'happy hydrogen,'" Scott said with a smile. "It is the most abundant element in the universe actually. There's so much hydrogen, we don't know what to do with it all. We will never run out of hydrogen. But we will run out of gasoline."

Earlier, Scott had explained that oil comes from dinosaur remnants and is dredged from the ground and shipped all over the planet to be refined into gas and diesel, the burning of which in traditional combustion engines causes pollution.

"This is better," he says. "It's cheaper and it's cleaner."

Toyota's Project Portal truck has logged more than 8,000 development miles and is currently at work pulling drayage-related cargo around the Ports of Los Angeles and Long Beach. The semi boasts 670 horsepower, 1,325 lb-ft of torque, and a 200+ miles per fill*, powered by 2 small 12kWh batteries and twin hydrogen fuel cell stacks coming straight from the Toyota Mirai.

"The goal of Project Portal is to show that hydrogen fuel cells can work not only in light duty vehicles, but also in heavy trucks that are moving around 80,000 pounds of goods every day into and out of the port, " Scott tells the kids, who are itching to see the real thing.

A few minutes later, they get their wish, gleefully inspecting the ocean-blue truck as a light afternoon shower paints the vehicle's H2Only emissions logo with rainwater.

Summing up the day, Scott says, "We want to show that hydrogen fuel cells are a very sustainable, meaningful way of transporting goods and services."

To view full video, click **here**.

*Toyota's Project Portal truck preliminary 200+mile driving range estimate determined by Toyota. Actual mileage will vary.