

Mazda's Skyactiv-X

We've sniffed out some details concerning Mazda's popular compact sedan and hatchback. Although the design of the two models remains literally under wraps, it's what sits under the hood that's most intriguing.



Mazda's SkyActiv-X engine is expected to show a 20% increase in fuel economy.

Word has it that the 2.0-liter powerplant will be the first of what Mazda calls the **SkyActiv-X**. This extremely high-compression gasoline engine's combustion occurs without the need for a spark, which is similar to how a diesel engine works.

As a result, Mazda feels that a 20-percent improvement in fuel economy with the SkyActiv-X engine is realistic. We further speculate that greater savings could be realized if the engine was part of a hybrid powertrain.

In 2016, the Dyson DyFly was to be the British engineering firm's stab at a flying car. We're still waiting.



Dyson plans electric car

Dyson — you know, the British folks that brought you the fancy vacuum cleaner — just revealed their plans to produce an electric car. Instead of partnering with an actual automaker, however, the British engineering firm will aim to build the vehicle itself from the ground up. This would be a departure from tech companies such as Google, which partner with established automakers to add their technology to existing products. CEO Max Conze told *Wired* magazine that by relying on its own battery and motor technology, Dyson expects to beat the range of existing electric vehicles by between 50 and 100 percent. (Any autonomous capability, however, will be derived from other suppliers, Conze said.) Can the quirky maker of boutique vacuum cleaners actually pull this off? There's been a lack of specifics about charging infrastructure and other important aspects. But as for battery range, Dyson does have experience with maximizing motor efficiency, and a reputation for out-of-the-box product conceptualization.



General Motors' new hydrogen fuel cell-powered **Chevrolet Colorado ZH2** is being considered for use by the U.S. military.

Will the General provide hydrogen fuel-cell trucks to the generals?

While **General Motors** has been developing the next generation of hydrogen fuel cell stacks in partnership with Honda — it expects to have its first commercial fuel cell vehicle out by 2020 — the General is also exploring the possibility of providing the technology for the U.S. military.

GM says its **hydrogen fuel cell-powered Chevrolet Colorado ZH2** is currently being evaluated by Uncle Sam. Also open for military adaptation is **SURUS** (Silent Utility Rover Universal Superstructure), a fuel cell-powered, four-wheel-steering concept vehicle on a heavy-duty truck frame driven by two electric motors. It's easy to see how such a vehicle might be useful for military use as a delivery truck, self-driving ambulance or power generator in remote locations where gasoline is hard to find.

Aside from warfare, it's all part of GM's (and the rest of the industry's, for that matter) commitment to going alternative fuel. With the Volt sedan and Bolt crossover under their belts, GM will be releasing two more electric vehicles next year. And by 2023, it expects to have 18 EVs in its lineup.

"General Motors believes in an all-electric future," said Mark Reuss, GM's head of global product development, at a recent event at the company's tech campus in Warren, Michigan. "Although that future won't happen overnight, GM is committed to driving increased usage and acceptance of electric vehicles."



Lamborghini expects to sell a lot of its new Urus SUV in North America.

Lambo opens new dealerships

Last week, **Lamborghini** opened two new dealerships in North America — one in Toronto, Canada, and one in Sterling, Virginia — with splashy fanfares that included attendance by CEO Stefano Domenicali. It signals that the Italy-based uberluxury automaker expects to sell a lot of its **Urus** hybrid SUV on this continent. Locating dealerships in Canada's biggest city and the metro D.C. area shows where they think they'll be selling these for just under \$200,000 a pop.

It also suggests Lamborghini realizes its buyers in this market will be more those looking for a (very expensive) go-anywhere people-hauler than a two-seater supercar, and it's prepared to go head-to-head with Porsche's Cayenne, which has dominated the segment since its introduction in 2002. Already, Lamborghini has been preparing its Sant'Agata Bolognese factory to produce 3,500 Urus models by 2019. For reference, Lambo sold a whopping 3,245 vehicles total in 2015, 41 percent of those in the U.S.

TEST DRIVE

2018 Lexus LC 500h

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500h delivers on that score with an EPA rated estimated 26 miles per gallon city, 35 highway and 30 combined. My road test of the hybrid netted 29 mpg's, with a city/highway mix of 20 percent/80percent.

Driving dynamics are right where you'd expect for a luxury touring car. While the skid pad performance would lag some performance oriented competitors, tuning a mainstream, luxury model that stiffly would be lacking in logic. Ride quality would suffer, and there's nothing very luxurious about getting beat up by a rough riding automobile.

Suffice to say, the LC 500h corners eagerly when asked, with more capability than the vast majority of its owners will ever explore. Ride quality is trip worthy, even with the 20-inch wheels. And for those few deep-pockets drivers with the need to have the hardest core performance possible, Lexus is rumored to be developing an edgier, F version of this car for future consumption.

Some cars sacrifice interior comfort for exterior styling. The most extreme examples of this that I've driven were all "classic" Italian sports cars. Here, the exotic bodies came at the expense of tank turret visibility, and a seating position that would put your chiropractor's kids through college. Not so here, as the LC 500 bodywork is complemented by a handsome, well finished cabin.

Materials, fit and finish are top shelf. The layered dashboard is fitted with crisp display screens. All are hooded or recessed to avoid sunlight washout. Seating position will suit most any size driver.

I found the Lexus front seats to be comfortable but short on lumbar support over the long haul. Seats are like shoes, though. What feels good to me may not to thee, so you need to see for yourself.

Rear seats are of the +2 variety. If front passengers are at all tall, back seat legroom is erased. The space makes a good landing spot for briefcases, purses, or overflow from the trunk, which, at 4.7



The materials, fit and finish of the Lexus LC500h's interior are top shelf, with no sacrifice of comfort for styling. Rear seat passengers, however, may find themselves cramped.

cubic-feet, demands a "pack light" mentality. The non-hybrid LC500 is (slightly) more accommodating (5.4 cu.-ft.).

The downside inside is twofold. The shifter is of the joystick variety, and the vagueness of its action is out of sync with the car's precision personality. And while several functions have hard button controls, many are accessed by the Remote Touch Interface.

You access these controls via touchpad, while viewing the central display screen. The interface requires finesse moves that can be frustrating and more distracting than they should be. Simple features like seat heaters that are a one button connection in most cars require drilling down through multiple menus. Voice controls present a partial work-around.

The roster of standard equipment is generous, with one surprise (blind spot monitoring is optional, not standard).

Beyond the standards, most any tech feature that interests a buyer can be had optionally, via packages or stand-alones. Music buffs will want to lend an ear to the Mark Levinson sound system. The 915 watt, 13-speaker setup is part of the Touring Package (\$1,790 — including leather front seat trim and an Alcantara headliner) has a truly premium sound, though it's noted that the car's infotainment system doesn't support Android Auto or Apple CarPlay.

All in all, the LC 500 makes an impressive debut for Lexus. Sharply drawn styling, a cozy, classy cabin and a distinct choice in powertrains makes for a high flying flagship for the luxury line.

A regular contributor to the Times Union for more than 25 years, Dan Lyons is the award-winning author of six books, and photographer of 180 calendars.

