The Volkswagen XL1: A Possible View of Tomorrow

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If you’ve ever pined for the day when Volkswagen will return to its roots and build a car that’s stranger-looking and more efficient than most other cars that time may have come. The XL1, VW’s super streamlined plug-in diesel-electric hybrid, is like nothing out there. But it may be a glimpse into the future of personal mobility.

The seats in the XL1 are a one-piece type similar to the ones in race cars.

The rear cargo area in the Volkswagen XL1.

Side mirrors have been replaced by rear-facing side cameras.
Volkswagen says that, going by European standards, the XL1 will get 261 miles a gallon. That may not match up with the American method of calculating fuel economy, but no other manufacturer is making a claim close to that. It will travel 31 miles on its 27-horsepower electric motor, and when combined with its 48-horsepower 0.8-liter 2-cylinder diesel engine, will go more than 310 miles on its 2.6-gallon fuel tank, according to Volkswagen.

“The fuel-economy number of 261 miles per gallon is actually translated from the New European Driving Cycle number of 0.9 litres of fuel used per 100 kilometres of driving,” Mark Gillies, a spokesman for Volkswagen, wrote in an email. “The cycle assumes that the battery is recharged every 100 kilometres. If you take the battery electric vehicle part out of the equation, then the number is 1.7 litres per 100 kilometres, which is about 140 m.p.g.”

Still pretty good. And to attain that number, Volkswagen had to focus on details.

Like the gasoline engine-assisted version of the BMW i3, the XL1 is carbon-fibre bodied and mostly electric. The similarities end there. Looking something like an airplane sans wings, a tail and a propeller, the XL1 is focused entirely on efficiency. Exterior mirrors were eliminated in favour of rear-facing side cameras to reduce drag. Folding manual cranks wind the windows up and down, because electric window motors are heavy. The navigation system, rather than being integrated into an in-dash infotainment stack with a huge screen, is simply a small, lightweight Garmin unit that clips into a swivel neck hard-mounted to the dash. There is only one cup holder. The car does not have power steering. The wheels are clad with pizza-cutter tires. The side windows are polycarbonate instead of glass. There is no soundproofing.

Some of those features are compromises in terms of the way modern vehicles are typically assembled. But they have paid off in terms of what the XL1 can do. Being mirrors less and fuselage-shaped gives the car a 0.19 drag coefficient. The carbon-fibre-reinforced polymer that makes up the frame and body — some of its charcoal grey crosshatching visible at the door sills and under the rear motor-engine cover — as well as the use of aluminium and magnesium parts and attention to the weights of every piece of the car, lends to the XL1’s low weight of 1,753 pounds.

Driving the XL1, you get the impression that if many more were on the road, and people became accustomed to driving such small conveyances, it would feel pretty
normal. The no power steering is predictably heavy at lower speeds, but still easy to use. The 7-speed dual clutch automatic shifts smoothly enough to be unnoticeable. Like the original Volkswagen Beetle, the XL1 is rear-engine and rear-wheel drive.

The seats have carbon-fibre backs and bear a shape similar to today’s racing seats. They are comfortable, and while they do not recline in the traditional sense, they do tilt back as a unit, and they also slide back and forth as most seats do. The dash is laid out simply, upon a concealed layer of pressed wood.

Other than climbing into the car’s low cockpit through its scissor doors, which a Lamborghini owner would execute unfazed, the only thing to get used to are the camera rear-view mirrors. Two small screens resembling those of iPhones stare back at the driver from just below the bottom of the windows, offering a realistic, wide-angle view of the street behind on either side of the car. After years of peering through tiny rectangles made from glass, these seemed fantastic. When you become accustomed to their brightness and their location, they work well.

The XL1 is lightweight, long relative to its width and low, with taut yet easy handling — what anyone would expect from a modern Volkswagen. Acceleration is not scorching — VW says the car will go from zero to 62 miles an hour in 12.7 seconds. Mashing on the accelerator pedal away from a light, the car elicited a hollow whine from its electric motor. Then with a light shudder, the diesel engine clattered to life, its primordial-sounding din audible because of the weight-saving lack of sound-deadening material in the car.

Although not quick off the line, the XL1 has an electronically limited top speed of 99 miles an hour, and Volkswagen says that the car’s light weight and wind-cheating body enable it to cruise at 62 M.P.H. on just 8.3 horsepower.

The XL1 has unique, albeit pleasant looks and a narrow, but nice-looking interior. It might seem a strange notion that Americans might drive a car that looked like a wingless airplane, but it’s a moot point anyway, as none of the 250 XL1s Volkswagen plans to make will be sold in the United States. (They do not meet federal motor vehicle standards.)

The next few years will be the time to see how they do in Europe, and whether it is worth scaling up production to bring down the cost. Because no matter how good the fuel economy, not many people would be willing to pay the $145,000 price for the XL1. As fuel prices rise and emissions regulations tighten, more cars of this sort, where every detail is honed to peak efficiency, are a possibility.