

Frankfurt auto show: Diesels improve, but will people buy?

September 13 2017, by David Mchugh



A Volkswagen Touareg stands upside down in front of the fair ground of the IAA Motor Show in Frankfurt, Germany, Wednesday, Sept. 13, 2017. The environmental organization Greenpeace installed the car the day before to protest against the car industry. From frighteningly fast hypercars to new electric SUVs, the Frankfurt auto show is a major event for car lovers wanting to get a glimpse of the future. (AP Photo/Michael Probst)

German automakers say they have new and improved diesels that meet or beat ever-tightening emissions standards. But will consumers buy them the way they used to in the wake of the Volkswagen scandal and threats of diesel bans?

Daimler, Volkswagen and BMW stressed their low-[emission](#) credentials at the Frankfurt auto show this week, displaying battery-powered cars ranging from an electric version of Daimler's tiny Smart fortwo to BMW's big and powerful i Vision Dynamics.

That is no surprise given the cloud over [diesel](#) technology that has grown since Volkswagen admitted to rigging [diesel cars](#) to evade U.S. emission testing. That was worsened by the discovery that other carmakers in Europe had exploited legal loopholes to turn off emissions controls much of the time—so that real-world driving emissions were much higher than test results.

Yet carmakers insist that diesel will continue to play a role. Experts say they may be right.

One reason stands out: regulators' efforts, particularly in Europe, to tighten emissions levels of carbon dioxide to fight global warming.

Daimler CEO Dieter Zetsche, speaking as president of the European Automobile Manufacturers' Association, said Wednesday that diesel engines, which emit less CO₂ than gasoline ones, would remain key to that effort.

"The latest generation of [diesel vehicles](#) is a very effective lever to achieve climate goals in the near future, because they emit 15-20 percent less CO₂ than equivalent petrol vehicles," Zetsche said.



In this Aug. 2, 2017 file photo Harald Krueger, CEO of German car maker BMW, Dieter Zetsche, chairman of German car maker Daimler AG and head of Mercedes-Benz cars and Matthias Mueller, CEO of German car maker Volkswagen, from right, attend a so-called diesel summit in Berlin. German government officials and automakers met to discuss the future of diesel vehicles. Diesel is one of the major themes at the Frankfurt International Motor Show, which opens for journalists Tuesday and Wednesday and to the general public from Saturday through Sept. 24, 2017. (Axel Schmidt/Pool Photo via AP, file)

The problem with diesels is that they emit more [nitrogen oxides](#), a pollutant that can harm people's health.

Diesel emissions controls can run into trouble at low temperatures, either not working properly or building up condensation and soot. So manufacturers exploited a loophole that let them turn off the controls at certain temperatures, and regulators tolerated that—until the

Volkswagen scandal focused public attention. One widely used emissions system involves injecting a urea solution into exhaust gases. That reduces the nitrogen oxides. But the urea tank has to be refilled, a pain for the car owners, and the tank takes up space.

From Sept. 1, the European Union has begun phasing in its new RDE, or real driving emissions, standards, in which emissions of nitrogen oxide are measured using mobile testing units attached to tailpipes under a range of actual driving conditions.

Under this pressure, carmakers are finding ways to tighten the emissions controls on diesels.

Consider Daimler's new line of four- and six-cylinder diesel engines, which the company spent 3 billion euros (\$3.6 billion) to develop. The new engines place the exhaust gas treatment system in the [engine](#) itself, rather than under the floor of the car. That helps it heat up faster and remain functional even in lower temperatures. The company also made key mechanical improvements, such as using steel pistons and a new high-tech coating to reduce friction and increase fuel efficiency.

The company says the new engines, already available in its new E-Class and S-Class sedans, will be rolled out throughout most of its models by 2019.

Volkswagen has also taken steps by adopting a different and more effective technology for its cars.



Drivers go to BMW cars before they start driving in circles on a temporary race track on the second media day of the IAA Motor Show in Frankfurt, Germany, Wednesday, Sept. 13, 2017. (AP Photo/Michael Probst)

Yet diesel remains a tougher sell now for car buyers who have heard proposals to ban diesels from cities like Stuttgart and Munich.

Diesels were 53 percent of auto sales in the EU in 2014, but fell to 49.7 percent in 2016 in the wake of the VW scandal and will likely fall to 46.9 percent for this year, according to analytical firm IHS Markit.

Stefan Pischinger, head of the Institute for Combustion Engines at Aachen University, says diesel is far from done: "There is a whole line of technologies that are still in the pipeline to improve diesel engines, to improve performance, efficiency and further reduce emissions. So I see

a long-term future for the diesel engine."

"It's purely in the current situation we need to work on that image and fix some of the things from the past. I hope that a more rational, de-emotionalized discussion will prevail."

Peter Mock, Europe managing director at the International Council on Clean Transportation in Berlin, said diesel's future as environmentally acceptable would also depend on the will of regulators to make the new requirements stick.

"First, technically, it can be said absolutely that diesel can be very, very clean. ... Second, you can also say that the RDE regulation certainly is effective, since the manufacturers have optimized their vehicles for a broader set of circumstances. That means, the test conditions are more realistic and the vehicles function better under realistic conditions. So there is definitely an improvement.

But the key is regulators' enforcement of the rules. Will they check engines more rigorously in the past to convince the public that [diesel engines](#) have been cleaned up?

"Here nothing, or almost nothing, has been done," he said. "Therefore I am a little cautious and am waiting to see if things really improve."

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