## The New Hork Times

## **After Volkswagen Revelation, Auto Emissions Tests Come Under Global Scrutiny**

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SEPT. 24, 2015

In the United States, automakers conduct their own emissions tests and submit the results to the government. In Europe, automakers pick who conducts the tests and where they are done. And these two regulatory systems are considered the world's gold standards.

Questions about the wisdom of allowing automakers so much sway in how air pollution standards are enforced grew this week after <u>the resignation of Volkswagen's chief executive</u>, following the company's diesel emissions cheating scandal.

Regulators in several European countries have opened investigations, attorneys general in the United States have joined federal inquiries, and there has been broader criticism of <u>Volkswagen</u>, and diesels, in markets from South Korea to Brazil.

Volkswagen has admitted installing software in 11 million vehicles that was used to provide false results about emissions, though it was not clear if it was used in all countries where the cars were sold. But the breadth of the scandal could finally threaten to bring change to an industry with a <u>record of cheating</u> since cars were first regulated.

While United States automakers are allowed to test their own cars, the <u>Environmental Protection</u> <u>Agency</u> does its own random checking, and the vast majority of enforcement actions are undertaken by American regulators.

In the European Union, by contrast, automakers can get new car models tested in any member state and can hire private companies, which regard them as clients, to conduct the testing. Member states have regulatory jurisdiction, and enforcement is scant.

One of the testing firms used by automakers in Europe is Applus Idiada of Spain, which has counted the major automakers, including Volkswagen, among its clients, though no company beyond Volkswagen has been implicated in the current scandal.

But advocates say tactics used by such companies highlight flaws in the European system. Applus Idiada markets itself as being able to provide "optimization of engine behavior to fulfill emissions and F.E. targets" — F.E. refers to fuel economy — in <u>one of its publications</u>, and uses similar language in others.

What does that mean for automaker clients?

"They will find ways to artificially lower the test results using flexibilities in the testing methods," Greg Archer, a former director at Britain's renewable-fuels regulator who now works at Transport and Environment, a Brussels-based advocacy group that has done its own testing, said in an interview.

The way the system is set up creates inherent problems, Mr. Archer added.

"Carmakers 'shop' for the best deal from agencies across Europe and directly pay for their services," he said in a recent statement on the Volkswagen scandal. "The job of the engineer overseeing the test is ultimately dependent on the next contract from the carmaker."

The company did not have an immediate comment.

Automakers have the same incentive to shop around for lenient testing companies that bond issuers have long had to shop around for the <u>credit rating agency</u> that would give them the highest credit rating. Overgenerous ratings of complex financial instruments based on mortgage prices were widely blamed as helping to set off the global financial crisis.

Volkswagen's rivals have had a clear response to the emissions cheating scandal: not us. "There is no evidence that this is an industrywide issue," the European Automobile Manufacturers' Association said in a statement on Wednesday, adding, "We cannot comment on an issue affecting one individual company."

In the wake of the Volkswagen emissions cheating scandal, Lucia Caudet, a European Commission spokeswoman, encouraged member states on Thursday to investigate so-called defeat devices.

Lawmakers in the <u>European Parliament</u> on Wednesday debated the implications of the scandal at length, with members in several parties advocating a greater regulatory and oversight role for the European government, instead of the member states.

"Of course that will be a big fight with the member states," said Bas Eickhout, a Dutch Green Party member who sits on the Parliament's committee on Environmental, Public Health and Food Safety.

He said he wanted the European Commission, the government's executive branch, to move quickly on plans to put new emissions testing into effect that will take place at independent laboratories. And he wanted commission officials to quickly determine if the Volkswagen software was used to evade European tests, something that has still not been disclosed by Volkswagen.

He said some lawmakers also lamented that Europe lagged on enforcement, leaving American regulators to take on such cases.

"We are better in talking. The U.S. is better in acting," he said, adding, "That's a bit of a painful conclusion."

In the United States, as attorneys general across the country opened investigations, Dan Becker, director of the safe climate campaign at the Center for Auto Safety, said the country also needed to rethink how emissions were tested. Independent testing has shown a widening gap between results in laboratories and the real world, raising suspicion.

"The automakers have proven that they're not trustworthy," Mr. Becker said. "The government has to overhaul the testing to make sure that independent parties ensure that the cars that are put on the road pollute less and are safe."

There are differing priorities among regulators around the world. Europe's regulations have tended to emphasize global warming emissions, while American regulation has put more focus on smog-forming pollutants, making it more difficult for diesel to comply. But those differences have been narrowing.

Many other countries follow regulatory developments in the United States and in Europe. India and China rely on old European emissions standards known as Euro 4 that were phased out by Europe in 2009, replaced by Euro 5 and then Euro 6 rules that have stricter limits on smogforming pollutants.

S. Velmurugan, head of the traffic and engineering division at the Central Road Research Institute, an Indian government research body based in Delhi, said there had been an influx of Volkswagen cars in the past three or four years in India, some of them diesels. Volkswagen diesels still represented only about 1 percent of overall car sales in India last year.

"If the software is coming as part of the engine, it is easy to pass the test," Dr. Velmurugan said. American testing methods were "more rigorous," he added. "Ours are not very good."

In Brazil, which has also used European emissions standards as a model, Marcio Veloso, coordinator of emissions control at the country's Environment Ministry, said the government would make an official request to Volkswagen to determine if the software was used on Volkswagen's only diesel model in Brazil, a pickup truck.

"If they say the technology was used here, we'll take appropriate legal measures," Mr. Veloso said. "If they say it wasn't, we'll do some tests just in case. And in the future we may pay a little closer attention to Volkswagen."

The new scandal could also crush the efforts of German automakers to open more export markets to diesel. Volkswagen had struggled for many years to win governments' permission to sell diesel cars outside Europe, and that goal now seems especially challenged.

South Korea has said it will investigate emissions levels of four Volkswagen models: Golf, Jetta, Beetle and Audi A3. About 6,000 cars of those models have been sold in South Korea.

"We can order a recall and a halt to sales, as well as a financial penalty, if we find the same problem in any of the models," said Kwon Sang-il, an environment ministry official. Volkswagen could face a fine of up to \$3.4 million if wrongdoing is found in all four models.

The inquiry will continue through October, the ministry said, and could expand to include other Volkswagen models.

In China, there has been little official response to the Volkswagen revelations. Xinhua, the official Chinese news agency, made a terse mention, referring to reports that South Korea would investigate three Volkswagen models. But Chinese regulators may have unintentionally saved Volkswagen from bigger problems.

Although China only uses Euro 4 emissions standards for diesel cars, government officials have exercised their considerable regulatory discretion to <u>discourage mass production</u> within China of diesel engines for cars. Volkswagen has lobbied unsuccessfully for years against that policy, and sells fewer than 1,000 diesels a year in China, all imported, out of overall annual sales of about 3 million cars, virtually all of them gasoline-powered.

But there was much chatter online in China, with little positive for the company's image.

"I just want to ask, as a world famous corporation that ranks the second in the industry," wrote **Zhong Xiaoyi** on the website Zhihu, "why is it so difficult for you to manufacture good cars, to do something good?"

Many commenters lamented the state of Chinese regulation, with <u>a Weibo user</u> writing: "They must have sold cars that should have been exported to China to the U.S."

## Correction: September 24, 2015

An earlier version of this article misspelled the surname of the coordinator of emissions control at the Brazilian Environment Ministry. He is Marcio Veloso, not Velloso.

## **Correction: September 25, 2015**

An earlier version of a picture caption with this article rendered incorrectly the name of site of the Center for Alternative Fuel Engines and Emissions. It is West Virginia University, not the University of West Virginia.

Dan Horch, Swati Gupta and Choe Sang-Hun contributed reporting. Kiki Zhao contributed research.

A version of this article appears in print on September 25, 2015, on page B1 of the New York edition with the headline: Emissions Tests Worldwide Leave Openings for Cheaters. Order Reprints Today's Paper Subscribe

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