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EPA Should Hit Road to Catch Emissions Cheaters, Critics Say

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(Updates with EPA comment starting in 15th paragraph.)

The U.S. Environmental Protection Agency vowed last week to do more spot-checks on data generated from indoor labs. Yet the agency remains wary of broader use of road tests, saying they are costly and the lab tests are still needed for scientific and legal accuracy. Environmental groups called the EPA's approach flawed.

“What we're doing now isn't keeping polluting vehicles off the road,” said Dan Becker, director of the Washington-based Safe Climate Campaign. “The VW scandal proves automakers cheat, and that means the rules have to change.”

There is precedent for on-the-road spot tests: The EPA began conducting them on trucks decades ago after a similar scandal. For now though, the agency is sticking with the carefully proscribed tests it conducts on treadmill-like dynamometers -- the ones VW engineers programmed their cars to evade.

For decades, regulators have relied on automakers' tailpipe tests to keep the air clean. Automakers test new models in the lab according to procedures designed by the EPA. Regulators look at the results and ask questions if they look suspicious. The agency does spot checks on about 15 percent of the fleet.

Non-Profit Group

But that failed to detect Volkswagen AG's cheating, which was ultimately discovered by a non-profit group that mounted monitors to cars and drove them up and down California. The Wolfsburg, Germany-based carmaker has admitted fitting as many as 11 million diesel cars with software that detected when a test was being run and altered the engine performance so it would pass. The company has suspended sales of those vehicles and its chief executive officer, Martin Winterkorn, quit as investigators from Washington to Berlin have promised to punish those responsible.

“This is a warning that the regulators can never afford to let down their guard,” said John DeCicco, a researcher who worked on overhauling EPA test procedures in the 1990s. “They can’t just accept lab results.”

The EPA was under fire two decades ago after real-world tests showed gasoline-powered cars were emitting far more pollution than lab tests suggested they should, DeCicco said.

The agency hired technicians with remote sensing systems to go to places like tunnels, where emissions are concentrated, or freeway entrances, where cars are accelerating. They compared readings with what models suggested pollution levels should be according to automakers’ lab results.

There were huge discrepancies, DeCicco said. Automakers were designing their systems according to a federal test cycle developed in the 1970s. The test was run too slow and with air-conditioning off, which skewed the results.

Truck Tests

In response, the EPA overhauled its lab tests to more closely mimic the way drivers actually drive. They added more acceleration, higher top speeds, aggressive starting and stopping and turned air-conditioning systems on.

The EPA has equipped big-rig trucks with emissions-measuring devices since a 1998 consent decree signed by truck makers. Since the 2007 model year, the agency has been compiling real-world pollution data, according to Public Employees for Environmental Responsibility, a watchdog group of government workers and retirees based in Washington.

The EPA hasn’t posted that data publicly or released it in a way that independent researchers can see what’s going on. The Volkswagen scandal “suggests EPA’s handle on the actual amount of auto emissions may be substantially off,” said Jeff Ruch, the group’s executive director.

“This scandal shows that dynamometer technology is a dinosaur yet EPA keeps pouring money into it,” Ruch said.

The EPA has released the vast majority of the testing data to Ruch’s group in response to a Freedom of Information Act request, agency spokeswoman Julia Valentine said in an e-mail. The only data withheld was confidential business information, she said.

Any effort to overhaul U.S. emissions tests to rely exclusively on measuring real-world driving would run into serious funding and legal issues, said Dave Cooke, vehicles analyst with the Union of Concerned Scientists.

Legal Limitations

The EPA’s tests have to meet a legal standard of being repeatable, Cooke said. Automakers and regulators have to be able to get the same results for any given vehicle, he said. The agency’s

audits have to match what automakers produce. That would be impossible with regular road conditions and drivers, with all of the dozens of variables including driving styles, temperature and various road surfaces.

And as measured by overall emissions levels, there's been clear progress in cleaning the air in U.S. cities, Cooke said. California has seen a 70 percent reduction in diesel emissions, he said.

"It's difficult to imagine how you could have caught this," Cooke said. "I'm confident in the system. It's generally working."

On Friday, the EPA announced it would look for more cars to borrow from vehicle owners or rental-car companies for unspecified additional checking. The agency sent a letter to every company selling cars in the U.S., warning that this would add time to the process of verifying vehicles meet the requirements of the law.

Chris Grundler, director of EPA's Office of Transportation and Air Quality, wouldn't say what changes the agency will make to audit the lab results carmakers submit to regulators.

"They don't need to know," Grundler, speaking to reporters on a conference call Friday, said of the automakers. "They only need to know that we will be keeping their cars a little bit longer, and we're going to be driving them more."

He said no major overhaul of the way the agency conducts tests was warranted. "We are adapting and continuously improving them," he said.

"If EPA believes that vehicles are not compliant, we do not certify them and they cannot be sold," he said. "Ultimately it was this action that held Volkswagen to account."

Road Tests

Dynamometer testing is already supplemented by on-road testing using portable emissions equipment, lab testing of cars borrowed from consumers, audits of other industry emissions labs and examination of vehicles chosen randomly from assembly lines, said Valentine, the EPA spokeswoman.

The EPA actions are a good start, said Becker of the Safe Climate Campaign, but the agency will have to quickly move toward a system of remote testing. Some states like California use equipment to take snapshots of emissions from cars on the road. If the emissions seem too high, vehicle owners are notified and asked to bring their cars in for a test.

The EPA already has on-road testing ability, Grundler said on Friday's call with reporters. The agency has used its resources in recent years to check carmaker gas mileage estimates and diesel trucks, two situations in which they had uncovered emissions cheating in the past.

The International Council on Clean Transportation, the non-profit group whose independent testing helped bring VW's cheating to light, has pushed for U.S. regulators and their counterparts in Europe to add spot checks on vehicles on the road to supplement lab testing.

But that's more of a refinement to a U.S. system that has worked pretty well, said John German, co-lead of the group. The backbone of lab testing doesn't need to change, German said, because manufacturers need to know for sure that vehicles will pass emissions tests before they can order production.

"It's an almost impossible burden to put on manufacturers without repeatable tests," German said.

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