

Congress of the United States

House of Representatives

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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June 28, 2018

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington, D.C. 20460

Dear Administrator Pruitt,

The Committee on Science, Space, and Technology is conducting oversight of the concealed use of technology to illegally circumvent emissions requirements. The Committee previously wrote Volkswagen AG (VW) regarding allegations that VW “continues to circumvent global emissions requirements” using stealth technology,¹ despite VW entering into a settlement with the U.S. government for billions of dollars for previous “allegations of cheating emissions tests and deceiving customers.”² The Committee is also examining increasing allegations that other automobile companies have similarly concealed the use of technology to control emissions in order to evade and defeat U.S. regulations on emissions standards, and the role that Robert Bosch GmbH (Bosch), an auto supplier of critical software controlling emissions, has played in the schemes.³ As part of this continued investigation, the Committee requests a briefing related to the U.S. Environmental Protection Agency’s (EPA) knowledge of the current research, development, and technology used to control and test emissions, as well as the current status of investigations into reported allegations.

¹ Letter from Hon. Lamar Smith, Chairman, H. Comm. on Sci., Space, & Tech. and Hon. Dana Rohrabacher, Member, H. Comm. on Sci., Space, & Tech. Comm. to Mr. Herbert Deiss, Chief Exec. Officer, Volkswagen AG (Apr. 12, 2018); Letter from Hon. Lamar Smith, Chairman, H. Comm. on Sci., Space, & Tech. and Hon. Dana Rohrabacher, Member, H. Comm. on Sci., Space, & Tech. Comm. to Mr. Herbert Deiss, Chief Exec. Officer, Volkswagen AG (June 14, 2018).

² Press Release, U.S. Dep’t of Justice, *Volkswagen to Spend Up to \$14.7 Billion to Settle Allegations of Cheating Emissions Tests and Deceiving Customers on 2.0 Liter Diesel Vehicles* (June 28, 2016), <https://www.justice.gov/opa/pr/volkswagen-spend-147-billion-settle-allegations-cheating-emissions-tests-and-deceiving>; see also Press Release, U.S. Dep’t of Justice, *Volkswagen AG Agrees to Plead Guilty and Pay \$4.3 Billion in Criminal and Civil Penalties; Six Volkswagen Executives and Employees are Indicted in Connection with Conspiracy to Cheat U.S. Emissions Tests* (Jan. 11, 2017), <https://www.justice.gov/opa/pr/volkswagen-ag-agrees-plead-guilty-and-pay-43-billion-criminal-and-civil-penalties-six>.

³ Jack Ewing, *Supplier’s Role Shows Breadth of VW’s Deceit*, N.Y. TIMES (Feb. 1, 2017), <https://nyti.ms/2jVAsO0>.

The Committee has advocated a restrained approach to regulation. However, where regulations are deemed necessary, any efforts to circumvent those rules can result in unfair competition and public harm. The Committee is wary that more companies are engaging in research and development aimed at defeating emissions standards, as well as using emerging technologies to manipulate and defeat the same U.S. regulations. The Committee hopes to work with the EPA to ensure that companies—foreign and domestic—are not using emerging technologies to subvert our tough emissions standards.

EPA plays a critical role in research and development for the setting national standards for vehicle tailpipe emissions of certain pollutants. The increasing use of advanced technology in vehicles to reduce emissions requires persistent and thorough oversight. EPA's development of extensive testing regimens using both laboratory testing and the emissions simulators allows for the ongoing development of new methods to test emissions. This includes determining new technology effectiveness to keep up with the latest engine specifications. Moreover, highlighting the increasing prioritization of understanding and regulating this technology, the director of EPA's Criminal Investigation Division has recently detailed how "finding instances of cars and trucks that have been doctored to pass emissions tests is now a top priority for agents."⁴ EPA's inspector general also recently highlighted EPA's efforts to increase testing that better replicates real-world driving and recommended other procedural and information sharing steps, such as better internal controls, which would help prevent emissions fraud on EPA's testing.⁵

Recent reports and law enforcement action against VW, which was found guilty of similar emissions cheating issues, indicate that there could still be potential issues within the company that would be of concern to the U.S. government.⁶ VW continues to operate under a cloud—news broke recently that VW was required to pay over a billion dollar fine in Germany and that the CEO for VW's Audi brand was arrested related to ongoing investigations.⁷ A confidential Independent Compliance Monitor report on VW—a report required under the settlement between the U.S. government and VW—found VW "had failed to hold executives accountable for wrongdoing that led to the huge emissions fraud, and [VW] was not making a serious enough attempt to remake its culture."⁸

⁴ David Schultz, *Environmental Cops Cracking Down on Car Emissions Cheating*, BLOOMBERG (June 12, 2018), <https://www.bgov.com/core/news/#!/articles/PA88LJ6JTSEE>.

⁵ U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF INSPECTOR GENERAL, EPA DID NOT IDENTIFY VOLKSWAGEN EMISSIONS CHEATING; ENHANCED CONTROLS NOW PROVIDE REASONABLE ASSURANCE OF FRAUD DETECTION (May 15, 2018), https://www.epa.gov/sites/production/files/2018-05/documents/_epaig_20180515-18-p-0181.pdf.

⁶ Jack Ewing, *Overseer Faults Volkswagen's Reform Efforts Since Emissions Scandal*, N.Y. TIMES (Apr. 22, 2018), <https://nyti.ms/2vxW5Ud>; Jack Ewing, *Top Porsche Official Targeted in German Police Raid Tied to Diesel Scheme*, N.Y. TIMES (Apr. 18, 2018), <https://nyti.ms/2vpLdHV>; Reuters Staff, *Prosecutors search Volkswagen headquarters in new emissions investigation*, REUTERS (Mar. 20, 2018), <https://www.reuters.com/article/us-volkswagen-emissions/prosecutors-search-volkswagen-headquarters-in-new-emissions-investigation-idUSKBN1GW0PT>.

⁷ William Boston, *Volkswagen Fined \$1.17 Billion in Germany in Emissions-Cheating Scandal*, WALL ST. J. (June 13, 2018); Edward Taylor & Jan Schwartz, *Head of VW's Audi arrested in Germany over diesel scandal*, REUTERS (June 18, 2018), <https://www.reuters.com/article/us-volkswagen-emissions-stadler/audi-ceo-arrested-volkswagen-idUSKBN1JE0R3>.

⁸ Ewing, *Overseer Faults Volkswagen's Reform Efforts Since Emissions Scandal*, *supra* note 6.

Of additional significant concern is the broad nature of the deception and coordination that is required to control emissions through a defeat device. VW used Bosch built electronic control modules and software to form defeat devices that enabled their vehicles to deceive emissions testing.⁹ Detailed specification requests from VW resulted in Bosch developing code that would instruct the computers in diesel engines to recognize the conditions that were similar to those of emissions testing parameters.¹⁰ This allowed the vehicles' computer systems to fully deploy pollution controls selectively when the software recognized those normal testing driving conditions present or for a set duration of time after the engine is started.¹¹ Once the technology determined the vehicle was not under testing conditions, "the vehicle [could] switch to an operating regime favored by the manufacturer for real driving rather than the clean regime necessary to pass the emission test."¹² Furthermore, as part of an effort to cover up the illegal nature of the defeat device, Bosch has been accused of altering onboard diagnostics systems to not provide emissions system malfunction warnings, deleting text from software documents to reduce suspicion, and helping conceal the presence of the software from authorities and the government.¹³

While Bosch has not officially admitted wrongdoing for its role in any of the legal settlements resulting from the VW litigation, there remain questions about how they could knowingly allow their proprietary software to be manipulated with obvious illegal intent. As one of the world's largest auto suppliers, the presence of similar Bosch software on other vehicles is something we hope EPA is monitoring. In addition to Bosch software in vehicles, the company is also a major producer of the semiconductor chips used in cars and smartphones, controlling the technology behind airbags, automatic car parking, and motion sensing.¹⁴ The importance of this technology will only continue to increase with electronic mobility and automated driving functions, making it imperative to know that one of the major companies behind the technology has operated in an open and honest manner. There is a need to better recognize the challenges of verifying this technology and understand techniques that will shed light on software and systems that may try to hide nefarious behavior. The Committee intends to further understand the relationship between the development of this technology and the application by companies to meet regulations.

Although VW has been the most prominent example for emissions related violations, recent media reports reveal comparable misconduct throughout the auto industry. Internal employee discussions at other companies acknowledging software functions acted as "essentially a defeat device" and the increasing allegations of the use of similar illegal technology in other

⁹ Ryan Beene, *Bosch software enabled emissions violations by VW, FCA, study says*, AUTO. NEWS (June 9, 2017), <http://www.autonews.com/article/20170609/OEM11/170609775/bosch-software-enabled-emissions-violations-by-vw-fca-study-says>.

¹⁰ Ewing, *supra* note 3; Moritz Contag et al., *How They Did It: An Analysis of Emission Defeat Devices in Modern Automobiles*, IEEE 2017 SYMPOSIUM ON SECURITY & PRIVACY 231 (2017).

¹¹ *Id.*

¹² Contag et al., *supra* note 10, at 236.

¹³ Ewing, *supra* note 3.

¹⁴ Martin-Werner Buchenau & Joachim Hofer, *Bosch powers the chip boost in cars — and iPhones*, HANDELSBLATT (Apr. 5, 2018), <https://global.handelsblatt.com/companies/bosch-powers-ever-more-cars-and-iphones-907449>.

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vehicles to cheat on emissions tests,¹⁵ demonstrate the need for continuing oversight. The Committee has an obligation to investigate the science and technology underpinning legal and regulatory actions. Where U.S. policymakers have determined there is a need for regulations, it is incumbent upon this Committee to investigate to ensure that research and development on emerging technologies in the automobile and other industries is not used to illegally circumvent regulations.

The Committee on Science, Space, and Technology has jurisdiction over environmental and scientific research and development programs and “shall review and study on a continuing basis laws, programs, and Government activities” as set forth in House Rule X. The Committee is interested in further understanding and identifying any emerging or stealth technologies used to circumvent U.S. regulations. To assist the Committee with its investigation, we request a briefing from the EPA. Please contact Travis Voyles or Ashley Callen of the Committee staff at 202-225-6371 to schedule a briefing on or before July 12, 2018. Thank you for your attention to this matter.

Sincerely,



Lamar Smith
Chairman



Dana Rohrabacher
Member of Congress



Ralph Norman
Member of Congress

cc: The Honorable Eddie Bernice Johnson, Ranking Member, House Committee on Science, Space, and Technology

¹⁵ See Chester Dawson & Mike Spector, *Fiat Chrysler Employees Knew of Emissions Cheating, Documents in Shareholder Suit Claim*, WALL ST. J. (May 14, 2018), <https://www.wsj.com/articles/fiat-chrysler-employees-knew-of-emissions-cheating-documents-in-shareholder-suit-claim-1526350332>; *Mercedes diesel probe in U.S. finds possible 'defeat' software, paper says*, AUTO. NEWS (Feb. 18, 2018), <http://europe.autonews.com/article/20180218/ANE/180219749/mercedes-diesel-probe-in-u-s-finds-possible-defeat-software-paper>.