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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

IN RE: VOLKSWAGEN 'CLEAN DIESEL' MARKETING, SALES PRACTICES, AND PRODUCTS LIABILITY LITIGATION	MDL 2672 CRB (JSC) **[UNREDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED]**
This Document Relates to: *A to Z Autosports, LLC, and MSI Auto Sales And Repair, Inc., v. Volkswagen Group of America, Inc.*, Case No. 3:15-cv-05963-CRB (transferred from W.D. Wis., Case No. 3:15-cv-00664-WMC)	**SECOND AMENDED CONSOLIDATED RESELLER DEALERSHIP CLASS ACTION COMPLAINT**

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Plaintiffs bring this action on behalf of themselves and all others similarly situated, against (1) the Defendants collectively known as "Volkswagen": Volkswagen Aktiengesellschaft ("VW AG"), Volkswagen Group of America, Inc. ("VW America") (together, "VW"), Audi Aktiengesellschaft ("Audi AG"), Audi of America, LLC ("Audi America") (together, "Audi"), Dr. Ing. h.c. F. Porsche Aktiengesellschaft ("Porsche AG"), Porsche Cars North America, Inc. ("Porsche America") (together, "Porsche"), Martin Winterkorn ("Winterkorn"), Matthias Müller ("Müller"), Michael Horn ("Horn"), and Rupert Stadler ("Stadler"); and (2) the Defendants collectively known as "Bosch": Robert Bosch GmbH ("Bosch GmbH"), Robert Bosch, LLC ("Bosch LLC"), and Volkmar Denner ("Denner") (together, "Bosch"). Plaintiffs allege the following based upon information and belief, the investigation of counsel, and personal knowledge as to the factual allegations pertaining to themselves.

INTRODUCTION

1. This case arises out of one of the most brazen corporate crimes in history, a cautionary tale about winning at any cost. Volkswagen cheated its way to the top of the automotive food chain and spared no victim along the way, targeting its customers, U.S. and foreign regulators, and even the very air we breathe. The linchpin of Volkswagen's fraudulent scheme was the deliberate use of a "defeat device," a secretly embedded software algorithm that, as Volkswagen has since admitted, was designed and installed to cheat emission tests, thereby fooling the Environmental Protection Agency ("EPA"), among other regulators, into approving for sale hundreds of thousands of non-compliant cars (the "Class Vehicles," defined below). For years, Volkswagen got away with it, and the Class Vehicles were sold at record numbers into our stream of commerce. Once on the roads, these cars spewed millions of tons of harmful nitrogen oxide ("NOx") pollutants into our air at a rate of up to 40 times the legal limit. All the while, Volkswagen pitched itself to the American public as the world's foremost innovator of "clean" diesel technology, duping hundreds of thousands of environmentally-conscious consumers who were willing to pay a premium for "clean" diesel vehicles.

2. This case arises out of one of the most brazen corporate crimes in history, a cautionary tale about winning at any cost. Volkswagen cheated its way to the top of the

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automotive food chain and spared no victim along the way, targeting its customers, U.S. and foreign regulators, and even the very air we breathe. The linchpin of Volkswagen's fraudulent scheme was the deliberate use of a "defeat device," a secretly embedded software algorithm that, as Volkswagen has since admitted, was designed and installed to cheat emission tests, thereby fooling the Environmental Protection Agency ("EPA"), among other regulators, into approving for sale hundreds of thousands of non-compliant cars (the "Class Vehicles," defined below). For years, Volkswagen got away with it, and the Class Vehicles were sold at record numbers into our stream of commerce. Once on the roads, these cars spewed millions of tons of harmful nitrogen oxide ("NOx") pollutants into our air at a rate of up to 40 times the legal limit. All the while, Volkswagen pitched itself to the American public as the world's foremost innovator of "clean" diesel technology, duping hundreds of thousands of environmentally-conscious consumers who were willing to pay a premium for "clean" diesel vehicles.

3. Fraud fueled Volkswagen's success, and its only real "clean" diesel innovation was how it played dirty. Its ingeniously-designed defeat devices, software installed on engine management systems supplied by defendant Bosch, detected when its dirty diesel engines were being tested in a laboratory or smog station and triggered performance-sapping controls to simulate compliance with emission laws. But when the test ended, and the driver returned to the road under normal operation and use, the performance—and the illegal belch of pollution—returned. Everything about Volkswagen's fraudulent scheme was coolly calculated, as defendant Horn, CEO of VW America, confessed in the fall of 2015 at Congressional hearings: "[the defeat device] was installed for this purpose, yes."[1]

4. Volkswagen promised low-emission, environmentally friendly vehicles, with high fuel economy and exceptional performance. Consumers believed Volkswagen and bought Volkswagen's VW-, Audi-, and Porsche-branded "clean" diesel vehicles in record numbers. In fact, during the relevant time period, Volkswagen sold more diesel cars in the U.S. than every

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[1] *See* Bill Chappell, *'It Was Installed For This Purpose,' VW's U.S. CEO Tells Congress About Defeat Device*, NPR (Oct. 8, 2015), available at http://www.npr.org/sections/thetwo-way/2015/10/08/446861855/volkswagen-us-ceo-faces-questions-on-capitol-hill.

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other automaker combined.[2] From 2009 to 2015, Volkswagen sold and/or leased approximately 580,000 dirty diesels that its defeat device disguised as clean. In doing so, Volkswagen secretly turned the most environmentally-conscious consumers into some of the biggest polluters on the road—and charged them a premium in the process.

5. As a result, there are over half a million cars on American roads with illegal emission systems that never should have left the factory, and would not have, but for Volkswagen's fraudulently obtained EPA Certificates of Conformity ("COCs"), as well as California Air Resources Board ("CARB") Executive Orders ("EOs"). Since the revelation of Volkswagen's scheme, the Department of Justice ("DOJ") has filed a complaint alleging numerous violations of the Clean Air Act ("CAA"), California and other state attorneys general have announced investigations or filed lawsuits concerning Defendants' fraudulent scheme, and countless other government entities have launched criminal and civil investigations around the globe.

6. Volkswagen's fraud has also taken a human toll. According to statistical models, the pollution spewed by the Class Vehicles will cause "somewhere between 16 and 94 deaths over seven years, with the annual count increasing more recently as more of the diesels were on the road."[3] Meanwhile a peer-reviewed study by researchers at MIT and Harvard University has estimated that the pollution from the illegal Vehicles will cause 59 early deaths and result in environmental costs exceeding $450 million.[4]

7. Plaintiffs and the Class (defined below) are automobile dealers that acquired a Class Vehicle for the purpose of resale and had said vehicle in inventory on or after September 18, 2015. Class Vehicles include the following models:

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[2] *Clean Diesel*, Volkswagen (last visited Feb. 8, 2016), *previously available at*, http://www.vw.com/features/clean-diesel/.

[3] Seth Borenstein, *AP analysis: VW evasion likely leads to dozens of deaths*, Associated Press (Oct. 5, 2015), http://bigstory.ap.org/article/1670ed00be824b4cbbf414ed1d637428/ap-analysis-vw-evasion-likely-led-dozens-deaths.

[4] Stephen R. H. Barrett, *et al.*, *Impact of the Volkswagen emissions control defeat device on US public health*, IOPScience (Oct. 29, 2015), http://iopscience.iop.org/article/10.1088/1748326/10/11/114005/meta?mbid=synd_flipboard.

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2.0-liter Class Vehicles	
Volkswagen Jetta TDI	2009-2015
Volkswagen Jetta SportWagen TDI	2009-2014
Volkswagen Beetle TDI	2012-2015
Volkswagen Beetle Convertible TDI	2012-2015
Audi A3 TDI	2010-2015
Volkswagen Golf TDI	2010-2015
Volkswagen Golf SportWagen TDI	2015
Volkswagen Passat TDI	2012-2015

3.0-liter Class Vehicles	
Volkswagen Touareg TDI	2009-2016
Porsche Cayenne Diesel	2013-2016
Audi A6 Quattro TDI	2014-2016
Audi A7 Quattro TDI	2014-2016
Audi A8 TDI	2014-2016
Audi A8L TDI	2014-2016
Audi Q5 TDI	2014-2016
Audi Q7 TDI	2009-2016

8. Volkswagen induced Plaintiffs and Class members to purchase or lease the Class Vehicles, which are illegal because they violate the CAA (among other laws) and, on top of that, admittedly do not perform as represented. No one would—or could—have purchased the Class Vehicles but for Volkswagen's fraudulent scheme, because Volkswagen obtained EPA COCs (and CARB EOs) only by cheating. In addition to now owning illegal, dirty diesels, Plaintiffs have suffered economic damages due to the steep diminution in value of their Class Vehicles, which pollute the environment at levels far in excess of the legal limits, cannot pass required emissions tests, and are subject to a planned recall in the indefinite future (even though no complete fix has yet been announced). To the extent the Class Vehicles can be repaired or retrofitted to pass federal and state emission requirements, they will, absent a full and comprehensive compensation program by Defendants, continue to suffer in diminution in value and cause economic loss. This is so because any such repairs or retrofits will reduce mileage per gallon, increase costs of operation, and cause the vehicles to suffer lower performance, durability, and reliability, reducing market value and increasing cost of ownership and operation.

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9. On behalf of themselves and the Independent Automobile Dealership Reseller Class (defined below), Plaintiffs hereby bring this action for violations of the federal Racketeer Influenced and Corrupt Organizations Act (18 U.S.C. § 1961, *et seq.* ("RICO")); Fraud; Failure to Recall; and Unjust Enrichment.

10. Plaintiffs seek a buy-back program for the Class Vehicles, monetary damages (including treble damages under RICO), appropriate restitution, pollution mitigation, business reforms, and injunctive and other equitable relief.

JURISDICTION AND VENUE

11. This Second Amended Consolidated Reseller Dealership Class Action Complaint supersedes the Consolidated Amended Reseller Dealership Class Action Complaint which amended the underlying action *A to Z Autosports, LLC, and MSI Auto Sales And Repair, Inc., v. Volkswagen Group of America, Inc.*, Case No. 3:15-cv-05963-CRB, transferred to from the Western District of Wisconsin, Case No. 3:15-cv-00664-WMC, and which was also filed as the Consolidated Class Action Complaint on behalf of the reseller automobile dealer Plaintiffs in the MDL No. 2672 proceedings, pursuant to Pretrial Order No. 7 therein.

12. This Court has jurisdiction over this action pursuant to the Class Action Fairness Act ("CAFA"), 28 U.S.C. § 1332(d), because at least one Class member is of diverse citizenship from one Defendant, there are more than 100 Class members, and the aggregate amount in controversy exceeds $5,000,000, exclusive of interest and costs. Subject-matter jurisdiction also arises under 28 U.S.C. § 1331 based upon the federal RICO claims asserted under 18 U.S.C. § 1961 *et seq.* The Court has personal jurisdiction over Defendants pursuant to 18 U.S.C. §§ 1965(b) and (d), and Cal. Code Civ. P. § 410.10, and supplemental jurisdiction over the state-law claims pursuant to 28 U.S.C. § 1367.

13. Venue is proper in each of the districts in which these cases have been filed in that a substantial part of the events or omissions giving rise to the claim occurred in each such district.

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PARTIES

A. Individual and Representative Plaintiffs

14. Plaintiff A TO Z SPORTS, LLC ("A to Z") is a limited liability corporation organized and existing under the laws of Wisconsin, with its principal place of business in Madison, Dane County, Wisconsin. A to Z is an independent used automobile dealer that purchased a Class Vehicle prior to the disclosure of Defendants' fraudulent defeat device scheme. A to Z has since disposed of the vehicle at a loss.

15. Plaintiff MSI AUTO SALES AND REPAIR, INC. ("MSI") is a corporation organized and existing under the laws of Wisconsin, with its principal place of business in Middleton, Dane County, Wisconsin. MSI is an independent used automobile dealer that purchased a Class Vehicle prior to the disclosure of Defendants' fraudulent defeat device scheme. MSI has been unable to sell the Class Vehicle.

B. Defendants

1. Volkswagen Defendants

a. Volkswagen AG

16. Volkswagen AG ("VW AG") is a German corporation with its principal place of business in Wolfsburg, Germany. VW AG is one of the largest automobile manufacturers in the world, and is in the business of designing, developing, manufacturing, and selling automobiles. VW AG is the parent corporation of VW America, Audi AG, and Porsche AG. According to VW AG, it sold 10.14 million cars worldwide in 2014 – including 6.12 million VW-branded cars, 1.74 million Audi-Branded cars, and 189,849 Porsche-branded cars. Combined with other brands, VW AG boasts a 12.9% share of the worldwide passenger car market. VW AG's sales revenue in 2014 totaled €202 billion (approximately $221 billion) and sales revenue in 2013 totaled €197 billion (approximately $215 billion). At €12.7 billion (approximately $13.9 billion), VW AG generated its highest ever operating profit in fiscal year 2014, beating the previous record set in 2013 by €1.0 billion (approximately $1.1 billion).

17. VW AG engineered, designed, developed, manufactured, and installed the defeat device software on the Class Vehicles equipped with the 2.0-liter and 3.0-liter TDI engines and

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exported these vehicles with the knowledge and understanding that they would be sold throughout the United States. Audi developed the 3.0-liter TDI diesel engine utilized in the VW Touareg and Porsche Cayenne Class Vehicles. VW AG also developed, reviewed, and approved the marketing and advertising campaigns designed to sell the Class Vehicles.

b. Volkswagen Group of America, Inc.

18. Volkswagen Group of America, Inc. ("VW America") is a New Jersey corporation with its principal place of business located at 2200 Ferdinand Porsche Drive, Herndon, Virginia 20171. VW America is a wholly-owned subsidiary of Volkswagen AG, and it engages in business, including the advertising, marketing and sale of Volkswagen automobiles, in all 50 states. In 2014 alone, VW America sold 552,729 vehicles from its 1,018 dealer locations in all 50 states, including 95,240 TDI "clean" diesel vehicles.

c. Audi AG

19. Audi AG ("Audi AG") is a German corporation with its principal place of business in Ingolstadt, Germany. Audi AG is the parent of Audi of America, LLC and a subsidiary of the Audi Group, which is a wholly-owned subsidiary of VW AG. Audi AG designs, develops, manufacturers, and sells luxury automobiles. According to Audi AG, the Audi Group sold 1.74 million cars worldwide in 2014, with sales revenues in 2014 totaling €53.8 billion (approximately $58.5 billion). Audi AG's operating profit in fiscal year 2014 was €5.15 billion (approximately $5.63 billion).

20. Audi AG engineered, designed, developed, manufactured and installed the defeat device software on the Class Vehicles equipped with the 3.0-liter TDI diesel engine, and exported these vehicles with the knowledge and understanding that they would be sold throughout the United States. Audi AG also developed, reviewed, and approved the marketing and advertising campaigns designed to sell its Audi Class Vehicles. According to the U.S. government, approximately 80,000 3.0-liter TDI® diesel engine vehicles containing the defeat device were sold by VW, Audi and Porsche in the United States.

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d. **Audi of America, LLC**

21. Audi of America, LLC ("Audi America") is a Delaware limited liability company with its principal place of business located at 2200 Ferdinand Porsche Drive, Herndon, Virginia 20171. Audi America is a wholly-owned U.S. subsidiary of Audi AG, and it engages in business, including the advertising, marketing and sale of Audi automobiles, in all 50 states.

e. **Dr. Ing. h.c. F. Porsche AG**

22. Dr. Ing. h.c. F. Porsche AG ("Porsche AG") is a German corporation with its principal place of business located in Stuttgart, Germany. Porsche AG designs, develops, manufacturers, and sells luxury automobiles. Porsche AG is a wholly-owned subsidiary of VW AG. According to Porsche AG, it sold 187,208 cars worldwide in 2014, with sales revenues in 2014 totaling €17.2 billion (approximately $18.8 billion). Porsche AG's operating profit in fiscal year 2014 was €2.79 billion ($2.97 billion).

23. Porsche AG installed the defeat device software on the Class Vehicles equipped with the 3.0-liter TDI diesel engine, designed by Audi and calibrated for use in the Porsche Cayenne, and exported these vehicles with the knowledge and understanding that they would be sold throughout the United States. Porsche executives and engineers had previously worked at Audi, including overseeing development of the 3.0-liter TDI diesel engine, and Porsche personnel had knowledge of the defeat device. Porsche AG also developed, reviewed, and approved the marketing and advertising campaigns designed to sell its Class Vehicles.

f. **Porsche Cars North America, Inc.**

24. Porsche Cars North America, Inc. ("Porsche America") is a Delaware corporation with its principal place of business located at 1 Porsche Drive, Atlanta, Georgia 30354. Porsche America is a wholly-owned U.S. subsidiary of Porsche AG, and it engages in business, including the advertising, marketing and sale of Porsche automobiles, in all 50 states. According to Porsche AG, 2014 represented its best annual results in Porsche history in the U.S., with 47, 007 automobiles delivered. Porsche America now maintains a network of 189 dealers nationwide.

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g. Martin Winterkorn

25. Martin Winterkorn is a resident of Germany. Winterkorn was CEO of VW AG until he resigned on September 23, 2015, in the wake of the diesel emissions scandal. Notably, Winterkorn was widely regarded as a detail-oriented, micromanaging CEO, who retained control over engineering details that many other CEOs would relinquish fully to deputies. Winterkorn is being investigated by the German government for allegations of fraud. Winterkorn reportedly hand-picked the engineers who designed the defeat devices. According to news reports, Winterkorn was also the head of Audi when the idea of defeat device software was first considered years earlier. Winterkorn received compensation from the illegal scheme and course of conduct based on the revenues and profits from the Class Vehicles, and Volkswagen's increased market share. Winterkorn approved, authorized, directed, ratified, and/or participated in the acts complained of herein. Winterkorn is subject to the personal jurisdiction of this Court as he has availed himself of the laws of the United States through his management and control over VW America as well as the manufacture, distribution, testing, and sale of hundreds of thousands of Class Vehicles imported and sold across the United States. Furthermore, Winterkorn has consistently travelled to the U.S. to attend and make presentations at various car shows across the country in order to promote the sale of the Class Vehicles.

h. Matthias Müller

26. Matthias Müller is a resident of Germany. Müller is a 40-year veteran of Volkswagen, where he began as an apprentice toolmaker at Audi AG in 1977. Müller was appointed coordinator of the Audi model lines in 2002, after Winterkorn took over the management of Audi AG. In 2007, when Winterkorn became CEO of VW AG, Winterkorn appointed Müller as Head of Product Management across all Volkswagen brands. In 2010, Müller was appointed CEO of Porsche AG. In 2014, Müller became the Chief Information Officer of Porsche Automobil Holding SE. Müller became the CEO of VW AG on September 25, 2015, upon Winterkorn's resignation amidst the emissions scandal. Müller profited millions of dollars from the illegal scheme and course of conduct based on the revenues and profits from the Class Vehicles and Volkswagen's increased market share. Müller approved, authorized,

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directed, ratified, and/or participated in the acts complained of herein. Müller is subject to the personal jurisdiction of this Court because he has availed himself of the laws of the United States through his management and control of the American Volkswagen Defendants, as well as the design, manufacture, distribution, testing, and/or sale of hundreds of thousands of Class Vehicles imported and sold across the United States. Furthermore, Müller has consistently travelled to the U.S. to attend and make presentations at various car shows across the country in order to promote the sale of the Class Vehicles.

i. Michael Horn

27. Michael Horn is a resident of Virginia. Horn was President and CEO of VW America until he resigned on March 9, 2016. Horn received compensation from the illegal scheme and course of conduct based on the revenues and profits from the Class Vehicles, and Volkswagen's increased market share. Horn approved, authorized, directed, ratified, and/or participated in the acts complained of herein. Horn has admitted that he was aware of the vehicles' emissions non-compliance since at least 2014.

j. Rupert Stadler

28. Rupert Stadler is a resident of Germany. Stadler became the CEO of Audi AG on January 1, 2010. Stadler joined Audi AG in 1990 and has held various roles at Audi and VW, including the Head of the Board of Management's Office for Volkswagen and the Head of Group Product Planning. In 2003, Stadler became an Audi AG Board Member and was later responsible for the Finance and Organisation Division. Stadler joined the Board of Management of Volkswagen when he was appointed to his current role as CEO of Audi AG. Stadler received millions of dollars from the illegal scheme and course of conduct based on the revenues and profits from the Class Vehicles and Volkswagen's increased market share. Stadler approved, authorized, directed, ratified, and/or participated in the acts complained of herein. Stadler is subject to the personal jurisdiction of this Court because he has availed himself of the laws of the United States through his management and control over Audi America as well as the design, manufacture, distribution, testing, and/or sale of hundreds of thousands of Class Vehicles imported and sold across the United States. Furthermore, Stadler has consistently travelled to the

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U.S. to attend and make presentations at various car shows across the country in order to promote the sale of the Class Vehicles.

2. Bosch Defendants

29. From at least 2005 to 2015, Bosch GmbH, Bosch LLC and CEO Volkmar Denner (together, "Bosch") were knowing and active participants in the creation, development, marketing, and sale of illegal defeat devices specifically designed to evade U.S. emissions requirements in vehicles sold solely in the United States. Even though Bosch has produced little discovery, the evidence obtained by Plaintiffs to date shows that Bosch participated not just in the development of the defeat device, but in the scheme to prevent U.S. regulators from uncovering the device's true functionality. Moreover, Bosch's participation was not limited to engineering the defeat device (in a collaboration described as unusually close). Rather, Bosch marketed "Clean Diesel" in the United States and lobbied U.S. regulators to approve Class Vehicles, another highly unusual activity for a mere supplier. These lobbying efforts, taken together with evidence of Bosch's actual knowledge that the "akustikfunction" operated as a defeat device, and participation in concealing the true functionality of the device from U.S. regulators, can be interpreted only one way under U.S. law: Bosch was a knowing and active participant in a massive, decade-long conspiracy with VW to defraud U.S. consumers.

b. Robert Bosch GmbH

30. Robert Bosch GmbH ("Bosch GmbH") is a German multinational engineering and electronics company headquartered in Gerlingen, Germany. Bosch GmbH is the parent company of Robert Bosch LLC. Bosch GmbH, directly and/or through its North-American subsidiary Robert Bosch LLC, at all material times, designed, manufactured, developed, tailored, reviewed, approved, and supplied elements of the defeat device to Volkswagen for use in the Class Vehicles. Bosch GmbH is subject to the personal jurisdiction of this Court because it has availed itself of the laws of the United States through its management and control over Bosch, LLC, and over the design, development, manufacture, distribution, testing, and sale of hundreds of thousands of the defeat devices installed in the Class Vehicles sold or leased in the U.S.

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c. **Robert Bosch, LLC**

31. Robert Bosch LLC ("Bosch LLC") is a Delaware limited liability company with its principal place of business located at 38000 Hills Tech Drive, Farmington Hills, Michigan 48331. Bosch LLC is a wholly-owned subsidiary of Bosch GmbH, which wholly owns and controls Bosch LLC. At all material times, Bosch LLC, directly and/or in conjunction with its parent Bosch GmbH, designed, manufactured, developed, tailored, reviewed, approved, and supplied elements of the defeat device to Volkswagen for use in the Class Vehicles.

32. Both Bosch GmbH and Bosch LLC (together with Volkmar Denner, "Bosch") operate under the umbrella of the Bosch Group, which encompasses some 340 subsidiaries and companies. The Bosch Group is divided into four business sectors: Mobility Solutions (formerly Automotive Technology), Industrial Technology, Consumer Goods, and Energy and Building Technology. The Mobility Solutions sector, which supplies parts to the automotive industry, and its Diesel Systems division, which develops, manufacturers and applies diesel systems, are particularly at issue here and include the relevant individuals at both Bosch GmbH and Bosch LLC. Bosch's sectors and divisions are grouped not by location, but by subject matter. Mobility Solutions includes the relevant individuals at both Bosch GmbH and Bosch LLC. Regardless of whether an individual works for Bosch in Germany or the U.S., the individual holds him or herself out as working for Bosch. This collective identity is captured by Bosch's mission statement: "We are Bosch," a unifying principle that links each entity and person within the Bosch Group.[5]

d. **Volkmar Denner**

33. Volkmar Denner ("Denner") is a resident of Germany. Denner has been the Chairman and CEO of Bosch GmbH since July 1, 2012, and contemporaneously holds the position of Chief Technology Officer. Denner joined Bosch in 1986, and has held numerous positions within the company, including, Director of ECU Development; Vice-President of Sales and Development, Semiconductors and Electronic Control Units division; and President of

[5] Bosch 2014 Annual Report: "Experiencing quality of life," available at http://www.bosch.com/en/com/bosch_group/bosch_figures/publications/archive/archive-cg12.php.

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Automotive Electronics division. In 2006, Denner became a member of Bosch GmbH's Board of Management and was later responsible for research and advance engineering, product planning, and technology coordination across the company's three business sectors from July 2010 until his appointment as CEO. Denner received millions of dollars from the illegal scheme and course of conduct based on the revenues and profits from the sale of defeat devices to Volkswagen. Denner approved, authorized, directed, ratified, and participated in the acts complained of herein. He is subject to the personal jurisdiction of this Court because he has availed himself of the laws of the United States through his management and control over Bosch LLC, as well as the design, development manufacture, distribution, testing, and sale of hundreds of thousands of the defeat devices installed in the Class Vehicles sold or leased in the U.S.

COMMON FACTUAL ALLEGATIONS

A. Volkswagen's Plot to Dominate the Automotive Market

34. Volkswagen's illegal scheme was born out of greed and ambition to dominate the global automotive market at any cost. By Volkswagen's own admissions, the seeds for the scandal were planted in 2005, as Volkswagen was repositioning its fleet in light of tightening emission regulations in our country with "a strategic decision to launch a large-scale promotion of diesel vehicles in the United States in 2005."[6] While other automakers focused on hybrid or hydrogen-fueled vehicles, Volkswagen pivoted toward "clean" diesel technology as its primary strategy to reach the growing market of environmentally-conscious consumers.

35. In 2004, the second generation Toyota Prius became an explosive success, tripling global sales from years prior and changing environmentally-friendly vehicles from a niche market to a standard consumer option. Although it was the first mainstream hybrid vehicle, the Prius was widely viewed as a "boring" vehicle, as the improvements in fuel efficiency and emissions were offset by relatively bland styling and lackluster driving performance.

36. Volkswagen took note of the success and sought to achieve the same (or better) efficiency benchmarks as the Prius, but in a "fun-to-drive," high-performance vehicle. This was

[6] *Volkswagen making good progress with its investigation, technical solutions, and Group realignment*, Volkswagen AG (Dec. 10, 2015), http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/12/VW_PK.html.

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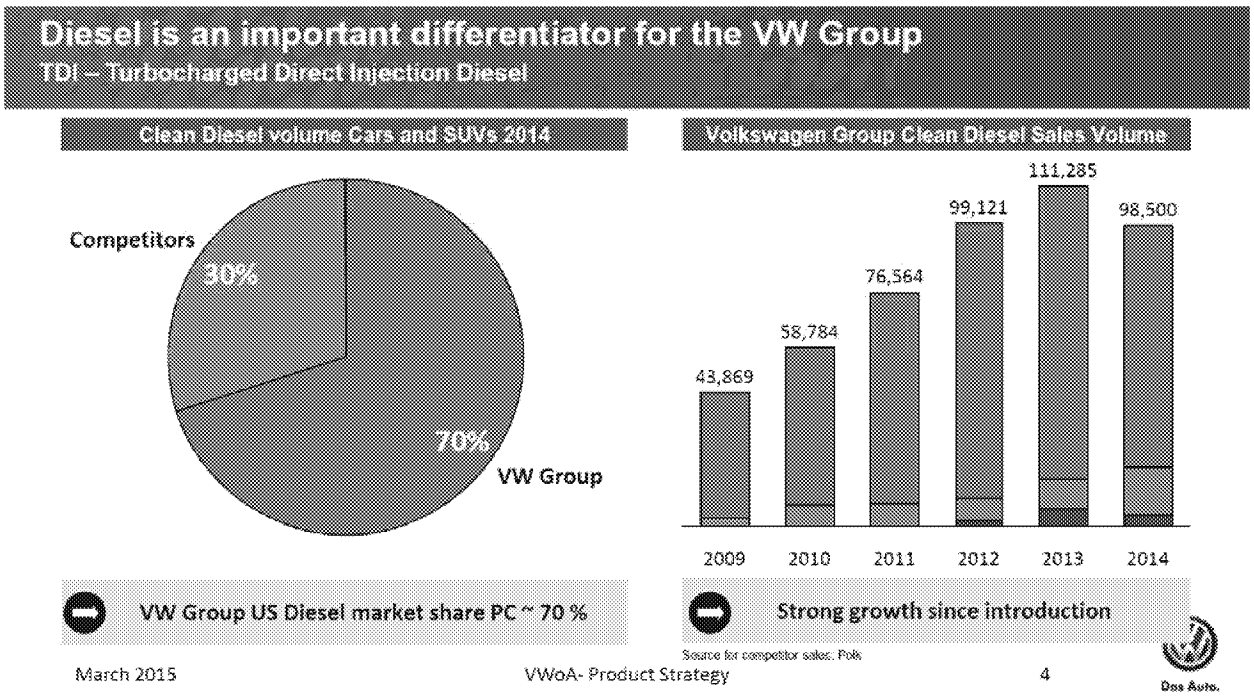
to be achieved with a supposedly remarkable breakthrough in diesel technology: the EA 189 TDI engine. Volkswagen's TDI (short for "turbocharged direct injection,") diesel engines were the culmination of millions of dollars in research and development, and were heralded as the critical factor that would be responsible for Volkswagen's growth and success in the U.S.

37. In 2007, defendant Winterkorn left his position at Audi to become VW AG's CEO. Winterkorn set goals for Volkswagen to become a world leader in automobile manufacturing. This included a target of tripling U.S. sales to at least 800,000 vehicles by 2018.[7] At the time, diesel-engine vehicles made up just 5% of the U.S. car market, and Winterkorn recognized this as the perfect opportunity to expand Volkswagen's market share. As shown below in a VW America presentation touting the success of "clean diesel," this strategy was employed with great success:[8]



38. To expand its diesel market penetration in the U.S., Volkswagen needed to overcome the stigmas associated with diesel vehicles. Foremost among these was the consumer perception that diesel engines emit thick, toxic smoke full of dangerous and destructive

[7] William Boston, *Volkswagen Emissions Investigation Zeroes In on Two Engineers*, Wall Street Journal (Oct. 5, 2015), http://www.wsj.com/articles/vw-emissions-probe-zeroes-in-on-two-engineers-1444011602.

[8] *Volkswagen AG, TDI: U.S. Market Success*, Clean Diesel Delivers (March, 2015), http://cleandieseldelivers.com/media/Douglas-Skorupski-VWoA_DTF_March2015.pdf.

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pollutants, relegated to the smog-filled cities of the past. Volkswagen claimed to have solved all of these environmental problems with the new EA 189 engine, which it aggressively marketed as the clean, green alternative to hybrid engines, such as those in the Prius.

39. Behind the scenes, however, Volkswagen realized internally that it was not possible to roll out these so-called "clean" diesel vehicles within its self-imposed budgets and engineering constraints. To get the job done, Winterkorn appointed two engineers with whom he had worked closely at Audi (Ulrich Hackenberg and Wolfgang Hatz[9]) to head up R&D and engine development for this project. These two engineers were the chief developers of the TDI engine.[10] Their primary mandate from management was to develop a diesel engine that maintained the performance of traditional gasoline engines with reduced CO_2 emissions and fuel consumption, all while meeting the strict NO_X emission standards in the U.S. Winterkorn also relied upon and worked closely with Frank Tuch, VW's head of quality assurance, who was intimately familiar with the engines and transmissions across all Volkswagen brands.

40. NO_X is a generic term for the mono-nitrogen oxides NO and NO_2 (nitric oxide and nitrogen dioxide), which are predominantly produced from the reaction of nitrogen and oxygen gases in the air during combustion. NO_X is produced by the burning of all fossil fuels, but is particularly difficult to control from the burning of diesel fuel. NO_X is a toxic pollutant, which produces smog and a litany of environmental and health problems, as detailed further below.

41. Diesel fuel is traditionally denser than gasoline, and the syrupy fuel contains longer hydrocarbon chains, which tends to produce a more efficient vehicle. In fact, diesel engines can convert over 45% of diesel's chemical energy into useful mechanical energy, whereas gasoline engines convert only 30% of gasoline's chemical energy into mechanical energy.[11] To make use of this dense diesel fuel, diesel engines combine high pressure to ignite a

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[9] Hatz, head of engine development at Volkswagen, and formerly at Audi, subsequently became head of development for Porsche.

[10] Jack Ewing, *Volkswagen Engine-Rigging Scheme Said to Have Begun in 2008*, N.Y. Times (Oct. 5, 2015), http://www.nytimes.com/2015/10/05/business/engine-shortfall-pushed-volkswagen-to-evade-emissions-testing.html.

[11] *Just the Basics, Diesel Engine*, U.S. Dept. of Energy, Office of Energy Efficiency and Renewable Energy (last visited Feb. 8, 2016), *available at* http://www1.eere.energy.gov/vehiclesandfuels/pdfs/basics/jtb_diesel_engine.pdf.

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combination of diesel fuel and air through "compression ignition," as opposed gasoline engines that typically use electric discharge from a spark plug to ignite a combination of gasoline and air through "spark ignition." Though more efficient, diesel engines come with their own set of challenges, as emissions from diesel engines can include higher levels of NO_X and particulate matter ("PM"), or soot than emissions from gasoline engines due to the different ways the different fuels combust and the different ways the resulting emissions are treated following combustion. One way NO_X emissions can be reduced by adjusting the compression and temperature, but that in turn produces PM, a similarly-undesirable hydrocarbon-based emission. Another way NO_X emissions can be reduced is through expensive exhaust gas aftertreatment devices, primarily, catalytic converters, that use a series of chemical reactions to transform the chemical composition of a vehicle's NO_X emissions into less harmful, relatively inert, and triple bonded nitrogen gas (N_2; just over 78% of the Earth's atmosphere by volume consists of N_2) and carbon dioxide (CO_2).

42. Diesel engines thus operate according to this trade-off between price, NO_X and PM, and for the EPA to designate a diesel car as a "clean" vehicle, it must produce ***both*** low PM and low NO_X. In 2000, the EPA announced stricter emission standards requiring all diesel models starting in 2007 to produce drastically less NO_X than years prior.

43. These strict emission standards posed a serious challenge to Volkswagen's engineers. In fact, during a 2007 demonstration in San Francisco, engine R&D chief Hatz lamented presciently that "[Volkswagen] can do quite a bit and we will do a bit, but 'impossible' we cannot do. . . . From my point of view, the CARB is not realistic . . . I see it as nearly impossible for [Volkswagen]."[12]

44. But it was of utmost importance for Volkswagen to achieve (or at least appear to achieve) this "impossible" goal, for it could not legally sell a single vehicle that failed comply

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[12] Danny Hakim, *et al.*, *VW Executive Had a Pivotal Role as Car Maker Struggled With Emissions*, N.Y. Times (Dec. 21, 2015), http://www.nytimes.com/2015/12/22/business/international/vw-executive-had-a-pivotal-role-as-car-maker-struggled-with-emissions.html?mtrref=undefined&gwh=7E46E42F7CCC3D687AEC40DFB2CFA8BA&gwt=pay.

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with the governmental emission regulations. Before introducing a Class Vehicle into the U.S. stream of commerce (or causing the same), Volkswagen was required to first apply for, and obtain, an EPA-administered COC, certifying that the vehicle comported with the emission standards for pollutants enumerated in 40 C.F.R. §§ 86.1811-04, 86.1811-09, and 86.1811-10.

45. The CAA expressly prohibits automakers, like Volkswagen, from introducing a new vehicle into the stream of commerce without a valid EPA COC. *See* 42 U.S.C. § 7522(a)(1). Moreover, vehicles must be accurately described in the COC application "in all material respects" to be deemed covered by a valid COC. *See* 40 C.F.R. §§ 86.1848-10(c)(6). California's emission standards were even more stringent than those of the EPA. California's regulator, CARB, requires a similar application from automakers to obtain an EO, confirming compliance with California's emission regulations, before allowing the vehicle onto California's roads.

46. Thus, in order to successfully grow the U.S. diesel market and meet its ambitious objectives, it was critical that Volkswagen develop the technology to maintain the efficient, powerful performance of a diesel, while drastically reducing NOx emissions to comply with the CAA and state emission standards.

47. This high-stakes engineering dilemma led to a deep divide within the company, as two divergent exhaust gas aftertreatment technical approaches emerged. One approach involved a selective catalytic reduction ("SCR") system that proved to be effective but expensive. The other, which utilized a lean NOx trap, was significantly cheaper but was less effective and resulted in lower fuel efficiency.

48. In 2006, Wolfgang Bernhard, then a top executive at VW AG (and former Daimler executive), advocated for the SCR system and championed a technology-sharing agreement with Mercedes-Benz and BMW to jointly develop a SCR emission control system utilizing urea— a post-combustion emission reductant generically referred to as "Diesel Exhaust Fluid" or "DEF" and marketed as "Bluetec" by Mercedes and "AdBlue" by Volkswagen and other German vehicle manufacturers. When injected into the exhaust stream in a catalyst chamber, converts NOx into nitrogen gas, water, and carbon dioxide. This SCR system was expensive, costing $350 per

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vehicle and came with other compromises, including, primarily, the need for installation of a DEF tank that would require regular refills.

49. Hatz initially supported this solution as well, stating publicly at the Detroit Auto Show in early 2007 that "Bluetec technology allows us to demonstrate Audi's commitment to always being at the very forefront of diesel technology."[13] Although the SCR system was ultimately utilized for the larger, 3.0-liter TDI engine, Hatz withdrew his support for using the system in the 2.0-liter engine as Volkswagen's leadership balked at the $350 per-vehicle cost of the SCR system. Bernhard ultimately lost the internal battle at Volkswagen and resigned.

50. Hatz remained and was tasked with implementing the alternative, lower-cost strategy for the 2.0-liter TDI engine: NO_X traps. This technology involved the storage of NO_X emissions in a catalyst substrate during vehicle operation. Once that substrate filled up, the system burned off the stored NO_X by pumping an extra burst of fuel into the cylinders, most of which passed through to the converter, where it then converts the NO_X into less harmful emissions. This method was cheaper and easier to implement than the SCR system. The NO_X trap system was less effective at reducing emissions, however, and, like the more effective SCR system used in the 3.0-liter engine, still resulted in lower miles-per-gallon fuel efficiency, directly contradicting one of the key elements (high miles-per-gallon fuel efficiency) necessary to execute Volkswagen's ambitious diesel sales goals. Accordingly, this option, too, was unacceptable.

51. But at Volkswagen, failure was not an option. According to many sources (including journalists, industry insiders, and Volkswagen whistleblowers), Volkswagen's top brass directed its engineers to find a way to meet emission standards despite tight budgetary and technical constraints, or suffer the consequences. VW AG's former CEO, Ferdinand Piëch, created "a culture where performance was driven by fear and intimidation," and his leadership was characterized as "a reign of terror."[14] Employees were told, "[y]ou will sell diesels in the

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[13] *Id.*

[14] Bob Lutz, *One Man Established the Culture That Led to VW's Emissions Scandal*, Road & Track (Nov. 4, 2015), http://www.roadandtrack.com/car-culture/a27197/bob-lutz-vw-diesel-fiasco/.

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U.S., and you will not fail. Do it, or I'll find somebody who will."[15] Piëch was infamous for firing subordinates who failed to meet his exacting standards: "Stories are legion in the industry about Volkswagen engineers and executives shaking in their boots prior to presentations before Piech, knowing that if he was displeased, they might be fired instantly."[16] And so it seems, out of self-preservation, the defeat device scandal was born.

B. Defendants' Illegal "Defeat Device" Scheme

52. Volkswagen engineers had to find a solution to the "impossible" problem of passing stricter emission standards while maintaining performance and fuel efficiency, all while hamstrung by cost-cutting measures. And it had to be done fast, because the new diesel vehicles were scheduled for imminent release in the U.S.

53. Ultimately, time ran out, and Volkswagen executives and engineers were either unable or unwilling to devise a solution within the constraints of the law and their self-imposed cost-cutting measures. So instead of being honest (and risk being summarily fired), they and others conspired to cheat by installing a "defeat device" in the new diesel vehicles so that those vehicles could "pass" the EPA and CARB emission testing, and Volkswagen could obtain COCs and EOs to sell the vehicles to make its sales targets throughout the U.S and in California.

54. Volkswagen had a ready-made solution at hand. As reported by the New York Attorney General, starting as far back as 1999, Audi engineers had come up with a similar solution to a problem they were facing related to the development of the 3.0-liter diesel engine for Audi models sold in Europe. The engineers had eliminated a noise problem associated with diesel engines by injecting additional fuel into the engine on ignition. But as a result, the engine could not meet European emissions standards during testing. To solve this problem, they developed defeat device software that could recognize when the car was being tested and deactivate the fuel injection function during testing, then reactivate it during normal driving conditions. From 2004-2008, Audi incorporated the defeat device software in its 3.0-liter diesel

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[15] *Id.*

[16] Doron Levin, *The man who created VW's toxic culture still looms large*, Fortune (Oct. 16, 2015), http://fortune.com/2015/10/16/vw-ferdinand-piech-culture/.

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engines sold in Europe. Since the defeat device software was related to the goal of reducing engine noise, it became known as the "Acoustic Function" or, in German, the "Akustikfunktion."

55. When it became clear that the 2.0-liter TDI engine being developed for the U.S. market could not meet U.S. emission regulations, and initial emission testing failed, the launch of the Jetta TDI "clean" diesel, initially scheduled for 2007, had to be delayed.[17] The prospect of failure was unacceptable, so Volkswagen decided to cheat instead. Starting in the mid-2000s, Volkswagen engineers, working with Bosch—as detailed further below—and with the knowledge of management, adapted Audi's "akustikfunktion" concept to the 2.0-liter and 3.0-liter diesel engines for Volkswagen, Audi, and Porsche models to be sold in the U.S. It has been reported that the decision to cheat the EPA, CARB, and countless other regulators worldwide was an "open secret" in Volkswagen's engine development department,[18] as it was necessary for the "EA 189 engine to pass U.S. diesel emissions limits within the budget and time frame allotted."[19] The resulting defeat device was incorporated into the software required to operate the 2.0-liter and 3.0-liter TDI engines in the Class Vehicles.

56. As explained further below, the defeat device that Defendants installed in the Class Vehicles to evade emission testing is software code residing the vehicles' control unit. All modern engines are integrated with sophisticated computer components to manage the vehicle's operation, such as, in the case of diesel vehicles, an electronic diesel control ("EDC"). The EDC equipped in the Class Vehicles is formally referred to as the Electronic Diesel Control Unit 17 (also known as "EDC Unit 17," "EDC 17," and "EDC17"). Defendant Bosch tested, manufactured, and sold customized EDC Unit 17's to Volkswagen for use in the Class Vehicles.

57. The EDC Unit 17 was widely used throughout the automotive industry, including by BMW and Mercedes, to operate modern "Clean Diesel" engines. Bosch worked with each

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[17] *VW delays Jetta TDI diesel into the US*, Clean MPG (last visited Feb. 8, 2016), http://www.cleanmpg.com/community/index.php?threads/7254/.

[18] Georgina Prodham, *Volkswagen probe finds manipulation was open secret in department*, Reuters (Jan. 23, 2016), http://www.reuters.com/article/us-volkswagen-emissions-investigation-idUSKCN0V02E7.

[19] Jay Ramey, *VW chairman Poetsch: Company 'tolerated breaches of rules'*, Autoweek (Dec. 10, 2015), http://autoweek.com/article/vw-diesel-scandal/vw-chairman-poetsch-company-tolerated-breaches-rules.

vehicle manufacturer that utilized a EDC Unit 17 to create a unique set of specifications and software code to manage the vehicle's engine operation.

58. With respect to the Class Vehicles, however, EDC Unit 17 was also used to surreptitiously evade emissions regulations. Bosch and Volkswagen worked together to develop and implement a specific set of software algorithms for implementation in the Class Vehicles, including algorithms to adjust fuel levels, exhaust gas recirculation, air pressure levels, and urea injection rates.[20]

59. Bosch's EDC Unit 17 was necessary for the Class Vehicles to "pass" emission tests in the U.S. When carmakers test their vehicles against EPA emission standards, they place their cars on dynamometers (large rollers) and then perform a series of specific maneuvers prescribed by federal regulations. Bosch's EDC Unit 17 allowed the Class Vehicles to detect test scenarios by monitoring vehicle speed, acceleration, engine operation, air pressure and even the position of the steering wheel. When the EDC Unit 17's detection algorithm detected that the vehicle was on a dynamometer (and undergoing an emission test), additional software code within the EDC Unit 17 downgraded the engine's power and performance and upgraded the emissions control systems' performance by switching to a "dyno calibration," temporarily reducing emissions to legal levels. Once the EDC Unit 17 detected that the emission test was complete, the EDC Unit would then enable a different "road calibration" that caused the engine to return to full power while reducing the emissions control systems' performance, and consequently, caused the car to spew the full amount of illegal NO_X emissions out on the road.[21] This process is illustrated in the following diagram:

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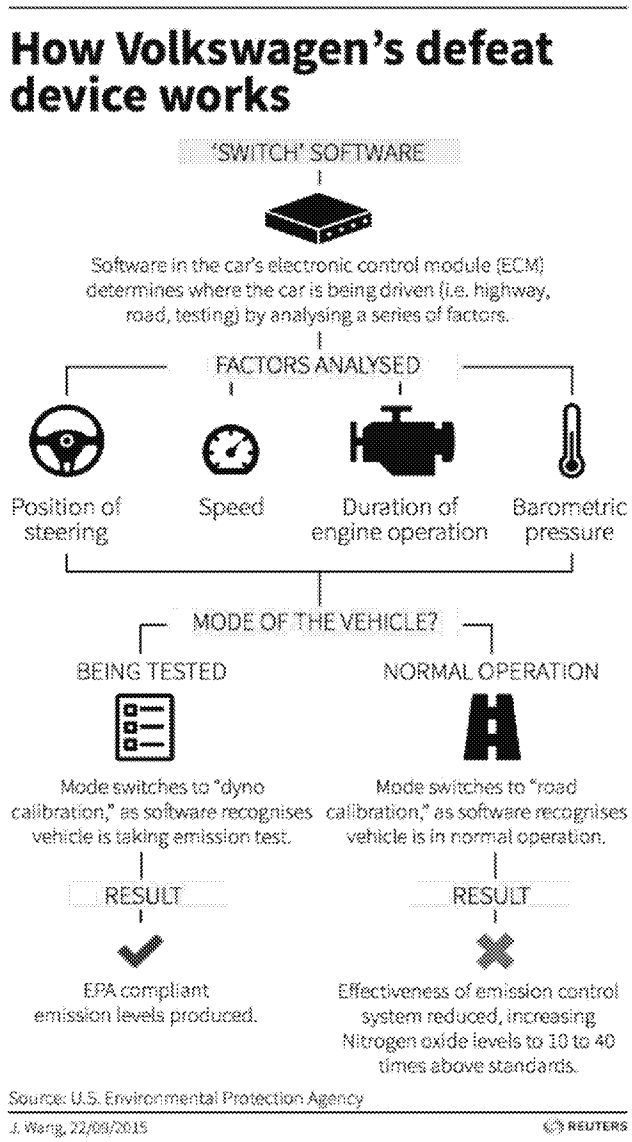
[20] *See, e.g.*, *Engine management*, Bosch Auto Parts (last visited February 8, 2016), http://de.bosch-automotive.com/en/parts_and_accessories/motor_and_sytems/diesel/engine_management_2/engine_control_unit_1.

[21] Russell Hotten, *Volkswagen: The scandal explained*, BBC (Dec. 10, 2015), http://www.bbc.com/news/business-34324772.



60. Make no mistake: this workaround was highly illegal. And, according to the New York Attorney General, Volkswagen management was well aware of this fact, as they studied the issue extensively during 2006-2007 when preparing to launch their vehicles in the U.S. market.

61. The CAA expressly prohibits "defeat devices," defined as any auxiliary emission control device "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use." 40 C.F.R. § 86.1803-01; *see also id.*, § 86.1809-10 ("No new light-duty vehicle, light-duty truck, medium-duty passenger vehicle, or complete heavy-duty vehicle shall be equipped with a defeat device."). Moreover, the CAA prohibits the sale of components used as defect devices, "where

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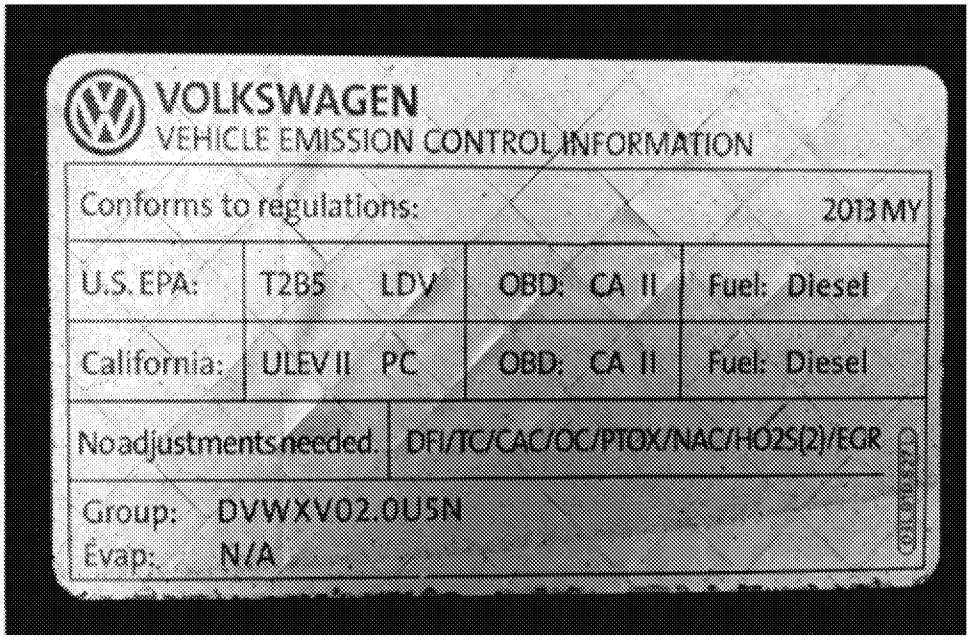
the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." 42 U.S.C. § 7522(a)(3). Finally, in order to obtain a COC, automakers must submit an application, which lists all auxiliary emission control devices installed in the vehicle, a justification for each, and an explanation of why the control device is not a defeat device.

62. Thus, in order to obtain the COCs necessary to sell their vehicles, Volkswagen did not disclose, and affirmatively concealed, the presence of the test-detecting and performance altering software code within the EDC Unit 17 from government regulators, thus making that software an illegal "defeat device." In other words, Volkswagen lied to the government, its customers, and the public at large. An example of one of Volkswagen's vehicle stickers reflecting its fraudulently-obtained COCs is pictured below:



63. Because the COCs were fraudulently-obtained, and because the 2.0-liter and 3.0-liter Class Vehicles did not conform "in all material respects" to the specifications provided in the COC applications, the Class Vehicles were never covered by a valid COC, and thus, were never legal for sale, nor were they EPA and/or CARB compliant, as represented. Volkswagen hid these facts from the EPA, other regulators, and consumers, and it continued to sell and lease the 2.0-liter and 3.0-liter Class Vehicles to the driving public, despite their illegality.

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64. Volkswagen knew better—VW America itself is a recidivist violator of the CAA. In July of 1973, the EPA sought legal action against VW America from the DOJ based on a claim that defeat devices were installed in 1973 Volkswagen vehicles. The matter was swiftly settled for $120,000 the following year.[22] And, in June of 2005, VW America entered into a consent decree with the DOJ, wherein it paid a $1.1 million penalty for failing to notify the EPA of emissions problems in certain vehicles manufactured by VW in Mexico.[23]

65. Volkswagen cheating continued. With respect to the Class Vehicles, Volkswagen hid the fact of the defeat devices from the EPA, such that the COCs were fraudulently obtained. Specifically, VW America submitted COC applications on behalf of VW AG, Audi AG, and itself, for the 2.0-liter and VW-and Audi-branded 3.0-liter Class Vehicles, describing compliant specifications and concealing the dual-calibration strategy of the defeat device. Similarly, Porsche America submitted COC applications on behalf of Porsche AG and itself for the Porsche-branded 3.0-liter Class Vehicles, describing compliant specifications and concealing the dual-calibration strategy of the defeat device. VW America coordinated the submission of these and other regulatory submissions with Audi and Porsche to ensure that discrepancies among the companies' submissions did not alert regulators to emission problems with the Class Vehicles.[24] Executives from the companies even devised a policy of cross brand communication and coordination to minimize the risk that U.S. regulators would learn of fraudulent representations contained in regulatory filings.[25] But, the Class Vehicles differed in "material respects" from the specifications described in the COC applications because they were equipped with undisclosed auxiliary emissions control devices, specifically, the software code described above, that functioned as an illegal "defeat device."

66. Because the COCs were fraudulently obtained, the Class Vehicles were never covered by valid COCs, and thus, were never offered legally for sale. Volkswagen hid these facts

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[22] Rich Gardellsa, *et al.*, *VW had previous run-in over 'defeat devices'*, NBC News (Sept. 23, 2015), http://www.cnbc.com/2015/09/23/vw-had-previous-run-in-over-defeat-devices.html.

[23] Consent Decree, *United States v. Volkswagen of Am., Inc.*, Case No. 1:05-cv-01193-GK (D.D.C. June 15, 2005 and Nov. 4, 2005), ECF Nos. 1-2.

[24] VW-MDL2672-00570461

[25] VW-MDL2672-00412718

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from the EPA, CARB and other regulators, and consumers, and it continued to sell and lease the illegal Class Vehicles to the public with the help of Bosch.

C. Bosch Played a Critical Role in the Defeat Device Scheme

67. Discovery of Bosch has just begun, but the evidence already proves that Bosch played a critical role in scheme to evade U.S. emission requirements in the Class Vehicles.[26] ***In 2008, Bosch wrote Volkswagen and expressly demanded that Volkswagen indemnify Bosch for anticipated liability arising from the use of the Bosch-created "defeat device" (Bosch's words), which Bosch knew was "prohibited pursuant to . . . US Law."***[27] Volkswagen apparently refused to indemnify Bosch, but Bosch nevertheless continued to develop the so-called "akustikfunktion" (the code name used for the defeat device) for Volkswagen for another seven years. During that period, Bosch concealed the defeat device in communications with U.S. regulators once questions were raised about the emission control system in the Class Vehicles, and went so far as to actively lobby lawmakers to promote Volkswagen's "Clean Diesel" system in the U.S. Bosch's efforts, taken together with evidence of Bosch's actual knowledge that the "akustikfunktion" operated as an illegal defeat device, demonstrate that Bosch was a knowing and active participant in the decade-long illegal enterprise to defraud U.S. consumers.

1. Volkswagen and Bosch Conspire to Develop the Illegal Defeat Device

68. Bosch tightly controlled development of the control units in the Class Vehicles, and actively participated in the development of the defeat device.

69. As discussed above, Bosch introduced a new generation of diesel ECUs for Volkswagen. The development of the EDC17 was a massive undertaking, which began years before Volkswagen began its push into the U.S. market. At least twenty Bosch engineers were working full-time on writing the code for the EDC17 in the 2001 time frame. By 2004, long before the November 20, 2006 meeting at which Volkswagen apparently decided to use the defeat

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[26] Plaintiffs' detailed and specific allegations against Bosch are based almost entirely on information produced by Volkswagen, publicly-available documents, and Plaintiffs' own research. Bosch has produced a small number of documents, none of which merit consideration for Plaintiffs' allegations against Bosch.

[27] VW-MDL2672-02570091 (English translation) (emphasis added).

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device to "pass" emission certification standards in the U.S., Bosch and Volkswagen had already entered into preliminary agreements for further development of the EDC17.[28]

70. A February 28, 2006, Bosch press release introduced the "New Bosch EDC17 engine management system" as the "brain of diesel injection" which "controls every parameter that is important for effective, low-emission combustion." The EDC17 offered "[e]ffective control of combustion" and a "[c]oncept tailored for all vehicle classes and markets." In the press release, Bosch touted the EDC17 as follows:

> **EDC17: Ready for future demands**
> Because the computing power and functional scope of the new EDC17 can be adapted to match particular requirements, it can be used very flexibly in any vehicle segment on all the world's markets. In addition to controlling the precise timing and quantity of injection, exhaust gas recirculation, and manifold pressure regulation, it also offers a large number of options such as the control of particulate filters or systems for reducing nitrogen oxides. The Bosch EDC17 determines the injection parameters for each cylinder, making specific adaptations if necessary. This improves the precision of injection throughout the vehicle's entire service life. The system therefore makes an important contribution to observing future exhaust gas emission limits.[29]

71. Bosch's EDC17 was the technology behind Volkswagen's ambition. The EDC17 and the development of its underlying software were integral to Volkswagen's entire diesel strategy, which by late 2006 included creating software to sense when the vehicles were in test mode and then manipulate the emission control system at that time. This could not have been accomplished without years of collaborative work with Bosch.

72. As early as February 2005, an internal feasibility study drafted by Ulrich Hackenberg (Audi Development Chief) mentioned Bosch's EDC17 as part of a strategy to reduce diesel vehicle emissions of nitrogen oxides ("NOx") by creating a change in engine electronics.[30]

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[28] *See* PowerPoint presentation at VW-MDL2672-02559528. This internal Volkswagen PowerPoint describes the "akustikfunktion" as activated in "recognition of emission related environment conditions" and proposed it as a solution to the "registration/certification [problem] in the US."

[29] *See* Feb. 28, 2006 Bosch press release, "The brain of diesel injection: New Bosch EDC17 engine management system," http://www.bosch-presse.de/presseforum/details.htm?txtID=2603&locale=en.

[30] VW-MDL2672-00744825.

The study discussed diesel strategies in the U.S. market in light of tightening U.S. emission standards. As discussed above, shortly after the cheating scandal became public, Volkswagen suspended Hackenberg, and he later resigned.[31]

73. Bosch made clear that the EDC17 was not one-size-fits-all. Instead, it was a "[c]oncept tailored for all vehicle classes and markets" that could "be adapted to match particular requirements [and] … be used very flexibly in any vehicle segment on all the world's markets." The EDC17 was tailored and adapted by modifying the sophisticated software embedded within the electronic control unit ("ECU"). Bosch manufactured, developed, and provided the ECU and its base of software to Volkswagen for the Class Vehicles.

74. Bosch and Volkswagen worked together closely to modify the software, and to create specifications for each vehicle model. Indeed, customizing a road-ready ECU is an intensive three- to five-year endeavor involving a full-time Bosch presence at an automaker's facility. Bosch and its customers work so closely that Bosch purposefully locates its component part manufacturing facilities close to its carmaker customers' manufacturing plants.

75. All Bosch ECUs, including the EDC17, run on complex, highly proprietary engine management software over which Bosch exerts near-total control. In fact, the software is typically locked to prevent customers, like Volkswagen, from making significant changes on their own. The defeat device was just such a software change—one that would allow modifications to the vehicle's emission control to turn on only under certain circumstances—that Volkswagen could not have made without Bosch's participation.

76. Bosch's security measures further confirm that its customers cannot make significant changes to Bosch software without Bosch involvement. Bosch boasts that its security modules protect vehicle systems against unauthorized access in every operating phase, meaning that no alteration could have been made without either a breach of that security—and no such claims have been advanced—or Bosch's knowing participation.[32]

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[31] Jack Ewing, *Audi Executive Resigns After Suspension over VW Emissions Scandal*, NY. Times (Dec. 4, 2015), http://www.nytimes.com/2015/12/05/business/international/ulrich-hackenberg-suspended-over-volkswagen-emissions-scandal-resigns.html.

[32] *Reliable Protection for* ECUs (May 12, 2016), https://www.escrypt.com/company/single-

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77. Unsurprisingly, then, at least one car-company engineer has confirmed that Bosch maintains absolute control over its software as part of its regular business practices:

> I've had many arguments with Bosch, and they certainly own the dataset software and let their customers tune the curves. Before each dataset is released it goes back to Bosch for its own validation.
>
> Bosch is involved in all the development we ever do. They insist on being present at all our physical tests and they log all their own data, so someone somewhere at Bosch will have known what was going on.
>
> All software routines have to go through the software verification of Bosch, and they have hundreds of milestones of verification, that's the structure . . . .
>
> The car company is *never* entitled by Bosch to do something on their own.[33]

78. Thus, Bosch cannot convincingly argue that the development of the "akustik" device was the work of a small group of rogue engineers.

79. In fact, Volkswagen's and Bosch's work on the EDC17 reflected a highly unusual degree of coordination. It was a massive project that required the work of numerous Bosch coders for a period of more than ten years, or perhaps more.[34] Although Bosch publicly introduced the EDC17 in 2006, it had started to develop the engine management system years before.[35]

80. The size and complexity of the undertaking is captured by a spreadsheet that lists entries for work done by Volkswagen and Bosch employees on the EDC17 from late 2003 to 2009. Each entry is given one of six descriptors: enhancement, new feature, service, support,

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news/detail/reliable-protection-for-ecus/.

[33] Michael Taylor, *EPA Investigating Bosch over VW Diesel Cheater Software*, Car and Driver (Nov. 23, 2015), http://blog.caranddriver.com/epa-investigating-bosch-over-vw-diesel-cheater-software/.

[34] Approximately 50,000 of Bosch's 375,000 employees worked in the diesel-technology operations branch of Bosch, and Volkswagen was the biggest diesel manufacturer in the world. *See Bosch Probes Whether Its Staff Helped VW's Emissions Rigging*, Automotive News (Jan. 27, 2016), http://www.autonews.com/article/20160127/COPY01/301279955/bosch-probes-whether-its-staff-helped-vws-emissions-rigging.

[35] Feb. 28, 2006 Bosch press release, "The brain of diesel injection: New Bosch EDC17 engine management system," http://www.bosch-presse.de/presseforum/details.htm?txtID=2603&locale=en.

integration, or bug/defect. In total, the spreadsheet contains 8,565 entries and lists hundreds of Bosch individuals.[36]

81. The joint enterprise is also memorialized in a series of agreements between Bosch and Volkswagen dating back to as early as mid-2005, reflecting negotiations that date prior to January, 2005. On April 7, 2005, for example, Bosch GmbH's Ulrich Gralka and Dr. Holfelder executed the "Framework Development Agreement for Software Sharing in EDC/MED17 Control Unit Projects from the Robert Bosch (RB) Diesel Systems (DS) And Gasoline Systems (GS) Motor Vehicle Units." VW AG countersigned the agreement on September 26, 2005. Importantly, the agreement defined software sharing as "the handing over of BOSCH software in the form of object code by BOSCH to VW, so that VW can use this BOSCH software as a basis for developing VW modules for specific EDC/ME(D)17 projects using software development environments from BOSCH." The agreement states that "[p]roviding the VW modules and integrating them to form a complete software product requires close cooperation between the Parties."

82. The contract also outlined responsibilities for software sharing and co-development. Throughout development, the contract dictated, Bosch was to retain control over the software. While Bosch provided (and owned) the object code, and Volkswagen developed (and owned) the modules, the parties agreed that "BOSCH carries out any modifications to the BOSCH software that are necessary in order to integrate the intended VW modules at the expense of VW." The agreement further specifies that Bosch would monitor the software, test the implementation of Volkswagen modules, and grant written approval to Volkswagen modules. Only if everything met Bosch's standards would it then "deliver[] the final complete software product for VW to use in combination with a BOSCH control unit."[37] Thus, Bosch needed to conduct extensive testing before delivering the product to V.

83. Yet another document demonstrates the tight grip that Bosch maintained over EDC17 software and any modifications made to it. On February 20, 2006, VW AG and Bosch

[36] VW-MDL2672-02559780.

[37] Volkswagen produced an English translation of the agreement at VW-MDL2672-03752699.

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(signed by Bosch GmbH's Dr. Steffen Berns, Senior Vice President of the Diesel Systems division), entered into a supplemental agreement concerning the use of "expanded software" documentation for the EDC17 and EDC16 (its predecessor).[38] Pursuant to this agreement, Bosch identified 35 named individuals, affiliated with either VW AG or IAV (Ingenieurgesellschaft Auto und Verkehr), who were granted access to expanded documentation for the EDC17 for specific functions relating to emissions. Any changes to the list of persons to be given access required the explicit consent of Bosch GmbH, and the access was temporary and non-transferable. Critically, the agreement stated that "[t]his right of use shall not include the right to the change, modify or use the DOCUMENTATION with third-party control units."[39] Bosch thereby tightly controlled both who could access the expanded documentation and the scope of their use of such materials.

84. A later agreement between Bosch GmbH and Volkswagen, this one from a June 12, 2006, governed the implementation, integration, project management, and delivery of certain EDC 17 software functions for diesel vehicles that VW AG had requested from Bosch. This agreement, too, made clear that any changes not explicitly detailed in the agreement would require further approval from Bosch.

85. Along the same lines, several years later, in a February 5, 2011 agreement, Bosch granted VW AG a license to further develop Bosch Denoxtronic functions for the treatment of exhaust from diesel engines. Again, the contract is clear that Bosch maintains rights over the Denoxtronic functions.

86. To recap, as the EA 189 project moved to series production in 2009, Bosch's documented role was to provide to Volkswagen executable software for installation in the EDC17 controller at the VW production line.[40] Bosch insisted that Bosch control the definition of the EDC17 software, that Bosch test the software using bench top and vehicle testing, that Bosch produce the final software release for series production, and that Bosch deliver the software to

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[38] Volkswagen produced an English translation of the agreement at VW-MDL2672-03752757.
[39] VW-MDL2672-03752757.
[40] VW-MDL2672-03752699.

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Volkswagen for installation in the EA 189 engines used in the Class Vehicles. Bosch's firm control over the development of and modifications to EDC17 is undeniable. It is inconceivable, then, that Bosch did not know that the software it was responsible for defining, developing, testing, maintaining and delivering contained an illegal defeat device.

87. In fact, Bosch was in on the secret and knew that Volkswagen was using Bosch's software algorithm as an "on/off" switch for emission controls when the Class Vehicle was undergoing testing. As noted above, it has been said the decision to cheat was an "open secret" at Volkswagen.[41] It was an "open secret" at Bosch as well.

88. Volkswagen and Bosch personnel employed code language for the defeat device, referring to it as the "acoustic function" (in German, "akustikfunktion"). As described above, the roots of the "akustikfunktion"—and likely the cheating—can be traced back to the late 1990's when Audi devised software called the "akustikfunktion" that could switch off certain functions when the vehicle was in a test mode.[42] The "akustik" term is derived from the function's ability to modify the noise and vibration produced by the engine. News articles report that, in 2006, VW AG further developed this "akustikfunktion" for the Class Vehicles.[43]

89. Written communications between and within Bosch and Volkswagen describe the "akustikfunktion" in surprising detail. In emails sent as early as July 2005 from VW AG's Andreas Specht to Bosch's Kilian Bucher, Tobias Lang, Michael Moeker, and Carlos Alvarez,

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[41] Georgina Prodham, *Volkswagen probe finds manipulation was open secret in department*, Reuters (Jan. 23, 2016), http://www.reuters.com/article/us-volkswagen-emissions-investigation-idUSKCN0V02E7. *See also* Jay Ramey, *VW chairman Poetsch: Company 'tolerated breaches of rules'*, Autoweek (Dec. 10, 2015), http://autoweek.com/article/vw-diesel-scandal/vw-chairman-poetsch-company-tolerated-breaches-rules (it was necessary for the "EA 189 engine to pass U.S. diesel emissions limits within the budget and time frame allotted.").

[42] https://global.handelsblatt.com/edition/413/ressort/companies-markets/article/dieselgates-roots-stretch-back-to-audi?ref=MTI5ODU1.

[43] Volkswagen Probe Finds Manipulation Was Open Secret in Department: Newspaper", *Reuters* (Jan. 23, 2016), http://www.reuters.com/article/us-volkswagen-emissions-investigation-idUSKCN0V02E7. VW Group Chairman, Hans Dieter Poetsch, explained that a small group of engineers and managers was involved in the creation of the manipulating software. *See* VW Chairman Poetsch: Company 'Tolerated Breaches of Rules'", *Auto Week* (Dec. 10, 2015), http://autoweek.com/article/vw-diesel-scandal/vw-chairman-poetsch-company-tolerated-breaches-rules. *See also* "Scandal Explained", *BBC*, Dec. 10, 2015, http://www.bbc.com/news/business-34324772; Sept. 18, 2015, http://www.autocar.co.uk/car-news/industry/vw-emissions-scandal-how-volkswagens-defeat-device-works.

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Specht discussed emissions measurements from vehicles using the "akustikfunktion" in connection with U.S. emission compliance.[44] A February 2014 PowerPoint prepared by VW AG explained that the akustikfunktion measured speed, acceleration, and engine operation to determine whether a vehicle is undergoing testing.[45]

90. On November 13, 2006, VW AG's Dieter Mannigel (Software Design, U.S. Diesel Engines, Drivetrain Electronics) circulated via email a PowerPoint presentation prepared for VW AG's Rudolf Krebs (who joined Volkswagen from Audi in 2005) about how the "akustikfunktion" is activated and deactivated in recognition of emissions-related environmental conditions, such as temperature and pressure. The presentation explained that the existing vehicles functioning with different drive cycles could not pass U.S. emission tests, and thus proposed the release of the "akustikfunktion" to be driving dependent.[46]

91. On November 20, 2006, Mannigel emailed his colleagues to summarize a meeting with Krebs, at which the PowerPoint described above was likely presented. Krebs had emphasized the importance of not getting caught by U.S. regulators using the "akustikfunktion," and warned that the function must be explainable to regulators. Krebs was skeptical about using the akustikfunktion in the U.S. market due to potential regulatory and legal exposure, and Mannigel was nervous that regulators would be able to detect the "akustikfunktion." Nevertheless, Mannigel reported, Volkswagen was going ahead with the expanded "akustikfunktion" with Bosch.[47] It is likely this was the meeting at which VW decided to use the "akustikfunktion" as a defeat device to evade compliance with U.S. emission requirements.

92. Well after the defeat device was developed and integrated into hundreds of thousands of Class Vehicles, Volkswagen and Bosch continued to work together to refine and maintain it. For example, both Bosch and Volkswagen were involved in the calibration of the

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[44] VW-MDL2672-02559611.

[45] VW-MDL2672-02572122.

[46] VW-MDL2672-02559527. The email attached an internal Volkswagen PowerPoint that describes the "akustikfunktion" as activated in recognition of emission related environment conditions and proposed it as a solution to the registration emissions certification problems in the U.S. (VW-MDL2672-02559528)

[47] VW-MDL2672-02559526.

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defeat devices for the Class Vehicles. A November 2014 email from VW AG's Juergen Hintz, entitled "Akustikfunktion," relayed a telephone call with Bosch's Kratt about the "akustikfunktion" and Volkswagen's role. VW AG's C. Arenz responded that while he had been responsible for the operation of the "akustikfunktion," Bosch was responsible for its calibration. In fact, Arenz disclosed that he planned to meet with Bosch (along with Michael Brand) about calibrating the "akustikfunktion" the following week.[48] In another email, Hintz wrote that Bosch's Kratt told him that Bosch would be making certain changes to the "akustikfunktion" based on Volkswagen's specifications.[49]

93. In sum, Bosch worked hand-in-glove with Volkswagen to develop and maintain the akustikfunktion/defeat device.[50]

2. Volkswagen and Bosch Conspire to Conceal the Illegal "Akustikfunktion"

94. By 2007, and likely earlier, Bosch was critical not only in developing the "akustikfunktion," but also in concealing it. On March 9, 2007, Bosch's Guenther Berger emailed VW AG's Mathias Klaproth (a technical developer) and Mannigel with the subject of "Erweiterungen Akustikfunktion" (in English, "Further Development of the Acoustic Function").[51] ***Berger confirmed that Bosch would remove the description of the enhanced "akustikfunktion" from Volkswagen's fuel pump specification sheets D2250 and D2278.*** Klaproth and Mannigel agreed not to list the function in documentation in the U.S., but disagreed whether to disclose it in Europe. Klaproth then took Berger off the email chain and insisted the "akustikfunktion" would be applied to the European projects, to which Mannigel responded that he would contact Klaproth off-line.

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[48] VW-MDL2672-02569895.

[49] Translation at 00387135.

[50] From the information available to date, it appears that at least nine individuals from Bosch were involved in the scheme to develop the illegal defeat device: Bucher, Lang, Moeker, and Alvarez (based on a July 2005 email from VW AG's Specht); Berger (based on a March 2007 email with VW AG's Klaproth and Mannigel); Schuetz, Pfeifle, and Richardt (based on a June 2, 2008 letter attempting to limit Bosch's liability); and Kratt (recipient of the letter attached to VW AG's June 6, 2008 response). VW-MDL2672-02570091; VW-MDL2672-02559611; VW-MDL2672-02559515.

[51] VW-MDL2672-02559515.

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95. Bosch was concerned about getting caught participating in the defeat device fraud. As reported in the German newspaper, *Bild am Sonntag*, and a French publication, a Volkswagen internal inquiry found that in 2007 Bosch warned Volkswagen by letter that using the emissions-altering software in production vehicles would constitute an "offense."[52,53]

96. Bosch expressed similar concerns that use of the defeat device it had created would violate U.S. law. These concerns culminated in a June 2, 2008, letter from Bosch's Dieter Schuetz to Volkswagen's Thorsten Schmidt in which Bosch demanded that Volkswagen indemnify Bosch for any liability arising from the creation of a "defeat device," as Bosch itself called it in English. Through the letter, Bosch sought to clarify the roles and responsibilities of Volkswagen and Bosch regarding the development of the EDC 17, and demanded that Volkswagen indemnify Bosch for any legal exposure arising from work on the defeat device:

> The further development [of the EDC17] requested by your company will result, in addition to the already existing possibility of activating enriched data manually, ***in an additional path for the potential to reset data to act as a "defeat device."*** We ask you to have the attached disclaimers executed by your company.[54]

The letter uses the words "defeat device" in English, and further explained that "**[t]he usage of a defeat device is prohibited pursuant to . . . US Law (CARB/EPA)** (see definition footnote 2)."[55]

97. Bosch's June 2, 2008 letter also warned Volkswagen that the software modifications Volkswagen requested could allow "the certified dataset [to be] replaced with another, possibly non-certified data set[,]" which could, in turn, cause "the vehicle's general operating license (registration) [to] become void."[56] Creating two data sets on emission

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[52] Automotive News (Sept. 27, 2015) (http://www.autonews.com/article/20150927/COPY01/309279989/bosch-warned-vw-about-illegal-software-use-in-diesel-cars-report-says); VW Scandal: Company Warned over Test Cheating Years Ago", *BBC*, Sept. 27, 2015, http://www.bbc.com/news/business-34373637.

[53] http://www.autonews.com/article/20150927/COPY01/309279989/bosch-warned-vw-about-illegal-software-use-in-diesel-cars-report-says

[54] VW-MDL2672-02570091 (English translation) (emphasis added).

[55] *Id.* at -92 (emphasis added).

[56] *Id.* at -93.

compliance was illegal under U.S. law. Bosch knew this, and that is why it requested indemnification from Volkswagen.

98. Helmut Pfeifle and Heike Richardt at Bosch signed the proposed indemnification; the signature lines for Volkswagen were left blank. When Volkswagen's Hermann Middendorf responded to Alfred Kratt at Bosch. He did not deny the existence of a defeat device, but instead attacked Bosch for involving "the lawyers."

99. Discovery is ongoing, and Plaintiffs do not have a full record of what unfolded in response to Bosch's June 2, 2008 letter. However, it is indisputable that Bosch continued to develop and sell to Volkswagen hundreds of thousands of the defeat devices for U.S. vehicles following Bosch's express, written recognition that its software was being used in the Class Vehicles as a "defeat device" that was "prohibited pursuant to . . . US Law."

100. VW AG and Bosch continued over the next few years to refine the defeat device. This was a lengthy and complicated process that required concealing its existence from the onboard diagnostic system, which was intended to report emission controls to comply with U.S., and particularly California's, requirements. In a July 18, 2011 email, Audi's Olaf Busse proposed tying the activation of the "akustikfunktion" more directly to steering angle, instead of vehicle temperature, which was proving to be problematic. This request coincided with inquiries from CARB about on-board diagnostics issues. VW AG's Hanno Jelden (Head of Powertrain Electronics), worried that the change would be too obvious and could not be explained to regulators.[57]

101. Defendant Denner and the other Individual Defendants were also in on the secret. Notes from a May 28, 2014 meeting between Bosch and Volkswagen executives at VW headquarters reflect that the topic of "akustikfunktion" was discussed in the context of Volkswagen's and Bosch's partnership in the U.S. market. VW AG's Friedrich Eichler (Powertrain Development Chief) mentioned the importance of the "akustikfunktion" in Bosch diesel engines. Bosch participants at the meeting included Defendant Denner, as well as Rolf

[57] VW-MDL2672-0259489. Jelden was subsequently suspended in connection with the emissions scandal.

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Bulander, Dirk Hoheisel, Markus Heyn, Scheider, Kampmann, Fetzer, Philipp, Hammer, Mader, Hubner, Karakas, Schirm, and Frese. For VW AG, Defendant Winterkorn was also present.[58]

3. Volkswagen and Bosch Conspire in the U.S. and Germany to Elude U.S. Regulators

102. The purpose of the defeat device was to evade stringent U.S. emissions standards. Once Bosch and VW perfected the defeat device, therefore, their attention turned to deceiving U.S. regulators.

103. Evidence already shows that Bosch GmbH employees expressly conspired with VW to hide the function of the defeat device. Shortly after the March 2007 email exchange detailed above, in which VW AG's Klaproth and Mannigel confirmed to Bosch GmbH's Berger that the "akustikfunktion" would not be listed in the U.S. documentation for the Class Vehicles, an internal email from VW AG's Frank Alich (Development, OBD Diesel) to various individuals at VW AG about scheduling a May 9, 2007 meeting, lamented the trouble distinguishing between acoustic and non-acoustic modes relating to soot simulation. Alich complained that he did not know how he would explain the problem to CARB.[59]

104. Bosch's North American subsidiary, Defendant Bosch LLC, was also part of and essential to the fraud. Bosch LLC worked closely with Bosch GmbH and Volkswagen, in the United States and in Germany, to ensure that the non-compliant Class Vehicles passed U.S. emission tests. As set forth below, Bosch LLC employees frequently communicated with U.S. regulators, and actively worked to ensure the Class Vehicles were approved by regulators.

105. Employees of Bosch LLC and Bosch GmbH provided specific information to U.S. regulators about how Volkswagen's vehicles functioned and unambiguously stated that the vehicles met emissions standards. Bosch LLC regularly communicated to its colleagues and clients in Germany about ways to deflect and diffuse questions from US regulators about the Class Vehicles - particularly CARB. For example, in a May 15, 2008 email from Audi AG's Martin Hierse to Bosch GmbH's Markus Schroeder (Diesel Systems, Engineering Powertrain

[58] VW-MDL2672-02569909.
[59] VW-MDL2672-02555825.

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Diagnosis), copying Audi's Stefan Forthmann, Hierse noted that auxiliary emission control devices ("AECDs") were a very important subject for certification of U.S. diesels, and admitted discrepancies with the U.S. authorities in AECD documentation.[60] The regulators' questions were chipping away at the discrepancies between on board diagnostic systems, and the emission controls.

106. Accordingly, Hierse worried that there was a possibility that one of the Volkswagen Group's representatives in the U.S. was providing the regulators too much information and data concerning AECD disclosure. He then asked to discuss the matter with Bosch's Schroeder either by telephone or in private at one of their offices due to the confidentiality of the issue.

107. Bosch and VW worked together to craft responses to CARB's questions. For example, an April 2009 email, Suanne Thomas (VW America Regulatory Strategist) and Bosch LLC's Bernie Carr discussed results from tests sent from an individual at IAV showing defects in the Class Vehicles' in-use ratios and missing readiness information.

108. On July 1, 2009, VW America's Thomas emailed colleagues, again raising concerns about documenting AECDs in Model Year 2010-11 Class Vehicles to U.S. authorities. At issue was the "low level of detail in the AECD documents [so that] ARB is not able to confirm which strategies are for component protection." Thomas then relayed that CARB asked whether there was a problem getting Bosch to disclose its strategy.[61] In a related email, Thomas commented: "I was not involved in the discussions . . . with ARB on diesel, however I get the impression that there is a misunderstanding at VW regarding AECDs. That this misunderstanding is the root of the issue – why ARB is not satisfied with the AECD disclosure for diesels."[62] CARB was asking the right questions, and not getting honest answers.

109. Nor can Bosch persuasively distance Bosch GmbH from the communications with regulators, as Bosch GmbH employees directly participated in meetings with CARB. For

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[60] VW-MDL2672-11873274.
[61] VW-MDL2672-02469411.
[62] VW-MDL2672-02120937.

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example, in January, 2015, Bosch GmbH (specifically, Bosch LLC's Adam Wienner, Senior Legal Counsel, Dennis Froehlich, Quality Control, and Axel Boeringer, Sales Quality and Warranty) conferred about setting up a conference call with Audi and CARB to explain problems with the diagnostics relating to faulty fuel pumps, issues that likely arose because the defeat device was causing problems with the on board diagnostic system in certain Class Vehicles. Suanne Thomas of VW coordinated the call between Bosch and CARB.

110. Volkswagen and Bosch held CARB and the EPA at bay with finesse (and fraud) to obtain the necessary COCs and EOs to keep Class Vehicles on the road. In an August 2009 email from VW America shared a comment from CARB regarding 2009 Volkswagen Jetta TDIs test results that "VW 'blatantly did the wrong thing'" and asking Volkswagen if this "is a base strategy from Bosch." Volkswagen responded, "yes."[63]

111. This is not the only document crediting Bosch strategies to obtain regulatory approval. A May 17, 2011 email from CARB to Thomas regarding Volkswagen 2014 TDIs referenced a 2010 conference call where they discussed "the bosch ZFC [Zero Fuel Calibration] strategy and a possible fuel rail pressure disablement." VW AG's Alich then relayed that "ARB accepted our proposal to implement the ZFC 'time to closed loop' monitor with MY [model year] 2013."[64] And in a May 31, 2013 email regarding 2.0-liter Class Vehicles, Thomas referenced a "[p]roposed strategy" to "get the executive order [from CARB] based on the 'Bosch' strategy."[65] These communications demonstrate Bosch's deep understanding of what regulators allowed and would not allow, and what Bosch did to help VW obtain approval.

112. In short, there can be no argument that Bosch left communications with the regulators to VW, or that Bosch did not understand the regulatory implications of the defeat device software VW paid Bosch to develop. Employees of Bosch GmbH and Bosch LLC worked together with VW to convince U.S. regulators to approve the Class Vehicles for sale and use in this country. The examples below identify at least six additional instances in which Bosch

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[63] VW-MDL2672-00912096.
[64] VW-MDL-2672-02464246.
[65] VW-MDL2672-00530556.

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communicated directly with U.S. regulators to discuss concerns with emissions detection and compliance in the Class Vehicles. During each communication, Bosch LLC provided specific information about how Volkswagen's vehicles functioned and unambiguously stated that the vehicles met emissions standards:

a. In December 2009, Bosch presented CARB with a strategy to allow usage of Injection Quantity Adjustment codes in 2013 Volkswagen diesel models.[66]

b. In or around December 2012, Volkswagen and Bosch submitted separate written responses, including requested documents, to the U.S. National Highway Traffic Safety Administration in response to its investigation into high-pressure fuel pump failures in certain Class Vehicles.[67]

c. A January 15, 2014 email from CARB to Thomas with the subject, "RE: VW response Re: V6TDI clarifications," CARB's Peter Ho referenced "previous discussions with Bosch," and inquired about false detections in the field.[68]

d. July 23, 2014 notes from Volkswagen referenced a phone call between Volkswagen, Bosch, CARB, and other automakers during which Bosch raised the issue of pin-pointing of wire faults of NOx and particulate matter sensors with a separate control unit.[69]

e. A February 9, 2015 email from VW AG's Steffen Vieser relayed an update from Bosch GmbH about a discussion between CARB and Bosch LLC's Wienner re: a "non-erasable permanent fault code issue of the fuel pump electronic driver stage diagnostic," which Volkswagen suggested could be fixed by a "software update" requiring Bosch's assistance, which CARB approved.[70]

f. Notes from a June 10-11, 2015 meeting between CARB and Volkswagen reference a "Bosch discussion with ARB regarding PM [particulate matter] sensor introduction with Fe-doping." The meeting notes also record that CARB told Volkswagen that CARB did not want the emission monitors in a "contrived condition."[71]

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[66] VW-MDL2672-07235955.
[67] VW-MDL2672-00762181.
[68] VW-MDL2672-00465156 (emphasis added). These discussions began in 2011.
[69] VW-MDL2672-00887996.
[70] VW-MDL2672-00902633; VW-MDL2672-02449923.
[71] VW-MDL2672-02296983.

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113. Bosch did not disclose its knowledge of the illegal defeat device in any of these meetings or communications with U.S. regulators.

4. Bosch Keeps Volkswagen's Secret Safe and Pushes "Clean" Diesel in the U.S.

114. Bosch not only kept Volkswagen's dirty secret safe, it went a step further and actively lobbied lawmakers to push "Clean Diesel" in the U.S., including making Class Vehicles available for regulators to drive.

115. As early as 2004, Bosch announced a push to convince U.S. automakers that its diesel technology could meet tougher 2007 U.S. emission standards.[72] Its efforts ended up being a multiple-year, multi-million dollar effort, involving key players from both Bosch Germany and Bosch America. Following the launch of its new EDC systems in 2006, Bosch hired mcapitol Managers, a lobbying firm to promote its "Clean Diesel" products on Capitol Hill and with the EPA. In Washington, DC, mcapital Managers lobbied on Bosch's behalf to defeat a proposal that would have favored hybrid vehicle technology over "Clean Diesel" vehicles.

116. Bosch also coordinated studies to advance diesel technology in the U.S. In September 2006, Bosch's Bill Rutecki reached out to Volkswagen and Audi to request their participation in the "Martec Light Duty Diesel Market Opportunity Assessment." The study's goal was to develop coordinated strategies to accelerate advancements of light duty diesel technology in the U.S.[73]

117. Bosch's promotion of diesel technology specifically targeted the U.S. For example, Bosch put on "Diesel Days in California," "Deer Conference: EGT Focus," and "SAE World Congress in Detroit." In 2008, Bosch LLC and VW America co-sponsored the "Future Motion Made in Germany-Second Symposium on Modern Drive Technologies" at the German Embassy in Washington, D.C., with the aim of providing a venue for "stakeholders to gain insight

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[72] Mar. 8, 2004, Edmund Chew, Autonews.

[73] VW-MDL2672-06136031.

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into the latest technology trends and engage in a vital dialogue with industry leaders and policymakers."[74]

118. Bosch LLC hosted multi-day conferences open to many regulators and legislators and held private meetings with regulators, in which it proclaimed extensive knowledge of the specifics of Volkswagen technology, including calibrations necessary for the Class Vehicles to comply with emissions regulations.

119. For example, in April 2009, Bosch organized and hosted a two-day "California Diesel Days" event in Sacramento, California. Bosch invited a roster of lawmakers, journalists, executives, regulators, and NGOs with the aim of changing perceptions of diesel from "dirty" to "clean." The event featured Class Vehicles as ambassadors of "Clean Diesel" technology, including a 2009 VW Jetta "green car." The stated goals were to "generat[e] a positive perception of Clean Diesel in passenger vehicles" and to "educate California stakeholders about the immediate benefits [of] Clean Diesel passenger vehicles" in reducing emissions. A key feature of the event included "Bosch Vehicles Being Deployed."[75] Attendees included Bernd Boisten (Bosch Regional President, Diesel Systems, Bosch LLC); Dr. Joerg Reuger (Senior Vice President, Diesel Engineering, Bosch Support Staff, Bosch GmbH); Brad Warner (Manager, Marketing, Diesel Systems, Robert Bosch LLC); and Norman Johnson (Director, External Affairs, Robert Bosch LLC).

120. In 2009, Bosch also became a founding member of the U.S. Coalition for Advanced Diesel Cars. One of this advocacy group's purposes included "generating awareness to legislators and regulators on the benefits of "Clean Diesel" technology for passenger cars, through engagement in policy, regulatory and advocacy activities."

121. Another example of Bosch's U.S. lobbying is the 2009 "California Green Summit." As part of its "Clean Diesel" partnership with Volkswagen, Bosch deployed two 2009 Jetta TDI Volkswagens to attendees with the express purpose of "Influencing California," and inviting CARB, the Western Automotive Journalist Organization, and many others.

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[74] VW-MDL2672-00234383.

[75] *Id.* 115-45; VW-MDL2672-03331605.

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122. In September 2009, Bosch held a Diesel Technology Forum in California. Dirk Naber (Diesel Systems/Engineering; Vehicle and Engine Laboratory of Bosch) attended, as did VW's Stuart Johnson, R. Dorenkamp and G. Pamio, along with Juergen Peter. Following this forum, in October 2009, Mightycomm (Bosch's California lobbyist) outlined a proposal for "OEM Vehicle Placement Program targeting influential California NGOs and Regulators."[76] This memo was addressed to Bosch's Lars Ulrich, Joerg Rueger, and Bosch Diesel Systems. **Mightycomm specifically stated "[v]ehicles placed with CARB would have to be . . . *newer models that can withstand possible dynamometer testing. While we do not anticipate a vehicle placed with CARB would be inspected, examined, or tested on a dynamometer, there is no assurance some CARB staff won't want to do this.*"**[77] On the other hand, Mightycomm advised not to worry about a vehicle being tested by the California Energy Commission ("CEC") "as the CEC is not equipped to conduct such inspections."[78]

123. In 2010, Bosch sponsored the Virginia International Raceway with the support of the 2010 Volkswagen Jetta Cup Series. This included the 2009 "Sidewinder" which Bosch featured for its "performance exhaust system."

124. In its lobbying on behalf of "Clean Diesel," Bosch had to continually cover up the dirty secret of the defeat device in the Class Vehicles. In a January 13, 2010 memo addressed to Bosch's Lars Ullrich and Brad Warner, Mightycomm noted that "Clean Diesel has been ranked the green car of the year" two years in a row—2009 and 2010. And yet Bosch knew the Class Vehicles could not obtain the results being advertised without activating the defeat device.

125. Bosch's Andreas Sambel (Director of Marketing and Business Excellence) presented on "Clean Diesel" technology before the CEC on June 19, 2013, specifically pinpointing "key influencers," such as specific NGOs that have not traditionally engaged CARB, "who we need to reach, rally and motivate."[79]

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[76] VW-MDL2672-15182932

[77] *Id.* (emphasis added).

[78] *Id.*

[79] VW-MDL2672-00885348.

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126. In its efforts to promote "Clean Diesel," including the Class Vehicles, Bosch acted on behalf of its global group. As an example, Bosch put on a two-day presentation on June 27-28, 2007, about meeting the demands of U.S. emission legislation, where it focused on lowering emissions in diesel vehicles. Each of the presentation's 30 pages bears both the "Bosch" name and "Bosch Engineering GmbH" but makes no mention of Bosch LLC.[80] The aforementioned memo from Mightycomm was addressed to "Bosch Diesel Systems." And each page of the presentation for California Diesel Days bears the label "BOSCH' in emboldened red type.[81] This is consistent with the ongoing representations that the Bosch entities, overseas and in the U.S. were "one-for-all-and-all-for-one" in promoting "Clean Diesel" technology to U.S. stakeholders.

5. Defendant Denner Also Played a Critical Role in the Scheme

127. Prior to becoming CEO in 2012, Denner climbed the corporate ladder in Bosch's Engine ECU Development division, managing the development and sale of automotive engine computers, such as the EDC units that Volkswagen used as defeat devices. In 2006, Denner joined Bosch Germany's Board of Management and was later responsible for research and advance engineering, product planning, and technology coordination across the company's three business sectors from July 2010 until his appointment as CEO. Denner has agitated for the company to become more like a "start-up,"[82] and to develop a "culture of failure,"[83] where risk taking is rewarded, in an attempt to replicate the "California venture capitalist model."[84] Denner set the tone at the top of Bosch as a member of Bosch's Board of Management and later CEO.

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[80] VW-MDL2672-05676990.

[81] VW-MDL2672-03331605.

[82] *See* Interview with Bosch Director Volkmar Denner, Jan. 21, 2015, available at http://www.uni-stuttgart.de/forschung-leben/forschung-persoenlich/persoenlich_artikel0005.en.html.

[83] *See* Martin-Werner Bucdhenau, The Multinational Start-up: The engineering and electronics giant Bosch is putting aside its conservative tendencies and investing in a new innovation unit that it hopes will rival successful start-up incubators, Handelsblatt, Nov. 28, 2014, available at https://global.handelsblatt.com/edition/64/ressort/companies-markets/article/the-multinational-start-up.

[84] *See* Nick Gibbs, German auto firms try to nurture Silicon Valley boldness, Automotive News, Nov. 22, 2015, available at http://www.autonews.com/article/20151122/OEM06/311239956/german-auto-firms-try-to-nurture-silicon-valley-boldness

He embraced the Silicon Valley culture of moving fast, taking risks, and asking for forgiveness rather than permission.

128. As he rose in the ranks, Denner worked to foster Bosch's relationship with key corporate partners, like Volkswagen, which brought in billions of dollars in annual revenues. Denner immersed himself in the day-to-day business of Bosch's important customers. Illustrating how important Volkswagen was to Bosch, Denner communicated directly with Volkswagen's Winterkorn about the companies' relationship and Bosch products sold to Volkswagen. For example, when Bosch ran out of oxygen sensor parts that Volkswagen ordered for its vehicles, Denner reached out directly to Winterkorn. Denner and Winterkorn directly communicated over parts delays and shortages, implying that each was not a manager who governed from afar, but rather was intricately involved in the details of operations.

129. In May 28, 2014, Denner participated in a meeting with Defendant Winterkorn and other Bosch and Volkswagen executives at Volkswagen headquarters concerning their partnership in the U.S. market. Among other topics, participants discussed the "akustikfunktion" in Volkswagen diesel vehicles.[85] Thus, Denner and Winterkorn were aware of the illegal use of the defeat devices at least by May 2014.

130. In sum, Bosch played a crucial role in the fraudulent enterprise and profited handsomely from it. It is no exaggeration to say that Bosch provided Volkswagen with the most critical elements necessary to create an engine capable of being (fraudulently) represented as achieving the most stringent U.S. emission standards. All of the Bosch content provided to the Volkswagen production line combined—including the ECU, software, fuel system, sensors, and harness—accounted for a sizeable portion of the total material cost of the engines. This is very big business for Bosch.

D. Porsche Knowingly Adopts the Defeat Device in Its 3.0-liter Class Vehicles

131. Porsche also knew that its class vehicles—the Porsche Cayenne Diesel—contained defeat devices that resulted in NO_X and other emissions exceeded the allowable EPA emission standards under normal driving conditions. Indeed, Porsche's head of development, Hatz, was

[85] VW-MDL2672-02569909.

formerly head of engine development at VW and Audi and, as alleged above, ***was one of the architects of the defeat device scheme***. Although Porsche would later disclaim any responsibility for the 3.0-liter TDI engine, Porsche was fully aware of the defeat device that the engine utilized, and fully embraced the "Clean Diesel" engine for purposes of marketing its cars to the public.

132. At the very least, Porsche learned of the defeat device during the design and manufacture of the Porsche Cayenne Diesel and the installation of its 3.0-liter TDI engine and ECU, which were developed and integrated into the Cayenne with the assistance of Audi and Bosch. When Porsche decided to enter the U.S. market, Porsche representatives worked closely with Audi and Bosch engineers on the development, installation, and integration of the Audi-developed 3.0-liter TDI engine used in the Porsche Cayenne Class Vehicles. During this process, Audi personnel educated Porsche personnel about the defeat device used in the 3.0-liter engine. This included communications between Audi engineers, Porsche's electronics development chief, and the head of engine development at Volkswagen, Ulrich Hackenberg, that described the EPA requirements and the strategy devised to circumvent those requirements.

133. Furthermore, although the Porsche Cayenne uses a 3.0-liter TDI engine developed by Audi, it is distinct and required its own unique calibrations. Any changes specific to the Cayenne required Porsche to collaborate with Audi and Bosch engineers to ensure that the modifications were advisable given the configuration of the engine software and would not negatively impact overall vehicle performance.

134. Additionally, Porsche was ultimately responsible for obtaining the necessary emissions certification required to market the Porsche Cayenne Diesels in the United States. Porsche was therefore aware of the input values and other engine calibrations required for the Cayenne to undergo the emissions testing necessary to obtain a COC, and it well understood that the Cayenne could maintain comparable levels of power and fuel efficiency during testing and real-world driving conditions while simultaneously generating drastically different emissions results during these two scenarios, only because of the presence of the defeat device in the Cayenne's ECU.

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E. Volkswagen's "Clean" Diesel Advertising Campaign

135. While secretly using defeat devices to bypass emission testing, Volkswagen publicly declared a landmark victory—touting that it had successfully optimized its engines to maintain legal emissions, while simultaneously enjoying the cost savings and convenience factors of a lean NO_X trap system. Volkswagen claimed it accomplished this by monitoring and adjusting combustion conditions and using a two-stage exhaust gas recirculation system to reduce initial emissions, while neutralizing the remaining ones with a lean NO_X trap to comply with U.S. law.[86] Volkswagen branded and advertised this purportedly revolutionary technology to American consumers as "Clean Diesel" TDI technology.

136. As we now know, Volkswagen's "clean" diesel campaign was built upon a lie. Indeed, the Class Vehicles were so "dirty" that they could not pass the minimum emission standards in the U.S., and Volkswagen had to lie to the EPA in order to sell them in the U.S. But, of course, Volkswagen marketed and sold these Class Vehicles without ever disclosing to consumers that they were unlawful to sell or drive due to their high levels of NO_X emissions.

2. VW's False and Misleading Advertisements

137. VW's "clean" diesel campaign was its key selling point for consumers increasingly concerned about the environment. Its marketing mission was to "get clean-diesel power the recognition it deserves as a true 'green' technology," thereby growing Volkswagen's market share to match Winterkorn's lofty goals.[87] The objective was to change the way consumers thought of diesel technology, by replacing the mental image of sulfur emissions amid clouds of thick soot with that of heightened efficiency and reduced CO_2 emissions. In fact, the VW website stated: "This ain't your daddy's diesel. Stinky, smoky, and sluggish. Those old diesel realities no longer apply. Enter TDI 'clean' diesel. Ultra-low-sulfur fuel, direct injection technology, and extreme efficiency. We've ushered in a new era of diesel."[88]

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[86] *See* Hadler, *et al.*, *Volkswagen's New 2.0l TDI Engine Fulfils the Most Stringent Emission Standards*, Internationales Wiener Motorensymposium 2008; *see also Self Study Program 826803: 2.0 Liter TDI Common Rail BinS ULEV Engine*, Volkswagen of America, Inc. (2008).
[87] *See, e.g.*, *TDI Clean Diesel*, *http://www.venturavw.com/TDI-clean-diesel.html*.
[88] *Supra* note 3.

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138. Dubbing these diesel engines as "Clean Diesel" was a symptom of the brazen arrogance underlying the fraud. VW's entire marketing campaign, from the branding of the products to the advertisements, focused on convincing consumers that the Class Vehicles were not merely compliant with emission regulations, but that they exceeded them. This deception culminated in a Guinness World Record attempt in a 2013 Volkswagen Passat TDI, which ironically won an award for "lowest fuel consumption—48 U.S. states for a non-hybrid car."[89]

139. VW professed that its diesel-based technology was equal or superior to hybrid and electric options offered by its competitors. As described by Mark Barnes (COO of VW America) when asked, "What is the advantage of a diesel over a hybrid?"

> It's a fantastic power train. It gives very good fuel economy. It's also good for the environment because it puts out 25% less greenhouse gas emissions than what a gasoline engine would. And thanks to the uniqueness of the TDI motor, it cuts out the particulate emissions by 90% and the emissions of nitrous oxide are cut by 95%. So, a very very clean running engine. Clean enough to be certified in all 50 states. It's just like driving a high-powered gasoline engine so you are not giving up one bit of the driving experience that you'd expect from a regular gasoline engine.[90]

140. Facing skepticism, Barnes had a ready, if imaginative, response to the question, "How do you re-brand something that's dirty like diesel as something that's green?"

> The way we've gone about it is through a number of communication pieces. One of them we've used is TDI Truth & Dare. It is a very good website that compares some older diesels versus the current TDI clean diesel. And one of the things we do is we put coffee filters over the exhaust pipes of both cars. We let them run for five minutes and after they are done, we take them off and the older diesel product (not a VW diesel) has a round sooty spot on that coffee filter. Ours is very clean. In fact they actually make coffee out of the filter that was attached to the Volkswagen clean diesel tail pipe and they drink it.[91]

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[89] Nick Palermo, *Volkswagen Passat TDI Sets World Record for Fuel Economy*, Autotrader (July 2013), http://www.autotrader.com/car-news/volkswagen-passat-tdi-sets-world-record-for-fuel-economy-210689.

[90] Gayathri Vaidyanathan, *Volkswagen: Our Diesel Cars Whup The Prius And Other Hybrids*, Business Insider (Oct. 9, 2009), http://www.businessinsider.com/volkswagen-preps-for-a-diesel-revolution-2009-10.

[91] *Id.*

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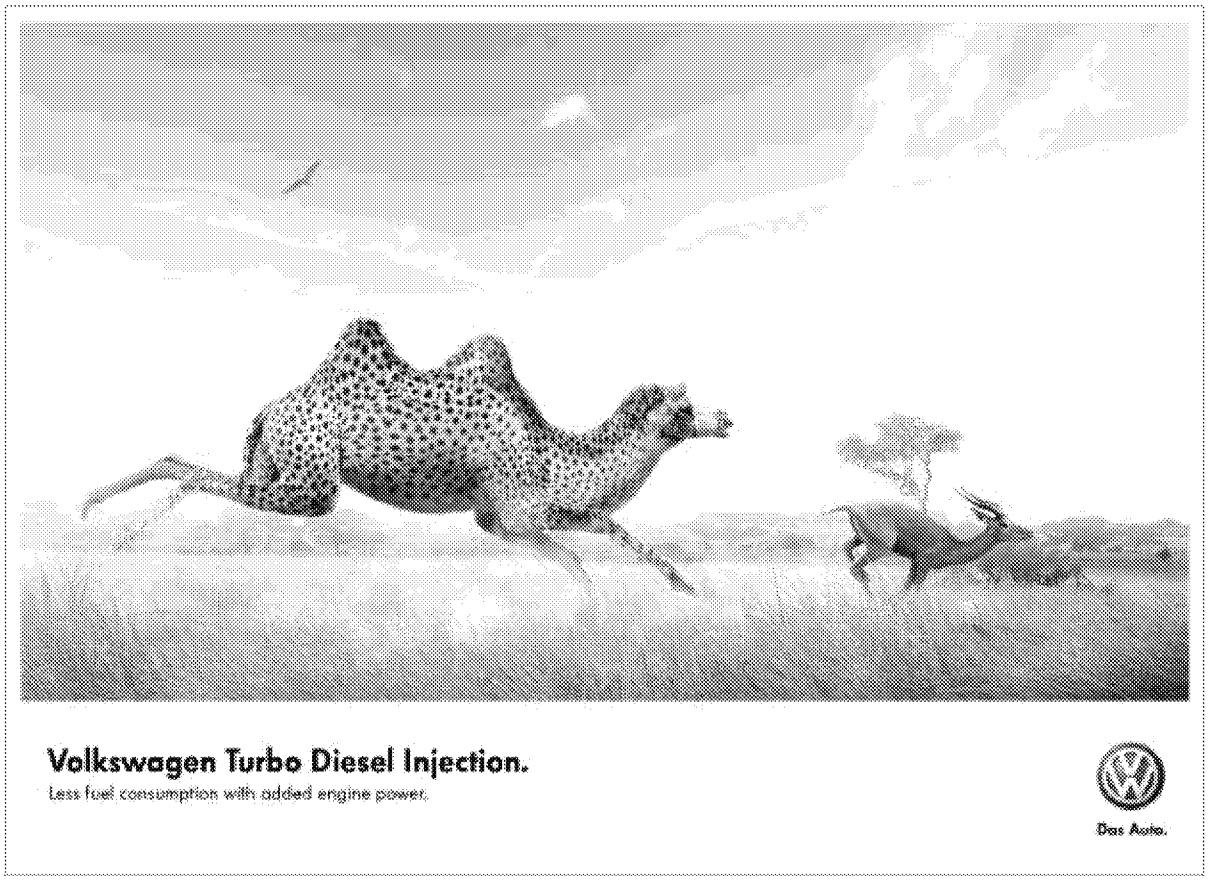
141. VW also advertised that its vehicles performed better on the road than in test conditions, touting in a 2008 press release: "While the Environmental Protection Agency estimates the Jetta TDI at an economical 29 mpg city and 40 mpg highway, Volkswagen went a step further to show real world fuel economy of the Jetta TDI. Leading third-party certifier, AMCI, tested the Jetta TDI and found it performed 24 percent better in real world conditions, achieving 38 mpg in the city and 44 mpg on the highway."[92] This discrepancy between the EPA certified mpg figures (which are reverse calculated based on vehicle performance on a dynometer) and the real world mpg figures came about because, in real world driving, Volkswagen's defeat device *disabled* the full functioning of the NO_X trap system exhaust gas after treatment control (which needed to burn more fuel to work properly), thereby decreasing vehicle operating costs at the expense of massively increased NO_X emissions.

142. Volkswagen distinguished the TDI "clean" diesel engines from other, "stinky, smoky, sluggish" diesels, proclaiming its "eco-conscious" status and of course failing to disclose that the Class Vehicles were "dirty" themselves. These messages were prevalent in Volkswagen's extensive marketing campaign.

143. Some advertisements, for example, specifically emphasized the low emissions and eco-friendliness of the vehicles:

[92] Jake Fisher, *Did Volkswagen Use 'Cheat Mode' as a Selling Point?*, Consumer Reports (Oct. 19, 2015), http://www.consumerreports.org/volkswagen/did-volkswagen-use-cheat-mode-as-a-selling-point?loginMethod=auto.

144. Others touted the combination of fuel efficiency and power:



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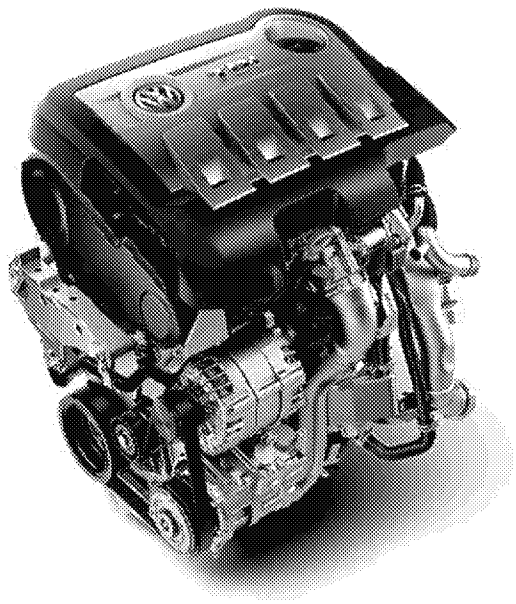
145. Yet others addressed the full package, implying that in contrast to the "stinky, smoky, and sluggish" diesel vehicles of old, Volkswagen's new diesel vehicles were clean, efficient, and powerful all at once:

This ain't your daddy's diesel.

Stinky, smoky, and sluggish. Those old diesel realities no longer apply. Enter TDI Clean Diesel. Ultra-low-sulfur fuel, direct injection technology, and extreme efficiency. We've ushered in a new era of diesel.

- **Engineered to burn low-sulfur diesel fuel**
- **"Common Rail" direct injection system**

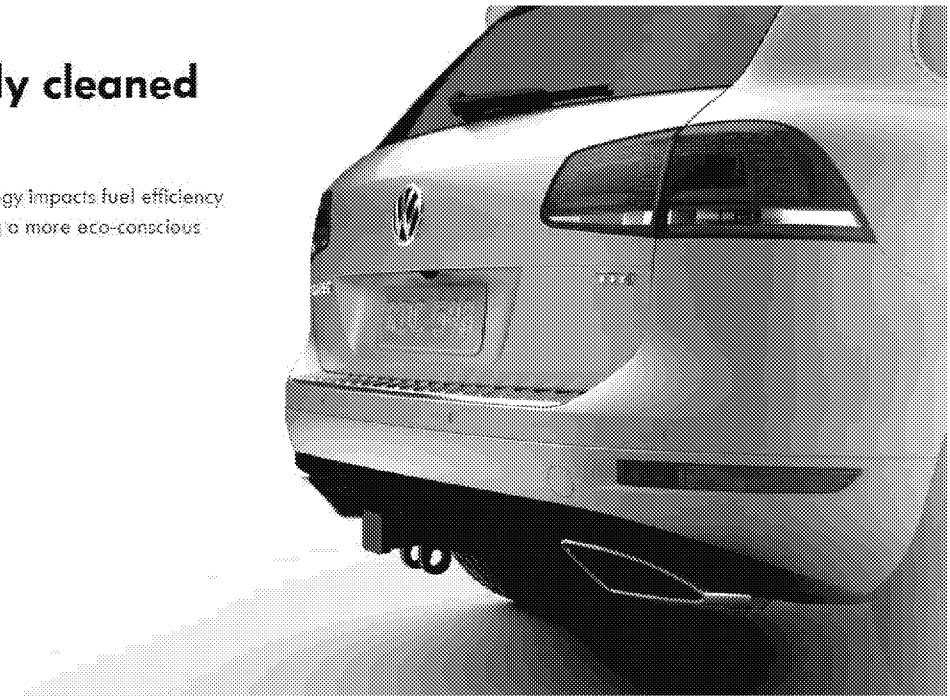
View key fuel efficiency info ?



Diesel has really cleaned up its act.

Find out how clean diesel technology impacts fuel efficiency and performance, while also being a more eco-conscious choice.

Go to clearlybetterdiesel.org



146. In addition, VW directed consumers to the www.clearlybetterdiesel.org website, which partnered with affiliates Audi and Porsche, as well as Bosch, Mercedes, and BMW. This

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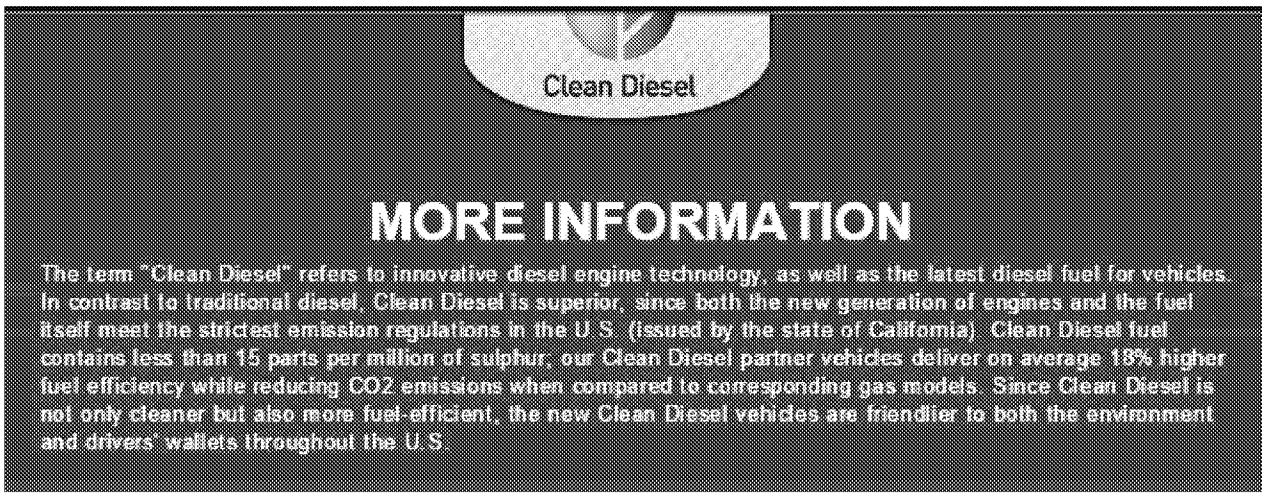
website touted the benefits of newly developed diesel technology as "clean" and environmentally friendly. Although it has been scrubbed of all content, the website previously contained false and misleading statements, such as:



147. The website also offered a graphic slider, specifically representing that "clean" diesel produced less emissions and dramatically reduced smog, as shown by the following:

148. This website may have accurately portrayed the environmental advantages of BMW diesel vehicles, which have not been implicated in the defeat device scandals, to date. However, Volkswagen's partnership with "www.clearlybetterdiesel.org" falsely or misleadingly portrayed the Class Vehicles as an environmentally friendly, low emissions choice for discerning and socially responsible consumers.

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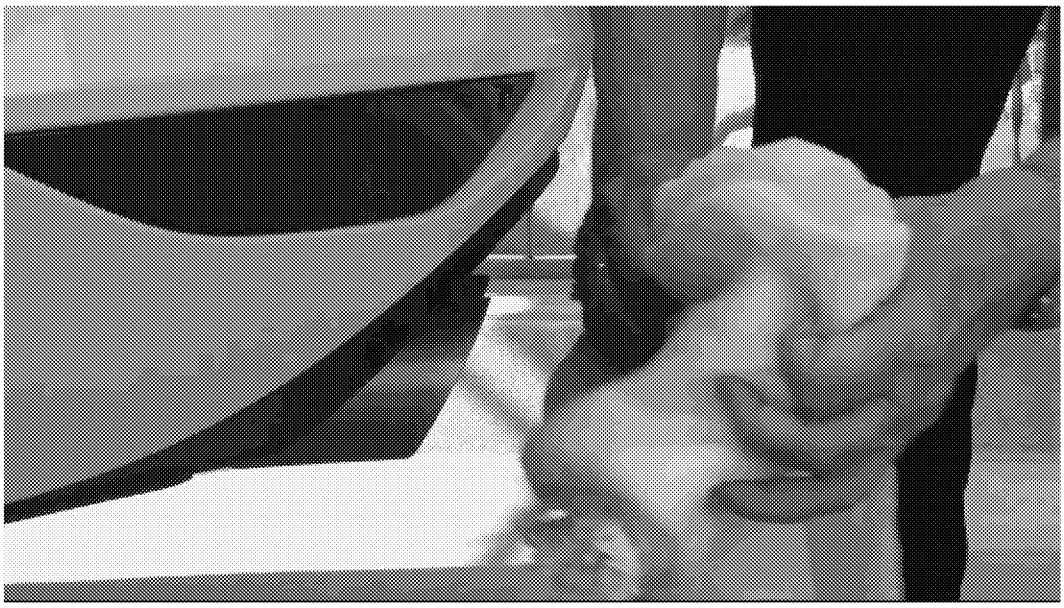
149. VW also produced a series of TV advertisements for the U.S. market, intended to debunk myths about diesel engines. One ad, titled "Three Old Wives Talk Dirty," featured three elderly women debating whether diesels, though "beautiful," are dirty vehicles:

150. To ostensibly debunk the "Old Wives' Tale" that diesel produced dirty exhaust and hazardous emissions, one of the women held her white scarf to the exhaust to convince the passengers that the exhaust was environmentally friendly, and not, in fact, dirty:



151. She removed the scarf, gestured at it, and asked her friends "see how clean it is?"

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152. Like others in VW's "clean" diesel campaign, this ad falsely or misleadingly portrayed the exhaust emissions from the Class Vehicles as clean and safe. In reality, the Class Vehicles actually emitted invisible and extremely hazardous levels of NO_X.

153. These themes extended to print brochures at dealerships and to VW's website. The brochures emphasized that VW's "clean" diesel was "clean," "green," and low emission. For example, a "2012 Volkswagen Family" brochure for all VW models, states:

> Let TDI "clean" diesel set you free from the filling station. Our TDI engines achieve astonishing mileage and range—up to 43 highway mpg and 795 miles on a single tank without sacrificing one bit of turbocharged performance. ***That's all thanks to the TDI technology that uses a direct injection system and runs on ultra-low-sulfur diesel, helping reduce sooty emissions by up to 90% compared to previous diesel engines.*** On most models, you can even choose the available DSG automatic transmission with Tiptronic to take that turbo engine to a whole new level.[93] (Emphasis added.)

154. Similarly, a "2013 Volkswagen Family" brochure, applicable to all models, states:

> When you've had your fill of filling stations, hit the road in your TDI "clean" diesel Volkswagen. These engines achieve astonishing

[93] Brochure: 2012 Volkswagen Family, http://cdn.dealereprocess.com/cdn/brochures/volkswagen/2012-family.pdf.

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> mileage and range-up to 43 highway mpg and 795 miles on a single tank without sacrificing one bit of turbocharged performance. ***That's all thanks to the TDI technology that uses a direct injection system, and runs on ultra-low-sulfur diesel, helping reduce emissions by up to 90% compared to previous diesels.*** Far and away, it's our best diesel yet.[94] (Emphasis added.)

155. And a 2012 "Volkswagen TDI "clean" diesel" brochure for the six models of Volkswagen TDIs then on the market (Jetta, Jetta SportWagen, Golf, Passat, Beetle, and Touareg) states:

> **These are not the kind of diesel engines that you find spewing sooty exhaust like an old 18-wheeler.** Clean diesel vehicles meet the strictest EPA standards in the U.S. Plus, TDI technology helps reduce sooty emissions by up to 90%, giving you a fuel-efficient and eco-conscious vehicle.
>
> . . .
>
> **Think beyond green.** TDI represents one part of the Volkswagen Think Blue initiative, our goal of creating and encouraging eco-conscious products and behaviors. Join us in being more responsible on the road and on the planet.[95]

156. Further, a Volkswagen 2010 TDI Jetta and Jetta SportWagen brochure states:

> The 2.0L TDI® "clean" diesel engine gives you 140hp and 236 lbs-ft of torque. This engine is the toast of Europe for its quickness, low emissions, and fuel efficiency—a staggering 38 city/44 highway mpg (automatic) based on real-world AMCI-certified testing (30 city/42 highway mpg. EPA estimates).
>
> . . .
>
> Jetta TDI "clean" diesel offers fuel efficiency, power, performance, and a $1,300 tax credit from Uncle Sam because it qualifies as an Advanced Lean Burn Credit. ***Or, in other words, lean, mean, cleaner burning machines. Volkswagen believes in delivering a no-compromise German-tuned auto that performs, and still leaves a small carbon footprint. The Volkswagen TDI engine is cleaner than conventional diesels, emitting as much as 95% less soot than previous diesel engines, as well as a reduction in oxides of nitrogen and sulfur.*** It's powerful, with the kind of low-end torque that racers and tuners demand. It's efficient, using a turbocharger and smart exhaust design to burn fuel more effectively. So much so,

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[94] Brochure: 2013 Volkswagen Family, http://cdn.dealereprocess.com/cdn/brochures/volkswagen/2013-volkswagenfamily.pdf.

[95] Brochure: 2012 Volkswagen TDI® Clean Diesel, http://cdn.dealereprocess.com/cdn/brochures/volkswagen/2012-family.pdf.

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in fact, that Volkswagen was the first automaker to make clean diesel cars certified in all 50 states. And best of all, it will help save you money with an out-of-this-world AMCI-estimated mileage of 38 city/44 highway mpg (automatic) and over 594 miles on a single tank of fuel.

There's even a Jetta SportWagen TDI "clean" diesel, with the same astonishing clean diesel technology, plus a whopping 66.9 cubic feet of cargo room.[96] (Emphasis added.)

157. And a Volkswagen 2011 Golf TDI brochure states:

Regardless of which Golf model you get, you'll be seeing a lot fewer gas stations and a lot more road. The 2.5L Golf comes standard with a 170-hp, in-line five-cylinder engine with 177 lbs/ft torque and impressive fuel efficiency rated at 23 city/30 highway mpg. Opt for the Golf TDI model and you'll enjoy a turbocharged clean diesel engine with 140 hp and 236 lbs/ft of torque that will run you even farther at a whopping 30 city/42 highway mpg. That's up to 609 miles per tank. ***And you'll do it all with 95 percent fewer sooty emissions than diesel engines of old, making it cleaner for both you and the planet.*** So whether you're in the market for IntelliChoice's 2010 "Best Overall Value Compact Car over $17,000," or you want to go for a variation on that theme and get the ever-popular TDI model, you can't go wrong. In fact, you can go very right for a long, long time."[97]

158. A Volkswagen 2012 Passat TDI brochure states:

Let the Passat TDI "clean" diesel set you free from the filling station. It achieves an astonishing 43 highway mpg and travels 795 miles on a single tank without sacrificing one bit of turbocharged performance. ***That's all thanks to its TDI technology that uses a direct injection system and runs on ultra-low-sulfur diesel, helping reduce sooty emissions by up to 90% compared to previous diesel engines.*** You can even choose the available DSG automatic transmission with Tiptronic to take that turbo engine to a whole new level.

. . .

The TDI "clean" diesel engine was designed and engineered around one simple belief: driving is more fun than refueling. ***So besides the reduced emissions and torque-filled benefits you experience behind the wheel of the Passat TDI, it also saves you money at the pump***.[98] (Emphasis added.)

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[96] Brochure: 2010 Volkswagen Jetta and Jetta SportWagen, http://www.slideshare.net/SteveWhiteVW/2010-volkswagen-jetta-brochure-greenville.

[97] Brochure: 2011 Volkswagen Golf, http://cdn.dealereprocess.com/cdn/brochures/volkswagen/2011-golf.pdf.

[98] Brochure: 2012 Volkswagen Passat, https://static.beepi.com/Brochures/17001.pdf.

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159. A Volkswagen 2013 Beetle TDI brochure states:

> Start the TDI® "clean" diesel model and hear the surprisingly quiet purr of ***the first clean diesel Beetle,*** designed for both power and efficiency.[99] (Emphasis added).

160. A Volkswagen 2014 Beetle TDI brochure states:

> 2.0L TDI "clean" diesel engine. Engineered with the idea that less is more. The Beetle TDI has lower CO_2 emissions compared to 84% of other vehicles. ***So every getaway you make will be a cleaner one.***[100] (Emphasis added.)

161. A Volkswagen 2014 TDI Touareg brochure states:

> 3.0L TDI "clean" diesel engine. Engineered with the idea that less is more. The Touareg TDI has lower CO_2 emissions compared to 88% of other vehicles. ***So every getaway you make will be a clean one.***[101] (Emphasis added.)

3. Audi's False and Misleading Advertisements

162. Audi, like VW, pitched its 2.0-liter and 3.0-liter diesel engines as environmentally friendly, powerful, and efficient. Drawing heavily from the themes in VW's advertisements, Audi deceptively portrayed its Class Vehicles as clean and safe for the environment, unlike the diesels of yesteryear. Examples of such advertisements include:

[99] Brochure: 2013 Volkswagen Beetle, https://static.beepi.com/Brochures/22980.pdf.
[100] Brochure: 2014 Volkswagen Beetle, https://static.beepi.com/Brochures/23900.pdf.
[101] Brochure: 2014 Volkswagen Touareg, https://static.beepi.com/Brochures/18663.pdf.

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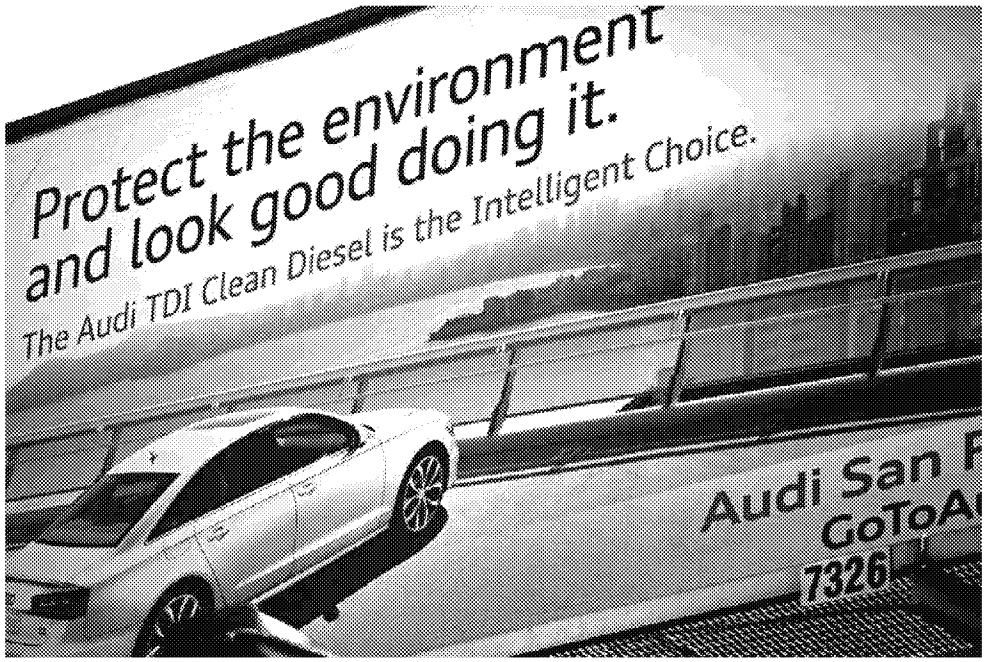

163. Audi proclaimed that "[d]iesel [was] no longer a dirty word," but failed to disclose that its vehicles were so dirty that they could not pass emission standards in the U.S. and that the only reason why they were introduced into the stream of commerce here is because Audi fraudulently obtained COCs from the EPA for these vehicles. With equal audacity, Audi advertised that, by driving an Audi TDI, you could "[p]rotect the environment and look good doing it," while failing to disclose the pernicious NO_X spewed into the environment.

164. Audi also ran numerous TV commercials for its "clean" diesel vehicles, many of which touted the "eco-friendly" characteristics of its diesel technology. One ad, "The Green Police" (which aired during the 2010 Super Bowl) portrayed a world in which the environmental police ("Green Police") arrested people for using Styrofoam cups, failing to compost, asking for plastic bags at the grocery store, throwing out batteries, and drinking water from plastic bottles. And at a highway checkpoint, the "ECO ROADBLOCK," the Green Police flagged cars that were harmful to the environment:

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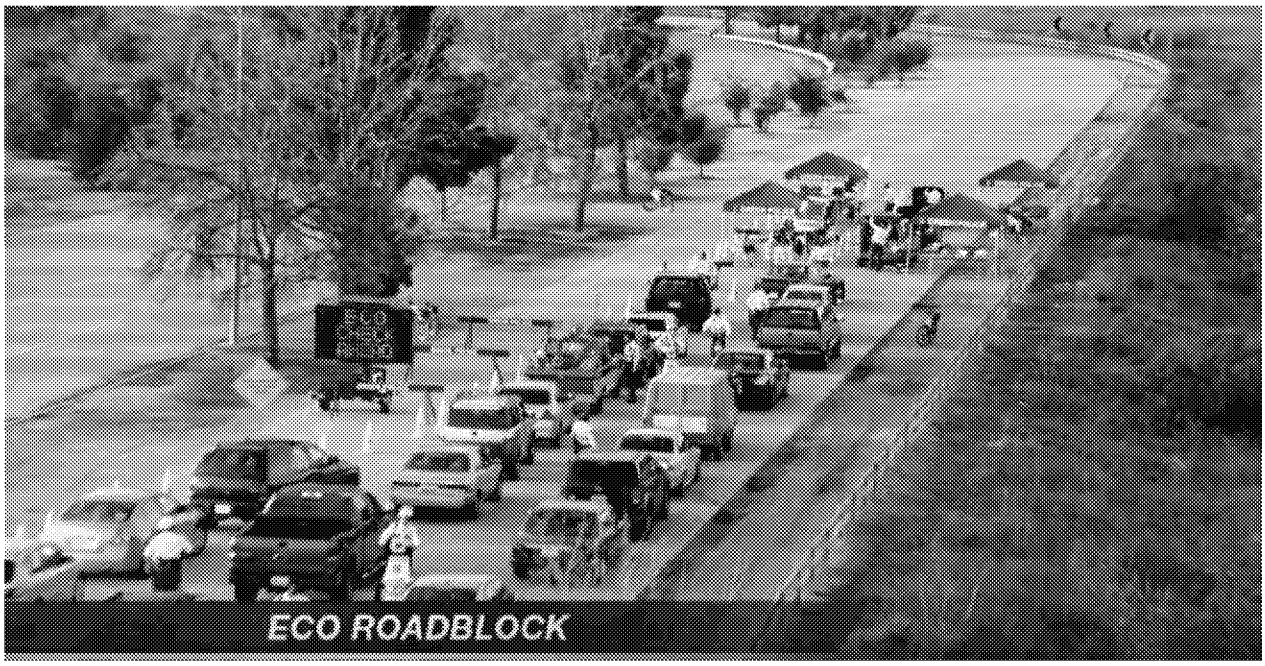

165. When the Green Police at the ECO ROADBLOCK see an Audi A3 TDI SportWagen, they give the car a "thumbs up" and allow the driver to bypass the roadblock.

166. After the white A3 TDI cruises past the other vehicles, the screen fades to black and falsely touts the supposed "green credentials" of the A3 TDI.

167. Like VW, Audi also made false representations in print brochures available at dealerships and on Audi's website. For example, an Audi 2011 A3 TDI brochure states:

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> With the potent combination of direct diesel injection and turbocharging, the 2.0-liter TDI® clean diesel engine delivers an impressive 236 lb-ft. of torque and produces 140hp. The power and performance is complemented with impressive EPA-estimated 30 MPG city and 42 MPG highway ratings. ***Producing 30 percent fewer CO_2 emissions than a comparable gasoline engine, the 2.0 TDI clean diesel also meets or exceeds the 50 state emissions requirements.***
>
> . . .
>
> ***Long gone are the days of dirty, smoking diesel engines. Audi TDI clean diesel technology is responsible for the cleanest diesel engines in the world***, with 30 percent fewer CO_2 emissions than comparable gasoline engines, making it an environmentally friendly alternative to gasoline power. ***In fact, TDI clean diesel is compliant with California 's ULEV II requirement—the world's most stringent emission standard. The result is a significant reduction in emissions that contribute to global warming.***[102] (Emphasis added.)

168. Audi's 2016 A6 and A7 brochures similarly (and falsely) stated that the 3.0-liter TDI versions of these cars meet emission rating "ULEV II," and the 2016 A6, A7, and Q5 brochures all similarly stated:

> Taking advantage of the greater power density of diesel fuel over traditional gasoline, the available 240-hp 3.0-liter TDI® clean diesel V6 delivers incredible torque (428 lb-ft) and passing power, while boasting impressive fuel efficiency numbers. ***It also produces fewer emissions with a combination of Piezo direct injection, a high compression ratio, and innovative after-exhaust treatment that helps eliminate up to 95% of diesel NOx emissions.***[103] (Emphasis added.)

169. An Audi 2016 A8 brochure also listed the TDI models as meeting emission rating "ULEV II," and further stated:

> With 240 hp and 428 lb-ft of torque on tap, the available 3.0-liter TDI® clean diesel engine's elasticity in the passing lane is almost as impressive as its ability to take on even the longest road trips. ***And with features like AdBlue® exhaust after-treatment helping***

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[102] Brochure: 2011 Audi A3, http://www.slideshare.net/MichiganCarSales/2011-audi-a3-detroit-mi-fred-lavery-company.

[103] Brochures 2016 Audi A6, https://www.audiusa.com/content/dam/audiusa/Documents/2016-Audi-A6-brochure.pdf.pdf, and 2016 Audi A7, https://www.audiusa.com/content/dam/audiusa/Documents/2016-Audi-A7-brochure.pdf.

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to make every journey a little cleaner, this is a performance win for all sides.[104] (Emphasis added.)

170. Contrary to these advertisements, Audi employees knew the Class Vehicles' real world NO_X and other emissions exceeded the allowable EPA emission standards.

4. Porsche's False and Misleading Advertisements

171. Porsche similarly exploited the "clean" diesel branding for the 3.0-liter TDI engine used in its Cayenne SUV to falsely convey that the vehicle was environmentally friendly and legal to drive. The "clean" diesel marketing and advertising for the Cayenne SUV also omitted the material fact that the COC issued by the EPA for the vehicle in response to Porsche's submission was based on a fundamental lie. Those ads were unfair, deceptive, false, and misleading for the same reasons, as stated above.

172. For example, Porsche expressly marketed the fuel-efficiency of the Cayenne Diesel, even though such efficiency could not be achieved while complying with applicable emission regulations.

173. Moreover, the brochure for Porsche's diesel-powered 2013 Cayenne SUV, available online and at dealerships, touted the vehicle's "Intelligent Performance and efficiency—

[104] Brochure: 2016 Audi A8, http://pa.motorwebs.com/audi/brochure/a8.pdf.

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the core characteristics of Porsche engineering."[105] It boasted that "[t]his is no ordinary diesel. This is a Porsche 3.0-liter V6 turbo diesel engine. It's a technological marvel, able to take its unique fuel source and transform it into clean, efficient, and incredibly torque-rich power." Further, the brochure exclaimed Porsche "refined" diesel engine technology, which made its diesel engine "far advanced from what many people perceive—especially in terms of its acceleration, clean emissions, and quiet running operation."[106] The brochure even touted its "low emissions" on a page entitled: "A cleaner diesel. Exhaust technologies."[107] Porsche described the exhaust system and stated that its exhaust technologies "help to ensure the reduction of harmful pollutants into the environment and make the Cayenne diesel compliant with U.S. emission standards."[108] Unfortunately, for thousands of American consumers, these statements were all false.

5. Volkswagen's Nationwide Advertising Campaign Was Highly Effective, and Volkswagen Profited Handsomely from Selling the Class Vehicles

174. Volkswagen's massive advertising campaign for the Class Vehicles proved highly successful, as Volkswagen took a commanding lead in U.S. diesel vehicle sales. Volkswagen's diesel vehicles were profiled on environmental websites and blogs as the responsible choice, relying on Volkswagen's representations of high mileage and low emissions.[109]

175. And the success of Volkswagen's advertising campaign resulted in skyrocketing sales. In 2007, VW America sold 230,572 cars in the United States—a far cry from Winterkorn's goal of 800,000 sales in 2018—and a negligible number of those were diesel vehicles. In fact, in 2007 only approximately 16,700 light-duty diesel vehicles were sold in the United States.[110] As

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[105] Brochure: 2012 Cayenne Diesel, https://static.beepi.com/Brochures/17053.pdf.
[106] *Id.*
[107] *Id.*
[108] *Id.*
[109] *See, e.g.*, Jim Motavalli, *Clean diesel: What you need to know*, Mother Nature Network (Apr. 5, 2013), http://www.mnn.com/green-tech/transportation/blogs/clean-diesel-what-you-need-to-know; Anthony Ingram, *2015 VW Golf, Beetle, Passat, Jetta All Get New Clean Diesel Engine*, Green Car Reports (Mar. 19, 2014), http://www.greencarreports.com/news/1090957_2015-vw-golf-beetle-passat-jetta-all-get-new-clean-diesel-engine (last visited on Sept. 28, 2015).
[110] Paul Eisenstein, *Volkswagen Scandal Delivers 'Black Eye' to Diesel Tech as a Whole*, NBC News (Sept. 24, 2015), http://www.nbcnews.com/business/autos/volkswagen-scandal-delivers-

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Volkswagen released its "clean" diesel lineup and fraudulent advertising campaign, sales of the Class Vehicles grew dramatically, from 43,869 in 2009 to a peak of 111,285 in 2013.[111] This largely accounted for VW America's sales growth to over 400,000 sales in 2013, nearly double the sales in 2007.[112] Likewise, the Class Vehicles contributed significantly to Audi's growth from 93,506 sales in 2007 to 182,011 in 2014.[113] According to the U.S. government, approximately 80,000 of the illegal vehicles sold by VW, Audi and Porsche in the United States had 3.0-liter TDI diesel engines.

176. Volkswagen reaped considerable benefit from their fraud, charging premiums of thousands of dollars for the "clean" diesel models of the Class Vehicles.

177. Volkswagen also engaged in an aggressive lobbying campaign for federal tax credits for the Class Vehicles, akin to the credits offered for electric cars.[114] These efforts were met with some success, as many of the Class Vehicles were deemed eligible for federal income tax credits in order to spur "clean" diesel technology. In fact, at least $78 million was earmarked for TDI Jetta buyers in 2009 and 2010.[115]

F. Defendants' Dirty Diesel Scheme Starts to Unravel

178. Defendants' illegal scheme started to unravel approximately five years after Volkswagen introduced its first diesel model containing the defeat device into the U.S. stream of commerce. In May 2014, West Virginia University's Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean

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[111] *Supra* note 7.

[112] *Volkswagen Reports December 2013 and Year-End Results*, Volkswagen (Jan. 3, 2014), http://media.vw.com/release/592/.

[113] *Audi achieves fifth straight year of U.S. record sales with 182,011 vehicles in 2014*, Audi USA (Jan. 5, 2015), https://www.audiusa.com/newsroom/news/press-releases/2015/01/audi-achieves-fifth-straight-year-of-us-record-sales-with-182011-vehicles-in-2014.

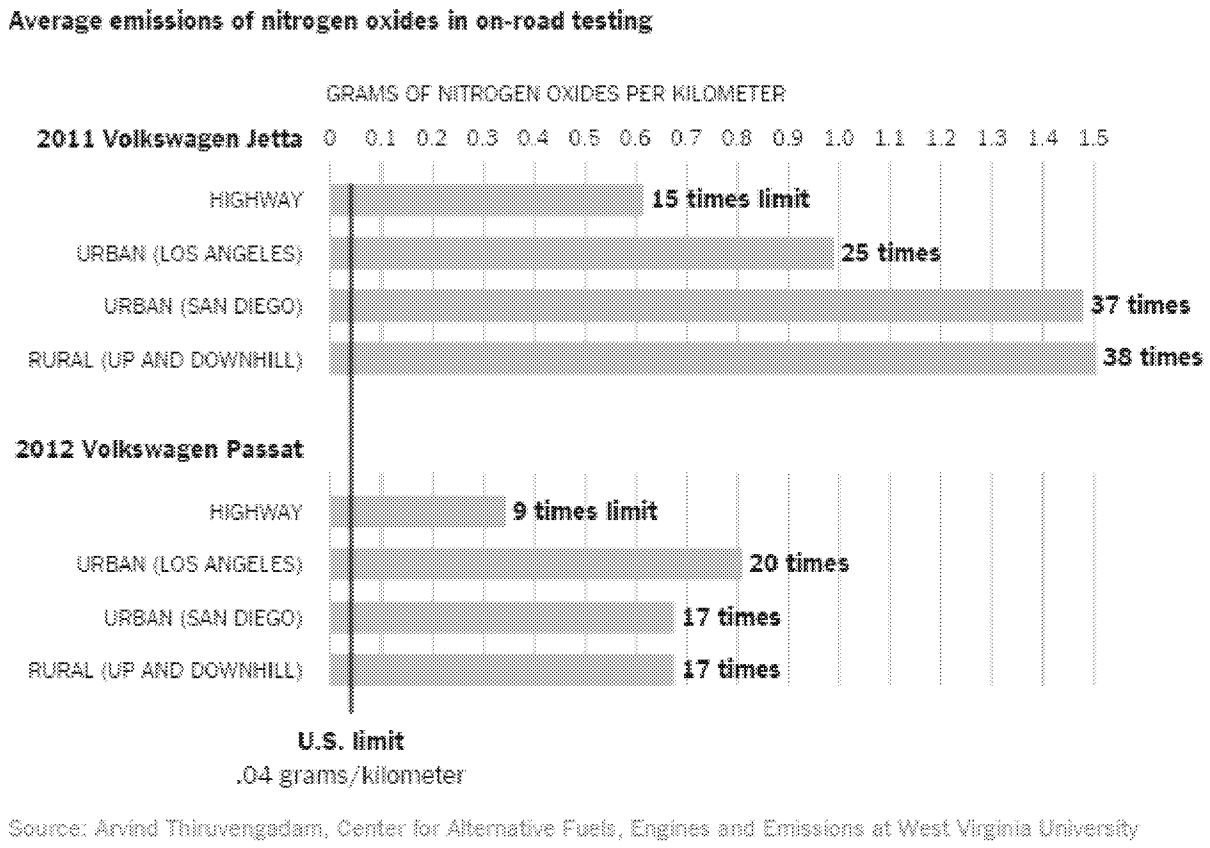
[114] Steve Birr, *Volkswagen Lobbied Obama Administration For Green Tax Credits*, The Daily Caller (Oct. 13, 2015), http://dailycaller.com/2015/10/13/volkswagen-lobbied-obama-administration-for-green-tax-credits/.

[115] *Volkswagen shares plunge on emissions scandal; U.S. widens probe*, Reuters (Sept. 21, 2015), https://finance.yahoo.com/news/volkswagen-shares-plunge-most-six-071319964.html.

Transportation ("ICCT"), which found that certain of the Class Vehicles' real world NO_X and other emissions exceeded the allowable EPA emission standards.[116]

179. The ICCT researchers had been comparing the real-world performance of "clean" diesel vehicles in Europe with reported results and noted numerous discrepancies. Since the U.S. emission regulations were significantly more stringent than its European counterparts, the ICCT sought to test the equivalent U.S. "clean" diesel cars, presuming that they would run cleaner. West Virginia University's team of emissions researchers was a qualified and enthusiastic partner, as they had already been engaged in the study of heavy truck emissions.

180. Shockingly, the study showed that, contrary to testing lab results, real world driving of Volkswagen "clean" diesel vehicles produced levels of NO_X up to 40 times higher than legal limits promulgated by the EPA and CARB:



[116] *See Final Report: In Use Emissions Testing of Light-Duty Diesel Vehicles in the United States*, International Council on Clean Transportation (May 15, 2015), http://www.theicct.org/sites/default/files/publications/WVU_LDDVin-use_ICCT_Report_Final_may 2014.pdf.

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181. The results of this study prompted an immediate investigation by the EPA and CARB, both of whom demanded an explanation from Volkswagen. Despite knowing that the Class Vehicles contained illegal emission systems—and defeat devices intentionally designed to comply with emission standards on a test bench but not under normal driving operation and use—Volkswagen failed to come clean. Instead, Volkswagen denied the allegations and blamed faulty testing procedures.

182. Audi conducted internal testing on the 3.0-Liter TDI engine starting in Fall 2014, and found driving emissions of NOx that greatly exceeded U.S. standards. Volkswagen officials conveyed this information to CARB, but without disclosing the true source and nature of the problem.

183. In December 2014, Volkswagen issued a recall purportedly to update emission control software in the Class Vehicles, and CARB (along with the EPA) conducted follow-up testing of the Class Vehicles in the laboratory and during normal road operation. CARB attempted to identify the source and nature of the Class Vehicles' poor performance and determine why their on-board diagnostic systems did not detect the increased emissions. None of the technical issues suggested by Volkswagen adequately explained the NO_X test results as confirmed by CARB.

184. Dissatisfied with Volkswagen's explanations, EPA and CARB officials finally threatened to withhold the COCs for Volkswagen's 2016 diesel vehicles until it adequately explained the anomaly of the higher emissions. Then, and only then, did Volkswagen finally relent and start to lift the curtain on its illegal scheme.

G. Once Caught, Volkswagen Admits its Fraud—in Part

185. On September 3, 2015, Volkswagen officials finally disclosed in writing and at a meeting with the EPA and CARB that it had installed a sophisticated software algorithm on the 2.0-liter Class Vehicles, which could detect when the car was undergoing emission testing on a test bench and switch the car into a cleaner running mode. During that meeting, Volkswagen admitted that the software was a "defeat device" forbidden by the CAA and state regulations.

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186. On September 18, 2015, the EPA issued a Notice of Violation of the CAA (the "First NOV") to VW AG, Audi AG, and VW America for installing illegal defeat devices in 2009-2015 Volkswagen and Audi diesel cars equipped with 2.0-liter diesel engines. That same day, CARB sent a letter to VW AG, Audi AG, and VW America, advising that it had initiated an enforcement investigation of Volkswagen pertaining to the vehicles at issue in the First NOV.

187. Two days later, Volkswagen made its first public admission of wrongdoing in a written statement and video by VW AG's then-CEO Winterkorn (who would soon resign as a result of this scandal), posted on VW AG's website. Winterkorn's statement read, in pertinent part:

> I personally am deeply sorry that we have broken the trust of our customers and the public. We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case. Volkswagen has ordered an external investigation of this matter. . . . We do not and will not tolerate violation of any kind of our internal rules or of the law.[117]

In his video, Winterkorn further apologized by stating:

> The irregularities in our group's diesel engines go against everything Volkswagen stands for. To be frank with you, manipulation at Volkswagen must never happen again. . . . I personally am deeply sorry that we have broken the trust of our customers. I would like to make a formal apology to our customers to the authorities and to the general public for this misconduct.[118]

188. That same day, Volkswagen confirmed that it had ordered dealers to stop selling both new and used vehicles with 2.0-liter diesel engines.[119] Volkswagen continued to sell its 3.0-liter diesel models, despite containing similar, but not-yet-disclosed defeat devices.

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[117] *See Statement of Prof. Dr. Martin Winterkorn, CEO of Volkswagen AG*, Volkswagen AG (Sept. 20, 2012), http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/09/statement_ceo_of_volkswagen_ag.html.

[118] *See* Joe Lorio, *VW Chairman Martin Winterkorn Releases Video Addressing Scandal, Is Not Stepping Down*, Car and Driver (Sept. 22, 2015), http://blog.caranddriver.com/vw-chairman-martin-winterkorn-releases-video-addressing-scandal-is-not-stepping-down/.

[119] Jack Ewing, *Volkswagen to Stop Sales of Diesel Cars Involved in Recall*, N.Y. Times (Sept. 20, 2015), http://www.nytimes.com/2015/09/21/business/international/volkswagen-chief-apologizes-for-breach-of-trust-after-recall.html.

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189. On September 21, 2015, Volkswagen spokesman John Schilling stated in an email that Volkswagen was "committed to fixing this issue as soon as possible" and to "developing a remedy that meets emissions standards and satisfies our loyal and valued customers."[120]

190. Defendant Horn, President and CEO of VW America, echoed this sentiment when he took the stage later that evening at a launch event for the 2016 Volkswagen Passat in Brooklyn, New York, telling reporters:

> Our company was dishonest, with the EPA and the California Air Resources Board, and with all of you and in my German words, ***we have totally screwed up***. We have to make things right, with the government, the public, our customers, our employees and also very important, our dealers.[121] (Emphasis added.)

Defendant Horn's presentation on the new Passat, notably, did not promote the environmental efficiency of the car's "clean" diesel model.

191. On September 22, 2015, Volkswagen announced that 11 million diesel cars worldwide were installed with the same defeat device software that had evaded emission testing by U.S. regulators. Contemporaneously, Volkswagen announced that it had set aside reserves of 6.5 billion euros ($7.3 billion) in the third quarter to address the matter.[122]

192. On September 23, 2015, Winterkorn resigned from his position as CEO of VW AG. In his resignation statement, Winterkorn insisted that he was not personally involved in the emissions scandal: "Above all, I am stunned that misconduct on such a scale was possible in the Volkswagen Group. I am doing this in the interests of the company even though I am not aware of any wrongdoing on my part."[123]

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[120] Jad Mouadwad, *et al.*, *The Wrath of Volkswagen's Drivers*, N.Y. Times (Sept. 21, 2015), http://www.nytimes.com/2015/09/22/business/the-wrath-of-volkswagens-drivers.html.

[121] Christine Seib, *Volkswagen's US Boss: We Totally Screwed Up*, CNBC (Sept. 22, 2015), http://www.cnbc.com/2015/09/21/volkswagen-us-ceo-screwed-up-on-eca-emissions-diesel-test-rigging.html.

[122] Nathan Bomey, *Volkswagen Emission Scandal Widens: 11 Million Cars Affected*, USA Today (Sept. 22, 2015), http://www.usatoday.com/story/money/cars/2015/09/22/volkswagen-emissions-scandal/72605874/.

[123] Graham Ruddick, *Volkswagen chief quits over emissions scandal as car industry faces crisis*, The Guardian (Sept. 23, 2015), http://www.theguardian.com/business/2015/sep/23/volkswagen-chief-martin-winterkorn-quits-emissions-scandal.

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193. Following Winterkorn's resignation, Volkswagen released a statement that it had set up a special committee to lead its own inquiry into the scandal and expected "further personnel consequences in the next days." It added: "The internal group investigations are continuing at a high tempo. All participants in these proceedings that have resulted in immeasurable harm for Volkswagen will be subject to the full consequences." However, the committee insisted that Winterkorn "had no knowledge of the manipulation of emissions data."[124]

194. On September 25, 2015, Matthias Müller, the Chairman of Porsche AG, was named as Winterkorn's successor. Immediately upon assuming his new role, Müller issued a press release stating:

> My most urgent task is to win back trust for the Volkswagen Group—by leaving no stone unturned and with maximum transparency, as well as drawing the right conclusions from the current situation. Under my leadership, Volkswagen will do everything it can to develop and implement the most stringent compliance and governance standards in our industry.[125]

195. On October 8, 2015, Defendant Horn made frank admissions of culpability in his testimony before the House Committee on Energy and Commerce's Subcommittee on Oversight and Investigations. Under oath, Defendant Horn testified: "On behalf of our Company, and my colleagues in Germany, I would like to offer a sincere apology for Volkswagen's use of a software program that served to defeat the regular emissions testing regime."[126] In response to a question from the Subcommittee Chairman, Representative Tim Murphy, whether the software was installed "for the express purpose of beating tests," Horn testified, "it was installed for this purpose, yes."[127]

196. On November 2, 2015, the EPA issued a second Notice of Violation of the CAA (the "Second NOV") to VW AG, Audi AG, and VW America, this time directed at the larger 3.0-liter, 6-cylinder diesel models—the same vehicles that Volkswagen continued to sell through its

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[124] *Id.*

[125] *Matthias Müller appointed CEO of the Volkswagen Group*, Volkswagen AG (Sept. 25, 2015), http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/09/CEO.html.

[126] *Supra* note 1.

[127] *Id.*

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dealers after the First NOV.[128] The Second NOV, which was also issued to Porsche AG and Porsche America, disclosed that the EPA had sent a letter to manufacturers on September 25, 2015, stating it was assessing all diesel engine cars for defeat devices. The Second NOV stated that Volkswagen had installed illegal defeat devices in certain vehicles equipped with 3.0-liter diesel engines for model years 2014–16. Although not identical, the cheating alleged of Volkswagen in the Second NOV concerned essentially the same mechanism Volkswagen used—and admitted to using—in the First NOV.

197. However, shortly after it received the Second NOV, Volkswagen fired back at the EPA's new claims of fraud, denying that it installed defeat device software in the identified 3.0-liter diesel vehicles. In response to the Second NOV, Volkswagen issued the following bold statement: "Volkswagen AG wishes to emphasize that no software has been installed in the 3.0-liter V6 diesel power units to alter emissions characteristics in a forbidden manner."[129]

198. Yet, the following day, despite Volkswagen's insistence that the 3.0-liter diesel emission system was legal, Volkswagen ordered dealers to stop selling all six models at issue in the Second NOV, in addition to the Audi Q7, which was also equipped with a 3.0-liter diesel engine.[130] Porsche likewise discontinued sales of the 3.0-Liter Cayenne, despite claiming the EPA notice was "unexpected."

199. On November 4, 2015, following its directive to halt sales of the 3.0-liter diesel models, Volkswagen announced that an internal investigation revealed "unexplained inconsistencies" with the carbon-dioxide output of 800,000 of its gasoline-powered vehicles.[131]

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[128] Letter from Susan Shinkman, Director, EPA Office of Civil Enforcement to Volkswagen dated Nov. 2, 2015, http://www.epa.gov/sites/production/files/2015-11/documents/vw-nov-2015-11-02.pdf.

[129] Emily Field, *Volkswagen Slams Newest EPA Emissions Fraud Claims*, Law360 (Nov. 3, 2015), http://www.law360.com/articles/722478/volkswagen-slams-newest-epa-emissions-fraud-claims.

[130] Paul Lienert, *Volkswagen tells dealers to stop selling some 3.0 V6 diesel models*, Reuters (Nov. 4, 2015), http://www.reuters.com/article/us-volkswagen-emissions-stopsale-idUSKCN0ST2E420151104.

[131] Benedikt Kammel, *VW Emissions Issues Spread to Gasoline Cars*, Bloomberg (Nov. 3, 2015), http://www.bloomberg.com/news/articles/2015-11-03/volkswagen-emissions-woes-deepen-as-800-000-more-cars-affected.

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200. At a meeting on November 19, 2015, after almost three weeks of denying the EPA's allegations contained in the Second NOV, Audi finally admitted that defeat device software was installed not only in the vehicles identified in the Second NOV, but in all 3.0-liter Class Vehicles sold by Volkswagen, Audi, and Porsche. Porsche met separately with the EPA on the same day. Specifically, Audi stated that it had failed to disclose three auxiliary emissions control devices in its 3.0-liter diesel engines to U.S. regulators, and further admitted: "One of them is regarded as a defeat device according to applicable U.S. law. Specifically, this is the software for the temperature conditioning of the exhaust-gas cleaning system."[132] On November 20, 2015, the EPA and CARB issued notices giving a complete list of 3.0-liter Class Vehicles that were affected. On November 25, 2015, CARB sent a letter to Audi, Volkswagen and Porsche stating that the same 3.0-liter engine, with the same defeat device, was used in all of the 3.0-liter Class Vehicles sold by Volkswagen, Audi and Porsche. Volkswagen had publicly acknowledged in a press release dated November 23, 2015, that the 3.0-liter engine "was developed by Audi" and had been used in the Porsche Cayenne since 2013.

201. This admission came almost three months after Volkswagen's initial, more limited *mea culpa*. It came years after Audi employees first learned that their 3.0-liter diesel vehicles, even when equipped with the more expensive SCR system, still could not pass NO_X emission tests. Moreover, Audi had known for years that, with the installation of the defeat device, its 3.0-liter diesel engines exceeded the legal limits of NO_X levels when operated in real world conditions.

202. It also came and years after Porsche employees first attended meetings with Bosch to discuss the diesel engine, began coordinating regulatory submissions regarding NO_X levels with Audi and Volkswagen America, and learned, following the installation of the defeat device, that their vehicles exceeded the legal limits of NO_X levels when operated in real world conditions.

203. Still, despite the admissions and apologies that followed each time a Volkswagen lie was exposed, it became apparent that Volkswagen was not ready to fully accept responsibility

[132] *Statement on Audi's discussions with the US environmental authorities EPA and CARB*, Volkswagen AG (Nov. 23, 2015), http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/11/epa.html.

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for its actions. Indeed, merely one month after Volkswagen admitted to the findings in the Second NOV, Hans-Gerd Bode, Volkswagen's Group Communications Chief, told a group of reporters: "I can assure you that we certainly did not, at any point, knowingly lie to you. . . . We have always tried to give you the information which corresponded to the latest level of our own knowledge at the time."[133]

204. On January 4, 2016, the DOJ, on behalf of the EPA, filed a civil complaint against VW AG, VW America, Volkswagen Group of America Chattanooga Operations LLC, Audi AG, Audi, Porsche AG, and Porsche America for injunctive relief and the assessment of civil penalties for their violations of the CAA. In addition to alleging the various violations of the CAA, the complaint states that the Defendants impeded the government's efforts to learn the truth about the emission irregularities related to the Class Vehicles with material omissions and misleading information.

205. On January 10, 2016, in an interview with NPR at the North American International Auto Show, Müller claimed that Volkswagen ***did not lie*** to U.S. regulators about emissions problems with its diesel engines, and suggested that the whole thing had been a misunderstanding of U.S. law. Müller stated:

> Frankly spoken, it was a technical problem. We made a default, we had a . . . not the right interpretation of the American law. And we had some targets for our technical engineers, and they solved this problem and reached targets with some software solutions which haven't been compatible to the American law. That is the thing. And the other question you mentioned—it was an ethical problem? I cannot understand why you say that. . . . We didn't lie. We didn't understand the question first. And then we worked since 2014 to solve the problem.[134]

206. Moreover, since the fraud was first exposed, Volkswagen has consistently denied that its top executives were involved with, or had knowledge of, the fraudulent scheme, instead pinning the blame on the work of a few rogue engineers.

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[133] Andreas Cremer, *Das Auto' no more: Volkswagen plans image offensive*, Reuters (Dec. 22, 2014), http://www.reuters.com/article/us-volkswagen-emissions-communications-i-idUSKBN0U514L20151222.

[134] Sonari Glinton, *'We Didn't Lie,' Volkswagen CEO Says Of Emissions Scandal*, NPR (Jan. 11, 2016), http://www.npr.org/sections/thetwo-way/2016/01/11/462682378/we-didnt-lie-volkswagen-ceo-says-of-emissions-scandal.

207. As an alternative tactic, during defendant Horn's Congressional hearing on October 8, 2015, Horn testified that the installation of the defeat device in certain Volkswagen diesel vehicles was the work of "a couple of software engineers who put this in for whatever reason."[135] Horn's explanation is not only contrary to prior admissions, but entirely implausible.

208. To date, at least eleven of Volkswagen's top executives have either resigned under pressure or been fired. Among the top executives dismissed are defendant Winterkorn, CEO and Chairman of Volkswagen, who resigned almost immediately once the scandal became public; Dr. Ulrich Hackenberg, a top engineering boss in the Audi Group, who was suspended and later resigned; Heinz-Jakob Neusser, described as a Volkswagen "development" boss, who was suspended and later resigned; and Wolfgang Hatz, Porsche's "development" boss and previously Volkswagen's head of engine development, who was suspended and then resigned. Furthermore, one of Volkswagen's top advertising executives purportedly "resigned" (although the company has said that the resignation was unrelated to the present scandal), and VW America has replaced their general counsel and head of public affairs, David Geanacopoulos. Frank Tuch, VW AG's head of quality assurance, resigned on February 8, 2016—his departure likely tied to leadership overhauls as Volkswagen's internal investigations continue. Michael Horn, head of VW America, resigned on March 9, 2016.

209. That a few rogue engineers could orchestrate this massive, worldwide scheme is implausible not only because of the firings of the above-listed executives, but also because Volkswagen has been implicated using not just one, but ***two*** sophisticated defeat device software programs, in ***two*** separate engines designed and manufactured by different engineers in different corporate facilities. In addition, more than a dozen different Class Vehicles, involving three separate brands—Volkswagen, Audi and Porsche—have been implicated in a fraud that began more than a decade ago.

210. On October 17, 2015, Reuters reported that anonymous insiders, including a Volkswagen manager and a U.S. official close to the government's investigation of the company,

[135] Paul A. Eisenstein, *Could Rogue Software Engineers Be Behind VW Emissions Cheating?*, NBC News (Oct. 9, 2015), http://www.nbcnews.com/business/autos/could-rogue-software-engineers-be-behind-vw-emissions-cheating-n441451.

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claimed that Volkswagen made several modifications to its emission defeat device software over the seven years the company has admitted to cheating.[136] Such incremental updates to the software, which were made to accommodate new generations of engines during that timeframe, evidences a larger group of employees making an ongoing effort to continue their deception.

211. As discussed above, on January 22, 2016, Germany's *Sueddeutsche Zeitung* newspaper reported that Volkswagen's development of defeat device software to cheat diesel emissions tests was an "open secret" in its engineering development department. Staff members in engine development have stated that they felt pressure from the top of Volkswagen's corporate hierarchy to find a cost-effective solution to develop "Clean Diesel" engines to increase U.S. market share. Rather than concede that such engines could not be built (*i.e.*, were "impossible" as R&D chief Hatz once proclaimed), the development team decided to push ahead with manipulation.[137]

212. Quoting documents from Volkswagen's internal investigation, which included testimony from a staff member who took part in the fraud, the German newspaper said: "Within the company there was a culture of 'we can do everything', so to say something cannot be done, was not acceptable. . . . Instead of coming clean to the management board that it cannot be done, it was decided to commit fraud."[138] The newspaper further reported that staff in Volkswagen's engine development department took comfort from the fact that regulators would not be able to detect the fraud using conventional examination techniques.

213. The role of Volkswagen's top management in the fraud has recently come under increased scrutiny after reports have emerged that Winterkorn was aware that Volkswagen was rigging emissions tests on its vehicles more than a year before the scandal emerged, yet did nothing to stop the practice.[139]

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[136] Andreas Cremer, *et al.*, *VW made several defeat devices to cheat emissions tests: sources*, Reuters (Oct. 17, 2015), http://www.reuters.com/article/us-volkswagen-emissions-software-idUSKCN0SB0PU20151017.

[137] Georgina Prodhan, *Volkswagen probe finds manipulation was open secret in department: newspaper*, Reuters (Jan. 23, 2016), http://www.reuters.com/article/us-volkswagen-emissions-investigation-idUSKCN0V02E7.

[138] *Id.*

[139] Geoffrey Smith, *VW's ex-CEO Winterkorn 'Knew About Defeat Device in Early 2014,'*

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214. According to German newspaper *Bild-Zeitung*, Winterkorn and other high-level Volkswagen managers were warned by a senior executive about the risk of a U.S. investigation into the use of the defeat devices back in May 2014.[140] The newspaper reported that the warning came in the form of a letter from Bernd Gottweis, an employee known internally as the "fire-fighter," who led a team called the "Product Safety Taskforce," which concentrated on crisis prevention and management. The letter, which was uncovered by the internal investigation carried out on Volkswagen's order, stated: "There is no well-founded explanation for the dramatically higher NOX emissions that can be given to the authorities. It is to be suspected, that the authorities will examine the VW systems to see whether Volkswagen has installed engine management software (a so-called Defeat Device)." Thus, senior Volkswagen executives were well aware of the issue a year and a half before the company's admission. In fact, issues related to the defeat device had been presented in meetings with senior management at least by November 2013. According to *Fortune* magazine, Audi engineers had considered use of defeat device software as early as 1999, when Winterkorn was head of Audi.

215. The *Bild-Zeitung* newspaper also reported that a senior Volkswagen manager had admitted the true level of emissions to a CARB official on August 5, 2015, over a month before the EPA issued the First NOV I, and that Volkswagen brand chief Herbert Diess had convened meetings on August 24th and August 25th to discuss how to react to the scandal that was about to break.[141]

216. The letter, of which *Bild-Zeitung* claims to have a copy, is the second leak suggesting that knowledge of the emissions problems and use of the defeat devices extended far higher, far earlier, than Volkswagen has admitted. Indeed, the German magazine *Manager* has reported that Volkswagen's management had already discussed the issue in the spring of 2014 in reference to a letter received from the EPA.[142] The revelations from these reports directly

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Fortune (Feb. 15, 2016), http://fortune.com/2016/02/15/vw-ceo-winterkorn-defeat-device/.

[140] *Id.*

[141] *Id.*

[142] *Id.*

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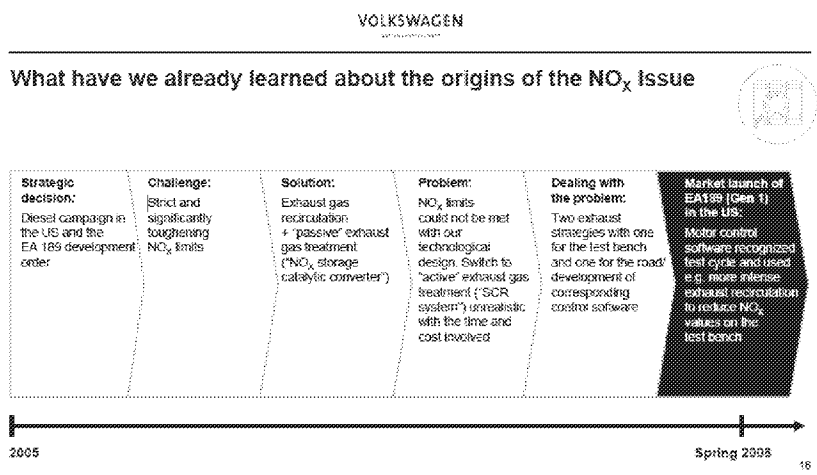
contradict arguments made by Winterkorn and Horn that they were unaware of the use of defeat devices applied specifically to circumvent U.S. regulations.

217. At a December 10, 2015, press conference, during which Volkswagen discussed preliminary results of their internal investigation, executives summed up the state of affairs, and admitted that Volkswagen had installed defeat devices to take shortcuts around engineering challenges. Faced with "[s]trict and significantly toughening NO_X limits," Volkswagen knew those "NO_X limits could not be met with [their] technological design" for lean NO_X traps so instead they dealt with the problem by installing defeat devices on those Class Vehicles. The Class Vehicles with urea treatments faced a separate problem: the urea tanks were too small for consumers to maintain urea levels at standard maintenance intervals. Volkswagen also took shortcuts around these engineering challenges by implementing a defeat device to reduce urea consumption and illegally stretch the capacity of its urea tanks outside of test conditions. Volkswagen concluded this presentation by implicitly acknowledging the toxicity of its corporate culture, as Volkswagen announced it would establish a "new mindset" among Volkswagen leadership that has "[m]ore capacity for criticism."[143]

218. The entire after-the-fact chronology and explanation of how and why Volkswagen perpetrated its fraud is set forth in its December 10, 2015, presentation, as follows:



[143] *Volkswagen AG, The Volkswagen Group is moving ahead: Investigation, customer solutions, realignment*, Volkswagen AG (Dec. 10, 2015), http://www.volkswagenag.com/content/vwcorp/info_center/en/talks_and_presentations/2015/12/Presentation_MUE_POE.bin.html/binarystorageitem/file/2015_12_10_Pr%C3%A4sentation+PK_Final_ENG.pdf.

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VOLKSWAGEN

What have we already learned about the origins of the NO_X Issue (continuation)

Market launch EA189 (Gen 1) in the US:	Further development:	Problem:	Dealing with the problem:	Market launch EA189 (Gen 2) in the US:
Motor control software recognizes test cycle and uses e.g. more intense exhaust recirculation to reduce NO_x values on the test bench	Generation 2 of EA189 was supposed to be more effective in reducing NO_x by utilizing active exhaust gas recirculation ("SCR system")	Tank for reduction medium ("Diesel Exhaust Fluid") needs to be large enough for oil change interval (approx. 15,000 km) because Diesel Exhaust Fluid could only be refilled at repair garages	Maintain dual exhaust gas strategies for the test bench and the road in order to cope with the conflicting goals by varying "Diesel Exhaust Fluid" dosages	Motor control software recognizes test cycle and uses e.g. higher "Diesel Exhaust Fluid" dosage to reduce NO_x values on the test bench

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H. Volkswagen's Failed Attempts at Remedial Action

219. While Volkswagen has repeatedly expressed its commitment to fix the problem and restore the public's trust, its attempts at remedial action have been wholly inadequate.

220. On November 8, 2015, Volkswagen announced a "goodwill package" to owners of Class Vehicles subject to the First NOV, but not the Second NOV.[144] The "goodwill package" consisted of a $500 Volkswagen Prepaid Visa Loyalty Card, a $500 Volkswagen Dealership Card, and 24-hour Roadside Assistance for three years. Volkswagen is on record that this package is provided to consumers "without any strings attached," and disavowed any attempt to claim offset for this "goodwill." U.S. Senators Richard Blumenthal and Edward J. Markey decried the program as "insultingly inadequate" and "a fig leaf attempting to hide the true depths of Volkswagen's deception." Volkswagen has since expanded the "goodwill package" to owners of 3.0-liter TDI Touareg models; however, the remaining vehicles at issue in the Second NOV are still excluded.

221. While Volkswagen claims to have a software fix for European cars, it has struggled to find a solution for U.S. cars. In a statement discussing the European fix, it said:

[144] Joseph White, *et al.*, *Volkswagen Offers U.S. Diesel Owners $1,000 in Credit Cards*, Reuters (Nov. 9, 2015), http://www.reuters.com/article/2015/11/09/volkswagen-emissionsid-idUSL1N1341ET20151109#eARbZZJFylQvGmG1.99.

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> Due to far stricter nitrogen oxide limits in the United States, it is a greater technical challenge to retrofit the vehicles such that all applicable emissions limits can be met with one and the same emissions strategy. . . . To this end, Volkswagen is cooperating closely with the United States Environmental Protection Agency and the California Air Resources Board.[145]

222. However, that cooperation has not yet been met with any success. On January 12, 2016, CARB rejected Volkswagen's proposal to recall and remedy Class Vehicles equipped with 2.0-liter diesel engines, finding that the plans were "incomplete, substantially deficient, and fall far short of meeting the legal requirements to return these vehicles to the claimed certification configuration."[146] Following the rejection, CARB initiated an enforcement action against Volkswagen and CARB Chair Mary D. Nichols released the following statement:

> Volkswagen made a decision to cheat on emissions tests and then tried to cover it up. They continued and compounded the lie and when they were caught they tried to deny it. The result is thousands of tons of nitrogen oxide that have harmed the health of Californians. They need to make it right. Today's action is a step in the direction of assuring that will happen.[147]

Shortly thereafter, the EPA issued a statement of its own backing CARB's decision not to approve Volkswagen's recall plans.[148] Volkswagen's efforts to meet EPA and CARB emission standards are ongoing, and are a component of currently proposed governmental and class action settlements addressing Volkswagen's 2.0-liter vehicles, which are pending before this Court and undergoing an approval process.

I. Volkswagen Caused Billions of Dollars in Harm to U.S. Consumers

223. Volkswagen's illegal scheme duped hundreds of thousands of U.S. consumers into buying Class Vehicles that never should have left the factory, let alone been sold, at a cost of billions of dollars. Similarly, automobile dealers like Plaintiffs and the Class members were

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[145] Jay Ramey, *VW chairman Poetsch: Company 'tolerated breaches of rules,'* Autoweek (Dec. 10, 2015), http://autoweek.com/article/vw-diesel-scandal/vw-chairman-poetsch-company-tolerated-breaches-rules.

[146] Ashlee Kieler, *California Rejects VW Proposal To Fix Emissions-Cheating Vehicles*, Consumerist (Jan. 12, 2016), http://consumerist.com/2016/01/12/california-rejects-vw-proposal-to-fix-emissions-cheating-vehicles/.

[147] *Id.*

[148] *Id.*

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duped into acquiring scores of Class Vehicles for the purpose of resale to equally unwitting consumers.

224. In addition, Volkswagen charged premiums of several thousands of dollars for the Class Vehicles, as compared to non-diesel vehicles. Using recent pricing figures, it has been estimated that Volkswagen charged premiums of from 7 to 27 percent for its 2.0-liter diesel models.[149] For example, the non-diesel 2015 Passat started at $21,340, while the "clean" diesel fetched at least $27,100.[150] Though the "clean" diesel model achieves greater mileage, the premium—some $5,755—would buy enough gas to drive the non-diesel model approximately 88,000 miles at current gas prices.[151] Automobile dealers like Plaintiffs and the Class Members were willing to pay such a premium because of the Volkswagen vehicles' popularity with American consumers.

225. Automobile dealer Class Members purchased the Class Vehicles only because Volkswagen fraudulently obtained COCs from the EPA to illegally introduce them into the U.S. stream of commerce. In addition, Volkswagen engaged in a false and misleading advertising campaign that the Clean Diesel engine system was an environmentally friendly, fuel efficient, and low emission vehicle with high performance. Plaintiffs and the Class Members acquired the Class Vehicles based on these claims, and were harmed as the cars were neither legal nor clean.

226. While Volkswagen once claimed that these vehicles would have "a higher resale value versus comparable gasoline vehicles,"[152] the cars are, in fact, now virtually unsellable and subject to a recall for the indefinite future. With the revelations of Volkswagen's fraud, the Class Vehicles have decreased sharply in value. Within several weeks of the announcement of Volkswagen's emissions fraud, the value of the Class Vehicles plummeted by nearly 16%.[153] In

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[149] Kyle Stock, *Volkswagen's Other Diesel Ruse: Premium Pricing*, Bloomberg (Sept. 23, 2015), http://www.bloomberg.com/news/articles/2015-09-23/volkswagen-s-other-diesel-ruse-premium-pricing.

[150] *Id.*

[151] *Id.*

[152] *See* Audi of America, TDI® clean diesel (2015), http://drivedigitalgroup.com/Dealer/classicaudi/brochures/tdi.pdf.

[153] *See* Ryan Beene, *Used VW diesel prices nosedive as fix remains unclear*, Autoweek (Oct. 26, 2015), http://autoweek.com/article/vw-diesel-scandal/used-vw-diesels-prices-nosedive-while-waiting-repair-news.

fact, VW, Audi, and Porsche have halted all sales of the Class Vehicles, new or used, so that even dealers are stuck with tainted, stigmatized, and unsellable Class Vehicles.

227. As an illustration of the quantifiable financial loss suffered by Class Members, the charts below demonstrate that the retail values prices of Audi, Porsche, and Volkswagen models equipped with 3.0-liter engines that incorporated the "defeat device" experienced significantly greater rates of depreciation than competitive models following revelation of the scandal in or about September of 2015. Examples of the accelerated monthly depreciation rates illustrative of the decline in the NADA Clean Retail Values of the affected models appear below.

Average (Geometric Mean) Monthly Depreciation Rates

Q7 TDI vs. Competitive Vehicles by Model Year		
	Q7 TDI	Competitive Vehicles
2009 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 1.23% 2.80%	 1.46% 1.65%
2010 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 1.30% 1.86%	 1.41% 1.26%
2011 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 1.23% 1.70%	 1.43% 1.24%
2012 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 1.17% 2.62%	 1.24% 1.63%
2013 Model Year (11/2013 – 6/2016) (10/2015 – 6/2016)	 1.23% 2.35%	 1.10% 1.28%
2014 Model Year (5/2014 – 9/2015) (10/2015 – 6/2016)	 0.96% 1.89%	 0.90% 0.95%
CAYENNE DIESEL vs. Competitive Vehicles by Model Year		
	Cayenne Diesel	Competitive Vehicles
2013 Model Year (11/2013 9/2015) (10/2015 – 6/2016)	 1.22% 2.31%	 1.16% 1.18%

2014 Model Year (1/2015 – 9/2015) (10/2015 – 6/2016)	 1.50% 1.84%	 1.10% 1.12%
Q5 TDI vs. Competitive Vehicles by Model Year		
	Q5 TDI	Competitive Vehicles
2014 Model Year (9/2014 – 9/2015) (10/2015 – 6/2016)	 -0.24% 2.04%	 0.11% 1.07%
TOUAREG TDI vs. Competitive Vehicles by Model Year		
	Touareg TDI	Competitive Vehicles
2009 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 1.30% 2.27%	 1.40% 1.52%
2010 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 1.40% 2.01%	 1.35% 1.43%
2011 Model Year (1/2012 – 9/2015) (10/2015 – 6/2016)	 0.98% 2.30%	 1.22% 1.26%
2012 Model Year (8/2012 – 9/2015) (10/2015 – 6/2016)	 0.99% 2.49%	 1.08% 1.44%
2013 Model Year (5/2013 – 9/2015) (10/2015 – 6/2016)	 1.06% 1.95%	 0.86% 1.20%
2014 Model Year (7/2014 – 9/2015) (10/2015 – 6/2016)	 1.09% 2.57%	 0.42% 1.12%
A6 TDI vs. Competitive Vehicles by Model Year		
	A6 TDI	Competitive Vehicles
2014 Model Year (7/2014 – 9/2015) (10/2015 – 6/2016)	 1.29% 2.53%	 1.20% 1.55%

A7 TDI vs. Competitive Vehicles by Model Year		
	A7 TDI	Competitive Vehicles
2014 Model Year (5/2014 – 9/2015) (10/2015 – 6/2016)	 0.90% 2.32%	 0.53% 1.51%
A8 TDI vs. Competitive Vehicles by Model Year		
	A8 TDI	Competitive Vehicles
2014 Model Year (6/2014 – 9/2015) (10/2015 – 6/2016)	 1.53% 2.04%	 0.70% 1.76%

228. Volkswagen cannot fix the Class Vehicles without degrading their performance, including horsepower and/or efficiency. As a result, even if Volkswagen is able to make the Class Vehicles compliant, Class Members will nonetheless suffer actual harm and damages because their vehicles will no longer perform as promised. Car buyers, now aware of the defeat device scandal, are no longer willing to pay a premium for Volkswagen's discredited technology. This has resulted in a diminution in value of every Class Vehicle in the Class Members' inventory.

229. The harm described herein is quantifiable and ongoing. As a result of Volkswagen's illegal scheme, owners and lessees of the Class Vehicles have suffered losses—and continue to lose—money and property in the many millions of dollars.

TOLLING OF THE STATUTES OF LIMITATIONS

Discovery Rule

230. The tolling doctrine was made for cases of concealment like this one. Plaintiffs and Class members did not discover, and could not have discovered through the exercise of reasonable diligence, that Defendants had conspired to install software that would evade emissions regulations, and that Volkswagen was concealing and misrepresenting the true emissions levels of its vehicles.

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231. Defendants' fraud was elaborate and well concealed. Indeed, the EPA and CARB uncovered the software manipulation only through a sophisticated and costly investigation involving highly technical equipment.

232. Plaintiffs and Class members had no realistic ability to discover the presence of the defeat devices, or to otherwise learn of the fraud, until it was discovered by the EPA and CARB and revealed to the public through the September 18, 2015, and November 2, 2015, NOVs.

233. Any statutes of limitation otherwise-applicable to any claims asserted herein have thus been tolled by the discovery rule.

Fraudulent Concealment

234. All applicable statutes of limitation have also been tolled by Volkswagen's knowing, active and ongoing fraudulent concealment of the facts alleged herein.

235. Defendants have known of the defeat devices installed in the Class Vehicles since at least 2009 when Volkswagen began installing them. Since then Volkswagen has intentionally concealed from or failed to notify Plaintiffs, Class members, and the public of the defeat devices and the true emissions and performance of the Class Vehicles.

236. There is no question that Volkswagen installed the defeat devices intentionally to deceive, regulators, and the public, as Volkswagen has publicly conceded.

237. Despite knowing about the defeat device and unlawful emissions, Volkswagen did not acknowledge the problem, and in fact actively concealed it, until after the EPA issued its NOVs on September 18, 2015 and November 2, 2015.

238. Any otherwise-applicable statutes of limitation have therefore been tolled by Defendants' exclusive knowledge and Volkswagen's active concealment of the facts alleged herein.

Estoppel

239. Defendants were and are under a continuous duty to disclose to Plaintiffs and Class members the true character, quality, and nature of the Class Vehicles, including their emissions systems and their compliance with applicable federal and state law. Instead, Volkswagen actively concealed the true character, quality, and nature of the Class Vehicles and

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knowingly made misrepresentations about the quality, reliability, characteristics, and performance of the Class Vehicles.

240. Plaintiffs and Class members reasonably relied upon Volkswagen's knowing and affirmative misrepresentations and/or active concealment of these facts.

241. Based on the foregoing, Defendants are estopped from relying on any statutes of limitation in defense of this action.

PLAINTIFFS' FACTS

242. Plaintiff A to Z acquired one of the Class Vehicles, a 2012 VW Jetta TDI, on July 1, 2015. A to Z purchased the vehicle at auction for $10,715, and incurred additional costs including inspection fees, auction fees, delivery fees, maintenance and repair costs, and advertising costs totaling $1,615.00, for a total investment in the vehicle of $12,330.00. A to Z expected to sell the vehicle for $13,995.00, and advertised the vehicle for sale on its lot and on the internet. After news of the defeat device scandal, A to Z dropped the list price four times in increments of $500 each, and ultimately sold the vehicle on November 23, 2015, for $11,995, an out-of-pocket loss of $335.00 and additional expected lost profits of 1,665.00.

243. Plaintiff MSI acquired one of the Class Vehicles, a 2013 VW Jetta TDI, on July 29, 2015. MSI purchased the vehicle at auction for $10,575.00, and incurred additional costs including auction fees, delivery fees, maintenance and repair costs, and advertising costs totaling $6,815.00, for a total investment in the vehicle of $17,390.00. Prior to purchasing the Class Vehicle, MSI's owner, Abdulrahman Al Dachach, had seen television commercials touting the benefits of VW's clean diesel engines. According to Al Dachach, "Customers liked VW's clean diesels because of the good gas mileage and they were cleaner for the environment than other diesels." MSI expected to sell the vehicle for $19,500.00, and advertised the vehicle for sale on its lot and also on various websites. MSI has not been able to sell the vehicle to date.

CLASS ACTION ALLEGATIONS

244. Plaintiffs bring this lawsuit as a class action pursuant to Federal Rules of Civil Procedure 23(a); (b)(1); (b)(2); (b)(3); and/or (c)(4), on behalf of themselves and all others

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similarly situated as members of the following Independent Automobile Dealership Reseller Class (the "Class").

245. This action concerns the following Class Vehicles:

2.0-liter Class Vehicles	
Volkswagen Jetta TDI	2009-2015
Volkswagen Jetta SportWagen TDI	2009-2014
Volkswagen Beetle TDI	2012-2015
Volkswagen Beetle Convertible TDI	2012-2015
Audi A3 TDI	2010-2015
Volkswagen Golf TDI	2010-2015
Volkswagen Golf SportWagen TDI	2015
Volkswagen Passat TDI	2012-2015

3.0-liter Class Vehicles	
Volkswagen Touareg TDI	2009-2016
Porsche Cayenne Diesel	2013-2016
Audi A6 Quattro TDI	2014-2016
Audi A7 Quattro TDI	2014-2016
Audi A8 TDI	2014-2016
Audi A8L TDI	2014-2016
Audi Q5 TDI	2014-2016
Audi Q7 TDI	2009-2016

246. The proposed Class is defined as the :

Independent Automobile Dealership Reseller Class

All automobile dealers in the United States, or its territories, with one or more previously owned VW Class Vehicles in inventory as of September 18, 2015, and/or previously owned Audi or Porsche Class Vehicles in inventory as of November 2, 2015.[154]

247. Excluded from the Classes are: (A) Defendants, including any entity or division in which Defendants have a controlling interest, as well as their agents, representatives, officers, directors, employees, trustees, parents, children, heirs, assigns, and successors, and other persons or entities related to, or affiliated with Defendants; (B) automobile dealerships affiliated with

[154] September 18, 2015, is the date the EPA and the California Air Resources Board revealed to the public the existence and nature of Defendants' defeat device scheme with respect to VW brand Class Vehicles. On November 2, 2015, the existence of the defeat device scheme with respect to Audi and Porsche brand Class Vehicles became public knowledge as well.

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defendants VW, Audi, or Porsche; (C) the Judges to whom this case is assigned, their staff, and their immediate families; and (D) governmental entities. Plaintiffs reserve the right to amend the Class definitions if discovery and further investigation reveal that any Class should be expanded, divided into additional subclasses under Rule 23(c)(5), or modified in any other way.

248. Certification of Plaintiffs' claims for class-wide treatment is appropriate because Plaintiffs can prove the elements of their claims on a class-wide basis using the same evidence as would be used in individual actions alleging the same claims.

249. This action has been brought and may be properly maintained on behalf of each of the Classes proposed herein under Federal Rule of Civil Procedure 23 and satisfies the numerosity, commonality, typicality, adequacy, predominance, and superiority requirements of its provisions.

Numerosity and Ascertainability

250. Although the exact number of Class Members is uncertain, there is no doubt that the number is great enough that joinder is impracticable. Hundreds of automobile dealers have one or more of the Class Vehicles in inventory, and thus are Class Members within the proposed class definition. The disposition of the claims of these Class Members in a single action will provide substantial benefits to all parties and to the Court. Class Members are readily identifiable from Volkswagen's internal records and from state vehicle registration records such as those compiled by independent vendor R.L Polk & Company.

Typicality

251. The claims of the representative Plaintiffs are typical of the claims of the Class in that the representative Plaintiffs, like all Class Members, acquired a Class Vehicle prior to September 18, 2015, when the defeat device scandal was revealed to the public. The representative Plaintiffs, like all Class Members, have been damaged by Defendants' misconduct in that they have incurred losses relating to the Class Vehicles. Furthermore, the factual bases of Defendants' misconduct are common to all Class Members and represent a common thread of misconduct resulting in injury to all Class Members.

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Adequate Representation

252. Plaintiffs are members of the Nationwide and State Classes and will fairly and adequately represent and protect the interests of the Classes. Plaintiffs have retained, and this Court has appointed, counsel with substantial experience in prosecuting consumer class actions, including actions involving defective products generally, and defective automobile systems and parts specifically. Plaintiffs and their counsel are committed to vigorously prosecuting this action on behalf of the Classes and have the financial resources to do so. Neither Plaintiffs nor their counsel have interests adverse to those of the Classes.

Predominance of Common Questions

253. There are numerous questions of law and fact common to Plaintiffs and Class members that predominate over any question affecting only individual Class members. The answers to these common questions will advance the adjudication or resolution of the litigation as to all Class members. These common legal and factual questions include:

a. whether Defendants designed, manufactured, advertised, marketed, distributed, leased, sold, or otherwise placed the Class Vehicles and/or their emissions-related systems, including "defeat devices," into the stream, of commerce in the United States;

b. whether the Class Vehicles contained a "defeat device" and emitted unlawful levels of pollutants under normal operation;

c. whether Defendants knew or should have known about the defeat device and emission levels in the Class Vehicles;

d. whether the true nature of the Class Vehicles' performance, emissions levels, fuel economy, and the inclusion of the defeat device constitute material facts that reasonable consumers would have considered in deciding whether to purchase a Class Vehicle;

e. whether Class members overpaid for their Class Vehicles;

f. whether Defendants made material misrepresentations regarding the Class Vehicles.

g. whether Defendants had a duty to disclose the true nature of the Class Vehicles to Plaintiffs and Class members;

h. whether Defendants omitted, actively concealed and/or failed to disclose material facts about the Class Vehicles;

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i. whether Defendants' concealment of the true nature of the Class Vehicles would have induced a reasonable consumer to act to their detriment by purchasing and/or leasing the Class Vehicles;

j. whether the Class Vehicles can be made to comply with EPA and state emission standard without substantially degrading their performance and/or efficiency;

k. whether Bosch supplied the "defeat device" to Volkswagen with the knowledge that Volkswagen would use it in production of Class Vehicles;

l. whether Bosch acted in concert with Volkswagen and aided and abetted Volkswagen's fraud;

m. whether Defendants' conduct violated RICO, fraud, and negligence laws, among others laws, as alleged herein;

n. whether Plaintiffs and Class members are entitled to a declaratory judgment;

o. whether Plaintiffs and Class members are entitled to equitable relief, including, but not limited to, a preliminary and/or permanent injunction; and

p. whether Plaintiffs and Class members are entitled to damages and other monetary relief, and, if so, of what types and under what formula.

Superiority

254. Defendants' scheme treated Class members as a Class to be uniformly deceived. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy. Plaintiffs and Class members have all suffered and will continue to suffer economic harm and damage as a result of Defendants' unlawful and wrongful conduct, which was directed toward Class members and the public as a whole, rather than specifically or uniquely against any individual Class members.

255. Defendants have acted in a uniform manner with respect to the Plaintiffs and Class members. Absent a class action, most Class members would likely find the cost of litigating their claims prohibitively high and would therefore have no effective remedy at law. Because of the relatively small size of the individual Class members' claims, it is likely that only a few Class members could afford to seek legal redress for Defendants' misconduct. Absent a class action,

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Class members will continue to incur damages, and Defendants' misconduct will continue without effective remedy.

256. Class treatment in this Court, as a court with original jurisdiction over the Class claims and as an MDL Transferee Court under 28 U.S. § 1407, will conserve the resources of the courts and the litigants, and will promote consistency and efficiency of adjudication by providing common answers to the common questions of knowledge, conduct, duty and breach, that predominate in this action.

257. Classwide declaratory, equitable, and injunctive relief is appropriate under Rule 23(b)(1) and/or (b)(2) because Defendants have acted on grounds that apply generally to the class, and inconsistent adjudications with respect to the Defendants' liability would establish incompatible standards and substantially impair or impede the ability of Class members to protect their interests. Classwide relief and Court supervision under Rule 23 assures fair, consistent, and equitable treatment and protection of all Class members, and uniformity and consistency in Defendants' discharge of their duties to perform corrective action regarding the Class Vehicles.

CLAIMS FOR RELIEF

FIRST CLAIM FOR RELIEF:
Violation of 18 U.S.C. § 1962(c)-(d)
The Racketeer Influenced And Corrupt Organizations Act ("RICO")

258. Plaintiffs incorporate by reference each preceding paragraph as though fully set forth herein.

259. Plaintiffs bring this Count on behalf of the Nationwide Class against the following Defendants: VW AG, Audi AG, Porsche AG, Winterkorn, Müller, Horn, Stadler, Bosch GmbH, Bosch LLC, and Denner (inclusively, for purpose of this Count, the "RICO Defendants").

260. Volkswagen conducts its business—legitimate and illegitimate—through various affiliates and subsidiaries, each of which is a separate legal entity. Bosch also conducts its business, both legitimate and illegitimate, through hundreds of subsidiaries and affiliates.[155] At

[155] http://www.bosch.com/en/com/bosch_group/business_sectors_divisions/business_sectors_divisions_2.php (last visited on Feb. 20, 2016).

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all relevant times, the RICO Defendants have been "persons" under 18 U.S.C. § 1961(3) because they are capable of holding, and do hold, "a legal or beneficial interest in property."

261. Section 1962(c) makes it "unlawful for any person employed by or associated with any enterprise engaged in, or the activities of which affect, interstate or foreign commerce, to conduct or participate, directly or indirectly, in the conduct of such enterprise's affairs through a pattern of racketeering activity." 18 U.S.C. § 1962(c).

262. Section 1962(d) makes it unlawful for "any person to conspire to violate" Section 1962(c), among other provisions. *See* 18 U.S.C. § 1962(d).

263. For many years, the RICO Defendants aggressively sought to increase their sales of the Class Vehicles (and components contained therein) in an effort to bolster their revenues, augment profits, and increase their market share of the diesel vehicle market. Finding it impossible to achieve their ambitious goals lawfully, however, the RICO Defendants resorted to cheating through their fraudulent scheme and conspiracy. The illegal scheme was hatched overseas by VW AG, Audi AG, and/or Porsche AG ("the German Volkswagen Defendants"), brought to U.S. shores by and through the vehicles of VW America, Audi America, and Porsche America (collectively, the "American Volkswagen Defendants"), and executed in conjunction with Bosch. In particular, the RICO Defendants, along with other entities and individuals, were employed by or associated with, and conducted or participated in the affairs of, one or several RICO enterprises (defined below and referred to collectively as the "Defeat Device RICO Enterprise"), whose purpose was to deceive regulators and the driving public into believing that the Class Vehicles were compliant with emission standards, "clean," and "environmentally friendly" so as to increase revenues and minimize losses from the design, manufacture, distribution and sale of the Class Vehicles and the defeat devices installed therein. As a direct and proximate result of their fraudulent scheme and common course of conduct, Defendants were able to extract revenues of billions of dollars from Plaintiffs and the Class. As explained in detail below, the RICO Defendants' years-long misconduct violated Sections 1962(c) and (d).

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B. **Description of the Defeat Device RICO Enterprise**

264. In an effort to expand its global reach, market share, and standardized marketing and sales in the U.S., VW AG, a publicly-traded German company, formed VW America, a separate New Jersey company, which is headquartered in Virginia. VW America is not publicly traded and thus has no SEC reporting obligations, but it does have reporting obligations, protections and responsibilities unique to the State of New Jersey. VW AG also controls Audi AG and Porsche AG which, in turn, formed separate U.S. subsidiaries that are not publicly traded – Audi America and Porsche America, respectively – to market and sell the Class Vehicles throughout the U.S. At all relevant times, VW AG maintained tight control over the design, manufacture, and testing of the Class Vehicles.

265. At all relevant times, the RICO Defendants, along with other individuals and entities, including unknown third parties involved in the design, manufacture, testing, and sale of the Class Vehicles, operated an association-in-fact enterprise, which was formed for the purpose of fraudulently obtaining COCs from the EPA (and EOs from CARB) in order to import and sell the Class Vehicles containing the defeat device throughout the U.S., and through which they conducted a pattern of racketeering activity under 18 U.S.C. § 1961(4).

266. Alternatively, each of the American Volkswagen Defendants constitutes a single legal entity "enterprise" within the meaning of 18 U.S.C. § 1961(4), through which the RICO Defendants conducted their pattern of racketeering activity in the U.S. Specifically, VW America is the entity through which Volkswagen applied for, and obtained, the EPA COCs for the VW- and Audi-branded Class Vehicles with material misrepresentations and omissions about their specifications in order to introduce them into the U.S. stream of commerce. Similarly, Porsche America is the entity through which Volkswagen applied for, and obtained, the EPA COCs for the Porsche-branded Class Vehicles with material misrepresentations and omissions about their specifications in order to introduce them into the U.S. stream of commerce. And, on information and belief, the German Volkswagen Defendants and Individual Volkswagen Defendants (Winterkorn, Müller, Horn, and Stadler) used each of the American Volkswagen Defendants to distribute and sell the illegal Class Vehicles throughout the U.S. Finally, Bosch participated,

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either directly or indirectly, in the conduct of the enterprise's affairs by developing, supplying, and concealing the defeat devices. The American Volkswagen Defendants' separate legal statuses facilitated the fraudulent scheme and provided a hoped-for shield from liability for the RICO Defendants and their co-conspirators. The enterprises, alleged in this and the previous paragraph, are referred to collectively as the "Defeat Device RICO Enterprise."

267. At all relevant times, the Defeat Device RICO Enterprise constituted a single "enterprise" or multiple enterprises within the meaning of 18 U.S.C. § 1961(4), as legal entities, as well as individuals and legal entities associated-in-fact for the common purpose of engaging in RICO Defendants' profit-making scheme.

268. The association-in-fact Defeat Device RICO Enterprise consisted of the following entities and individuals.

2. The Volkswagen Entity Defendants

269. Each Volkswagen Entity Defendant is a distinct legal entity, but they are all controlled (directly or indirectly) by Defendant VW AG.[156] Specifically, Audi AG is a majority-owned subsidiary of VW AG. Audi America is also a subsidiary of VW AG. Porsche AG is a wholly-owned subsidiary of VW AG, and Porsche America is, in turn, a wholly-owned subsidiary of Porsche AG.

270. As noted previously, the Volkswagen RICO Defendants made it their mission to become the dominant automotive manufacturing conglomerate in the world. At the time they articulated this goal, however, Volkswagen was struggling to retain its foothold in the U.S. market. The strategy of wooing customers with premium products was not paying off, and VW America's costly plant in Chattanooga, Tennessee was "woefully underutilized."[157]

271. In response to these obstacles, VW AG and its leader at the time, Defendant Winterkorn, set in motion an ambitious plan to triple Volkswagen's sales in the U.S. The

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[156] http://www.volkswagenag.com/content/vwcorp/content/en/brands_and_products.html; http://www.volkswagenag.com/content/vwcorp/info_center/en/publications/2015/03/Y_2014_e.bin.html/binarystorageitem/file/GB+2014_e.pdf

[157] Anton Watts. VW Drama: *Why Piech Wants Winterkorn Out-and What the Future May Hold.* Car and Driver (Apr. 16, 2015).

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linchpin of this strategy was increasing sales of "diesel-powered cars . . . [and] promising high mileage and low emissions without sacrificing performance."[158]

272. Additionally, to achieve their lofty sales goals, the Volkswagen RICO Defendants made a business-driven decision to move away from the original selective catalytic reduction ("SCR") emission control systems they had previously used in their vehicles and focused instead on a less expensive and easier to maintain lean NO_X trap system.[159] Critically, however, the NO_X trap technology that the Volkswagen RICO Defendants implemented could not effectively reduce the Class Vehicles' toxic NO_X emissions to lawful levels under normal operating conditions.

273. Accordingly, working with the other members of the Defeat Device RICO Enterprise, including the Bosch Defendants, the Volkswagen RICO Defendants devised a scheme to illegally circumvent the U.S.'s stringent emissions standards by incorporating a "defeat device" into the Class Vehicles' Electronic Diesel Control Units. Employing this technology, Defendants fraudulently obtained COCs (and EOs) for the Class Vehicles even though they emit unlawful levels of toxic pollutants into the atmosphere during normal operating conditions.[160]

274. Moreover, in order to profit from the scheme and increase their sales according to plan, the Volkswagen RICO Defendants falsely marketed the Class Vehicles as not only compliant but "*clean*" and "*environmentally friendly*" vehicles.[161]

275. In sum, as part of their effort to become the dominant automotive manufacturing conglomerate in the world, the Volkswagen RICO Defendants controlled and directed a decade-

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[158] Danny Kim, Aaron Danny Hakim, Aaron Kessler, and Jack Ewing, "*As Volkswagen Pushed to Be No. 1, Ambitions Fueled a Scandal*," New York Times (Sept. 26, 2015).

[159] The term "NOx trap" refers to any device whose purpose is to reduce the oxides of nitrogen. *See* https://en.wikipedia.org/wiki/NOx_adsorber. However, the term here is used as a shorthand, informal reference to the emissions control system developed by the Volkswagen Defendants as an alternative to the SCR system. Unlike the NOx trap, SCR systems require vehicles to carry an onboard tank of an exhaust additive, often urea crystals in mineralized water, that has to be refilled every 10,000 miles at a cost of around $300. Additionally, SCR systems also increase the vehicles' initial purchase price.

[160] *Id.*

[161] *See* Jad Mouawad & Sydney Ember, *VW's Pitch to Americans Relied on Fun and Fantasy*, New York Times (Sept. 27, 2015), http://nytimes.com/2015/09/28/business/media/vws-pitch-to-americans-relied-on-fun-and-fantasy.html?ref=business.

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long enterprise with the common purpose of deceiving regulators and the public through lies and deception to increase their market shares and profits, and minimize losses.

3. The Volkswagen Entity Defendants' Directors, Officers, and Engineers

276. Volkswagen's leaders—including the Individual Defendants (Winterkorn, Müller, Horn, and Stadler) and their unnamed co-conspirators—Ulrich Hackenberg ("Hackenberg"), Frank Tuch ("Tuch"), Wolfgang Hatz ("Hatz"), Scott Keogh ("Keogh"), and Detlev von Platen ("von Platen")—played pivotal roles in the Defeat Device RICO Enterprise's unlawful scheme, common course of conduct, and conspiracy.

b. Martin Winterkorn

277. Defendant Winterkorn took the helm of VW AG in 2007 and was the chief architect of Volkswagen's strategy to triple sales in the U.S. market by relying more heavily on "clean" diesel vehicles.[162]

278. Winterkorn quickly realized his strategy could not succeed if Volkswagen relied on the same SCR technology that they had used up until then. Winterkorn instead advocated an alternative course of action that enabled Volkswagen to cut costs and offer the public lower-priced diesel vehicles. To that end, he appointed Hackenberg and Hatz, two former Audi engineers and unnamed co-conspiring members of the Defeat Device RICO Enterprise, to lead the research and development facet of the "clean" diesel project.

279. Nevertheless, despite Hackenberg and Hatz's efforts, the technological hurdles were too formidable, and a lawful alternative could not apparently be found. Although Defendant Winterkorn was routinely apprised of these obvious technical setbacks, he continued to pursue the aggressive cost-cutting, profit driven plan he had originally envisioned. In so doing, he set into motion the fraudulent scheme to defraud regulators and consumers.

280. Winterkorn knew that the Class Vehicles were unable to comply with emission standards and thus utilized defeat devices in order to evade federal and state emission standards.

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[162] *Volkswagen AG, TDI: U.S. Market Success*, Clean Diesel Delivers (March, 2015), http://cleandieseldelivers.com/media/Douglas-Skorupski-VWoA_DTF_March2015.pdf.

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c. **Matthias Müller**

281. Defendant Müller has worked at Volkswagen for nearly his entire life, starting as an Audi toolmaker and climbing the corporate ladder to become VW's Head of Product Management in 2007, and later, became the CEO of Porsche AG in October 2010. As CEO of Porsche AG, Müller was a trusted "longtime lieutenant of Mr. Winterkorn,"[163] and grew sales and profits at Porsche AG dramatically.

282. During Müller's reign over Porsche AG, he oversaw the release of the Porsche Cayenne Diesels discovered by the EPA to be equipped with defeat devices.

283. Further, after the revelation of Volkswagen's fraud, Müller was appointed CEO of VW AG on September 25, 2015. He is suspected to be a protégé of VW AG's former CEO Ferdinand Piëch, whom some blame for propagating the Volkswagen culture that ultimately led to the defeat device conspiracy alleged herein.[164]

284. Müller knew or recklessly disregarded that the Class Vehicles utilized defeat devices to evade federal and state vehicle emissions standards.

d. **Michael Horn**

285. On January 1, 2014, Defendant Horn became CEO and President of VW America after 23 years working at Volkswagen in various sales leadership positions, until he resigned on March 9, 2016. Defendant Horn was tasked with continuing Winterkorn's aggressive ambitions to reach 800,000 in U.S. sales by 2018. As part of his position, Defendant Horn oversaw VW America emissions labs, regulatory compliance efforts, and development of new vehicles.

286. As alleged above, Defendant Horn admitted to Volkswagen's intentional use of defeat devices to overcome state and federal regulation.

287. Moreover, Defendant Horn admittedly knew about Volkswagen's use of defeat devices at least as early as 2014, and also knew (and concealed) the existence of defeat devices in Class Vehicles when Volkswagen initiated a recall in December 2014 to purportedly update

[163] Danny Hakim and Jack Ewing, *Matthias Müller, in the Driver's Seat at Volkswagen*, New York Times (Oct. 1, 2015), http://www.nytimes.com/2015/10/02/business/international/matthias-muller-in-the-drivers-seat-at-volkswagen.html.

[164] Victor Luckerson, *5 things to know about Volkswagen's new CEO Matthias Müller*, Fortune (Sept. 25, 2015), http://fortune.com/2015/09/25/volkswagen-ceo-muller/.

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emission control software in the Class Vehicles without notifying regulators, or the Class, about the use of the illegal defeat devices.

e. Rupert Stadler

288. In 1990, Defendant Stadler joined Audi AG, assuming various roles in Audi and VW as he ascended the ranks at Volkswagen. On January 1, 2010, he was appointed CEO of Audi AG, which he remains to present day. As the CEO of Audi AG, Stadler was tasked with implementing Winterkorn's lofty growth goals, as well as overseeing unnamed co-conspirators Hatz and Hackenberg's development of the "clean" diesel engines in Audi vehicles.

289. Though presumed by many to be Winterkorn's heir apparent, the revelation of Volkswagen's emissions and Audi's extensive involvement in the conspiracy caused Stadler to be passed over for the position of VW AG CEO in favor of Matthias Müller.[165]

290. Stadler knew or recklessly disregarded that the Class Vehicles utilized defeat devices in order to evade federal and state vehicle emissions standards.

f. Scott Keogh

291. Since June 2012, unnamed co-conspirator Keogh has served as President of Audi America, after a six period as the Chief Marketing Officer of Audi America. His primary missions was "rallying the company's internal and external constituencies to focus on Audi goals for further expansion in the U.S. market,"[166] as promulgated by Winterkorn.

292. After the revelation of Volkswagen's fraud, Keogh publicly apologized for Audi America's involvement in the defeat device scandal[167] and agreed to return "Green Car of the Year" awards,[168] though he continues to tout the future of Audi diesel vehicles in the U.S.[169]

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[165] *Audi CEO Rupert Stadler to continue with his post*, THE ECONOMIC TIMES (Sept. 25, 2015), http://auto.economictimes.indiatimes.com/news/industry/audi-ceo-rupert-stadler-to-continue-with-his-post/49103955.

[166] *Scott Keogh*, AUDI USA (last visited Feb. 27, 2016), https://www.audiusa.com/newsroom/corporate/executive-team/scott-keogh.

[167] Michael Walker, *L.A. Auto Show: VW, Porsche, Audi Execs Address Diesel Emissions Scandal*, THE HOLLYWOOD REPORTER (Nov. 20, 2015), http://www.hollywoodreporter.com/news/vw-porsche-audi-execs-apologize-842581.

[168] Jackie Wattles, *Volkswagen stripped of two 'Green Car of the Year' titles*, CNN MONEY (Oct. 1, 2015), http://money.cnn.com/2015/10/01/news/companies/volkswagen-green-car-of-year-awards-rescinded/.

[169] Mike Duff, *Audi Chief Thinks Diesel Has a Future in the U.S.*, CAR AND DRIVER (Jan. 19,

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293. Keogh knew or recklessly disregarded that the Class Vehicles utilized defeat devices in order to evade federal and state vehicle emissions standards.

g. Detlev von Platen

294. In 1997, unnamed co-conspirator von Platen joined Porsche AG, managing the Porsche brand in France. Over the following decade, von Platen climbed the ranks at Porsche to assume the position of President and CEO of Porsche America on April 1, 2008.

295. As President and CEO of Porsche America, von Platen was charged with implementing Winterkorn's vision for the Porsche brand in the U.S., as he had oversight "responsibility for the importation and distribution of Porsche cars in North America."[170] Porsche America was expected to contribute to Winterkorn's lofty sales goals, bolstered by the introduction of "clean" diesel engines for the Porsche Cayenne and increasing sales from 26,035 to a record 47,007 sales in 2014.

296. On November 1, 2015, as part of a management shakeup in the wake of Volkswagen's diesel scandal, von Platen left his position at Porsche America to become a member of the Executive Board for Sales and Marketing at Porsche AG.

297. Von Platen knew or recklessly disregarded that the Class Vehicles utilized defeat devices in order to evade federal and state vehicle emissions standards.

h. Ulrich Hackenberg

298. On February 1, 2007, unnamed co-conspirator Hackenberg was appointed to Volkswagen's Brand Board of Development. In this capacity, he was responsible for the technical development of all of the Volkswagen Defendant's brands.[171]

299. On July 1, 2013, Hackenberg was appointed to the Board of Management of Audi AG and made responsible for its Technical Development department. In this capacity, Hackenberg spearheaded the development of Audi's TDI "CleanDiesel" engines, which

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Footnote continued from previous page
2016), http://blog.caranddriver.com/audi-chief-thinks-diesel-has-a-future-in-the-u-s/.

[170] *President and Chief Executive Officer - PCNA, Inc.*, PORSCHE CARS NORTH AMERICA (last visited Feb. 7, 2016), http://press.porsche.com/more_about/executives/pcna/platen.php.

[171] https://www.audiusa.com/newsroom/corporate/audi-ag-board-of-management/ulrich-hackenberg

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ultimately contained the illegal defeat devices at issue in this case. As he explained in a press release, Hackenberg's strategy for Audi's technical development included the following:

> [P]ushing forward with development in . . . our TDI engines in the USA -- our clean diesel offensive is bearing substantial fruit. In China, too, we are already introducing the first clean diesel models and watching developments there very closely. We also expect a great deal from g-tron technology, the most sustainable type of gas drive.[172]

Hackenberg's statement is illustrative of the Volkswagen Defendants' efforts to falsely bill Class Vehicles as "clean," "environmentally friendly," and "fuel efficient" when the opposite was true.

i. Frank Tuch

300. In 2010, unnamed co-conspirator Tuch was appointed head of quality control across the various Volkswagen Defendants' brands. Defendant Winterkorn hoped Tuch would bring the Volkswagen Defendants "forward in the USA."[173] Volkswagen's in-house magazine reported that Tuch and Winterkorn worked closely to honor that pledge, meeting "every Monday to discuss quality issues, often taking test drives in vehicles manufactured by the company." In his role as head of quality assurance, Tuch was also intimately familiar with Volkswagen, Audi, and Porsche engines and transmissions. Among his duties was "the development and production of components such as engines, transmissions, seats and suspension parts" for small, compact, midsize, and full size product lines, including all the Class Vehicles.[174]

301. Significantly, Tuch also oversaw "36 laboratory locations throughout the world in terms of training and auditing and also finds staff to fill laboratory manager positions," including the Volkswagen Defendants' laboratories in the United States, which were primarily responsible for emissions testing of the Class Vehicles.[175]

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[172] "Gentlemen Start Your Engines," http://audi-encounter.com/magazine/ technology/01-2015/126-gentlemen-start-your-engines (2014).

[173] http://www.marketwatch.com/story/volkswagen-suspends-quality-control-chief-2015-10-20-84855452

[174] Jack Ewing. "Volkswagen Suspends 5th Executive in Emissions Scandal," The New York Times (Oct. 20, 2015).

[175] http://www.volkswagen-larriere.de/en/what_we_do/corporate_divisions/quality_assurance.html

302. Tuch knew or recklessly disregarded that the Class Vehicles used defeat devices to evade federal and state vehicle emissions standards.

j. Wolfgang Hatz

303. Unnamed co-conspirator Hatz directed engine development for the Porsche, Audi and Volkswagen brands. In this role, he supervised the development of the engines and transmissions for the Class Vehicles issue and had intimate knowledge of their technical details.

304. Hatz knew or recklessly disregarded that the Class Vehicles used defeat devices to evade federal and state vehicle emissions standards.

4. The Bosch Defendants

305. As explained above, Bosch supplied the EDC Unit 17 that was used as the defeat device in the Class Vehicles.[176]

306. Defendant Bosch GmbH is a multinational engineering and electronics company headquartered in Gerlingen, Germany, which has hundreds of subsidiaries and companies. It wholly owns defendant Bosch LLC, a Delaware limited liability company headquartered in Farmington Hills, Michigan. As explained above, Bosch's sectors and divisions are grouped by subject matter, not location. The Mobility Solutions (formerly Automotive Technology) is the Bosch sector at issue, particularly its Diesel Services division, and it encompasses employees of Bosch GmbH and Bosch LLC. These individuals were responsible for the design, manufacture, development, customization, and supply of the defeat device to Volkswagen for use in the Class Vehicles.

307. Defendant Denner has been Chairman and CEO of Bosch since July 2012, after decades of working in Bosch's Engine ECU Development division, managing the development and sale of automotive engine computers, such as the EDC units that Volkswagen used as defeat devices. Denner fostered Bosch's relationship with key corporate partners, such as Volkswagen, which brought in billions of dollars in annual revenue for Bosch. Denner communicated directly with Winterkorn about products sold to Volkswagen. For example, when Bosch had a shortage of oxygen sensor parts that Volkswagen had ordered, Denner reached out directly to Winterkorn.

[176] http://www.bosch-presse.de/presseforum/details.htm?txtID=7421&tk_id=108

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Further, Bosch met in 2014 in person with Winterkorn at VW AG headquarters to discuss, among other topics, the "akustikfunktion" in diesel engines.

308. Bosch worked with Volkswagen to develop and implement a specific and unique set of software algorithms to surreptitiously evade emissions regulations. Bosch customized their EDC Unit 17s for installation in the Class Vehicles with unique software code to detect when it was undergoing emissions testing, as described above.[177]

309. Bosch was well aware that the EDC Unit 17 would be used by Volkswagen to cheat on emissions testing. As described above, on June 2, 2008, Bosch's Dieter Schütz wrote to his counterparts at Volkswagen, seeking legal indemnification from Volkswagen for the "expanded use" of the EDC Unit 17s which it called a "defeat device."[178] Schütz explained that "[t]he usage of a defeat device is prohibited pursuant to . . . US Law (CARB/EPA) (see definition footnote 2),"[179] and warned that the agreed-to software modifications would allow "the certified dataset [to be] replaced with another, possibly non-certified data set," which could cause "the vehicle's general operating license (registration) [to] become void."[180] Volkswagen rebuffed Bosch's request, yet Bosch nonetheless shipped the modified software to Volkswagen for use in the Class Vehicles for another seven years. Bosch was also critical to the concealment of the defeat device in communications with U.S. regulators and went even further to actively lobby U.S. lawmakers on behalf of Volkswagen and its "Clean Diesel" vehicles.

C. The Defeat Device RICO Enterprise Sought to Increase Defendants' Profits and Revenues

310. The Defeat Device RICO Enterprise began as early as 2005, when an internal feasibility study at VW AG identified Bosch's EDC17 as a solution to their engineering dilemma by reducing diesel vehicle emissions of nitrogen oxides ("NOx") through a change in engine electronics. Starting in mid-2005, Volkswagen and Bosch entered into a series of agreements to develop what ultimately became the defeat device for the Class Vehicles. The Defeat Device

[177] http://blog.caranddriver.com/epa-investigating-bosch-over-vw-diesel-cheater-software
[178] VW-MDL2672-02570091 (English translation).
[179] *Id.* at -92.
[180] *Id.* at -93.

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RICO Enterprise continued without interruption for a decade, as Defendants successfully installed Bosch EDC Unit 17's in hundreds of thousands of the Class Vehicles sold in the U.S. It was not until September 2015 that the Defeat Device RICO Enterprise began to unravel, when U.S. regulators finally uncovered Defendants' scheme.

311. At all relevant times, the Defeat Device RICO Enterprise: (a) had an existence separate and distinct from each RICO Defendant; (b) was separate and distinct from the pattern of racketeering in which the RICO Defendants engaged; and (c) was an ongoing and continuing organization consisting of legal entities, including the Volkswagen Defendants, their network of dealerships, the Individual Defendants, the Bosch Defendants, and other entities and individuals associated for the common purpose of designing, manufacturing, distributing, testing, and selling the Class Vehicles to Plaintiffs and the Nationwide Class through fraudulent COCs and EOs, false emissions tests, deceptive and misleading sales tactics and materials, and deriving profits and revenues from those activities. Each member of the Defeat Device RICO Enterprise shared in the bounty generated by the enterprise, *i.e.*, by sharing the benefit derived from increased sales revenue generated by the scheme to defraud Class members nationwide.[181]

312. The Defeat Device RICO Enterprise functioned by selling vehicles and component parts to the consuming public. Many of these products are legitimate, including vehicles that do not contain defeat devices. However, the RICO Defendants and their co-conspirators, through their illegal Enterprise, engaged in a pattern of racketeering activity, which involves a fraudulent scheme to increase revenue for Defendants and the other entities and individuals associated-in-fact with the Enterprise's activities through the illegal scheme to sell the Class Vehicles.

313. The Defeat Device RICO Enterprise engaged in, and its activities affected interstate and foreign commerce, because it involved commercial activities across state boundaries, such as the marketing, promotion, advertisement and sale or lease of the Class Vehicles throughout the country, and the receipt of monies from the sale of the same.

[181] The Volkswagen Defendants sold more Class Vehicles by utilizing an emissions control system that was cheaper than SCRs, all the while charging consumers a premium for purportedly "clean," "environmentally friendly" and "fuel efficient" Class Vehicles. Bosch, in turn, sold more EDC Units because the Volkswagen Defendants manufactured and sold more Class Vehicles.

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314. Within the Defeat Device RICO Enterprise, there was a common communication network by which co-conspirators shared information on a regular basis. The Defeat Device RICO Enterprise used this common communication network for the purpose of manufacturing, marketing, testing, and selling the Class Vehicles to the general public nationwide.

315. Each participant in the Defeat Device RICO Enterprise had a systematic linkage to each other through corporate ties, contractual relationships, financial ties, and continuing coordination of activities. Through the Defeat Device RICO Enterprise, the RICO Defendants functioned as a continuing unit with the purpose of furthering the illegal scheme and their common purposes of increasing their revenues and market share, and minimizing losses.

316. The RICO Defendants participated in the operation and management of the Defeat Device RICO Enterprise by directing its affairs, as described herein. While the RICO Defendants participated in, and are members of, the enterprise, they have a separate existence from the enterprise, including distinct legal statuses, different offices and roles, bank accounts, officers, directors, employees, individual personhood, reporting requirements, and financial statements.

317. The Volkswagen RICO Defendants exerted substantial control over the Defeat Device RICO Enterprise, and participated in the affairs of the Defeat Device RICO Enterprise by:

a. transitioning their diesel vehicle design away from an effective SCR emissions control system and adopting instead the ineffective NO_X trap technology that generates high levels of toxic pollutants;

b. designing the Class Vehicles with defeat devices;

c. failing to correct or disable the defeat devices when warned;

d. manufacturing, distributing, and selling the Class Vehicles that emitted greater pollution than allowable under the applicable regulations;

e. misrepresenting and omitting (or causing such misrepresentations and omissions to be made) vehicle specifications on COC and EO applications;

f. introducing the Class Vehicles into the stream of U.S. commerce without a valid EPA COC and/or CARB EO;

g. concealing the existence of the defeat devices and the unlawfully high emissions from regulators and the public;

h. persisting in the manufacturing, distribution, and sale of the Class Vehicles even after questions were raised about the emissions testing and discrepancies concerning the same;

i. misleading government regulators as to the nature of the defeat devices and the defects in the Class Vehicles;

j. misleading the driving public as to the nature of the defeat devices and the defects in the Class Vehicles;

k. designing and distributing marketing materials that misrepresented and concealed the defect in the vehicles;

l. otherwise misrepresenting or concealing the defective nature of the Class Vehicles from the public and regulators;

m. illegally selling and/or distributing the Class Vehicles;

n. collecting revenues and profits from the sale of such products; and

o. ensuring that the other RICO Defendants and unnamed co-conspirators complied with the fraudulent scheme.

318. Bosch also participated in, operated and/or directed the Defeat Device RICO Enterprise. Bosch participated in the fraudulent scheme by manufacturing, installing, testing, modifying, and supplying the EDC Unit 17 which operated as a "defeat device" in the Class Vehicles. Bosch exercised tight control over the coding and other aspects of the defeat device software and was closely collaborated with Volkswagen to develop, customize, and calibrate the defeat devices. Additionally, Bosch continuously cooperated with the Volkswagen Defendants to ensure that the EDC Unit 17 was fully integrated into the Class Vehicles. Bosch also participated in the affairs of the Enterprise by concealing the defeat devices on U.S. documentation and in communications with U.S. regulators. Finally, Bosch actively lobbied lawmakers in the U.S. on Volkswagen's behalf. Bosch collected tens of millions of dollars in revenues and profits from the hidden defeat devices installed in the Class Vehicles.

319. Without the RICO Defendants' willing participation, including Bosch's active involvement in developing and supplying the critical defeat devices for the Class Vehicles, the Defeat Device RICO Enterprise's scheme and common course of conduct would not have been successful.

320. The RICO Defendants directed and controlled the ongoing organization necessary to implement the scheme at meetings and through communications of which Plaintiffs cannot fully know at present, because such information lies in the Defendants' and others' hands.

D. Mail and Wire Fraud

321. To carry out, or attempt to carry out the scheme to defraud, the RICO Defendants, each of whom is a person associated-in-fact with the Defeat Device RICO Enterprise, did knowingly conduct or participate, directly or indirectly, in the conduct of the affairs of the Defeat Device RICO Enterprise through a pattern of racketeering activity within the meaning of 18 U.S.C. §§ 1961(1), 1961(5) and 1962(c), and which employed the use of the mail and wire facilities, in violation of 18 U.S.C. § 1341 (mail fraud) and § 1343 (wire fraud).

322. Specifically, the RICO Defendants have committed, conspired to commit, and/or aided and abetted in the commission of, at least two predicate acts of racketeering activity (*i.e.*, violations of 18 U.S.C. §§ 1341 and 1343), within the past ten years. The multiple acts of racketeering activity which the RICO Defendants committed, or aided or abetted in the commission of, were related to each other, posed a threat of continued racketeering activity, and therefore constitute a "pattern of racketeering activity." The racketeering activity was made possible by the RICO Defendants' regular use of the facilities, services, distribution channels, and employees of the Defeat Device RICO Enterprise. The RICO Defendants participated in the scheme to defraud by using mail, telephone and the Internet to transmit mailings and wires in interstate or foreign commerce.

323. The RICO Defendants used, directed the use of, and/or caused to be used, thousands of interstate mail and wire communications in service of their scheme through virtually uniform misrepresentations, concealments and material omissions.

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324. In devising and executing the illegal scheme, the RICO Defendants devised and knowingly carried out a material scheme and/or artifice to defraud Plaintiffs and the Nationwide Class or to obtain money from Plaintiffs and the Nationwide Class by means of materially false or fraudulent pretenses, representations, promises, or omissions of material facts. For the purpose of executing the illegal scheme, the RICO Defendants committed these racketeering acts, which number in the thousands, intentionally and knowingly with the specific intent to advance the illegal scheme.

325. The RICO Defendants' predicate acts of racketeering (18 U.S.C. § 1961(1)) include, but are not limited to:

a. Mail Fraud: The RICO Defendants violated 18 U.S.C. § 1341 by sending or receiving, or by causing to be sent and/or received, materials via U.S. mail or commercial interstate carriers for the purpose of executing the unlawful scheme to design, manufacture, market, and sell the Class Vehicles by means of false pretenses, misrepresentations, promises, and omissions.

b. Wire Fraud: The RICO Defendants violated 18 U.S.C. § 1343 by transmitting and/or receiving, or by causing to be transmitted and/or received, materials by wire for the purpose of executing the unlawful scheme to defraud and obtain money on false pretenses, misrepresentations, promises, and omissions.

326. The RICO Defendants' use of the mails and wires include, but are not limited to, the transmission, delivery, or shipment of the following by the RICO Defendants or third parties that were foreseeably caused to be sent as a result of Defendants' illegal scheme:

a. the Class Vehicles themselves;

b. component parts for the defeat devices;

c. essential hardware for the Class Vehicles;

d. falsified emission tests;

e. fraudulent applications for EPA COCs and CARB EOs;

f. fraudulently-obtained EPA COCs and CARB EOs;

g. vehicle registrations and plates as a result of the fraudulently-obtained EPA COCs and CARB EOs;

h. documents and communications that facilitated the falsified emission tests;

i. false or misleading communications intended to lull the public and regulators from discovering the defeat devices and/or other auxiliary devices;

j. sales and marketing materials, including advertising, websites, product packaging, brochures, and labeling, which misrepresented and concealed the true nature of the Class Vehicles;

k. documents intended to facilitate the manufacture and sale of the Class Vehicles, including bills of lading, invoices, shipping records, reports and correspondence;

l. documents to process and receive payment for the Class Vehicles by unsuspecting Class members, including invoices and receipts;

m. payments to Bosch;

n. millions of dollars in compensation to the Individual Defendants;

o. deposits of proceeds; and

p. other documents and things, including electronic communications.

327. The RICO Defendants also used the internet and other electronic facilities to carry out the scheme and conceal the ongoing fraudulent activities. Specifically, the American Volkswagen Defendants, under the direction and control of the German Volkswagen and Individual Volkswagen Defendants, made misrepresentations about the Class Vehicles on their websites, YouTube, and through ads online, all of which were intended to mislead regulators and the public about the fuel efficiency, emissions standards, and other performance metrics.

328. The RICO Defendants also communicated by U.S. mail, by interstate facsimile, and by interstate electronic mail with various other affiliates, regional offices, divisions, dealerships and other third-party entities in furtherance of the scheme.

329. The mail and wire transmissions described herein were made in furtherance of Defendants' scheme and common course of conduct to deceive regulators and consumers and lure consumers and reseller dealers into purchasing the Class Vehicles, which Defendants knew or

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recklessly disregarded as emitting illegal amounts of pollution, despite their advertising campaign that the Class Vehicles were "clean" diesel cars.

330. Many of the precise dates of the fraudulent uses of the U.S. mail and interstate wire facilities have been deliberately hidden, and cannot be alleged without access to Defendants' books and records. However, Plaintiffs have described the types of, and in some instances, occasions on which the predicate acts of mail and/or wire fraud occurred. They include thousands of communications to perpetuate and maintain the scheme, including the things and documents described in the preceding paragraphs.

331. The RICO Defendants have not undertaken the practices described herein in isolation, but as part of a common scheme and conspiracy. In violation of 18 U.S.C. §1962(d), the RICO Defendants conspired to violate 18 U.S.C. §1962(c), as described herein. Various other persons, firms and corporations, including third-party entities and individuals not named as defendants in this Complaint, have participated as co-conspirators with the RICO Defendants in these offenses and have performed acts in furtherance of the conspiracy to increase or maintain revenues, increase market share, and/or minimize losses for the Defendants and their unnamed co-conspirators throughout the illegal scheme and common course of conduct.

332. The RICO Defendants aided and abetted others in the violations of the above laws, thereby rendering them indictable as principals in the 18 U.S.C. §§1341 and 1343 offenses.

333. To achieve their common goals, the RICO Defendants hid from the general public the unlawfulness and emission dangers of the Class Vehicles and obfuscated the true nature of the defect even after regulators raised concerns. The RICO Defendants suppressed and/or ignored warnings from third parties, whistleblowers, and governmental entities about the discrepancies in emissions testing and the defeat devices present in the Class Vehicles.

334. The RICO Defendants and each member of the conspiracy, with knowledge and intent, have agreed to the overall objectives of the conspiracy and participated in the common course of conduct to commit acts of fraud and indecency in designing, manufacturing, distributing, marketing, testing, and/or selling the Class Vehicles (and the defeat devices contained therein).

335. Indeed, for the conspiracy to succeed, each of the RICO Defendants and their co-conspirators had to agree to implement and use the similar devices and fraudulent tactics against their intended targets.

336. The RICO Defendants knew and intended that government regulators, as well as Plaintiffs and Class members, would rely on the material misrepresentations and omissions made by them and the American Volkswagen Defendants about the Class Vehicles. The RICO Defendants knew and intended that consumers and reseller dealers would incur costs as a result. As fully alleged herein, Plaintiffs, along with hundreds other automobile dealers, relied upon Defendants' representations and omissions that were made or caused by them. Plaintiffs' reliance is made obvious by the fact that they purchased illegal vehicles that never should have been introduced into the U.S. stream of commerce and whose worth has now plummeted since the scheme was revealed. In addition, the EPA and regulators relied on the misrepresentations and material omissions made or caused to be made by the RICO Defendants; otherwise Volkswagen could not have obtained valid COCs and EOs to sell the Class Vehicles.

337. As described herein, the RICO Defendants engaged in a pattern of related and continuous predicate acts for years. The predicate acts constituted a variety of unlawful activities, each conducted with the common purpose of obtaining significant monies and revenues from Plaintiffs and Class members based on their misrepresentations and omissions, while providing Class Vehicles that were worth significantly less than the purchase price paid. The predicate acts also had the same or similar results, participants, victims, and methods of commission. The predicate acts were related and not isolated events.

338. The predicate acts all had the purpose of generating significant revenue and profits for the RICO Defendants at the expense of Plaintiffs and Class members. The predicate acts were committed or caused to be committed by the RICO Defendants through their participation in the Defeat Device RICO Enterprise and in furtherance of its fraudulent scheme, and were interrelated in that they involved obtaining Plaintiffs' and Class members' funds and avoiding the expenses associated with remediating the Class Vehicles.

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339. During the design, manufacture, testing, marketing and sale of the Class Vehicles, the RICO Defendants shared technical, marketing, and financial information that revealed the existence of the defeat devices contained therein. Nevertheless, the RICO Defendants shared and disseminated information that deliberately misrepresented the Class Vehicles as legal, "clean," "environmentally friendly," and "fuel efficient."

340. By reason of, and as a result of the conduct of the RICO Defendants, and in particular, their pattern of racketeering activity, Plaintiffs and Class members have been injured in their business and/or property in multiple ways, including but not limited to:

a. Purchase or lease of an illegal, defective Class Vehicle;

b. Overpayment for a Class Vehicle, in that Plaintiffs and Class members believed they were paying for a vehicle that met certain emission and fuel efficiency standards and obtained a vehicle that was anything but;

c. The value of the Class Vehicles has diminished, thus reducing their resale value;

d. Other out-of-pocket and loss-of-use expenses;

e. Payment for alternative transportation; and

f. Loss of employment due to lack of transportation.

341. The RICO Defendants' violations of 18 U.S.C. § 1962(c) and (d) have directly and proximately caused injuries and damages to Plaintiffs and Class members, and Plaintiffs and Class members are entitled to bring this action for three times their actual damages, as well as injunctive/equitable relief, costs, and reasonable attorneys' fees pursuant to 18 U.S.C. § 1964(c).

SECOND CLAIM FOR RELIEF: FRAUD

342. Plaintiffs reallege and incorporate by reference each preceding paragraph as though fully set forth herein.

343. Plaintiffs bring this Count on behalf of the Class against all Defendants.

344. As set forth above, Defendants concealed and/or suppressed material facts integral to the environmental compliance, performance, fuel efficiency, and value of the Class Vehicles.

Defendants knew that the Class Vehicles were designed and manufactured with defeat devices, but Defendants concealed this material information from federal regulators and the consuming public. Defendants recklessly manufactured and distributed the Class Vehicles in the United States, even though Defendants knew, at the time of distribution, that the Class Vehicles contained a significant material defect. Plaintiffs and Class members had no knowledge of this defect, the presence of the defeat device, at the time they acquired the Class Vehicles in inventory.

345. Defendants made material omissions and/or affirmative misrepresentations regarding the environmental compliance, performance, fuel efficiency, and value of the Class Vehicles.

346. Defendants knew these representations were false when they were made.

347. The Class Vehicles acquired by Plaintiffs and Class members were, in fact, defective because the vehicles contained undisclosed defeat devices designed to evade the CAA and other applicable laws.

348. Defendants had a duty to disclose this defect to Plaintiffs, Class members, the public, and the United States government, but failed to do so.

349. Defendants had a duty to disclose the true facts about the Class Vehicles because Defendants had superior knowledge and access to those facts, and the facts were not known or reasonably discoverable by Plaintiffs and Class members. Defendants knew that Plaintiffs and Class members had no knowledge of the defeat devices in the Class Vehicles, and that neither Plaintiffs nor other Class members had an equal opportunity to discover the facts to inform themselves of the defect. Indeed, the Plaintiffs and Class members trusted Defendants not to sell vehicles that were defective or that violated the CAA or other applicable laws.

350. Defendants had a duty to disclose that the Class Vehicles were defective in that they contained undisclosed defeat devices because Plaintiffs and Class members relied on Defendants' representations that the vehicles were regulatory compliant, "green," "clean," and otherwise free from defects.

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351. The aforementioned concealment was material because, if it had been disclosed, Plaintiffs and Class members would not have purchased or otherwise acquired their Class Vehicles.

352. The aforementioned representations were also material because they were facts that typically would be relied upon by a person or entity purchasing a used motor vehicle. Defendants knew or recklessly disregarded that the representations and/or statements regarding the Class Vehicles' environmental friendliness and regulatory compliance were false.

353. By misrepresenting and/or failing to disclose these material facts, Defendants intended to induce, and did in fact induce, Plaintiffs and Class members to purchase the Class Vehicles.

THIRD CLAIM FOR RELIEF: FAILURE TO RECALL/RETROFIT

354. Plaintiffs reallege and incorporate by reference each preceding paragraph as though fully set forth herein.

355. Plaintiffs bring this Count on behalf of the Class against Volkswagen.

356. Volkswagen manufactured, marketed, distributed, sold, or otherwise placed in the stream of U.S. commerce the Class Vehicles, as set forth above.

357. Volkswagen knew or reasonably should have known that, at the time the Class Vehicles were placed in the stream of U.S. commerce, said Class Vehicles would be defective when used in a reasonably foreseeable manner.

358. Volkswagen failed to recall the Class Vehicles in a timely manner or warn of the defects inherent in the Class Vehicles. In addition, Volkswagens' December 2014 recall in connection with the 2.0-liter Class Vehicles in December 2014 was ineffective because it did not mitigate or otherwise resolve the illegal and excessive NOx emissions.

359. A reasonable manufacturer in same or similar circumstances would have timely and properly recalled the Class Vehicles.

360. Volkswagen's failure to timely recall the Class Vehicles was a substantial factor in causing the harm to Plaintiffs and the Class as alleged herein. If the Class Vehicles had been

properly recalled in a timely manner, Plaintiffs and the Class Members would have invested their money in vehicles other than the Class Vehicles.

361. As it stands, the Plaintiffs and Class Members have been stuck with Class Vehicles that, because they have not been properly recalled, remain illegal, defective, and virtually unsellable.

FOURTH CLAIM FOR RELIEF:
UNJUST ENRICHMENT

362. Plaintiffs reallege and incorporate by reference all paragraphs as though fully set forth herein.

363. Plaintiffs bring this Count on behalf of the Class against all Defendants.

364. Defendants have benefitted from selling at an unjust profit defective Class Vehicles whose value was artificially inflated by Defendants' concealment of the "defeat device," and Plaintiffs and Class Members have overpaid for the vehicles.

365. Defendants have received and retained unjust benefits from the Plaintiffs and Class Members, and inequity has resulted.

366. It is inequitable and unconscionable for Defendants to retain these benefits.

367. Because Defendants concealed their fraud and deception, Plaintiffs and Class Members were not aware of the true facts concerning the Class Vehicles and did not benefit from Defendants' misconduct.

368. Defendants knowingly accepted the unjust benefits of their fraudulent conduct.

369. As a result of Defendants' misconduct, the amount of its unjust enrichment should be disgorged and returned to Plaintiffs and the Class Members, in an amount to be proven at trial.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs, individually and on behalf of members of the Class and State Classes, respectfully request that the Court grant certification of the proposed Independent Automobile Dealership Reseller Class, including the designation of Plaintiffs as the named representatives of the Class, the appointment of the undersigned as Class Counsel, and the designation of any appropriate subclasses, under the applicable provisions of Fed. R. Civ. P. 23,

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and that the Court enter judgment in their favor and against Defendants, providing for recovery of compensatory and consequential damages, including lost profits, for the economic loss independent reseller dealers have incurred by virtue of the Class Vehicles' diminution in value; treble damages for Defendants' violation of Civil RICO; punitive and compensatory damages for Defendants' fraud; and such other and further legal, injunctive and equitable relief as the court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiffs demand a trial by jury of any and all issues in this action so triable of right.

Dated: August 16, 2016

Respectfully submitted,

LIEFF CABRASER HEIMANN & BERNSTEIN, LLP

By: */s/ Elizabeth J. Cabraser*
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