

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF MICHIGAN

_____	)	
UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No.
	)	
Volkswagen AG, Audi AG,	)	
Volkswagen Group of America, Inc.,	)	
Volkswagen Group of America	)	
Chattanooga Operations, LLC,	)	
Dr. Ing. H.c. F. Porsche AG, and	)	
Porsche Cars North America, Inc.,	)	
	)	
Defendants.	)	
_____	)	

**COMPLAINT**

The United States of America, by authority of the Attorney General of the United States and at the request of the Administrator of the United States Environmental Protection Agency (“EPA”), files this complaint and alleges as follows:

**NATURE OF ACTION**

1. This is a civil action brought pursuant to Sections 204 and 205 of the Clean Air Act (“Act”), 42 U.S.C. §§ 7523 and 7524, for injunctive relief and the assessment of civil penalties against Volkswagen AG, Audi AG, Volkswagen Group of America, Inc. (“VWoA”), Volkswagen Group of America Chattanooga Operations, LLC (“VWoA Chattanooga”), Dr. Ing. h.c. F. Porsche AG (“Porsche AG”), and Porsche Cars North America, Inc. (collectively, “VW”) for violations of the Act and regulations promulgated thereunder.

### **JURISDICTION AND VENUE**

2. This Court has jurisdiction over the subject matter of and the parties to this action pursuant to Sections 203, 204, and 205 of the Act, 42 U.S.C. §§ 7522, 7523, and 7524, and 28 U.S.C. §§ 1331, 1345, and 1355.

3. This Court has personal jurisdiction over Defendant Volkswagen AG under Mich. Comp. Laws § 600.705 because Volkswagen AG transacts business in Michigan. In addition, this Court's exercise of jurisdiction over Defendant Volkswagen AG is consistent with due process.

4. Among other things, Defendant Volkswagen AG interacts with Defendant VWoA, its wholly-owned subsidiary, which has an office in Auburn Hills, Michigan and this judicial district, by regularly submitting information to VWoA necessary for VWoA to complete the required applications to obtain certificates of conformity ("COCs") for a significant number of the vehicles Volkswagen AG sells in the United States. The United States alleges, subject to a reasonable opportunity for further investigation or discovery, that in connection with this and other interactions with its wholly-owned subsidiary, Volkswagen AG has attended meetings at VWoA's Auburn Hills office, and corresponded, telephoned, and otherwise communicated with VWoA's Auburn Hills office. Volkswagen AG has also attended meetings at, and had other communications with, EPA's Ann Arbor, Michigan Office of Transportation and Air Quality ("OTAQ"), the EPA office in charge of issuing COCs. Further, Volkswagen AG delivered or arranged for delivery of its cars to the United States with the intent to market and sell them in all 50 states, including Michigan, and in fact, cars were sold in Michigan.

5. This Court has personal jurisdiction over Defendant VWoA under Mich. Comp. Laws § 600.705 because it transacts business in Michigan. In addition, this Court's exercise of

jurisdiction over VWoA is consistent with due process.

6. Among other things, VWoA has an Engineering and Environmental Office in Auburn Hills, Michigan from which it interacts with EPA OTAQ in connection with obtaining many of the COCs for vehicles sold in the United States, including many of the light duty diesel vehicles addressed in this Complaint. Further, VWoA delivered or arranged for delivery of many of the vehicles addressed in this Complaint, within the United States with the intent to market and sell them in all 50 states, including Michigan, and in fact, cars were sold in Michigan.

7. This Court has personal jurisdiction over Defendant Audi AG under Mich. Comp. Laws § 600.705 because Audi AG transacts business in Michigan. In addition, this Court's exercise of jurisdiction over Audi AG is consistent with due process.

8. Among other things, Audi AG has interacted with VWoA's Auburn Hills, Michigan office by regularly submitting information to VWoA's Auburn Hills office necessary for VWoA to complete the required applications to obtain COCs for the vehicles that Audi AG sells in the United States, including the light duty diesel vehicles addressed in this Complaint. The United States alleges, subject to a reasonable opportunity for further investigation or discovery, that in connection with this and other interactions with VWoA, Audi AG has attended meetings at VWoA's Auburn Hills office, and corresponded, telephoned, and otherwise communicated with VWoA's Auburn Hills office. Audi AG has also attended meetings at, and had other communications with, EPA's OTAQ in Ann Arbor, Michigan. Further, Audi AG delivered or arranged for delivery of its cars to the United States with the intent to market and sell them in all 50 states, including Michigan, and in fact, cars were sold in Michigan.

9. This Court has personal jurisdiction over Defendant Volkswagen Group of America

Chattanooga Operations, LLC, under Mich. Comp. Laws § 600.705 because VWoA Chattanooga transacts business in Michigan. In addition, this Court's exercise of jurisdiction over VWoA Chattanooga is consistent with due process.

10. The United States alleges, subject to a reasonable opportunity for further investigation or discovery, that: among other things, VWoA is the corporate parent of VWoA Chattanooga; VWoA Chattanooga manufactures certain Passats; VWoA Chattanooga interacts with VWoA, in connection with vehicle manufacturing and other matters; in connection with this and other interactions with its parent company, VWoA Chattanooga has attended meetings at VWoA's Auburn Hills, Michigan office and/or corresponded, telephoned and otherwise communicated with VWoA's Auburn Hills office. Further, VWoA Chattanooga delivered or arranged for delivery of its cars within the United States with the intent to market and sell them in all 50 states, including Michigan, and in fact, cars were sold in Michigan.

11. This Court has personal jurisdiction over Defendant Porsche AG under Mich. Comp. Laws § 600.705 because Porsche AG transacts business in Michigan. In addition, this Court's exercise of jurisdiction over Porsche AG is consistent with due process.

12. The United States alleges, subject to a reasonable opportunity for further investigation or discovery, that: among other things, Porsche AG has interacted with VWoA's Auburn Hills, Michigan office in connection with obtaining COCs for the Porsche light duty diesel vehicles addressed in this Complaint; in connection with this and other interactions with VWoA, Porsche AG has attended meetings at VWoA's Auburn Hills office and/or corresponded, telephoned, and otherwise communicated with VWoA's Auburn Hills office. Porsche AG has also attended meetings at, and had other communications with, EPA's OTAQ in Ann Arbor,

Michigan. Further, Porsche AG delivered or arranged for delivery of Porsche cars to the United States with the intent to market and sell them in all 50 states, including Michigan, and in fact, cars were sold in Michigan.

13. This Court has personal jurisdiction over Defendant Porsche Cars North America, Inc. under Mich. Comp. Laws § 600.705 because Porsche Cars North America, Inc. transacts business in Michigan. In addition, this Court's exercise of jurisdiction over Porsche Cars North America, Inc. is consistent with due process.

14. The United States alleges, subject to a reasonable opportunity for further investigation or discovery, that: among other things, Porsche Cars North America, Inc. has interacted with VWoA's Auburn Hills, Michigan office in connection with obtaining COCs for the Porsche light duty diesel vehicles addressed in this Complaint; in connection with this and other interactions with VWoA, Porsche Cars North America, Inc. has attended meetings at VWoA's Auburn Hills office and/or corresponded, telephoned, and otherwise communicated with VWoA's Auburn Hills office. Porsche Cars North America, Inc. has also attended meetings at, and had other communications with, EPA's OTAQ in Ann Arbor, Michigan. Further, Porsche Cars North America, Inc. delivered or arranged for delivery of Porsche cars within the United States with the intent to market and sell them in all 50 states, including Michigan, and in fact, cars were sold in Michigan.

15. Venue is proper in this jurisdiction pursuant to Sections 204 and 205 of the Act, 42 U.S.C. §§ 7523 and 7524, because violations occurred in this judicial district and VWoA has a corporate office within this judicial district.

**DEFENDANTS**

16. Volkswagen AG is a publicly-held German corporation.
17. Volkswagen AG is a “person” within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).
18. Volkswagen AG is a “manufacturer” within the meaning of Section 216(1) of the Act, 42 U.S.C. § 7550(1).
19. Volkswagen Group of America, Inc. is incorporated under the laws of the State of New Jersey, and is a wholly-owned subsidiary of Volkswagen AG.
20. Volkswagen Group of America, Inc. is a “person” within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).
21. Volkswagen Group of America, Inc. is a “manufacturer” within the meaning of Section 216(1) of the Act, 42 U.S.C. § 7550(1).
22. Volkswagen Group of America Chattanooga Operations, LLC is incorporated under the laws of the State of Tennessee, and is a wholly-owned subsidiary of VWoA.
23. Volkswagen Group of America Chattanooga Operations, LLC is a “person” within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).
24. Volkswagen Group of America Chattanooga Operations, LLC is a “manufacturer” within the meaning of Section 216(1) of the Act, 42 U.S.C. § 7550(1).
25. Audi AG is a German corporation, and is approximately 99.55% owned by Volkswagen AG.
26. Audi AG is a “person” within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).

27. Audi AG is a “manufacturer” within the meaning of Section 216(1) of the Act, 42 U.S.C. § 7550(1).

28. Porsche AG is a German corporation, and is wholly-owned by Volkswagen AG.

29. Porsche AG is a “person” within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).

30. Porsche AG is a “manufacturer” within the meaning of Section 216(1) of the Act, 42 U.S.C. § 7550(1).

31. Porsche Cars North America, Inc. is a Delaware corporation, and is a wholly-owned subsidiary of Porsche AG.

32. Porsche Cars North America, Inc. is a “person” within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).

33. Porsche Cars North America, Inc. is a “manufacturer” within the meaning of Section 216(1) of the Act, 42 U.S.C. § 7550(1).

34. At all times relevant to this action, VW was engaged in the business of manufacturing new motor vehicles, and selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing (or causing the foregoing with respect to) these vehicles in the United States.

## **STATUTORY AND REGULATORY BACKGROUND**

35. This action arises under Title II of the Act, as amended, 42 U.S.C. § 7521 *et seq.*, and the regulations promulgated thereunder, which aim to protect human health and the environment by reducing emissions of nitrogen oxides (“NOx”) and other pollutants from mobile sources of air pollution, including new motor vehicles.

36. NOx is a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds that produce ozone in the atmosphere. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma, and can lead to premature death. Children are at greatest risk of experiencing negative health impacts from exposure to ozone. Additionally, recent scientific studies indicate that the direct health effects of NOx are worse than previously understood, including respiratory problems, damage to lung tissue, and premature death.

37. Section 202(a) of the Act, 42 U.S.C. § 7521(a), requires EPA to promulgate emissions standards for new motor vehicles for NOx, and other air pollutants.

38. 40 C.F.R. Part 86 sets emission standards and test procedures for light-duty motor vehicles, including emission standards for NOx. *See* 40 C.F.R. § 86.1811-04.

### **A. Certificates of Conformity and Prohibition on Uncertified Motor Vehicles**

39. Light-duty vehicles must satisfy emission standards for certain air pollutants. 40 C.F.R. §§ 86.1811-04, 86.1811-09, 86.1811-10. EPA administers a certification program to ensure that every new motor vehicle introduced into United States commerce satisfies applicable emission standards. 42 U.S.C. § 7521. Under this program, EPA issues COCs and thereby



regulates the introduction of new motor vehicles into United States commerce.

40. To obtain a COC, a manufacturer must submit an application to EPA for each model year and for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. A test group is comprised of vehicles with similar emissions profiles for pollutants regulated under the Act. *See, e.g.*, 40 C.F.R. §§ 86.1803-01, 86.1827-01.

41. Vehicles are covered by a COC only if the vehicles are as described in the manufacturer's application for the COC "in all material respects." 40 C.F.R. § 86.1848-10(c)(6).

42. EPA issues COCs "upon such terms . . . as [the Administrator] may prescribe." 42 U.S.C. § 7525(a)(1); *see also* 40 C.F.R. § 86.1848-01(b) (authorizing EPA to issue COCs on any terms that are necessary and appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

43. Section 203(a)(1) of the Act, 42 U.S.C. § 7522(a)(1), prohibits manufacturers of new motor vehicles from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or any person from importing into the United States any new motor vehicle not covered by a COC issued by EPA under regulations prescribed by the Act governing vehicle emission standards. It is also a violation to cause any of the foregoing acts. 42 U.S.C. § 7522(a); 40 C.F.R. § 86.1854-12(a).

#### **B. Prohibition on Defeat Devices and Tampering**

44. Each COC application must include, among other things, a list of all auxiliary emission control devices ("AECDs") installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11).

45. An AECD is "any element of design which senses temperature, vehicle speed, engine [revolutions per minute], transmission gear, manifold vacuum, or any other parameter for

the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.” 40 C.F.R. § 86.1803-01.

46. An element of design is “any control system (i.e., computer software, electronic control system, emission control system, computer logic), and/or control system calibrations, and/or the results of systems interaction, and/or hardware items on a motor vehicle or motor vehicle engine.” 40 C.F.R. § 86.1803-01.

47. Each COC application must also include “a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device.” 40 C.F.R. § 86.1844-01(d)(11).

48. A motor vehicle containing an AECD that can reasonably be expected to affect emission controls and is not disclosed or justified in the COC application does not conform in all material respects with the COC application, and is therefore not covered by the COC.

49. A “defeat device” is an AECD “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, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . .” 40 C.F.R. § 86.1803-01.

50. Motor vehicles equipped with defeat devices cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); see also 40 C.F.R. §§ 86.1809-01, 86.1809-10, 86.1809-12.

51. Section 203(a)(3)(B) of the Act, 42 U.S.C. § 7522(a)(3)(B), makes it a violation “for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where 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.” *See also* 40 C.F.R. § 86.1854-12(a)(3)(ii).

52. Section 203(a)(3)(A) of the Act, 42 U.S.C. § 7522(a)(3)(A), prohibits any person from removing or rendering inoperative any device or element of design installed on a motor vehicle in compliance with the regulations promulgated under Title II of the Act prior to its sale and delivery to the ultimate purchaser.

53. It is also a violation to cause any of the acts set forth in Section 203(a)(3). 42 U.S.C. § 7522(a); 40 C.F.R. § 86.1854-12(a).

### **C. Reporting Requirements**

54. Section 208(a) of the Act, 42 U.S.C. § 7542(a), requires that “[e]very manufacturer of new motor vehicles . . . establish and maintain records, perform tests . . . make reports, and provide information the Administrator may reasonably require to determine whether the manufacturer or other person has acted or is acting in compliance” with Part A of Title II of the Act.

55. Section 203(a)(2) of the Act, 42 U.S.C. § 7522(a)(2), prohibits any person from failing or refusing to make reports or provide information to EPA pursuant to Section 208 of the

Act, 42 U.S.C. § 7542. It is also a violation to cause any of the foregoing acts. 42 U.S.C. § 7522(a); 40 C.F.R. § 86.1854-12(a).

**GENERAL ALLEGATIONS**

56. Volkswagen AG, Audi AG, VWoA and VWoA Chattanooga sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported into the United States (or caused one or more of the foregoing acts), new motor vehicles identified in Appendix A to this Complaint (“2.0L Subject Vehicles”).

57. Each of the 2.0L Subject Vehicles is equipped with a 2.0 liter diesel engine, and is part of model years 2009-2015.

58. In total, approximately 500,000 2.0L Subject Vehicles were sold in the United States.

59. VWoA submitted to EPA, on behalf of itself, and representing Volkswagen AG and Audi AG, the applications for COCs for the 2.0L Subject Vehicles.

60. Volkswagen AG, VWoA, Audi AG, Porsche AG, and Porsche Cars North America, Inc. sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported into the United States (or caused one or more of the foregoing acts), new motor vehicles identified in Appendix B to this Complaint (“3.0L Subject Vehicles”).

61. Each of the 3.0L Subject Vehicles is equipped with a 3.0 liter diesel engine, and is part of model years 2009-2016.

62. In total, approximately 80,000 3.0L Subject Vehicles were sold in the United States.

63. VWoA submitted to EPA, on behalf of itself, and representing Volkswagen AG and Audi AG, the applications for COCs for certain 3.0L Subject Vehicles.

64. Porsche Cars North America, Inc. submitted to EPA, on behalf of itself, and representing Porsche AG, the applications for COCs for certain 3.0L Subject Vehicles.

65. Each COC issued by EPA during the time period relevant to this Complaint states on its face that the certificate covers only those new motor vehicles that conform, in all material respects, to the design specifications provided to EPA in the certificate application for such vehicle.

66. Each application for a COC constitutes a “report [and/or] information the Administrator may reasonably require . . .” to assess compliance with the Act, within the meaning of Section 208(a) of the Act, 42 U.S.C. § 7542(a).

**A. The 2.0L Subject Vehicles**

67. Each 2.0L Subject Vehicle contains one or more AECDs that were not disclosed, described or justified in the application for the COC that purportedly covers the 2.0L Subject Vehicle.

68. The electronic control module (“ECM”) of the 2.0L Subject Vehicles contains software logic and/or calibrations that sense when the vehicle is being tested for compliance with applicable emission standards, based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine’s operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure (“FTP”) and other test cycles used for emission testing required to obtain a COC.

69. During FTP emission testing, the 2.0L Subject Vehicles' ECM run software logic and/or calibrations that produce compliant emission results under an ECM calibration that VW has referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the 2.0L Subject Vehicles' ECM software run a separate "road calibration" that reduces the effectiveness of the emission control system. In other words, the 2.0L Subject Vehicles' ECM software tracks the parameters of the FTP and causes emission control systems to underperform (or fail to perform) when the software determines that the vehicle is not undergoing the FTP.

70. The COC applications for the 2.0L Subject Vehicles described vehicle design specifications that were in compliance with regulations promulgated under Title II of the Act. The undisclosed design specifications of this dual-calibration strategy differ in a material respect from the design specifications disclosed in the 2.0L Subject Vehicles' COC applications.

71. The 2.0L Subject Vehicles therefore are not covered by a COC.

72. This dual-calibration system results in increased NOx emissions by a factor of up to 40 times above the EPA-compliant levels, depending on the type vehicle and drive cycle (e.g., city, highway).

73. The software logic and/or calibrations installed in the ECM of the 2.0L Subject Vehicles render inoperative, bypass, or defeat certain elements of design installed on or in the 2.0L Subject Vehicles in compliance with applicable regulations.

74. VW entities including at least Volkswagen AG, VWoA and Audi AG knew or should have known that the software logic/and or calibrations were installed for such use or put to such use.

75. The software logic and/or calibrations installed in the ECM of the 2.0L Subject Vehicles has the effect of rendering inoperative devices or elements of design installed on or in the 2.0L Subject Vehicles in compliance with applicable regulations.

**B. The 3.0L Subject Vehicles**

76. Each 3.0L Subject Vehicle contains one or more AECDs that were not disclosed, described or justified in the application for the COC that purportedly covers the 3.0L Subject Vehicles.

77. The ECM of the 3.0L Subject Vehicles contains software logic and/or calibrations that cause the vehicle to perform differently when the vehicle is being tested for compliance with applicable emission standards, based on various inputs that appear to track the FTP and/or other test cycles used for emission testing required to obtain a COC, than when the vehicle is in normal operation and use.

78. During FTP emission testing, the 3.0L Subject Vehicles' ECM run software logic and/or calibrations that produce compliant emission results under an ECM calibration referred to as the "temperature conditioning mode." At other times during normal vehicle operation, the 3.0L Subject Vehicles' ECM software run a separate "normal mode" that reduces the effectiveness of the emission control system. In other words, the 3.0L Subject Vehicles' ECM software tracks certain parameters of the FTP and causes emission control systems to underperform (or fail to perform) when the software determines that the vehicle is not undergoing the FTP.

79. The COC applications for the 3.0L Subject Vehicles described vehicle design specifications that were in compliance with regulations promulgated under Title II of the Act. The

undisclosed design specifications of this dual-calibration strategy differ in a material respect from the design specifications disclosed in the 3.0L Subject Vehicles' COC applications.

80. The 3.0L Subject Vehicles therefore are not covered by a COC.

81. This dual-calibration strategy results in increased NO<sub>x</sub> emissions by a factor of up to 9 times above the EPA-compliant levels, depending on the type vehicle and drive cycle (e.g., city, highway).

82. The software logic and/or calibrations installed in the ECM of the 3.0L Subject Vehicles render inoperative, bypass, or defeat certain elements of design installed on or in the 3.0L Subject Vehicles in compliance with applicable regulations.

83. VW entities including at least Volkswagen AG, VWoA, Audi AG, Porsche AG and Porsche Cars North America, Inc. knew or should have known that the software logic/and or calibrations were installed for such use or put to such use.

84. The software logic and/or calibrations installed in the ECM of the 3.0L Subject Vehicles has the effect of rendering inoperative devices or elements of design installed on or in the 3.0L Subject Vehicles in compliance with applicable regulations.



### **C. The Investigations and Concealment**

85. In or about May 2014, West Virginia University's Center for Alternative Fuels, Engines & Emissions ("WVU") published results of a study commissioned by the International Council on Clean Transportation, and conducted in collaboration with the California Air Resources Board ("CARB"), that found on-road NOx emissions from two 2.0L VW light duty diesel vehicles (2012 Jetta and 2013 Passat) were significantly higher than the applicable emission standards established by EPA regulations.

86. Beginning in or about May 2014 through the present, CARB, in coordination with EPA, has investigated the reasons for the high in-use emissions, repeatedly questioning representatives from VWoA and Volkswagen AG about WVU's findings.

87. In or about October 2014, those VW entities responded that the increased emissions from the vehicles studied by WVU were attributable to various yet-to-be-identified technical issues with the after treatment emission control systems and in-use conditions not represented by the FTP.

88. VW entities including at least VWoA represented to regulators that the vehicles' software could be optimized to address the excess NOx emissions issue and issued a recall in December 2014 and March 2015 for 2.0L vehicles to address the excess emissions issue.

89. From approximately December 2014 through the present, CARB, in coordination with EPA, conducted its own testing to further investigate the reasons behind the high NOx emissions observed on VW's 2.0L light duty diesel vehicles during real world driving conditions, and to investigate the effectiveness of the recall action. This on-road and laboratory testing showed limited reduction in the rates of emission of NOx of the recalled vehicles, and also

revealed that the vehicles exhibited different behaviors during real world driving conditions than during FTP emission testing.

90. During the course of this investigation, VW entities including at least VWoA and Volkswagen AG suggested a number of potential technical issues and in-use conditions that might explain the higher emission test results, but none of those issues adequately explained why the 2.0L Subject Vehicles behaved differently while operating on the FTP test cycles versus while being driven on the road.

91. In or about September 2015, VW entities including at least VWoA and Volkswagen AG admitted that these 2.0L motor vehicles contained a defeat device in the form of a software algorithm or algorithms that detect when the vehicle is undergoing emission testing.

92. The United States' efforts to learn the truth about the emission exceedances and other irregularities related to the 2.0L Subject Vehicles, including whether VW had committed the violations of federal law alleged herein, were impeded and obstructed by material omissions and misleading information provided by VW entities including at least VWoA and Volkswagen AG.

93. VW entities including at least Volkswagen AG knowingly concealed facts that would have revealed the existence of the dual-calibration strategy utilized in the 2.0L Subject Vehicles to regulators when they had a duty to share such information, and also engaged in affirmative misrepresentations and took affirmative actions designed to conceal these facts.

94. On October 8, 2015, Mr. Michael Horn, VWoA President and Chief Executive Officer, testified before the United States House of Representatives Subcommittee on Oversight and Investigations Committee on Energy and Commerce, and admitted that VWoA and

Volkswagen AG's representations to EPA and CARB that the increased NOx emissions from the 2.0L Subject Vehicles were due to technical issues were false.

95. During his October 8, 2015 testimony, Mr. Horn further admitted that the installation of the "defeat device" in the 2.0L Subject Vehicles was a knowing and willful decision to deceive.

96. Even after EPA issued its September 18, 2015 Notice of Violation to Volkswagen AG, Audi AG, and VWoA, and Mr. Horn's testimony before Congress, VW failed to come forward and reveal to regulators that the 3.0L Subject Vehicles contain one or more undisclosed AECDs, including the dual calibration strategy involving the "temperature conditioning mode" and the "normal mode." The existence of this dual calibration strategy was uncovered only as a result of EPA and CARB's diligence.

97. On November 2, 2015, EPA issued a Notice of Violation to Volkswagen AG, VWoA, Audi AG, Porsche AG, and Porsche Cars North America, Inc., citing violations of the Act related to the dual calibration strategy involving the "temperature conditioning mode" and the "normal mode," and the resultant excess emissions in certain 3.0L light duty diesel vehicles.

98. VW entities including at least Volkswagen AG immediately issued a statement denying that software had been installed in 3.0L light duty diesel vehicles to alter emissions in a prohibited manner.

99. On or about November 23, 2015, VW entities including at least Volkswagen AG and Audi AG admitted that the 3.0L Subject Vehicles contain three undisclosed AECDs, one of which – the temperature conditioning mode – is regarded as a defeat device under the Act and implementing regulations.

100. The United States' efforts to learn the truth about the emission exceedances and other irregularities related to the 3.0L Subject Vehicles, including whether VW had committed the violations of federal law alleged herein, were impeded and obstructed by material omissions and misleading information provided by VW entities including at least Volkswagen AG and Audi AG.

101. VW entities including at least Audi AG knowingly concealed facts that would have revealed the existence of the dual-calibration strategy utilized in the 3.0L Subject Vehicles to regulators when they had a duty to share such information, and also engaged in affirmative misrepresentations and took affirmative actions designed to conceal these facts.

**FIRST CLAIM FOR RELIEF**

**(Section 203(a)(1): Sale, Offer for Sale, Introduction or Delivery for Introduction into Commerce, or Import of New Motor Vehicles Not Covered by COCs)**

102. The United States realleges paragraphs 1 through 101 above as if fully set forth herein.

103. Volkswagen AG, Audi AG, VWoA and VWoA Chattanooga sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported the approximately 500,000 2.0L Subject Vehicles that were not covered by COCs (or caused any of the foregoing) because the 2.0L Subject Vehicles do not conform in all material respects to the design specifications described in the applications for the COCs that purportedly cover them, in that the 2.0L Subject Vehicles are equipped with undisclosed AECs that affect the 2.0L Subject Vehicles' emission controls.

104. Volkswagen AG, VWoA, Audi AG, Porsche AG, and Porsche Cars North America, Inc. sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported the approximately 80,000 3.0L Subject Vehicles that were not covered by COCs (or

caused any of the foregoing) because the 3.0L Subject Vehicles do not conform in all material respects to the design specifications described in the applications for the COCs that purportedly cover them, in that the 3.0L Subject Vehicles are equipped with undisclosed AECDs that affect the 3.0L Subject Vehicles' emission controls.

105. VW violated Section 203(a)(1) of the Act, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing new motor vehicles that were not covered by a COC, or by causing any of the foregoing acts.

106. Each such violation of Section 203(a)(1) of the Act, 42 U.S.C. § 7522(a)(1), is a separate offense with respect to each new motor vehicle.

107. Pursuant to Sections 204(a) and 205(a) of the Act, 42 U.S.C. §§ 7523(a) and 7524(a), VW is liable for injunctive relief and civil penalties of up to \$32,500 per vehicle for each violation occurring before January 13, 2009, and for injunctive relief and civil penalties of up to \$37,500 per vehicle for each violation occurring on or after January 13, 2009, 40 C.F.R. § 19.4.

**SECOND CLAIM FOR RELIEF**

**(Section 203(a)(3)(B): Manufacture, Sale, Offer for Sale, or Installation of Defeat Device)**

108. The United States realleges paragraphs 1 through 101 above as if fully set forth herein.

109. VW entities including at least Volkswagen AG, VWoA and Audi AG manufactured, sold, offered for sale, or installed parts or components (or caused any of the foregoing), intended for use with, or as part of, motor vehicles, including the road-calibration AECDs installed on the 2.0L Subject Vehicles, where a principal effect of the part or component is to bypass, defeat, or render inoperative a device or element of design installed on or in the 2.0L

Subject Vehicles in compliance with regulations under Title II of the Act, and VW entities including at least Volkswagen AG knew or should have known that such part or component was being offered for sale or installed for such use or put to such use.

110. VW entities including at least Volkswagen AG, VWoA, Audi AG, Porsche AG, and Porsche Cars North America, Inc. manufactured, sold, offered for sale, or installed parts or components (or caused any of the foregoing), intended or use with, or as part of, motor vehicles, including the normal mode calibration AECDs installed on the 3.0L Subject Vehicles, where a principal effect of the part or component is to bypass, defeat, or render inoperative a device or element of design installed on or in the 3.0L Subject Vehicles in compliance with regulations under Title II of the Act, and VW entities including at least Audi AG knew or should have known that such part or component was being offered for sale or installed for such use or put to such use.

111. VW entities including at least Volkswagen AG and Audi AG violated Section 203(a)(3)(B) of the Act, 42 U.S.C. § 7522(a)(3)(B), by manufacturing, selling, offering for sale, or installing “defeat devices” on new motor vehicles, or by causing any of the foregoing acts.

112. Each part or component that constitutes a “defeat device” manufactured, sold, offered for sale, or installed on new motor vehicles (or the causing thereof) is a separate violation of Section 203(a)(3)(B) of the Act, 42 U.S.C. § 7522(a)(3)(B).

113. Pursuant to Sections 204(a) and 205(a) of the Act, 42 U.S.C. §§ 7523(a) and 7524(a), VW entities including at least Volkswagen AG and Audi AG are liable for injunctive relief and civil penalties of up to \$2,750 per part or component that constitutes a “defeat device” per 2.0L Subject Vehicle and per 3.0L Subject Vehicle for each violation occurring before January 13, 2009, and for injunctive relief and civil penalties of up to \$3,750 per part or component that

constitutes a “defeat device” per 2.0L Subject Vehicle and per 3.0L Subject Vehicle for each violation occurring on or after January 13, 2009, 40 C.F.R. § 19.4.

**THIRD CLAIM FOR RELIEF**  
**(Section 203(a)(3)(A): Tampering)**

114. The United States realleges paragraphs 1 through 101 above as if fully set forth herein.

115. The road-calibration AECDs have the effect of removing or rendering inoperative devices or elements of design installed on or in the 2.0L Subject Vehicles in compliance with the regulations promulgated under Title II of the Act.

116. The normal mode calibration AECDs have the effect of removing or rendering inoperative devices or elements of design installed on or in the 3.0L Subject Vehicles in compliance with the regulations promulgated under Title II of the Act.

117. VW entities including at least Volkswagen AG, Audi AG and VWoA Chattanooga violated Section 203(a)(3)(A) of the Act, 42 U.S.C. § 7522(a)(3)(A), by incorporating the road-calibration AECDs in the 2.0L Subject Vehicles, thereby removing or rendering inoperative elements of the emissions control system installed in a new motor vehicle in compliance with regulations promulgated under Title II of the Act, or by causing any of the foregoing acts.

118. VW entities including at least Volkswagen AG, Audi AG and Porsche AG violated Section 203(a)(3)(A) of the Act, 42 U.S.C. § 7522(a)(3)(A), by incorporating the normal mode calibration AECDs in the 3.0L Subject Vehicles, thereby removing or rendering inoperative elements of the emissions control system installed in a new motor vehicle in compliance with regulations promulgated under Title II of the Act, or by causing any of the foregoing acts.

119. Each 2.0L Subject Vehicle equipped with the road-calibration AECD represents a separate violation by VW entities including at least Volkswagen AG, Audi AG and VWoA Chattanooga of Section 203(a)(3)(A) of the Act, 42 U.S.C. § 7522(a)(3)(A).

120. Each 3.0L Subject Vehicle equipped with the normal mode calibration AECD represents a separate violation by VW entities including at least Volkswagen AG, Audi AG and Porsche AG of Section 203(a)(3)(A) of the Act, 42 U.S.C. § 7522(a)(3)(A).

121. Pursuant to Sections 204(a) and 205(a) of the Act, 42 U.S.C. §§ 7523(a) and 7524(a), VW entities including at least Volkswagen AG, Audi AG and Porsche AG are liable for injunctive relief and civil penalties of up to \$32,500 per 2.0L Subject Vehicle and per 3.0L Subject Vehicle for each violation occurring before January 13, 2009, and for injunctive relief and civil penalties of up to \$37,500 per 2.0L Subject Vehicle and per 3.0L Subject Vehicle for each violation occurring on or after January 13, 2009, 40 C.F.R. § 19.4.

**FOURTH CLAIM FOR RELIEF**  
**(Section 203(a)(2): Reporting Violations)**

122. The United States realleges paragraphs 1 through 101 above as if fully set forth herein.

123. VW entities including at least Volkswagen AG, Audi AG and VWoA failed or caused the failure to disclose the existence of the road-calibration and/or other AECDs in the COC applications for the 2.0L Subject Vehicles, information reasonably required by the Administrator to determine whether VW has acted or is acting in compliance with Part A of Title II of the Act.

124. VW entities including at least Volkswagen AG, Audi AG, VWoA, Porsche AG and Porsche Cars North America, Inc. failed or caused the failure to disclose the existence of the normal mode calibration and/or other AECDs in the COC applications for the 3.0L Subject



Vehicles, information reasonably required by the Administrator to determine whether VW has acted or is acting in compliance with Part A of Title II of the Act.

125. VW entities including at least Volkswagen AG, Audi AG and VWoA failed or caused the failure to provide a justification for the road-calibration and/or other undisclosed AECDs, and/or failed or caused the failure to provide a rationale for why the road-calibration and/or other AECDs are not a defeat device, in the COC applications for the 2.0L Subject Vehicles, in order for the Administrator to determine whether VW has acted or is acting in compliance with Part A of Title II of the Act.

126. VW entities including at least Volkswagen AG, Audi AG, VWoA, Porsche AG and Porsche Cars North America, Inc. failed or caused the failure to provide a justification for the normal mode calibration and/or other undisclosed AECDs, and/or failed or caused the failure to provide a rationale for why the normal mode calibration and/or other AECDs are not a defeat device, in the COC applications for the 3.0L Subject Vehicles, in order for the Administrator to determine whether VW has acted or is acting in compliance with Part A of Title II of the Act.

127. VW entities including at least Volkswagen AG, Audi AG, VWoA, Porsche AG and Porsche Cars North America, Inc. violated Section 203(a)(2) of the Act, 42 U.S.C. § 7522(a)(2), by failing or causing the failure to disclose one or more AECDs in a COC application for a test group of new motor vehicles.

128. VW entities including at least Volkswagen AG, Audi AG and VWoA violated Section 203(a)(2) of the Act, 42 U.S.C. § 7522(a)(2), by failing or causing the failure to provide a justification for why AECDs contained in the 2.0L Subject Vehicles are not defeat devices in a COC application for a test group of new motor vehicles.

129. VW entities including at least Volkswagen AG, Audi AG, VWoA, Porsche AG and Porsche Cars North America, Inc. violated Section 203(a)(2) of the Act, 42 U.S.C. § 7522(a)(2), by failing or causing the failure to provide a justification for why AECDs contained in the 3.0L Subject Vehicles are not defeat devices in a COC application for a test group of new motor vehicles.

130. Each failure to provide reports or information described above is a separate violation of Section 203(a)(2) of the Act, 42 U.S.C. § 7522(a)(2).

131. Pursuant to Sections 204(a) and 205(a) of the Act, 42 U.S.C. §§ 7523(a) and 7524(a), VW entities including at least Volkswagen AG, Audi AG, VWoA, Porsche AG and Porsche Cars North America, Inc. are liable for injunctive relief and civil penalties of up to \$32,500 per day of violation of Section 203(a)(2) occurring before January 13, 2009, and for injunctive relief and civil penalties of up to \$37,500 per day of violation for such violations occurring on or after January 13, 2009, 40 C.F.R. § 19.4.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff, the United States of America, respectfully requests that the Court provide the following relief:

a. Permanently enjoin VW from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing in the United States (or causing any of the foregoing acts) any new motor vehicle not covered by a COC issued by EPA in accordance with the Act and the regulations promulgated thereunder.

b. Permanently enjoin VW from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing in the United States (or causing any of the

foregoing acts) any new motor vehicle equipped with an AECD, except in compliance with the Act and the regulations promulgated thereunder.

c. Permanently enjoin VW from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing in the United States (or causing any of the foregoing acts) any new motor vehicle equipped with a defeat device.

d. Permanently enjoin VW from bypassing, defeating, or rendering inoperative any device or element of design installed on or in a new motor vehicle in compliance with regulations promulgated under Title II of the Act.

e. Order VW to take appropriate steps, including, but not limited to, mitigation of excess NOx emissions, to remedy the violations of Sections 203(a)(1), 203(a)(3)(A), and 203(a)(3)(B) alleged above.

f. Enter a judgment that VW is liable to the United States for civil penalties for each violation of Section 203(a) of the Act, and assess civil penalties against VW as follows:

- i. up to \$32,500 per 2.0L Subject Vehicle and 3.0L Subject Vehicle for each violation occurring before January 13, 2009, and up to \$37,500 per 2.0L Subject Vehicle and 3.0L Subject Vehicle for each violation occurring on or after January 13, 2009 for violations of Section 203(a)(1) of the Act;
- ii. up to \$32,500 per 2.0L Subject Vehicle and 3.0L Subject Vehicle for each violation occurring before January 13, 2009, and up to \$37,500 per 2.0L Subject Vehicle and 3.0L Subject Vehicle for each violation occurring on or after January 13, 2009 for violations of Section 203(a)(3)(A) of the Act;

- iii. up to \$2,750 per “defeat device” per 2.0L Subject Vehicle and 3.0L Subject Vehicle for each violation occurring before January 13, 2009, and up to \$3,750 per “defeat device” per 2.0L Subject Vehicle and 3.0L Subject Vehicle for each violation occurring on or after January 13, 2009 for violations of Section 203(a)(3)(B) of the Act; and
- iv. up to \$32,500 per day of violation occurring before January 13, 2009, and up to \$37,500 per day of violation occurring on or after January 13, 2009 for violations of Section 203(a)(2) of the Act.
- g. Award the United States its costs in this action; and
- h. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted,



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**United States v. Volkswagen AG, et al.****APPENDIX A TO COMPLAINT**Identification of the 2.0L Subject Vehicles

<b>Model Year</b>	<b>EPA Test Group</b>	<b>Vehicle Make and Model(s)</b>
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

**United States v. Volkswagen AG, et al.****APPENDIX B TO COMPLAINT**Identification of the 3.0L Subject Vehicles

<b>Model Year</b>	<b>EPA Test Group(s)</b>	<b>Vehicle Make and Model(s)</b>
2009	9ADXT03.03LD	VW Touareg, Audi Q7
2010	AADXT03.03LD	VW Touareg, Audi Q7
2011	BADXT03.02UG BADXT03.03UG	VW Touareg Audi Q7
2012	CADXT03.02UG CADXT03.03UG	VW Touareg Audi Q7
2013	DADXT03.02UG DADXT03.03UG DPRXT03.0CDD	VW Touareg Audi Q7 Cayenne Diesel
2014	EADXT03.02UG EADXT03.03UG EPRXT03.0CDD EADXJ03.04UG	VW Touareg Audi Q7 Cayenne Diesel A6 quattro, A7 quattro, A8, A8L, Q5
2015	FVGAT03.0NU2 FVGAT03.0NU3 FPRXT03.0CDD FVGAJ03.0NU4	VW Touareg Audi: Q7 Cayenne Diesel A6 quattro, A7 quattro, A8, A8L, Q5
2016	GVGAT03.0NU2 GPRXT03.0CDD GVGAJ03.0NU4	VW Touareg Cayenne Diesel A6 quattro, A7 quattro, A8, A8L, Q5