

**APPENDIX:  
TIMELINE OF EVENTS RELATED TO  
VOLKSWAGEN’S “DEFEAT DEVICE”**

- May 2014 A study conducted by independent researchers at West Virginia University (WVU) on behalf of the International Council for Clean Transportation (ICCT) identifies significantly higher on-road oxides of nitrogen (NOx) emissions from two VW vehicles — a 2012 Jetta and a 2013 Passat. The results of this study are brought to the attention of the U.S. Environmental Protection Agency (U.S. EPA), the California Air Resources Board (ARB), and Volkswagen.
- May-Dec. 2014 ARB and U.S. EPA launch investigations into the higher emissions in Volkswagen vehicles. Volkswagen initiates testing to replicate the ICCT/WVU research and identify technical causes for the higher on-road emissions observed by the researchers. Volkswagen asserts to U.S. EPA and ARB that “increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions.”
- Dec. 2, 2014 Volkswagen shares testing results with U.S. EPA and ARB and proposes a “recalibration fix.”
- Dec. 2014 Volkswagen initiates a voluntary recall of approximately 500,000 vehicles in the United States. The recall includes model year 2009 through 2014 diesel vehicles equipped with Gen1 and Gen2 technology.
- May 6, 2015 ARB commences testing to confirm that Volkswagen’s recall solutions address the higher on-road emissions.
- May 6 to July 2015 ARB conducts laboratory and on-road testing to confirm the efficacy of the recall. The testing shows limited improvement, prompting ARB to expand its investigation.
- July 8, 2015 ARB shares test results with Volkswagen and U.S. EPA, prompting a series of technical meetings. According to ARB, in the course of those meetings, “VW disclosed that Gen1, Gen2, and the 2015 model-year improved SCR vehicle (known as Gen3) had a second calibration intended to run only during confirmatory testing.”
- Aug. 2015 U.S. EPA and ARB inform Volkswagen that they will not issue certificates of conformity for 2016 vehicles until Volkswagen can explain the higher emissions and provide assurance that these will not occur in 2016 vehicles.

- Sept. 3, 2015            During one of a series of technical meetings, Volkswagen admits to U.S. EPA and ARB staff that these vehicles were designed and manufactured with a defeat device to bypass, defeat, or render inoperative elements of the vehicles' emission control system.
- Sept. 18, 2015            U.S. EPA issues a Notice of Violation of the Clean Air Act to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc., alleging that model years 2009-2015 Volkswagen and Audi diesel cars equipped with 2.0-liter engines include software that circumvents U.S. EPA emissions standards for NOx. This software is a "defeat device" as defined by the Clean Air Act.
- On the same day, ARB issues an in-use compliance letter to Volkswagen AG, Audi AG, and Volkswagen Group of America deeming the December 2014 voluntary recall ineffective and unapproved. The letter orders Volkswagen and Audi to immediately initiate discussions with ARB to determine corrective action to rectify the emission non-compliance and restore the vehicles to meet clean air requirements.
- Sept. 21, 2015            Volkswagen CEO Dr. Martin Winterkorn issues a public apology.
- Sept. 23, 2015            Dr. Winterkorn resigns from Volkswagen and is replaced by Matthias Müller, who most recently led the company's Porsche division.
- Sept. 25, 2015            U.S. EPA announces it is adding additional confirmatory testing of passenger vehicles intended as an effort to identify any additional defeat devices.
- On the same day, Volkswagen suspends the leaders of the Volkswagen, Audi, and Porsche research and development divisions and announces a restructuring of its North American business unit. The company sets aside more than \$7 billion to address the alleged violations.
- Also on the same day, ARB announces that it has sent a letter to automobile manufacturers notifying them that ARB will begin using enhanced testing procedures for light-duty diesel vehicles to determine compliance with emissions levels to which they were originally certified.
- Oct. 6, 2015              The U.S. House Energy and Commerce Committee, Subcommittee on Oversight and Investigations holds a hearing titled, "Volkswagen's Emissions Cheating Allegations: Initial Questions," during which the committee hears from:
- Michael Horn, President and Chief Executive Officer, Volkswagen Group of America;

- Christopher Grundler, Director, Office of Transportation and Air Quality, Office of Air and Radiation, U.S. EPA; and
- Phillip Brooks, Director, Air Enforcement Division, Office of Enforcement and Compliance Assurance, U.S. EPA.

Nov. 2, 2015

U.S. EPA issues a second Notice of Violation to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc. This notice is also issued to Porsche AG and Porsche Cars North America (collectively referred to as Volkswagen). The Notice alleges that Volkswagen developed and installed a defeat device in certain light duty diesel vehicles equipped with 3.0-liter engines for model years 2014-2016 that increases NOx emissions up to nine times U.S. EPA's standard.

In response, Volkswagen issues a statement that "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." Volkswagen also states that it will cooperate fully with U.S. EPA.

On the same day, ARB issues an in-use compliance letter to the same parties aligning with the U.S. EPA notice and demanding that Volkswagen immediately initiate discussions with ARB to discuss testing results.

Nov. 9, 2015

Volkswagen issues a letter to its U.S. customers who own or lease a vehicle with a 2.0-liter diesel engine, asking for patience "[a]s we work tirelessly to develop a remedy..." The letter offers customers a \$500 prepaid Visa "loyalty" card, a \$500 Volkswagen dealership card, and 24-hour roadside assistance at no charge for three years, as a "first step toward restoring your invaluable trust."

Nov. 19, 2015

Volkswagen officials inform U.S. EPA that the defeat device has existed in all of its U.S. 3.0-liter diesel models since 2009.

Nov. 20, 2015

Volkswagen, on behalf of both Volkswagen and Audi models, submits a proposed 2.0-liter engine recall plan to ARB for review.

Nov. 25, 2015

ARB informs Volkswagen, Audi, and Porsche that they need to correct a range of non-compliance issues, including an illegal defeat device, on 3.0-liter diesel engines for model years 2009-2016. ARB states that Volkswagen, Audi, and Porsche must submit a recall plan, meeting specified requirements, within 45 business days.

Dec. 15, 2015

Volkswagen, which has been continually submitting additional information and data, asks ARB for an extension to submit a supplemental recall plan.

- Jan. 4, 2016      The U.S. Department of Justice files a complaint on behalf of U.S. EPA against Volkswagen AG; Audi AG; Volkswagen Group of America, Inc.; Volkswagen Group of America Chattanooga Operations, LLC; Porsche AG; and Porsche Cars North America, Inc. for alleged violations of the Clean Air Act affecting nearly 600,000 diesel-engine vehicles.
- Jan. 12, 2016      ARB formally rejects Volkswagen's recall plan for 2.0-liter engines, as well as the request for extension, and issues a Notice of Violation to Volkswagen of America. ARB cites a number of reasons for deeming the recall plan incomplete, including failure to describe the nonconformities in sufficient detail; failure to specifically describe the fixes; and failure to sufficiently address the impacts on the engine, vehicle operation, and all related emission-control technologies.
- Feb. 2, 2016      Volkswagen, Audi, and Porsche submit a recall plan for 3.0-liter engines to ARB for review.