

CANADA

PROVINCE OF QUEBEC  
DISTRICT OF MONTREAL

NO: 500-06-000837-175

(Class Action)  
SUPERIOR COURT

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**GARAGE POIRIER & POIRIER INC.**

and

**A. BOUFFARD**

*Plaintiffs/ Class Representatives*

-vs.-

**FCA CANADA INC.**, legal person duly constituted having a principal establishment at 3000 Autoroute Trans-Canada, city of Pointe-Claire, province of Quebec, H9R 1B1

and

**FCA US LLC**, legal person duly constituted having its head office at 1000 Chrysler Drive, City of Auburn Hills, State of Michigan, 48326, U.S.A.

and

**VM MOTORI NORTH AMERICA, INC.**, legal person duly constituted, having its head office at 1000 Chrysler Drive, City of Auburn Hills, State of Michigan, 48326, USA

and

**ROBERT BOSCH INC.**, legal person duly constituted, having its head office at 6955 Creditview Road, City of Mississauga, Province of Ontario, L5N 1R1

and

**ROBERT BOSCH NORTH AMERICA CORPORATION**, legal person duly constituted, having its head office at 2800 South 25th Avenue, City of Broadview, State of Illinois, 60155-4594, U.S.A.

and

**ROBERT BOSCH LLC**, legal person duly constituted, having its head office at 38000 Hills Tech Drive, City of Farmington Hills, State of Michigan, 48331, U.S.A.

*Defendants*

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**APPLICATION TO INSTITUTE PROCEEDINGS**  
(Arts. 141 and following *C.C.P.*)

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TO THE HONOURABLE MADAM JUSTICE CHANTAL CORRIVEAU OF THE SUPERIOR COURT, SITTING IN AND FOR THE DISTRICT OF MONTREAL, YOUR PLAINTIFF/ CLASS REPRESENTATIVE STATE AS FOLLOWS:

## **I. INTRODUCTION**

1. This is a case about a vehicle manufacturer (FCA) and its suppliers (VM Motori and Bosch) having produced and secretly installed illegal defeat devices in certain Jeep Grand Cherokee and Ram 1500 vehicles, branded as “EcoDiesel”, in order to evade emissions laws and provide otherwise unattainable performance results;
2. This class action is about scheme devised by the Defendants that deprived consumers of crucial material facts, precluded informed purchase/lease choices, and subverted consumer decisions and the environment itself;
3. This case is also about the greenwashing that the Defendants engaged in in actively misrepresenting the Subject Vehicles and their EcoDiesel engines as “clean” and “green”;
4. The present class action has many elements, which can be summed up in one unfortunately familiar word: Dieselgate;
5. By judgment dated July 5, 2021, the Superior Court of Quebec authorized (certified) the Plaintiffs/ Class Representatives to institute a class action against the Defendants on behalf of the group of:

« toutes les personnes morales ou physiques résidents au Québec qui ont acheté ou loué un des véhicules visé » et les véhicules visés sont « les modèles 2014 à 2016 RAM 1500 et Jeep Grand Cherokee, équipés d'un moteur EcoDiesel 3 litres.»

*“All legal or natural persons resident in Quebec, who purchased or leased a Subject Vehicle” and the Subject Vehicles are “the 2014 to 2016 RAM 1500 and Jeep Grand Cherokee models, equipped with a 3.0-litre EcoDiesel engine.”<sup>1</sup>*

(the “Class” or “Class Members”);

6. The Plaintiffs have instituted a class action seeking compensatory and punitive damages against the Defendants, on behalf of the Class, based on the Defendants’ designing, manufacturing, and installation of illegal software, being Defeat Devices or Auxiliary Emission Control Devices, used to circumvent emission regulatory standards, and making false representations as to the fuel efficiency of the Subject Vehicles. In addition, the repairs performed by the Defendants to address the false representations caused a further decrease in vehicle performance, lasting over a period of at least one year;

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<sup>1</sup> Unofficial English translation.

7. The “Defeat Devices” and/or “Auxiliary Emission Control Devices” (AECDs) referred to in this litigation are illegal software that detects when the vehicle is undergoing emissions testing and switches on full emissions controls *only during the test* – unduly and temporarily “defeating” or reducing the vehicle’s emissions (and, exhibiting higher fuel efficiency); otherwise, at all other times that the vehicle is running, i.e. during real-world driving conditions, the emissions control systems are disabled;
8. The FCA Defendants designed, manufactured, marketed, distributed, warranted, leased and/or sold the Subject Vehicles as being “EcoDiesel” and capable of passing federal emission standards, which enabled the charging of a premium price (the “EcoDiesel Premium”); however, in fact, the Subject Vehicles had been equipped with an illegal software designed to falsify the vehicles’ real-world emissions during emissions testing;
9. The VM Motori Defendant designed, manufactured, calibrated, and delivered the EcoDiesel engine system for inclusion in the Subject Vehicles;
10. The Bosch Defendants created, designed, developed, manufactured, tested, supplied, and/or sold the Defeat Devices and the EDC-17 Engine Control Unit, which enabled the FCA Defendants to implement the Defeat Devices in the Subject Vehicles;
11. The Defendants colluded in order to secretly design, create, install, test, and maintain the Defeat Devices in the Subject Vehicles, which rendered the emission control systems ineffective and enabled the FCA Defendants to trick regulators to obtain regulatory approval for sale and lease to Class Members – without the active participation and collaboration of the Defendants, the Subject Vehicles would never have been available for sale or lease as they were;
12. The Plaintiffs contend that the Defendants failed to disclose the existence of the Defeat Devices and that the Subject Vehicles emitted Oxides of Nitrogen (“NO<sub>x</sub>”) at a much higher level than stated (between 10 and 40 times the legal limit); far exceeding the pollutants that consumers reasonably expected, and that they had substantially lower fuel efficiency. The Defendants actively concealed the Defeat Devices, which diminished the intrinsic and the resale value of the Subject Vehicles (and an overpayment at the point-of-sale) for Class Members;
13. In its judgment granting class action status, the Superior Court of Quebec identified the principle issues or issues of fact and law to be treated collectively as the following:

<b><u>Original Commons Issues</u></b>	<b><u>Translated Common Issues</u></b>
<p>(a) Est-ce que les véhicules visés contiennent une composante qui lors des tests de performance masque et modifie les résultats en termes d'émanations polluantes?</p> <p>(b) Hors de ces périodes d'évaluation, est ce que la composante a un effet sur la pollution qui émane du véhicule visé et la consommation du carburant pour le véhicule?</p> <p>(c) Est-ce que les défenderesses ont agi en toute connaissance de cause afin de tromper les agences gouvernementales, les consommateurs et commerçants s'étant procuré un des véhicules visés?</p> <p>(d) Est-ce que les différentes défenderesses peuvent être tenues responsables des dommages?</p> <p>(e) Est-ce que les défenderesses FCA et VM Motori ont fait des fausses représentations concernant les qualités anti polluantes et écoénergétique des véhicules visés?</p> <p>(f) Quels sont les dommages auxquels les membres du groupe auraient droit?</p> <p>i. Les membres peuvent-ils recouvrer des dommages économiques tels le remboursement des frais excédentaires de carburant, les troubles et inconvénients découlant des avis de réparation nécessaires pour tenter de régler le problème identifié?</p> <p>ii. Les membres peuvent-ils réclamer de FCA et VM Motori des dommages découlant des</p>	<p>(a) <i>Do the Subject Vehicles contain a component that masks and alters the results during performance tests in terms of polluting emissions?</i></p> <p>(b) <i>Outside of these testing periods, does the component have an effect on the pollution emitted from the Subject Vehicle and the fuel consumption of the vehicle?</i></p> <p>(c) <i>Did the Defendants knowingly act to deceive government agencies, consumers and merchants who purchased one of the Subject Vehicles?</i></p> <p>(d) <i>Can the individual Defendants be held liable for the damages?</i></p> <p>(e) <i>Did the FCA and VM Motori Defendants make false representations concerning the anti-pollution and fuel-efficiency qualities of the Subject Vehicles?</i></p> <p>(f) <i>What damages are Class Members entitled to?</i></p> <p>i. <i>Can Class Members recover economic damages such as reimbursement of excess fuel costs, trouble and inconvenience arising from repair notices required to attempt to resolve the identified problem?</i></p> <p>ii. <i>Can Class Members claim damages from FCA and VM Motori for false representations? If yes, which ones?</i></p> <p>(g) <i>Can the Defendants be ordered to pay punitive damages if the Court</i></p>



fausses représentations? Si oui lesquels?	<i>finds a violation of the Consumer Protection Act or other legislation?</i>
(g) Les défenderesses peuvent-elles être condamnées à verser des dommages punitifs si le Tribunal conclut à une violation de la Loi sur la protection du consommateur ou une autre Loi ?	(h) <i>Should the Defendants offer a guarantee to the members that the modifications address the energy and engine performance problem?</i>
(h) Les défenderesses devraient elles offrir une garantie aux membres que les modifications apportées règlent le problème de performance énergétique et de performance du moteur?	(i) <i>Alternatively, should the Defendants recall the Subject Vehicles and compensate the holders of the Subject Vehicles accordingly?</i>
(i) Alternativement les défenderesses devraient-elles reprendre les véhicules visés et compenser en conséquence les détenteurs des véhicules visés?	

## II. THE DEFENDANTS

14. There are three groups of Defendants; (i) the manufacturers of the Subject Vehicles (FCA), (ii) the FCA-owned company that manufactured the EcoDiesel engines (VM Motori), and (iii) the companies that designed and supplied the EDC units that were used to manage and control the emissions for the engines (Bosch):

### A. The FCA Defendants

15. Defendant FCA Canada Inc. ("FCA Canada") is a Canadian corporation with its head office in Ontario. FCA Canada is the current owner of, *inter alia*, the following trademarks: "CHRYSLER AND BAND WITHIN SHIELD DESIGN" (NFLD1502), "DODGE" (UCA29065), and "CHRYSLER" (TMDA56220), as appears from a copy of an extract from the *Registraire des entreprises* and from copies of said trademarks from the CIPO trade-mark database, produced herein *en liasse* as **Exhibit P-1**;

16. Defendant FCA US LLC ("FCA US") is an American corporation with its head office in Michigan. FCA US is the current owner of *inter alia* the following trademarks:

- "JEEP" (design) (TMA214501)
- "JEEP" (word) (TMA240978)
- "GRAND CHEROKEE" (word) (TMA667541)
- "CHRYSLER IMPERIAL AND SHIELD DESIGN" (NFLD1799)
- "DODGE & RAM'S HEAD DESIGN" (TMA748793)
- "RAM" (TMA128585)
- "RAM'S HEAD DESIGN" (TMA675408)



As appears from a copy of said trademarks from the CIPO trade-mark database, produced herein *en liasse* as **Exhibit P-2**;

17. Defendants FCA Canada and FCA US (collectively, “FCA”) are motor vehicle engineers, manufacturers, and licensed distributors of the Subject Vehicles. The Chrysler brand is one of the “Big Three” in the United States Automotive Industry<sup>2</sup>. As of 2015, FCA was the 7<sup>th</sup> largest automaker in the world by unit production;
18. The Ram 1500 Subject Vehicles are built at the Warren Truck Assembly Plant in Warren, Michigan and the Jeep Grand Cherokee Subject Vehicles are built at the Jefferson Ave Truck Assembly Plant in Detroit, Michigan, as appears from a copy of extracts from the FCA Defendants’ website at allpar.com, produced herein *en liasse* as **Exhibit P-3**;
19. Fiat Chrysler Automobiles N.V., FCA’s parent company, wholly-owns the company VM Motori S.p.A. (“VM Italy”). As such, it is the Fiat Group that owns the trademark for “VM” (TMA924142), as appears from a copy of the Fiat and GM Press Release entitled “Fiat Powertrain Purchases Penske Corporations’s Fifty-Percent Stake in VM Motori VM Motori to be co-owned by GM and Fiat Powertrain” dated February 11, 2011, from a copy of the Reuters article entitled “Italy’s Fiat to take full control of VM Motori” dated September 21, 2013, and from a copy of the Automotive News article entitled “Fiat buys remainder of diesel maker VM Motori from GM” dated October 28, 2013, produced herein *en liasse* as **Exhibit P-4** and as appears from a copy of the trademark “VM” from the CIPO trade-mark database, produced herein as **Exhibit P-5**;

## **B. The VM Motori Defendant**

20. Defendant VM Motori North America, Inc. (“VM Motori”) is an American corporation with its head office in Michigan. It is a wholly owned subsidiary of Fiat Chrysler Automobiles N.V. (Exhibit P-4). VM Motori designed, manufactured, calibrated, and delivered the EcoDiesel engine for inclusion in the Subject Vehicles, knowing and intending that the Subject Vehicles would be marketed, distributed, warranted, leased and/or sold in Quebec;
21. VM Motori is deeply involved in the development and testing of all aspects of the engine, as appears from a copy of an extract from VM Motori’s website at [www.vmmotori.com](http://www.vmmotori.com), produced herein as **Exhibit P-6**;
22. All Subject Vehicles contain the same 3.0-litre VM Motori powertrain diesel engine, as appears from a copy of an excerpt from the deposition testimony of Robert J. Hegbloom dated March 23, 2018, produced herein as **Exhibit P-7**;

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<sup>2</sup> When used in relation to the United States automotive industry, the “Big Three” generally refers to: Defendant FCA US LLC, non-party Ford Motor Company, and non-party General Motors Corporation.



### C. The Bosch Defendants

23. Defendant Robert Bosch Inc. (“Bosch Inc.”) is a Canadian corporation with its head office in Ontario. It is a subsidiary of Defendant Bosch North America Corporation that conducts business in Canada, including within the province of Quebec, as appears from a copy of an extract from the *Registraire des entreprises*, produced herein as **Exhibit P-8**;
24. Defendant Robert Bosch North America Corporation (“Bosch North America”) is an American corporation with its head office in Illinois. It is a parent company of Defendant Bosch Inc.;
25. Defendant Robert Bosch LLC (“Bosch LLC”) is an American corporation with its head office in Michigan;
26. Bosch is one of the world’s largest automotive suppliers, as appears from a copy of an extract from Bosch’s 2014 Annual Report, produced herein as **Exhibit P-9**;
27. Bosch presents itself as having a collective identity, which is captured by Bosch’s mission statement: “We are Bosch”, as appears from a copy of an extract from the Bosch Defendants’ website at [www.bosch.com](http://www.bosch.com) and from a copy of an extract from the Bosch Defendants’ website at [www.wearebosch.com](http://www.wearebosch.com), produced herein *en liasse* as **Exhibit P-10**;
28. Bosch embeds sales and engineering personnel at customer offices and facilities throughout the world, including automakers like FCA, to work directly on the design, sale, calibration, and configuration of the parts it supplies;
29. Bosch created, designed, developed, tested, configured, manufactured, supplied, marketed, and/or sold the Defeat Devices and the EDC-17, which enabled their operation, to control emissions, knowing and intending that the Subject Vehicles would be marketed, distributed, warranted, leased and/or sold in Quebec;
30. Bosch was a knowing and active participant in the scheme or common course of conduct with FCA and VM Motori and others to defraud federal regulators and consumers. Bosch participated not only in the development of the Defeat Devices, but also in the scheme to prevent federal regulators from uncovering their true functionality, as well as in actively marketing the supposed “clean diesel” technology, as appears from a copy of the Reuters article entitled “US probes Bosch in VW cheating scandal” dated November 19, 2015, from a copy of Automotive News’ article entitled “Bosch warned VW about illegal software use in diesel cars, report says”, and from a copy of the Bloomberg article entitled “Study of VW’s Cheating on Diesels Examines Role of Bosch Code”, produced herein *en liasse* as **Exhibit P-11**;

#### **D. The Defendants' Solidary Liability**

31. The Defendants, either directly or through a parent company, subsidiary, agent or affiliate, designed, manufactured, marketed, advertised, distributed, leased and/or sold or caused to be leased and/or sold the Subject Vehicles equipped with the Defeat Devices throughout Canada, including within the province of Quebec;
32. Given the close ties between the Defendants and considering the preceding, they are all solidarily liable for the acts and omissions of the other;

#### **III. The Situation**

##### **A. Diesel Engines and the Emissions Trade-off**

33. A diesel engine is an internal combustion engine in which ignition of fuel is initiated by the high temperature that gas achieves when it is greatly compressed. In contrast, a regular spark-ignition engine, such as a gasoline engine, ignites fuel using spark plugs;
34. Diesel engines pose a particularly difficult challenge to the environment because they have an inherent compromise between power, fuel efficiency, and emissions – the greater the power and fuel efficiency, the “dirtier” and more harmful the emissions become. Compared to gasoline engines, diesel engines generally produce greater power, torque, low-end power, better drivability, and much higher fuel efficiency. But these benefits come at a cost: diesel produces dirtier and much more harmful emissions;
35. Diesel engine exhaust is materially different from gasoline engine exhaust, most notably in terms of the greatly increased levels of oxides of nitrogen ( $\text{NO}_x$ ) and other harmful pollutants, such as noxious gases and particulate matter;
36.  $\text{NO}_x$  is comprised of nitrogen and oxygen atoms. It is formed primarily from the liberation of nitrogen contained in fuel and in combustion. Nitrogen oxide ( $\text{NO}$ ) emitted during combustion quickly oxidizes to Nitrogen Dioxide ( $\text{NO}_2$ ) when released into the atmosphere.  $\text{NO}_2$  dissolves in water vapour in the air to form acids and interacts with other gases and particles in the air to form particles known as nitrates and other products that may be harmful to people and the environment. These compounds develop inside the cylinder of the diesel engine during the high temperature combustion process;
37.  $\text{NO}_x$  is a highly reactive group of gases that create environmental problems and public health hazards, including smog, ground-level ozone, and acid rain.  $\text{NO}_x$  is a notable contributor to global warming,  $\text{NO}_x$  emissions have other detrimental effects on the environment, such as feeding invasive algal blooms, create sulfur-derived toxins, and detrimentally change the acidity of water. Direct exposure to  $\text{NO}_x$  can cause respiratory problems, such as lung irritation, bronchitis, or pneumonia. When  $\text{NO}_x$  combines with sunlight, it may create photochemical smog, which appears as a brownish ground-level haze and causes chest pains, shortness of breath,



coughing and wheezing, and eye irritation. Breathing ozone can also trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion and can worsen bronchitis, emphysema, and asthma. Automobiles and other mobile sources contribute significantly to the amount of NO<sub>x</sub> emitted into the atmosphere, as appears from a copy of an extract from Environment Canada's website at [www.ec.gc.ca](http://www.ec.gc.ca), and from a copy of the EPA Technical Bulletin entitled "Nitrogen Oxides (NO<sub>x</sub>), Why and How they are Controlled" dated 1999, produced herein *en liasse* **Exhibit P-12**;

38. In June 2012, the World Health Organization declared that diesel vehicle emissions were carcinogenic to humans (Group 1), which is about as dangerous as asbestos, as appears from a copy of International Agency for Research on Cancer (WHO) Press Release entitled "IARC: Diesel Engine Exhaust Carcinogenic" dated June 12, 2012 and from a copy of the Toronto Star article entitled "Diesel exhaust as cancerous as asbestos, says WHO" dated June 13, 2012, produced herein *en liasse* as **Exhibit P-13**;
39. Seeing a major opportunity for growth, almost all of the major automobile manufacturers rushed to develop "clean diesel" and promoted new diesel vehicles as environmentally friendly. In order to bring their emissions in compliance with regulatory standards, manufacturers of diesel vehicles employ certain systems (including engine control software and emissions hardware systems) in order to reduce harmful pollutants, such as NO<sub>x</sub> emissions – these systems, when operative, have the corresponding effect of limiting performance in terms of acceleration, towing power and torque, as well as reducing fuel economy;
40. FCA's supposed response to this challenge was the EcoDiesel engine. Emission reductions start in the cylinder with advanced fuel injection strategies. After the by-products of combustion leave the engine, the EcoDiesel technology treats these emissions using a diesel oxidation catalyst ("DOC"), a diesel particulate filter, and SCR;

## **B. The Introduction of the Subject Vehicles and the EcoDiesel Engine**

41. In and around 2009, emissions standards were becoming more stringent in North America. In contrast to other global automakers, such as Toyota and Ford, who were focusing on hybrid and electric cars, FCA chose to focus on diesel engines, and Bosch was prepared to meet the challenge, as appears from a copy of the Wards Auto article entitled "Chrysler Eyes Different Path to Meeting New CAFE Standards" dated August 29, 2012, a copy of a press release from Bosch entitled "Bosch: Clean Diesel is Key Part of the Future Technology Mix", dated October 2008, a copy of the Automotive News article "New coalition aims to promote diesel cars", dated February 2, 2009, and a copy of the Automotive News article "Bosch Boosts US Diesel Lobbying", produced herein *en liasse* as **Exhibit P-14**;
42. In 2010-2011, non-party VM Italy announced its new V6, 3.0-litre diesel engine (Exhibit P-4). Fiat thereafter began working with VM Motori to develop the engine for use in FCA vehicles to be sold in North America. By 2014, Fiat unveiled an

aggressive five-year plan, explaining that “Ram’s goals with its next-generation pickups are to retain its lead in truck innovation by offering diesel engines ...” as appears from a copy of the LA Times article “Fiat Chrysler unveils aggressive five-year plan”, dated May 06, 2014, a copy of the Motor Trend article “Ram and Ferrari’s Place in Fiat Chrysler’s Five-Year Plan”, dated May 6, 2014, a copy of the Engine Labs article entitled “An Inside Look At The Ram 1500 3.0L EcoDiesel” dated January 11, 2015, and from a copy of the Motor Trend article “Fiatapalooza! Chrysler’s Five-Year Plan”, dated November 6, 2009, produced herein *en liasse* as **Exhibit P-15**;

43. Because the engine had been originally developed for use in Europe (where standards for NO<sub>x</sub> emissions were less stringent than in North America), the emissions were higher than those allowable in North America;
44. Rather than cutting their losses on “EcoDiesel” and necessitating a delay in the production of the Subject Vehicles, FCA found a way to cheat on emissions tests by working closely with VM Motori (on the design of the EcoDiesel engines) and with Bosch (on the design and customization of the EDC-17). Unlike during testing, the defeat device software disables or restricts certain of the emission controls during real-world driving conditions;
45. Debuting for the 2014 model year, the FCA Defendants introduced their “EcoDiesel” vehicles (the brand name alone suggesting an environmental quality that was utterly lacking) and they leased and/or sold the Subject Vehicles that produced emissions level that were far higher than advertised, intentionally concealing the truth through a sophisticated scheme involving the Defeat Devices;

### **C. The Bosch EDC-17**

46. All modern engines are integrated with computer components to manage nearly all aspects of the vehicle’s operation, referred to as an Engine Control Unit (“ECU”). An ECU is a closed control loop between the engine sensors and actuators which allow for significant improvements in performance, reliability, and fuel economy. It is also responsible for ensuring the vehicle complies with regulation emission requirements through control measures which actively balance performance and efficiency. It is within the ECU that a defeat device can be implemented in the software.
47. The Subject Vehicles use a Bosch EDC-17 diesel ECU (“EDC-17”) to monitor sensors throughout the vehicle and operate nearly all of the vehicle’s systems according to sophisticated programming that can sense and vary factors like steering, combustion, and emissions performance;
48. All Bosch EDCs, including the EDC-17, run on complex, highly proprietary engine management software over which Bosch exerts near-total control. The software is typically locked to prevent customers, like FCA, from making significant changes on their own. Both the design and implementation of the EDC-17 are interactive processes, requiring Bosch’s close collaboration with the automaker from beginning to end;



49. Bosch's EDC-17 controls emissions by periodically reading sensor values, evaluating a control function, and controlling actuators. Sensor readings include crankshaft position, air pressure, air temperature, air mass, fuel temperature, oil temperature, coolant temperature, vehicle speed, exhaust oxygen content, as well as driver inputs such as accelerator pedal position, brake pedal position, cruise control setting, and selected gear, as appears from a copy of the report entitled "How They Did It: An Analysis of Emission Defeat Devices in Modern Automobiles" undated and from a copy of the Computer article entitled "Embedded Software: Facts, Figures, and Future" dated 2009, produced herein *en l'asse* as **Exhibit P-16**;
50. The EDC-17 itself is not inherently a tool for deceit; it is widely used by automakers that operate modern diesel engines (Exhibit P-22); however, it is a good enabler for manufacturers to employ defeat devices as it allows the software to detect conditions outside of the emissions test cycle. Almost all of the vehicles found or alleged to have been manipulating emissions in the United States use Bosch defeat devices, as appears from a copy of the Checksum article entitled "New Bosch EDC17 Engine Management System" dated August 17, 2006, from a copy of the Quantum Tuning article entitled "Bosch EDC-17 Remap", and from a copy of the Bosch press release entitled "The brain of diesel injection: New Bosch EDC17 engine management system" dated February 28, 2006, produced herein *en l'asse* as **Exhibit P-17**;
51. In January 2013, Bosch LLC announced that its "clean diesel" technology would be featured in the new 2014 Jeep Grand Cherokee 3.0-Litre EcoDiesel®. Bosch LLC stated: "The 2014 Jeep Grand Cherokee features a Bosch emission system compliant with the most stringent emission regulations in the world. From fuel tank to tailpipe, Bosch is pleased to equip this vehicle with top technologies to give consumers a great driving experience requiring fewer stops at the pump", as appears from a copy of Bosch LLC's Press Release entitled "Bosch Announces Clean Diesel Technology On 2014 Jeep Grand Cherokee" dated January 24, 2013, and from a copy of the PR News Wire article "'Clean Diesel. Clearly Better.' Campaign for Clean Diesel Cars Welcomed", dated Dec 12, 2012, produced herein *en l'asse* as **Exhibit P-18**;
52. Bosch represented that its EDC-17 was "the key to diesel engines which will fulfill future emission regulations". At a roundtable event hosted by Bosch, and attended by legislators and regulators from California, Bosch discussed the immediate benefits of Clean Diesel passenger cars offering reduced vehicle petroleum consumption and CO2 emissions, as appears from a copy of a Bosch brochure entitled "Diesel Systems: Efficiency is what drives us – solutions for on-and off-highway", from a copy of a Bosch press release entitled "Bosch drives clean diesel in California", from a copy of a Bosch press release entitled "Bosch brings innovation, green technology to SAE 2009 World Congress", and from a copy of a California Diesel Days Press Release, entitled "Clean Diesel Delivers", produced herein *en l'asse* as **Exhibit P-19**;
53. With respect to the Subject Vehicles, Bosch, VM Motori, and FCA, in close partnership, manipulated the EDC-17 to surreptitiously evade emissions



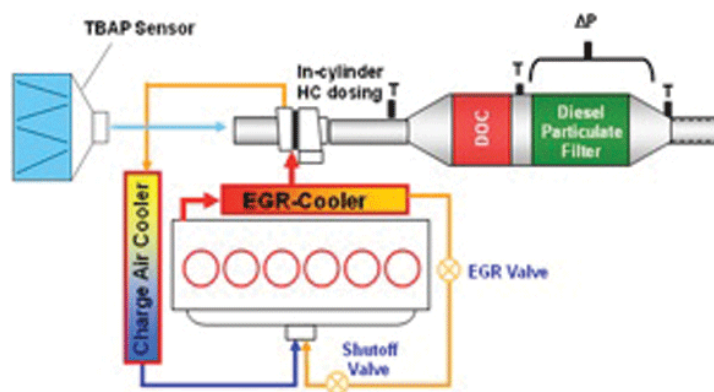
regulations. The Bosch and FCA Defendants worked together to develop and to implement a specific set of software algorithms for implementation in the Subject Vehicles, which enabled FCA to adjust fuel levels, exhaust gas recirculation (EGR), air pressure levels, and even urea injection rates (for applicable vehicles), as appears from a copy of an extract from the Bosch Defendants' website at de.bosch-automotive.com, produced herein as **Exhibit P-20** and as appears from a copy of the Automotive News article entitled "Bosch probes whether its staff helped VW's emissions rigging" dated January 27, 2016, produced herein as **Exhibit P-21**;

54. In the U.S. litigation relating to Volkswagen, Bosch did attempt to have the case dismissed against them; however it was unsuccessful with the U.S. court noting "because the Franchise Dealers plausibly alleges that Bosch controlled all modifications to the EDC17, the Franchise Dealers' complaint supports an inference that Bosch must have known about and approved the changes that converted the EDC17 into a defeat device", as appears from a copy of the Order Denying Bosch's Motion to Dismiss the Volkswagen-Branded Franchise Dealers' Second Amended Consolidated Class Action Complaint in the case of *In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation* in MDL No. 2672 CRB (JSC), produced herein as **Exhibit P-22**;

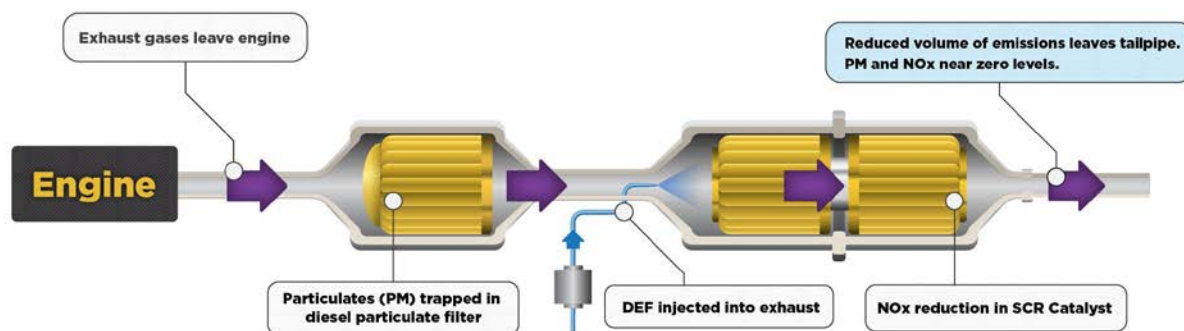
#### **D. The Defendants' Defeat Devices**

55. The Defeat Devices used an algorithm to detect when Subject Vehicles were being operated on dynamometers, as is used by federal regulators when determining compliance with emissions standards. When the Defeat Devices detect that the vehicle is undergoing emissions testing, they engage full emissions controls, which allows the Subject Vehicles to pass stringent standards for NO<sub>x</sub> emissions. During on-road driving, however, the emission controls are turned off and these same vehicles emit 10 to 40 times the legal limits for NO<sub>x</sub>;
56. The Defendants' scheme focused on at least two of the emissions control systems in the Subject Vehicles, both of which FCA pitched to consumers as enablers of the Subject Vehicles' purported "clean" operation: (i) the Exhaust Gas Recirculation ("EGR") system and (ii) the Selective Catalytic Reduction ("SCR") system;
57. The EGR system reduces NO<sub>x</sub> in diesel emissions by lowering the temperature of the exhaust gas exiting the engine. The SCR system takes the NO<sub>x</sub> leftover from the EGR System and converts it into harmless nitrogen and water. Together, the EGR and SCR systems are vital to mitigating the pollution from the Subject Vehicles' diesel emissions;

(a) EGR AECD Strategy (AECD 5): EGR Rate Reduction – T\_Eng



58. As described above, the amount of NO<sub>x</sub> produced by a diesel vehicle is a function of temperature: the hotter the exhaust gas is when exiting the engine, the more NO<sub>x</sub> it emits;
59. The EGR system minimizes NO<sub>x</sub> by lowering the temperature of the engine exhaust through a recirculation process. The higher the rate of exhaust gas recirculation (the EGR rate), the lower the exhaust gas temperature. The lower the exhaust temperature, the lower the NO<sub>x</sub>. Conversely, the higher the EGR rate in a vehicle, the worse fuel economy it achieves;
60. The Defendants employed the EGR AECDs in the Subject Vehicles to either reduce the EGR rate or shut it off entirely during emissions testing, thereby artificially increasing the Subject Vehicles' fuel economy and drivability at the expense of increased NO<sub>x</sub> during real-world driving conditions;
61. One way that the Defendants reduced the EGR rate during emissions testing was through AECD 5, which detected the engine temperature in the Subject Vehicles and reduced the EGR rate during the vehicles' "warm-up phase" (the phase when the engine is heating up after a cold start). The Defendants referred to AECD 5 as "T\_Eng" and various derivatives thereof (e.g., "t\_engine" and "tEng");
62. VM Motori knew as early as 2010 that T\_Eng was an AECD that if concealed, was an illegal Defeat Device, FCA approved of it, and Bosch, after considering limiting its liability from VM Motori's use of T\_Eng through a risk release, not only incorporated T\_Eng into the emission software for the Subject Vehicles, but went so far as to advise VM Motori not to disclose T\_Eng to regulators, as appears from a copy of the Automotive News article entitled "FCA emails suggest alleged diesel emissions violations surfaced in 2010" dated May 18, 2018, produced herein as **Exhibit P-23**;

(b) SCR AECD Strategy (AECD 7): Dosing Disablement**Diesel Emissions Control System**

63. The SCR system uses a diesel exhaust fluid injector (DEF – a solution of urea and water) to convert NO<sub>x</sub> into harmless nitrogen and water after it exits the EGR system and before it is emitted from the tailpipe. The SCR system is meant to inject measured quantities of DEF into the exhaust stream based on a software program that injects the right amount of DEF to neutralize the amount of NO<sub>x</sub> being emitted by the engine; however, the Defendants employed the SCR AECDs to either reduce or disable the DEF dosing amount during emissions testing, causing the Subject Vehicles to emit more NO<sub>x</sub> during real-world driving conditions;
64. Reduced DEF dosing was important to the Defendants for at least two reasons. First, the more DEF consumed, the more frequently consumers have to refill the DEF tank; an inconvenience that would make vehicles less marketable. Second, by the time the first Subject Vehicles hit the market, the Defendants realized that the chemicals in the DEF were breaking down the materials in the SCR catalyst and causing these components to fail prematurely, which could be mitigated by reducing DEF dosing;
65. The Defendants relied heavily on an alternative DEF dosing mode called “online dosing”, which limited the injection of DEF into the SCR catalyst, thereby compromising the SCR system (see Exhibit P-28 below);
66. Bosch and VM Motori first discussed “online dosing” in March 2011 and acknowledged that it must be disclosed to the U.S. Environmental Protection Agency (“EPA”) and the California Air Resources Board (“CARB”) as an AECD. Yet, in November 2012, Bosch implemented a software change to prevent online dosing from activating during EGR diagnostic monitoring and in February 2013, Kasser Jaffri of FCA’s On Board Diagnostic group expressed concern to VM Motori that CARB might see online dosing as “cycle beating”. Jaffri concluded that, if applied, online dosing would have to be disclosed as an AECD. It did not do so. VM Motori then told FCA in March 2013 that it was not going to use the online dosing strategy. They used it anyway. In September 2013, Jaffri reported to FCA Senior Manager Dan Hennessey, head of the On Board Diagnostic group, that online dosing was (i) active in the vehicles; (ii) had not been disclosed to CARB or the EPA; and (iii)



reduces the conversion efficiency effectiveness, thereby resulting in increased NO<sub>x</sub> emissions;

67. The Defendants knew that the Subject Vehicles contained undisclosed AECDs that reduced or disabled the emissions control systems in real-world driving conditions, and they knew that the Subject Vehicles could not deliver the fuel economy and performance as promised. The Defendants concealed this fact from consumers and regulators and, in so doing, cheated Class Members out of the vehicles they reasonably thought they were buying;
68. In his Expert Report produced in the context of the Ontario litigation, Dr. M. David Checkel, P.Eng<sup>3</sup>, opined *inter alia* the following:

My opinion is that the 2014-2016 model year Jeep Grand Cherokee and Dodge Ram 1500 Eco-diesel models use the alleged software elements to operate in a manner that may improve driveability and fuel economy, but that also produces much higher NO<sub>x</sub> emissions than would be expected based on certification test values. In my opinion this behaviour would be the same for all of the 2014 to 2016 model year Dodge Ram 1500 and Jeep Grand Cherokee vehicles with the 3.0 Litre Eco-diesel engine.

...

[M]y opinion is that the emission control deficiencies and high NO<sub>x</sub> emission rates associated with the Dodge Ram and Jeep Grand Cherokee diesel engine control system are all related to software programmed into the vehicle ECUs. This digital software would operate in the same way and produce the same high emission rates for every vehicle having the same engine and control system, i.e: all of the mass-produced model 2014-2016 model year Dodge Ram 1500 pickup trucks and Jeep Grand Cherokee SUVs with the 3.0L Eco-Diesel engine.

As appears from a copy of the Affidavit of Dr. M. David Checkel, P.Eng sworn March 29, 2017 in *Maginnis et al. v. FCA Canada Inc. et al*, Court File No. CV-17-567691-00CP, produced herein as **Exhibit P-24**;

#### **E. The Volkswagen Emissions Scandal and the Investigations into the Subject Vehicles**

69. On September 18, 2015, the “Volkswagen Emissions Scandal” erupted, when the EPA issued a notice of violation of the *Clean Air Act* to the Volkswagen Group after it discovered that Volkswagen had intentionally programmed turbocharged direct injection (TDI) diesel engines to activate certain emissions controls only during laboratory emissions testing. The programming caused the vehicles’ NO<sub>x</sub> output to meet environmental standards during regulatory testing, but to emit up to 40 times

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<sup>3</sup> Dr. Checkel is a professional engineer and Professor Emeritus of the Department of Mechanical Engineering at the University of Alberta. Dr. Checkel has practiced as professor of mechanical engineering for over 30 years and has studied fuel economy and performance of diesel-powered vehicles as compared to gasoline-powered vehicles.



more NO<sub>x</sub> in real-world driving, as appears from a copy of the EPA Notice of Violation dated September 18, 2015, produced herein as **Exhibit P-25**;

70. In September and November 2015, Volkswagen and Audi admitted using defeat device software to activate emissions controls when diesel cars were being smog tested and deactivate those controls during on-road driving. Volkswagen pled guilty to criminal charges and settled civil class actions for over ten billion dollars”, as appears from a copy of the Forbes article entitled “Audi Admits 2.1 Million Vehicles Are Also Fitted With Emissions Cheat Software” dated September 28, 2015, from a copy of the Financial Times article entitled “VW admits second illegal device in 85,000 Audi engines” dated November 23, 2015, from a copy of the BBC article “VW scandal: company warned over test cheating years ago”, and from a copy of the USA Today article entitled “Volkswagen emission scandal widens: 11 million cars affected” dated September 22, 2015, produced herein *en l'asse* as **Exhibit P-26**;
71. In 2015, researchers at the West Virginia University Center for Alternative Fuels, Engines, and Emissions – the same researchers instrumental in uncovering the Volkswagen Defeat Device – tested five model year 2014 and 2015 vehicles produced by the FCA Defendants. The test vehicles comprised the Subject Vehicles at issue here: Jeep Grand Cherokees and Ram 1500 diesel vehicles, all equipped with the 3.0L EcoDiesel engine, and featuring SCR NO<sub>x</sub> after-treatment technology, as appears from a copy of the report entitled “On-Road and Chassis Dynamometer Testing of Light-Duty Diesel Passenger Cars” undated, produced herein as **Exhibit P-27**;
72. Results indicated that both the 2014 Jeep Grand Cherokee and Ram 1500 exhibited significantly increased NO<sub>x</sub> emissions during on-road operation as compared to the results observed through testing on the chassis dynamometer. For the 2015, Jeep vehicles produced from 4 to 8 times more NO<sub>x</sub> emissions during urban/rural on-road operation than the certification standard, while Ram 1500 vehicles emitted approximately 25 times the NO<sub>x</sub> permitted for highway driving conditions;
73. A peer-reviewed study conducted in 2017 by researchers at the University of California, San Diego and Ruhr-Universität Bochum in Germany analyzed firmware in the EDC-17 of the Fiat 500X and found a defeat device affecting the logic governing NO<sub>x</sub> storage catalyst regeneration (Exhibit P-16). Unlike the Volkswagen defeat device, the researchers found that the mechanism in the Fiat 500X relied on timing, reducing the frequency of NSC approximately 26 minutes and 40 seconds after the engine was started. (By reducing the frequency of NO<sub>x</sub> storage catalyst regeneration, a manufacturer can improve fuel economy and increase the service life of the diesel particulate filter, at the cost of increased NO<sub>x</sub> emissions);
74. According to the study, the conditions used to determine when to regenerate the NO<sub>x</sub> storage catalyst (NSC) were duplicated, and each set of conditions could start a regeneration cycle. The researchers obtained Bosch copyrighted documentation for a Fiat vehicle, which described two sets of conditions using the terms “during



homologation cycle” and “during real driving.”<sup>4</sup> Bosch’s authorship of the document and use of the terms “homologation [testing]” and “real driving” to describe the regeneration conditions demonstrate that it not only created the mechanism in the Subject Vehicles, but was also aware of the mechanism’s intended purpose of circumventing emission testing;

75. On January 12, 2017, the EPA issued a “Notice of Violation” to Fiat Chrysler Automobiles N.V. and FCA US for cheating on their emissions certificate applications with respect to the Subject Vehicles in failing to disclose the existence of at least 8 Defeat Devices. The EPA determined that due to the existence of the Defeat Devices in the Subject Vehicles, they do not conform to the vehicle specifications in the certificates of conformity and that operation of one or more of these Defeat Devices, “either alone or in combination with each other, results in excess emissions of nitrogen oxides (NO<sub>x</sub>) under various operating conditions that may reasonably be expected to be encountered in normal vehicle operation and use”, as appears from a copy of the United States Environmental Protection Agency – Notice of Violation dated January 12, 2017, from a copy of the EPA News Release entitled “EPA Notifies Fiat Chrysler of Clean Air Act Violations” dated January 12, 2017, from a copy of an extract from the EPA website [www.epa.gov](http://www.epa.gov) entitled “Learn About FCA Violations”, and from a copy of The New York Times article entitled “E.P.A. Accuses Fiat Chrysler of Secretly Violating Emissions Standards” dated January 12, 2017, produced herein *en l’asse* as **Exhibit P-28**;
76. As identified in the United States Environmental Protection Agency’s (EPA) Notice of Violation (Exhibit P-28), the Defendants installed a number of undisclosed AECDs in the Subject Vehicles that compromised the EGR and SCR systems and resulted in substantially increased NO<sub>x</sub> emissions during real-world driving conditions. As exemplified herein, the Defendants knew that these AECDs were Defeat Devices and therefore not allowed, but that the Subject Vehicles could not achieve the fuel economy or performance that the Defendants marketed without them;
77. The EPA identified at least the following eight concealed Defeat Devices in the Subject Vehicles:
  - (1) Full EGR Shut-Off at Highway Speed
  - (2) Reduced EGR with Increasing Vehicle Speed
  - (3) EGR Shut-off for Exhaust Valve Cleaning
  - (4) DEF Dosing Disablement during SCR Adaptation
  - (5) EGR Reduction due to Modeled Engine Temperature
  - (6) SCR Catalyst Warm-Up Disablement
  - (7) Alternative SCR Dosing Modes
  - (8) Use of Load Governor to Delay Ammonia Refill of SCR Catalyst
78. The EPA testing found that “some of these [Defeat Devices] appear to cause the vehicle to perform differently when the vehicle is being tested for compliance with

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<sup>4</sup> The term “homologation” is commonly used in Europe to describe the process of testing an automobile for regulatory conformance.



the EPA emission standards using the Federal emission test procedure (e.g., FTP, US06) than in normal operation and use.” The EPA cited the following by way of example:

- (a) Combined operation of AECD # 3 with AECD # 7 or AECD # 8 reduces in certain situations the effectiveness of the overall emission control system by disabling one key component of that system, the EGR system. without compensating by increasing the effectiveness of the other critical component, the SCR system. AECD # 3 employs a timer to shut-off EGR: this EGR disablement does not appear justified for protecting the vehicle, nor does it meet any of the other exceptions or the defeat device regulatory definition. Under certain conditions reasonably expected to be encountered in normal vehicle operation and use, the SCR is unable to compensate for the reduced effectiveness caused by EGR shut-off and the overall effectiveness of the emission control system is reduced.
  - (b) The operation of AECD #5. together with AECD #6, at temperatures outside of those found in the Federal emission test procedure reduces the effectiveness of the NO<sub>x</sub> emission control system under conditions reasonably expected to be encountered in normal vehicle operation and use. In addition. a timer is used to discontinue warming of the SCR aftertreatment system. thereby reducing its effectiveness, in a manner that does not appear to be justified to protect the vehicle.
  - (c) The operation of AECD #4, particularly when combined with AECD #8, increases emissions of tailpipe NO<sub>x</sub> under conditions reasonably expected to be encountered in normal vehicle operation and use. The operation of AECD # 1, AECD #2 and/or AECD #5 increase the frequency of occurrence of AECD #4.
  - (d) The operation of AECDs #7 and #8, particularly in variable grade and high load conditions, increases emissions of tailpipe NO<sub>x</sub> under conditions reasonably expected to be encountered in normal vehicle operation and use;
79. Specifically, the EPA determined that FCA failed to disclose the existence of the Defeat Devices in the Subject Vehicles and that the Defeat Devices are present in approximately 103,828 motor vehicles in the U.S.:

<b>Model Year</b>	<b>EPA Test Group</b>	<b>Make and Model(s)</b>	<b>50 State Volume</b>
2014	ECRXT03.05PV	FCA Dodge Ram 1500	14,083
2014	ECRXT03.05PV	FCA Jeep Grand Cherokee	14,652
2015	ECRXT03.05PV	FCA Dodge Ram 1500	31,984
2015	ECRXT03.05PV	FCA Jeep Grand Cherokee	8,421
2016	ECRXT03.05PV	FCA Dodge Ram 1500	32,319 (projected)
2016	ECRXT03.05PV	FCA Jeep Grand Cherokee	2,469 (projected)



80. Environment and Climate Change Canada has stated that the department's enforcement branch is "carefully evaluating the information released by the EPA to determine its relevance in Canada, and if an investigation is warranted into potential violations" of *CEPA*, as appears from a copy of the CBC News article entitled "U.S. alleges Fiat Chrysler cheated on diesel engine emissions" dated January 12, 2017, produced herein as **Exhibit P-29**;
81. Also on January 12, 2017, and, in coordination with the EPA, CARB issued a Notice of Violation against FCA US, Fiat Chrysler Automobiles N.V., and Chrysler Group LLC on behalf of the State of California, for failing to disclose the Defeat Devices in the Subject Vehicles in their certification applications. On September 25, 2015, CARB had sent a letter to various vehicle manufacturers notifying them of CARB's intent to test the performance of diesel vehicles in-use. The test results showed higher emissions during screening tests than during certification test cycles and that there were undisclosed Defeat Devices in the Subject Vehicle, as appears from a copy of the California Air Resources Board Enforcement Division's Notice of Violation for Fiat Chrysler Automobiles N.V., FCA US LLC, and Chrysler Group LLC, dated January 12, 2017, from a copy of the California Air Resources Board letter with the Reference No. IUC-2015-008 dated September 25, 2015, and from a copy of an extract from the California Air Resources Board website at [ww3.arb.ca.gov](http://ww3.arb.ca.gov), produced herein *en liasse* as **Exhibit P-30**;
82. The CARB Notice of Violation (Exhibit P-30) alleged the following violations of law:
- (a) Invalid certification applications (e.g., undisclosed AECDS)
  - (b) Importation, delivery, purchase, acquisition, or receipt of uncertified vehicles
  - (c) Intentional or negligent importation, delivery, purchase, receipt or acquisition of uncertified vehicles
  - (d) Intentional or negligent sales or offers to sell uncertified vehicles
  - (e) Sale of vehicles that do not meet emission standards
  - (f) Failure to comply with the emission standards or test procedures – Durability Data Vehicle
  - (g) Failure to comply with the emission standards or test procedures – Emissions Data Vehicle (EDV)
  - (h) Failure to comply with onboard diagnostic (OBD) system requirements
  - (i) Invalid Vehicle Emission Control Information Label (compliance statement)
  - (j) Invalid smog rating on the Smog Index Label
  - (k) Violation of emission warranty provisions;



83. FCA's 2016 annual report acknowledged the notices of violation that it had received, as appears from a copy of extracts from the FCA 2016 Annual Report, produced herein as **Exhibit P-31**;
84. On May 23, 2017, the United States Department of Justice (on behalf of the EPA) filed a civil suit against Defendants FCA US and VM Motori as well as two other related FCA entities alleging violations of the *Clean Air Act*, 42 U.S.C and its implementing regulations. On June 7, 2017, it was transferred to the Multidistrict Litigation (MDL) of *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, as appears from a copy of the U.S. Complaint (2:17-cv-11633-JCO-EAS) dated May 23, 2017, from a copy of the Conditional Transfer Order dated June 7, 2017, from a copy of the U.S. Department of Justice news release entitled "United States Files Complaint Against Fiat Chrysler Automobiles for Alleged Clean Air Act Violations" dated May 23, 2017, and from a copy of the EPA news release entitled "EPA Announces 2017 Annual Environmental Enforcement Results" dated February 8, 2018, produced herein *en l'asse* as **Exhibit P-32**;
85. FCA's 2017 annual report represented the following:

On January 12, 2017, the U.S. Environmental Protection Agency ("EPA") and the California Air Resource Board issued Notices of Violation related to certain software-based features in the emissions control systems in approximately 100,000 2014-2016 model year light-duty Ram 1500 and Jeep Grand Cherokee diesel vehicles. On May 23, 2017, the Environmental and Natural Resources Division of the U.S. Department of Justice ("DOJ-ENRD") filed a civil lawsuit against us in connection with the concerns raised by the EPA. The complaint alleges that software-based features were not disclosed to the EPA as required during the vehicle emissions certification process, resulting in violations of the Clean Air Act. The complaint also alleges that certain of the software features bypass, defeat or render inoperative the vehicles' emission control systems, causing the vehicles to emit higher levels of oxides of nitrogen (NOx) during certain normal real world driving conditions than during federal emissions tests. A number of private lawsuits relating to the vehicles have been filed in U.S. state and federal courts principally on behalf of consumers asserting fraud, violation of consumer protection laws, and other civil claims, including a putative class action that is proceeding in U.S. federal court in the Northern District of California, and a number of other governmental agencies and authorities including the U.S. Department of Justice, the U.S. Securities and Exchange Commission and various states Attorneys General have commenced related investigations.

As appears from a copy of extracts from the FCA 2017 Annual Report, produced herein as **Exhibit P-33**;



## **F. The International Investigations**

86. FCA and Bosch are both being investigated by German regulators. In May 2017, Bosch GmbH's Stuttgart offices were raided by German prosecutors, as appears from a copy of the Reuters article entitled "Stuttgart prosecutor targets Bosch in Daimler diesel investigation" dated May 26, 2017, produced herein as **Exhibit P-34**;
87. Reportedly, Bosch GmbH representatives met with Germany's Federal Motor Transport Authority ("KBA") whereby, Bosch informed on FCA. The KBA's takeaway from its meetings with Bosch was there is a defeat device in the vehicles and Bosch shared responsibility for the defeat device with FCA. Media reports have confirmed the same, as appears from a copy of the Jalopnik article entitled "Here's How Fiat Might Also Be Cheating On Emissions Tests: Report" dated April 25, 2016 and from a copy of the Reuter's article entitled "Test of Fiat diesel model shows irregular emissions: Bild am Sonntag" dated April 24, 2016, produced herein *en liasse* as **Exhibit P-35**;
88. After the meeting with Bosch, the KBA performed testing on the Fiat diesel vehicles and confirmed that the emission controls were disabled after 22 minutes of driving time, causing the vehicles to emit more than 10 times the legal limit of NO<sub>x</sub>. The KBA concluded that the vehicles were designed to cheat on emission tests, which normally run for about 20 minutes. In August 2016, the German government formally concluded that Fiat vehicles sold in the EU had used defeat devices (Exhibit P-35);
89. In September 2016, the KBA issued a request to the European Commission to mediate between the German and Italian authorities after Germany accused Fiat of using an illegal device in diesel versions of its Fiat 500X, Fiat Doblo and Jeep Renegade models. That mediation ended in March 2017. On May 17, 2017, the European Commission issued a press release regarding its decision to initiate legal action against Italy for failing to respond to allegations of emission-test cheating by FCA, as appears from a copy of the European Union press release entitled "Car emissions: Commission opens infringement procedure against Italy for breach of EU rules on car type approval" dated May 17, 2017 and from a copy of the Reuters article entitled "German transport ministry says finds defeat device in Fiat car" dated March 31, 2017, produced herein *en liasse* as **Exhibit P-36**;
90. On March 15, 2017, French prosecutors opened an investigation into whether FCA exceeded emissions limits following tests performed that had revealed pollutants from FCA vehicles that exceeded regulatory limits. The investigation was opened in relation to what was termed as FCA's "aggravated cheating", as appears from a copy of the BBC News article entitled "Fiat Chrysler diesel emissions investigated in France" dated March 21, 2017, produced herein as **Exhibit P-37**;
91. The Australian government also began its own investigation into allegations that FCA diesels breached emissions regulations, as appears from a copy of the Go Auto article entitled "FCA confirms it is working with Australian officials over diesel allegations" dated May 18, 2017, produced herein as **Exhibit P-38**;

92. On January 24, 2018, the office of the District Attorney of Stuttgart initiated investigation proceedings against 2 Bosch employees due to suspicion of assisting with fraud and a week later, announced its suspicion that since 2014, the Subject Vehicles “in which the efficacy of the emission control system had been reduced outside of the performance of regulatory tests without technical justification were put on the U.S. market”, as appears from a copy of the Office of the District Attorney of Stuttgart translated German press release entitled “Investigations against employees of Robert Bosch LLC, USA” dated January 31, 2018 and from a copy of the Associated Press release entitled “U.S. Bosch Workers Investigated Over ‘Dieselgate’” dated January 31, 2018, produced herein *en l’asse* as **Exhibit P-39**;
93. On May 23, 2019, the Office of the District Attorney of Stuttgart fined Bosch €90 million due to what it called “negligent violation of supervisory obligations”. €2 million was a sanction and €88 million was to offset the economic advantages that Bosch gained, as appears from a copy of the District Attorney of Stuttgart translated German press release entitled “Bosch must pay a fine” dated May 23, 2019 and from a copy of the Ghana Business News article entitled “Germany Hits Bosch with Fine of €90M in Diesel Scandal” dated May 23, 2019, produced herein *en l’asse* as **Exhibit P-40**;
94. The Attorney General of New York also conducted an investigation into the Defendants’ conduct and found that:

FCA:

Installed unlawful software in more than 97,000 vehicles sold nationwide, including in 3,050 vehicles in New York;

Cheated on federal and state emissions tests to conceal true emissions levels; and,

Misled consumers about vehicles being environmentally friendly, and lied about its ecological footprint and compliance with state laws.

Bosch:

Supplied the illegal so-called “defeat device” software used in more than 600,000 Volkswagen and Fiat Chrysler vehicles over the span of a decade;

Assisted Volkswagen and Fiat Chrysler with installation and use of the devices despite knowledge and concern of the risks; and,

Concealed misconduct from regulators and the public.

As appears from a copy of the New York Attorney General press release entitled “Attorney General James Announces Landmark Multistate Settlements With Fiat Chrysler And Bosch Totaling \$171 Million For Alleged Violations Of State



Environmental And Consumer Protection Laws” dated January 10, 2019, produced herein as **Exhibit P-41**;

95. According to records unsealed on April 20, 2021, three FCA employees have been charged by federal prosecutors in the United States for alleged emissions cheating, accused of “playing a determining role in developing a defeat device that allowed the V6 to obtain certification from the Environmental Protection Agency (EPA) while polluting too much in normal driving conditions. Jeep and Ram began making the engine available in the Grand Cherokee and the 1500, respectively, in 2014, but the charges state plans to game the EPA started in 2011.” The three employees, credited with developing and calibrating the 3.0-liter diesel engine at issue, face charges of conspiracy to defraud the United States government, wire fraud, making false statements to the FBI and EPA, and violation of the U.S. Clean Air Act, as appears from a copy of the Detroit Free Press article entitled “Diesel emissions cheating case involving Stellantis gets bigger as more managers charged”, and from a copy of the Autoblog article entitled “Prosecutors Indict Three FCA Employees in Emissions-Cheating Case”, produced herein *en liasse* as **Exhibit P-42**;

#### **G. Canadian Emissions Laws and Regulations**

96. Because of the potential for considerable environmental pollution, the diesel engine market is characterized by stringent governmental regulations regarding allowable pollutants, including exhaust emissions levels of NO<sub>x</sub>, Non-Methane Hydrocarbons (“NMHC”), Non-Methane Hydrocarbon Equivalent, Carbon Monoxide, and Particulate Matter;
97. The general approach to setting vehicle emissions standards in Canada has been to harmonize them with the EPA standards. On January 1, 2004 and, pursuant to s.160 of the *Canadian Environmental Protection Act, 1999* (“CEPA”), Environment Canada enacted the *On-Road Vehicle and Engine Emission Regulations*, SOR/2003-2 (the “*On-Road Vehicle and Engine Emission Regulations*”) (Exhibit P-45), the purpose of which was to reduce emissions and to “establish emission standards and test procedures for on-road vehicles that are aligned with those of the EPA” for “vehicles and engines that are manufactured in Canada, or imported into Canada, on or after January 1, 2004”<sup>5</sup>. Every model of vehicle or engine that is certified by the EPA and that is sold concurrently in Canada, is required to meet the same emission standards in Canada as in the United States, as appears from a copy of the DieselNet article entitled “Emission Standards: Canada” and from a copy of an extract from the TransportPolicy.net website at [www.transportpolicy.net](http://www.transportpolicy.net), produced herein *en liasse* as **Exhibit P-43** and as appears from a copy of an extract from the Registrar of Imported Vehicles’ website at [www.riv.ca](http://www.riv.ca), from a copy of an extract from Environment and Climate Change Canada’s website at [www.ec.gc.ca](http://www.ec.gc.ca) entitled “Workplan for General Areas of Collaboration On Vehicle and Engine Emission Control Under the Agreement Between the Government of the United States of America and the Government of Canada on Air Quality”, and from a copy

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<sup>5</sup> *On-Road Vehicle and Engine Emission Regulations*; ss. 2 & 3.



of the Canadian Council of Ministers of the Environment's Environmental Code of Practice for On-Road Heavy-Duty Vehicle Emission Inspection and Maintenance Programs dated 2003, produced herein *en liasse* as **Exhibit P-44**;

98. The *On-Road Vehicle and Engine Emission Regulations* provide that “[n]o vehicle or engine shall be equipped with a defeat device”, which is defined as “an auxiliary emission control device that reduces the effectiveness of the emission control system under conditions that may reasonably be expected to be encountered in normal vehicle operation and use”<sup>6</sup>, as appears from a copy of the *On-Road Vehicle and Engine Emission Regulations*, SOR/2003-2, produced herein as **Exhibit P-45**;
99. The *On-Road Vehicle and Engine Emission Regulations* (Exhibit P-45) define an auxiliary emission control device at s.1:

*auxiliary emission control device* means any element of design that senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of an emission control system. (*dispositif antipollution auxiliaire*);

100. In 2007, the *Motor Vehicle Fuel Consumption Standards Act*, R.S.C., 1985, c. M-9/ *Loi sur les normes de consommation de carburant des véhicules automobiles*, L.R.C., 1985, ch. M-9 was enacted and implemented in order to make Canadian fuel consumption and emissions targets mandatory and to harmonize these standards with the United States Corporate Average Fuel Economy (CAFE) standards to establish a common North American approach, as appears from a copy of an extract from the TransportPolicy.net's website at [www.transportpolicy.net](http://www.transportpolicy.net), produced herein as **Exhibit P-46**;
101. The final rules for the *Motor Vehicle Fuel Consumption Standards Act* were published in October 2010 as the *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations*, SOR/2010-201/ *Règlement sur les émissions de gaz à effet de serre des automobiles à passagers et des camions légers*, DORS/2010-201 under CEPA. Beginning in model year 2011, the Canadian motor vehicle industry began submitting fuel economy and greenhouse gas emissions data through annual regulatory compliance reports to Environment Canada (Exhibit P-46);
102. Transport Canada defines vehicle and engine types for the purposes of federal emissions regulations. The gross vehicle weight rating (GVWR – *poids nominal brut spécifié ou PNBV en français*) refers to the maximum weight a vehicle is designed to carry including the net weight of the vehicle with accessories, plus the weight of passengers, fuel, and cargo. The Subject Vehicles are classified as heavy light-duty trucks (i.e. GVWR of more than 2 722 kg) (Exhibit P-65, Exhibit P-66, Exhibit P-67), as appears from a copy of the British Columbia Ministry of Transportation and

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<sup>6</sup> *On-Road Vehicle and Engine Emission Regulations*, SOR/2003-2, at s. 11.



Infrastructure brochure entitled “Gross Vehicle Weight Rating – Frequently Asked Questions”, produced herein as **Exhibit P-47**;

103. The *On-Road Vehicle and Engine Emission Regulations* (Exhibit P-45) provide that a heavy light-duty truck shall:

12 (a) for the 2016 and earlier model years, conform to the exhaust emission and evaporative emission standards applicable to vehicles of the model year in question set out in section 1811 of Title 40, chapter I, subchapter C, part 86, subpart S, of the CFR;

(a.1) for the 2017 and later model years, conform to

(i) the exhaust emission standards applicable to vehicles of the model year in question set out in section 1811 of Title 40, chapter I, subchapter C, part 86, subpart S, of the CFR,

(ii) the evaporative emission and refueling emission standards applicable to vehicles of the model year in question set out in section 1813 of Title 40, chapter I, subchapter C, part 86, subpart S, of the CFR, and

(iii) the family emission limit established by the company for the evaporative emission family to which the vehicle belongs, which shall not exceed the applicable family emission limit cap set out in section 1813 of Title 40, chapter I, subchapter C, part 86, subpart S, of the CFR;

(b) be equipped with an on-board diagnostic system that conforms to the standards applicable to vehicles of the model year in question set out in section 1806 of Title 40, chapter I, subchapter C, part 86, subpart S, of the CFR; and

(c) not release any crankcase emissions;

104. The term CFR used in the *On-Road Vehicle and Engine Emission Regulations* means the *Code of Federal Regulations* of the United States, which provide the following in terms of applicable emission and evaporative emission standards:

TABLE S04-1—TIER 2 AND INTERIM NON-TIER 2 FULL USEFUL LIFE EXHAUST MASS EMISSION STANDARDS  
[Grams per mile]

Bin No.	NO <sub>x</sub>	NMOG	CO	HCHO	PM	Notes
11	0.9	0.280	7.3	0.032	0.12	a, c
10	0.6	0.156/0.230	4.2/6.4	0.018/0.027	0.08	a, b, d
9	0.3	0.090/0.180	4.2	0.018	0.06	a, b, e
8	0.20	0.125/0.156	4.2	0.018	0.02	b, f
7	0.15	0.090	4.2	0.018	0.02	
6	0.10	0.090	4.2	0.018	0.01	
5	0.07	0.090	4.2	0.018	0.01	
4	0.04	0.070	2.1	0.011	0.01	
3	0.03	0.055	2.1	0.011	0.01	
2	0.02	0.010	2.1	0.004	0.01	
1	0.00	0.000	0.0	0.000	0.00	



TABLE S04-2—TIER 2 AND INTERIM NON-TIER 2 INTERMEDIATE USEFUL LIFE (50,000 MILE) EXHAUST MASS EMISSION STANDARDS (GRAMS PER MILE)

Bin No.	NO <sub>x</sub>	NMOG	CO	HCHO	PM	Notes
11	0.6	0.195	5.0	0.022		a,c,t,h
10	0.4	0.125/0.160	3.4/4.4	0.015/0.018		a,b,d,f,g,h
9	0.2	0.075/0.140	3.4	0.015		a,b,e,f,g,h
8	0.14	0.100/0.125	3.4	0.015		b,f,h,i
7	0.11	0.075	3.4	0.015		f,h
6	0.08	0.075	3.4	0.015		f,h
5	0.05	0.075	3.4	0.015		f,h

105. Before introducing the Subject Vehicles into the stream of commerce, automakers are required to obtain either a Canadian National Emissions Mark (NEM) under the *On-Road Vehicle and Engine Emission Regulations* or an EPA-administered certificate of conformity certifying that the vehicle comported with the emissions standards. Vehicles must be accurately described in the application in all material respects to be deemed covered by a valid NEM or certificate of conformity, as appears from a copy of the Environment and Climate Change Canada Guidance document – Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations, produced herein as **Exhibit P-48**;
106. An important aspect of the harmonization with U.S. standards is the recognition of emission certificates issued by the EPA. Under most Canadian regulations there are two ways of demonstrating emissions compliance (Exhibit P-43):
- EPA emission certificate: Every model of vehicle or engine that is certified by the EPA and that is sold concurrently in Canada and the United States is required to meet the same emission standards in Canada as in the United States. The term concurrent sales means that for an EPA certificate to be valid in Canada, at least one engine or vehicle covered by this certificate must be sold in a given year in the United States. Most vehicles and engines are sold in Canada under this concurrent sales principle. These vehicles and engines must be affixed with an EPA emission label and do not require a Canadian emission approval or labeling,
  - Environment Canada emission approval: Vehicles and engines that do not have a valid EPA emission certificate must be emission approved by Environment Canada and affixed with a Canadian emission label;
107. The Subject Vehicles had been approved by the EPA and furnished with an EPA emission certificate, indicating that they complied with emissions legislation in the U.S., and therefore Canada under the harmonized regime, which enabled FCA Canada to sell or lease the Subject Vehicles to Class Members, as appears from copies of the Certificates of Conformity numbered as: ECRXT03.05PV-049, ECRXT03.05PV-049-R01, FCRXT03.05PV-055, FCRXT03.05PV-055-R01, FCRXD03.05VV-057, GCRXT03.05PV-045, and GCRXD03.05VV-048, produced herein *en liasse* as **Exhibit P-49** and from copies of the associated Applications for Certification, produced herein *en liasse* as **Exhibit P-50**;



108. In order to obtain a certificate of conformity, automakers must submit an application that lists all AECDs installed in the vehicle, justifications for each, and an explanation why it is not a defeat device (Exhibit P-50 at Section 11);
109. FCA was required to disclose the eight AECDs at issue to the EPA and CARB on its applications for certification (Exhibit P-50) and to explain why they were not defeat devices. FCA decided instead to conceal the eight AECDs altogether;
110. Under the *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations*, a vehicle manufacturer can earn emissions credits for future use to offset emission deficits. In other words, emission credits can be generated for performance superior to the standard, whereas deficits for performance worse than the standard can be offset, as appears from a copy of the Greenhouse Gas Emissions Performance for the 2011 to 2016 Light-Duty Vehicle Fleet Report and from a copy of the Environment and Climate Change Canada report entitled “Greenhouse Gas Emissions Performance for the 2017 Model Year Light-Duty Vehicle Fleet”, produced herein *en liasse* as **Exhibit P-51**;
111. Manufacturers that generate emission credits may transfer those credits to other manufacturers and can transfer credit between its own cars and trucks. This is essentially a credit trading system that allows manufacturers to carry efficiency and greenhouse gas credits forward by up to five years and backwards by up to three years to achieve compliance and avoid fines;
112. Early on, FCA began purchasing emissions credits – in 2011, FCA purchased 689,582 emissions credits, in 2012, 218,920, in 2013, 24,649, in 2014, 55,496, in 2015, 105,226, and in 2016, 158,088 (Exhibit P-51);
113. Manufacturers have a clear economic motivation to meet the standards. There are stiff penalties for every 0.1 kilometres per litre below the standard, multiplied by the total number of vehicles the manufacturer has produced for the entire Canadian market in that year. Alternately, it can use regulatory credits it either stockpiled or purchased, as appears from a copy of the Axios article entitled “Emissions credits are like gold for automakers” dated August 30, 2019, produced herein as **Exhibit P-52**;

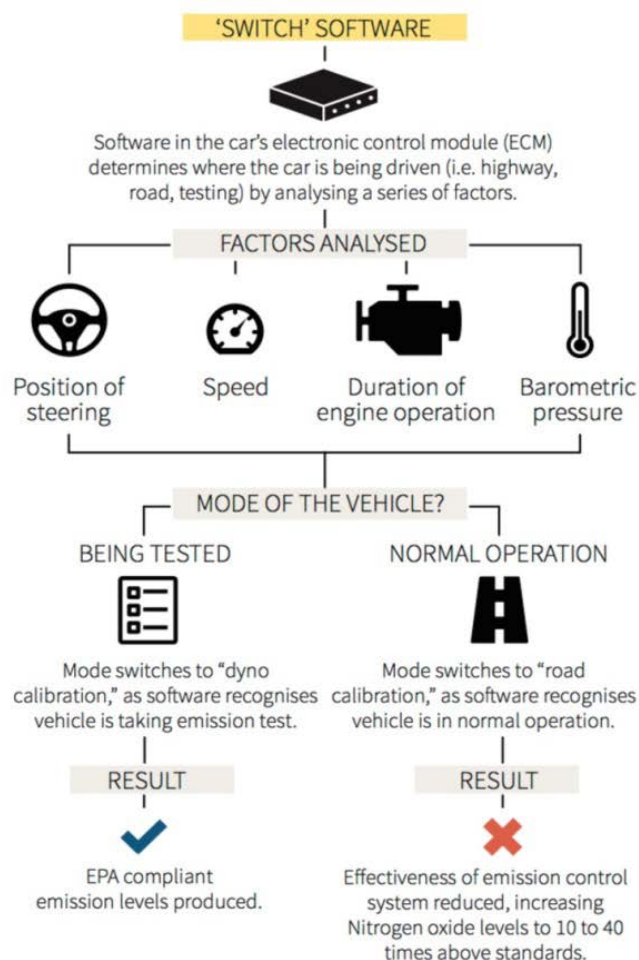
#### **H. Emissions Testing Protocol**

114. As discussed, in Canada, all new vehicles have to meet Environment Canada emissions standards – the same standards set by the EPA, as appears from a copy of The Globe and Mail article entitled “The problem with car emissions tests” dated September 24, 2015, produced herein as **Exhibit P-53**;
115. Vehicle manufacturers are responsible to test their own vehicles using a 5-cycle testing procedure, which tests for city and highway conditions as well as other factors such as cold weather, the use of air conditioners, and driving at higher speeds with more rapid acceleration and braking to reflect typical driving conditions

and styles, as appears from a copy of an extract from the Natural Resources Canada website at [www.nrcan.gc.ca](http://www.nrcan.gc.ca), produced herein as **Exhibit P-54**;

116. When vehicle manufacturers test their vehicles against emission standards, they place their vehicles on dynamometers (large rollers) and then perform a series of specific manoeuvres prescribed by federal regulations. Bosch's EDC-17 gave Volkswagen, FCA, and other manufacturers the power to detect test conditions by monitoring vehicle speed, acceleration, engine operation, air pressure, and the steering wheel position. When the EDC-17's detection algorithm identified that the vehicle was on a dynamometer (undergoing an emission test), additional software code within the EDC-17 downgraded the engine's power and performance and upgraded the emissions control systems' performance by switching to a "dyno calibration" to cause a reduction in emissions to legal levels. Once the EDC-17 detected that the emission test was complete, it 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 vehicle to spew the full amount of illegal NO<sub>x</sub> emissions, as appears from a copy of the BBC News article entitled "Volkswagen: The scandal explained" dated December 10, 2015, produced herein as **Exhibit P-55**;
117. The following diagram illustrates the process:

## How Volkswagen's defeat device works



Source: U.S. Environmental Protection Agency

J. Wang, 22/09/2015

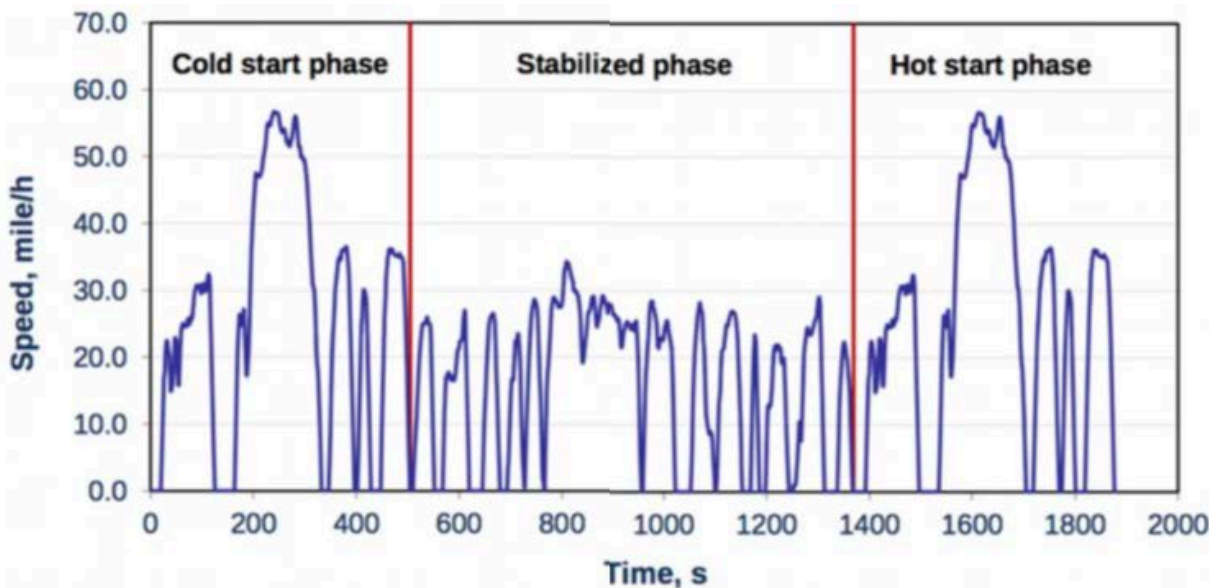
REUTERS

118. The below graph is an example of the FTP<sup>7</sup>-75 driving cycle used for emission certification and fuel economy testing of vehicles. This particular cycle simulates an urban route with frequent changes in speed, acceleration, and stops, combined with both a cold and a hot start transient phase<sup>8</sup>:

<sup>7</sup> U.S. Federal Test Procedure.

<sup>8</sup> The cycle lasts 1,877 seconds (about 31 minutes) and covers a distance of 17.77 km (11.04 miles) at an average speed of 34.12 km/h (21.2 mph)





119. While the FTP-75 is the primary dynamometer cycle used to certify the light- and medium-duty passenger vehicles, there are also cycles that simulate driving patterns under different conditions. To assess conformity, several of these tests are carried out on a chassis dynamometer, a fixture that holds a car in place while allowing its wheel to turn with varying resistance. Emissions are measured during the test and compared to an emissions standard that defines the maximum pollutant levels that can be released during such a test, as appears from a copy of the DieselNet article entitled “Emission Test Cycles”, produced herein as **Exhibit P-56**;
120. Emissions testing requires a “cold start” cycle; i.e. the vehicles must emit low levels of NO<sub>x</sub> even when they have just started and are not yet operating at a high temperature. That means the vehicle starts the cycle with the engine having been off for at least eight hours and in a completely cold state. The “cold start” portion of the test is challenging for diesel engines employing SCR because catalysts meant to control emissions are not yet at temperatures where they work (i.e., above their “light-off” temperature);
121. The SCR requires hot exhaust to be effective at reducing NO<sub>x</sub> emissions; i.e. for the urea catalyst to function properly. The system takes time to warm up and does not work well when the engine system is cold; the diesel particulate filter (DPF) absorbs much of the heat during exhaust warmup and delays the time for the SCR catalyst to reach its light-off temperature;
122. The Defendants did not want to increase Engine Gas Recirculation (EGR) or use other inefficient methods to reduce “cold start” emissions, so they designed the EcoDiesel engines with the SCR system closer to the engine than the DPF;
123. This arrangement allows the SCR system to warm up quicker, thus allowing sufficiently reduced NO<sub>x</sub> emissions to pass the cold start test; however, there is a drawback. Because the NO<sub>x</sub> is reduced before the exhaust reaches the DPF filter,





there is little passive regeneration<sup>9</sup> in the DPF. This, in turn, requires more active regenerations, resulting in reduced fuel economy, reduced lifetime of the SCR catalysts, and a significant increase in overall NO<sub>x</sub> emissions;

## **I. Testing of the Subject Vehicles**

124. In connection with the U.S. litigation, engineering experts in emissions testing have tested the 2015 Ram 1500 pickup using a Portable Emissions Measurement System (PEMS)<sup>10</sup>. Testing revealed that Ram 1500 spews more than the legal amount of emissions;
125. The applicable federal standard is 80 mg/km (50 mg/mile) of NO<sub>x</sub> for city driving. Testing was conducted with a PEMS unit to simulate driving conditions under both city conditions and highway conditions. The Ram 1500 emits an average of 254 mg/km (159 mg/mile) of NO<sub>x</sub> and a maximum of 2,052mg/km (1,283 mg/mile) on flat roads, and 355 mg/km (222 mg/mile) of NO<sub>x</sub> with a maximum of 2,974 mg/km (1,859 mg/mile) on hills. For highway driving, the average was 371 mg/km (232 mg/mile) and a maximum of 2584 mg/km (1,615 mg/mile), compared to the 112 mg/km standard. On hills, the numbers are 565mg/km (353 mg/mile) and 5184 mg/km (3,240 mg/mile);
126. Testing also revealed a device triggered by ambient temperature that significantly derates (lowers) the performance of the NO<sub>x</sub> emission reduction system, with threshold temperatures above approximately 35°C (95°F) and below 4-10°C (40-50°F). The resulting NO<sub>x</sub> emissions increase by a factor of 10 when above or below these temperatures. Testing also revealed the presence of a device that is triggered when ascending hills, as the emission control system appears to be significantly derated after a short period of steady driving on hills. As a result, NO<sub>x</sub> emissions increase after about 500-1000 seconds on hills with grades as low as 1%, where emissions are often 10 times the highway standard. For grades as little as 0.4%, emissions were found to be as high as 6 times the highway standard;
127. The Ram 1500's emission software is a Bosch EDC-17, as is the Jeep Grand Cherokee's emission software. The same basic emission system is in the Grand Cherokee EcoDiesel and the engines are identical (Exhibit P-7);
128. In separate testing by counsel for the plaintiffs in the U.S. litigation (Exhibit P-87), a 2014 Ram 1500 equipped with an EcoDiesel engine was tested on a chassis dynamometer as well as on the road. In both scenarios, gaseous exhaust emissions,

<sup>9</sup> Passive regeneration occurs at any time that the vehicle is in operation and the exhaust gas temperature is high enough to burn the particulate matter trapped by the filter. It is a continuously occurring process, meaning that it naturally occurs whenever the conditions are met. Active regeneration occurs only when the engine senses that the DPF requires cleaning.

<sup>10</sup> A portable emissions measurement system (PEMS) is essentially a lightweight 'laboratory' that is used to test and/or assess mobile source emissions (i.e. cars, trucks, buses, construction equipment, generators, trains, cranes, etc.) for the purposes of compliance, regulation, or decision-making.



including NO<sub>x</sub>, nitrogen oxide (NO), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), and total hydrocarbons (THC) were measured on a continuous basis using a PEMS;

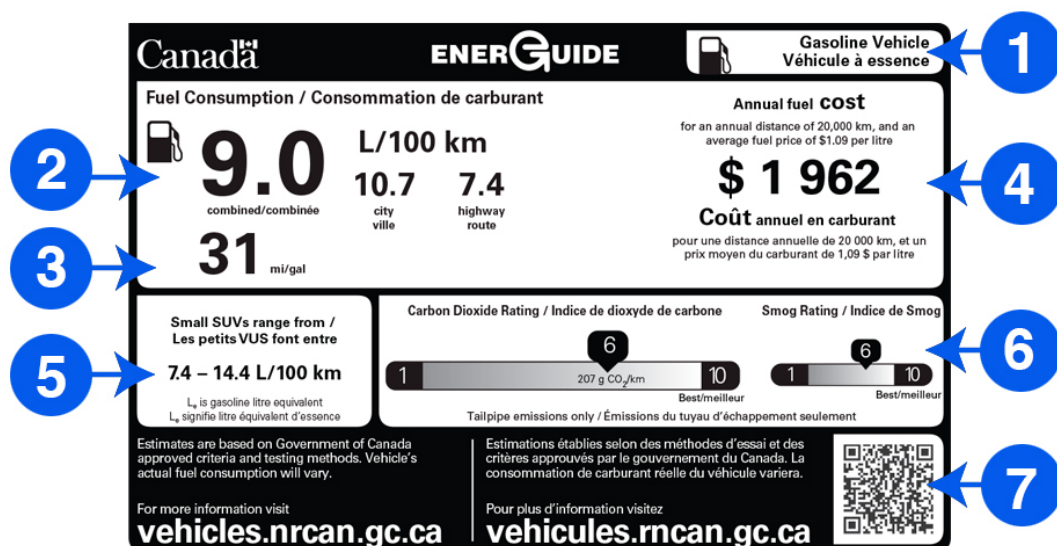
129. The tests showed significantly increased NO<sub>x</sub> emissions during on-road testing as opposed to testing on a chassis dynamometer (i.e., in the laboratory). On the road, over an urban/suburban route, the vehicle produced average NO<sub>x</sub> emissions that exceeded federal standards by approximately 15-19 times;

#### J. Claims of Fuel Economy/ Efficiency

130. EnerGuide is the official Government of Canada mark for rating and labelling the energy consumption or energy efficiency of products, including new vehicles;

131. The EnerGuide label, which appears on all new vehicles, gives model-specific fuel consumption information for new light-duty vehicles available for sale in Canada and remains on the vehicle until it is sold. It gives information about (1) the vehicle technology and fuel, (2) fuel consumption combined and separate as to city and highway fuel consumption, (3) fuel economy (expressed in miles per gallon), (4) annual fuel cost (expressed by 20,000 km/ year and the fuel price indicated), (5) vehicle class range, (6) CO<sub>2</sub> and smog ratings, (7) the quick-response code to guide users to Natural Resources Canada's fuel consumption ratings search tool, as appears from a copy of an extract for the Natural Resources Canada website at [www.nrcan.gc.ca](http://www.nrcan.gc.ca), and from the article "EPA Investigating Bosch over VW Diesel Cheater Software", dated November 23, 2015, produced herein *en liasse* as **Exhibit P-57**;

132. Below is a sample EnerGuide label:



133. The Defendants' misleading test results are sent to the Government of Canada to be used as the basis for fuel economy information provided on the EnerGuide Label as well as in the Fuel Consumption Guide. The 2014 Fuel Consumption Guide, which is published by natural Resources Canada provided the following:

134. RAM 1500 Diesel: 10.2 L/100 kms city and 7.1 L/100 kms highway and estimated fuel costs of \$2,270 per year for 1760 litres of fuel,
135. RAM 1500 4x4 Diesel: 10.6 L/100 kms city and 7.4 L/100 kms highway and estimated fuel costs of \$2,374 per year for 1840 litres of fuel
136. Jeep Grand Cherokee 4x4 Diesel: 9.8 L/100 kms city and 7.0 L/100 kms highway and estimated fuel costs of \$2,219 per year for 1720 litres of fuel,
137. As appears from a copy of the 2014 Fuel Consumption Guide, produced herein as **Exhibit P-58**;
138. A vehicle's advertised fuel economy is determined by driving a vehicle over many standardized driving patterns (or drive cycles), all of which are performed in a laboratory on a dynamometer where the conditions for all tests can be controlled. These driving cycles include cold starts, hot starts, highway driving, aggressive and high-speed driving, driving with the air conditioner in use under conditions similar to a hot summer day and driving in cold temperatures. Data from the drive cycles are combined and adjusted for "real world" conditions in a way to represent "City" driving and "Highway" driving. The "combined" fuel economy is the average of the City and Highway values with weights of 55% and 45% respectively, as appears from a copy of an extract from the book "Assessment of Fuel Economy Technologies for Light-Duty Vehicles – Chapter 2, dated 2011, produced herein as **Exhibit P-59**;
139. During each of the drive cycles – all of which are performed in a lab, under the Subject Vehicles' low power/low emissions/low fuel consumption mode – the amount of each pollutant is measured. This includes un-combusted or partially combusted gasoline (hydrocarbons or HC), NO<sub>x</sub>, oxygen, carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>). The amount of carbon produced is then converted to amount of gasoline which was required to produce the carbon in the exhaust. The amount of gasoline produced during the tests is divided into the distance driven on the test to produce the fuel economy;
140. Based on this equation, as the amount of NO<sub>x</sub> produced increases, the gasoline used increases and the fuel economy decreases. Therefore, if a Subject Vehicle produced less NO<sub>x</sub> during laboratory testing, but higher NO<sub>x</sub> when driven on road, then the vehicle would have better estimated fuel efficiency than the vehicle would actually achieve on road;
141. FCA promises that the EcoDiesel vehicles provide greater fuel economy, "30% better than a comparable gasoline engine...A Jeep Grand Cherokee or Ram 1500 with the EcoDiesel V-6 has a driving range of about 730 miles on one tank of fuel", as appears from a copy of an extract from the FCA Defendants' website at <https://blog.fcanorthamerica.com>, produced herein as **Exhibit P-60**;
142. FCA's website claimed that the Ram 1500 engine delivers the highest fuel economy among all full-size truck competitors – 12% higher than the next-closest competitor. On the Jeep Grand Cherokee, it offers fuel economy of 30 miles per

gallon highway with a driving range of more than 730 miles”; however, its own scandal began to emerge, it removed that representation from its website, as appears from copies of two extracts from the FCA Defendants’ website at [www.fcanorthamerica.com](http://www.fcanorthamerica.com), produced herein *en l’asse* as **Exhibit P-61**;

143. FCA further claims that the 2014 Ram 1500 “exceeds the EPA highway rating for the top-ranked small pickup. The breakthrough results mean Ram keeps the half-ton fuel-economy record set last year by the 2013 Ram 1500”, as appears from a copy of the FCA Defendants Press Release entitled “2014 Ram 1500 EcoDiesel Orders Top More Than 8,000 Units in Three Days, Filling Initial Allocation” dated February 19, 2014, produced herein as **Exhibit P-62**;

144. FCA’s advertising has been effective. According to one press release, “[i]t’s every truck manufacturer’s dream to have this kind of initial order demand for a product. Fuel economy is the No. 1 request of half-ton buyers and the Ram 1500 EcoDiesel delivers without compromising capability” (Exhibit P-62);

#### **K. The Defendants’ Marketing Practices**

##### **(a) The EcoDiesel Brand**

145. In order to counter the public perception that diesel engines produce dirty emissions and to capitalize on consumers’ desire to protect the environment, FCA aggressively marketed the EcoDiesel engine as being environmentally friendly, fuel efficient, and high performing using either a leaf and green colouring in its logo for the Jeep Grand Cherokees or the more rugged red look for the Ram 1500s, placed prominently on every single Subject Vehicle:



146. In researching potential terms to distinguish and market the Subject Vehicles back in 2012, FCA had engaged a consumer research firm to evaluate consumer reactions to nine potential engine identifying terms. FCA’s study indicated that “green” names like “Eco-Diesel” were the best because they suggest that the diesel is cleaner, more efficient, and better for the environment. Accordingly, FCA decided to combine the terms “Eco”, “Diesel”, and “3.0L” with the above designs to refer to

the engine because the engine is an economical, fuel-efficient, more environmentally friendly 3.0 litre diesel engine, as appears from a copy of the “Declaration of James Cameron Morrison in Support of Chrysler Group LLC’s Brief in Opposition to Unitek’s Motion for Preliminary Injunction” dated June 4, 2013 in the case of *Unitek Solvent Services, Inc. v. Chrysler Group LLC*, No. 1:12-cv-00704-DKW-RLP, produced herein as **Exhibit P-63**;

147. The Expert Report of Dr. Elisabeth Honka, produced in the context of the U.S. Litigation, discusses the marketing process for the EcoDiesel Subject Vehicles from start to finish. In so doing, Dr. Honka advised that:

9. FCA conducted naming research to evaluate consumer reactions to potential names for a new diesel engine in 2012. The name “Eco-Diesel” was the most preferred name, scoring best in terms of preference, appeal, and fit with the Jeep Grand Cherokee. The Executive Summary states that “‘Green’ names are the best” and “suggest the diesel is cleaner, more efficient, and better for the environment.”

10. FCA conducted competitive and positioning research for the Jeep Grand Cherokee “Eco-Diesel” in 2012. Among other things, the goal of this research was to “identify the theme that best resonates with consumers.” The first priority was that the “Jeep Grand Cherokee diesel must be overtly understood to be clean for the individual first, the environment second.”

11. Both the Jeep and the Ram vehicles in this lawsuit bear the EcoDiesel badge.

...

13. Two internal briefing notes to FCA managers on how to communicate about the 2014 Jeep Grand Cherokee EcoDiesel to the press and public provide insights into FCA’s own view and intentions for its marketing strategy for the 2014 Jeep Grand Cherokee EcoDiesel. For example, FCA employees are asked to “Always refer to the Diesel engine as EcoDiesel V6” to emphasize the theme that it is “The cleanest Diesel engine within the full-size segment.” Furthermore, the Key Messages/Q&A script talks about the “new 3.0-liter clean EcoDiesel” having the “Cleanest emissions in the diesel segment.”

14. FCA also thoroughly planned a specific marketing campaign accompanying the launch of the 2014 RAM 1500 EcoDiesel—above and beyond the general marketing campaign accompanying the launch of the 2014 RAM trucks—as evidenced by an FCA presentation titled “2014MY RAM 1500 EcoDiesel Launch.” This 2014 RAM 1500 EcoDiesel marketing campaign included TV, print, radio, social media, direct mail, and e-newsletter elements prominently containing the EcoDiesel logo. FCA also set up a separate EcoDiesel landing page on the Ramtrucks.com website and distributed point-of-sale kits about the Class Vehicle. As part of this campaign, FCA also set up a schedule to ensure



that dealers were educated about the Class Vehicle. In its marketing campaign for the 2014 RAM vehicles, FCA stated that it wanted to “invest most heavily in priority launches: EcoDiesel...,” and that “the media plans are aligned to support key priorities and messaging: Consistent presence throughout the year in TV, Print, Digital.”

As appears from a copy of the Declaration of Dr. Elisabeth Honka in Support of Plaintiffs’ Motion for Class Certification dated June 5, 2018, in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-64**;

148. FCA’s marketing of its Subject Vehicles and its “EcoDiesel” engines has consistently been to promise clean diesel and the word “EcoDiesel” was used in virtually every consumer-facing communication;

(b) The Marketing Campaign – “Clean” Diesel

149. FCA engaged in a comprehensive marketing campaign, through a variety of media, all with the consistent objective of convincing consumers that the EcoDiesel vehicles were environmentally friendly, fuel efficient, and high performing. FCA knew the importance of communicating this consistent message across all channels, and it invested heavily in its marketing and advertising campaign. The central theme in FCA’s diesel engine marketing is the promise of “clean” diesel (Exhibit P-60).



150. For years, the FCA Defendants marketed their diesel vehicles as fuel efficient trucks with low emissions;
151. The 2014 RAM 1500 was launched as “Canada’s Longest-Lasting and Most Fuel-Efficient Full-Size Pickup”. The FCA Defendants emphasized to consumers that “Fuel Efficiency. It’s Not One Thing. It’s Everything”, as appears from copies of



FCA's marketing materials, entitled "2014 RAM 1500", produced herein *en liasse* as **Exhibit P-65**;

152. The FCA Defendants continued the slogan of "Canada's Longest-Lasting and Most Fuel-Efficient Full-Size Pickup" for the launch of the 2015 RAM 1500, which included an "incredibly fuel-efficient 3.0-litre EcoDiesel V6", as appears from a copy of FCA's marketing material, entitled "2015 RAM 1500", produced herein as **Exhibit P-66**;
153. For the 2016 RAM 1500, the slogan was commonly abridged to "Canada's Most Fuel-Efficient Full-Size Pickup" or "Canada's most fuel-efficient pickup ever". The FCA Defendants boast about "the Best-in-Class fuel economy as efficient as 8.0L/100km". In order to advertise how much consumers trust the RAM 1500, it further marketed that the 2016 RAM 1500 has the "[h]ighest customer loyalty of any full-size pickup", as appears from copies of extracts from FCA's website, [www.ramtruck.ca](http://www.ramtruck.ca), entitled "2016 RAM 1500 – Interior, RamBox®, Exterior", "2016 RAM 1500 – Unconnect®, Rear Back-Up Camera", "2016 RAM 1500 – Specs & Dimensions", and "RAM 1500 Facts – Pickup Truck w/ Best-in-Class Fuel Economy", from a copy of FCA's marketing material, entitled "2016 RAM 1500", and from a copy of "2016 Ram 1500 Specifications" from RAM, produced herein *en liasse* as **Exhibit P-67**;
154. When marketing the Ram's Fuel Consumption, it was done so "[b]ased on 2015 EnerGuide fuel consumption ratings. Government of Canada test methods used. Your actual fuel consumption will very based on driving habits and other factors", as appears in a copy of FCA's "Ram Fuel Consumption" presentation, produced herein as **Exhibit P-68**;
155. The FCA Defendants marketed the 2014 Jeep Grand Cherokee as "the most awarded SUV ever" and "Efficient, Clean, Powerful: Grand Cherokee's new, available 3.0L EcoDiesel V6 engine treats your fuel budget with respect, while its reduce CO<sub>2</sub> emissions display reverence for the environment". The marketing material highlighted also highlighted the new "ECO MODE" feature, as appears in a copy of FCA's marketing material, entitled "2014 JEEP GRAND CHEROKEE", produced herein as **Exhibit P-69**;
156. The 2015 Jeep Grand Cherokee was marketed as "The Best of What We're Made Of" and "the most awarded SUV ever ... simply the most capable and fuel efficient vehicle in its class." In promoting the EcoDiesel 3.0L V6 engine, the FCA Defendants wrote: "Love the planet and great fuel economy? The 3.0L EcoDiesel V6 engine lets you adhere to your principles while taking you further per tank full". The fuel economy is represented to be estimated at 8.4L/100km and the engine as "CLEAN: ...clean diesel technology with low CO<sub>2</sub> emissions that are gentle on the planet", as appears in a copy of FCA's marketing material, entitled "2015 GRAND CHEROKEE: THE BEST OF WE'RE MADE OF", produced herein as **Exhibit P-70**;



157. The 2016 Jeep Grand Cherokee was similarly marketed as “The best of what we’re made of means exactly that. The Jeep Grand Cherokee offers Best-in-Class 4x4 capability, power , fuel economy and driving range for the full spectrum of performance.” The 3.0L EcoDiesel V6 is boasted to be a “three-time winner of *Ward’s* ‘10 Best Engines’ winner delivers efficient power while leaving little trace of being there” and a fuel efficiency of 8.4L/100 km. As appears from a copy of FCA’s marketing material, entitled “JEEP GRAND CHEROKEE 2016”, and from copies of extracts from FCA’s website, [www.jeep.ca](http://www.jeep.ca), entitled “2016 Jeep Grand Cherokee – Mid-Size SUV”, “2016 Jeep Grand Cherokee Summit – Interior & Exterior Design”, “2016 Jeep Grand Cherokee – Jeep Grand Cherokee EcoDiesel Engine”, “2016 Jeep Grand Cherokee Technology – Unconnect Touch Screen”, and “2016 Jeep grand Cherokee Safety Features”, and from a copy of the *Torque News* article “RAM 1500, Jeep EcoDiesel Engine on *Ward’s* 10 Best for 3<sup>rd</sup> Straight Year, dated December 10, 2015, produced herein *en liasse* as **Exhibit P-71**;

158. The following is a non-exhaustive sample of representations made by the FCA Defendants:

a. 3.0L Jeep Grand Cherokee EcoDiesel V6

The 3.0L EcoDiesel V6 is a three-time winner of *Ward’s* ‘10 Best Engine’ and delivers 240 horsepower and 420 lb-ft of torque. This diesel engine gives the Jeep® Grand Cherokee a Best-in-Class towing capacity of up to 3,265 kg (7,200 lb).

You’ll also enjoy savings with fuel economy as efficient as 8.4 L/100 km (34 mpg) highway, and a driving range up to 1,100 km that no other SUV in its class can match.

2016 Jeep Grand Cherokee EcoDiesel: Best-in-Class fuel economy

City  
11.2 L/100KM  
25 IMP. MPG

Highway  
8.4 L/100KM  
34 IMP. MPG

Yearly Fuel Cost \$2,227  
Up to \$565 Savings

b. 3.0L Dodge Ram 1500 EcoDiesel

Canada’s Most Fuel-Efficient Full-Size Pickup



Legendary durability and capability combine with advanced features like the Class-Exclusive 3.0L EcoDiesel V6 to give you Canada's most fuel-efficient full-size pickup ever, winner of Four Wheeler's 2016 Pickup Truck of the Year and the 2016 Canadian Truck King Challenge winner. The available EcoDiesel engine dominates with Best-in-Class 420 lb-ft of low-end torque and makes the Ram 1500 the only half-ton pickup in the industry to offer a diesel engine.

(i) 3.0L EcoDiesel V6

A true benchmark, the Class-Exclusive 3.0L EcoDiesel V6 delivers 240 horsepower and Class-Leading 420 lb-ft of low-end torque at an impressive 2,000 rpm. If you want diesel power, you can forget the competition. The Ram 1500 is the only half-ton truck in the industry to offer a diesel engine.

The 3.0L EcoDiesel engine also delivers Best-in-Class fuel economy as efficient as 8.0 L/100 km (35 mpg) highway and has recommend oil change intervals of up to 16,000 km to lower your total operating costs. No matter how you look at it, this engine dominates across the performance spectrum - which is why Wards named it one of their '10 Best Engines' two years in a row.

Transmission(s)

Mated to the 3.0L EcoDiesel is a TorqueFlite® 8-speed automatic transmission. With 40 different shift maps, it optimizes the engine's performance, giving you stronger power when needed and fuel economy that makes the Ram 1500 Canada's most fuel-efficient full-size pickup.

2016 RAM 1500

Best-in-Class fuel economy that dominates the competition

**CANADA'S MOST FUEL-EFFICIENT FULL-SIZE PICKUP AS EFFICIENT AS 35 MPG (8.0L/100 KM) HIGHWAY**

The dominating performance of the 3.0L EcoDiesel V6 runs deep. Not only is it Class-Exclusive, but it also puts an impressive 420 lb-ft of low-end torque in your hands along with exhilarating power. This massive capability is balanced by Best-in-Class fuel economy thanks to a Segment-First 8-speed automatic transmission. The Ram 1500 is the complete package, which is why it beat all competitors to become the back-to-back winner of the Canadian Truck King Challenge,

(ii) 3.0L EcoDiesel V6 (HFE Model)

City  
11.3 L/100KM

25 IMP. MPG

Highway  
8.0 L/100KM  
35 IMP. MPG

Estimated fuel cost with EcoDiesel:

\$2,199 Yearly Fuel Cost

Up to \$676 in Savings,

As appears from copies of various extracts from the FCA Defendants' website(s), entitled "3.0L EcoDiesel V6", "2016 RAM 1500", and "2016 RAM 1500 – Towing Capacity, Fuel Economy, Engine", produced herein *en liasse* as **Exhibit P-72**;

159. FCA also released many press releases extolling the Subject Vehicles' performance, environmental friendliness, fuel efficiency, emissions compliance, and popularity, as appears from copies of the FCA Press Releases entitled "2014 Ram 1500's Breakthrough 3.0-liter EcoDiesel V-6 Delivers Best-in-Class Fuel Economy" dated September 8, 2013, "Chrysler Canada: Ram Launches 2015 Heavy Duty Models with a Trifecta of Claims: Best-in-class Power, Towing Capacity and Payload Capacity" dated August 25, 2014, "Chrysler Canada Reports Highest August Sales Ever" dated September 3, 2014, "Ram Truck Increases EcoDiesel Mix to 20 Percent of Ram 1500 Pickup Production" dated September 30, 2014, "Ram 1500 EcoDiesel Named 2015 Green Truck of the Year™ by Green Car Journal" dated November 6, 2014, "FCA Canada: FCA US LLC Scores Wards 10 Best Engines 'Three-Peat' With EcoDiesel V6; Lone Diesel on List for Second Straight Year" dated December 10, 2015, "Chrysler Canada – New 2015 Ram 1500 Rebel Makes a Statement" dated January 13, 2015, "Jeep® Grand Cherokee EcoDiesel Named 2015 Green SUV of the Year™ by Green Car Journal" dated January 22, 2015, produced herein *en liasse* as **Exhibit P-73**;
160. FCA specifically targets consumers "who want to drive an efficient, environmentally friendly truck without sacrificing capability or performance." It claims that the Ram 1500 was "the NAFTA market's first and only light-duty pickup powered by clean diesel technology", as appears from a copy of an extract from the FCA Defendants' website at [blog.ramtrucks.com](http://blog.ramtrucks.com), produced herein as **Exhibit P-74**;
161. FCA further claims that "the Bosch emissions control system helps ensure that virtually no particulates and minimal [NO<sub>x</sub>] exit the tailpipe" (Exhibit P-60);
162. FCA went so far as to hold itself out as a protector of the environment: "We are in a race against time. Climate change and the increasing scarcity of traditional sources of energy require new approaches to mobility. Fiat Group is addressing this challenge head-on by ensuring individual freedom of movement with maximum consideration for the environment and local communities." Step one, according to FCA, is to "minimize environmental impacts related to the use of our products", as



appears from a copy of the FCA Defendants' 2014 Sustainability Report, produced herein as **Exhibit P-75**;

163. VM Motori marketed its EcoDiesel engine as “the ultimate in diesel engines” and stated that it “can be tailored to meet each individual customer’s requirements”. In addition, VM Motori represented that the EcoDiesel engine “match[ed] refinement with power with ultra-low emissions” was the “ultimate in diesel engines”. The Subject Vehicles were equipped with the L 630 DOHC engine, as appears from copies of extracts from the FCA and VM Motori Defendants’ website at [www.vmmotori.com](http://www.vmmotori.com) from 2016 and from a copy of the Engine Specification, produced herein *en liasse* as **Exhibit P-76** and as appears from copies of extracts from the VM Motori website at [www.vmmotori.com](http://www.vmmotori.com) from 2015, 2016 and 2017, produced herein *en liasse* as **Exhibit P-77**;
164. The 2016 Dodge Ram 1500 EcoDiesel vehicle repeatedly won the Canadian Truck King Challenge, as appears from a copy of the Driving.ca article entitled “Ram EcoDiesel wins 2016 Canadian Truck King Challenge” dated October 19, 2015, produced herein as **Exhibit P-78**;
165. The FCA Defendants’ sales figures in Canada for 2016 indicate that approximately 39,000 Subject Vehicles were sold in that year alone (Exhibit P-29);
166. The Expert Report of Dr. Honka (Exhibit P-64) opined the following on FCA’s marketing:
  15. FCA’s advertising for both Class Vehicles was wide-reaching and pervasive.
  - ...
  29. In most consumer-facing print marketing materials that I have reviewed, for both the Ram and Jeep brands, FCA communicated that the EcoDiesel engines are (i) fuel efficient, (ii) powerful, and (iii) environmentally friendly and have low emissions. For example, the 2014 Jeep Grand Cherokee EcoDiesel is described as “an exceptionally luxurious, environmentally friendly SUV” and its “Clean diesel technology reduces CO2 emissions to the lowest amount yet” and “Meets and even exceeds the low-emission requirements in all 50 states.”
  30. Ram introduced the 2014 Ram 1500 EcoDiesel with the headline “Capable, efficient and easy on the environment” in an email intended to be sent to consumers.
  31. Ram and Jeep EcoDiesel vehicles were featured on FCA’s social media. For example, Ram advertised on its social media account on November 6, 2014, that the Ram 1500 EcoDiesel was named Green Truck of the Year by the Green Car Journal. Ram described the Ram 1500 EcoDiesel as a “lean, green, efficient machine.” Ram advertised its diesel trucks as “rugged, clean diesel power” on its social media account on June 23, 2015. Jeep advertised its EcoDiesel engine as “an eco-



friendly engine. E is for EcoDiesel” on its social media account on July 5, 2014.<sup>22</sup> Jeep described its new 3.0L Diesel engine as “Capable. Fuel efficient. Environmentally friendly” on its social media account on November 18, 2013;

167. Dr. Honka (Exhibit P-64) concluded the following:

38. Based on the evidence described above and the other FCA documents I have reviewed, it is my opinion that FCA:

- a. intentionally chose the name EcoDiesel for its new diesel engine to evoke the perception of environmental friendliness in consumers;
- b. intentionally chose the same name-EcoDiesel-to brand both Jeep and Ram vehicles;
- c. pervasively advertised the EcoDiesel engine, reaching a wide range of consumers across the United States via all major media channels;
- d. consistently communicated the environmental friendliness (i.e. low emissions) of the EcoDiesel engine in print and on line advertisements for both Jeep and Ram vehicles;
- e. provided both Jeep and Ram dealerships with consistent material on how to address consumers’ environmental concerns about diesel engines and emphasize the EcoDiesel engines’ environmental qualities;

(c) The Warranty

168. FCA provided Class Members with written warranties stating that the Subject Vehicles complied with emissions standards *inter alia* as follows:

EMISSION WARRANTIES

FCA Canada warrants that your new vehicle was designed, built and equipped to conform at the time of sale with applicable federal and provincial emissions standards, and that the vehicle is at the time of sale free from defects in material and workmanship which would cause it to fail to conform to the applicable emission standards within the warranty periods specified. A covered defect is one which causes your vehicle to fail to meet applicable emission control regulations.

...

EMISSION DEFECT WARRANTY

The 3/60 Basic Warranty covers all emission control components for 3 years or 60,000 kilometres, whichever occurs first. The Emission Defect warranty provides longer coverage for specified components.

#### LIGHT-DUTY TRUCKS

For light-duty trucks, the Defect Warranty covers the following major emission control parts, if so equipped, for 8 years or 130,000 kilometres, whichever occurs first:

- catalytic converter
- powertrain control module

To receive this coverage the vehicles onboard diagnostic system must indicate a failed emission component.

...

#### EMISSION PERFORMANCE WARRANTY

The Emission Performance Warranty only applies to cars and trucks with a GVW less than 3855 kg (8500 lb).

For 2 years or 40,000 kilometres, whichever occurs first, the Performance Warranty will cover the cost of repairing or adjusting any components or parts of your vehicle that might be necessary to pass an approved provincial Inspection/Maintenance (I/M) program's emissions test, but only if:

- your vehicle failed an approved provincial I/M emissions test; and
- your vehicle was properly maintained and operated until it failed the test; and
- warranty service is required in order for your vehicle to pass the provincial I/M test

Provincial test fees, if any, are not covered by this warranty.

If your province does not require emission testing, this 2/40 Emission Performance Warranty does not apply.

As appears from copies of the 2014, 2015, and 2016 Warranty/Maintenance booklets for the Ram Subject Vehicles and from copies of the 2014, 2015, and 2016 Warranty/Maintenance booklets for the Jeep Grand Cherokee Subject Vehicles, produced herein *en l'asse* as **Exhibit P-79**;

169. FCA has represented *inter alia* that:

- (a) The Subject Vehicles either met or exceeded emissions standards and regulations;
- (b) The Subject Vehicles had a certain fuel economy, which had been accurately reported to regulators;
- (c) The Subject Vehicles produced a specific amount of NO<sub>x</sub>, which had been accurately reported to regulators;
- (d) The Subject Vehicles were environmentally friendly,
- (e) The Subject Vehicles provided a superior driving experience, including by virtue of their superior fuel economy and emissions;
- (f) The Subject Vehicles would live up to high performance standards and specifications and a particular level of fuel economy, while emitting a low level of pollutants and emissions;

170. FCA failed to state any or all of the following:

- (a) The Subject Vehicles were not free from defects;
- (b) The Defeat Devices in the Subject Vehicles generated inaccurate and false emissions testing results and were designed for this purpose;
- (c) The Defeat Devices in the Subject Vehicles misled persons who tested emissions in the Subject Vehicles;
- (d) The Subject Vehicles emitted more pollutants than the test results indicated and that they had publicly stated; and
- (e) The Subject Vehicles were not an environmentally friendly, clean or “green” purchasing option that would be beneficial to the environment due to their low fuel consumption or low emissions;

171. Class Members were sold, thought they were getting, and paid a premium for an EcoDiesel package deal that purportedly combined low emissions, high fuel efficiency, and the performance of a diesel engine. But the badge lied, and the Defendants’ conduct was designed to hide the truth from the public and from every buyer and lessor in the Class. In actual operation, the EcoDiesel Subject Vehicles were “dirty” indeed;

#### **L. The Monetary Damages**

172. In 2017, the starting price for a new 2016 RAM 1500 ranged from 31,095\$ to 62,495\$, before taxes, freight, insurance, registration, licence, A/C charge, retailer administration fees and other charges, and new tire duties (in Quebec), as appears

from copies of extracts from FCA's website, [www.ramtruck.ca](http://www.ramtruck.ca), provided herein *en liasse* as **Exhibit P-80**;

173. In 2017, the starting price for a new 2016 Jeep Grand Cherokee ranged from 43,395\$ to 71, 695\$ before taxes, freight, insurance, registration, licence, A/C charge, retailer administration fees and other charges, and new tire duties (in Quebec), as appears from a copy of an extract from FCA's website, [www.jeep.ca](http://www.jeep.ca), provided herein as **Exhibit P-81**;
174. The Expert Report of Steven P. Gaskin, produced in the context of the U.S. Litigation, discusses his assignment of designing, conducting, and analyzing market research surveys in order to assess the reduction in economic value resulting from the use of EcoDiesel engines with the Defeat Devices in the Subject Vehicles, as appears from a copy of the Report of Steven P. Gaskin dated June 6, 2018 in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-82**;
175. Choice-based conjoint analysis surveys<sup>11</sup> were conducted with product profiles for the Subject Vehicles composed of six features: (i) engine performance, (ii) steering performance, (iii) trim level, (iv) drive type, (v) car connectivity system performance, and (vi) price. Mr. Gaskin was able to conclude that the Subject Vehicles experienced a reduction in economic value of approximately 16.8% for the Jeep Grand Cherokee vehicles and 18.5% for the Ram 1500 vehicles, due solely to the cheating software (Exhibit P-82);
176. The Expert Report of Colin B. Weir, produced in the context of the U.S. Litigation, opined on the Expert Report of Mr. Gaskin (Exhibit P-82) and concluded that the conjoint survey was properly designed to measure the reduction in economic value of the Subject Vehicles at the time and point of first sale and lease as a result of the cheating software (termed "Overpayment Damages"). Mr. Weir also suggests the alternative methodology of isolating price premium that class members paid for the EcoDiesel feature to calculate what is termed the "EcoDiesel Premium". This alternate method of calculation was based on the documents that the defendants in the U.S. Litigation had produced listing the MSRP<sup>12</sup> for each model, model year, and trimline including optional packages. Each of the models and model years offered a base engine for no additional cost, and the EcoDiesel package for an additional, stand-alone price. For each relevant model year of the Jeep Grand Cherokee, the upgrade to the EcoDiesel engine adds \$4,500 or \$5,000 to the MSRP, depending on the trimline. For the 2014 Ram 1500, the EcoDiesel upgrade

<sup>11</sup> Conjoint analysis is a survey-based statistical technique used in market research that helps determine how people value different attributes (feature, function, benefits) that make up an individual product or service. It is a technique used to evaluate products and services, and determine how consumers perceive them. Products are broken-down into distinguishable attributes or features, which are presented to consumers for ratings on a scale. Choice-based conjoint analysis lets the researcher include a "None" option for Defendants, such as "I wouldn't choose any of these."

<sup>12</sup> MSRP stands for the Manufacturer Suggested Retail Price — also known as "sticker" price — which is a recommended selling price that automakers give a new car. A dealer uses the MSRP as a price to sell each vehicle; it's different from invoice price on a car, which can stand thousands below the sale price.



adds \$4,500, and for the 2015-2016 Ram 1500 it adds \$4,770, as appears from a copy of the Declaration of Colin B. Weir dated June 6, 2018 in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-83**;

177. Mr. Weir made the following chart to graphically depict the “Overpayment Damages” (Exhibit P-83):

Table 2. Estimate of Total Class Vehicle Damages				
Vehicle	Units	Dollars	Overpayment %	Damages
Jeep	25,690	\$1,328,257,461	16.8%	\$223,147,253.45
RAM	75,538	\$3,825,585,851	18.5%	\$707,733,382.44

178. Mr. Weir also made the following chart to graphically depict the “EcoDiesel Premium” (Exhibit P-83):

Table 3. Sample Estimate of Total Class Vehicle Damages				
Vehicle	Units	Dollars	EcoDiesel Premium	Damages
Jeep	25,690	\$1,328,257,461	\$4,500	\$115,605,000
RAM (2014)	14,092	\$692,530,299	\$4,500	\$63,414,000
RAM (2015-2016)	61,446	\$3,133,055,552	\$4,770	\$293,097,420

179. The Expert Report of Edward M. Stockton, produced in the context of the U.S. Litigation, discusses *inter alia* the economic harm suffered by class members and the methods by which to assess this harm. Mr. Stockton concludes that if “a) FCA, indeed, sold the Subject Vehicles with an emissions defects present at the time of sale, consumers suffered economic harm therefrom, b) overpayment at the time of purchase or acquisition is a reasonable method to assess this prospective harm”, as appears from a copy of the Declaration of Edward M. Stockton in Support of Plaintiffs’ Motion for Preliminary Approval of Class Settlement and Direction of Notice Under Fed. R. Civ. P. 23(E) dated January 9, 2019 in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-84**;



180. Mr. Stockton opined on the nature of the harm suffered as follows (Exhibit P-84):

Assuming these allegations to be true, consumers who purchased Subject Vehicles did so under conditions that were inherently different from those for which they bargained. Instead, consumers overpaid for the Subject Vehicles because the vehicles lacked certain attributes that FCA marketed as being present in the vehicles, such as emissions performance and regulatory emissions compliance. The vehicles also included negative attributes for which consumers did not bargain, including but not limited to an alleged defect that caused the release of excess and potentially harmful amounts of NO<sub>x</sub> emissions, and a device that was alleged to elude detection by emissions testing equipment (“defeat device”).

...

In accordance with economic theory, concealing a design defect from consumers and potential consumers directly impairs the consumer’s assessment of a potential transaction and leads to a different outcome (price and/or purchase probability) than what would have occurred had the defect been disclosed. This means that a vehicle with an unknown emissions defect is different from the vehicle that the consumer perceives it to be. Furthermore, if concealment of a defect occurs, it interferes with and short-circuits the consumer’s process for assessing the expected utility of a transaction. The consumer would reach a different perception of utility and value a transaction differently, depending upon whether a seller revealed or concealed the defect.

...

In cases in which a seller remedies an initial defect, the initial overpayment amount may not entirely represent economic damages to the consumer. Nor does a competent repair remedy all economic damage suffered by the consumer. Rather, in a generalized case, economic damages that flow from an initial defect that the seller eventually remedies are a function of the initial overpayment increment and a schedule of the consumer’s consumption of the good’s value.

181. In quantifying what he terms the “diesel premium”, Mr. Stockton assumed it to be 90% of the MSRP of the EcoDiesel option cost (to account for certain discounts and product bundling) associated with the Subject Vehicles as follows (in USD):

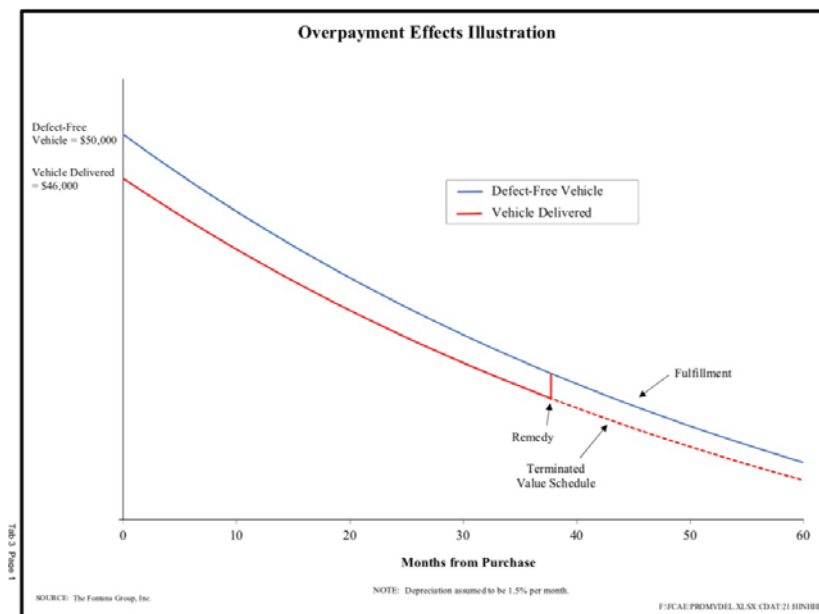
**Table 2: Estimated Diesel Premium:**

<b>Diesel Option Cost</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Grand Cherokee</b>	\$4,050	\$4,050	\$4,050
<b>Ram 1500</b>	\$4,050	\$4,293	\$4,293

182. Mr. Stockton proceeds to graphically depict the effect of the overpayment over time. Because depreciation of a vehicle as a whole tends to decrease the effect of the overpayment, the vehicle would have higher sales price or lease payments. Mr.



Stockton states that even absent market knowledge of the alleged defect or the presence of excess depreciation, the depreciation of the premium vehicle is higher in absolute terms than that of the alternate vehicle; i.e. the vehicle actually delivered



183. In order to estimate the economic harm to class members, one must take the initial overpayment and multiply it by the depreciation of the vehicle; i.e. multiply the rate of depreciation by the amount of years that have elapsed. Mr. Stockton assumes a 12.5% depreciation rate. This is because class members have suffered for a number of years with a vehicle that contained an emissions defect, which is something that even a proper repair cannot remedy;
184. In the present case, if we use this formula to calculate Plaintiff Garage Poirier's damages in terms of overpayment, they would be assessed at USD\$2,531.25 ( $\$4,050 \times 0.125 \times 5$  years) and for Plaintiff Bouffard, they would be USD\$2,146.50 ( $\$4,293 \times 0.125 \times 4$  years);
185. The Expert Report of Brandon Schaufele, PhD and Adam Fremeth, PhD, produced in the context of the Ontario litigation, discussed existing methodologies to quantify the loss to Class Members for (i) the overpayment of the purchase price of the Subject Vehicles (premium price theory), (ii) the decreased market value of the Subject Vehicles, and (iii) the loss in fuel economy, performance, environmental, that a fix would engender. These methodologies include:
- (i) Premium price paid: the hedonic price model, which is a widely applied and accepted method in economics, specifically in quantifying consumers' willingness to pay for specific vehicle attributes such as an EcoDiesel engine. Once the value of the EcoDiesel Engine is quantified, the aggregate loss to the class is straightforward to calculate;

- (ii) Impact on resale market values: a combination of two methods is used (i) the difference-in-difference regression methodology, which calculates the loss in market value to class members as the difference between the market value of the Subject Vehicles and the counterfactual market value of the unaffected vehicles had the wrongdoing not occurred and (ii) the synthetic control methodology, which calculates a weighted average of other vehicles that were not the subject of a violation announcement and the subsequent divergence in value pre-and post-announcement is attributed to the announcement. Used together, these methodologies can calculate the decrease in market rate beyond normal depreciation;
- (iii) Assessment of loss related to fix: various methodologies would be used, including the hedonic model described above, assessing the statistical elasticities of fuel price, valuing Class Member time, and using stated preference methodology and choice modelling with respect to environmental attributes. The damages here relate to: (i) performance and vehicle attributes, (ii) operating costs, (iii) fuel economy, (iv) value of time during period of repair using mean wage rates, and (v) foregone environmental and health benefits using stated preference analysis, choice modelling or conjoint analysis;

As appears from a copy of the Affidavit of Brandon Schaufele sworn March 1, 2019, in *Maginnis et al. v. FCA Canada Inc. et al*, Court File No. CV-17-567691-00CP, produced herein as **Exhibit P-85**;

186. Mr. Schaufele concluded that in order to calculate the aggregate damages for the Class from all sources of economic loss, we shall sum the estimated economic loss from the (i) *ex-ante*<sup>13</sup> premium paid for the Vehicles, (ii) the ex-post impact on the market value of the Vehicles, and (iii) loss should the vehicles be fixed and multiply those figures by the total number of Class Members. The data necessary to calculate damages (much of which will emanate from the Defendants) includes: (i) number of vehicles sold and leased and the location of registration, (ii) transaction prices for all vehicles including financing terms and warranties, (iii) resale prices of the Subject Vehicles for both dealers and private sales, (iv) vehicle usage rates such as annual kilometres travelled and commuting times, (v) a list of vehicle attributes including engine size, fuel economy, trim, weight, horsepower, fuel type, drivetrain among other characteristics, (vi) marketing intelligence reports and market research for the EcoDiesel engine, and (vii) basic economic data such as fuel prices and wage rates (Exhibit P-85);
187. In the alternate, and assuming that the various fix(es) did actually resolve the problem (it is alleged herein that they did not), Class Members were deprived of the money that they laid out for the EcoDiesel premium overpayment (calculated in the present section) from the date of purchase or lease until the “supposed” fix(es) ultimately resolved the issue. In accordance with the *Interest Act*, R.S.C., 1985, c. I-15, the applicable interest rate is 5% per annum;

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<sup>13</sup> Latin for “before the event”.



188. In the present case, if we use this formula to calculate Plaintiff Garage Poirier's damages in terms of interest on the overpayment, they would be assessed at USD\$1,012.50 ( $\$4,050 \times 0.05 \times 5$  years) and for Plaintiff Bouffard, they would be USD\$858.60 ( $\$4,293 \times 0.05 \times 4$  years);

## **M. The U.S. Litigation**

### **a) Procedural Steps**

189. On April 5, 2017, the U.S. Judicial Panel on Multidistrict Litigation ("JPML") consolidated pretrial proceedings for *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777 in the United States District Court for the Northern District of California (the "U.S. MDL Court") and assigned the case to the Honorable Edward M. Chen, as appears from a copy of the MDL Transfer Order dated April 5, 2017 *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-86**;
190. On September 29, 2017, the Amended Consolidated Consumer Class Action Complaint was filed in the U.S. MDL Court, as appears from copies of several of the U.S. Class Action Complaints and from a copy of the Amended Consolidated Consumer Class Action Complaint, produced herein, *en liasse*, as **Exhibit P-87**;
191. The United States Judicial Panel on Multidistrict Litigation has transferred them to the Northern District of California under the supervision of the Honourable Judge Chen under MDL No. 2777 and a Second Amended Class Action Complaint has been filed, as appears from a copy of the Second Amended Class Action Complaint in *In Re Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices, and Products Liability* dated May 16, 2017, produced herein as **Exhibit P-88**;
192. On March 15, 2018, the U.S. MDL Court granted in part and dismissed in part the defendants' motion to dismiss, giving the U.S. plaintiffs leave to amend, holding the following:
- Given this level of control, it is highly plausible that the Bosch Defendants played a role in developing and implementing the AECDS.
  - Additional support for this conclusion comes from allegations that researchers...have analyzed technical documents showing that code written by the Bosch Defendants was used in a defeat device found in the Fiat 500X...Although the Fiat 500X is not a Class Vehicle, these allegations show that the Bosch Defendants knew how to develop a defeat device and were willing to do so.
  - Together, these allegations plausibly support that the Bosch Defendants were actively involved in developing the hidden AECDS used in the Class Vehicles, and not only concealed their use but also falsely touted to the market and



lawmakers that ‘clean diesel’ vehicles, including the Class Vehicles, were compliant with emission standards.

- Together, these allegations plausibly support that the VM Motori Defendants were knowing participants in the scheme to deceive regulators into certifying that the Class Vehicles. They participated in the scheme by developing and customizing the EcoDiesel engine, and by working with the other Defendants to knowingly customize the EDC Unit 17 to simulate passing emissions tests.
- These allegations are sufficient to plausibly support the FCA Defendants’ participation in the emissions scheme... Two other allegations also support the plausibility of the FCA Defendants’ involvement with the hidden AECDS.
- [C]ontrary to what Defendants argue, it is plausible that a reasonable consumer would understand “EcoDiesel” to mean environmentally friendly or reduced emissions.
- Here, it is a reasonable inference that Defendants marketed the Class Vehicles as “EcoDiesel” intending and expecting to cash in on the consumer interest in “green” products.

As appears from a copy of the Order Granting in Part and Denying in Part Defendants’ Motions to Dismiss dated March 15, 2018, in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-89**;

193. On May 16, 2018, the Second Amended Consolidated Consumer Class Action Complaint was filed in the U.S. MDL Court, as appears from a copy of the Second Amended Consolidated Consumer Class Action dated May 23, 2018, in *re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-90**;

(b) Discovery Material

194. In the course of the related U.S. litigation, it was revealed that VM Motori and Bosch had discussed the illegal use of software to pass emissions tests as early as 2010. According to emails that were disclosed:

Fiat Chrysler wanted to use software in its diesel engines that was capable of “cycle detection,” meaning it could sense when the vehicle was undergoing emissions evaluations and activate controls to pass tests, Sergio Pasini, the controls and calibration director at supplier VM Motori, wrote in a 2010 email to colleagues. An employee within the automaker’s powertrain division had tried to convince him the software, called “t\_engine,” didn’t count as cycle detection.



The automaker's emissions control "will be managed mainly on t\_engine which is, no matter what Fiat says, a cycle detection," Pasini wrote in an email, according to a court document that was unsealed on Wednesday.

...

In 2012, another VM Motori employee, Emanuele Palma, wrote to colleagues that Fiat Chrysler "knows tEng is the only way to get to 30 mpg, so don't worry about this topic."

195. Thus, FCA approved of and VM Motori was fully aware that the EGR rate would be managed on the T\_Eng Defeat Device, which was a cycle detection software and that it would not be disclosed to the EPA (Bosch's knowledge is discussed hereinbelow) (Exhibit P-23);
196. Documents produced in the United States reveal various high-level FCA personnel discussing *inter alia*:
  - The impact of FCA having Bosch engines in their vehicles with regards to what that means for emissions cheating allegations,
  - CARB having identified certain Defeat Devices in the end of 2014 as to 2015 Subject Vehicles
  - Not disclosing to CARB if a specific test FCA was performing did not meet emissions limits:
  - Using discretion when discussing the Defeat Devices with CARB:
  - How to revise the Subject Vehicles' On Board Diagnostics (OBD) Statement to obtain the EPA certification:
  - The determination of which Defeat Devices FCA would disclose to the EPA and CARB:
  - Early concerns about the Defeat Devices and not disclosing them to the EPA
  - VM Motori expressing FCA's lack of desire to understand certain "red flags" regarding the implementation of certain AECDs:
  - How to "trick the system" to not comport with emissions regulations:
  - The Mechanism of cheating, including "online dosing", which was accomplished through AECD #7:
  - FCA's knowledge of the Defeat Devices:
  - Communications between Bosch and FCA regarding the "T-Eng" functionality, which was AECD #5, that it was a method of detecting an emissions cycle, and that there could be serious penalties:



As appears from a copy of the Declaration of Jeremy A. Lieberman dated May 14, 2018, filed in the case of *Pirnik v. Fiat Chrysler Automobiles N.V. et al.*, No. 15-cv-07199 (S.D.N.Y. Sept. 11, 2015), produced herein as **Exhibit P-91**;

(c) The U.S. MDL Settlement

197. On January 10, 2019, a settlement was reached in the U.S. Litigation in order to bring the vehicles into compliance with emissions regulations, to incentivize class members to bring them in for approved emissions fixes, and to compensate owners and lessees for the lost part of the diesel premium package they paid for but did not receive (the “U.S. MDL Settlement”). The U.S. MDL Settlement provided for the following benefits to the class:

- Eligible Owners: Owner Payment of \$3,075 (\$2,460 if there is a Former Owner Payment), an Approved Emissions Modification and an Extended Warranty
- Eligible Former Owners: Former Owner Payment of \$990
- Eligible Lessees: Lessee Payment of \$990, an Approved Emissions Modification and an Extended Warranty
- Eligible Former Lessees: Former Lessee Payment of \$990

Category	Benefits	Class Member Payment*
<b>Eligible Owner</b> (acquired vehicle on or before January 12, 2017)	Owner Payment + Approved Emissions Modification + Extended Warranty	<b>\$3,075</b>
<b>Eligible Owner</b> (acquired vehicle after January 12, 2017)  (does not apply to owners of vehicles that were leased as of January 10, 2019, who are treated as Eligible Lessees, and not Eligible Owners)	Owner Payment + Approved Emissions Modification + Extended Warranty	<b>\$2,460</b> (if an Eligible Former Owner or Eligible Former Lessee of the vehicle also makes a valid claim for benefits)  <u>OR</u> <b>\$3,075</b> (if no other Class Member makes a valid claim for benefits related to the same vehicle)
<b>Eligible Former Owner</b>	Former Owner Payment	<b>\$990</b>
<b>Eligible Lessee</b>	Lessee Payment + Approved Emissions Modification + Extended Warranty	<b>\$990</b>
<b>Eligible Former Lessee</b>	Lessee Payment	<b>\$990</b>

As appears from a copy of the Amended Consumer and Reseller Dealership Class Action Settlement Agreement and Release dated January 18, 2019, in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-92**;

198. The “Approved Emissions Modification” provided for in the U.S. MDL Settlement (Exhibit P-92) was a change to the emissions software of the U.S. Subject Vehicles to render the vehicles is in compliance with emissions standards. It involved replacing powertrain software and calibrations with an approved version that extended emission control to the expected range of real-world driving conditions;
199. The “Extended Warranty” provided for in the U.S. MDL Settlement (Exhibit P-92) related to the parts and systems affected by the emissions modification and consisted of the greater of either (i) 10 years from initial sale or 120,000 miles, whichever comes first or (ii) 4 years or 48,000 miles from the installation of the emissions modification, whichever comes first;
200. The estimated maximum settlement value of cash compensation to class members (if every U.S. class member made a claim) was USD\$307,460,800 and the estimated per vehicle cost was USD\$1,050. The U.S. MDL Settlement was specifically designed in conjunction with Consent Decrees (discussed hereinbelow) to incentivize and to facilitate the achievement of a minimum claims rate of 85% (See Section 4.12 of the U.S. MDL Settlement – Exhibit P-92);
201. Outside of the MDL, all states reached settlements with FCA, VM Motori, and Bosch. For example, both FCA and Bosch entered into Consent Orders and Judgments with the state of New York, as appears from a copy of the letter from the Office of the Attorney General of the State of New York to the U.S. MDL Court dated January 18, 2019, including its attachments and from a copy of the Bosch press release entitled “Bosch reaches settlements with 50 U.S. States and Territories as well as with U.S. civil plaintiffs with regard to diesel vehicles” dated January 10, 2019, produced herein *en l'asse* as **Exhibit P-93**;
202. On February 11, 2019, the U.S. MDL Court preliminarily approved the U.S. MDL Settlement and certified the U.S. class for the purposes of settlement. On May 3, 2019, final approval was granted, as appears from a copy of the Order granting Motion for Preliminary Approval of Class Settlement dated February 11, 2019, from a copy of the Order granting Preliminary Approval of Class Settlement and Direction of Notice Under Rule 23(e) dated February 11, 2019, and from a copy of the Order Granting Final Approval of Class Action Settlement and Attorneys’ Fees and costs dated May 3, 2019 in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein *en l'asse* as **Exhibit P-94**;
203. Concurrent with the U.S. MDL Settlement, the U.S. defendants entered into a Consent Decree with the EPA and with the state of California (the “U.S.-CA Consent Decree”) to resolve the EPA and CARB allegations (Exhibits P-28, P-32, and P-30). The U.S-CA Consent Decree described the corrective actions required to bring the





U.S. Subject Vehicles in compliance with emissions standards, including the removal of the Defeat Devices, extending the warranties and provided for civil penalties, as appears from a copy of the Consent Decree dated May 3, 2019, from a copy of the First California Partial Consent Decree dated May 3, 2019, and from a copy of the Second California Partial Consent Decree dated May 3, 2019 in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein *en liasse* as **Exhibit P-95**;

204. The U.S.-CA Consent Decree provided that any money the defendants could potentially save by not compensating U.S. class members would be lost, in the form of penalties of more than USD\$6,000 per vehicle for failing to achieve the required 85% participation rate within two years' time (See paras. 37, 41 of Exhibit P-95);

205. The Consent Decree (Exhibit P-95) provided that *inter alia* the following disclosure be made before applying the Approved Emissions Modification to the U.S. Subject Vehicles:

206. Key Vehicle Attributes. This AEM is not expected to change any of your key vehicle attributes, such as reliability, durability, vehicle performance, drivability, engine noise or vibration, or other driving characteristics.

207. DEF Consumption. The AEM is not expected to change your Diesel Exhaust Fluid (DEF) tank refill interval. If your previous refill rate coincided with your oil change interval, that should not change with this software update. However, you may notice that under certain conditions your vehicle may use slightly more DEF as compared to prior usage.

208. Fuel Economy. Average fuel economy is not expected to change as a result of this AEM. The AEM may, under sustained low speed driving (e.g. under 21 mph) with frequent stops, decrease your fuel economy or, under sustained high speed driving conditions, may increase or decrease your fuel economy. As with all vehicles, however, several factors can affect your actual fuel economy such as: how and where you drive, vehicle condition, maintenance and age, fuel variations, and vehicle variations;

209. Following driver complaints of a hesitation in acceleration for a five-minute period after the engines were started, the above disclosure was modified as follows:

Key Vehicle Attributes: The AEM is not expected to change any of your key vehicle attributes, such as reliability, durability, vehicle performance, drivability, engine noise or vibration, or other driving characteristics. The original version of the AEM released in May of 2019 caused a slight hesitation or lag in acceleration during approximately the initial five minutes of driving after engine start until the engine and exhaust warm up. This problem, which was reported by only a small percentage of drivers, has been addressed by an updated AEM that the U.S. Environmental Protection Agency and the California Air Resources Board approved in



December of 2019. With the updated AEM, for a short period of time after engine start, some customers may have to depress the accelerator pedal further to minimize any hesitation or lag in acceleration.

As appears from a copy of the Stipulation and Agreement Regarding Non-Material Changes to the Consent Decree dated December 17, 2019 in *In re: Chrysler-Dodge-Jeep EcoDiesel Marketing, Sales Practices and Products Liability Litigation*, MDL No. 2777, produced herein as **Exhibit P-96**;

#### **N. The Aftermath**

210. Following *inter alia* the issuance of the Notices of Violation and the ensuing investigations, FCA was unable to obtain a certificate of conformity from the EPA for its 2017 model year Ram 1500 and Jeep Grand Cherokee vehicles equipped with 3.0-litre EcoDiesel engines (the “2017 Vehicles”) until it addressed the emissions issues. After several months, FCA presented updates to the 2017 Vehicles including modified emissions calibrations and on July 28, 2017, announced its intentions to make updates to the emissions control software in the Subject Vehicles, as appears from a copy of the FCA Defendants’ press release entitled “FCA Announces Certification of 2017 Model-year Diesel Vehicles” dated July 28, 2017, from copies of the Certificates of Conformity numbered as: HCRXT03.05PV-064 and JCRXT03.05PV-058, produced herein *en liasse* as **Exhibit P-97**;
211. FCA also received conditional certification from CARB for the 2017 Vehicles, as appears from a copy of the CARB Executive Order: A-009-1321 to FCA US, dated July 27, 2017, produced herein as **Exhibit P-98**;
212. Due to a collapse in demand and spiralling costs following the public exposure of the Defeat Devices in the Subject Vehicles, on February 26, 2018, FCA announced that it will abandon diesel engines in most of its passenger cars by 2022, as appears from a copy of the Financial Times article entitled “Fiat Chrysler to kill off diesel in all cars by 2022” dated February 25, 2018, produced herein as **Exhibit P-99**;
213. As part of the U.S. MDL Settlement, FCA provided a change to the emissions software in the U.S. Subject Vehicles called the “Approved Emissions Modification” to ostensibly render the vehicles in compliance with emissions standards (Exhibit P-92);
214. In approximately April/May 2019 and in the absence of any Canadian settlement similar to that in effect in the U.S. (i.e. monetary compensation and an extended warranty to U.S. residents), FCA launched a Canadian campaign notifying Canadian Class Members that it was offering the same change to the emissions software to the Subject Vehicles: Campaign V16 – Emission Control System Software (the “Emissions-Related Repair Campaign (V16)”), as appears from a copy of the Emissions-Related Repair Campaign (V16) letter that was sent out to Class Members in Canada, in English and in French, produced herein *en liasse* as **Exhibit P-100**;



215. Where a defect is not qualified as being safety-related, the automakers do not have to use the word “recall” or follow any “recall” procedures or regulations. These “Customer-Satisfaction Campaigns” are sometimes called “secret warranties” or “silent recalls”. As vehicles become more technologically sophisticated, the line between service campaign and safety recall become increasingly blurred. The largest reason for an automaker to opt for a campaign over a recall is simply cost, as appears from a copy of the article “Non-recall actions raise questions on safety info disclosure” from Automotive News, dated September 08, 2014, produced herein as **Exhibit P-101**;

216. The letter that FCA sent out to Class Members regarding the Emissions-Related Repair Campaign (V16) (Exhibit P-100) stated the following:

...WE ARE CONTACTING YOU ON IMPROVEMENTS THAT INVOLVE REPROGRAMMING THE EMISSION CONTROL SYSTEM SOFTWARE IN 2014, 2015, AND 2016 MODEL YEAR RAM 1500 AND JEEP GRAND CHEROKEE VEHICLES EQUIPPED WITH THE 3.0L DIESEL ENGINE TO ENHANCE THE EXHAUST EMISSION CONTROL AND ON- BOARD DIAGNOSTIC (OBD) MONITORING OF THOSE ENGINES.

Your vehicle must be repaired because:

The emission control system needs to be reprogrammed to enhance exhaust emissions control and OBD monitoring.

We apologize for any inconvenience and thank you for your attention to this very important matter.

217. According to the Supplemental Expert Report of Dr. M. David Checkel, P.Eng, which was produced in the context of the Ontario litigation:

...there are trade-offs between minimizing emissions and maximizing vehicle attributes, such as responsiveness and fuel economy. The subject vehicles, which were previously optimized for responsiveness and fuel economy at the expense of tailpipe emissions over much of the real-world operating range, can be expected to lose some vehicle responsiveness and fuel economy in normal operation. That is, the additional responsiveness and fuel economy previously gained by compromising emission control when operating outside of certification test cycle conditions could be lost.

...

...The V16 Recall involves replacing the original software and calibrations with Approved Emission Control (AEM) software which optimizes emission control over the full range of normal driving conditions. This change is confidently expected to compromise other powertrain attributes which were previously optimized at the expense of emission control. To put it simply, the incentive for using an illegal defeat



device was to provide enhanced vehicle attributes, such as responsiveness, fuel economy and extended DEF refill intervals. It is my opinion that, to the extent that those enhancements were made possible by defeat devices which compromised emission controls, the V16 Recall which removes those defeat devices is expected to eliminate the related enhancements. The effect is expected to be the same for all vehicles subjected to the V16 Recall.

... My opinion is that the unchanged official fuel economy ratings are not relevant to fuel economy changes in real world driving conditions. The official fuel economy ratings were originally measured and have been subsequently re-measured on the same official test cycles. The V16 Recall is not expected to change vehicle operations on official test cycles since the defeat devices were not active on official test cycles. Hence, no significant changes in the official fuel economy ratings measured on official test cycles would be expected.

... Because the V16 recall eliminates defeat devices that operated in real-world driving conditions (and not in official test conditions) the measurable changes in vehicle performance attributes and fuel economy are expected to occur in real world driving, not on official test cycles. In contrast to FCA's assurance that the V16 Recall has no effect on driveability and economy of the subject vehicles, a number of sources suggest that drivers have experienced significant changes in vehicle response and fuel economy of their in-use vehicles. While it is difficult to verify the accuracy of those sources, the frequency and commonality of those complaints suggests that the effects are real and measurable.

As appears from a copy of the Supplemental Affidavit of M. David Checkel sworn September 16, 2019, in *Maginnis et al. v. FCA Canada Inc. et al*, Court File No. CV-17-567691-00CP, produced herein as **Exhibit P-102**;

218. Following receipt of the Emissions-Related Repair Campaign (V16) letter (Exhibit P-100) many owners and lessees of the Subject Vehicles visited online forums to discuss *inter alia* the software upgrade, the existence of the U.S.-only settlement, and issues from having done the software upgrade, including disappointment, sluggish performance, shift points changed, harder shifts, requiring more downshifts on hills, extreme lag from dead stop, turbo lag, poor acceleration response, waiting to get into an accident, sometimes floored with no response for 2-4 seconds, reduced fuel economy, use of much more DEF, extreme throttle delay, safety concerns, and dead pedal, as appears from a copy of the discussions on the following online forums (i) EcoDieselRam.com entitled "Unhappy with Performance after Emissions Recall Update" from June 3, 2019 to February 4, 2020; (ii) EcoDieselRam.com entitled "Campaign v16 emission control system software" from May 14, 2019 to May 26, 2019, (iii) DieselRamForum.com entitled "FCA Campaign V16 – Emission Control System Software" from June/July 2019, (iv) Ram1500Diesel.com entitled "FCA 3.0L Diesel emissions recall (CANADA)" from May 2019 to May 2020, (v) Ram1500Diesel.com entitled "FCA Class Action in



Canada” from January 11, 2019 to November 2019, (vi) RAM Forumz from June 2019, and (vii) DieselJeeps.com entitled “Problem after Diesel Emission Fix” from June 2019 to May 2020, produced herein *en liasse* as **Exhibit P-103**;

219. One forum member posted a video of his 2015 Ram 1500 which demonstrates the major lag, as appears from a copy of the video entitled “Ram 1500 ecodiesel emissions recall test” dated July 14, 2019, produced herein as **Exhibit P-104**;
220. The NHTSA Engine Problems site “2015 RAM 1500” has 184 complaints about the Ram 1500 Subject Vehicle, with most of the most of the 2019 complaints relating to deterioration in responsiveness and/or fuel economy after the Emissions-Related Repair Campaign (V16), as appears from a copy of an extract from the website [www.carcomplaints.com](http://www.carcomplaints.com), produced herein as **Exhibit P-105**;
221. According to the Supplemental Expert Report of Dr. M. David Checkel, P.Eng (Exhibit P-102), which was produced in the context of the Ontario litigation:

“It is well understood in the industry that changing transmission control strategy and calibration can have a significant impact on vehicle performance attributes like vehicle responsiveness and fuel economy. The EPA/CARB/FCA Consent Decree requires FCA to replace the Transmission Control Unit software and calibration by reflashing the TCU. This re-flash would not be expected to change transmission behaviour on certification test cycles where it already met EPA/CARB requirements. However, the Consent Decree and the subsequent FCA response provide no indication of how significantly this re-flash changes transmission operating characteristics in real-world driving. The anecdotal reports based on driver experience suggest that some combination of engine calibration and transmission control effects can be very significant, particularly during the engine warm-up period. Several owners report [] the vehicle running in higher gears after the re-flash and not shifting down to low gear even when starting from rest.

The documents at the heart of this matter do not clarify why or to what extent the V16 Recall alters the transmission shift behaviour of the subject FCA vehicles. However, it is relatively simple and relatively important to observe transmission shift patterns during controlled on-road testing so changes in transmission behaviour in real-world driving conditions would be observable.

Publicly available reports from Dodge Ram and Jeep Cherokee owners whose vehicles have received the FCA V16 Recall consistently state that vehicle responsiveness in real-world driving conditions was negatively affected. When reports include fuel consumption they generally state that fuel consumption in real-world driving conditions increased after the FCA V16 Recall. One report from an automotive technical author cites the same issues while providing more detail than others.



This anecdotal evidence is consistent with the changes expected when emissions defeat devices that operate in real-world driving conditions are corrected.

222. Following FCA's Emissions-Related Repair Campaign (V16) (Exhibit P-100), many owners and lessees of the Subject Vehicles reported issues with the performance of their vehicles, including a decrease in fuel economy. Specifically, after publishing a report on the U.S. settlement and the related performance issues with the Subject Vehicles, TFL Truck received hundreds of emails from concerned owners and lessees regarding the performance of their Subject Vehicles after the Approved Emissions Modification reflash i.e. the Emissions-Related Repair Campaign (V16), as appears from copies of 2 TFL Truck videos entitled "Last-Gen Ram EcoDiesel Owners Are FURIOUS About Their Trucks' Performance After Emissions Fix!" dated August 6, 2019 (TFL Video 1) and entitled "Did a Recall Ruin the 2016 Ram EcoDiesel? We Drive One and Find Out!" dated September 1, 2019 (TFL Video 2), produced herein *en liasse* as **Exhibit P-106**;

223. In TFL Video 1, after TFL Truck had received a lot of responses by disappointed owners and lessees by the lack of performance after the Emissions-Related Repair Campaign (V16), including performance degradation, accelerator lag, and poor fuel economy. Many of the emails were read out including the following:

- Phil: ...I have noticeable change in power and acceleration...I did the AEM fix in June and have driven the truck about 1,500 miles since. Since performing this recall procedure...I have noticed 2 issues, first a significant acceleration delay, especially from stop when under a light load or an uphill climb. The second issue is loss of highway fuel economy. My average long trip mileage used to be 26-28 mpg, but after the fix, it never has exceeded 23 mpg...
- David: I have a 2016 Ram EcoDiesel and had the emission repair as well. I noticed a very significant lag of almost 5 seconds from a slow after the repair and almost got hit because I couldn't get out of the way.

Two Ram dealers said there is no fix per Fiat Chrysler.

- Kyle: I have a 2015 Ram 1500 EcoDiesel with the new emissions update. I have poor throttle response and more noticeable when cold. I think its very dangerous because you expect to pull into traffic and have it respond. It is not the case.

I have to be particularly careful when entering intersections. Have had 2 close calls so far. I have to warn people to use extreme caution if they use my truck...

- Brett: The settlement info states you are not suppose[d] to have performance changes. I lost power and 3 miles to the gallon. I took it back to the dealer and was basically told there was nothing they could do. I liked my truck but it is no longer fun to drive and no longer safe, especially if I'm pulling anything.



I don't recommend the update unless you plan to get rid of the truck anyway. I feel the settlement information misrepresented the performance impact and that I'm ending up in a worse position for doing it.

- WM: Yes, there is a noticeable difference in the throttle response after the recall was performed. The turbo lag is significant. It makes you push the accelerator further causing a turbo leap and lose fuel economy...
224. In TFL Video 2, it was reported that owners/lessees of the Subject Vehicles experienced performance issues after the Emissions-Related Repair Campaign (V16), with many people writing emails to the TFL staff to complain. The drivers complained about a “really big delay in acceleration when taking off with a cold engine and a decrease in fuel economy. In performing a test drive of a 2015 Ram 1500 Subject Vehicle, the acceleration was found to be noticeably worse both at start up and during the drive, with no downshift, and that you need to force down your foot to accelerate for regular driving needs;
225. On October 25, 2019, Transport Canada issued a recall in Canada for 50,259 Ram 1500 vehicles model year 2014-2019 to replace the EGR cooler due to its propensity to crack internally and leak, as appears from a copy of the Transport Canada Recall #2019535 dated October 25, 2019, produced herein as **Exhibit P-107**;
226. On April 3, 2020, FCA initiated another Canadian emissions-related repair campaign of the Subject Vehicles by sending a letter to Class Members stating that there were more “improvements” to be made (“FCA’s Emissions-Related Repair Campaign (VA7)”), stating the following:

Your vehicle must be repaired because:

After the emission control system was reprogrammed (V16), some vehicles may have experienced a slight engine hesitation or lag in acceleration from engine start-up until the engine and exhaust warmed up.

This improvement (Customer Satisfaction Notification – VA7) for your vehicle reduces the hesitation or lag in acceleration from engine start-up.

As appears from a copy of the Emissions-Related Repair Campaign (VA7) letter dated April 3, 2020, in English and in French, produced herein *en liasse* as **Exhibit P-108**;

#### **O. Class Members**

227. Nearly 2,000 Quebec-resident Class Members have been identified, as appears from a redacted copy of the Class Members who have registered with Class Counsel, produced herein as **Exhibit P-109**;



228. A list of compiled key words from the Class Members complaints highlight terms relating to *pollution, loss in value, money, environment, performance, and emission*, as appears from a copy of the Counsel's report, provided herein as **Exhibit P-110**;
229. A small sampling of the Class Members comments is included herein (Exhibit P-110):
- (a) "...Perte de puissance. Augmentation de la consommation d'essence et de liquide DEF" (Line 9);
  - (b) "...Vous devriez voir le nombre de fois j'ai été au garage perdu du temps de travail le matin à aller déposer mon camion et déranger quelqu'un pour venir me chercher..." (Line 16);
  - (c) "Système anti pollution NOX toujours en défaut dépensé environ 5000\$ a date et ne fonctionne toujours pas" (Line 17);
  - (d) "...Suite au rappel de Chrysler, j'ai fait faire la reprogrammation du système d'émission de gaz en juin 2019. Tout de suite après avoir fait faire ce rappel, j'ai constaté une perte de performance du véhicule (perte de puissance, perte d'accélération, augmentation de la consommation de carburant et de DEF, (etc.)..." (Line 20);
  - (e) "...la lumière check engine s'allume de 3 à 10 fois par année qui est toujours reliée à la anti-pollution très couteux à cheque fois." (Line 21);
  - (f) "...Perte de pouvoir sur l'autoroute, perte de valeur lors de la vente suite à ces problèmes. Véhicule vendue en janvier 2018 par manque de confiance sur la fiabilité d'un tel véhicule." (Line 30);
  - (g) "Paid a premium for the EcoDiesel because it was more environmentally friendly than the Hemi, when you consider the fuel economy versus the increased cost of winter diesel and increased maintenance cost anyone could figure out the choice was purely for the environment. I got ripped off[f]. I am not factoring the fact that the engine self destroyed at 82 000 Km. Now I do not trust the truck and it is for sale, do not have time to get stranded again and the money to fix a destroyed engine out of warranty" (Line 32);
  - (h) "Loss of power to the point of it being dangerous. Replacement of catalytic converter along with O2 sensors at only 130 000km worth approx. 4000\$. Was at the garage for 3-4 weeks." (Line 35);

#### **P. Summative Remarks**

230. The Defendants were well aware that emissions, performance, and fuel consumption were significant factors for customers making vehicle purchase decisions – the misrepresentations regarding these factors were designed to influence customers to purchase their Subject Vehicles based on false information;



231. Because of the Defendants' actions, the vehicles that were sold to the Plaintiffs and the Class are not what they had promised. During normal operation, the Subject Vehicles polluted the atmosphere with much higher levels of NO<sub>x</sub> than the artificially manipulated test results disclosed and then are permitted by federal and environmental protection laws. Meanwhile, when the engine and transmission are operated in a manner that actually limits pollution to legal levels, the Subject Vehicles cannot deliver the performance that the Defendants advertise;
232. FCA would not have been able to achieve the promised fuel economy and/or towing power for the Subject Vehicles without having deactivated or having reduced the emission control system during real-world driving conditions. FCA's two repair campaigns to date for the emissions systems in the Subject Vehicles has resulted in decreased engine performance and the Class Members that performed the supposed "fix" must spend additional sums of money on fuel and have not retained the promised performance and towing power. Subject Vehicles that did undergo the campaign's repairs are also necessarily worth significantly less in the marketplace because of their decreased performance and fuel efficiency and increased wear on their engines;
233. Taken together, the above facts reveal that the Defendants have intentionally concealed the functions of the emission control technology from regulators and consumers alike. Further, they demonstrate that the Defendants' claims about their EcoDiesel Subject Vehicles as "clean diesel" with "ultralow emissions" and "no NO<sub>x</sub>" emitted through the tailpipe is false and/or misleading;
234. As a result of the Defendants' surreptitious use of the Defeat Devices to downplay the NO<sub>x</sub> emissions and to exaggerate the fuel economy of the Subject Vehicles, owners and/or lessees of the Subject Vehicles have suffered damages upon which they are entitled to claim, including, the premium price paid for the EcoDiesel option for fuel-efficient and powerful vehicles that were environmentally friendly;

#### **IV. THE EXAMPLE OF THE REPRESENTATIVE PLAINTIFFS**

##### **A. Plaintiff Garage Poirier**

235. On March 31, 2015, Plaintiff Garage Poirier purchased a lightly-used 2014 Ram 1500 Laramie Longhorn Crew Cab 4x4 EcoDiesel pick-up truck (VIN 1C6RR7WM4ES352033) from Trois Diamants Autos (1987) Ltée at 3035 Chemin Gascon, in Mascouche, Quebec for a purchase price of \$46,000.00 plus taxes, as appears from a copy of the sales contract dated March 31, 2015, produced herein as **Exhibit P-111**;
236. Plaintiff Garage Poirier had no opportunity to negotiate the price of the Subject Vehicle and he did not receive any manufacturer rebate;
237. Plaintiff Garage Poirier purchased the Subject Vehicle based on its advertised fuel economy, appearance, perceived comfort, and performance, and it assumed that it met all federal regulations;



238. Plaintiff Garage Poirier purchased the Subject Vehicle in part based on his impression that it would be economical for inter alia his frequent trips to visit his son who was studying in Matane, Quebec (over 600 kms from Montreal). At the time, he was driving approximately 30,000 – 35,000 kms per year;
239. At the time, the FCA Defendants represented that the vehicle had a fuel consumption of 12.1 litres per 100 kilometres in city driving and 8.0 litres per 100 kilometres on the highway;
240. Plaintiff Garage Poirier noticed that its vehicle was consuming more fuel than was represented and that the fuel consumption was much higher than it would have expected given the Defendants' representations relating to the vehicle's fuel efficiency;
241. In April/May 2019, Plaintiff Garage Poirier received a letter (Exhibit P-100) from FCA about the Emissions Related Recall (Campaign V16) and it had its emission control system reprogrammed;
242. Plaintiff Garage Poirier had the Emissions Related Recall performed on May 27, 2019 between 8h36 and 11h20 am, based on FCA's letter, which informed it that it consisted of improvements and enhancements and did not inform of the potential for performance issues and lower fuel economy, the whole as appears more fully from a copy of the bill from ALBI Chrysler dated May 27, 2019, produced herein as **Exhibit P-112**;
243. Following the completion of the Emissions Related Recall Plaintiff Garage Poirier experienced acceleration problems with its Subject Vehicle;
244. In April 2020, Plaintiff Garage Poirier received another letter from FCA informing it that there were more "improvements" to be made on its Subject Vehicle stating the following (Exhibit P-108):

Your vehicle must be repaired because:

After the emission control system was reprogrammed (V16), some vehicles may have experienced a slight engine hesitation or lag in acceleration from engine start-up until the engine and exhaust warmed up.

This improvement (Customer Satisfaction Notification - VA7) for your vehicle reduces the hesitation or lag in acceleration from engine start-up;

245. Plaintiff Garage Poirier had the second Emissions Related Recall performed on June 26, 2020 between 9h10 and 10h48 am, the whole as appears more fully from a copy of the bill from ALBI Chrysler dated June 26, 2020, produced herein as **Exhibit P-113**;



246. Plaintiff Garage Poirier still owns the Subject Vehicle today, it has approximately 127,000 kms on it, and he has remaining acceleration issues;
247. Plaintiff Garage Poirier has suffered ascertainable loss as a result of the Defendants' omissions and/or misrepresentations associated with the Defeat Device, including, but not limited to, overpayment for the Subject Vehicles, past, present, and future excessive gasoline charges, future reduced resale value, and trouble and inconvenience;
248. Had Plaintiff Garage Poirier known about the Defeat Device, it would not have purchased the Subject Vehicle or would not have paid such a price;
249. To quantify Plaintiff Garage Poirier's "diesel premium" portion of the purchase price in accordance with the Expert Report of Edward M. Stockton (Exhibit P-84), reference must be made to the below chart:

**Table 2: Estimated Diesel Premium:**

<b>Diesel Option Cost</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Grand Cherokee</b>	\$4,050	\$4,050	\$4,050
<b>Ram 1500</b>	\$4,050	\$4,293	\$4,293

250. Accordingly, Plaintiff Garage Poirier purchased its 2014 RAM 1500 on March 31, 2015 and received the second recall/campaign on June 26, 2020 (i.e. 5 years later);
251. In accordance with the "diesel premium" price theory, it is assumed that a vehicle's lifespan is 8 years (i.e. has a 12.5% per year depreciation). In other words, Plaintiff Garage Poirier paid an additional \$4,050 premium at the point-of-sale; however, this really means that he overpaid by \$506.25 (i.e. \$4,050/ 8 years) per year, for 8 years;
252. For 5 of those years, March 2015 (purchase date) until June 2020 (fix date), Plaintiff Garage Poirier overpaid \$506.25 per year. Even if his Subject Vehicle was 100% fixed in 2020 (which is not admitted), he still lost 5 years of the 8-year lifespan of his vehicle where he paid a premium, but did not receive the "bargain" that he paid for. The damages in this case would be \$2,531.25 (i.e. \$506.25 x 5 years);
253. Alternately, and also based on the "diesel premium" purchase price theory, it is unfair that Plaintiff Garage Poirier was deprived of \$4,050 when it purchased the vehicle in March 2015. The "bargain" of that purchase price was (arguably) only delivered in June 2020. This means that the Plaintiff Garage Poirier has a claim for interest on this overpayment for 5 years at 5% per year in accordance with the *Interest Act*, R.S.C. 1985 c. I-15. The damages in this case would be \$1,012.50 (i.e. \$4,050 x 5% x 5 years);



**B. Plaintiff Bouffard**

254. On May 25, 2016, Plaintiff Bouffard purchased a lightly-used 2016 Dodge Ram 1500 Outdoorsman EcoDiesel pick-up truck (VIN 1C6RR7GM1GS168850) from Blainville Chrysler at 249 Boulevard de la Seigneurie West, in Blainville, Quebec for a purchase price of \$44,995.00 plus taxes, the whole as appears more fully from a copy of the sales contract dated May 25, 2016, produced herein as **Exhibit P-114**;
255. At that time, the Subject Vehicle had 6,000 kms on it (Exhibit P-114);
256. Plaintiff Bouffard traded in his previous vehicle which was a 2011 Dodge Ram 1500 (Exhibit P-114);
257. Plaintiff Bouffard financed the Subject Vehicle through the dealership with Scotiabank;
258. Plaintiff Bouffard purchased the Subject Vehicle based on its advertised fuel economy, torque, power, and perceived cleanliness as advertised on the Defendants' website(s) and he assumed that it met all federal regulations ;
259. At the time, Plaintiff Bouffard was driving an average minimum of 40,000 kms per year;
260. At the time, the FCA Defendants represented that the vehicle had a fuel consumption of 11.6 litres per 100 kilometres in city driving and 8.4 litres per 100 kilometres on the highway;
261. Because he resets his odometer every time that he fills up fuel, Plaintiff Bouffard noticed that his vehicle was consuming more fuel than he would have expected given the Defendants' representations relating to the vehicle's fuel efficiency;
262. Plaintiff Bouffard became aware of the news stories about the Defeat Device that the Defendants had installed in his Subject Vehicle and also noticed that several class actions were filed in the United States due to this same issue (Exhibit P-87);
263. Plaintiff Bouffard never received any notices from FCA regarding the various "fixes" and he no longer owns the Subject Vehicle as he traded it in 2018 due to reliability concerns and in order to be in conformity with environmental standards;
264. On June 20, 2018, Plaintiff Bouffard traded-in his Subject Vehicle at St-Jerome Chrysler Jeep Dodge Inc. for another Ram 1500 EcoDiesel (2018 – VIN 1C6RR7TM3JS259163), the whole as appears more fully from a copy of the sales contract dated June 20, 2018, produced herein as **Exhibit P-115**;
265. The reason that Plaintiff Bouffard purchased another Ram 1500 EcoDiesel was that he was told that this model had all of the new fixes due to the problems that they had with the older model;

266. Plaintiff Bouffard has suffered ascertainable loss as a result of the Defendants' omissions and/or misrepresentations associated with the Defeat Device, including, but not limited to, overpayment for the Subject Vehicles, past, present, and future excessive gasoline charges, reduced resale value, and trouble and inconvenience;
267. Had Plaintiff Bouffard known about the Defeat Device, he would not have purchased the Subject Vehicle or would not have paid such a high price;
268. To quantify Plaintiff Bouffard's "diesel premium" portion of the purchase price in accordance with the Expert Report of Edward M. Stockton (Exhibit P-84), reference must again be made to the below chart:

**Table 2: Estimated Diesel Premium:**

<b>Diesel Option Cost</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Grand Cherokee</b>	\$4,050	\$4,050	\$4,050
<b>Ram 1500</b>	\$4,050	\$4,293	\$4,293

269. Accordingly, Plaintiff Bouffard purchased his 2016 RAM 1500 on May 25, 2016 and traded it in on June 20, 2018 (i.e. 2 years later);
270. In accordance with the "diesel premium" price theory, it is assumed that a vehicle's lifespan is 8 years (i.e. has a 12.5% per year depreciation). In other words, Plaintiff Bouffard paid an additional \$4,293 premium at the point-of-sale; however, this really means that he overpaid \$536.63 (i.e. \$4,293/ 8 years) per year, for 8 years.
271. For 2 of those years, May 2016 (purchase date) until June 2018 (trade-in date), Plaintiff Bouffard overpaid \$536.625 per year. Even if he then sold his vehicle, he still lost 2 years of the 8-year lifespan of his vehicle where he paid a premium, but did not receive the "bargain" that he paid for. The damages in this case would be \$1,073.25 (i.e. \$536.625 x 2 years).
272. Alternately, and also based on the "diesel premium" purchase price, it is unfair that Plaintiff Bouffard was deprived of \$4,293 when he purchased the vehicle in May 2016. The "bargain" of that purchase price was (arguably) never delivered to him. This means that the Plaintiff Bouffard has a claim for interest on this overpayment for 2 years at 5% per year in accordance with the *Interest Act*, R.S.C. 1985 c. I-15. The damages in this case would be \$429.30 (i.e. \$4,293 x 5% x 2 years).
273. Both Plaintiffs' damages are a direct and proximate result of the Defendants' conduct;
274. In consequence of the foregoing, the Plaintiffs are justified in claiming compensatory and punitive damages;



## V. THE DAMAGES

275. Every member of the Class has purchased or leased a Subject Vehicle;
276. The Class Members' damages would not have occurred, but for the acts, omissions, and/or false representations of the Defendants in fitting the Subject Vehicles with an illegal Defeat Device;
277. In consequence of the foregoing, each member of the Class is justified in claiming at least one or more of the following damages:
- (a) Overpayment of the purchase price and/or lease payments of the Subject Vehicles assessed ex-ante at the time that the purchase and/or lease payment was made;
    - Alternately, if one of the various fix(es) are presumed to have resolved the problem, the above calculation multiplied by a percentage of such overpayment for a certain number of years [i.e. from the date of purchase or lease to the date of the fix(es)], or an annual interest rate of 5% per annum in accordance with the federal *Interest Act* on such overpayment for a certain number of years [i.e. from the date of purchase or lease to the date of the fix(es)],
  - (b) Lower resale value/ diminished value of the Subject Vehicles,
  - (c) Increased fuel expenditures (past, present, and future),
  - (d) Out-of-pocket loss,
  - (e) Cost of future attempted repairs,
  - (f) Higher interest charges, increased sales tax, and higher insurance premiums;
  - (g) Trouble and inconvenience, and
  - (h) Punitive and/or exemplary damages;
278. The damages to the Class Members are a direct and proximate result of the purchase or lease of Subject Vehicles and the Defendants' conduct in designing, manufacturing, and installing an illegal Defeat Device and making false representations as to the performance of the Subject Vehicles;

**FOR THESE REASONS, MAY IT PLEASE THIS HONORABLE COURT TO:**

**GRANT** the class action application of the members of the Class;

**DECLARE** that the Defendants have manufactured vehicles containing a latent defect in connection with pollutant emissions and high fuel consumption;

**DECLARE** that the Defendants deceived the Class Members by failing to disclose the latent defects, given the elevated level of pollutant emissions and fuel consumption;

**DECLARE** that the FCA Canada inc., FCA US LLC, VM Motori North America Inc. Defendants have made false representations to governments, consumers, and merchants regarding the anti-polluting and energy-efficient qualities of the Subject Vehicles;

**CONDEMN** the Defendants to pay compensatory damages and punitive damages to each member of the Class;

**ORDER** the collective recovery of the amounts payable;

Alternatively, **ORDER** the Defendants to recall the Subject Vehicles and pay compensation to the owners and/or lessees of the Subject Vehicles;

The whole with legal costs, including the costs of opinions and experts.

Montreal, October 5, 2021

(s) Andrea Grass

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CONSUMER LAW GROUP INC.

Per: Me Andrea Grass

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