CANADA

PROVINCE OF QUEBEC
DISTRICT OF MONTREAL

NO: 500-06-000862-173

(Class Action)
SUPERIOR COURT

C. AUGER

Petitioner

-vs.-

GENERAL MOTORS OF CANADA COMPANY, legal person duly constituted having its head office at 1300-1969 Upper Water Street, Purdy's Wharf Tower II, City of Halifax, Province of Nova Scotia, B3J 3R7

and

GENERAL MOTORS LLC, legal person duly constituted having its head office at 300, Renaissance Center, City of Detroit, State of Michigan, 48265-3000, U.S.A.

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 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.

Respondents

APPLICATION TO AUTHORIZE THE BRINGING OF A CLASS ACTION
& TO APPOINT THE PETITIONER AS REPRESENTATIVE
(Art. 574 C.C.P. and following)

TO ONE OF THE HONOURABLE JUSTICES OF THE SUPERIOR COURT, SITTING IN AND FOR THE DISTRICT OF MONTREAL, YOUR PETITIONER STATES AS FOLLOWS:

I. GENERAL PRESENTATION

A) The Action

1. Petitioner wishes to institute a class action on behalf of the following group, of which he is a member, namely:

    - all persons, entities or organizations resident in Quebec who purchased and/or leased one or more of the Subject Vehicles equipped with Defeat Devices, or any other group to be determined by the Court;

2. The "Defeat Devices" and/or the "Auxiliary Emission Control Devices" referred to in this litigation are illegal software that detects when the vehicle is undergoing emissions testing and switches on the full emissions control systems only during the test – unduly "defeating" or reducing the vehicle's emissions (and exhibiting higher fuel efficiency) under testing conditions; otherwise, at all other times that the vehicle is running, the emissions control systems are shut off;

3. The "Subject Vehicles" means all GM vehicles equipped with a Duramax engine, including, but not limited to:

    a) Model years 2011 to 2016 GM Silverado 2500HD and 3500HD vehicles, and

    b) Model years 2011 to 2016 GM Sierra 2500HD and 3500HD vehicles;

4. The Petitioner reserves the right to amend the Class definition and the list of "Subject Vehicles" should further investigation reveal that additional models, model-years, and model variations be uncovered to be affected;

5. The GM Respondents designed, manufactured, marketed, distributed, warranted, leased and/or sold the Subject Vehicles with Duramax engines that were represented to be capable of passing federal emission standards; however, in reality, they had equipped the Subject Vehicles with at least 3 illegal Defeat Devices software designed to falsify the vehicles' emissions during emissions testing;

6. The Bosch Respondents created, designed, developed, manufactured, tested, supplied, and/or sold the Defeat Devices as well as an electronic diesel control (EDC) in order to enable the GM Respondents to implement the Defeat Devices in the Subject Vehicles;

7. The Petitioner contends that the Respondents failed to disclose the existence of the Defeat Devices and that the Subject Vehicles emitted Nitrogen Oxides ("NO_x") at a

much higher level than represented and that they had substantially lower fuel efficiency than stated. In fact, the Respondents actively concealed the existence of the Defeat Devices and the fact that their existence would diminish both the intrinsic and the resale value of the Subject Vehicles, as well as, increase the cost of fuel for consumers;

B) The Respondents

I. The GM Respondents

8. Respondent General Motors of Canada Company (hereinafter "GM Canada") is a Canadian corporation with its head office in Halifax, Nova Scotia. It conducts business throughout Canada, including within the province of Quebec, as appears from a copy of an extract from the *Registraire des entreprises*, produced herein as **Exhibit R-1**;

9. Respondent General Motors LLC ("hereinafter "GM US") is an American corporation with its head office in Detroit, Michigan. It is the owner of the following trade-marks

   (a) "GENERAL MOTORS" (TMA107722), which was registered on August 16, 1957,
   (b) "SILVERADO" (TMA513431), which was registered on July 27, 1999,
   (c) "SIERRA" (TMA508465), which was registered on February 24, 1999,
   (d) "DURAMAX" (TMA549804), which was registered on August 16, 2001, and
   (e) "GENERAL MOTORS" (TMA675384), which was registered on October 20, 2006,

   the whole as appears more fully from a copy of said trade-marks from the CIPO database, produced herein *en liasse* as **Exhibit R-2**;

10. The GM Respondents designed, manufactured, marketed, distributed, warranted, leased and/or sold the Subject Vehicles worldwide, including in Quebec. They designed, manufactured, and installed the GM engine systems in the Subject Vehicles and they developed and disseminated the owner's manuals and warranty booklets as well as other advertising and promotional material relating to the Subject Vehicles;

II. The Bosch Respondents

11. Respondent Robert Bosch Inc. (hereinafter "Bosch Inc.") is a Canadian corporation with its head office in Mississauga, Ontario. It conducts business in Canada, including within the province of Quebec, the whole as appears more fully from a copy of an extract from the *Registraire des entreprises*, produced herein as **Exhibit R-3**;

12. Respondent Robert Bosch LLC ("Bosch LLC") is an American corporation with its head office in Farmington Hills, Michigan;

13. From at least 2005 to 2015, the Bosch Respondents created, designed, developed, manufactured, tested, supplied, and/or sold defeat devices, which were specifically designed to evade emissions requirements in vehicles including the Dodge Ram 1500

EcoDiesel and Jeep Grand Cherokee EcoDiesel, as well as models manufactured by Volkswagen, Audi, Porsche, and Mercedes;

III. The Respondents' Solidary Liability

14. During the Class Period, the Respondents, either directly or through a parent company, subsidiary, agent or affiliate, caused the Subject Vehicles to be sold with a Defeat Device throughout Canada, including within the province of Quebec;

15. Given the close ties between the Respondents and considering the preceding, they are all solidarily liable for the acts and omissions of the other;

C) The Situation

I. Diesel Engines – Background

16. A diesel engine is an internal combustion engine in which ignition of fuel is initiated by the high temperature which a gas achieves when it is greatly compressed. In contrast, a regular spark-ignition engine such as a gasoline engine, which ignites fuel using spark plugs;

17. Diesel engines first became popular in North American passenger vehicles in the 1970s and 1980s, but gained a reputation as "dirty" because of their emissions; they emitted noxious gases and particulate matter. As diesel engines need to be more robust than gasoline engines, diesel-powered vehicles also cost more to produce – commanding a premium price. These factors, combined with increasingly stringent emissions regulations caused diesel passenger vehicles to become increasingly unpopular in the market;

18. Thus, in recent decades, fewer diesel engine vehicles have appeared on Canadian roadways. Even though diesel engines can usually provide more torque than gasoline engines, they are also higher polluters and more expensive. Diesel passenger cars thus began to disappear in the 1980s and 1990s, and were all but eliminated in 2004 when the *On-Road Vehicle and Engine Emission Regulations*, SOR/2003-2 (the "*On-Road Vehicle and Engine Emission Regulations*) under the *Canadian Environmental Protection Act, 1999* ("CEPA") aligned with the *Environment Protection Act* in the United States and when the California Air Resources Board (CARB) came into effect, effectively banning their use;

19. The *On-Road Vehicle and Engine Emission Regulations* makes it a violation for any person to sell, manufacture, or install any component in a motor vehicle that "is 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"[1];

[1] *On-Road Vehicle and Engine Emission Regulations*, SOR/2003-2, at s. 11.

20. 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, the whole as appears more fully 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 R-4**;

21. The *Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations*, SOR/2013-24 came into effect under *CEPA*, establishing mandatory greenhouse gas emission standards (including NO_x), which are harmonized with the U.S. standards. These regulations apply to vehicles of the 2014 and later model years;

22. 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, low-end power, better drivability, and much higher fuel efficiency. But these benefits come at the cost of much more harmful emissions than gasoline vehicles;

23. Instead of using a spark plug to combust highly-refined fuel with short hydrocarbon chains (as gasoline engines do), diesel engines compress a mist of liquid fuel and air to very high temperatures and pressures, which causes the diesel to spontaneously combust. This causes a more powerful compression of the pistons, which produces greater engine torque (that is, more power);

24. The diesel engine is able to do this both because it operates at a higher compression ratio than a gasoline engine and because diesel fuel contains more energy than gasoline does;

II. <u>The Emissions Situation, the Bosch Respondents, and the EDC</u>

25. One important by-product of a diesel combustion engine is NO_x, which is comprised of the gases nitrogen oxide (NO) and nitrogen dioxide (NO_2) that only form at high temperatures. NO_x is formed primarily from the liberation of nitrogen contained in fuel and nitrogen contained in combustion air during combustion processes. NO emitted during combustion quickly oxidizes to NO_2 when released into the atmosphere. 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 engine during the high temperature combustion process;

26. NO_x are a highly reactive group of gases that Environment Canada and other government agencies have found to create environmental problems and public health hazards, including smog, ground-level ozone, and acid rain. For example, direct exposure to NO_x can cause respiratory problems, such as lung irritation, bronchitis, or

pneumonia. When 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. NO_x is one of the main ingredients involved in the formation of ground-level ozone. 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. Children are at the greatest risk of experiencing negative health impacts from exposure to ozone. When mixed with rain in the atmosphere, NO_x can create nitric acid or acid rain. NO_x is also a contributor to global warming, the whole as appears more fully from a copy of an extract from Environment Canada's website at www.ec.gc.ca, produced herein as **Exhibit R-5**;

27. Because of the potential for considerable environmental pollution, the diesel engine market is one characterized by stringent governmental regulations regarding allowable pollutants, including exhaust emissions levels of Oxides of Nitrogen ("NO_x"), Non-Methane Hydrocarbons ("NMHC"), Non-Methane Hydrocarbon Equivalent, Carbon Monoxide and Particulate Matter;

28. In Canada, emissions from motor vehicles are regulated by Environment Canada under CEPA, which applies to new and/or used vehicles imported into Canada or to vehicles shipped inter-provincially;

29. Increasingly, the general approach to setting vehicle emissions standards in Canada is to harmonize them with the federal United States Environmental Protection Agency ("U.S. EPA") standards as much as possible. On January 1, 2004, Environment Canada enacted the *On-Road Vehicle and Engine Emission Regulations*, 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"[2]. Every model of vehicle or engine that is certified by the U.S. EPA and that is sold concurrently in Canada and in the United States, is required to meet the same emission standards in Canada as in the United States, the whole as appears more fully from a copy of the DieselNet article entitled "Emission Standards: Canada", produced herein as **Exhibit R-6**;

30. More specifically, the CEPA emission standards strictly regulate exhaust emissions, including oxides of nitrogen (NO_x). This effectively banned the sale of diesel passenger vehicles in Canada because the nature of diesel engines inherently makes NO_x emissions a particularly difficult problem to resolve;

31. Because of the serious hazards created by NO_x emissions, CEPA, in alignment with both the U.S. EPA and CARB, have regulated NO_x;

32. Seeing a major opportunity for growth, almost all of the major automobile manufacturers rushed to develop "clean diesel" and promoted new diesel vehicles as

[2] *On-Road Vehicle and Engine Emission Regulations*; ss. 2 & 3.

environmentally friendly and clean. Vehicle manufacturers such as Volkswagen, Mercedes, GM, Fiat Chrysler and others began selling diesel vehicles as more powerful, yet also as an environmentally friendly alternative to gasoline vehicles. And the marketing seemed to work, as millions of diesel vehicles were purchased between 2007 and 2016;

33. On September 18, 2015, the "Volkswagen Emissions Scandal" erupted, when the United States Environmental Protection Agency (US EPA) issued a notice of violation of the *Clean Air Act* to the Volkswagen Group after it was 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_x output to meet environmental standards during regulatory testing, but to emit up to 40 times more NO_x in real-world driving. Volkswagen deployed this programming in about eleven million cars worldwide, during model years 2009 through 2015, the whole as appears more fully from a copy of the U.S. EPA Notice of Violation dated September 18, 2015, produced herein as **Exhibit R-7**;

34. A defeat device, as defined by the U.S. EPA, is any apparatus that unduly reduces the effectiveness of emissions control systems under conditions a vehicle may reasonably be expected to experience. The U.S. EPA found that the Volkswagen/Audi defeat device allowed the vehicles to pass emissions testing while in the real world these vehicles polluted far in excess of emissions standards;

35. In September 2015 and again in November 2015, the Respondents admitted using defeat device software to activate emissions controls when diesel cars were being smog tested and deactivate those controls during normal, on-road driving. Volkswagen pled guilty to criminal charges and settled civil class actions for over ten billion dollars", the whole 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, 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 liasse* as **Exhibit R-8**;

36. The U.S. EPA as well as other government agencies began to look for defeat devices in other vehicles that were actually exceeding emissions standards. It was revealed that dozens of vehicle models were affected and on January 12, 2017, the U.S. EPA issued a Notice of Violation to Fiat Chrysler America because it had cheated on its emissions certificates with respect to its Dodge Ram and Jeep Grand Cherokee vehicles. On May 23, 2017, the United States filed a civil suit against Fiat Chrysler alleging violations of the *Clean Air Act*, the whole as appears more fully from a copy of the U.S. EPA Notice of Violation dated January 12, 2017 and from a copy of the U.S. Complaint (2:17-cv-11633-JCO-EAS) dated May 23, 2017, produced herein *en liasse* as **Exhibit R-9**;

37. At the core of the diesel scandal are the Bosch Respondents who were active and knowing participants in the scheme to evade emissions regulations. Bosch created, designed, developed, manufactured, and tested the electronic diesel control (EDC) that allowed GM to implement the Defeat Devices into the Subject Vehicles;

38. The Bosch EDC-17 is a good enabler for manufacturers to employ defeat devices as it enables the software to detect conditions when emissions controls can be detected – i.e., conditions outside of the emissions test cycle. Almost all of the vehicles found or alleged to have been manipulating emissions in the United States (Mercedes, Fiat Chrysler America, Volkswagen, Chevy Cruze) use a Bosch defeat device, the whole as appears more fully from a copy of the Checksumm article entitled "New Bosch EDC17 Engine Management System" dated August 17, 2006 and from a copy of the Quantum Tuning article entitled "Bosch EDC-17 Remap", produced herein *en liasse* as **Exhibit R-10**;

39. All modern engines are integrated with sophisticated computer components to manage the vehicle's operation, such as an EDC. The Bosch Respondents tested, manufactured, supplied, and/or sold the EDC system employed by Volkswagen, Fiat Chrysler, Mercedes, and GM;

40. Upon its introduction, EDC-17 was publicly touted by the Bosch Respondents as follows:

> EDC17 . . . controls every parameter that is important for effective, low-emission combustion.
>
> Because the computing power and functional scope of the new EDC17 can be adapted to match particular requirements, it can be used very flexibly in any vehicle segment on all the world's markets. In addition to controlling the precise timing and quantity of injection,
> exhaust gas recirculation, and manifold pressure regulation, it also offers a large number of options such as the control of particulate filters or systems for reducing nitrogen oxides. The Bosch EDC17 determines the injection parameters for each cylinder, making specific adaptations if necessary. This improves the precision of injection throughout the vehicle's entire service life. The system therefore makes an important contribution to observing future exhaust gas emission limits. (Exhibit R-10);

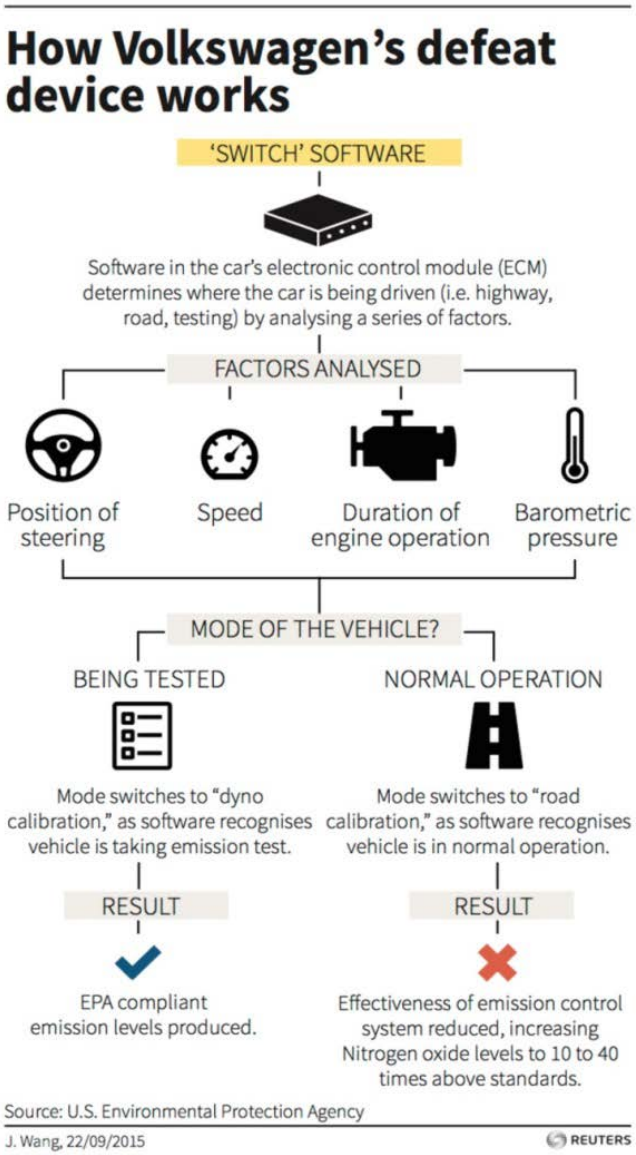
41. Bosch worked with each vehicle manufacturer that utilized EDC-17 to create a unique set of specifications and software code to manage the vehicles' engine operation;

42. With respect to the Subject Vehicles; however, EDC-17 was also enabled by Bosch and GM to surreptitiously evade emissions regulations. The Bosch and GM Respondents worked together to develop and to implement a specific set of software algorithms for implementation in the Subject Vehicles, which enabled GM to adjust fuel

levels, exhaust gas recirculation (EGR), air pressure levels, and even urea injection rates (for applicable vehicles), the whole as appears more fully from a copy of an extract from the Bosch Respondents' website at de.bosch-automotive.com, produced herein as **Exhibit R-11**;

43. When carmakers test their vehicles against emission standards, they place their cars on dynamometers (large rollers) and then perform a series of specific manoeuvres prescribed by federal regulations. Bosch's EDC-17 gave Volkswagen, GM, and other manufacturers the power to detect test scenarios by monitoring vehicle speed, acceleration, engine operation, air pressure, and even the position of the steering wheel. When the EDC-17's detection algorithm detected that the vehicle was on a dynamometer (and 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 subsequent reduction in emissions to legal levels. Once the EDC-17 detected that the emission test was complete, the EDC Unit would then enable a different "road calibration" that caused the engine to return to full power while reducing the emissions control systems' performance, and consequently caused the vehicle to spew the full amount of illegal NO_x emissions out on the road, the whole as appears more fully from a copy of the BBC News article entitled "Volkswagen: The scandal explained" dated December 10, 2015, produced herein as **Exhibit R-12**;

44. This process is illustrated in the following diagram, which is applicable to GM as well:



45. GM's illegal workaround was enabled by its close partnership with Bosch, which enjoyed a sizable portion of its annual revenue from manufacturing parts used in GM's and other manufacturers' diesel vehicles, the whole as appears more fully 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 R-13**;

46. The same level of coordination that occurred between Bosch and Volkswagen and went on between Bosh and GM. Bosch was well aware that GM was using its emissions control components as a defeat device and, in fact, worked with GM to develop the software algorithm specifically tailored for the Subject Vehicles;

47. Below is a list, excluding the Subject Vehicles in the present application, of all of the diesel models with Bosch-supplied defeat device software whose emissions exceed standards:

48. Bosch's security measures confirm that its customers cannot make significant changes to Bosch software without Bosch's involvement. Bosch boasts that its security modules protect vehicle systems against unauthorized access in every operating phase, meaning that no alteration could have been made without either a breach of that security – and no such claims have been advanced – or Bosch's knowing participation, the whole as appears more fully from a copy of the Escrypt article entitled "Reliable Protection for ECUs" dated December 5, 2016, produced herein as **Exhibit R-14**;

49. It is therefore unsurprising that at least 1 car company engineer has confirmed that Bosch maintains absolute control over its software as part of its regular business practices:

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

The whole as appears more fully from a copy of the Car and Driver article entitled "EPA Investigating Bosch over VW Diesel Cheater Software" dated November 23, 2015, produced herein as **Exhibit R-15**;

50. Bosch participated not only in the development of the defeat devices, but in the scheme to prevent regulators from uncovering the device's true functionality. Moreover, Bosch's participation was not limited to engineering the defeat device but also in marketing "Clean Diesel" and lobbying U.S. regulators to approve "Clean Diesel," another highly unusual activity for a mere supplier;

III. Diesel Engines, Emissions Testing, the Subject Vehicles' Duramax Engine, and the Respondents' Defeat Devices

51. Facing the implementation of stringent federal regulations, the GM Respondents designed, manufactured, marketed, distributed, warranted, leased and/or sold the Subject Vehicles with Duramax engines which were designed to, and did, mislead consumers and regulators about their emissions;

52. The use of the Defeat Devices to mislead consumers and regulators was made possible by the Bosch Respondents who created, designed, developed, manufactured, marketed, tested, supplied, and/or sold the Defeat Devices and the electronic diesel control (EDC), which enable their operation;

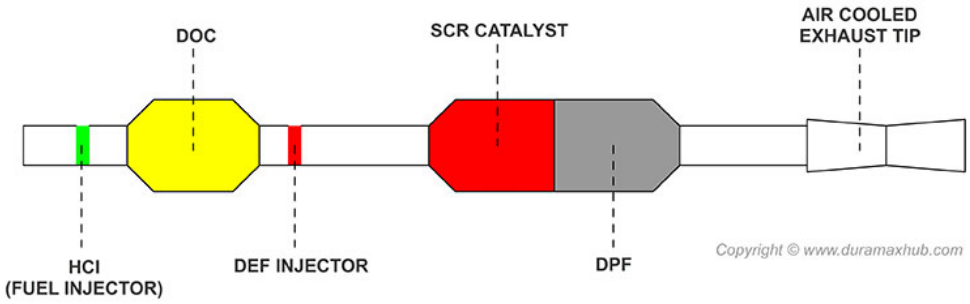
(i) Diesel Engines in General

53. The main components of a diesel engine are:

(a) The Hydrocarbon Injector (HCI)

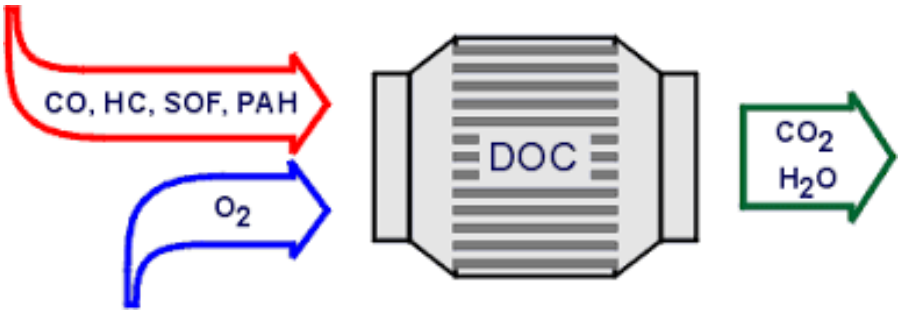
54. The hydrocarbon injector (HCI) is located in the turbocharger downpipe. It is simply a fuel injector used to inject diesel fuel into the exhaust stream during active regeneration (cleaning of the diesel particulate filter). This active regeneration strategy is unique as

the previous version allowed fuel to be injected into the cylinder during the exhaust stroke instead of utilizing a separate injector. The following diagram depicts the HCI in addition to the other components of the Duramax engine that are described hereinafter:



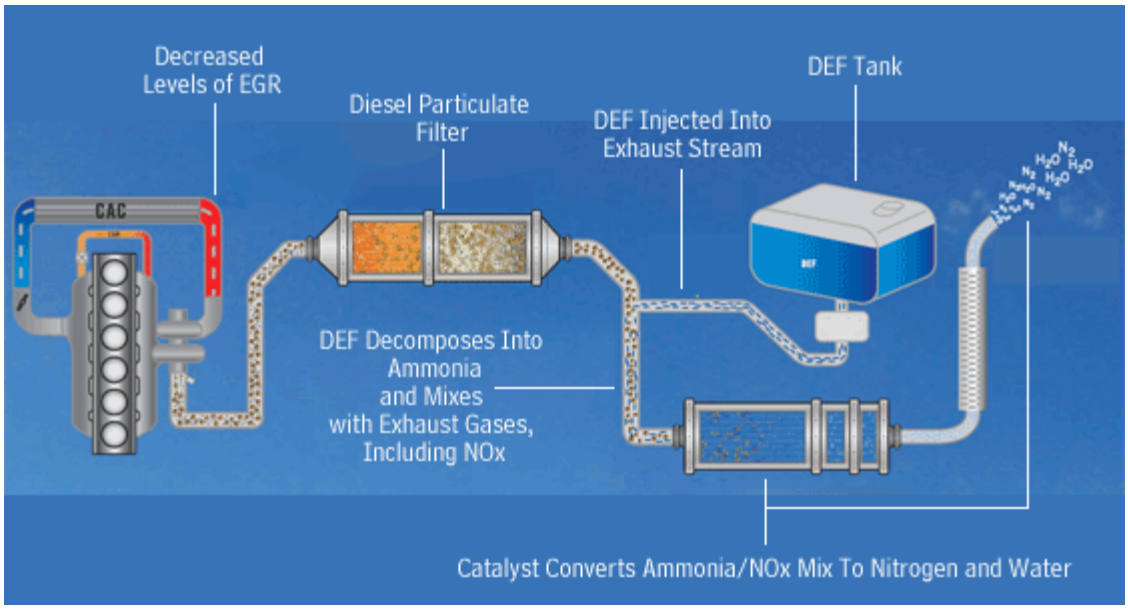
(b) Diesel Oxidation Catalyst (DOC)

55. The diesel oxidation catalyst (DOC) converts hydrocarbons and carbon monoxide into water and carbon dioxide through an oxidization reaction. The DOC also converts nitric oxide to nitrogen dioxide to generate favourable conditions for the reduction of NO_x in the SCR system downstream of the DOC. Finally, the DOC oxidizes fuel injected from the HCI to generate the temperatures required for active regeneration;



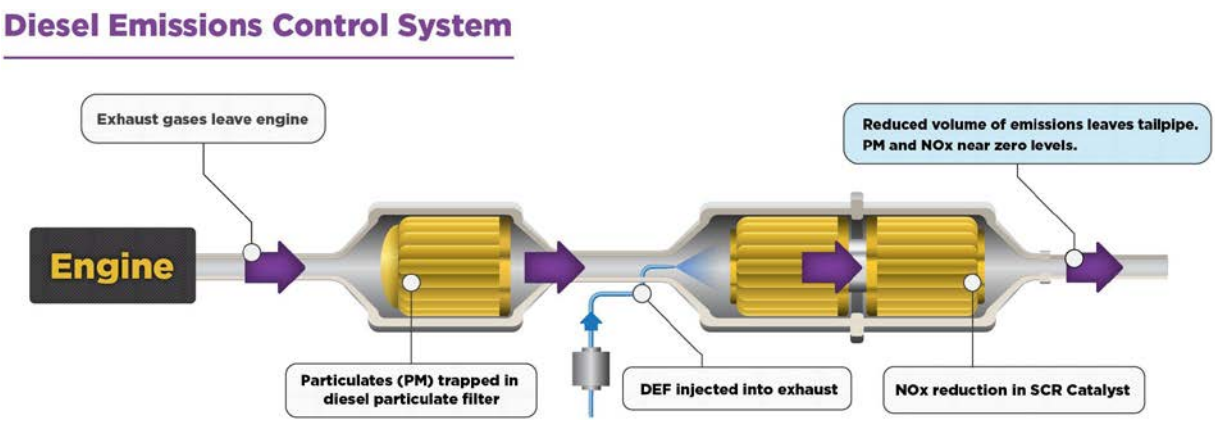
(c) Diesel Exhaust Fluid Injector (DEF)

56. The diesel exhaust fluid (DEF) is injected downstream of the DOC. DEF is composed of 32.5% urea (its active ingredient), distilled water, and a very small amount of additives. Because of its urea content, some people call the process “urea injection.” DEF is required for the selective catalytic reduction process to occur. The heat of the exhaust converts the DEF into carbon dioxide and ammonia;



(d) Selective Catalytic Reduction (SCR)

57. Once DEF is added to the exhaust, it travels through the selective catalytic reduction (SCR) catalyst. Here, oxides of nitrogen (NO_x) are converted to nitrogen gas (N2) and water (H2O) by means of a reduction reaction. The SCR system significantly reduces NO_x emissions, reducing the frequency of active regeneration cycles and allowing for more freedom in the calibration of the engine. The drawback of SCR is its increased complexity and the need to carry and replenish the urea fluid;



(e) Diesel Particulate Filter (DPF)

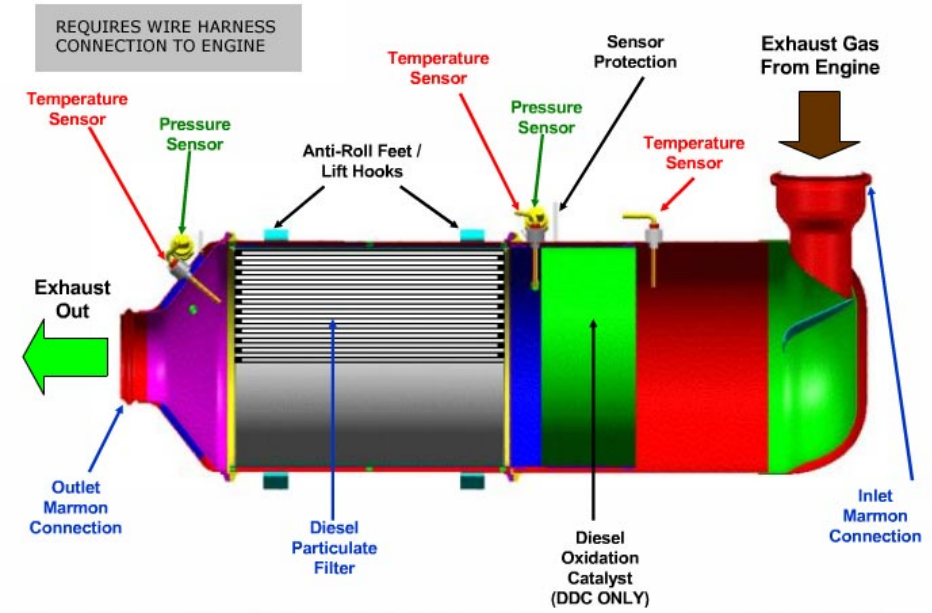
58. After the exhaust stream has been treated by the DOC and SCR, it travels through the diesel particulate filter (DPF), where particulate matter (soot) is trapped and stored. The DPF is cleaned through a process known as regeneration, which is divided into 2 methods; passive and active:

- 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, such as when the DPF is approaching maximum capacity and generating too much exhaust backpressure. When active regeneration occurs, fuel is injected into the exhaust stream via the HCI to increase the exhaust gas temperature so that the particulate matter can be burned off at carbon's non-catalytic oxidation temperature. Active regeneration dramatically reduces fuel economy since fuel is being used for purposes other than driving the vehicle;

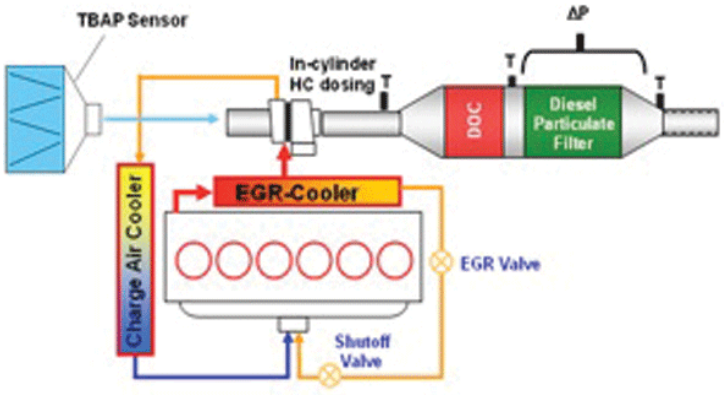
59. The exhaust system features a specifically designed air-cooled exhaust tip to reduce the heat of the exhaust gases as they are expelled. While the DPF is highly effective at trapping particulates, as the amount of particulates accumulates, the resistance to air flow increases also, increasing the load of the engine. To purge the DPF of accumulated deposits, it must undergo a regeneration cycle approximately every 500 km, lasting about 30 minutes. DPF regeneration requires high exhaust temperatures of approximately 600°C that are almost never achieved under normal engine operating conditions. Unfortunately, these conditions may not arise in normal urban driving, requiring the electronic control unit to perform active regeneration;

60. During active regeneration, the electronic control unit adjusts engine operation to increase exhaust temperature to regenerate the DPF; however, if the vehicle is only driven for short distances, such a temperature may never be reached. At sufficiently high soot load, the vehicle will illuminate a special warning lamp, prompting the driver to drive the vehicle at increased speed to allow active regeneration to take place. Thus, while the DPF is highly effective at reducing particulate emissions, it imposes a performance penalty and can become a hassle for owners who drive their vehicle for short distances. Furthermore, the tests that were conducted in the U.S. demonstrated that NO_x emissions increase by a factor of 5-10 compared to normal driving conditions for the Duramax-equipped Silverado;



(f) Exhaust Gas Recirculation (EGR)

61. Exhaust gas recirculation (EGR) is used to reduce NOx emissions. Since oxides of nitrogen form in oxygen rich, high temperature environments, introducing exhaust gases back into the intake air charge reduces the amount of these compounds that form. Exhaust gas recirculation is not a new technology and has been regularly used on diesel engines for many years;



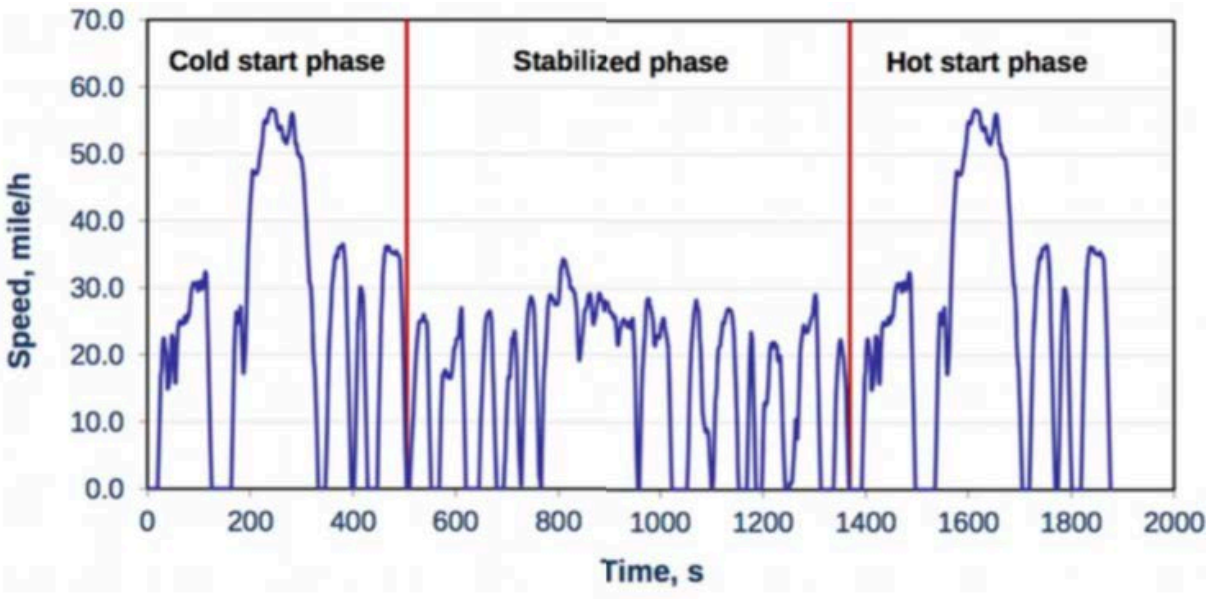
(ii) Emissions Testing and the Duramax Engine

62. An emissions test cycle defines a protocol that enables repeatable and comparable measurements of exhaust emissions in order to evaluate compliance. The protocol specifies all conditions under which the engine is tested, including lab temperature and vehicle conditions. Most importantly, the test cycle defines the speed and load over time that is used to simulate a typical driving scenario;

63. Both Canadian and U.S. federal emission standards for vehicles and engines are closely aligned, the whole as appears more fully from a copy of an extract from the Registrar of Imported Vehicles' website at www.riv.ca, from a copy of an extract from Environment and Climate Change Canada's website at 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 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 R-16**;

64. In Canada, Ottawa is responsible for the testing of new vehicles; however, it is the provinces' responsibility to identify polluting vehicles after they are on the road. Ontario is the only province with mandatory emissions testing for vehicles, the whole as appears more fully from a copy of The Globe and Mail article entitled "The problem with car emissions tests" dated September 24, 2015, produced herein as **Exhibit R-17**;

65. An example of a driving cycle is depicted below. This graph represents the FTP-75 (U.S. Federal Test Procedure, which is used in Canada) cycle that has been created by the U.S. EPA and is used for emission certification and fuel economy testing of light-duty vehicles. This particular cycle simulates an urban route with frequent stops, combined with both a cold and a hot start transient phase. 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):



66. Besides urban test cycles such as FTP-75, 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 drive wheel to turn with varying resistance. Emissions are measured during the test

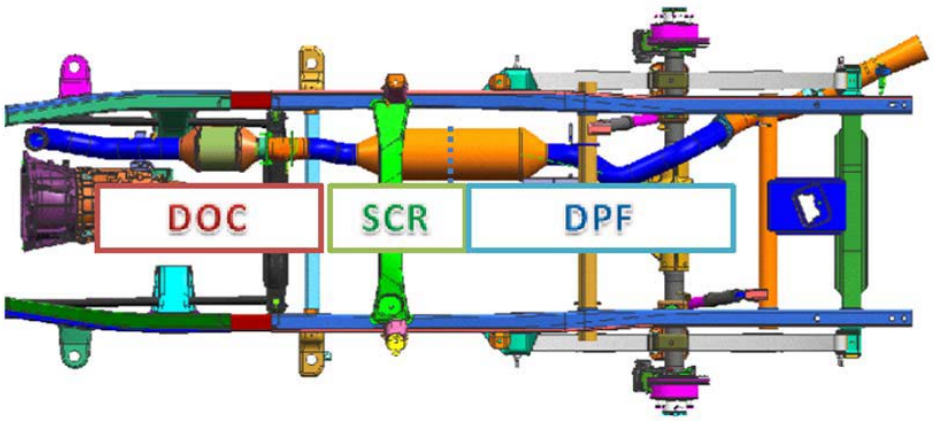
and compared to an emissions standard that defines the maximum pollutant levels that can be released during such a test, the whole as appears more fully from a copy of the DieselNet article entitled “Emission Test Cycles”, produced herein as **Exhibit R-18**;

67. The FTP-75 is the primary dynamometer cycle used to certify the light- and medium-duty passenger cars/trucks. This cycle is primarily a dynamic cycle, with rapid changes in speed and acceleration meant to reflect city driving along with some steadier higher speed sections meant to account for some highway driving;

68. The FTP-75 uses a “cold start” cycle. 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);

69. As mentioned in the above section, in order for the SCR to be effective at reducing NO_x emissions, it requires hot exhaust for the urea catalyst to function properly. Thus, the system takes some time to warm up and does not work well when the engine system is cold; the DPF absorbs much of the heat during exhaust warmup and delays the time for the SCR catalyst to reach its light-off temperature;

70. Emissions testing requires a cold start emissions measurement; i.e. the vehicles must emit low levels of NO_x even when they have just started and are not yet operating at a high temperature. The GM Respondents did not want to increase Engine Gas Recirculation (EGR) or use other inefficient methods to reduce “cold start” emissions, so they departed from the DOC–DPF–SCR order that other manufacturers use and designed its Duramax engines with the SCR system closer to the engine than the DPF. In the Duramax, the order is instead as follows:



71. This arrangement allows the SCR system to warm up quicker, thus allowing sufficiently reduced NO_x emissions to pass the cold start test; however, there is a drawback. Because the NO_x is reduced before the exhaust reaches the DPF filter, there is little Passive Regeneration 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_x emissions;

72. The Respondents' solution to this problem was to install at least three separate Defeat Devices in the Subject Vehicles to increase engine power and efficiency, increase NO_x levels into the DPF, and decrease the need for Active Regeneration. These Defeat Devices caused the Duramax engine to emit 1.5 to 5.5 times the permissible limit for deadly NO_x pollutants during real-world driving;

(iii) The Defeat Devices in the Subject Vehicles

73. Engineering experts in emissions testing have tested the Subject Vehicles and have concluded that they emit far more pollution on the road than in the emission certification testing environment and that they exceed federal emission standards and employ at least 3 different defeat devices to turn down the emissions controls when the vehicle senses that it is not in the certification test cycle;

74. The Defeat Devices operate as follows:

(i) Defeat Device #1 reduces or derates the emissions system when temperatures are above the emissions certification test range (30°C/ 86°F),

(ii) Defeat Device #2 operates to reduce emissions control when temperatures are below the emissions certification low temperature range (20°C/ 68°F). Testing reveals that at temperatures below 20°C/ 68°F (the lower limit of the certification test temperature), stop-and-go emissions are 2.1 times the emissions standard. At temperatures above 30°C/ 86°F, stop-and-go emissions are an average of 2.4 times the standard with some emissions as high as 5.8 times the standard, and

(iii) Defeat Device #3, which reduces the level of emissions controls after 200-500 seconds of steady speed operation in all temperature windows, causing emissions to increase on average of a factor of 4.5;

75. The defeat devices decreased the dosing of urea used by the SCR system and reducing the overall EGR rate: above (defeat device #1) and below (defeat device 2) the narrow temperature band in which certification testing is performed (20-20°C); and decreasing the dose of the SCR system and rate of EGR (defeat device 3) after 5-8 minutes of relatively constant engine speed (which never happens during an emissions test);

76. By decreasing the dosing of urea, the SCR allows more NO_x to pass through to the DPF, thus increasing Passive Regeneration in the DPF and decreasing the need for Active Regenerations, which reduce fuel economy, reduce the lifetime of the SCR catalysts, and result in significant increases in overall NO_x emissions. Reduced urea dosing has the added advantage of lower urea consumption, which means lower

operating costs and longer service intervals between having to fill the urea catalyst tank;

77. Thus, by placing the SCR in front of the DPF and installing and employing the Defeat Devices, the GM Respondents were able to market and sell millions of Duramax-equipped Subject Vehicle with power and efficiency characteristics that made them very appealing, but also caused illegal levels of deadly NO_x pollution. If GM had not installed and employed illegal Defeat Devices to enable it to cheat on the emissions test, then its vehicles would have been less efficient and less powerful, meaning that GM would not have sold as many and would certainly not have been able to charge as much for them.

78. It is estimated that due to the temperature-triggered defeat devices, the vehicles operate at 65-70% of their kilometres driven with emissions that are 2.1 to 5.8 times the standard;

79. Increased sales and thus increased profits drove GM to use at least these 3 defeat devices in its Duramax diesel engines. By reversing the traditional order of the exhaust treatment components and putting the Selective Catalytic Reduction (SCR) in front of the Diesel Particulate Filter (DPF), GM could obtain and market higher power and efficiency from its engines while still passing the cold-start emissions certification tests. This made GM's trucks more appealing and competitive in the marketplace, driving up sales and profits. But the reordering would have also drastically increased the need to employ Active Regeneration and other power – and efficiency – sapping exhaust treatment measures, reversing the very advantage gained;

80. GM's solution was to install defeat devices to purposefully reduce SCR dosing, increase NO_x emissions, and thus decrease Active Regeneration. The Defeat Devices allowed GM to gain the advantage of hot exhaust going into the SCR system needed to pass cold-start tests, while avoiding the fuel and power robbing Active Regeneration procedure that the DPF filter requires when the SCR treatment comes first. GM turned a blind eye to the twofold to fivefold increase in deadly NO_x emissions its scheme caused – all to drive up its sales and profits;

IV. <u>The GM Respondents' Marketing</u>

81. In order to appeal to environmentally-conscious consumers, the GM Respondents market their Silverado and Sierra Duramax vehicles as having low emissions, high fuel economy, and powerful torque and towing capacity. GM charges a premium of at least $5,000 for diesel-equipped vehicles over other comparable gasoline vehicles. For example, Motor Trend has estimated that diesel vehicles cost $9,670 more than gasoline, the whole as appears more fully from a copy of the Motor Trend article entitled "La comparaison de deux poids lourds : essence contre diesel dans un camion de grande capacité", produced herein as **Exhibit R-19**;

82. The GM Respondents understood that a vehicle's pollution is a significant factor in a reasonable consumer's decision to purchase a vehicle. GM, in press releases, owner's manuals, and brochures, promoted the Duramax engine as delivering low emissions or having reduced NO_x emissions. GM was acutely aware of this due to the public perception that diesels are "dirty";

83. For example, on March 10, 2010, the GM Respondents released a press release pertaining to the 2011 Chevrolet Silverado 2500HD and 3500HD vehicles whereby they claimed that it offered an 11% improved highway fuel economy and up to 63% reduced NO_x emissions stating the following:

> "Segment-leading power is great, but it's not the only thing that makes the new Duramax a winner," said Gary Arvan, Duramax chief engineer. "We designed the engine to make that power with less fuel and fewer emissions, while also increasing its durability.
> …
> The more powerful 6.6L Duramax is also more fuel-efficient – up to 11-percent greater highway fuel economy than the outgoing model – reduces NOx emissions by up to 63 percent and helps enable greater towing ratings. Silverado 3500HD equipped with a fifth wheel hitch can tow up to 20,000 pounds (9,072 kg). The increased fuel efficiency, combined with a new, 36-gallon (136 L) fuel tank, provides up to 680 miles (1,090 km) of highway driving between fill-ups."

The whole as appears more fully from a copy of the GM Respondents Press Release entitled "New 2011 Chevrolet Silverado Heavy Duty Trucks Deliver Best-In-Class Diesel Torque And Horsepower" dated March 10, 2010, produced herein as **Exhibit R-20**;

84. The GM Respondents released another press release in 2012, pertaining to the GMC Sierra All Terrain HD, claiming the following:

> The Sierra All Terrain HD concept is propelled by the new, production 6.6L Duramax turbo-diesel V-8 and Allison 1000 six-speed automatic transmission powertrain combination offered in the 2011 Sierra HD trucks. The Duramax is rated at 397 horsepower (296 kW) and 765 lb.-ft. of torque (1,037 Nm).
>
> The powerful 6.6L Duramax is more fuel-efficient – with up to 11-percent greater fuel economy than previous versions – and reduces NOx emissions by up to 63 percent. The powertrain's efficiency is assisted by the Allison 1000 transmission, which requires less engine power to funnel torque to the axles. It also incorporates a "smart" exhaust brake feature that helps save wear on the brakes on downhill grades, a feature available on production Sierra HDs.

The whole as appears more fully from a copy of the GM Respondents Press Release entitled “GMC Sierra All Terrain HD Concept Takes Heavy-Duty Capability To New Ground” dated February 16, 2012, produced herein as **Exhibit R-21**;

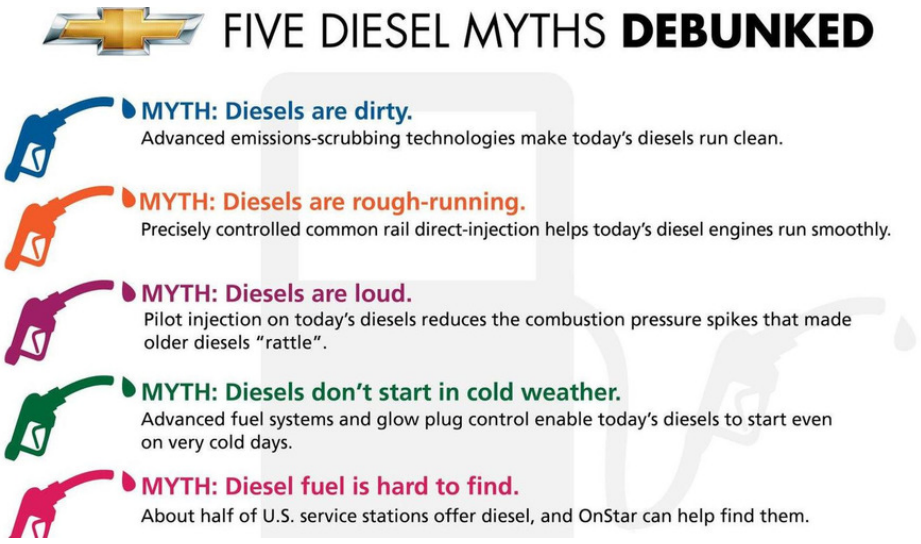
85. The GM Respondents released another press release in 2013, which touted the benefits of the 2015 GMC Sierra HD lineup as follows:

> The Duramax 6.6L diesel and Allison 1000 six-speed automatic transmission powertrain combination is available on all 2500HD and 3500HD models, with highlights that include:
>
> - 397 horsepower (296 kW) at 3,000 rpm
> - 765 lb-ft of torque (1,037 Nm) at 1,600 rpm
> - High-pressure (30,000 psi/2,000 bar) Piezo-actuated fuel system for greater fuel efficiency, improved performance and reduced emissions,

the whole as appears more fully from a copy of the GM Respondents Press Release entitled “New 2015 GMC Sierra HD: Smart, Capable and Comfortable” dated October 1, 2013, produced herein as **Exhibit R-22**;

86. The GM Respondents released another press release in 2014, which touted the 2014 GMC Sierra 2500HD and 3500HD vehicles as containing a “high-pressure (30,000 psi/2,000 bar) Piezo-actuated fuel system for greater fuel efficiency, improved performance and reduced emissions”, the whole as appears more fully from a copy of the GM Respondents Press Release entitled “2014 GMC Sierra 2500HD and 3500HD”, produced herein as **Exhibit R-23**;

87. The GM Respondents promised that their Subject Vehicles were “clean diesel” in advertisements such as the following:



88. The GM Respondents promised that the Subject Vehicles' Duramax engines would turn "heavy diesel fuel into a fine mist", would deliver low emissions that were a huge reduction compared to the prior model and at the same time, would produce a vehicle with great power;

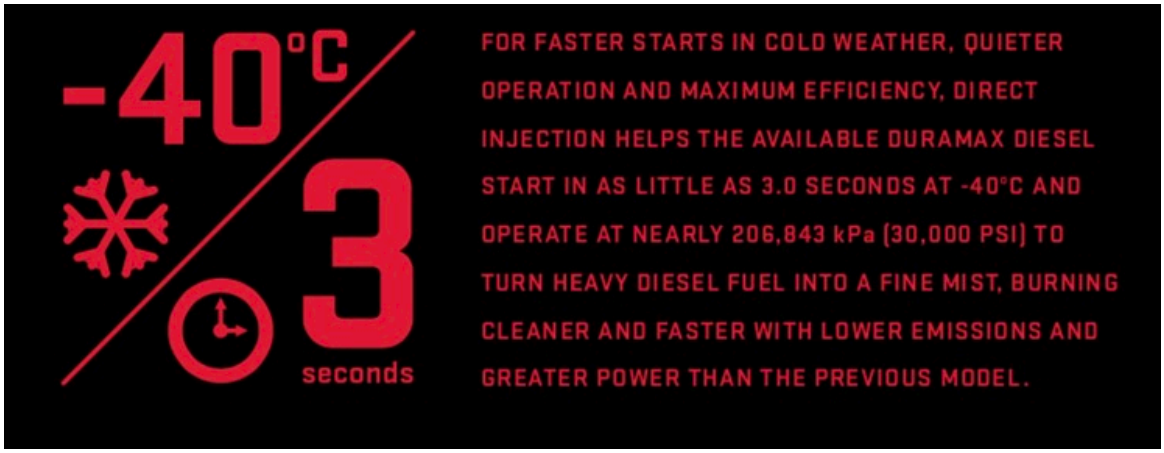
89. For example, the 2016 GMC Sierra HD vehicle brochure states the following:

+ QUICK STARTS IN COLD WEATHER
+ DIRECT INJECTION HELPS DURAMAX DIESEL START IN AS LITTLE AS 3 SECONDS AT -40ºC
+ OPERATES AT NEARLY 206,843 KPA TO TURN HEAVY DIESEL FUEL INTO A FINE MIST,

the whole as appears more fully from a copy of the 2016 GMC Sierra HD vehicle brochure, produced herein as **Exhibit R-24**;

90. The 2015 GMC Sierra HD vehicle brochure states the following:

FOR FASTER STARTS IN COLD WEATHER, QUIETER OPERATION AND MAXIMUM EFFICIENCY, DIRECT INJECTION HELPS THE AVAILABLE DURAMAX DIESEL START IN AS LITTLE AS 3.0 SECONDS AT -40ºC AND OPERATE AT NEARLY 206,843 kPa (30,000 PSI) TO TURN HEAVY DIESEL FUEL INTO A FINE MIST, BURNING CLEANER AND FASTER WITH LOWER EMISSIONS AND GREATER POWER THAN THE PREVIOUS MODEL.



The whole as appears more fully from a copy of the 2015 GMC Sierra HD vehicle brochure, produced herein as **Exhibit R-25**;

91. The 2013 GMC Sierra HD vehicle brochure states the following:

DURAMAX B20 BIODIESEL CAPABILITY

To reduce carbon-dioxide emissions and stretch your fuel budget, the Duramax 6.6L can operate on B20 biodiesel, a mix of 20 percent biodiesel from domestic, renewable resources, and 80 percent petroleum diesel.

DURAMAX HIGH-PRESSURE DIRECT INJECTION
For fast starts in cold weather, quieter operation and maximum efficiency, the direct injection system operates at nearly 30,000 psi to turn heavy diesel fuel into a fine mist, burning cleaner and faster with lower emissions and greater power than the previous model.

The whole as appears more fully from a copy of the 2013 GMC Sierra vehicle brochure, produced herein as **Exhibit R-26**;

92. The 2012 Chevrolet Silverado HD vehicle brochure states the following:

Diesel Emissions Fluid

The Duramax® Diesel performs selective catalytic reduction using Diesel Emissions Fluid (DEF) downstream in the exhaust. It reduces the amount of harmful Nitrogen Oxide (NOx) emissions by 63 percent – representing the latest technology available. DEF also allows for optimum fuel efficiency by increasing the range between Diesel Particulate Filter burn-off cycles to over 1100 km. The urea-based DEF solution is held in a separate storage tank and injected as a fine mist into the hot exhaust gases. The heat turns the urea into ammonia that, when combined with the catalytic converter, breaks down the NOx into harmless nitrogen gas and water vapour,

The whole as appears more fully from a copy of the 2012 Chevrolet Silverado HD vehicle brochure, produced herein as **Exhibit R-27**;

93. The 2011 Chevrolet Silverado HD vehicle brochure states the following:

DIESEL EMISSIONS FLUID (DEF)

The new Duramax Diesel isn't only the most powerful diesel pickup engine Chevrolet has ever built – it's also the cleanest burning. This reflects Chevrolet's ongoing commitment to greener technologies across its lineup. Key to this improvement is selective catalytic reduction using Diesel Emissions Fluid (DEF) downstream in the exhaust. It reduces the amount of harmful Nitrogen Oxide (NOx) emissions by 63 percent – representing the latest technology available. The urea-based DEF solution is held in a separate storage tank and injected as a fine mist into the hot exhaust gases. The heat turns the urea into ammonia that, when combined in the catalytic converter, breaks down the NOx into harmless nitrogen gas and water vapour. DEF also allows for optimum fuel efficiency by increasing the range between Diesel Particulate Filter (DPF) burn-off cycles to over 1100 km.

The whole as appears more fully from a copy of the 2011 Chevrolet Silverado HD vehicle brochure, produced herein as **Exhibit R-28**;

94. In contrast to GM's promises, emissions testing in the U.S. has revealed that the Subject Vehicles in fact emit levels of NO_x that are much higher than (i) their gasoline counterparts, (ii) what a reasonable consumer would expect, and (iii) the Canadian emissions standards. On-road testing has confirmed that the Subject Vehicles produce NO_x emissions that are not only "reduced" or "low", but in fact are in excess of the applicable emission standards, and that GM has programmed the Subject Vehicles such that in a wide range of conditions, the emissions systems are powered down, producing NO_x in excess of emissions standards. This testing indicates that the GM and Bosch Respondents programmed the software to detect a possible emission testing environment and to comply with emissions requirements in that circumstance, but to turn off the emissions controls when a testing environment is not detected;

95. These representations are deceptive and false, and the GM Respondents sold the Subject Vehicles while omitting information that would be material to a reasonable consumer; i.e. that they had programmed the Subject Vehicles to significantly reduce the effectiveness of the NO_x reduction systems during real-world driving conditions;

96. In addition, the GM Respondents market the Subject Vehicles as being fuel efficient, if the "best" of any full-sized pickup truck. Without the illicit manipulation of the defeat device software to turn off the emissions controls, the Subject Vehicles could not achieve the power and fuel economy it promises

V. Summative Remarks

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

98. Because of the Respondents' actions, the Subject Vehicles that they sold to the Petitioner and the Class are not what they had promised. During normal operation, the Subject Vehicles pollute the atmosphere with much higher levels of NO_x than the artificially-manipulated test results disclose or than 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 Respondents advertise;

99. As a result of the Respondents' surreptitious use of the Defeat Device to exaggerate the fuel economy of the Subject Vehicles and to downplay their NO_x emissions, owners and lessees of the Subject Vehicles have suffered damages upon which they are entitled to claim;

II. FACTS GIVING RISE TO AN INDIVIDUAL ACTION BY THE PETITIONER

100. On August 28, 2015, the Petitioner purchased a new 2015 GMC Sierra SLT 2500 HD Diesel vehicle (VIN 1GT12ZE84FF658699) from Lachapelle Buick GMC at 900 Boulevard Saint-Joseph, in Gatineau, Quebec for a purchase price of $77,248.83 taxes included after a rebate of $5,422.00 (the full price of the Subject Vehicle being $82,215.00), the whole as appears more fully from a copy of the paperwork dated August 28, 2015, produced herein as **Exhibit R-29**;

101. At the time of purchase, the Petitioner traded in his previous 2011 GMC Sierra for an additional $35,400.00 reduction on the purchase price of the Subject Vehicle (Exhibit R-29);

102. The Petitioner financed the vehicle with the Bank of Nova Scotia for a term of 84 months;

103. The Petitioner purchased the Subject Vehicle and paid a premium for it based on the fact that it had a diesel engine (the Duramax engine), on its advertised fuel economy, for environmental reasons, and for its durability and power as advertised on the Respondents' website(s); the Petitioner also assumed that the vehicle met all federal and environmental regulations;

104. After driving his Subject Vehicle for a short while, the Petitioner was disappointed that there was no real difference in fuel consumption from his previous vehicle;

105. The Petitioner still owns the Subject Vehicle;

106. At the time of sale, the Petitioner was unaware that the Subject Vehicle was designed and equipped to turn off or limit emissions reduction during normal driving conditions (with defeat devices), resulting in NO_x emissions that were higher than the Respondents represented and fuel economy that was lower than represented;

107. The Petitioner soon noticed that the Subject Vehicle was consuming more fuel than was represented and that the fuel consumption was much higher than he would have expected given the Respondents' representations relating to the vehicle's fuel efficiency;

108. The Petitioner has recently become aware of the existence of the defeat devices and that a class action had been filed in the United States due to this same issue, as appears from a copy of the U.S. Class Action Complaint, produced herein as **Exhibit R-30**;

109. Petitioner has suffered ascertainable loss as a result of the Respondents' omissions and/or misrepresentations associated with the Defeat Devices, including, but not limited to, overpayment for the Subject Vehicle, past, present, and future excessive gasoline charges, reduced resale value, and trouble and inconvenience;

110. Had Petitioner known about the Defeat Devices, he would not have purchased the Subject Vehicle or would not have paid such a high price;

111. Petitioner's damages are a direct and proximate result of the Respondents' conduct;

112. In consequence of the foregoing, the Petitioner is justified in claiming damages;

III. FACTS GIVING RISE TO INDIVIDUAL ACTIONS BY EACH MEMBER OF THE CLASS

113. Every member of the Class has purchased and/or leased a Subject Vehicle and is justified in claiming at least one or more of the following as damages:

a. Overpayment of the purchase price and/or lease payments of the Subject Vehicles,

b. Lower resale value/ diminished value of the Subject Vehicles,

c. Increased fuel expenditures,

d. Out-of-pocket loss,

e. Cost of future attempted repairs,

f. Trouble and inconvenience, and

g. Punitive and/or exemplary damages;

114. However, even if the Respondents were to repair the Defeat Device in the Subject Vehicles so that they comply with emissions requirements, the repair would not compensate the Class for the significant harm that the Respondents have caused because any repairs performed as part of the recall are likely to significantly diminish the performance of the Subject Vehicles;

115. All of these damages to the Class Members are a direct and proximate result of the Respondents' conduct;

IV. CONDITIONS REQUIRED TO INSTITUTE A CLASS ACTION

A) The composition of the Class makes it difficult or impractical to apply the rules for mandates to sue on behalf of others or for consolidation of proceedings

116. Petitioner is unaware of the specific number of persons who purchased and/or leased the Subject Vehicles; however, it is safe to estimate that it is in the thousands;

117. Class Members are numerous and are scattered across the province;

118. In addition, given the costs and risks inherent in an action before the courts, many people will hesitate to institute an individual action against the Respondents. Even if Class Members themselves could afford such individual litigation, the court system could not as it would be overloaded. Further, individual litigation of the factual and legal issues raised by the conduct of the Respondents would increase delay and expense to all parties and to the court system;

119. Also, a multitude of actions instituted in different jurisdictions, both territorial and judicial districts, risks having contradictory judgments on issues of fact and law that are similar or related to all members of the Class;

120. These facts demonstrate that it would be impractical, if not impossible, to contact every member of the Class to obtain mandates and to join them in one action;

121. In these circumstances, a class action is the only appropriate procedure for all of the members of the Class to effectively pursue their respective rights and have access to justice;

B) <u>The claims of the members of the Class raise identical, similar or related issues of law or fact</u>

122. Individual issues, if any, pale by comparison to the numerous common issues that will advance the litigation significantly;

123. The damages sustained by the Class Members flow, in each instance, from a common nucleus of operative facts, namely, Respondents' misconduct;

124. The claims of the Class Members raise identical, similar or related issues of fact or law, namely:

a) Did the Respondents design, supply, and/or install the Defeat Devices in the Subject Vehicles?

b) Do the Subject Vehicles emit pollutants at levels that do not make them "clean diesels and that do not comply with federal regulations?

c) Did the Respondents know or should they have known about the Defeat Devices and, if so, for how long?

d) Were the Respondents aware of the unlawfully high emissions and, if so, how long have they known?

e) Did the GM Respondents design, manufacture, market, distribute, warrant, lease and/or sell the Subject Vehicles with defective and/or otherwise inadequate emission controls?

f) Did the Respondents engage in unfair, false, misleading, or deceptive acts or practices regarding the marketing and sale of the Subject Vehicles?

g) Are the Petitioner and the Class Members entitled to a declaratory judgment stating that the Respondents committed misconduct in utilizing the Defeat Devices to misstate the qualities of the Subject Vehicles?

h) Should an injunctive remedy be ordered to prohibit the Respondents from continuing to perpetrate their unfair, false, misleading, and/or deceptive conduct?

i) Should an injunctive remedy be order to force the Respondents to buy back the Subject Vehicles or otherwise, free of charge, remove the Defeat Device while insuring that the Subject Vehicles conform to promised performance and fuel economy guarantees?

j) Are the Respondents responsible for all related damages (including, but not limited to: the Overpayment of the purchase price and/or lease payments of the Subject Vehicles, the lower resale value of the Subject Vehicles, increased fuel expenditures, out-of-pocket loss, the cost of future attempted repairs, and trouble and inconvenience) to Class Members as a result of their misconduct and in what amount?

k) Are the Respondents responsible to pay punitive damages to Class Members and in what amount?

125. The interests of justice favour that this application be granted in accordance with its conclusions;

V. NATURE OF THE ACTION AND CONCLUSIONS SOUGHT

126. The action that the Petitioner wishes to institute on behalf of the members of the Class is an action in damages, injunctive relief, and declaratory judgment;

127. The conclusions that the Petitioner wishes to introduce by way of an application to institute proceedings are:

GRANT the class action of the Petitioner and each of the members of the Class;

DECLARE the Defendants have committed unfair, false, misleading, and/or deceptive conduct with respect to their designing, marketing, advertising, leasing, selling and/or representing the Subject Vehicles as having certain levels of lower fuel economy and lower emissions than in reality;

ORDER the Defendants to cease from continuing their unfair, false, misleading, and/or deceptive conduct by designing, marketing, advertising, leasing, selling and/or representing the Subject Vehicles in a false manner;

ORDER the Defendants to recall and repair the Subject Vehicles free of charge, or otherwise, to buy back the Subject Vehicles at the original sale price or return any and all lease payments;

DECLARE the Defendants solidarily liable for the damages suffered by the Petitioner and each of the members of the Class;

CONDEMN the Defendants to pay to each member of the Class a sum to be determined in compensation of the damages suffered, and ORDER collective recovery of these sums;

CONDEMN the Defendants to pay to each of the members of the Class, punitive damages, and ORDER collective recovery of these sums;

CONDEMN the Defendants to pay interest and additional indemnity on the above sums according to law from the date of service of the application to authorize a class action;

ORDER the Defendants to deposit in the office of this court the totality of the sums which forms part of the collective recovery, with interest and costs;

ORDER that the claims of individual Class Members be the object of collective liquidation if the proof permits and alternately, by individual liquidation;

CONDEMN the Defendants to bear the costs of the present action including expert and notice fees;

RENDER any other order that this Honourable court shall determine and that is in the interest of the members of the Class;

A) <u>Petitioner requests that he be attributed the status of representative of the Class</u>

128. The Petitioner is a member of the Class;

129. The Petitioner is ready and available to manage and direct the present action in the interest of the members of the Class that he wishes to represent and is determined to lead the present file to a final resolution of the matter, the whole for the benefit of the Class, as well as, to dedicate the time necessary for the present action before the Courts and the *Fonds d'aide aux actions collectives*, as the case may be, and to collaborate with his attorneys;

130. The Petitioner has the capacity and interest to fairly and properly protect and represent the interest of the members of the Class;

131. The Petitioner has given the mandate to his attorneys to obtain all relevant information with respect to the present action and intends to keep informed of all developments;

132. The Petitioner, with the assistance of his attorneys, is ready and available to dedicate the time necessary for this action and to collaborate with other members of the Class and to keep them informed;

133. The Petitioner has given instructions to his attorneys to put information about this class action on its website and to collect the coordinates of those Class Members that wish to be kept informed and participate in any resolution of the present matter, the whole as will be shown at the hearing;

134. The Petitioner is in good faith and has instituted this action for the sole goal of having his rights, as well as the rights of other Class Members, recognized and protected so that they may be compensated for the damages that they have suffered as a consequence of the Respondents' conduct;

135. The Petitioner understands the nature of the action;

136. The Petitioner's interests are not antagonistic to those of other members of the Class;

137. The Petitioner is prepared to be examined out-of-court on his allegations (as may be authorized by the Court) and to be present for Court hearings, as may be required and necessary;

138. The Petitioner has spent time researching this issue on the internet and meeting with his attorneys to prepare this file. In so doing, he is convinced that the problem is widespread;

139. The Petitioner, with the assistance of his attorneys, has created a webpage at www.clg.org wherein other Class Members can enter their coordinates to join the class action and be kept up to date on its development;

B) <u>Petitioner suggests that this class action be exercised before the Superior Court of justice in the district of Montreal</u>

140. A great number of the members of the Class reside in the judicial district of Montreal and in the appeal district of Montreal;

141. The Petitioner's attorneys practice their profession in the judicial district of Montreal;

142. The present application is well founded in fact and in law.

FOR THESE REASONS, MAY IT PLEASE THE COURT:

GRANT the present application;

AUTHORIZE the bringing of a class action in the form of an application to institute proceedings in damages, injunctive relief, and declaratory relief;

APPOINT the Petitioner as representative of the persons included in the class herein described as:

- all persons, entities or organizations resident in Quebec who purchased and/or leased one or more of the Subject Vehicles equipped with Defeat Devices, or any other group to be determined by the Court;

IDENTIFY the principle issues of fact and law to be treated collectively as the following:

a) Did the Respondents design, supply, and/or install the Defeat Devices in the Subject Vehicles?

b) Do the Subject Vehicles emit pollutants at levels that do not make them “clean diesels and that do not comply with federal regulations?

c) Did the Respondents know or should they have known about the Defeat Devices and, if so, for how long?

d) Were the Respondents aware of the unlawfully high emissions and, if so, how long have they known?

e) Did the GM Respondents design, manufacture, market, distribute, warrant, lease and/or sell the Subject Vehicles with defective and/or otherwise inadequate emission controls?

f) Did the Respondents engage in unfair, false, misleading, or deceptive acts or practices regarding the marketing and sale of the Subject Vehicles?

g) Are the Petitioner and the Class Members entitled to a declaratory judgment stating that the Respondents committed misconduct in utilizing the Defeat Devices to misstate the qualities of the Subject Vehicles?

h) Should an injunctive remedy be ordered to prohibit the Respondents from continuing to perpetrate their unfair, false, misleading, and/or deceptive conduct?

i) Should an injunctive remedy be order to force the Respondents to buy back the Subject Vehicles or otherwise, free of charge, remove the Defeat Device while

insuring that the Subject Vehicles conform to promised performance and fuel economy guarantees?

j) Are the Respondents responsible for all related damages (including, but not limited to: the Overpayment of the purchase price and/or lease payments of the Subject Vehicles, the lower resale value of the Subject Vehicles, increased fuel expenditures, out-of-pocket loss, the cost of future attempted repairs, and trouble and inconvenience) to Class Members as a result of their misconduct and in what amount?

k) Are the Respondents responsible to pay punitive damages to Class Members and in what amount?

IDENTIFY the conclusions sought by the class action to be instituted as being the following:

GRANT the class action of the Petitioner and each of the members of the Class;

DECLARE the Defendants have committed unfair, false, misleading, and/or deceptive conduct with respect to their designing, marketing, advertising, leasing, selling and/or representing the Subject Vehicles as having certain levels of lower fuel economy and lower emissions than in reality;

ORDER the Defendants to cease from continuing their unfair, false, misleading, and/or deceptive conduct by designing, marketing, advertising, leasing, selling and/or representing the Subject Vehicles in a false manner;

ORDER the Defendants to recall and repair the Subject Vehicles free of charge, or otherwise, to buy back the Subject Vehicles at the original sale price or return any and all lease payments;

DECLARE the Defendants solidarily liable for the damages suffered by the Petitioner and each of the members of the Class;

CONDEMN the Defendants to pay to each member of the Class a sum to be determined in compensation of the damages suffered, and ORDER collective recovery of these sums;

CONDEMN the Defendants to pay to each of the members of the Class, punitive damages, and ORDER collective recovery of these sums;

CONDEMN the Defendants to pay interest and additional indemnity on the above sums according to law from the date of service of the application to authorize a class action;

ORDER the Defendants to deposit in the office of this court the totality of the sums which forms part of the collective recovery, with interest and costs;

ORDER that the claims of individual Class Members be the object of collective liquidation if the proof permits and alternately, by individual liquidation;

CONDEMN the Defendants to bear the costs of the present action including expert and notice fees;

RENDER any other order that this Honourable court shall determine and that is in the interest of the members of the Class;

DECLARE that all members of the Class that have not requested their exclusion, be bound by any judgment to be rendered on the class action to be instituted in the manner provided for by the law;

FIX the delay of exclusion at thirty (30) days from the date of the publication of the notice to the members, date upon which the members of the Class that have not exercised their means of exclusion will be bound by any judgment to be rendered herein;

ORDER the publication of a notice to the members of the group in accordance with article 579 C.C.P. within sixty (60) days from the judgment to be rendered herein in The Montreal Gazette and La Presse;

ORDER that said notice be available on the Respondents' websites, Facebook pages, and Twitter accounts with a link stating "Notice to GMC Sierra 2500HD and 3500HD and to Chevrolet Silverado 2500HD and 3500HD Vehicle Owners/Lessees";

ORDER that said notice be sent by individual letters emailed and/or mailed to Class Members by using the Respondents' customer list;

RENDER any other order that this Honourable Court shall determine and that is in the interest of the members of the class;

THE WHOLE with costs, including all publication and dissemination fees.

Montreal, May 29, 2017

(s) Andrea Grass

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