

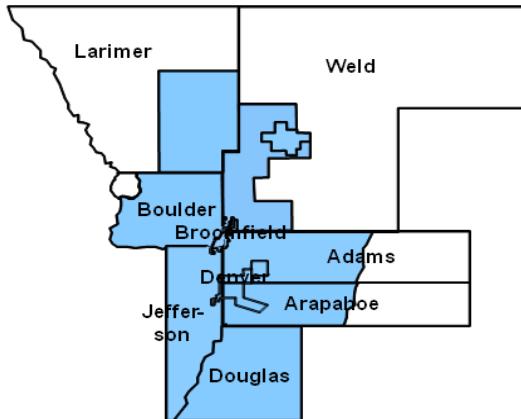


COLORADO

Air Pollution Control Division

Department of Public Health & Environment

Automobile Inspection and Readjustment (AIR) Program Annual Report Calendar Year 2018



July 1, 2019

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Executive Summary

The purpose of the Automobile Inspection and Readjustment Program is to improve air quality through the detection and repair of excessively emitting gasoline-powered vehicles. Mobile source emissions constitute one of the larger categories of controllable emissions that contribute to summertime ozone concentrations. Lowering vehicle emissions by repairing high emitting vehicles contributes to a cleaner motor vehicle fleet and improves the air quality throughout Colorado's Front Range.

The State of Colorado operates a registration denial based motor vehicle emissions inspection program in the nine-county Front Range area. This includes all, or portions of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld counties.

Vehicles are exempt from inspection for the first seven model years. Newer model year vehicles that undergo ownership change during this period are also exempt from inspection if they have at least 12 months remaining in their seven-year exemption period.

The Inspection and Maintenance network consists of 18 Air Care Colorado emissions inspection stations with 97 inspection lanes located throughout the nine-county program area. These centralized inspection stations inspect gasoline-powered vehicles regardless of age. Air Care Colorado also operates the Remote Sensing Clean Screen program, which consists of 24 on-road Remote Sensing Device units. There are also two independent test-only stations that only inspect 1981 and older gasoline-powered vehicles. Additionally, there are 20 licensed vehicle fleet owners who self-inspect their own qualifying commercial and government vehicles.

The Colorado Automobile Inspection and Readjustment (AIR) Program includes four primary inspections types, which are administered depending on the vehicle model year, weight, and dynamometer compatibility. The inspection types are:

- On-Board Diagnostic (OBD) - electronic query of the vehicle's computer control system for vehicles that are 11 years old and newer.
- I/M240 - dynamometer based emissions inspection for light-duty gasoline-powered vehicles that are model years 1982 through 12 years old.
- Two-Speed Idle (TSI) - measures vehicle emissions at idle and raised idle. TSI inspections are administered to light-duty vehicles that are 1981 and older and all model year heavy-duty gasoline-powered vehicles.
- Remote Sensing- measures tailpipe emissions while a vehicle drives past an on-road remote sensing unit. Vehicles that meet the Clean Screen standards can forgo the traditional OBD or I/M240 dynamometer inspection performed at the Air Care Colorado testing facilities.

The AIR Program also includes a visual inspection to check for required emissions control equipment on vehicles that are model year 1995 and older. Additionally,

vehicles receive a gas cap pressure test (light-duty only) along with an inspection for visible smoke.

In calendar year 2018, there were 285,685 initial OBD inspections, 572,751 initial I/M240 inspections and 43,275 Two-Speed Idle inspections conducted throughout the AIR Program network. The OBD failure rate was 6.10%, the I/M240 inspection failure rate was 8.45%, and the Idle inspection failure rate was 7.62%. Remote sensing units observed 146,645 unique vehicles that met clean screen program requirements. Of these, 126,594 vehicles participated in the program.

The state estimates that the net cost of the total AIR program during 2018 was approximately \$60.8 million. This equates to \$7,665 per ton of ozone precursors removed from Colorado's airsheds. The net cost is a combination of vehicle inspection costs, repair costs, vehicle registration fees, motorist inconvenience, and estimated fuel savings.

Introduction

The State of Colorado has maintained an automotive emissions inspection program since 1981. The purpose of this program is to identify and repair high-emitting vehicles. Repair of these vehicles results in lower mobile source emissions and contributes to improvement in the program area's air quality. Mobile sources remain a significant source of controllable emissions that contribute to Front Range summertime ozone levels.

The current Automobile Inspection and Readjustment (AIR) program was authorized by HB93-1340, and began operations on January 1, 1995. It consists of an Inspection and Maintenance Program that uses an electronic query of the On-Board Diagnostic system for light-duty gasoline-powered vehicles that are 11 years old and newer. A dynamometer-based I/M240 emissions inspection is used for model year 1982 through 12 years old light-duty gasoline-powered vehicles. It includes a Two-Speed Idle emissions inspection for 1981 and older light-duty and all model year heavy-duty gasoline-powered vehicles. A visual emissions control system inspection is conducted on all 1975 through 1995 model year vehicles. A gas cap pressure test (light-duty only) and a visual opacity (smoke) inspection are performed on all 1975 and newer light-duty vehicles.

The AIR Program is comprised of the nine-county Front Range area, including all or portions of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld counties. Vehicles registered in the latter two North Front Range counties began to be inspected on November 1, 2010.

The inspection frequency is contingent on the vehicle model year. Model year 1982 and newer vehicles are inspected biennially (every two years), while 1981 and older model year vehicles are inspected annually. The inspection cycle for new vehicles begins after a seven model year exemption period. This allows the newest and cleanest model year vehicles to forgo periodic emissions inspections. Vehicles sold during their exemption period are also exempt from inspection as long as there are at least 12 months remaining in the exemption period.

To further improve motorist convenience, the AIR program includes a Clean Screen Program using remote sensing devices. The program monitors vehicle emissions while simultaneously photographing the license plate as a vehicle passes through infrared and ultraviolet beams of light. Vehicle owners are notified by their local County Clerk via registration renewal card if their vehicles have met the program criteria. Vehicles that pass the remote sensing inspection process are not required to be inspected at a traditional inspection facility and can continue through the vehicle registration process.

The contractor for the program is Envirotest Systems Corp. (Envirotest is an operating subsidiary of Opus Inspection). They operate and maintain all of the Air Care Colorado vehicle emissions inspection stations, the Clean Screen testing units and manage all related data and communication services. The Mobile Sources Program in the Air Pollution Control Division at the Colorado Department of Public Health and Environment designs, administers, and evaluates the program. The Emissions section in

the Division of Motor Vehicles at the Colorado Department of Revenue regulates the emissions inspection facilities and inspectors working in the emissions program areas. The AIR Program is enforced through the denial of vehicle registration by the County Clerks. Proof of a passing emissions inspection is a prerequisite to renewing a vehicle's registration.

Automobile Inspection and Readjustment Program

AIR Program Network

The AIR Program network consists of 18 Air Care Colorado emissions inspection stations with a total of 97 inspection lanes, two independent test-only stations that inspect model year 1981 and older gasoline-powered vehicles, and 20 fleet stations that are licensed to inspect qualifying commercial and governmental fleet vehicles. Fleet inspection stations are licensed to only test qualifying commercial and governmental fleet vehicles that they own.

The Clean Screen roadside inspection program consists of, on average, 12 remote sensing units deployed within the program area. The units are rotated among 86 locations throughout the program area, with the primary locations being highway on ramps.

The division operates six Emissions Technical Centers throughout the AIR program area to help both the motoring public and the repair industry.

New Program Developments

In 2018, Mobile Sources staff completed a project to evaluate the emissions pass/fail criteria for OBD-equipped vehicles that are more than 11 years old. The project evaluated vehicles using specific OBD trouble codes in conjunction with the IM240 test results to make a pass/fail determination. This study was initiated as a result of an audit recommendation from the 2017 AIR Program Evaluation. The study failed to show a comparable air quality benefit as presented in the program evaluation¹. At the time of this report, Mobile Sources staff were still investigating potential modifications to the proposed control strategy that may yield additional air quality benefits.

¹ <https://leg.colorado.gov/audits/automobile-inspection-and-readjustment-program>

A challenge to any modern vehicle emissions program is identifying vehicles that have been modified to pass the OBD inspection through the use of emissions defeat devices or software programming. In 2018, Mobile Sources staff implemented additional measures to identify vehicles that do not meet the original manufacturer profile. When a vehicle's profile does not match what is expected, the vehicle is required to visit an Emissions Technical Center where a pass/fail determination is made. In 2018, there were 354 vehicles identified and referred to the Emissions Technical Centers.

On June 19, 2018, Colorado Governor Hickenlooper issued Executive Order B2018-06 "*Maintaining Progress on Clean Vehicles*". In this Order, the Colorado Department of Public Health and Environment was directed to:

- *Develop a rule to establish a Colorado LEV (Low Emission Vehicle) program, which incorporates the requirements of the California LEV program; and*
- *Propose that rule to the Air Quality Control Commission during its August 2018 meeting for possible adoption into the Colorado Code of Regulations by December 30, 2018.*

The purpose of this executive order was to ensure progress toward reducing greenhouse gas emissions from motor vehicles in Colorado. Although the proposed Regulation does not directly impact the AIR Program, Mobile Sources staff were directly involved with the development process. The regulation will ensure continued GHG reductions from vehicles through model year 2025 by means of adoption of California's Low Emission Vehicle (LEV) standards. The Air Quality Control Commission approved the Regulation Number 20 on November 16, 2018.

Emissions Technical Centers

Pursuant to Colorado Revised Statutes, the division is required to operate Emissions Technical Centers throughout the program area. The division operates six centers that provide assistance to the motoring public, repair industry and the emissions testing contractor. These centers also provide technical support for the Department of Revenue in assessing requirements for repair and hardship waivers.

In 2018, these technical centers performed approximately 4,650 vehicle evaluations. Vehicles evaluations are completed to help assist the motoring public with proper emissions related repairs and to address potential vehicle tampering problems. In addition to vehicle evaluations, technical center staff received approximately 14,000 phone calls to answer questions from both the motoring public and repair industry.

In 2018, technical center staff conducted four repair industry training seminars. Repair industry training is completed to help educated technicians on proper emissions related repairs and to inform the industry of any impactful program changes.

The Emissions Technical Centers are a vital part of the success of the AIR Program. Technical center staff provides frontline vehicle owner support and provide valuable input that has helped shape the current emissions program.

On-Board Diagnostic Inspection Program

In 2018, vehicles model year 2008 through 2011 were required to receive an On-Board Diagnostic (OBD) inspection. Additionally, vehicles model year 1996 through 2007 received an alternate OBD inspection if the vehicle was incompatible with the I/M240 dynamometer, allowing OBD fail rates to be measured for these vehicles, as explained in the I/M240 section.

The OBD inspection involves a visual assessment of the Malfunction Indicator Light (MIL), also known as a check engine light, and an electronic query of the computer control system to determine if there are emissions problems. A vehicle's OBD system will command the MIL on if the emissions output is elevated at least 1.5 times the Environmental Protection Agency certification levels.

Because of the way the OBD inspection interprets vehicle's sensors and computer control systems, an emissions related issue may be identified more readily than with the traditional dynamometer based I/M240 inspection that directly measures a vehicle's emissions.

The OBD inspection process also includes a functional inspection of the gas cap and a visual inspection of the exhaust for opacity (smoke).

OBD – Initial Inspection Results

There were a total of 285,685 initial OBD inspections conducted in 2018. A vehicle will fail the OBD inspection if the Malfunction Indicator Light is illuminated or not functioning (Visual Fail) and/or the MIL is commanded on by the OBD system. Furthermore, a failing test may occur if the vehicle is emitting visual opacity (smoke), or has a faulty or missing gas cap. In 2018, there were 17,417 vehicles that failed their initial OBD inspections, which included failures for the MIL commanded on, visual inspection of the MIL, gas cap pressure, and visual opacity, resulting in an OBD initial failure rate of 6.10%. Vehicles that fail

their initial inspection must undergo repairs and then return to an emissions station for a post-repair emissions inspection. Figure 1 shows the overall OBD initial failure rates by model year and vehicle type. Additional information regarding initial OBD failures is available in the Initial OBD Inspection Report within Appendix A2.

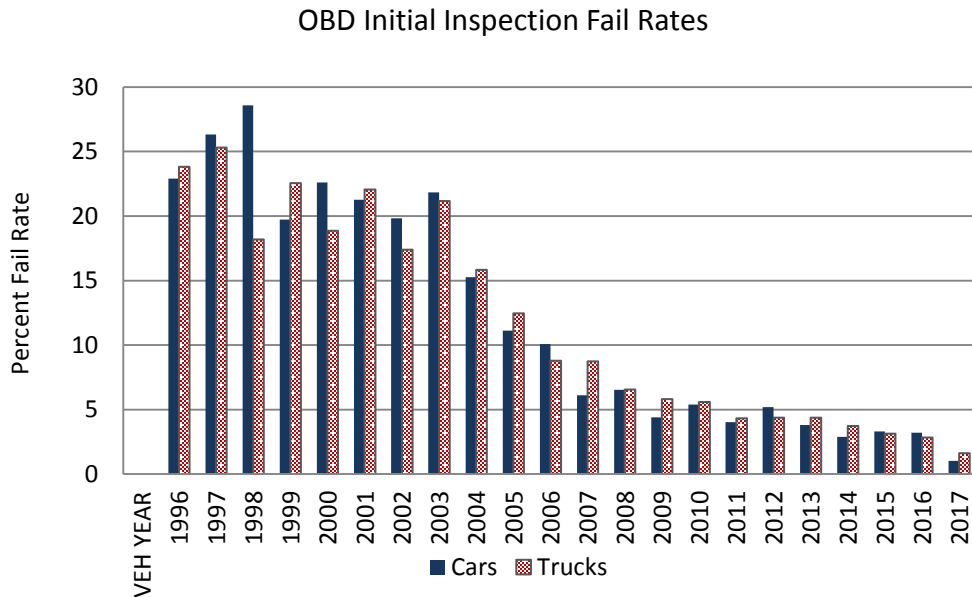


Figure 1 – OBD Initial Inspection Fail Rates by Model Year and Vehicle Type

Figure 1 demonstrates that the lowest failure rates are associated with the newest model year vehicles. This has prompted the state to exempt all new vehicles from periodic emissions inspections for the first seven model years. Nevertheless, some motorists had their vehicles inspected during the model year exemption period. This permits failure rates to be measured for 2012 and newer model year vehicles as shown in Figure 1.

Of the 17,417 overall failures, 11,128 vehicles failed their initial OBD MIL inspection resulting in an OBD MIL initial failure rate of 3.90%. Figure 2 shows the MIL failure rates by model year and vehicle type. These MIL failures include vehicles that failed for the MIL being commanded on and/or the visual MIL inspection, which is explained in the OBD visual inspection results section. Vehicles that failed for MIL and Gas Cap, as explained in OBD Initial Inspection Failure Report (Appendix A3), are also included.

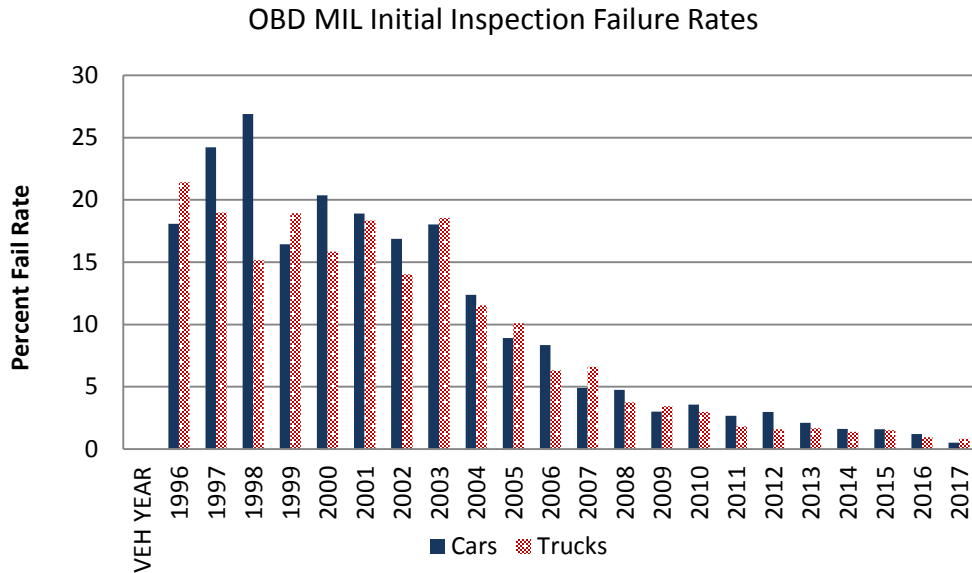


Figure 2 – OBD MIL Fail Rates by Model Year and Vehicle Type

Additional information on MIL inspection activity is available in the Initial OBD Inspection Failure Report in Appendix A3.

A vehicle’s OBD system may not communicate with the inspection equipment. If the MIL passes the visual inspection but the OBD system does not communicate the vehicle is given an alternate I/M240 inspection. In 2018, 2,478 vehicles did not communicate and received an alternate I/M240 inspection. The pass/fail results and emissions rates for these vehicles are included in the I/M240 section of this report. The purpose of administering an alternate I/M240 inspection is to maximize customer convenience, as it reduces the number of required trips to the inspection station.

In order for a vehicle’s emissions system to be properly evaluated, certain vehicle equipment parameters must be met before the diagnostic process can begin. These parameters are evaluated by the OBD system and will report the status of supported emissions systems through various “readiness monitors.” A vehicle will receive an OBD inspection if the supported readiness monitors are set to “Ready”. If the MIL passes the visual inspection but the required readiness monitors are not set to “Ready”, the vehicle is given an alternate I/M240 inspection. The readiness monitor standard varies by model year grouping so some vehicles may receive an OBD inspection with one or two readiness monitors set to “Not Ready”. In 2018, 12,843 vehicles were “Not Ready” to receive an OBD inspection and received an alternate I/M240 inspection instead. The pass/fail results and emissions rates for these vehicles are included in the I/M240 section of this report.

In 2018, 268,268 vehicles passed their initial OBD inspection (93.90%), with 16,391 (6.11%) of those passing with at least one readiness monitor set to “Not Ready”. Additionally, there were 17,417 (6.10%) vehicles that failed the OBD inspection with 3,722 (33.45%) of those failing with at least one readiness monitor set to “Not Ready”. Supplementary information on OBD readiness status is available in the Initial OBD Fail Readiness Monitor Summary Report and Initial OBD Pass Readiness Monitor Summary Report in Appendix A5 and A8.

Some vehicles are not compatible with the alternate I/M240 inspection due to the vehicle’s configuration, such as hybrids or all-wheel drive trucks with a wheel base that exceeds the limitations of the dynamometer. If the MIL passes the visual inspection, but the OBD system is “Not Ready” or a problem exists with the vehicle’s OBD system and the vehicle is not compatible with the dynamometer, then the vehicle receives an incomplete inspection. Vehicles that receive an incomplete inspection must have the OBD systems communication issue resolved or have the readiness monitors meet the “Ready” criteria. There were 10,116 (3.42%) initial incomplete inspections in 2018. Additional information regarding incomplete OBD inspections is available in the Initial OBD Incomplete Inspection Report within Appendix A10.

In addition to the mandatory OBD inspection performed on model year vehicles 2008 through 2011, an advisory only OBD inspection was completed on all 1996 through 2007 vehicles subject to the I/M240 inspection. The advisory OBD inspection included a visual MIL examination and a check of the MIL command status. These OBD inspection statistics are available in the OBD Initial Inspection Emissions Report in Appendix A9.

OBD – Gas Cap Inspection Results

Another element of the OBD Program inspection is a visual and functional inspection of gas caps. Inspectors verify that a gas cap is present, and then connect each gas cap to a device that pressurizes the cap and measures the decay of that pressure over time, which indicates a fuel vapor leak. If the gas cap is missing or if the pressure decay exceeds the standard, then the gas cap fails the inspection and the motorist is required to install a functional gas cap.

The benefit of this inspection is the reduction of gasoline vapors venting to the atmosphere, which is a major factor in ground-level ozone formation. EPA’s emissions model, MOVES, estimates that a functional gas cap program removes approximately one ton of hydrocarbons per day in Colorado.

For vehicles receiving an OBD inspection, there were 6,771 gas cap failures (2.37%) in 2018. Additional information on Gas Cap inspection activity is available in the Initial OBD Inspection Failure Report in Appendix A3.

Figure 3 shows the percentage of gas cap failures by model year

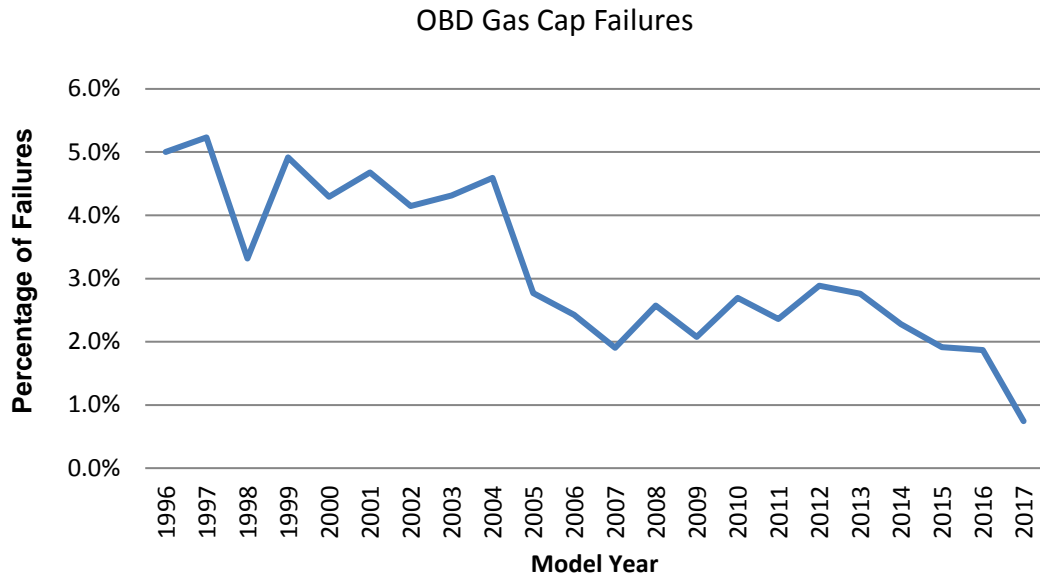


Figure 3 – OBD Gas Cap Failure Percentage by Model Year (1996-2018)

This chart only accounts for the gas cap failures associated with the OBD inspection.

OBD – Visual Inspection Results

Vehicles receiving an OBD inspection can fail for a visual inspection of its Malfunction Indicator Light. If the MIL bulb does not illuminate with the key on and engine off, or if it does not turn off after the engine is started, then the visual MIL inspection fails. Visual MIL failures can be in addition to the MIL commanded on failures. In 2018, 8,422 vehicles (2.95%) failed the visual MIL inspection. These vehicles are included in the overall OBD initial failure section. Additional information on visual MIL inspection activity is available in the Initial OBD Inspection Failure Report in Appendix A3.

OBD – Multiple Retests

Failing vehicles are required to undergo retesting after repairs are made. Some of the vehicles that fail their initial OBD inspection may continue to fail after their initial repair attempt. In 2018, 15,798 vehicles were given an OBD post-repair retest. Of these vehicles, 2,025 failed a second time, resulting in a 12.82% OBD initial retest failure rate. Additional information

on retest activity is available in the OBD Retest Frequency Report in Appendix A6.

As previously noted, a vehicle's OBD system must have the required readiness monitors set to "Ready" in order to get an OBD inspection. The program found 7,390 vehicles (26.99% of all initial OBD retest inspections) were "Not Ready" or had OBD communication issues during their initial post-repair inspections and received incomplete retests. When a vehicle has its battery disconnected or has its Diagnostic Trouble Codes manually cleared, the readiness monitors will remain in a "Not Ready" status until a manufacturer specific drive cycle is completed. The division has an extensive outreach program to educate and inform motorists and repair shops how to properly set readiness monitors after repairs are completed. The goal of this outreach is to reduce the number of vehicles that return for a retest without having the required readiness monitors set to "Ready". Additional information is provided in the OBD Retest Incomplete Inspection Report in Appendix A11.

OBD – Post-Repair Inspection Results

Vehicles that fail their OBD emissions inspection potentially have higher emissions than vehicles that pass OBD inspection. The improved emissions from repairing these vehicles generate the OBD program's air quality benefit. Additional information on retest activity is available in the OBD Retest Frequency Report in Appendix A6.

OBD – Tampering Identification Results

In 2018, vehicles receiving an OBD inspection had to meet specific criteria to ensure that the OBD system had not been tampered. It's not uncommon for the OBD system to be modified to report normal operating conditions when aftermarket emissions defeat devices have been installed. When a vehicle is identified as being tampered it is referred to an Emissions Technical Center where the vehicle is subject to an evaluation and the vehicle owner is advised on what repairs need to be completed to obtain a passing inspection.

In 2018, 354 vehicles were identified and referred to the Emissions Technical Centers. Of those 354 vehicles, 200 were evaluated, repaired and received a passing emissions inspection. There were 154 vehicles that were unresolved at the time of this report.

I/M240 Program Results

The I/M240 element of the program uses a 240-second loaded-mode transient dynamometer inspection cycle to measure exhaust emissions. This emissions inspection cycle is a derivative of the Federal Test Procedure that is used to certify new vehicles for emissions. The I/M240 inspection also includes a visual inspection of emissions control equipment for 1995 and older model year vehicles, a visual and pressure test of the gas cap and a visual inspection of the exhaust for opacity (smoke). Vehicles model year 1996 and newer that are I/M240 tested also receive a visual inspection of the OBD Malfunction Indicator Light as an advisory check.

I/M240 – Initial Inspection Results

In 2018, there were a total of 572,751 initial I/M240 inspections conducted. The majority of vehicles pass this initial I/M inspection. Vehicles that fail their initial inspections must undergo repairs and then return to an emissions inspection station for additional testing.

Vehicles can fail for a number of reasons, including missing or broken emission control equipment (1995 and older model year vehicles), excess exhaust emissions, visual opacity (smoke), or faulty or missing gas caps. In 2018, 48,380 vehicles failed their initial I/M240 inspections, resulting in an initial failure rate of 8.45%. Of these, 24,950 vehicles failed for excess exhaust emissions, or an exhaust emissions failure rate of 4.36%.

There were a small number of vehicles that were tested within their exemption period that are not included in Figures 4, 5, 6, 7, and 8. There were not enough vehicles for model years 2012 and newer to accurately represent average emissions rates.

Figure 4 shows the overall I/M240 initial failure rates by model year and vehicle type. Overall failures consist of vehicles with excessive exhaust emissions, gas cap pressure failures, opacity and/or visual equipment test failures.

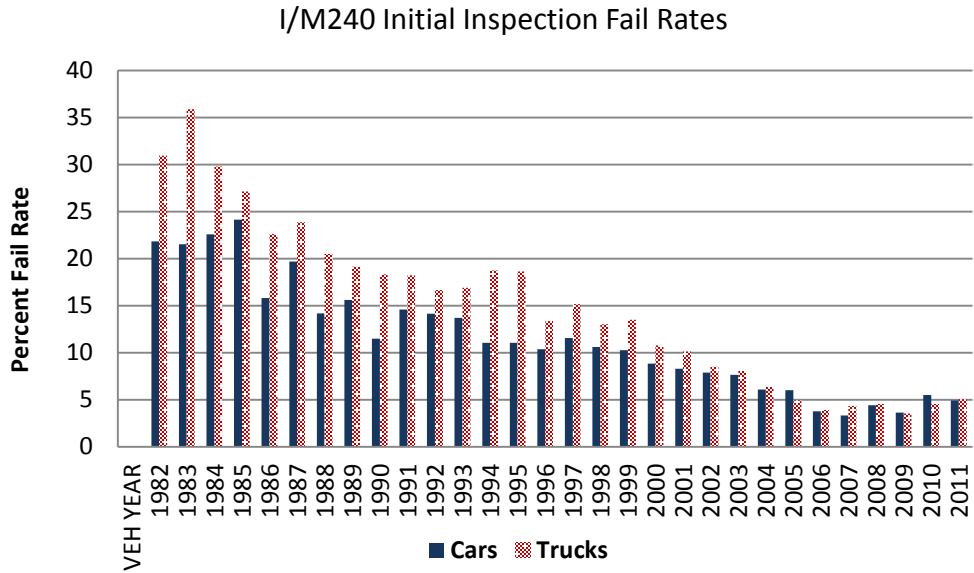


Figure 4– I/M240 Initial Inspection Fail Rates by Model Year and Vehicle Type (1982-2011)

In 2018, model year 2007 and older vehicles were required to receive I/M240 inspections, however; model year 2008 and newer vehicles may have received alternate I/M240 inspections if the vehicles’ OBD systems were “Not Ready” or did not communicate and therefore allowing I/M240 exhaust fail rates to be measured for these vehicles.

Figure 5 shows rates of vehicles that failed for excessive exhaust emissions, sorted by model year and vehicle type.

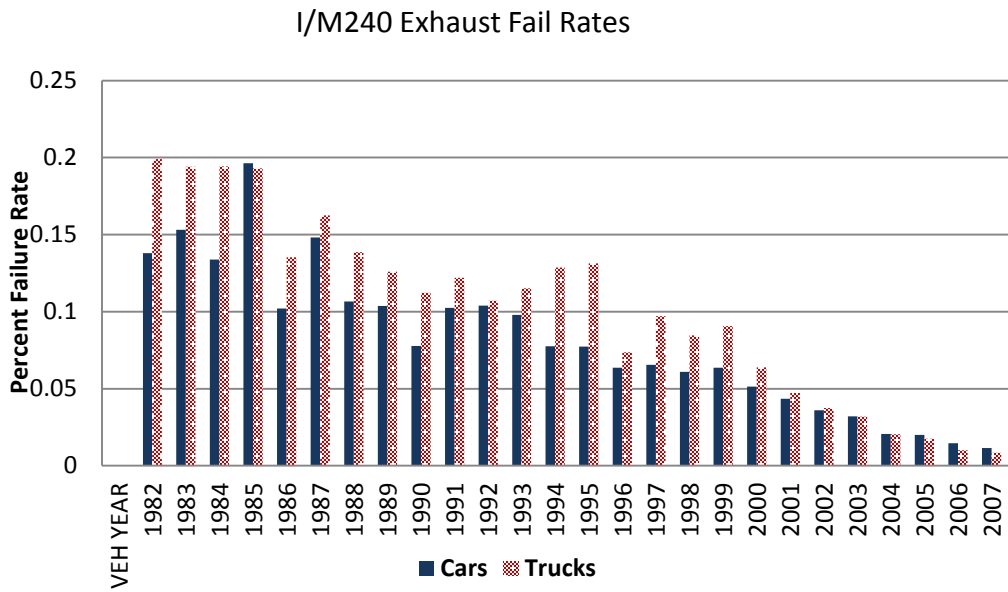


Figure 5 – I/M240 Exhaust Fail Rates by Model Year and Vehicle Type (1982-2007)

Figures 6, 7, and 8 show the initial exhaust emission results for hydrocarbons, carbon monoxide, and nitrogen oxides, respectively.

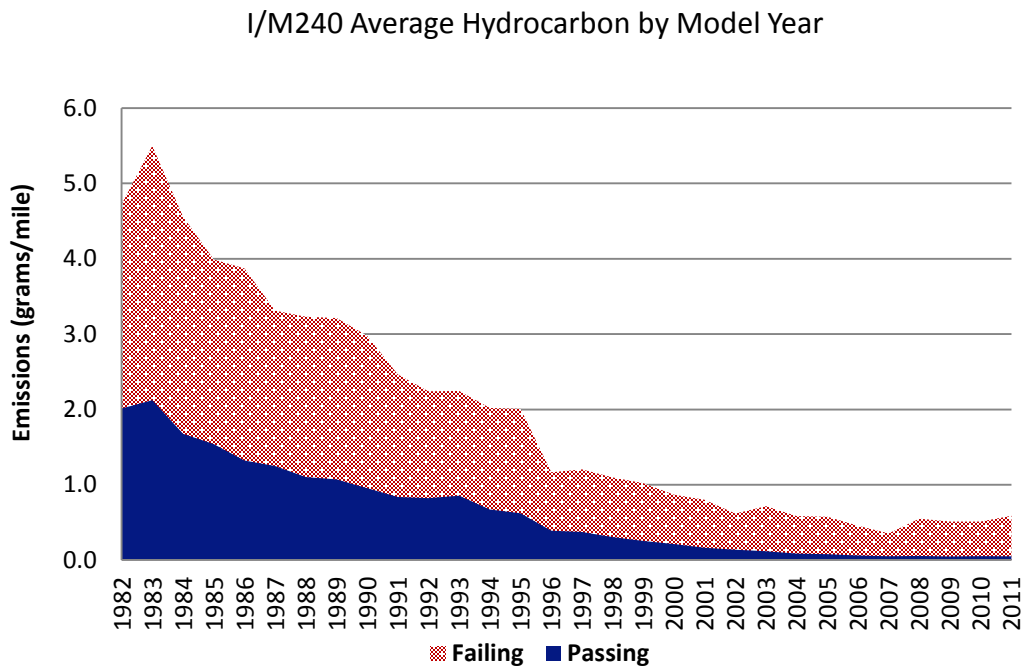


Figure 6 – I/M240 Average Hydrocarbon Emissions by Model Year (1982-2011)

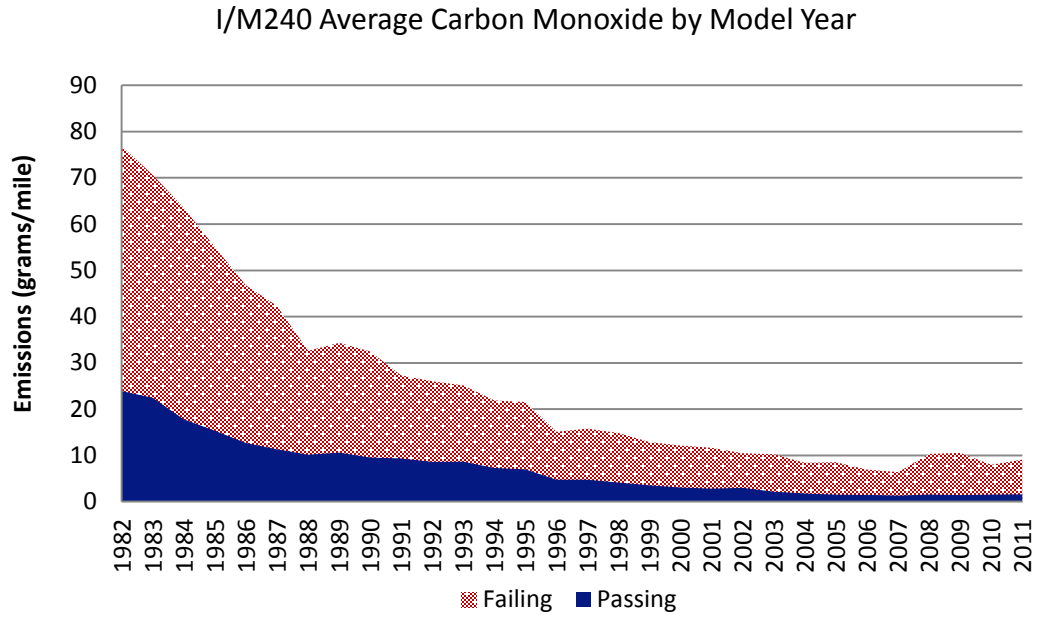


Figure 7 – I/M240 Average Carbon Monoxide Emissions by Model Year (1982-2011)

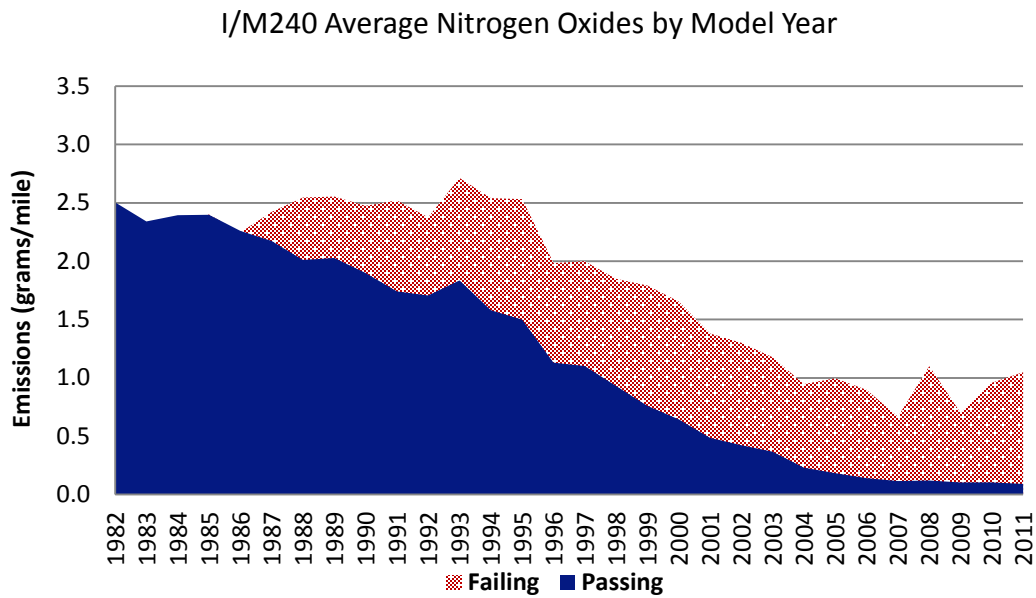


Figure 8 – I/M240 Average Nitrogen Oxides Emissions by Model Year (1982-2011)

Vehicles that fail for excessive exhaust emissions could fail for one or any combination of these criteria pollutants. Emission standards that are used to fail a vehicle are set accordingly for individual model years and vehicle types. All standards are set so that well-maintained vehicles will likely pass, with an adequate buffer to prevent marginal vehicles from falsely failing the inspection.

As these figures show, HC, CO, and NO_x emissions are highest for the oldest vehicles. As expected, average exhaust emissions drop significantly for newer vehicles (in terms of both passing and failing emissions).

I/M240 – Gas Cap Pressure Inspection Results

The inspection program includes a visual and functional test of each vehicle’s gas cap. Inspectors install each gas cap on a pressurizing device that measures pressure decay over time. If the pressure decay exceeds the standard, then the gas cap fails and the motorist is required to install a functional gas cap.

The benefit of this test is a reduction of gasoline vapors venting to the atmosphere, a significant factor in ground-level ozone formation. EPA’s emissions model, MOVES, estimates that a functional gas cap testing program removes approximately one ton of hydrocarbons each day in Colorado.

There were 24,416 vehicles subjected to the I/M240 inspection that failed the gas cap test in 2018; resulting in a failure rate of 4.28%. Figure 9 shows the number of gas cap pressure failures by model year.

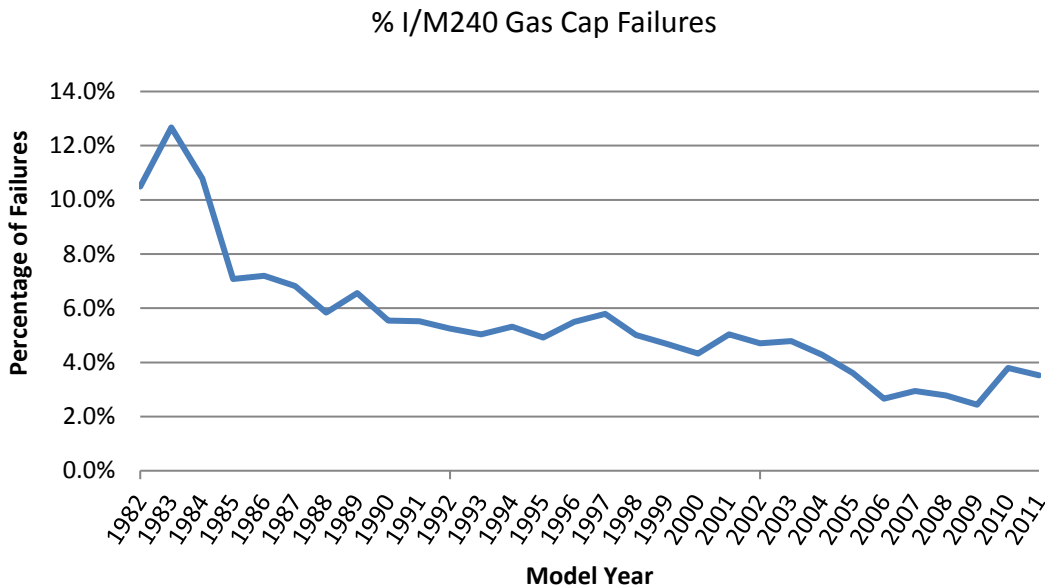


Figure 9 – I/M240 Gas Cap Failure Percentage by Model Year (1982-2011)

This chart only accounts for the gas cap failures associated with the I/M240 inspection.

I/M240 – Visual Inspection Results

All model year 1982 through 1995 vehicles are subjected to a visual inspection of their secondary air injection system, catalytic converter(s), and/or oxygen sensor(s).

In 2018, 328 vehicles failed for missing or improperly installed catalytic converter(s), 385 vehicles failed for a missing or tampered air injection system and 156 vehicles failed for a missing or tampered oxygen sensor(s).

I/M240 – Multiple Retests

Failing vehicles are required to undergo retesting after repairs are made. Some vehicles that fail their initial I/M240 inspections may continue to fail even after initial repairs.

In 2018, 44,653 vehicles received an initial post-repair I/M240 retest. Of these, 11,247 failed again, thus resulting in a 25.19% I/M240 initial retest failure rate. Additional information on retest activity is available in the I/M240 Retest Frequency Report in Appendix B6.

I/M240 – Post-Repair Inspection Results

Vehicles that fail their emissions inspection generally have much higher emissions than vehicles that pass. The improved emissions from repairing these vehicles generate the program's air quality benefit.

Table 1 shows the average emissions from all vehicles that failed their initial I/M240 inspections and received a subsequent retest, average emissions from vehicles that passed a subsequent retest, and the percent reduction by pollutants and vehicle types in grams per mile.

Table 1 - I/M240 Passed Retest Inspection Results (2018)

Vehicle Type	Failed Initial Inspection			Passed Retest			Percent Reduction		
	HC gpm	CO gpm	NOx gpm	HC gpm	CO gpm	NOx gpm	HC	CO	NOx
Cars	1.20	14.83	1.52	0.30	3.77	0.66	64.86	65.04	44.38
Trucks	1.50	19.99	2.12	0.45	5.51	1.05	56.42	61.42	37.38
TOTAL	1.38	17.97	1.88	0.39	4.82	0.89	59.41	62.63	39.62

Two-Speed Idle Inspection Results

The AIR Program requires non-exempt² model year 1981 and older gasoline-powered vehicles to undergo annual Two-Speed Idle inspection. Fleet-owned vehicles model year 1995 and older are Idle inspected annually. Fleet-owned vehicles model year 1996 and newer are OBD inspected annually (these vehicles are included in the OBD section). Heavy-duty gasoline-powered vehicles newer than model year 1981 undergo Idle inspection, but on a biennial (every two years) basis.

The Idle inspection measures vehicle emissions at idle and raised (2500 rpm) idle. Only hydrocarbon and carbon monoxide emissions are measured, with no engine load placed on the vehicle. NOx emissions are not measured as part of the two-speed idle inspection protocol because NOx is not produced in significant amounts at idle and when the vehicle is not under load. These inspections measure vehicle exhaust pollutant concentration levels in parts per million for hydrocarbon and percent for carbon monoxide, not the actual mass of emissions. The Two-Speed Idle inspection also includes a visual inspection of emissions control equipment (for 1975 through 1995 newer model year vehicles), a visual and pressure test of the gas cap (light-duty only) and a visual inspection of the exhaust for opacity (smoke).

² Exempt vehicles include vehicles registered as collector series, street rods, farm vehicles, or horseless carriage.

Two-Speed Idle – Initial Inspection Results

In 2018, 43,274 vehicles underwent Idle inspections within the program area. Of these vehicles, 3,299 (or 7.62%) failed their initial inspections, with 2,852 (6.59%) failing the exhaust portion of the inspection.

Figures 10, 11, and 12 show failure rates by model year, along with the average emissions of passing and failing vehicles by pollutant. Model year 1974 in these figures include all failing vehicles of model year 1974 and earlier. There were a small group of vehicles that were tested within their exemption period that are not included in Figures 10, 11, and 12. There were not enough vehicles for model years 2012 and newer to accurately represent average emissions rates.

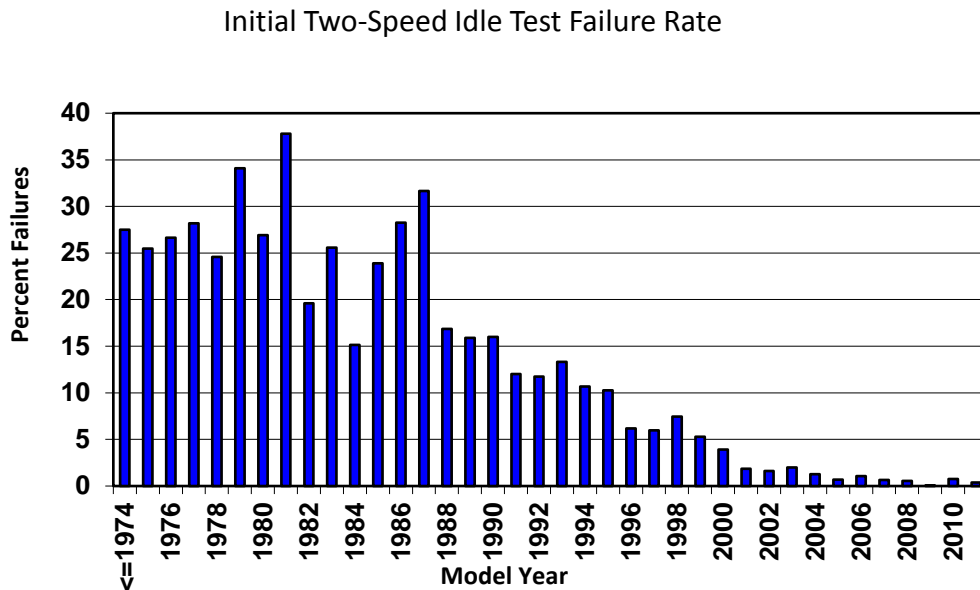


Figure 10 – Two-Speed Idle Inspection Initial Inspection Fail Rate by Model Year

Two-Speed Idle Test - Hydrocarbon

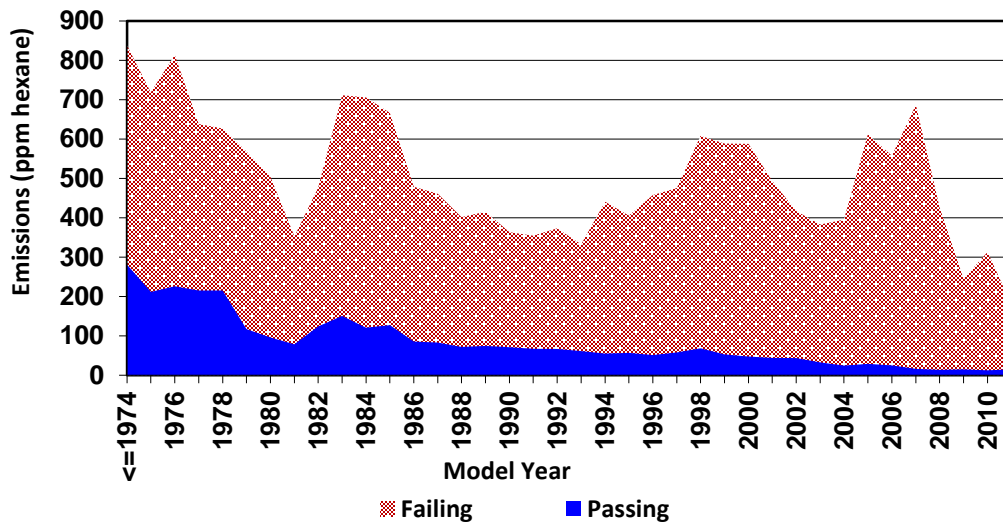


Figure 11 – Two-Speed Idle Inspection Average Hydrocarbon by Model Year

Two-Speed Idle Test - Carbon Monoxide

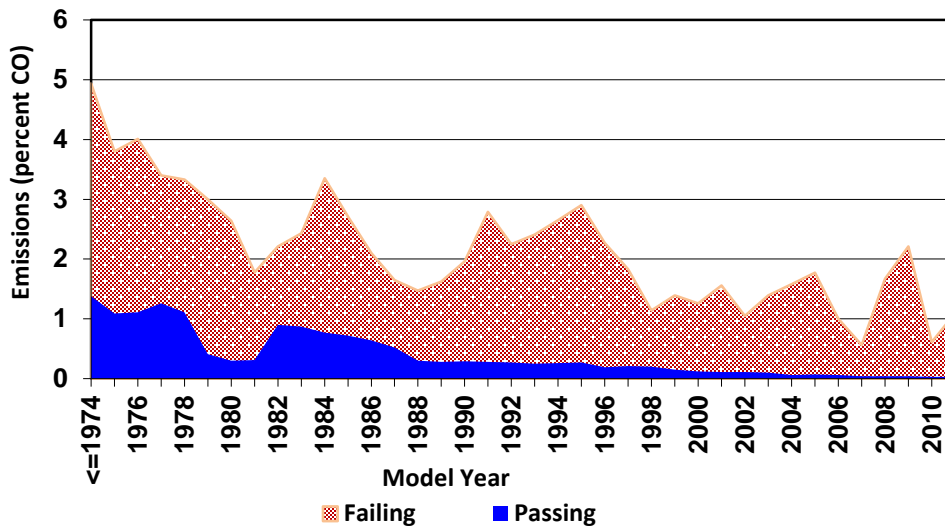


Figure 12 – Two-Speed Idle Inspection Average Carbon Monoxide by Model Year

Two-Speed Idle – Gas Cap Inspection Results

One function of the gas cap is to prevent harmful fuel vapors from escaping into the atmosphere. A gas cap pressure inspection is performed to test the gas cap's ability to hold pressurized vapors inside the fuel tank. Two-Speed Idle tested light-duty vehicles (model year 1975 and newer) must undergo a gas cap pressure inspection. Inspectors install a vehicle's gas cap on a device that pressurizes the cap and measures the decay of that pressure over time. If the pressure decay exceeds the standard, then the vehicle fails the inspection and motorists are required to install a functional cap. There were 340 gas cap failures during two-speed idle inspections in 2018. This is a failure rate of 9.12% of vehicles subjected to gas cap inspection.

Two-Speed Idle – Visual Inspection Results

Two-Speed Idle inspected vehicles undergo a visual inspection of the secondary air injection system, catalytic converter, and oxygen sensor. There were 3,299 vehicles that failed the Two-Speed Idle inspection in 2018. Of these, 161 vehicles failed for missing or improperly installed catalytic converter(s), 258 failed for a missing or tampered air injection system, and 31 failed for missing oxygen sensor(s).

Two-Speed Idle – Multiple Retests

Failing vehicles are required to undergo retesting after repairs are made. Some vehicles that failed their initial Idle inspections may continue to fail after their initial repairs. There were 2,763 vehicles given initial post repair retests in 2018. Of these vehicles, 1,050 failed again, resulting in a 38.00% initial Idle retest failure rate. Additional information on retest activity is available in the Idle Retest Frequency Report in Appendix C6.

Two-Speed Idle – Post-Repair Inspection Results

Vehicles that fail their initial Idle exhaust emissions inspections generally have much higher emissions than vehicles that pass the inspection initially. After failing their emissions inspections, vehicles must undergo repairs until they pass the inspection.

Table 2 shows the average emissions (in part per million and percent) at idle and raised idle (2500 rpm) from all vehicles that failed their initial Idle inspections and received subsequent retests, average emissions from vehicles that passed subsequent retests and the percent reduction by pollutant.

Table 2 - Two-Speed Idle Passed Retest Inspection Results (2018)

Vehicle Type	Failed Initial Idle		Failed Initial 2500		Passed Retest Idle		Passed Retest 2500		% Reduction Idle		% Reduction 2500	
	HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC	CO	HC	CO
Cars	598.15	3.32	478.84	3.66	155.57	0.58	171.56	1.53	68.41	80.56	57.81	51.58
Trucks	653.44	2.83	414.52	2.25	146.60	0.68	136.28	1.08	74.63	74.31	62.89	47.78
Total	642.43	2.93	427.32	2.53	148.30	0.66	142.97	1.16	73.58	75.63	61.84	48.79

Unresolved Vehicles

A concern for any inspection program is “unresolved vehicles” which fail an initial inspection, never receive a passing inspection, and disappear from the registered fleet. Approximately 16.71% of vehicles that failed their initial inspection in 2018 did not receive a passing retest by March 2018. Out of the 69,096 initial failures, there were 11,548 vehicles that were unresolved as of March 2018. It is assumed that the vast majority of these vehicles are successfully repaired outside of the analysis period (calendar year 2018), move out of the program area, or are retired.

Smoking Vehicles

Smoking vehicles tend to be excessive emitters. They are of concern to the state for overall air quality reasons, and to the nearby motorists exposed to emissions from these vehicles.

CDPHE operates a Smoking Vehicle Hotline for motorists to report any excessively smoking vehicles they observe. Once reported, CDPHE provides registered owners of these vehicles with a brochure informing them that if their vehicle emits any visible smoke during their next regular emissions inspection, it will fail.

The brochure is designed to educate owners on the causes of visible smoke, its health effects, and potential danger, not only to other motorists but also to those in the smoking vehicle. The brochure also provides information regarding where a motorist may receive diagnostic help in determining and repairing their vehicle’s problem. Although the

smoking vehicle program is voluntary, the state encourages smoking vehicle owners to take advantage of diagnostic services available at State-operated Emission Centers.

Vehicle information reported on the hotline is also transferred to Air Care Colorado lane inspectors, alerting them that the vehicle they are inspecting has been reported as a smoking vehicle. If the vehicle is smoking at the time of the inspection, then it fails the emissions inspection. In 2018, 655 vehicles failed the visible smoke portion of the emissions inspection (148 OBD inspections, 449 I/M240 inspections and 58 Two-Speed Idle inspections).

Waivers

A Certificate of Emissions Waiver (or “waiver”) is an emissions control document that satisfies the emissions inspection requirement for a vehicle for one inspection cycle, even though the vehicle was unable to meet emissions standards.

There are three types of waivers:

- A Repair Cost Waiver may be issued for a vehicle which fails an emissions inspection, receives emissions-related repairs that meet the minimum repair cost limit (\$715 for model year 1968 and newer vehicles, and \$75 for 1967 and older vehicles), and then fails a subsequent emissions inspection. In order to qualify for a repair cost waiver, repair expenses must pertain to the specific causes of the emissions failure. Documentation of this fact is required. This type of waiver is referenced in C.R.S. 42-4-306(7)(a)(II)(A) and AQCC Regulation No. 11. In 2018, there were 362 Repair Waivers issued by Department of Revenue (DOR).
- An Economic Hardship Waiver may be issued once in each vehicle’s lifetime if the vehicle owner has no other means of transportation and is receiving a recognized form of economic assistance. This type of waiver is referenced in C.R.S. 42-4-306(7)(a)(II)(C) and AQCC Regulation No. 11. In 2018, there were 255 Economic Hardship Waivers issued by DOR.
- A Diagnostic Waiver may be issued for a vehicle that fails a retest, has not met the repair cost limit, and a complete and documented physical and functional diagnosis of the vehicle (performed at one of the program’s Emissions Technical Centers) concludes that no additional emissions-related repairs would be effective or needed. This type of waiver is referenced in C.R.S. 42-4-310(1)(d)(IX). In 2018, there were 2 Diagnostic Waivers issued by CDPHE Technical Center staff.

Waivers are not issued for vehicles that have been tampered with (i.e. missing emissions control equipment), and/or are visibly smoking. Vehicles that fail the gas cap inspection are also not eligible to receive a waiver.

A vehicle owner can request a waiver by calling the Division of Motor Vehicles at the Department of Revenue. As part of the waiver process, a State Emissions Technical Center technician may evaluate the vehicle to both verify the aforementioned criteria and make useful repair recommendations to the vehicle owner.

Additional information on waivers is available in the Department of Revenue's section of this report.

Clean Screen Program Results

The state also operates a remote sensing based roadside emissions inspection program called Clean Screen or RapidScreen. This program permits vehicles that are seen two or more times in a year and meet certain rigorous emissions standards to pass a remote sensing emissions inspection as an alternative to the standard inspection at an emissions inspection station.

The state's emissions inspection contractor, on average, deploys 12 units daily in the nine county program area. These units operated a total of 25,229 hours in 2018, collecting approximately 4.6 million emissions records.

In 2018, the overall remote sensing evaluated fraction of testable vehicles was 24.33% (based on 707,539 total I/M eligible vehicles in the fleet, with 172,149 unique eligible vehicles assessed by remote sensing devices). The number of unique eligible vehicles evaluated includes both vehicles that did and did not pass Clean Screen standards.

Of the 172,149 vehicles evaluated by remote sensing units, 146,645 (85.18%) were identified as passing Clean Screen standards and issued a Clean Screen notice. Of those Clean Screen notices, 126,594 or 86.33% were redeemed. The redeemed numbers are calculated from each individual vehicle that passed Clean Screen requirements whose owners chose to use the passing Clean Screen results to register their vehicles in lieu of getting the traditional emissions inspections.

Clean Screen Average Vehicle Emissions Results

The Clean Screen program measures vehicle emissions under actual operating conditions. While there is variability to these measurements, when aggregated as a group, vehicle emissions trends may be observed. The following three graphs (Figure 13,14, and 15) detail the emissions results of remote sensing monitoring

for each of the three pollutants measured (HC, CO, and NO_x), grouped by vehicle model year.

The fleet average emissions are shown by the middle green line in each of the charts. It represents the average emissions for the model year 1982 and newer vehicle fleet that are evaluated through remote sensing. As defined on the charts, average fleet emissions for all three pollutants (HC, CO, and NO_x) show a pronounced downward trend to the newest vehicles that are the cleanest portion of the fleet.

The bottom blue line indicates the average emissions by model year for vehicles that met all the Clean Screen requirements and pass Clean Screen standards. It is noticeable that the average emission rates are much lower than the fleet as a whole, reflecting the tighter emissions standards these vehicles must meet. The red line shows the average emissions by model year for vehicles that met Clean Screen requirements but did not pass the Clean Screen standards.

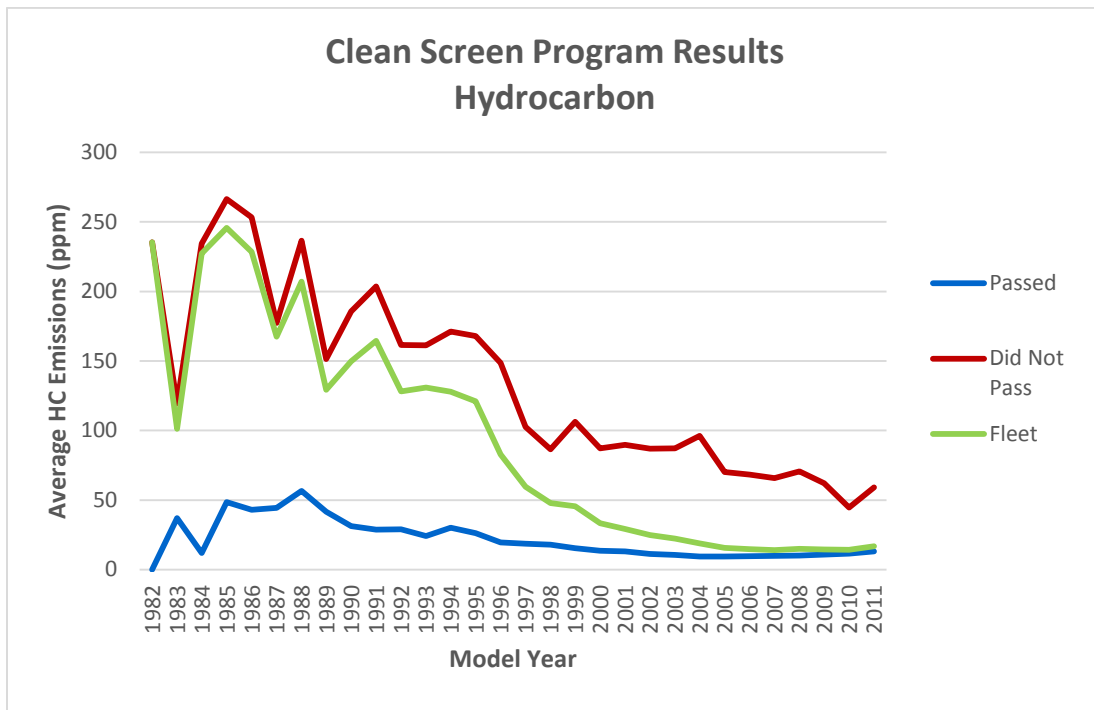


Figure 13 – Clean Screen Program Results – Average Hydrocarbon Emissions by Model Year (1982-2011)

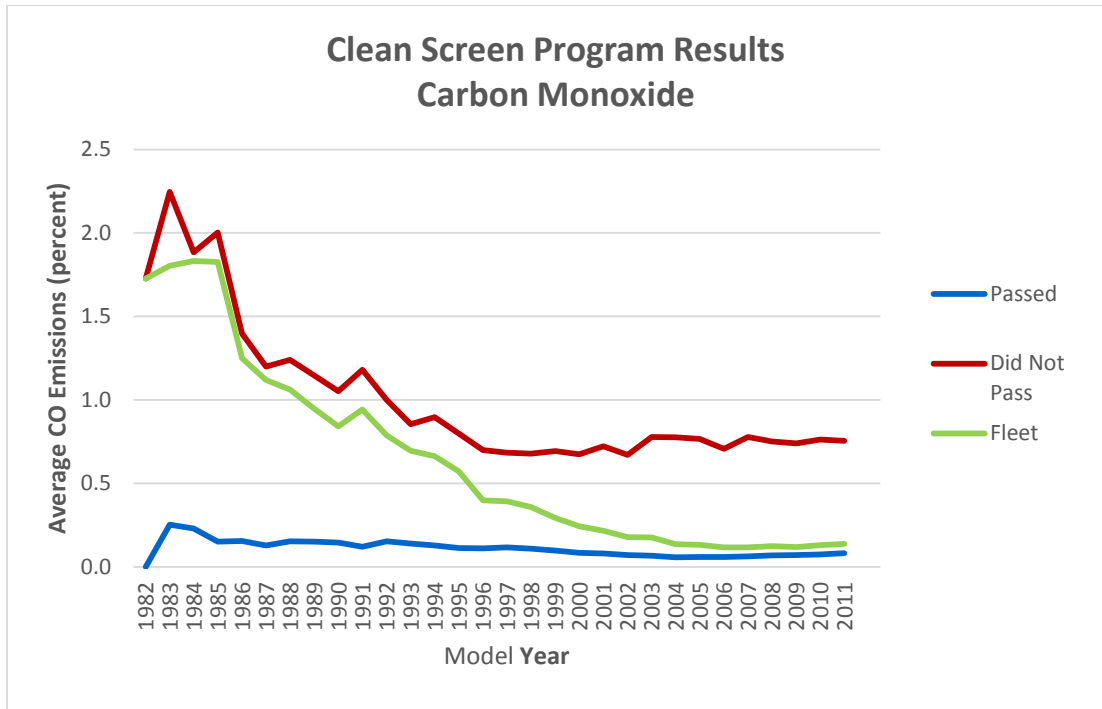


Figure 14 – Clean Screen Program Results – Average Carbon Monoxide Emissions by model year (1982-2011)

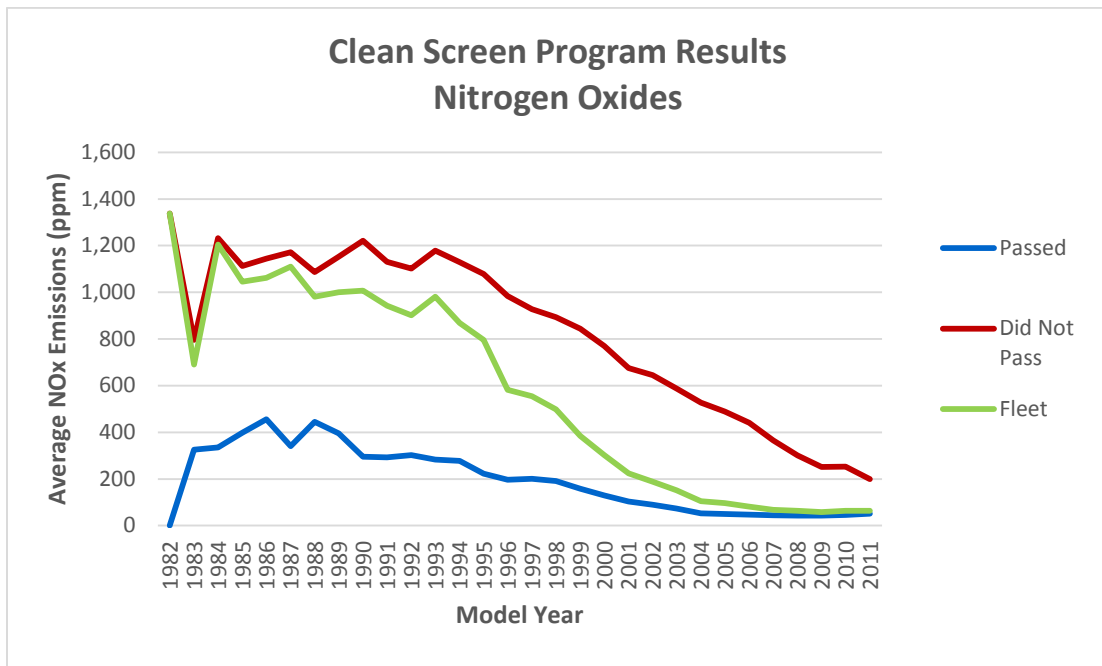


Figure 15 – Clean Screen Program Results – Average Nitrogen Oxides Emissions by model year (1982-2011)

Cost-Effectiveness of the AIR Program

As with any public program, it's important to evaluate the value that the AIR Program provides in relation to the overall program costs. Such analysis depends on assumptions about the program design and the financial impact to the motorist.

The state looks at the program's benefit as measured in tons per day of emissions reduced and the daily program operating costs. The analysis is completed using methodologies consistent with that used in the development of the State Implementation Plan.

This analysis included the inspection costs, the number of vehicles inspected, registration fees associated to the operation of the AIR Program, the average cost of repairs for vehicles undergoing repair, and the fuel economy benefit obtained from repairing excessively emitting vehicles. Additionally, motorist inconvenience costs have been added to this year's analysis as a recommendation from the 2017 AIR Program audit. Previous program economic analysis did not include this cost due to the highly variable assumptions associated to these costs.

Cost of Inspections

The total cost of inspections is defined as the cost of inspecting an individual vehicle multiplied by the number of vehicles undergoing paid inspections. The cost of OBD, I/M240, and Two Speed Idle (TSI) emissions inspections for 1982 and newer vehicles is \$25.00 per inspection. Inspections for 1981 and older vehicles cost \$15.00 per inspection.

Failing vehicles are entitled to a free retest within ten (10) calendar days after the initial inspection. Subsequent inspections (third, fifth, etc.) are considered to be new inspections requiring additional payment. In addition, some motorists undergo inspection after the ten day period and must pay for a new inspection. This cost is included in the total program inspection costs.

Clean Screen inspections cost \$25.00 for eligible vehicles whose owners wish to participate in this program. This fee is then added to the vehicle's registration renewal.

In 2018 there were a total of 1,028,304 initial inspections (including redeemed clean screen) conducted. Of these inspections, 285,685 were initial OBD inspections, 572,751 were initial I/M240 inspections, 43,274 were initial TSI inspections, and 126,594 were for vehicles that went through the Clean Screen process.

The state estimates that the program’s inspection costs amounted to \$26,394,140 in 2018.

Table 3 shows overall inspection costs per type of inspection.

Table 3 - Overall Inspection Cost by Inspection Type (2018)

Inspection Type	Initial Inspections	Total Paid Inspections	Cost
OBD	285,685	291,735	\$7,293,375
I/M240	572,751	595,577	\$14,889,425
Idle	43,275	44,592	\$1,047,790
Clean Screen	126,594	126,594	\$3,163,550
TOTAL	1,028,304	1,058,498	\$26,394,140

Registration Fees

As part of the total vehicle registration cost, the state collects a \$2.20 vehicle emissions fee from gasoline motor vehicles registered in the I/M program area. This helps to fund AIR program operations, program administration, motorist and repair industry assistance, outreach activities, and county registration activities. This fee is shared between County Clerks that administer vehicle registration renewals, and with the Colorado Departments of Revenue and Public Health and Environment that design, administer, evaluate, and enforce the program.

There were an estimated 3,116,947 I/M fee-eligible gasoline-powered vehicles registered in the enhanced nine-county I/M Program area as of December 31, 2018. This equates to a total registration-fee cost of \$6,857,283 for the entire program.

Repair Costs

Vehicles that failed their emissions inspections are required to undergo repair. Repair costs vary depending on the types of repairs and the shops performing them. To determine repair costs, the state collects data on the repair costs for failing vehicles.

In 2018, the average emissions repair cost for vehicles failing the OBD inspection was \$404.74 and for the I/M240 inspection was \$382.33. For vehicles receiving the Idle inspection, the average repair costs were \$263.50 for model year 1981 and older vehicles, and \$456.61 for model year 1982 and newer vehicles. For

vehicles failing the gas cap portion of the I/M inspection, the assumed replacement gas cap cost is \$20 each.

For the OBD inspected vehicles, 17,417 failed their initial OBD inspections. Of these vehicles, 11,128 failed for the MIL commanded on and/or visual MIL inspection, and other non-gas cap failures. There were 6,771 OBD inspected vehicles that failed the gas cap pressure inspection. Some vehicles failed for both OBD inspection and gas cap and are included in both the groups.

Of the I/M240 vehicles inspected, 48,380 vehicles failed their initial I/M240 inspections, with 24,950 of these vehicles failing for excess emissions only, or excess emissions in combination with failing visual inspection. Vehicles were also failed for opacity. For the gas cap portion of the test, there were 24,416 I/M240 vehicles that failed. There were some vehicles that failed for both excess emissions and gas cap. These vehicles are included in both the excess emissions/visual failure group and gas cap failure group.

In the two-speed idle tested vehicle group, 3,299 vehicles failed their initial Idle inspections. Of these vehicles, 2,852 failed the exhaust only, a combination of the exhaust and visual components of the inspection process, or excess opacity. For the gas cap portion of the test, there were 340 vehicles that failed gas cap inspection. Some of these vehicles failed for both excess emissions and gas cap and are included in both the excess emissions/visual failure group and gas cap failure group.

Table 4 details the total repair costs by inspection type.

Table 4 - Total Repair Costs by Inspection Type (2018)

Inspection Type	Excess Emissions/Visual		Gas Cap		TOTAL
	Count	Cost	Count	Cost	
OBD	11,128	\$4,563,848	6,771	\$135,420	\$4,699,268
I/M240	24,950	\$8,540,105	24,950	\$488,320	\$9,028,425
Idle	2,852	\$1,161,400	340	\$6,800	\$1,168,200
TOTAL	38,930	\$14,265,353	32,061	\$630,540	\$14,895,893

Fuel Savings

Vehicles that received emissions-related repairs achieve better fuel economy on average. The amount of the fuel economy improvement is highly dependent on the individual vehicle, the type of repair, and the effectiveness of that repair.

When a vehicle receives an I/M240 inspection, fuel economy is measured. Based on Colorado's I/M240 testing, a fuel economy improvement of 5.04% was achieved for all vehicles failing their initial I/M240 test and passing their final retest.

Using the estimated fuel savings, and assuming that these repairs prevent excessive emissions for the entire two-year emissions testing cycle, fixing exhaust and gas cap failures result in an estimated savings of 1,394,366 gallons of gasoline. Using a 2018 average cost of \$2.73 per gallon (Denver / Front Range annual average from the U.S. Energy Information Administration), vehicles undergoing emission repairs saved an estimated \$3,806,618 on gasoline as a result of reduced fuel usage.

Motorist Inconvenience Costs

Vehicle owners incur an inconvenience cost, which generally represents the time and effort expended in order to complete the emissions test at a brick-and-mortar test facility. These costs include:

- Vehicle operation costs associated with travel to and from the emissions inspection center.
- Time spent traveling to and from an emissions inspection center.
- Time waiting for and during the emission test.

To calculate direct vehicle operation costs, an average cost of 54.5 cents per mile was assumed, representing the 2018 IRS standard business mileage rate. The average travel to an inspection center was seven miles. Based on the number of vehicles undergoing IM inspections, average per mile cost of operation, and average travel to and from an emissions inspection center, a vehicle operation cost of \$7,110,428 was calculated.

Travel to and from an emissions inspection center averaged 22.24 minutes. Assuming half the hourly consumer wage rate of \$26.84 per hour (based on U.S. Bureau of Labor Statistics May 2018 state occupational employment and wage estimates for Colorado), this equates to a motorist travel time cost of \$4,635,614.

The average motorist experienced an average wait time before their vehicle is inspected of 10.39 minutes in 2018. Applying the same discounted average hourly consumer wage as above to the total wait times, produces a motorist wait time cost of \$2,165,128.

For 2018, the average emissions inspection took 12.30 minutes to complete. Once again applying the discounted hourly consumer wage rate to total test time, results in a motorist test time cost of \$2,563,761.

Inconvenience cost is the total of vehicle operation costs and motorist personal time costs, or a total of \$16,474,930.

There are no inconvenience costs for the Clean Screen inspection. Vehicles are inspected during on-road travel that incurs no inconvenience cost to the motorist. Vehicle owners are notified by the receipt of their vehicle registration renewal postcard, and payment is mailed in with the registration renewal payment.

Overall Program Costs

Overall program costs include inspection fees, vehicle registration fees, repair costs, and fuel economy savings, as well as motorist inconvenience costs. Table 5 details these costs, and the overall cost of the program.

Table 5 - Overall Program Cost (2018)

Annual I/M Program Cost (dollars)	
Inspection Fees	\$26,394,140
Registration Fees	\$6,857,283
Repair Costs	\$14,895,893
Fuel Economy Savings	-\$3,806,618
Inconvenience Costs	\$16,474,930
Total	\$60,815,627

Emission Benefits

Based on the U.S. EPA's MOVES model, Colorado's current AIR Program reduces total gaseous hydrocarbon emissions by 10.14 tons per day (tpd), carbon monoxide emissions by 123.45 tpd, nitrogen oxide (NOx) emissions by 9.54 tpd, and overall ozone precursors (TGH + [1/60]CO + NOx) by 21.74 tpd. Table 6 details the overall emissions program benefit by pollutant developed by the EPA's MOVES model.

Table 6 - Modeled Program Benefit (2018)

MOVES Emission Inventories and Program Benefit (tons/day)				
	TGH	CO	NOx	TGH + (1/60)CO + NOx
No IM	68.30	769.58	90.52	171.64
Current IM	58.16	646.13	80.98	149.91
TPD Benefit	10.14	123.45	9.54	21.74
%Benefit	14.85%	16.04%	10.54%	12.66%

Both total gaseous hydrocarbon and nitrogen oxide emissions can be ozone precursors. Carbon monoxide can be a weak ozone precursor. The combined TGH + (1/60) CO + NOx ozone precursor reduction would be equal to 21.74 tons per day. The generalized TGH + (1/60) CO + NOx formula has been used for California and other states to quantify ozone precursor emissions from motor vehicles. For this analysis, projections assume the use of 7.8 lb. Reid Vapor Pressure gasoline with a one pound waiver for ethanol and 100% market share for ethanol-blended gasoline.

Cost-Effectiveness

The AIR program’s cost-effectiveness is the ratio of the program’s cost to its benefits. As stated, the state calculates the entire program cost to be approximately \$60.8 million in 2018. This cost includes inspection costs, repair costs, motorist inconvenience costs, and registration renewal fees used to fund administrative expenses.

The State estimates the cost-effectiveness of the inspection program at \$7,665 per ton of ozone precursors removed from the AIR program area. Table 7 gives the specific breakdown of cost per ton removed by pollutant.

Table 7 - AIR Program Cost Effectiveness in Dollars per Ton (2018)

Cost Benefit Results	
Emission	Cost/Benefit (\$/ton)
TGH	16,432
CO	1,350
NOx	17,465
TGH + (1/60) CO + NOx	7,665

2018 Annual Report from the Colorado Department of Revenue

The Colorado Department of Revenue (DOR), in conjunction with the Colorado Department of Public Health and Environment (CHPHE), continues to operate the enhanced Colorado Vehicle Emissions Inspection and Maintenance (I/M) Program, which has been in place since 1995, designed to meet the requirements of the federal “Clean Air Act”, as amended by the federal “Clean Air Act Amendments of 1990”, 42 U.S.C. sec. 7401 et seq. DOR maintained quality assurance, auditing, licensing, and enforcement activities consistent with Colorado Revised Statutes (C.R.S.) and the Code of Colorado Regulations (C.C.R.) during 2018.

2018 Department of Revenue Audit Results

Pursuant to C.R.S. 42-4-305(6)(a), DOR oversees an ongoing quality assurance program. The objective of this program is to discover, correct, and prevent fraud, as well as to ensure proper calibration of emissions test equipment and adherence to proper testing procedures.

Record Audits

Pursuant to C.R.S. 42-4-305(6)(b)(I), DOR performed 240 record audits on all contractor-operated inspection centers and inspection-only facilities. Record audits are used to identify and correct anomalies in the vehicle inspection database, as well as to prompt for additional risk-based equipment audits. The record audit process also includes an ongoing evaluation of approximately 4.6 million vehicles currently registered statewide; this ensures that county clerks maintain a reasonable level of record accuracy.

Performance Audits

Pursuant to C.R.S. 42-4-305(6)(b)(I), DOR executed overt performance audits which were conducted contemporaneously with equipment audits at the enhanced inspection centers, resulting in 603 performance audits completed. Forty-four overt performance audits were completed at the independent inspection-only facilities and fleet testing facilities.

Equipment Audits

Pursuant to C.R.S. 42-4-305(6)(e)(I), DOR executed overt performance audits twice per year for each testing lane.

During 2018, 209 initial lane equipment audits were performed on 97 contractor-operated enhanced inspection lanes, 4 initial equipment audits performed at 2 independent inspection only stations, and 49 initial equipment audits performed at 20 operational fleet inspection stations. There were 3 occasions where a fleet testing facility was inoperable as a result of equipment failure. An equipment audit was unable to be conducted until repairs were completed. The facility was then returned to service.

There were 93 initial equipment audit failures (see Table 8), 16 of which resulted in the suspension of a testing lane. (Note: A lane is suspended and unable to test until its failures are mitigated.)

Table 8 – Audit Failures by Equipment Category (2018)

2018 Initial Equipment Audit Failures by Category	
Emissions Analyzer	80
Dynamometer	20
Gas Cap Analyzer	1

Covert Audits

Pursuant to C.R.S. 42-4-305(6)(c)(I), all enhanced inspection centers were subject to covert audits, using an unmarked motor vehicle, at least once per year per number of inspectors at each inspection-only facility and enhanced inspection center. All covert vehicles used in the audit process were tampered to fail the visual emission component inspection. Possible tampers included (but were not limited to) removed or tampered catalytic converters, air injection systems, oxygen sensors, and Check Engine lights.

Throughout 2018, 274 covert inspections were conducted at enhanced inspection centers, resulting in 214 tests conducted properly and 60 deficiencies. Additionally there was 1 covert test in which more than 1 emissions control component was not correctly identified, resulting in 61 emission control component violations. Table 9 categorizes these violations and the number of times components were incorrectly identified. In 35 of the 60 improper tests, the failing vehicles received passing results.

Table 9 – Emission Components Incorrectly Identified During Covert Audits (2018)

Emission Component Tampered	Number of Times Incorrectly Identified
Air Injection System	25
Catalytic Converter	15
Check Engine Light	3
Oxygen Sensor	18

Risk-Based Audits

Risk-based audits were prompted by suspicious emissions testing activity, data analysis, or consumer complaints.

Utilizing the above-named methods of detection, DOR conducted 403 risk-based equipment audits. While there were 41 initial equipment failures, 39 issues were resolved on the retest. Only 2 failures could not be immediately resolved which resulted in lane suspensions pending further repairs. Twenty-eight risk-based covert audits were conducted, resulting in no violations.

Remote Sensing Audits

DOR performed Remote Sensing (i.e., Clean Screen, RapidScreen, or RSD) mobile emissions testing equipment audits for quality assurance purposes (see Figure 16). A Phase I audit includes 9 gas readings from 3 different known gas blends. In the event that a gas reading is outside the allowable tolerance, a Phase II audit is initiated. A Phase II audit includes 6 additional gas readings from the specific gas blend that failed the Phase I audit.

DOR performed 783 audits in 2018, resulting in 105 Phase I failures, or a 13.41% initial failure rate. Of the 105 Phase I failures, 6 units failed the Phase II audit and were suspended pending repairs and/or CDPHE evaluation. Note: The overall audit result is not a failure unless a secondary audit (Phase II) also fails.

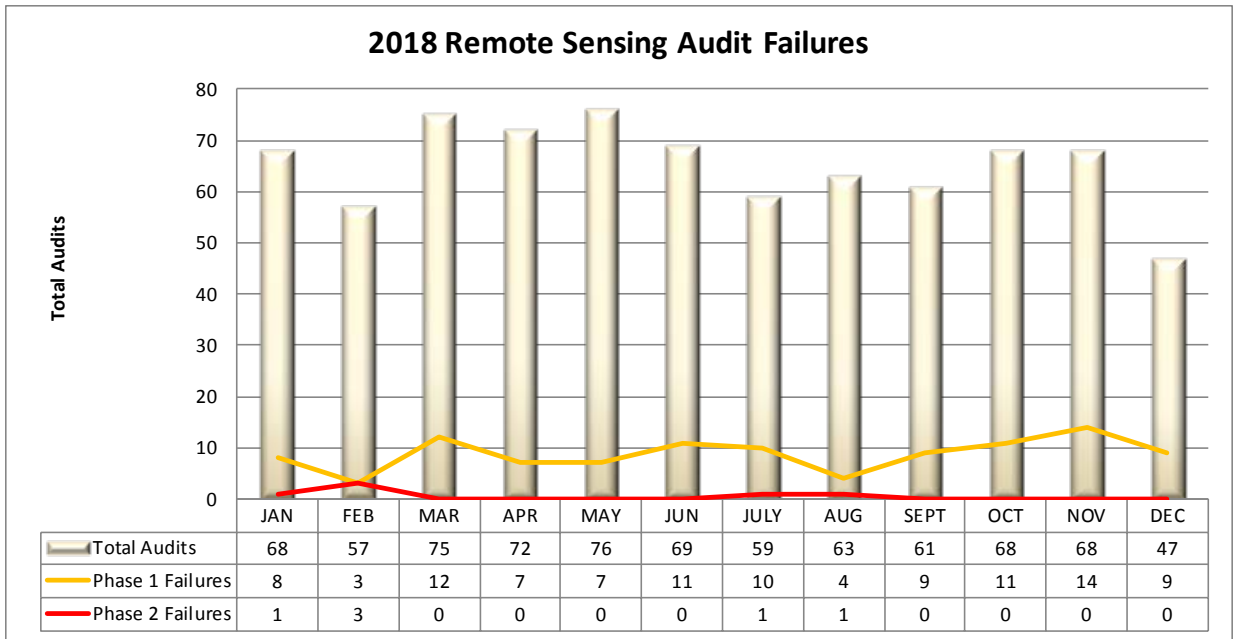


Figure 16 – Remote Sensing Audit Failures (2018)

2018 Enforcement Results

Hearings & Fines

In 2018, 134 hearings were conducted as a result of improper vehicle emission inspections. Hearing proceedings resulted in 41 inspectors placed on probation, with no inspector licenses revoked. Fines totaling \$55,700 were collected as a result of improper vehicle inspections.

Additionally, \$1,363,700 was collected as a result of wait-time violations. These violations occurred when motorist wait times at contractor inspection centers exceeded 15 minutes when averaged over a two-hour period. The wait-time calculation includes time spent in the queue and test time, whichever is greater. The fines assessed were consistent with C.R.S. and the terms of the contract held with OPUS. The total of all fines collected in 2018 was \$1,419,400. Figure 17 shows the average total motorist wait time in relation to the amount of time spent in the queue and within the facility.

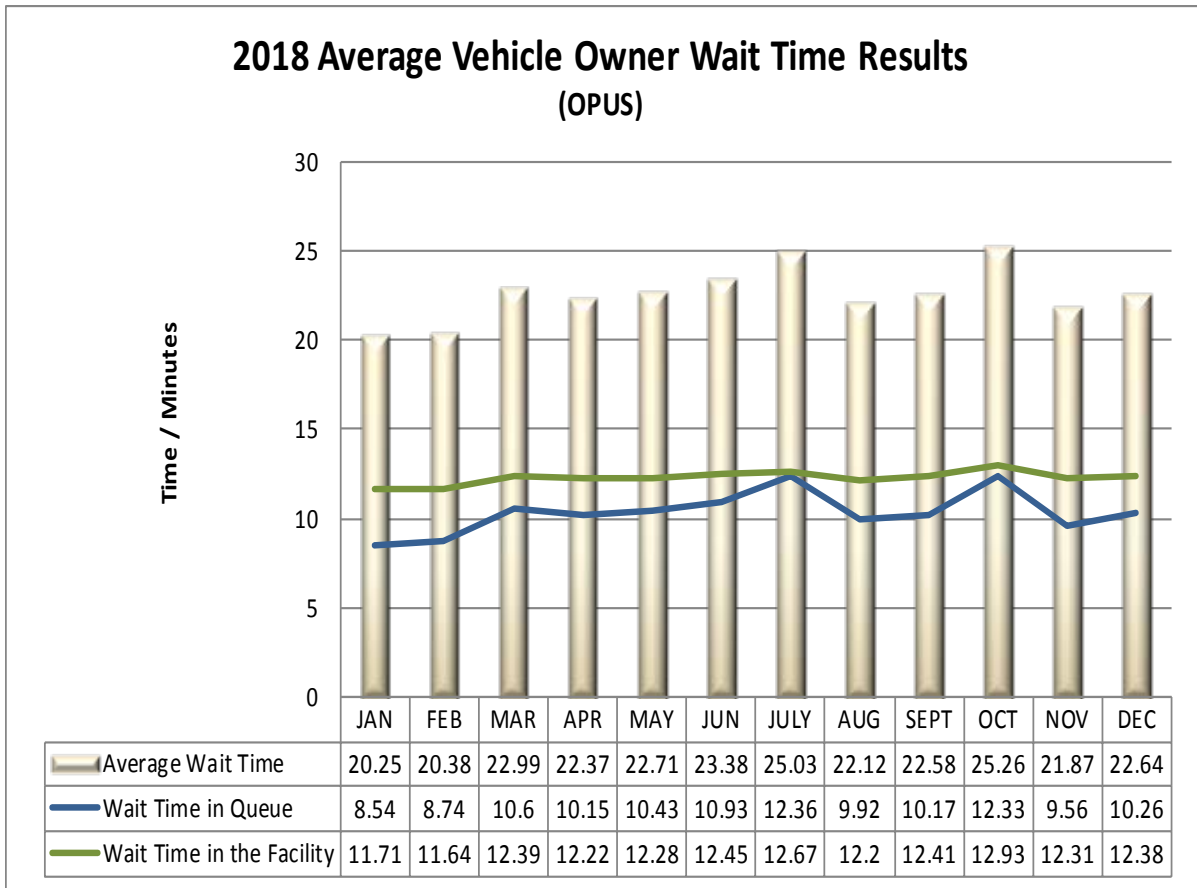


Figure 17 – Average Vehicle Owner Wait Time Results (2018, OPUS only)

Complaints

A total of 296 Vehicle Damage, Procedural and Statutory Non-Compliance complaints were opened against inspection stations operated by OPUS. DOR involvement in the complaint mitigation process resulted in \$61,963.37 in refunds to consumers. DOR responded to 27 emissions-related complaints against auto dealerships. A total of \$34,059.63 was refunded to consumers from those proceedings. Table 10 shows the 323 total complaints by category. Vehicle damage may occur when a consumer's vehicle was damaged through the negligence or omission of the contractor's agents. A Procedural Claim may occur when a consumer's vehicle was not properly inspected as directed by statute or regulation. A Statutory Non-Compliance claim may occur when a consumer experienced a violation of Title 42 (42-4-309 (6)(a)(b)(c)) of the Colorado Revised Statutes as it pertains to purchasing a vehicle without a passing emissions test or emission equipment that is required, missing, or tampered.

Table 10 – Complaints Opened, by Category (2018)

2018 Complaints Opened by Category	
Vehicle Damage	248
Procedural Claims	56
Statutory Non-Compliance	19

Waivers

In 2018, 1,064 waiver applications were submitted to and processed by DOR. Of the 1,064 applications, 34% resulted in the issuance of Repair Waivers and 24% resulted in the issuance of Economic Hardship Waivers. The remaining 42% were not issued waivers.

In 2018, the Colorado Department of Public Health and Environment, Colorado Department of Revenue, and Regional Air Quality Council (RAQC) continued to operate a Repair Assistance Program. This program provides emissions related repairs to gasoline-powered vehicles registered through counties in the Denver Metropolitan Area (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson) that qualify for an Economic Hardship Waiver. As a result of this program, emissions related repairs were performed on 4 vehicles (0.4%) that otherwise would have been issued a hardship waiver.

Figure 18 shows the total amount of emission waivers requested and issued by waiver type over a five-year period.

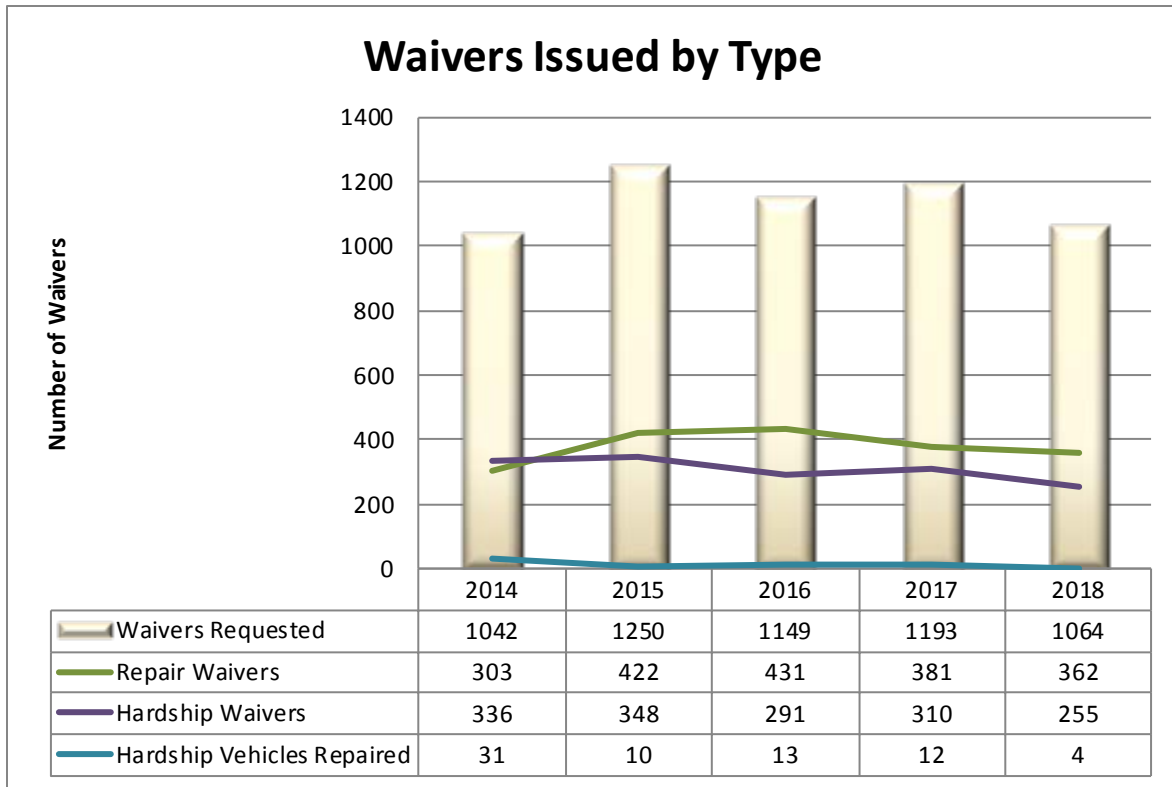


Figure 18 – Waivers Issued by Type (2014 – 2018)

The following program changes influenced the slight decrease in number of emissions waivers issued by DOR:

- January 2015: mandatory OBD testing was implemented, which impacted the vehicle failure rate.

The following were the most common reasons a waiver was *not* issued:

- **14.7% of Waiver requests were not pursued** - after completing the waiver application, the vehicle owner withdrew the request or did not respond to requests for information or availability.
- **6% of Waiver requests passed inspection** - after requesting a waiver, additional repairs were made resulting in a passing emissions test. Vehicle owners are encouraged to use CDPHE’s Emissions Technical Centers for a free diagnosis of their vehicle. CDPHE technicians are often able to assist the owner and recommend minor repairs that allow the vehicle to pass the emissions inspection.
- **4% of Waiver requests had improper repairs to the vehicle** – repairs were performed that did not address the cause of the emissions failure. C.R.S 42-4-306(7)(b)(I)

- **7.2% of Waiver requests were tampered or emitting smoke** - when presented for a waiver, the vehicle was not equipped with the manufacturer’s required emission control equipment, or was emitting visible smoke above 5% opacity. C.R.S 42-4-306(7)(b)(I)
- **8.4% of Waiver requests did not meet minimum waiver limits for dollars spent to repair the vehicle** - vehicle owner had not incurred the minimum \$715 in repair costs to bring the vehicle into compliance. C.R.S 42-4-310(1)(d)(VI)
- **0.4% of Waiver request vehicles were repaired through CDPHEs Repair Assistance Program for vehicles otherwise eligible for Hardship Waivers.**
- **1.1% of Waiver requests had not yet been resolved at the completion of the calendar year.**

2018 Licensing Results

Pursuant to C.R.S. 42-4-305, DOR is responsible for issuing biennial inspection licenses to independent, fleet, and contractor emissions inspection stations, as well as to inspectors that are employed by the inspection facilities.

All RapidScreen testing sites are authorized annually in conjunction with the Colorado Department of Transportation (CDOT), as testing sites require frequent review due to road or traffic configuration changes.

Table 4 shows the number of initial, renewed, and active licenses by license type for 2018.

Table 11 – Licenses Issued and Renewed, by Type (2018)

License Type	Number of Initial Licenses	Number of Licenses Renewed	Total Active Licenses
Fleet Inspector	16	21	79
Independent Inspector	0	1	2
Contractor Employed Inspectors	114	81	249
Independent Station	0	1	2
Fleet Station	0	3	20
Total	126	103	352

Authorized RSD Sites	168
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Appendix – Additional Reports

In addition to this report, the following detailed data reports are available:

Report	Content
A1 Initial Inspection Report All Test Type	Initial inspection pass/fail statistics, by inspection type, model year and vehicle class with an overall summary by vehicle type.
A2 Initial OBD Inspection Report	Initial OBD inspection pass/fail statistics by model year and vehicle type.
A3 Initial OBD Inspection Failure Report	Initial OBD inspection failure statistics by failure type, model year and vehicle type.
A4 Initial OBD Fail DTC Report	Initial OBD failing statistics with DTCs present by model year and vehicle type.
A5 Initial OBD Fail Readiness Monitor Summary Report	Initial OBD failing statistics with unset readiness monitors by model year and vehicle type.
A6 OBD Retest Frequency Report	OBD retest inspection statistics including multiple retest frequency and readiness status at the time of retests by model year and vehicle class.
A7 Initial OBD Pass DTC Report	Initial OBD passing statistics with DTCs present by model year and vehicle type.
A8 Initial OBD Pass Readiness Monitor Summary Report	Initial OBD passing statistics with unset readiness monitors by model year and vehicle type.
A9 OBD Initial Inspection Emissions Report (Vehicles that are dual tested)	Initial OBD pass/fail statistics including average emissions results by model year and vehicle type.

A10 Initial OBD Incomplete Inspection Report	Initial OBD inspection incomplete test statistics by incomplete reason, model year and vehicle type.
A11 OBD Retest Incomplete Inspection Report	OBD retest inspection incomplete test statistics by incomplete reason, model year and vehicle type.
B1 I/M240 Initial Inspection Report	Initial inspection pass/fail statistics, including average emissions results for overall total, passing and failing inspections by model year and vehicle class.
B2 I/M240 Initial Failure Report	Initial inspection failure statistics, including average emissions results for inspections which failed for both exhaust and visual components, exhaust only, and visual only by model year and vehicle class.
B3 I/M240 Initial Exhaust Failure Report	Initial exhaust failure statistics by model year, vehicle class, and pollutant.
B4 I/M240 Initial Failure for Other Report	Initial visual mandatory failure and gas cap pressure failure statistics by model year, vehicle class, and emissions component.
B5 I/M240 Retest Pass Reduction Report	Passing retest inspection statistics by model year and vehicle class.
B6 I/M240 Retest Frequency Report	Retest inspection statistics.
B7 I/M240 Fleet Characterization Summary Report – Initial Inspection Component	Initial inspection pass/fail statistics from vehicles that passed or failed with a final result of pass or waiver, including average emissions results by model year and vehicle class.

B8 I/M240 Fleet Characterization Summary Report – Final Inspection Component	Final inspection statistics from vehicles that passed or failed with a final result of pass or waiver, including average emissions results by model year and vehicle class.
B9 I/M240 Fleet Characterization Summary Report – Emissions Reduction Component	Emissions reduction statistics from vehicles that passed or failed with a final result of pass or waiver by model year and vehicle class.
C1 Idle Initial Inspection Report	Initial idle inspection pass/fail statistics, including average emissions results for passing and failing inspections by model year.
C2 Idle Initial Failure Report	Initial idle inspection failure statistics, including average emissions results for inspections which failed for both exhaust and visual components, exhaust only, and visual only by model year.
C3 Idle Initial Exhaust Failure Report	Initial idle exhaust failure statistics by model year, vehicle class, and pollutant.
C4 Idle Initial Failure for Other Report	Idle initial mandatory visual failure and gas cap pressure failure statistics by model year, vehicle class, and emissions component.
C5 Idle Retest Pass Reduction Report	Passing idle retest inspection statistics by model year and vehicle class.
C6 Idle Retest Frequency Report	Retest idle inspection statistics.
D1 I/M Eligible Vehicle Report, Evaluated Vehicles	Clean Screen observations performed in 2018 by model year and vehicle type.

Appendix A1

Initial Inspection Report All Test Type

Date Range
Between 1/1/2018 and 12/31/2018

Initial Inspection Report All Test Types (V 1.02)

Model Year	Type	Overall Total	OBD				IM240				Two Speed Idle									
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%						
1974	HDGV	107	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	107	100.00	97	90.65	10	9.35
	LDGT1	295	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	295	100.00	212	71.86	83	28.14
	LDGT2	225	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	225	100.00	189	84.00	36	16.00
	LDGV	533	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	533	100.00	343	64.35	190	35.65
1974 Total		1,160	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,160	100.00	841	72.50	319	27.50
1975	HDGV	18	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	18	100.00	13	72.22	5	27.78
	LDGT1	12	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	12	100.00	5	41.67	7	58.33
	LDGT2	39	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	39	100.00	33	84.62	6	15.38
	LDGV	33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	33	100.00	25	75.76	8	24.24
1975 Total		102	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	102	100.00	76	74.51	26	25.49
1976	HDGV	71	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	71	100.00	56	78.87	15	21.13
	LDGT1	111	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	111	100.00	71	63.96	40	36.04
	LDGT2	268	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	268	100.00	218	81.34	50	18.66
	LDGV	207	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	207	100.00	137	66.18	70	33.82
1976 Total		657	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	657	100.00	482	73.36	175	26.64
1977	HDGV	123	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	123	100.00	103	83.74	20	16.26
	LDGT1	99	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	99	100.00	47	47.47	52	52.53
	LDGT2	346	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	346	100.00	290	83.82	56	16.18
	LDGV	244	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	244	100.00	143	58.61	101	41.39
1977 Total		812	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	812	100.00	583	71.80	229	28.20
1978	HDGV	122	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	122	100.00	101	82.79	21	17.21
	LDGT1	153	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	153	100.00	77	50.33	76	49.67
	LDGT2	443	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	443	100.00	378	85.33	65	14.67
	LDGV	283	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	283	100.00	199	70.32	84	29.68
1978 Total		1,001	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,001	100.00	755	75.42	246	24.58
1979	HDGV	159	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	159	100.00	119	74.84	40	25.16
	LDGT1	167	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	167	100.00	106	63.47	61	36.53
	LDGT2	290	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	290	100.00	180	62.07	110	37.93
	LDGV	355	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	355	100.00	235	66.20	120	33.80
1979 Total		971	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	971	100.00	640	65.91	331	34.09
1980	HDGV	81	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	81	100.00	66	81.48	15	18.52
	LDGT1	157	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	157	100.00	110	70.06	47	29.94

Model Year	Type	Overall Total	OBD						IM240						Two Speed Idle					
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGT2	90	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	90	100.00	56	62.22	34	37.78
	LDGV	218	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	218	100.00	167	76.61	51	23.39
1980 Total		546	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	546	100.00	399	73.08	147	26.92
1981	HDGV	130	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	130	100.00	105	80.77	25	19.23
	LDGT1	168	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	168	100.00	87	51.79	81	48.21
	LDGT2	81	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	81	100.00	46	56.79	35	43.21
	LDGV	166	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	166	100.00	101	60.84	65	39.16
1981 Total		545	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	545	100.00	339	62.20	206	37.80
1982	HDGV	95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	95	100.00	78	82.11	17	17.89
	LDGT1	192	0	0.00	0	0.00	0	0.00	192	100.00	133	69.27	59	30.73	0	0.00	0	0.00	0	0.00
	LDGT2	34	0	0.00	0	0.00	0	0.00	34	100.00	23	67.65	11	32.35	0	0.00	0	0.00	0	0.00
	LDGV	176	0	0.00	0	0.00	0	0.00	174	98.86	136	78.16	38	21.84	2	1.14	0	0.00	2	100.00
1982 Total		497	0	0.00	0	0.00	0	0.00	400	80.48	292	73.00	108	27.00	97	19.52	78	80.41	19	19.59
1983	HDGV	126	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	126	100.00	95	75.40	31	24.60
	LDGT1	205	0	0.00	0	0.00	0	0.00	205	100.00	140	68.29	65	31.71	0	0.00	0	0.00	0	0.00
	LDGT2	69	0	0.00	0	0.00	0	0.00	68	98.55	35	51.47	33	48.53	1	1.45	0	0.00	1	100.00
	LDGV	211	0	0.00	0	0.00	0	0.00	209	99.05	164	78.47	45	21.53	2	0.95	1	50.00	1	50.00
1983 Total		611	0	0.00	0	0.00	0	0.00	482	78.89	339	70.33	143	29.67	129	21.11	96	74.42	33	25.58
1984	HDGV	213	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	213	100.00	180	84.51	33	15.49
	LDGT1	421	0	0.00	0	0.00	0	0.00	421	100.00	319	75.77	102	24.23	0	0.00	0	0.00	0	0.00
	LDGT2	166	0	0.00	0	0.00	0	0.00	166	100.00	93	56.02	73	43.98	0	0.00	0	0.00	0	0.00
	LDGV	461	0	0.00	0	0.00	0	0.00	456	98.92	353	77.41	103	22.59	5	1.08	5	100.00	0	0.00
1984 Total		1,261	0	0.00	0	0.00	0	0.00	1,043	82.71	765	73.35	278	26.65	218	17.29	185	84.86	33	15.14
1985	HDGV	236	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	236	100.00	180	76.27	56	23.73
	LDGT1	522	0	0.00	0	0.00	0	0.00	519	99.43	396	76.30	123	23.70	3	0.57	2	66.67	1	33.33
	LDGT2	144	0	0.00	0	0.00	0	0.00	144	100.00	87	60.42	57	39.58	0	0.00	0	0.00	0	0.00
	LDGV	563	0	0.00	0	0.00	0	0.00	555	98.58	421	75.86	134	24.14	8	1.42	6	75.00	2	25.00
1985 Total		1,465	0	0.00	0	0.00	0	0.00	1,218	83.14	904	74.22	314	25.78	247	16.86	188	76.11	59	23.89
1986	HDGV	225	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	225	100.00	161	71.56	64	28.44
	LDGT1	886	0	0.00	0	0.00	0	0.00	884	99.77	718	81.22	166	18.78	2	0.23	1	50.00	1	50.00
	LDGT2	217	0	0.00	0	0.00	0	0.00	217	100.00	134	61.75	83	38.25	0	0.00	0	0.00	0	0.00
	LDGV	875	0	0.00	0	0.00	0	0.00	872	99.66	734	84.17	138	15.83	3	0.34	3	100.00	0	0.00
1986 Total		2,203	0	0.00	0	0.00	0	0.00	1,973	89.56	1,586	80.39	387	19.61	230	10.44	165	71.74	65	28.26
1987	HDGV	200	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	200	100.00	140	70.00	60	30.00
	LDGT1	814	0	0.00	0	0.00	0	0.00	801	98.40	621	77.53	180	22.47	13	1.60	7	53.85	6	46.15
	LDGT2	263	0	0.00	0	0.00	0	0.00	263	100.00	189	71.86	74	28.14	0	0.00	0	0.00	0	0.00

Model Year	Type	Overall Total	OBD						IM240						Two Speed Idle					
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGV	845	0	0.00	0	0.00	0	0.00	837	99.05	672	80.29	165	19.71	8	0.95	4	50.00	4	50.00
1987 Total		2,122	0	0.00	0	0.00	0	0.00	1,901	89.59	1,482	77.96	419	22.04	221	10.41	151	68.33	70	31.67
1988	HDGV	317	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	317	100.00	269	84.86	48	15.14
	LDGT1	1,246	0	0.00	0	0.00	0	0.00	1,229	98.64	999	81.29	230	18.71	17	1.36	10	58.82	7	41.18
	LDGT2	460	0	0.00	0	0.00	0	0.00	458	99.57	342	74.67	116	25.33	2	0.43	1	50.00	1	50.00
	LDGV	1,166	0	0.00	0	0.00	0	0.00	1,164	99.83	999	85.82	165	14.18	2	0.17	1	50.00	1	50.00
1988 Total		3,189	0	0.00	0	0.00	0	0.00	2,851	89.40	2,340	82.08	511	17.92	338	10.60	281	83.14	57	16.86
1989	HDGV	462	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	462	100.00	394	85.28	68	14.72
	LDGT1	1,332	0	0.00	0	0.00	0	0.00	1,319	99.02	1,072	81.27	247	18.73	13	0.98	9	69.23	4	30.77
	LDGT2	534	0	0.00	0	0.00	0	0.00	531	99.44	424	79.85	107	20.15	3	0.56	3	100.00	0	0.00
	LDGV	1,235	0	0.00	0	0.00	0	0.00	1,216	98.46	1,026	84.38	190	15.63	19	1.54	12	63.16	7	36.84
1989 Total		3,563	0	0.00	0	0.00	0	0.00	3,066	86.05	2,522	82.26	544	17.74	497	13.95	418	84.10	79	15.90
1990	HDGV	471	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	471	100.00	405	85.99	66	14.01
	LDGT1	1,669	0	0.00	0	0.00	0	0.00	1,646	98.62	1,361	82.69	285	17.31	23	1.38	14	60.87	9	39.13
	LDGT2	637	0	0.00	0	0.00	0	0.00	635	99.69	502	79.06	133	20.94	2	0.31	2	100.00	0	0.00
	LDGV	2,171	0	0.00	0	0.00	0	0.00	2,148	98.94	1,901	88.50	247	11.50	23	1.06	15	65.22	8	34.78
1990 Total		4,948	0	0.00	0	0.00	0	0.00	4,429	89.51	3,764	84.99	665	15.01	519	10.49	436	84.01	83	15.99
1991	HDGV	388	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	388	100.00	342	88.14	46	11.86
	LDGT1	1,871	0	0.00	0	0.00	0	0.00	1,853	99.04	1,543	83.27	310	16.73	18	0.96	12	66.67	6	33.33
	LDGT2	616	0	0.00	0	0.00	0	0.00	614	99.68	474	77.20	140	22.80	2	0.32	2	100.00	0	0.00
	LDGV	2,300	0	0.00	0	0.00	0	0.00	2,275	98.91	1,943	85.41	332	14.59	25	1.09	25	100.00	0	0.00
1991 Total		5,175	0	0.00	0	0.00	0	0.00	4,742	91.63	3,960	83.51	782	16.49	433	8.37	381	87.99	52	12.01
1992	HDGV	582	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	582	100.00	523	89.86	59	10.14
	LDGT1	2,160	0	0.00	0	0.00	0	0.00	2,138	98.98	1,839	86.01	299	13.99	22	1.02	13	59.09	9	40.91
	LDGT2	1,105	0	0.00	0	0.00	0	0.00	1,102	99.73	861	78.13	241	21.87	3	0.27	2	66.67	1	33.33
	LDGV	3,144	0	0.00	0	0.00	0	0.00	3,137	99.78	2,693	85.85	444	14.15	7	0.22	4	57.14	3	42.86
1992 Total		6,991	0	0.00	0	0.00	0	0.00	6,377	91.22	5,393	84.57	984	15.43	614	8.78	542	88.27	72	11.73
1993	HDGV	647	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	647	100.00	564	87.17	83	12.83
	LDGT1	2,732	0	0.00	0	0.00	0	0.00	2,726	99.78	2,315	84.92	411	15.08	6	0.22	5	83.33	1	16.67
	LDGT2	1,178	0	0.00	0	0.00	0	0.00	1,177	99.92	928	78.84	249	21.16	1	0.08	0	0.00	1	100.00
	LDGV	3,247	0	0.00	0	0.00	0	0.00	3,240	99.78	2,796	86.30	444	13.70	7	0.22	4	57.14	3	42.86
1993 Total		7,804	0	0.00	0	0.00	0	0.00	7,143	91.53	6,039	84.54	1,104	15.46	661	8.47	573	86.69	88	13.31
1994	HDGV	919	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	919	100.00	832	90.53	87	9.47
	LDGT1	4,020	0	0.00	0	0.00	0	0.00	3,995	99.38	3,394	84.96	601	15.04	25	0.62	15	60.00	10	40.00
	LDGT2	2,309	0	0.00	0	0.00	0	0.00	2,293	99.31	1,716	74.84	577	25.16	16	0.69	11	68.75	5	31.25
	LDGV	4,219	0	0.00	0	0.00	0	0.00	4,196	99.45	3,732	88.94	464	11.06	23	0.55	20	86.96	3	13.04

Model Year	Type	Overall Total	OBD						IM240						Two Speed Idle					
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
1994 Total		11,467	0	0.00	0	0.00	0	0.00	10,484	91.43	8,842	84.34	1,642	15.66	983	8.57	878	89.32	105	10.68
1995	HDGV	1,079	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,079	100.00	970	89.90	109	10.10
	LDGT1	4,289	0	0.00	0	0.00	0	0.00	4,284	99.88	3,620	84.50	664	15.50	5	0.12	5	100.00	0	0.00
	LDGT2	2,718	0	0.00	0	0.00	0	0.00	2,702	99.41	2,063	76.35	639	23.65	16	0.59	14	87.50	2	12.50
	LDGV	5,469	0	0.00	0	0.00	0	0.00	5,440	99.47	4,838	88.93	602	11.07	29	0.53	24	82.76	5	17.24
1995 Total		13,555	0	0.00	0	0.00	0	0.00	12,426	91.67	10,521	84.67	1,905	15.33	1,129	8.33	1,013	89.73	116	10.27
1996	HDGV	1,282	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,282	100.00	1,204	93.92	78	6.08
	LDGT1	5,479	25	0.46	20	80.00	5	20.00	5,451	99.49	4,769	87.49	682	12.51	3	0.05	3	100.00	0	0.00
	LDGT2	2,868	17	0.59	12	70.59	5	29.41	2,849	99.34	2,422	85.01	427	14.99	2	0.07	1	50.00	1	50.00
	LDGV	7,241	83	1.15	64	77.11	19	22.89	7,153	98.78	6,411	89.63	742	10.37	5	0.07	4	80.00	1	20.00
1996 Total		16,870	125	0.74	96	76.80	29	23.20	15,453	91.60	13,602	88.02	1,851	11.98	1,292	7.66	1,212	93.81	80	6.19
1997	HDGV	1,426	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,426	100.00	1,340	93.97	86	6.03
	LDGT1	7,853	36	0.46	31	86.11	5	13.89	7,814	99.50	6,678	85.46	1,136	14.54	3	0.04	3	100.00	0	0.00
	LDGT2	3,361	43	1.28	28	65.12	15	34.88	3,313	98.57	2,761	83.34	552	16.66	5	0.15	5	100.00	0	0.00
	LDGV	8,792	95	1.08	70	73.68	25	26.32	8,687	98.81	7,682	88.43	1,005	11.57	10	0.11	10	100.00	0	0.00
1997 Total		21,432	174	0.81	129	74.14	45	25.86	19,814	92.45	17,121	86.41	2,693	13.59	1,444	6.74	1,358	94.04	86	5.96
1998	HDGV	1,218	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,218	100.00	1,127	92.53	91	7.47
	LDGT1	11,330	39	0.34	32	82.05	7	17.95	11,281	99.57	9,915	87.89	1,366	12.11	10	0.09	10	100.00	0	0.00
	LDGT2	4,261	27	0.63	22	81.48	5	18.52	4,231	99.30	3,578	84.57	653	15.43	3	0.07	2	66.67	1	33.33
	LDGV	11,926	119	1.00	85	71.43	34	28.57	11,803	98.97	10,551	89.39	1,252	10.61	4	0.03	4	100.00	0	0.00
1998 Total		28,735	185	0.64	139	75.14	46	24.86	27,315	95.06	24,044	88.02	3,271	11.98	1,235	4.30	1,143	92.55	92	7.45
1999	HDGV	2,018	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,018	100.00	1,912	94.75	106	5.25
	LDGT1	11,164	58	0.52	51	87.93	7	12.07	11,100	99.43	9,754	87.87	1,346	12.13	6	0.05	5	83.33	1	16.67
	LDGT2	6,240	687	11.01	526	76.56	161	23.44	5,552	88.97	4,651	83.77	901	16.23	1	0.02	1	100.00	0	0.00
	LDGV	12,903	152	1.18	122	80.26	30	19.74	12,747	98.79	11,436	89.72	1,311	10.28	4	0.03	4	100.00	0	0.00
1999 Total		32,325	897	2.77	699	77.93	198	22.07	29,399	90.95	25,841	87.90	3,558	12.10	2,029	6.28	1,922	94.73	107	5.27
2000	HDGV	2,492	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,492	100.00	2,397	96.19	95	3.81
	LDGT1	15,248	266	1.74	225	84.59	41	15.41	14,970	98.18	13,359	89.24	1,611	10.76	12	0.08	10	83.33	2	16.67
	LDGT2	7,948	1,426	17.94	1,148	80.50	278	19.50	6,519	82.02	5,809	89.11	710	10.89	3	0.04	3	100.00	0	0.00
	LDGV	18,867	270	1.43	209	77.41	61	22.59	18,590	98.53	16,946	91.16	1,644	8.84	7	0.04	6	85.71	1	14.29
2000 Total		44,555	1,962	4.40	1,582	80.63	380	19.37	40,079	89.95	36,114	90.11	3,965	9.89	2,514	5.64	2,416	96.10	98	3.90
2001	HDGV	2,200	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,200	100.00	2,159	98.14	41	1.86
	LDGT1	14,454	417	2.89	333	79.86	84	20.14	14,030	97.07	12,692	90.46	1,338	9.54	7	0.05	7	100.00	0	0.00
	LDGT2	8,149	1,482	18.19	1,147	77.40	335	22.60	6,666	81.80	5,905	88.58	761	11.42	1	0.01	1	100.00	0	0.00
	LDGV	17,899	423	2.36	333	78.72	90	21.28	17,468	97.59	16,015	91.68	1,453	8.32	8	0.04	8	100.00	0	0.00
2001 Total		42,702	2,322	5.44	1,813	78.08	509	21.92	38,164	89.37	34,612	90.69	3,552	9.31	2,216	5.19	2,175	98.15	41	1.85

Model Year	Type	Overall Total	OBD						IM240						Two Speed Idle					
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
2002	HDGV	2,289	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,289	100.00	2,252	98.38	37	1.62
	LDGT1	20,251	181	0.89	149	82.32	32	17.68	20,061	99.06	18,464	92.04	1,597	7.96	9	0.04	9	100.00	0	0.00
	LDGT2	9,890	2,521	25.49	2,083	82.63	438	17.37	7,366	74.48	6,630	90.01	736	9.99	3	0.03	3	100.00	0	0.00
	LDGV	24,021	575	2.39	461	80.17	114	19.83	23,435	97.56	21,586	92.11	1,849	7.89	11	0.05	11	100.00	0	0.00
2002 Total		56,451	3,277	5.81	2,693	82.18	584	17.82	50,862	90.10	46,680	91.78	4,182	8.22	2,312	4.10	2,275	98.40	37	1.60
2003	HDGV	2,050	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,050	100.00	2,009	98.00	41	2.00
	LDGT1	16,952	60	0.35	46	76.67	14	23.33	16,876	99.55	15,579	92.31	1,297	7.69	16	0.09	16	100.00	0	0.00
	LDGT2	9,352	2,023	21.63	1,596	78.89	427	21.11	7,325	78.33	6,670	91.06	655	8.94	4	0.04	4	100.00	0	0.00
	LDGV	21,650	682	3.15	533	78.15	149	21.85	20,964	96.83	19,358	92.34	1,606	7.66	4	0.02	4	100.00	0	0.00
2003 Total		50,004	2,765	5.53	2,175	78.66	590	21.34	45,165	90.32	41,607	92.12	3,558	7.88	2,074	4.15	2,033	98.02	41	1.98
2004	HDGV	2,427	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,427	100.00	2,398	98.81	29	1.19
	LDGT1	24,688	86	0.35	79	91.86	7	8.14	24,588	99.59	23,105	93.97	1,483	6.03	14	0.06	14	100.00	0	0.00
	LDGT2	13,184	2,531	19.20	2,124	83.92	407	16.08	10,653	80.80	9,890	92.84	763	7.16	0	0.00	0	0.00	0	0.00
	LDGV	25,687	1,035	4.03	877	84.73	158	15.27	24,633	95.90	23,132	93.91	1,501	6.09	19	0.07	17	89.47	2	10.53
2004 Total		65,986	3,652	5.53	3,080	84.34	572	15.66	59,874	90.74	56,127	93.74	3,747	6.26	2,460	3.73	2,429	98.74	31	1.26
2005	HDGV	1,734	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,734	100.00	1,722	99.31	12	0.69
	LDGT1	21,420	137	0.64	124	90.51	13	9.49	21,277	99.33	20,342	95.61	935	4.39	6	0.03	6	100.00	0	0.00
	LDGT2	9,289	1,853	19.95	1,618	87.32	235	12.68	7,434	80.03	6,950	93.49	484	6.51	2	0.02	2	100.00	0	0.00
	LDGV	24,178	1,583	6.55	1,407	88.88	176	11.12	22,589	93.43	21,230	93.98	1,359	6.02	6	0.02	6	100.00	0	0.00
2005 Total		56,621	3,573	6.31	3,149	88.13	424	11.87	51,300	90.60	48,522	94.58	2,778	5.42	1,748	3.09	1,736	99.31	12	0.69
2006	HDGV	2,285	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,285	100.00	2,262	98.99	23	1.01
	LDGT1	24,472	896	3.66	863	96.32	33	3.68	23,561	96.28	22,762	96.61	799	3.39	15	0.06	14	93.33	1	6.67
	LDGT2	11,519	1,575	13.67	1,391	88.32	184	11.68	9,942	86.31	9,427	94.82	515	5.18	2	0.02	2	100.00	0	0.00
	LDGV	29,609	1,775	5.99	1,596	89.92	179	10.08	27,827	93.98	26,774	96.22	1,053	3.78	7	0.02	6	85.71	1	14.29
2006 Total		67,885	4,246	6.25	3,850	90.67	396	9.33	61,330	90.34	58,963	96.14	2,367	3.86	2,309	3.40	2,284	98.92	25	1.08
2007	HDGV	1,532	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,532	100.00	1,522	99.35	10	0.65
	LDGT1	21,556	780	3.62	726	93.08	54	6.92	20,755	96.28	19,912	95.94	843	4.06	21	0.10	21	100.00	0	0.00
	LDGT2	12,098	3,414	28.22	3,102	90.86	312	9.14	8,681	71.76	8,238	94.90	443	5.10	3	0.02	3	100.00	0	0.00
	LDGV	26,466	2,408	9.10	2,261	93.90	147	6.10	24,048	90.86	23,244	96.66	804	3.34	10	0.04	10	100.00	0	0.00
2007 Total		61,652	6,602	10.71	6,089	92.23	513	7.77	53,484	86.75	51,394	96.09	2,090	3.91	1,566	2.54	1,556	99.36	10	0.64
2008	HDGV	2,378	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,378	100.00	2,365	99.45	13	0.55
	LDGT1	28,369	25,312	89.22	23,898	94.41	1,414	5.59	3,049	10.75	2,950	96.75	99	3.25	8	0.03	8	100.00	0	0.00
	LDGT2	14,403	13,049	90.60	11,951	91.59	1,098	8.41	1,349	9.37	1,247	92.44	102	7.56	5	0.03	5	100.00	0	0.00
	LDGV	31,081	27,576	88.72	25,773	93.46	1,803	6.54	3,500	11.26	3,345	95.57	155	4.43	5	0.02	5	100.00	0	0.00
2008 Total		76,231	65,937	86.50	61,622	93.46	4,315	6.54	7,898	10.36	7,542	95.49	356	4.51	2,396	3.14	2,383	99.46	13	0.54
2009	HDGV	1,362	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,362	100.00	1,361	99.93	1	0.07

Model Year	Type	Overall Total	OBD						IM240						Two Speed Idle					
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGT1	19,493	17,584	90.21	16,675	94.83	909	5.17	1,907	9.78	1,861	97.59	46	2.41	2	0.01	2	100.00	0	0.00
	LDGT2	8,956	8,171	91.23	7,581	92.78	590	7.22	779	8.70	730	93.71	49	6.29	6	0.07	6	100.00	0	0.00
	LDGV	29,017	26,254	90.48	25,099	95.60	1,155	4.40	2,759	9.51	2,659	96.38	100	3.62	4	0.01	4	100.00	0	0.00
2009 Total		58,828	52,009	88.41	49,355	94.90	2,654	5.10	5,445	9.26	5,250	96.42	195	3.58	1,374	2.34	1,373	99.93	1	0.07
2010	HDGV	659	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	659	100.00	654	99.24	5	0.76
	LDGT1	11,152	10,323	92.57	9,839	95.31	484	4.69	829	7.43	798	96.26	31	3.74	0	0.00	0	0.00	0	0.00
	LDGT2	6,805	6,210	91.26	5,772	92.95	438	7.05	593	8.71	559	94.27	34	5.73	2	0.03	2	100.00	0	0.00
	LDGV	15,063	13,882	92.16	13,133	94.60	749	5.40	1,179	7.83	1,114	94.49	65	5.51	2	0.01	2	100.00	0	0.00
2010 Total		33,679	30,415	90.31	28,744	94.51	1,671	5.49	2,601	7.72	2,471	95.00	130	5.00	663	1.97	658	99.25	5	0.75
2011	HDGV	2,395	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,395	100.00	2,386	99.62	9	0.38
	LDGT1	35,404	33,869	95.66	32,886	97.10	983	2.90	1,530	4.32	1,478	96.60	52	3.40	5	0.01	5	100.00	0	0.00
	LDGT2	18,022	17,116	94.97	15,902	92.91	1,214	7.09	900	4.99	829	92.11	71	7.89	6	0.03	6	100.00	0	0.00
	LDGV	32,906	31,115	94.56	29,862	95.97	1,253	4.03	1,787	5.43	1,699	95.08	88	4.92	4	0.01	4	100.00	0	0.00
2011 Total		88,727	82,100	92.53	78,650	95.80	3,450	4.20	4,217	4.75	4,006	95.00	211	5.00	2,410	2.72	2,401	99.63	9	0.37
2012	HDGV	509	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	509	100.00	509	100.00	0	0.00
	LDGT1	4,149	3,860	93.03	3,744	96.99	116	3.01	289	6.97	280	96.89	9	3.11	0	0.00	0	0.00	0	0.00
	LDGT2	2,677	2,474	92.42	2,313	93.49	161	6.51	202	7.55	184	91.09	18	8.91	1	0.04	1	100.00	0	0.00
	LDGV	6,507	5,982	91.93	5,672	94.82	310	5.18	525	8.07	499	95.05	26	4.95	0	0.00	0	0.00	0	0.00
2012 Total		13,842	12,316	88.98	11,729	95.23	587	4.77	1,016	7.34	963	94.78	53	5.22	510	3.68	510	100.00	0	0.00
2013	HDGV	204	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	204	100.00	204	100.00	0	0.00
	LDGT1	1,858	1,770	95.26	1,723	97.34	47	2.66	88	4.74	86	97.73	2	2.27	0	0.00	0	0.00	0	0.00
	LDGT2	1,024	936	91.41	865	92.41	71	7.59	88	8.59	85	96.59	3	3.41	0	0.00	0	0.00	0	0.00
	LDGV	2,836	2,605	91.85	2,506	96.20	99	3.80	231	8.15	211	91.34	20	8.66	0	0.00	0	0.00	0	0.00
2013 Total		5,922	5,311	89.68	5,094	95.91	217	4.09	407	6.87	382	93.86	25	6.14	204	3.44	204	100.00	0	0.00
2014	HDGV	164	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	164	100.00	163	99.39	1	0.61
	LDGT1	1,133	1,080	95.32	1,055	97.69	25	2.31	53	4.68	52	98.11	1	1.89	0	0.00	0	0.00	0	0.00
	LDGT2	712	665	93.40	625	93.98	40	6.02	47	6.60	47	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	1,580	1,487	94.11	1,444	97.11	43	2.89	93	5.89	87	93.55	6	6.45	0	0.00	0	0.00	0	0.00
2014 Total		3,589	3,232	90.05	3,124	96.66	108	3.34	193	5.38	186	96.37	7	3.63	164	4.57	163	99.39	1	0.61
2015	HDGV	113	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	113	100.00	113	100.00	0	0.00
	LDGT1	908	867	95.48	844	97.35	23	2.65	41	4.52	41	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	389	379	97.43	363	95.78	16	4.22	10	2.57	9	90.00	1	10.00	0	0.00	0	0.00	0	0.00
	LDGV	1,188	1,124	94.61	1,087	96.71	37	3.29	64	5.39	64	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2015 Total		2,598	2,370	91.22	2,294	96.79	76	3.21	115	4.43	114	99.13	1	0.87	113	4.35	113	100.00	0	0.00
2016	HDGV	88	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	88	100.00	88	100.00	0	0.00
	LDGT1	580	566	97.59	553	97.70	13	2.30	14	2.41	14	100.00	0	0.00	0	0.00	0	0.00	0	0.00

Model Year	Type	Overall Total	OBD						IM240						Two Speed Idle					
			Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGT2	183	178	97.27	170	95.51	8	4.49	5	2.73	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	795	752	94.59	728	96.81	24	3.19	43	5.41	40	93.02	3	6.98	0	0.00	0	0.00	0	0.00
2016 Total		1,646	1,496	90.89	1,451	96.99	45	3.01	62	3.77	59	95.16	3	4.84	88	5.35	88	100.00	0	0.00
2017	HDGV	35	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	35	100.00	35	100.00	0	0.00
	LDGT1	183	180	98.36	178	98.89	2	1.11	3	1.64	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	69	67	97.10	65	97.01	2	2.99	2	2.90	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	413	396	95.88	392	98.99	4	1.01	17	4.12	16	94.12	1	5.88	0	0.00	0	0.00	0	0.00
2017 Total		700	643	91.86	635	98.76	8	1.24	22	3.14	21	95.45	1	4.55	35	5.00	35	100.00	0	0.00
2018	HDGV	3	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	3	100.00	0	0.00
	LDGT1	31	28	90.32	28	100.00	0	0.00	3	9.68	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	11	11	100.00	11	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	35	33	94.29	33	100.00	0	0.00	2	5.71	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2018 Total		80	72	90.00	72	100.00	0	0.00	5	6.25	5	100.00	0	0.00	3	3.75	3	100.00	0	0.00
2019	HDGV	6	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	100.00	6	100.00	0	0.00
	LDGT1	2	2	100.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	1	1	100.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	1	1	100.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2019 Total		10	4	40.00	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	6	60.00	6	100.00	0	0.00
Grand Total		901,715	285,685	31.68	268,268	93.90	17,417	6.10	572,755	63.52	524,375	91.55	48,380	8.45	43,275	4.80	39,976	92.38	3,299	7.62

Initial Inspection Report All Test Types - Summary by Veh (V 1.02)

Type	Overall Total	OBD						IM240						Two Speed Idle						
		Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	
HDGV	37,640	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	37,640	100.00	35,984	95.60	1,656	4.40	
LDGT1	321,650	98,422	30.60	94,104	95.61	4,318	4.39	221,782	68.95	203,367	91.70	18,415	8.30	1,446	0.45	941	65.08	505	34.92	
LDGT2	163,643	66,856	40.85	60,416	90.37	6,440	9.63	94,910	58.00	84,499	89.03	10,411	10.97	1,877	1.15	1,472	78.42	405	21.58	
LDGV	378,782	120,407	31.79	113,748	94.47	6,659	5.53	256,063	67.60	236,509	92.36	19,554	7.64	2,312	0.61	1,579	68.30	733	31.70	
Grand Total		901,715	285,685	31.68	268,268	93.90	17,417	6.10	572,755	63.52	524,375	91.55	48,380	8.45	43,275	4.80	39,976	92.38	3,299	7.62

Appendix A2

Initial OBD Inspection Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Inspection Report (V 1.03)

Model Year	Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail	
					Count	%	Count	%
1996	LDGT1	45	25	55.56	20	80.00	5	20.00
	LDGT2	24	17	70.83	12	70.59	5	29.41
	LDGV	161	83	51.55	64	77.11	19	22.89
1996 Total		230	125	54.35	96	76.80	29	23.20
1997	LDGT1	95	36	37.89	31	86.11	5	13.89
	LDGT2	70	43	61.43	28	65.12	15	34.88
	LDGV	143	95	66.43	70	73.68	25	26.32
1997 Total		308	174	56.49	129	74.14	45	25.86
1998	LDGT1	69	39	56.52	32	82.05	7	17.95
	LDGT2	36	27	75.00	22	81.48	5	18.52
	LDGV	168	119	70.83	85	71.43	34	28.57
1998 Total		273	185	67.77	139	75.14	46	24.86
1999	LDGT1	74	58	78.38	51	87.93	7	12.07
	LDGT2	946	687	72.62	526	76.56	161	23.44
	LDGV	216	152	70.37	122	80.26	30	19.74
1999 Total		1,236	897	72.57	699	77.93	198	22.07
2000	LDGT1	367	266	72.48	225	84.59	41	15.41
	LDGT2	1,848	1,426	77.16	1,148	80.50	278	19.50
	LDGV	369	270	73.17	209	77.41	61	22.59
2000 Total		2,584	1,962	75.93	1,582	80.63	380	19.37
2001	LDGT1	521	417	80.04	333	79.86	84	20.14
	LDGT2	1,922	1,482	77.11	1,147	77.40	335	22.60
	LDGV	573	423	73.82	333	78.72	90	21.28
2001 Total		3,016	2,322	76.99	1,813	78.08	509	21.92
2002	LDGT1	223	181	81.17	149	82.32	32	17.68
	LDGT2	3,139	2,521	80.31	2,083	82.63	438	17.37
	LDGV	771	575	74.68	461	80.17	114	19.83
2002 Total		4,133	3,277	79.31	2,693	82.18	584	17.82
2003	LDGT1	69	60	86.96	46	76.67	14	23.33
	LDGT2	2,550	2,023	79.33	1,596	78.89	427	21.11
	LDGV	875	682	77.94	533	78.15	149	21.85
2003 Total		3,494	2,765	79.14	2,175	78.66	590	21.34
2004	LDGT1	107	86	80.37	79	91.86	7	8.14
	LDGT2	3,258	2,531	77.69	2,124	83.92	407	16.08
	LDGV	1,263	1,035	81.95	877	84.73	158	15.27
2004 Total		4,628	3,652	78.91	3,080	84.34	572	15.66
2005	LDGT1	195	137	70.26	124	90.51	13	9.49
	LDGT2	2,390	1,853	77.53	1,618	87.32	235	12.68
	LDGV	1,811	1,583	87.41	1,407	88.88	176	11.12
2005 Total		4,396	3,573	81.28	3,149	88.13	424	11.87
2006	LDGT1	1,019	896	87.93	863	96.32	33	3.68
	LDGT2	1,990	1,575	79.15	1,391	88.32	184	11.68

Model Year	Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail	
					Count	%	Count	%
	LDGV	2,073	1,775	85.62	1,596	89.92	179	10.08
2006 Total		5,082	4,246	83.55	3,850	90.67	396	9.33
2007	LDGT1	904	780	86.28	726	93.08	54	6.92
	LDGT2	3,972	3,414	85.95	3,102	90.86	312	9.14
	LDGV	2,741	2,408	87.85	2,261	93.90	147	6.10
2007 Total		7,617	6,602	86.67	6,089	92.23	513	7.77
2008	LDGT1	25,439	25,312	99.50	23,898	94.41	1,414	5.59
	LDGT2	13,575	13,049	96.13	11,951	91.59	1,098	8.41
	LDGV	27,852	27,576	99.01	25,773	93.46	1,803	6.54
2008 Total		66,866	65,937	98.61	61,622	93.46	4,315	6.54
2009	LDGT1	17,646	17,584	99.65	16,675	94.83	909	5.17
	LDGT2	8,457	8,171	96.62	7,581	92.78	590	7.22
	LDGV	26,493	26,254	99.10	25,099	95.60	1,155	4.40
2009 Total		52,596	52,009	98.88	49,355	94.90	2,654	5.10
2010	LDGT1	10,378	10,323	99.47	9,839	95.31	484	4.69
	LDGT2	6,411	6,210	96.86	5,772	92.95	438	7.05
	LDGV	14,029	13,882	98.95	13,133	94.60	749	5.40
2010 Total		30,818	30,415	98.69	28,744	94.51	1,671	5.49
2011	LDGT1	33,953	33,869	99.75	32,886	97.10	983	2.90
	LDGT2	17,519	17,116	97.70	15,902	92.91	1,214	7.09
	LDGV	31,364	31,115	99.21	29,862	95.97	1,253	4.03
2011 Total		82,836	82,100	99.11	78,650	95.80	3,450	4.20
2012	LDGT1	3,868	3,860	99.79	3,744	96.99	116	3.01
	LDGT2	2,530	2,474	97.79	2,313	93.49	161	6.51
	LDGV	6,043	5,982	98.99	5,672	94.82	310	5.18
2012 Total		12,441	12,316	99.00	11,729	95.23	587	4.77
2013	LDGT1	1,773	1,770	99.83	1,723	97.34	47	2.66
	LDGT2	968	936	96.69	865	92.41	71	7.59
	LDGV	2,624	2,605	99.28	2,506	96.20	99	3.80
2013 Total		5,365	5,311	98.99	5,094	95.91	217	4.09
2014	LDGT1	1,080	1,080	100.00	1,055	97.69	25	2.31
	LDGT2	690	665	96.38	625	93.98	40	6.02
	LDGV	1,500	1,487	99.13	1,444	97.11	43	2.89
2014 Total		3,270	3,232	98.84	3,124	96.66	108	3.34
2015	LDGT1	867	867	100.00	844	97.35	23	2.65
	LDGT2	388	379	97.68	363	95.78	16	4.22
	LDGV	1,133	1,124	99.21	1,087	96.71	37	3.29
2015 Total		2,388	2,370	99.25	2,294	96.79	76	3.21
2016	LDGT1	566	566	100.00	553	97.70	13	2.30
	LDGT2	182	178	97.80	170	95.51	8	4.49
	LDGV	754	752	99.73	728	96.81	24	3.19
2016 Total		1,502	1,496	99.60	1,451	96.99	45	3.01
2017	LDGT1	181	180	99.45	178	98.89	2	1.11
	LDGT2	67	67	100.00	65	97.01	2	2.99
	LDGV	396	396	100.00	392	98.99	4	1.01
2017 Total		644	643	99.84	635	98.76	8	1.24

Model Year	Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail	
					Count	%	Count	%
2018	LDGT1	28	28	100.00	28	100.00	0	0.00
	LDGT2	12	11	91.67	11	100.00	0	0.00
	LDGV	33	33	100.00	33	100.00	0	0.00
2018 Total		73	72	98.63	72	100.00	0	0.00
2019	LDGT1	2	2	100.00	2	100.00	0	0.00
	LDGT2	1	1	100.00	1	100.00	0	0.00
	LDGV	2	1	50.00	1	100.00	0	0.00
2019 Total		5	4	80.00	4	100.00	0	0.00
Grand Total		295,801	285,685	96.58	268,268	93.90	17,417	6.10

Initial OBD Inspection Report - Summary by Veh (V 1.03)

Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail	
				Count	%	Count	%
LDGT1	99,469	98,422	98.95	94,104	95.61	4,318	4.39
LDGT2	72,945	66,856	91.65	60,416	90.37	6,440	9.63
LDGV	123,387	120,407	97.59	113,748	94.47	6,659	5.53
Grand Total	295,801	285,685	96.58	268,268	93.90	17,417	6.10

Appendix A3

Initial OBD Inspection Failure Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Inspection Failure Report (V 1.03)

Model Year	Type	Total Fail	Failed OBD Only						Failed Both OBD and Gas Cap						Failed Gas Cap Only		Failed Opacity	
			MIL Commanded on Count	MIL Commanded on %	Visual MIL Count	Visual MIL %	Both MIL Count	Both MIL %	Gas Cap and MIL on Count	Gas Cap and MIL on %	Gas Cap and Visual MIL Count	Gas Cap and Visual MIL %	Both MIL and Gas Cap Count	Both MIL and Gas Cap %	Count	%	Count	%
1996	LDGT1	5	0	0.00	1	20.00	3	60.00	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	5	1	20.00	0	0.00	3	60.00	0	0.00	0	0.00	0	0.00	1	20.00	0	0.00
	LDGV	19	4	21.05	2	10.53	9	47.37	0	0.00	0	0.00	0	0.00	4	21.05	0	0.00
1996 Total		29	5	17.24	3	10.34	15	51.72	1	3.45	0	0.00	0	0.00	5	17.24	0	0.00
1997	LDGT1	5	1	20.00	0	0.00	2	40.00	0	0.00	0	0.00	0	0.00	2	40.00	0	0.00
	LDGT2	15	6	40.00	2	13.33	4	26.67	0	0.00	0	0.00	0	0.00	3	20.00	0	0.00
	LDGV	25	5	20.00	4	16.00	12	48.00	0	0.00	1	4.00	1	4.00	2	8.00	0	0.00
1997 Total		45	12	26.67	6	13.33	18	40.00	0	0.00	1	2.22	1	2.22	7	15.56	0	0.00
1998	LDGT1	7	1	14.29	1	14.29	3	42.86	0	0.00	0	0.00	0	0.00	2	28.57	0	0.00
	LDGT2	5	1	20.00	2	40.00	2	40.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	34	5	14.71	6	17.65	19	55.88	1	2.94	0	0.00	1	2.94	2	5.88	2	5.88
1998 Total		46	7	15.22	9	19.57	24	52.17	1	2.17	0	0.00	1	2.17	4	8.70	2	4.35
1999	LDGT1	7	1	14.29	0	0.00	3	42.86	0	0.00	0	0.00	0	0.00	3	42.86	0	0.00
	LDGT2	161	17	10.56	28	17.39	80	49.69	2	1.24	3	1.86	7	4.35	24	14.91	0	0.00
	LDGV	30	4	13.33	1	3.33	20	66.67	0	0.00	0	0.00	0	0.00	5	16.67	0	0.00
1999 Total		198	22	11.11	29	14.65	103	52.02	2	1.01	3	1.52	7	3.54	32	16.16	0	0.00
2000	LDGT1	41	3	7.32	3	7.32	15	36.59	1	2.44	1	2.44	3	7.32	14	34.15	1	2.44
	LDGT2	278	42	15.11	34	12.23	146	52.52	3	1.08	3	1.08	14	5.04	36	12.95	0	0.00
	LDGV	61	15	24.59	8	13.11	29	47.54	0	0.00	0	0.00	3	4.92	6	9.84	1	1.64
2000 Total		380	60	15.79	45	11.84	190	50.00	4	1.05	4	1.05	20	5.26	56	14.74	2	0.53
2001	LDGT1	84	16	19.05	1	1.19	38	45.24	1	1.19	0	0.00	3	3.57	24	28.57	2	2.38
	LDGT2	335	45	13.43	42	12.54	183	54.63	1	0.30	3	0.90	15	4.48	46	13.73	1	0.30
	LDGV	90	24	26.67	4	4.44	47	52.22	0	0.00	1	1.11	4	4.44	10	11.11	0	0.00
2001 Total		509	85	16.70	47	9.23	268	52.65	2	0.39	4	0.79	22	4.32	80	15.72	3	0.59
2002	LDGT1	32	5	15.63	2	6.25	11	34.38	0	0.00	0	0.00	2	6.25	12	37.50	0	0.00
	LDGT2	438	47	10.73	55	12.56	231	52.74	3	0.68	4	0.91	19	4.34	76	17.35	5	1.14
	LDGV	114	25	21.93	8	7.02	60	52.63	1	0.88	1	0.88	2	1.75	15	13.16	2	1.75
2002 Total		584	77	13.18	65	11.13	302	51.71	4	0.68	5	0.86	23	3.94	103	17.64	7	1.20
2003	LDGT1	14	3	21.43	1	7.14	7	50.00	0	0.00	0	0.00	1	7.14	2	14.29	0	0.00
	LDGT2	427	60	14.05	54	12.65	235	55.04	1	0.23	4	0.94	20	4.68	53	12.41	1	0.23
	LDGV	149	23	15.44	8	5.37	79	53.02	1	0.67	0	0.00	12	8.05	25	16.78	1	0.67
2003 Total		590	86	14.58	63	10.68	321	54.41	2	0.34	4	0.68	33	5.59	80	13.56	2	0.34
2004	LDGT1	7	0	0.00	0	0.00	3	42.86	0	0.00	0	0.00	0	0.00	3	42.86	1	14.29

Model Year	Type	Total Fail	Failed OBD Only						Failed Both OBD and Gas Cap						Failed Gas Cap Only		Failed Opacity	
			MIL Commanded on Count	MIL Commanded on %	Visual MIL Count	Visual MIL %	Both MIL Count	Both MIL %	Gas Cap and MIL on Count	Gas Cap and MIL on %	Gas Cap and Visual MIL Count	Gas Cap and Visual MIL %	Both MIL and Gas Cap Count	Both MIL and Gas Cap %	Count	%	Count	%
	LDGT2	407	44	10.81	48	11.79	182	44.72	3	0.74	3	0.74	19	4.67	106	26.04	4	0.98
	LDGV	158	35	22.15	8	5.06	80	50.63	1	0.63	0	0.00	4	2.53	28	17.72	3	1.90
2004 Total		572	79	13.81	56	9.79	265	46.33	4	0.70	3	0.52	23	4.02	137	23.95	8	1.40
2005	LDGT1	13	1	7.69	1	7.69	5	38.46	0	0.00	0	0.00	1	7.69	5	38.46	0	0.00
	LDGT2	235	18	7.66	42	17.87	125	53.19	1	0.43	2	0.85	5	2.13	42	17.87	0	0.00
	LDGV	176	35	19.89	8	4.55	88	50.00	3	1.70	0	0.00	7	3.98	32	18.18	3	1.70
2005 Total		424	54	12.74	51	12.03	218	51.42	4	0.94	2	0.47	13	3.07	79	18.63	3	0.71
2006	LDGT1	33	4	12.12	0	0.00	17	51.52	0	0.00	0	0.00	2	6.06	9	27.27	1	3.03
	LDGT2	184	27	14.67	13	7.07	84	45.65	3	1.63	2	1.09	4	2.17	51	27.72	2	1.09
	LDGV	179	49	27.37	15	8.38	82	45.81	0	0.00	1	0.56	1	0.56	29	16.20	3	1.68
2006 Total		396	80	20.20	28	7.07	183	46.21	3	0.76	3	0.76	7	1.77	89	22.47	6	1.52
2007	LDGT1	54	4	7.41	1	1.85	25	46.30	0	0.00	0	0.00	3	5.56	21	38.89	0	0.00
	LDGT2	312	48	15.38	9	2.88	181	58.01	1	0.32	1	0.32	4	1.28	66	21.15	3	0.96
	LDGV	147	30	20.41	5	3.40	81	55.10	0	0.00	0	0.00	2	1.36	27	18.37	3	2.04
2007 Total		513	82	15.98	15	2.92	287	55.95	1	0.19	1	0.19	9	1.75	114	22.22	6	1.17
2008	LDGT1	1,414	173	12.23	16	1.13	587	41.51	10	0.71	1	0.07	45	3.18	570	40.31	13	0.92
	LDGT2	1,098	129	11.75	20	1.82	428	38.98	6	0.55	1	0.09	23	2.09	487	44.35	4	0.36
	LDGV	1,803	305	16.92	59	3.27	884	49.03	5	0.28	2	0.11	52	2.88	485	26.90	15	0.83
2008 Total		4,315	607	14.07	95	2.20	1,899	44.01	21	0.49	4	0.09	120	2.78	1,542	35.74	32	0.74
2009	LDGT1	909	137	15.07	10	1.10	372	40.92	6	0.66	0	0.00	23	2.53	358	39.38	3	0.33
	LDGT2	590	93	15.76	6	1.02	221	37.46	7	1.19	0	0.00	10	1.69	250	42.37	3	0.51
	LDGV	1,155	225	19.48	31	2.68	507	43.90	3	0.26	1	0.09	25	2.16	350	30.30	14	1.21
2009 Total		2,654	455	17.14	47	1.77	1,100	41.45	16	0.60	1	0.04	58	2.19	958	36.10	20	0.75
2010	LDGT1	484	55	11.36	7	1.45	168	34.71	2	0.41	0	0.00	16	3.31	235	48.55	1	0.21
	LDGT2	438	71	16.21	7	1.60	152	34.70	5	1.14	0	0.00	10	2.28	188	42.92	5	1.14
	LDGV	749	154	20.56	19	2.54	301	40.19	4	0.53	0	0.00	19	2.54	247	32.98	5	0.67
2010 Total		1,671	280	16.76	33	1.97	621	37.16	11	0.66	0	0.00	45	2.69	670	40.10	11	0.66
2011	LDGT1	983	132	13.43	18	1.83	340	34.59	2	0.20	0	0.00	13	1.32	471	47.91	7	0.71
	LDGT2	1,214	95	7.83	12	0.99	258	21.25	10	0.82	0	0.00	45	3.71	787	64.83	8	0.66
	LDGV	1,253	246	19.63	38	3.03	528	42.14	4	0.32	1	0.08	12	0.96	408	32.56	18	1.44
2011 Total		3,450	473	13.71	68	1.97	1,126	32.64	16	0.46	1	0.03	70	2.03	1,666	48.29	33	0.96
2012	LDGT1	116	16	13.79	0	0.00	27	23.28	1	0.86	0	0.00	2	1.72	68	58.62	2	1.72
	LDGT2	161	14	8.70	2	1.24	37	22.98	1	0.62	0	0.00	1	0.62	106	65.84	0	0.00
	LDGV	310	53	17.10	7	2.26	111	35.81	3	0.97	0	0.00	4	1.29	130	41.94	2	0.65
2012 Total		587	83	14.14	9	1.53	175	29.81	5	0.85	0	0.00	7	1.19	304	51.79	4	0.68
2013	LDGT1	47	5	10.64	1	2.13	14	29.79	1	2.13	0	0.00	2	4.26	24	51.06	0	0.00
	LDGT2	71	7	9.86	1	1.41	13	18.31	0	0.00	0	0.00	1	1.41	49	69.01	0	0.00

Model Year	Type	Total Fail	Failed OBD Only						Failed Both OBD and Gas Cap						Failed Gas Cap Only		Failed Opacity	
			MIL Commanded on Count	MIL Commanded on %	Visual MIL Count	Visual MIL %	Both MIL Count	Both MIL %	Gas Cap and MIL on Count	Gas Cap and MIL on %	Gas Cap and Visual MIL Count	Gas Cap and Visual MIL %	Both MIL and Gas Cap Count	Both MIL and Gas Cap %	Count	%	Count	%
	LDGV	99	12	12.12	3	3.03	37	37.37	1	1.01	0	0.00	2	2.02	44	44.44	0	0.00
2013 Total		217	24	11.06	5	2.30	64	29.49	2	0.92	0	0.00	5	2.30	117	53.92	0	0.00
2014	LDGT1	25	6	24.00	2	8.00	10	40.00	0	0.00	0	0.00	0	0.00	7	28.00	0	0.00
	LDGT2	40	1	2.50	1	2.50	3	7.50	0	0.00	0	0.00	1	2.50	34	85.00	0	0.00
	LDGV	43	7	16.28	0	0.00	15	34.88	1	2.33	0	0.00	1	2.33	17	39.53	2	4.65
2014 Total		108	14	12.96	3	2.78	28	25.93	1	0.93	0	0.00	2	1.85	58	53.70	2	1.85
2015	LDGT1	23	4	17.39	0	0.00	7	30.43	0	0.00	0	0.00	0	0.00	12	52.17	0	0.00
	LDGT2	16	1	6.25	0	0.00	6	37.50	1	6.25	0	0.00	0	0.00	8	50.00	0	0.00
	LDGV	37	7	18.92	2	5.41	9	24.32	0	0.00	0	0.00	0	0.00	19	51.35	1	2.70
2015 Total		76	12	15.79	2	2.63	22	28.95	1	1.32	0	0.00	0	0.00	39	51.32	1	1.32
2016	LDGT1	13	1	7.69	1	7.69	2	15.38	0	0.00	0	0.00	0	0.00	8	61.54	1	7.69
	LDGT2	8	0	0.00	1	12.50	2	25.00	0	0.00	0	0.00	0	0.00	4	50.00	1	12.50
	LDGV	24	4	16.67	0	0.00	5	20.83	0	0.00	0	0.00	0	0.00	12	50.00	3	12.50
2016 Total		45	5	11.11	2	4.44	9	20.00	0	0.00	0	0.00	0	0.00	24	53.33	5	11.11
2017	LDGT1	2	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	0	0.00
	LDGT2	2	0	0.00	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	1	50.00	0	0.00
	LDGV	4	2	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	50.00	1	25.00
2017 Total		8	3	37.50	0	0.00	1	12.50	0	0.00	0	0.00	0	0.00	4	50.00	1	12.50
Grand Total		17,417	2,605	14.96	681	3.91	7,239	41.56	101	0.58	36	0.21	466	2.68	6,168	35.41	148	0.85

Initial OBD Inspection Failure Report - Summary by Veh (V 1.03)

Type	Total Fail	Failed OBD Only						Failed Both OBD and Gas Cap						Failed Gas Cap Only		Failed Opacity		
		MIL Commanded on Count	MIL Commanded on %	Visual MIL Count	Visual MIL %	Both MIL Count	Both MIL %	Gas Cap and MIL on Count	Gas Cap and MIL on %	Gas Cap and Visual MIL Count	Gas Cap and Visual MIL %	Both MIL and Gas Cap Count	Both MIL and Gas Cap %	Count	%	Count	%	
LDGT1	4,318	569	13.18	66	1.53	1,659	38.42	25	0.58	2	0.05	116	2.69	1,851	42.87	32	0.74	
LDGT2	6,440	767	11.91	379	5.89	2,577	40.02	48	0.75	26	0.40	198	3.07	2,418	37.55	37	0.57	
LDGV	6,659	1,269	19.06	236	3.54	3,003	45.10	28	0.42	8	0.12	152	2.28	1,899	28.52	79	1.19	
Grand Total		17,417	2,605	14.96	681	3.91	7,239	41.56	101	0.58	36	0.21	466	2.68	6,168	35.41	148	0.85

Appendix A4

Initial OBD Fail DTC Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Fail DTC Report (V 1.03)

Model Year	Type	Total Fail	Count of Tests by Number of DTC Present												No DTCs Available	
			0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %	Count	%
1996	LDGT1	5	1	20.00	2	40.00	1	20.00	1	20.00	0	0.00	0	0.00	0	0.00
	LDGT2	4	0	0.00	2	50.00	2	50.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	15	1	6.67	6	40.00	4	26.67	2	13.33	0	0.00	1	6.67	1	6.67
1996 Total		24	2	8.33	10	41.67	7	29.17	3	12.50	0	0.00	1	4.17	1	4.17
1997	LDGT1	3	0	0.00	1	33.33	1	33.33	1	33.33	0	0.00	0	0.00	0	0.00
	LDGT2	12	1	8.33	7	58.33	2	16.67	1	8.33	0	0.00	1	8.33	0	0.00
	LDGV	23	1	4.35	11	47.83	1	4.35	4	17.39	1	4.35	2	8.70	3	13.04
1997 Total		38	2	5.26	19	50.00	4	10.53	6	15.79	1	2.63	3	7.89	3	7.89
1998	LDGT1	5	1	20.00	3	60.00	0	0.00	0	0.00	0	0.00	1	20.00	0	0.00
	LDGT2	5	2	40.00	0	0.00	1	20.00	1	20.00	0	0.00	1	20.00	0	0.00
	LDGV	32	3	9.38	8	25.00	4	12.50	3	9.38	5	15.63	6	18.75	3	9.38
1998 Total		42	6	14.29	11	26.19	5	11.90	4	9.52	5	11.90	8	19.05	3	7.14
1999	LDGT1	4	0	0.00	2	50.00	0	0.00	1	25.00	1	25.00	0	0.00	0	0.00
	LDGT2	137	12	8.76	42	30.66	35	25.55	14	10.22	12	8.76	7	5.11	15	10.95
	LDGV	25	0	0.00	10	40.00	1	4.00	5	20.00	4	16.00	4	16.00	1	4.00
1999 Total		166	12	7.23	54	32.53	36	21.69	20	12.05	17	10.24	11	6.63	16	9.64
2000	LDGT1	26	5	19.23	8	30.77	3	11.54	6	23.08	1	3.85	2	7.69	1	3.85
	LDGT2	242	21	8.68	87	35.95	43	17.77	26	10.74	23	9.50	26	10.74	16	6.61
	LDGV	55	9	16.36	20	36.36	8	14.55	5	9.09	4	7.27	4	7.27	5	9.09
2000 Total		323	35	10.84	115	35.60	54	16.72	37	11.46	28	8.67	32	9.91	22	6.81
2001	LDGT1	59	3	5.08	29	49.15	8	13.56	10	16.95	3	5.08	6	10.17	0	0.00
	LDGT2	289	12	4.15	101	34.95	62	21.45	37	12.80	29	10.03	18	6.23	30	10.38
	LDGV	80	9	11.25	22	27.50	28	35.00	7	8.75	5	6.25	7	8.75	2	2.50
2001 Total		428	24	5.61	152	35.51	98	22.90	54	12.62	37	8.64	31	7.24	32	7.48
2002	LDGT1	20	1	5.00	11	55.00	3	15.00	3	15.00	0	0.00	1	5.00	1	5.00
	LDGT2	359	23	6.41	160	44.57	65	18.11	36	10.03	24	6.69	18	5.01	33	9.19
	LDGV	97	9	9.28	40	41.24	18	18.56	15	15.46	5	5.15	7	7.22	3	3.09
2002 Total		476	33	6.93	211	44.33	86	18.07	54	11.34	29	6.09	26	5.46	37	7.77
2003	LDGT1	12	3	25.00	1	8.33	5	41.67	1	8.33	1	8.33	0	0.00	1	8.33
	LDGT2	374	17	4.55	155	41.44	76	20.32	35	9.36	27	7.22	25	6.68	39	10.43
	LDGV	123	12	9.76	38	30.89	29	23.58	18	14.63	11	8.94	11	8.94	4	3.25
2003 Total		509	32	6.29	194	38.11	110	21.61	54	10.61	39	7.66	36	7.07	44	8.64

			Count of Tests by Number of DTC Present												No DTCs Available	
Model Year	Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %	Count	%
2004	LDGT1	3	0	0.00	2	66.67	1	33.33	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	299	16	5.35	111	37.12	61	20.40	45	15.05	17	5.69	17	5.69	32	10.70
	LDGV	128	20	15.63	52	40.63	26	20.31	9	7.03	9	7.03	11	8.59	1	0.78
2004 Total		430	36	8.37	165	38.37	88	20.47	54	12.56	26	6.05	28	6.51	33	7.67
2005	LDGT1	8	1	12.50	5	62.50	0	0.00	1	12.50	0	0.00	1	12.50	0	0.00
	LDGT2	193	13	6.74	68	35.23	32	16.58	23	11.92	17	8.81	10	5.18	30	15.54
	LDGV	141	22	15.60	40	28.37	37	26.24	16	11.35	13	9.22	11	7.80	2	1.42
2005 Total		342	36	10.53	113	33.04	69	20.18	40	11.70	30	8.77	22	6.43	32	9.36
2006	LDGT1	23	1	4.35	10	43.48	4	17.39	5	21.74	2	8.70	1	4.35	0	0.00
	LDGT2	133	11	8.27	46	34.59	31	23.31	15	11.28	5	3.76	17	12.78	8	6.02
	LDGV	148	27	18.24	60	40.54	18	12.16	18	12.16	11	7.43	13	8.78	1	0.68
2006 Total		304	39	12.83	116	38.16	53	17.43	38	12.50	18	5.92	31	10.20	9	2.96
2007	LDGT1	33	2	6.06	13	39.39	8	24.24	3	9.09	3	9.09	4	12.12	0	0.00
	LDGT2	244	8	3.28	125	51.23	61	25.00	22	9.02	12	4.92	10	4.10	6	2.46
	LDGV	118	6	5.08	56	47.46	36	30.51	4	3.39	8	6.78	8	6.78	0	0.00
2007 Total		395	16	4.05	194	49.11	105	26.58	29	7.34	23	5.82	22	5.57	6	1.52
2008	LDGT1	832	20	2.40	470	56.49	167	20.07	92	11.06	45	5.41	30	3.61	8	0.96
	LDGT2	607	16	2.64	306	50.41	138	22.73	79	13.01	23	3.79	33	5.44	12	1.98
	LDGV	1,307	56	4.28	630	48.20	306	23.41	147	11.25	57	4.36	88	6.73	23	1.76
2008 Total		2,746	92	3.35	1,406	51.20	611	22.25	318	11.58	125	4.55	151	5.50	43	1.57
2009	LDGT1	548	12	2.19	291	53.10	123	22.45	80	14.60	20	3.65	20	3.65	2	0.36
	LDGT2	337	8	2.37	165	48.96	87	25.82	38	11.28	22	6.53	12	3.56	5	1.48
	LDGV	792	33	4.17	423	53.41	185	23.36	66	8.33	39	4.92	36	4.55	10	1.26
2009 Total		1,677	53	3.16	879	52.42	395	23.55	184	10.97	81	4.83	68	4.05	17	1.01
2010	LDGT1	248	11	4.44	156	62.90	56	22.58	12	4.84	5	2.02	7	2.82	1	0.40
	LDGT2	245	8	3.27	123	50.20	70	28.57	24	9.80	5	2.04	13	5.31	2	0.82
	LDGV	497	44	8.85	278	55.94	94	18.91	37	7.44	16	3.22	24	4.83	4	0.80
2010 Total		990	63	6.36	557	56.26	220	22.22	73	7.37	26	2.63	44	4.44	7	0.71
2011	LDGT1	505	24	4.75	312	61.78	109	21.58	33	6.53	8	1.58	15	2.97	4	0.79
	LDGT2	420	22	5.24	268	63.81	83	19.76	24	5.71	8	1.90	11	2.62	4	0.95
	LDGV	829	62	7.48	495	59.71	153	18.46	50	6.03	19	2.29	37	4.46	13	1.57
2011 Total		1,754	108	6.16	1,075	61.29	345	19.67	107	6.10	35	2.00	63	3.59	21	1.20
2012	LDGT1	46	3	6.52	31	67.39	9	19.57	3	6.52	0	0.00	0	0.00	0	0.00
	LDGT2	55	4	7.27	36	65.45	7	12.73	3	5.45	3	5.45	2	3.64	0	0.00
	LDGV	178	14	7.87	97	54.49	35	19.66	14	7.87	6	3.37	11	6.18	1	0.56
2012 Total		279	21	7.53	164	58.78	51	18.28	20	7.17	9	3.23	13	4.66	1	0.36

			Count of Tests by Number of DTC Present												No DTCs Available	
Model Year	Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %	Count	%
2013	LDGT1	23	0	0.00	15	65.22	5	21.74	2	8.70	0	0.00	0	0.00	1	4.35
	LDGT2	22	3	13.64	12	54.55	3	13.64	2	9.09	2	9.09	0	0.00	0	0.00
	LDGV	55	3	5.45	29	52.73	12	21.82	5	9.09	3	5.45	2	3.64	1	1.82
2013 Total		100	6	6.00	56	56.00	20	20.00	9	9.00	5	5.00	2	2.00	2	2.00
2014	LDGT1	18	1	5.56	12	66.67	2	11.11	1	5.56	1	5.56	1	5.56	0	0.00
	LDGT2	6	1	16.67	3	50.00	1	16.67	0	0.00	1	16.67	0	0.00	0	0.00
	LDGV	24	1	4.17	13	54.17	3	12.50	4	16.67	1	4.17	2	8.33	0	0.00
2014 Total		48	3	6.25	28	58.33	6	12.50	5	10.42	3	6.25	3	6.25	0	0.00
2015	LDGT1	11	1	9.09	6	54.55	1	9.09	2	18.18	0	0.00	1	9.09	0	0.00
	LDGT2	8	0	0.00	5	62.50	3	37.50	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	18	4	22.22	11	61.11	1	5.56	2	11.11	0	0.00	0	0.00	0	0.00
2015 Total		37	5	13.51	22	59.46	5	13.51	4	10.81	0	0.00	1	2.70	0	0.00
2016	LDGT1	4	2	50.00	2	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	3	1	33.33	2	66.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	9	2	22.22	7	77.78	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2016 Total		16	5	31.25	11	68.75	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2017	LDGT1	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	1	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	2	1	50.00	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2017 Total		4	2	50.00	2	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Grand Total		11,128	631	5.67	5,554	49.91	2,368	21.28	1,113	10.00	537	4.83	596	5.36	329	2.96

Initial OBD Fail DTC Report - Summary by Veh (V 1.03)

		Count of Tests by Number of DTC Present												No DTCs Available		
Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %	Count	%	
LDGT1	2,437	93	3.82	1,382	56.71	506	20.76	257	10.55	90	3.69	90	3.69	19	0.78	
LDGT2	3,995	199	4.98	1,825	45.68	863	21.60	425	10.64	230	5.76	221	5.53	232	5.81	
LDGV	4,696	339	7.22	2,347	49.98	999	21.27	431	9.18	217	4.62	285	6.07	78	1.66	
Grand Total		11,128	631	5.67	5,554	49.91	2,368	21.28	1,113	10.00	537	4.83	596	5.36	329	2.96

Appendix A5

Initial OBD Fail Readiness Monitor Summary Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Fail Readiness Monitor Summary Report (V 1.04)

Model Year	Type	Total OBD Fail	% of Total Fail with Unset Readiness Monitors	Total OBD Fail W/ Ready Info	CAT				EVAP				SAIR				O2				HO2				EGR			
					Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%
1996	LDGV	15	66.67	14	14	100.00	5	35.71	6	42.86	4	66.67	4	28.57	2	50.00	14	100.00	7	50.00	14	100.00	11	78.57	6	42.86	5	83.33
	LDGT1	5	80.00	4	4	100.00	1	25.00	4	100.00	1	25.00	0	0.00	0	0.00	4	100.00	2	50.00	1	25.00	1	100.00	4	100.00	1	25.00
	LDGT2	4	75.00	4	4	100.00	1	25.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00	2	50.00	4	100.00	4	100.00	3	75.00	3	100.00
1996 Total		24	70.83	22	22	100.00	7	31.82	10	45.45	5	50.00	4	18.18	2	50.00	22	100.00	11	50.00	19	86.36	16	84.21	13	59.09	9	69.23
1997	LDGV	23	65.22	20	20	100.00	6	30.00	9	45.00	1	11.11	0	0.00	0	0.00	20	100.00	12	60.00	20	100.00	20	100.00	7	35.00	5	71.43
	LDGT1	3	100.00	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	1	33.33	3	100.00	3	100.00	0	0.00	0	0.00
	LDGT2	12	41.67	12	11	91.67	7	63.64	4	33.33	4	100.00	0	0.00	0	0.00	12	100.00	11	91.67	12	100.00	10	83.33	6	50.00	4	66.67
1997 Total		38	60.53	35	34	97.14	13	38.24	13	37.14	5	38.46	0	0.00	0	0.00	35	100.00	24	68.57	35	100.00	33	94.29	13	37.14	9	69.23
1998	LDGV	32	40.63	29	29	100.00	18	62.07	27	93.10	18	66.67	5	17.24	2	40.00	29	100.00	21	72.41	29	100.00	28	96.55	14	48.28	12	85.71
	LDGT1	5	40.00	4	4	100.00	2	50.00	3	75.00	2	66.67	0	0.00	0	0.00	4	100.00	2	50.00	4	100.00	3	75.00	1	25.00	1	100.00
	LDGT2	5	60.00	5	5	100.00	2	40.00	4	80.00	3	75.00	0	0.00	0	0.00	5	100.00	5	100.00	5	100.00	5	100.00	4	80.00	4	100.00
1998 Total		42	42.86	38	38	100.00	22	57.89	34	89.47	23	67.65	5	13.16	2	40.00	38	100.00	28	73.68	38	100.00	36	94.74	19	50.00	17	89.47
1999	LDGV	25	52.00	24	24	100.00	16	66.67	24	100.00	13	54.17	7	29.17	6	85.71	24	100.00	16	66.67	23	95.83	23	100.00	10	41.67	7	70.00
	LDGT1	4	50.00	4	4	100.00	2	50.00	4	100.00	3	75.00	0	0.00	0	0.00	4	100.00	3	75.00	4	100.00	3	75.00	3	75.00	3	100.00
	LDGT2	137	54.01	122	120	98.36	79	65.83	120	98.36	55	45.83	5	4.10	4	80.00	122	100.00	109	89.34	122	100.00	109	89.34	121	99.18	110	90.91
1999 Total		166	53.61	150	148	98.67	97	65.54	148	98.67	71	47.97	12	8.00	10	83.33	150	100.00	128	85.33	149	99.33	135	90.60	134	89.33	120	89.55
2000	LDGV	55	41.82	50	43	86.00	24	55.81	42	84.00	26	61.90	13	26.00	7	53.85	47	94.00	34	72.34	46	92.00	45	97.83	18	36.00	12	66.67
	LDGT1	26	42.31	24	23	95.83	17	73.91	18	75.00	13	72.22	0	0.00	0	0.00	23	95.83	18	78.26	23	95.83	17	73.91	2	8.33	2	100.00
	LDGT2	242	41.32	226	221	97.79	157	71.04	218	96.46	134	61.47	8	3.54	7	87.50	226	100.00	212	93.81	226	100.00	208	92.04	222	98.23	215	96.85
2000 Total		323	41.49	300	287	95.67	198	68.99	278	92.67	173	62.23	21	7.00	14	66.67	296	98.67	264	89.19	295	98.33	270	91.53	242	80.67	229	94.63
2001	LDGV	80	41.25	77	71	92.21	47	66.20	71	92.21	47	66.20	32	41.56	25	78.13	77	100.00	59	76.62	76	98.70	70	92.11	21	27.27	13	61.90
	LDGT1	59	42.37	47	47	100.00	30	63.83	47	100.00	30	63.83	0	0.00	0	0.00	47	100.00	32	68.09	47	100.00	36	76.60	2	4.26	1	50.00
	LDGT2	289	39.45	259	257	99.23	189	73.54	257	99.23	171	66.54	4	1.54	3	75.00	258	99.61	222	86.05	257	99.23	224	87.16	222	85.71	203	91.44
2001 Total		428	40.19	383	375	97.91	266	70.93	375	97.91	248	66.13	36	9.40	28	77.78	382	99.74	313	81.94	380	99.22	330	86.84	245	63.97	217	88.57
2002	LDGV	97	46.39	94	87	92.55	58	66.67	90	95.74	62	68.89	43	45.74	31	72.09	93	98.94	75	80.65	92	97.87	88	95.65	21	22.34	19	90.48
	LDGT1	20	35.00	18	19	105.56	13	68.42	19	105.56	13	68.42	0	0.00	0	0.00	19	105.56	14	73.68	19	105.56	18	94.74	1	5.56	1	100.00
	LDGT2	359	33.98	326	321	98.47	255	79.44	321	98.47	221	68.85	0	0.00	0	0.00	326	100.00	288	88.34	322	98.77	292	90.68	31	9.51	29	93.55
2002 Total		476	36.55	438	427	97.49	326	76.35	430	98.17	296	68.84	43	9.82	31	72.09	438	100.00	377	86.07	433	98.86	398	91.92	53	12.10	49	92.45
2003	LDGV	123	42.28	119	113	94.96	85	75.22	114	95.80	82	71.93	44	36.97	37	84.09	115	96.64	93	80.87	112	94.12	107	95.54	52	43.70	49	94.23
	LDGT1	12	16.67	11	8	72.73	7	87.50	11	100.00	10	90.91	0	0.00	0	0.00	11	100.00	10	90.91	6	54.55	5	83.33	1	9.09	1	100.00
	LDGT2	374	42.78	335	333	99.40	254	76.28	334	99.70	193	57.78	1	0.30	1	100.00	334	99.70	284	85.03	303	90.45	292	96.37	0	0.00	0	0.00
2003 Total		509	42.04	465	454	97.63	346	76.21	459	98.71	285	62.09	45	9.68	38	84.44	460	98.92	387	84.13	421	90.54	404	95.96	53	11.40	50	94.34
2004	LDGV	128	29.69	127	111	87.40	87	78.38	118	92.91	93	78.81	47	37.01	37	78.72	118	92.91	102	86.44	110	86.61	106	96.36	41	32.28	36	87.80
	LDGT1	3	66.67	3	3	100.00	2	66.67	3	100.00	2	66.67	2	66.67	2	100.00	3	100.00	2	66.67	3	100.00	3	100.00	1	33.33	1	100.00
	LDGT2	299	42.81	267	266	99.63	192	72.18	266	99.63	156	58.65	0	0.00	0	0.00	266	99.63	222	83.46	266	99.63	260	97.74	8	3.00	4	50.00
2004 Total		430	39.07	397	380	95.72	281	73.95	387	97.48	251	64.86	49	12.34	39	79.59	387	97.48	326	84.24	379	95.47	369	97.36	50	12.59	41	82.00
2005	LDGV	141	30.50	139	127	91.37	99	77.95	127	91.37	94	74.02	25	17.99	17	68.00	128	92.09	102	79.69	116	83.45	110	94.83	57	41.01	49	85.96
	LDGT1	8	50.00	8	8	100.00	6	75.00	8	100.00	4	50.00	0	0.00	0	0.00	8	100.00	6	75.00	8	100.00	8	100.00	4	50.00	4	100.00
	LDGT2	193	38.34	162	162	100.00	117	72.22	162	100.00	101	62.35	1	0.62	1	100.00	162	100.00	125	77.16	161	99.38	151	93.79	22	13.58	18	81.82
2005 Total		342	35.38	309	297	96.12	222	74.75	297	96.12	199	67.00	26	8.41	18	69.23	298	96.44	233	78.19	285	92.23	269	94.39	83	26.86	71	85.54
2006	LDGV	148	30.41	147	133	90.48	111	83.46	133	90.48	104	78.20	24	16.33	21	87.50	135	91.84	116	85.93	111	75.51	104	93.69	55	37.41	48	87.27
	LDGT1	23	56.52	23	23	100.00	20	86.96	23	100.00	12	52.17	3	13.04	3	100.00	23	100.00	19	82.61	11	47.83	8	72.73	5	21.74	5	100.00
	LDGT2	133	49.62	125	123	98.40	73	59.35	125	100.00	76	60.80	1	0.80	0	0.00	125	100.00	84	67.20	125	100.00	112	89.60	20	1		

Model Year	Type	Total OBD Fail	% of Total Fail with Unset Readiness Monitors	Total OBD Fail W/ Ready Info	CAT				EVAP				SAIR				O2				HO2				EGR			
					Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%
2009	Total	1,677	29.76	1,658	1,640	98.91	1,373	83.72	1,653	99.70	1,281	77.50	140	8.44	114	81.43	1,651	99.58	1,364	82.62	1,654	99.76	1,553	93.89	1,174	70.81	1,062	90.46
2010	LDGV	497	33.20	492	470	95.53	389	82.77	487	98.98	369	75.77	61	12.40	50	81.97	487	98.98	382	78.44	487	98.98	448	91.99	445	90.45	392	88.09
	LDGT1	248	25.81	246	246	100.00	206	83.74	246	100.00	210	85.37	10	4.07	9	90.00	246	100.00	206	83.74	246	100.00	235	95.53	232	94.31	215	92.67
	LDGT2	245	43.27	243	239	98.35	180	75.31	242	99.59	154	63.64	6	2.47	6	100.00	240	98.77	172	71.67	242	99.59	219	90.50	205	84.36	171	83.41
2010	Total	990	33.84	981	955	97.35	775	81.15	975	99.39	733	75.18	77	7.85	65	84.42	973	99.18	760	78.11	975	99.39	902	92.51	882	89.91	778	88.21
2011	LDGV	829	26.30	816	776	95.10	654	84.28	809	99.14	662	81.83	83	10.17	79	95.18	812	99.51	675	83.13	811	99.39	756	93.22	799	97.92	762	95.37
	LDGT1	505	20.59	500	498	99.60	450	90.36	500	100.00	429	85.80	19	3.80	18	94.74	500	100.00	436	87.20	500	100.00	481	96.20	496	99.20	470	94.76
	LDGT2	420	24.52	415	404	97.35	351	86.88	408	98.31	345	84.56	16	3.86	14	87.50	406	97.83	333	82.02	407	98.07	380	93.37	409	98.55	387	94.62
2011	Total	1,754	24.23	1,731	1,678	96.94	1,455	86.71	1,717	99.19	1,436	83.63	118	6.82	111	94.07	1,718	99.25	1,444	84.05	1,718	99.25	1,617	94.12	1,704	98.44	1,619	95.01
2012	LDGV	178	40.45	177	168	94.92	139	82.74	174	98.31	116	66.67	22	12.43	19	86.36	175	98.87	137	78.29	175	98.87	161	92.00	173	97.74	158	91.33
	LDGT1	46	30.43	46	45	97.83	40	88.89	46	100.00	35	76.09	2	4.35	2	100.00	46	100.00	38	82.61	46	100.00	45	97.83	46	100.00	43	93.48
	LDGT2	55	29.09	55	53	96.36	49	92.45	53	96.36	42	79.25	2	3.64	1	50.00	54	98.18	43	79.63	54	98.18	50	92.59	55	100.00	52	94.55
2012	Total	279	36.56	278	266	95.68	228	85.71	273	98.20	193	70.70	26	9.35	22	84.62	275	98.92	218	79.27	275	98.92	256	93.09	274	98.56	253	92.34
2013	LDGV	55	40.00	54	53	98.15	44	83.02	54	100.00	39	72.22	3	5.56	3	100.00	54	100.00	41	75.93	54	100.00	50	92.59	54	100.00	48	88.89
	LDGT1	23	21.74	22	22	100.00	18	81.82	22	100.00	20	90.91	2	9.09	2	100.00	22	100.00	18	81.82	22	100.00	21	95.45	22	100.00	21	100.00
	LDGT2	22	31.82	22	20	90.91	19	95.00	20	90.91	13	65.00	0	0.00	0	0.00	20	90.91	17	85.00	20	90.91	17	85.00	22	100.00	21	95.45
2013	Total	100	34.00	98	95	96.94	81	85.26	96	97.96	72	75.00	5	5.10	5	100.00	96	97.96	76	79.17	96	97.96	88	91.67	98	100.00	91	92.86
2014	LDGV	24	45.83	24	22	91.67	17	77.27	24	100.00	16	66.67	1	4.17	1	100.00	24	100.00	17	70.83	24	100.00	19	79.17	24	100.00	22	91.67
	LDGT1	18	22.22	18	18	100.00	18	100.00	18	100.00	16	88.89	2	11.11	1	50.00	18	100.00	16	88.89	18	100.00	18	100.00	18	100.00	18	100.00
	LDGT2	6	50.00	5	4	80.00	4	100.00	4	80.00	3	75.00	1	20.00	1	100.00	5	100.00	4	80.00	5	100.00	4	80.00	5	100.00	3	60.00
2014	Total	48	37.50	47	44	93.62	39	88.64	46	97.87	35	76.09	4	8.51	3	75.00	47	100.00	37	78.72	47	100.00	41	87.23	47	100.00	43	91.49
2015	LDGV	18	27.78	18	17	94.44	15	88.24	18	100.00	13	72.22	0	0.00	0	0.00	18	100.00	14	77.78	18	100.00	18	100.00	18	100.00	16	88.89
	LDGT1	11	36.36	11	11	100.00	11	100.00	11	100.00	7	63.64	0	0.00	0	0.00	11	100.00	9	81.82	11	100.00	11	100.00	11	100.00	11	100.00
	LDGT2	8	50.00	8	8	100.00	6	75.00	8	100.00	4	50.00	0	0.00	0	0.00	8	100.00	6	75.00	8	100.00	8	100.00	8	100.00	8	100.00
2015	Total	37	35.14	37	36	97.30	32	88.89	37	100.00	24	64.86	0	0.00	0	0.00	37	100.00	29	78.38	37	100.00	37	100.00	37	100.00	35	94.59
2016	LDGV	9	44.44	9	8	88.89	6	75.00	9	100.00	5	55.56	0	0.00	0	0.00	9	100.00	7	77.78	9	100.00	9	100.00	9	100.00	9	100.00
	LDGT1	4	0.00	4	3	75.00	3	100.00	3	75.00	3	100.00	0	0.00	0	0.00	3	75.00	3	100.00	3	75.00	3	100.00	3	75.00	3	100.00
	LDGT2	3	66.67	3	3	100.00	2	66.67	3	100.00	1	33.33	0	0.00	0	0.00	3	100.00	2	66.67	3	100.00	2	66.67	3	100.00	3	100.00
2016	Total	16	37.50	16	14	87.50	11	78.57	15	93.75	9	60.00	0	0.00	0	0.00	15	93.75	12	80.00	15	93.75	14	93.33	15	93.75	15	100.00
2017	LDGV	2	50.00	2	2	100.00	2	100.00	2	100.00	1	50.00	0	0.00	0	0.00	2	100.00	2	100.00	2	100.00	2	100.00	2	100.00	1	50.00
	LDGT1	1	0.00	1	1	100.00	1	100.00	1	100.00	1	100.00	0	0.00	0	0.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00
	LDGT2	1	0.00	1	1	100.00	1	100.00	1	100.00	1	100.00	0	0.00	0	0.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00
2017	Total	4	25.00	4	4	100.00	4	100.00	4	100.00	3	75.00	0	0.00	0	0.00	4	100.00	4	100.00	4	100.00	4	100.00	4	100.00	3	75.00
Grand Total		11,128	33.45	10,772	10,526	97.72	8,501	80.76	10,599	98.39	7,844	74.01	946	8.78	794	83.93	10,674	99.09	8,744	81.92	10,540	97.85	9,836	93.32	6,148	57.07	5,616	91.35

Initial OBD Fail Readiness Monitor Summary Report - Summary by Veh(V 1.04)

Type	Total OBD Fail	% of Total Fail with Unset Readiness Monitors	Total OBD Fail W/ Ready Info	CAT				EVAP				SAIR				O2				HO2				EGR			
				Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%	Supported Count	Supported %	Ready Count	Ready%
LDGV	4,696	31.67	4,613	4,431	96.05	3,577	80.73	4,504	97.64	3,476	77.18	688	14.91	562	81.69	4,545	98.53	3,687	81.12	4,462	96.73	4,182	93.72	2,866	62.13	2,587	90.27
LDGT1	2,437	27.99	2,400	2,386	99.42	2,020	84.66	2,385	99.38	1,908	80.00	157	6.54	142	90.45	2,393	99.71	2,005	83.79	2,375	98.96	2,276	95.83	1,558	64.92	1,466	94.09
LDGT2	3,995	38.87	3,759	3,709	98.67	2,904	78.30	3,710	98.70	2,460	66.31	101	2.69	90	89.11	3,736	99.39	3,052	81.69	3,703	98.51	3,378	91.22	1,724	45.86	1,563	90.66
Grand Total	11,128	33.45	10,772	10,526	97.72	8,501	80.76	10,599	98.39	7,844	74.01	946	8.78	794	83.93	10,674	99.09	8,744	81.92	10,540	97.85	9,836	93.32	6,148	57.07	5,616	91.35

Appendix A6

OBD Retest Frequency Report

Date Range
Between 1/1/2018 and 12/31/2018

OBD Retest Frequency Report (V 1.04)

Model Year	Type	Total	Avg Retest #	Retest #1 Inspected				Retest #2 Inspected				Retest #3 Inspected				Retest #4 Inspected				Retest >=5 Inspected			
				Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%
1996	LDGT1	7	1.43	5	71.43	3	60.00	1	14.29	0	0.00	1	14.29	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	6	2.17	4	66.67	3	75.00	0	0.00	0	0.00	0	0.00	0	0.00	1	16.67	0	0.00	1	16.67	0	0.00
	LDGV	17	1.24	15	88.24	9	60.00	1	5.88	0	0.00	0	0.00	0	0.00	1	5.88	0	0.00	0	0.00	0	0.00
1996 Total		30	1.47	24	80.00	15	62.50	2	6.67	0	0.00	1	3.33	1	100.00	2	6.67	0	0.00	1	3.33	0	0.00
1997	LDGT1	4	1.25	3	75.00	3	100.00	1	25.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	20	1.45	14	70.00	9	64.29	4	20.00	2	50.00	1	5.00	0	0.00	1	5.00	1	100.00	0	0.00	0	0.00
	LDGV	24	1.46	15	62.50	4	26.67	7	29.17	3	42.86	2	8.33	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
1997 Total		48	1.44	32	66.67	16	50.00	12	25.00	6	50.00	3	6.25	2	66.67	1	2.08	1	100.00	0	0.00	0	0.00
1998	LDGT1	7	1.29	5	71.43	4	80.00	2	28.57	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	11	2.18	4	36.36	1	25.00	3	27.27	0	0.00	2	18.18	0	0.00	2	18.18	1	50.00	0	0.00	0	0.00
	LDGV	31	1.61	18	58.06	9	50.00	9	29.03	4	44.44	3	9.68	0	0.00	0	0.00	0	0.00	1	3.23	1	100.00
1998 Total		49	1.69	27	55.10	14	51.85	14	28.57	6	42.86	5	10.20	0	0.00	2	4.08	1	50.00	1	2.04	1	100.00
1999	LDGT1	7	1.29	5	71.43	3	60.00	2	28.57	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	213	1.65	137	64.32	92	67.15	42	19.72	20	47.62	18	8.45	5	27.78	9	4.23	6	66.67	7	3.29	3	42.86
	LDGV	30	1.47	22	73.33	15	68.18	5	16.67	2	40.00	1	3.33	0	0.00	1	3.33	1	100.00	1	3.33	0	0.00
1999 Total		250	1.62	164	65.60	110	67.07	49	19.60	23	46.94	19	7.60	5	26.32	10	4.00	7	70.00	8	3.20	3	37.50
2000	LDGT1	34	1.18	28	82.35	22	78.57	6	17.65	5	83.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	315	1.41	236	74.92	172	72.88	48	15.24	24	50.00	18	5.71	10	55.56	7	2.22	1	14.29	6	1.90	2	33.33
	LDGV	47	1.32	37	78.72	29	78.38	6	12.77	4	66.67	3	6.38	1	33.33	1	2.13	0	0.00	0	0.00	0	0.00
2000 Total		396	1.38	301	76.01	223	74.09	60	15.15	33	55.00	21	5.30	11	52.38	8	2.02	1	12.50	6	1.52	2	33.33
2001	LDGT1	75	1.45	60	80.00	50	83.33	8	10.67	4	50.00	3	4.00	1	33.33	1	1.33	0	0.00	3	4.00	0	0.00
	LDGT2	417	1.40	308	73.86	218	70.78	71	17.03	42	59.15	24	5.76	16	66.67	9	2.16	3	33.33	5	1.20	2	40.00
	LDGV	95	1.41	69	72.63	42	60.87	17	17.89	6	35.29	6	6.32	1	16.67	2	2.11	1	50.00	1	1.05	0	0.00
2001 Total		587	1.41	437	74.45	310	70.94	96	16.35	52	54.17	33	5.62	18	54.55	12	2.04	4	33.33	9	1.53	2	22.22
2002	LDGT1	49	1.57	35	71.43	30	85.71	7	14.29	5	71.43	2	4.08	0	0.00	3	6.12	1	33.33	2	4.08	1	50.00
	LDGT2	520	1.41	384	73.85	276	71.88	89	17.12	56	62.92	27	5.19	13	48.15	14	2.69	6	42.86	6	1.15	4	66.67
	LDGV	108	1.37	85	78.70	63	74.12	11	10.19	5	45.45	8	7.41	3	37.50	3	2.78	2	66.67	1	0.93	1	100.00
2002 Total		677	1.42	504	74.45	369	73.21	107	15.81	66	61.68	37	5.47	16	43.24	20	2.95	9	45.00	9	1.33	6	66.67
2003	LDGT1	17	1.12	15	88.24	13	86.67	2	11.76	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	485	1.33	388	80.00	306	78.87	65	13.40	47	72.31	14	2.89	6	42.86	8	1.65	2	25.00	10	2.06	5	50.00
	LDGV	161	1.43	117	72.67	81	69.23	29	18.01	16	55.17	10	6.21	4	40.00	2	1.24	0	0.00	3	1.86	0	0.00
2003 Total		663	1.35	520	78.43	400	76.92	96	14.48	65	67.71	24	3.62	10	41.67	10	1.51	2	20.00	13	1.96	5	38.46
2004	LDGT1	7	1.14	6	85.71	5	83.33	1	14.29	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	457	1.24	376	82.28	298	79.26	63	13.79	45	71.43	11	2.41	5	45.45	4	0.88	2	50.00	3	0.66	2	66.67
	LDGV	151	1.39	115	76.16	83	72.17	22	14.57	13	59.09	7	4.64	2	28.57	5	3.31	3	60.00	2	1.32	2	100.00
2004 Total		615	1.28	497	80.81	386	77.67	86	13.98	59	68.60	18	2.93	7	38.89	9	1.46	5	55.56	5	0.81	4	80.00
2005	LDGT1	41	1.80	27	65.85	22	81.48	6	14.63	3	50.00	3	7.32	2	66.67	2	4.88	1	50.00	3	7.32	1	33.33
	LDGT2	269	1.23	225	83.64	180	80.00	34	12.64	26	76.47	6	2.23	4	66.67	1	0.37	0	0.00	3	1.12	1	33.33
	LDGV	194	1.43	144	74.23	113	78.47	30	15.46	14	46.67	12	6.19	4	33.33	5	2.58	2	40.00	3	1.55	2	66.67
2005 Total		504	1.36	396	78.57	315	79.55	70	13.89	43	61.43	21	4.17	10	47.62	8	1.59	3	37.50	9	1.79	4	44.44

Model Year	Type	Total	Avg Retest #	Retest #1 Inspected				Retest #2 Inspected				Retest #3 Inspected				Retest #4 Inspected				Retest >=5 Inspected			
				Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%
2006	LDGT1	90	1.90	53	58.89	35	66.04	19	21.11	8	42.11	7	7.78	3	42.86	3	3.33	1	33.33	8	8.89	1	12.50
	LDGT2	206	1.22	176	85.44	151	85.80	20	9.71	11	55.00	6	2.91	3	50.00	3	1.46	1	33.33	1	0.49	1	100.00
	LDGV	237	1.41	177	74.68	131	74.01	37	15.61	20	54.05	14	5.91	8	57.14	6	2.53	5	83.33	3	1.27	1	33.33
2006 Total		533	1.42	406	76.17	317	78.08	76	14.26	39	51.32	27	5.07	14	51.85	12	2.25	7	58.33	12	2.25	3	25.00
2007	LDGT1	231	1.43	163	70.56	126	77.30	47	20.35	26	55.32	14	6.06	7	50.00	5	2.16	2	40.00	2	0.87	0	0.00
	LDGT2	447	1.27	367	82.10	309	84.20	52	11.63	30	57.69	18	4.03	11	61.11	9	2.01	6	66.67	1	0.22	1	100.00
	LDGV	433	1.60	298	68.82	225	75.50	77	17.78	41	53.25	28	6.47	12	42.86	15	3.46	6	40.00	15	3.46	7	46.67
2007 Total		1,111	1.43	828	74.53	660	79.71	176	15.84	97	55.11	60	5.40	30	50.00	29	2.61	14	48.28	18	1.62	8	44.44
2008	LDGT1	1,387	1.12	1,266	91.28	1,147	90.60	94	6.78	68	72.34	17	1.23	10	58.82	6	0.43	3	50.00	4	0.29	3	75.00
	LDGT2	1,099	1.12	995	90.54	899	90.35	85	7.73	63	74.12	12	1.09	7	58.33	4	0.36	2	50.00	3	0.27	1	33.33
	LDGV	1,746	1.16	1,546	88.55	1,344	86.93	152	8.71	104	68.42	33	1.89	17	51.52	9	0.52	5	55.56	6	0.34	2	33.33
2008 Total		4,232	1.14	3,807	89.96	3,390	89.05	331	7.82	235	71.00	62	1.47	34	54.84	19	0.45	10	52.63	13	0.31	6	46.15
2009	LDGT1	872	1.11	810	92.89	754	93.09	46	5.28	35	76.09	11	1.26	7	63.64	2	0.23	2	100.00	3	0.34	0	0.00
	LDGT2	560	1.12	510	91.07	457	89.61	38	6.79	29	76.32	7	1.25	2	28.57	4	0.71	3	75.00	1	0.18	1	100.00
	LDGV	1,142	1.15	1,017	89.05	900	88.50	92	8.06	66	71.74	22	1.93	11	50.00	8	0.70	2	25.00	3	0.26	3	100.00
2009 Total		2,574	1.13	2,337	90.79	2,111	90.33	176	6.84	130	73.86	40	1.55	20	50.00	14	0.54	7	50.00	7	0.27	4	57.14
2010	LDGT1	500	1.14	456	91.20	421	92.32	27	5.40	16	59.26	10	2.00	5	50.00	4	0.80	2	50.00	3	0.60	0	0.00
	LDGT2	454	1.12	415	91.41	377	90.84	29	6.39	19	65.52	7	1.54	4	57.14	2	0.44	1	50.00	1	0.22	1	100.00
	LDGV	754	1.13	671	88.99	585	87.18	67	8.89	47	70.15	15	1.99	11	73.33	1	0.13	0	0.00	0	0.00	0	0.00
2010 Total		1,708	1.13	1,542	90.28	1,383	89.69	123	7.20	82	66.67	32	1.87	20	62.50	7	0.41	3	42.86	4	0.23	1	25.00
2011	LDGT1	939	1.04	908	96.70	877	96.59	26	2.77	18	69.23	5	0.53	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	1,198	1.07	1,135	94.74	1,080	95.15	51	4.26	42	82.35	9	0.75	6	66.67	3	0.25	3	100.00	0	0.00	0	0.00
	LDGV	1,194	1.09	1,115	93.38	1,033	92.65	63	5.28	48	76.19	9	0.75	5	55.56	4	0.34	3	75.00	3	0.25	0	0.00
2011 Total		3,331	1.07	3,158	94.81	2,990	94.68	140	4.20	108	77.14	23	0.69	16	69.57	7	0.21	6	85.71	3	0.09	0	0.00
2012	LDGT1	110	1.05	105	95.45	100	95.24	4	3.64	3	75.00	1	0.91	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	145	1.06	138	95.17	129	93.48	6	4.14	5	83.33	1	0.69	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	266	1.06	251	94.36	229	91.24	15	5.64	13	86.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2012 Total		521	1.06	494	94.82	458	92.71	25	4.80	21	84.00	2	0.38	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00
2013	LDGT1	29	1.07	27	93.10	24	88.89	2	6.90	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	58	1.02	57	98.28	56	98.25	1	1.72	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	76	1.03	74	97.37	71	95.95	2	2.63	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2013 Total		163	1.03	158	96.93	151	95.57	5	3.07	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2014	LDGT1	19	1.16	16	84.21	13	81.25	3	15.79	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	33	1.00	33	100.00	33	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	29	1.03	28	96.55	23	82.14	1	3.45	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2014 Total		81	1.05	77	95.06	69	89.61	4	4.94	3	75.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2015	LDGT1	13	1.00	13	100.00	13	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	11	1.09	10	90.91	9	90.00	1	9.09	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	26	1.00	26	100.00	25	96.15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2015 Total		50	1.02	49	98.00	47	95.92	1	2.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2016	LDGT1	9	1.11	8	88.89	7	87.50	1	11.11	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	6	1.00	6	100.00	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	19	1.00	19	100.00	19	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2016 Total		34	1.03	33	97.06	32	96.97	1	2.94	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Model Year	Type	Total	Avg Retest #	Retest #1 Inspected				Retest #2 Inspected				Retest #3 Inspected				Retest #4 Inspected				Retest >=5 Inspected			
				Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%
2017	LDGT1	1	1.00	1	100.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	2	1.00	2	100.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	4	1.00	4	100.00	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2017 Total		7	1.00	7	100.00	7	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Overall Total		18,164	1.20	15,798	86.97	13,773	87.18	1,650	9.08	1,075	65.15	428	2.36	215	50.23	170	0.94	80	47.06	118	0.65	49	41.53

OBD Retest Frequency Report - Summary by Veh (V 1.04)

Type	Total	Avg Retest #	Retest #1 Inspected				Retest #2 Inspected				Retest #3 Inspected				Retest #4 Inspected				Retest >=5 Inspected			
			Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%	Count	%	Pass	%
LDGT1	4,448	1.15	4,015	90.27	3,673	91.48	305	6.86	204	66.89	74	1.66	42	56.76	26	0.58	12	46.15	28	0.63	6	21.43
LDGT2	6,932	1.22	5,920	85.40	5,063	85.52	702	10.13	463	65.95	181	2.61	92	50.83	81	1.17	38	46.91	48	0.69	24	50.00
LDGV	6,784	1.20	5,863	86.42	5,037	85.91	643	9.48	408	63.45	173	2.55	81	46.82	63	0.93	30	47.62	42	0.62	19	45.24
Overall Total	18,164	1.20	15,798	86.97	13,773	87.18	1,650	9.08	1,075	65.15	428	2.36	215	50.23	170	0.94	80	47.06	118	0.65	49	41.53

Appendix A7

Initial OBD Pass DTC Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Pass DTC Report (V 1.02)

			Count of Tests by Number of DTC Present											
Model Year	Type	Total Pass	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
1996	LDGT1	20	19	95.00	0	0.00	1	5.00	0	0.00	0	0.00	0	0.00
	LDGT2	12	10	83.33	1	8.33	0	0.00	1	8.33	0	0.00	0	0.00
	LDGV	64	58	90.63	5	7.81	0	0.00	0	0.00	1	1.56	0	0.00
1996 Total		96	87	90.63	6	6.25	1	1.04	1	1.04	1	1.04	0	0.00
1997	LDGT1	31	31	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	28	27	96.43	1	3.57	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	70	60	85.71	7	10.00	0	0.00	2	2.86	0	0.00	1	1.43
1997 Total		129	118	91.47	8	6.20	0	0.00	2	1.55	0	0.00	1	0.78
1998	LDGT1	32	27	84.38	3	9.38	1	3.13	1	3.13	0	0.00	0	0.00
	LDGT2	22	21	95.45	0	0.00	0	0.00	1	4.55	0	0.00	0	0.00
	LDGV	85	69	81.18	10	11.76	5	5.88	1	1.18	0	0.00	0	0.00
1998 Total		139	117	84.17	13	9.35	6	4.32	3	2.16	0	0.00	0	0.00
1999	LDGT1	51	49	96.08	0	0.00	0	0.00	2	3.92	0	0.00	0	0.00
	LDGT2	526	426	80.99	40	7.60	39	7.41	13	2.47	6	1.14	2	0.38
	LDGV	122	116	95.08	4	3.28	2	1.64	0	0.00	0	0.00	0	0.00
1999 Total		699	591	84.55	44	6.29	41	5.87	15	2.15	6	0.86	2	0.29
2000	LDGT1	225	206	91.56	15	6.67	3	1.33	0	0.00	1	0.44	0	0.00
	LDGT2	1,148	982	85.54	86	7.49	44	3.83	17	1.48	13	1.13	6	0.52
	LDGV	209	177	84.69	26	12.44	3	1.44	2	0.96	1	0.48	0	0.00
2000 Total		1,582	1,365	86.28	127	8.03	50	3.16	19	1.20	15	0.95	6	0.38
2001	LDGT1	333	299	89.79	22	6.61	6	1.80	5	1.50	1	0.30	0	0.00
	LDGT2	1,147	959	83.61	94	8.20	47	4.10	31	2.70	11	0.96	5	0.44
	LDGV	333	278	83.48	43	12.91	9	2.70	0	0.00	2	0.60	1	0.30
2001 Total		1,813	1,536	84.72	159	8.77	62	3.42	36	1.99	14	0.77	6	0.33
2002	LDGT1	149	141	94.63	5	3.36	2	1.34	0	0.00	1	0.67	0	0.00
	LDGT2	2,083	1,804	86.61	161	7.73	66	3.17	36	1.73	9	0.43	7	0.34
	LDGV	461	408	88.50	41	8.89	9	1.95	1	0.22	2	0.43	0	0.00
2002 Total		2,693	2,353	87.37	207	7.69	77	2.86	37	1.37	12	0.45	7	0.26
2003	LDGT1	46	42	91.30	4	8.70	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	1,596	1,358	85.09	156	9.77	41	2.57	24	1.50	11	0.69	6	0.38
	LDGV	533	452	84.80	60	11.26	13	2.44	5	0.94	1	0.19	2	0.38
2003 Total		2,175	1,852	85.15	220	10.11	54	2.48	29	1.33	12	0.55	8	0.37

			Count of Tests by Number of DTC Present											
Model Year	Type	Total Pass	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
2004	LDGT1	79	62	78.48	15	18.99	0	0.00	1	1.27	1	1.27	0	0.00
	LDGT2	2,124	1,900	89.45	122	5.74	40	1.88	46	2.17	10	0.47	6	0.28
	LDGV	877	780	88.94	66	7.53	24	2.74	6	0.68	1	0.11	0	0.00
2004 Total		3,080	2,742	89.03	203	6.59	64	2.08	53	1.72	12	0.39	6	0.19
2005	LDGT1	124	106	85.48	17	13.71	1	0.81	0	0.00	0	0.00	0	0.00
	LDGT2	1,618	1,442	89.12	96	5.93	33	2.04	32	1.98	9	0.56	6	0.37
	LDGV	1,407	1,252	88.98	90	6.40	36	2.56	18	1.28	6	0.43	5	0.36
2005 Total		3,149	2,800	88.92	203	6.45	70	2.22	50	1.59	15	0.48	11	0.35
2006	LDGT1	863	838	97.10	20	2.32	3	0.35	0	0.00	0	0.00	2	0.23
	LDGT2	1,391	1,257	90.37	54	3.88	37	2.66	22	1.58	7	0.50	14	1.01
	LDGV	1,596	1,430	89.60	120	7.52	31	1.94	5	0.31	3	0.19	7	0.44
2006 Total		3,850	3,525	91.56	194	5.04	71	1.84	27	0.70	10	0.26	23	0.60
2007	LDGT1	726	693	95.45	29	3.99	2	0.28	0	0.00	2	0.28	0	0.00
	LDGT2	3,102	2,880	92.84	155	5.00	45	1.45	11	0.35	7	0.23	4	0.13
	LDGV	2,261	2,116	93.59	106	4.69	26	1.15	6	0.27	2	0.09	5	0.22
2007 Total		6,089	5,689	93.43	290	4.76	73	1.20	17	0.28	11	0.18	9	0.15
2008	LDGT1	23,898	22,765	95.26	823	3.44	202	0.85	59	0.25	18	0.08	31	0.13
	LDGT2	11,951	11,138	93.20	527	4.41	205	1.72	44	0.37	16	0.13	21	0.18
	LDGV	25,773	24,225	93.99	1,208	4.69	230	0.89	55	0.21	31	0.12	24	0.09
2008 Total		61,622	58,128	94.33	2,558	4.15	637	1.03	158	0.26	65	0.11	76	0.12
2009	LDGT1	16,675	16,087	96.47	442	2.65	106	0.64	32	0.19	3	0.02	5	0.03
	LDGT2	7,581	7,038	92.84	366	4.83	125	1.65	34	0.45	13	0.17	5	0.07
	LDGV	25,099	24,003	95.63	874	3.48	159	0.63	40	0.16	11	0.04	12	0.05
2009 Total		49,355	47,128	95.49	1,682	3.41	390	0.79	106	0.21	27	0.05	22	0.04
2010	LDGT1	9,839	9,479	96.34	291	2.96	56	0.57	7	0.07	5	0.05	1	0.01
	LDGT2	5,772	5,436	94.18	230	3.98	83	1.44	13	0.23	6	0.10	4	0.07
	LDGV	13,133	12,545	95.52	453	3.45	98	0.75	24	0.18	5	0.04	8	0.06
2010 Total		28,744	27,460	95.53	974	3.39	237	0.82	44	0.15	16	0.06	13	0.05
2011	LDGT1	32,886	32,169	97.82	541	1.65	144	0.44	19	0.06	8	0.02	5	0.02
	LDGT2	15,902	15,210	95.65	536	3.37	117	0.74	28	0.18	2	0.01	9	0.06
	LDGV	29,862	28,824	96.52	836	2.80	156	0.52	30	0.10	5	0.02	11	0.04
2011 Total		78,650	76,203	96.89	1,913	2.43	417	0.53	77	0.10	15	0.02	25	0.03
2012	LDGT1	3,744	3,622	96.74	98	2.62	23	0.61	1	0.03	0	0.00	0	0.00
	LDGT2	2,313	2,209	95.50	79	3.42	16	0.69	5	0.22	2	0.09	2	0.09
	LDGV	5,672	5,406	95.31	216	3.81	36	0.63	9	0.16	4	0.07	1	0.02
2012 Total		11,729	11,237	95.81	393	3.35	75	0.64	15	0.13	6	0.05	3	0.03

			Count of Tests by Number of DTC Present											
Model Year	Type	Total Pass	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
2013	LDGT1	1,723	1,667	96.75	47	2.73	8	0.46	1	0.06	0	0.00	0	0.00
	LDGT2	865	832	96.18	24	2.77	7	0.81	1	0.12	0	0.00	1	0.12
	LDGV	2,506	2,388	95.29	96	3.83	17	0.68	3	0.12	1	0.04	1	0.04
2013 Total		5,094	4,887	95.94	167	3.28	32	0.63	5	0.10	1	0.02	2	0.04
2014	LDGT1	1,055	1,036	98.20	16	1.52	3	0.28	0	0.00	0	0.00	0	0.00
	LDGT2	625	599	95.84	17	2.72	8	1.28	1	0.16	0	0.00	0	0.00
	LDGV	1,444	1,402	97.09	34	2.35	7	0.48	1	0.07	0	0.00	0	0.00
2014 Total		3,124	3,037	97.22	67	2.14	18	0.58	2	0.06	0	0.00	0	0.00
2015	LDGT1	844	826	97.87	15	1.78	2	0.24	0	0.00	1	0.12	0	0.00
	LDGT2	363	352	96.97	11	3.03	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	1,087	1,058	97.33	22	2.02	3	0.28	4	0.37	0	0.00	0	0.00
2015 Total		2,294	2,236	97.47	48	2.09	5	0.22	4	0.17	1	0.04	0	0.00
2016	LDGT1	553	547	98.92	6	1.08	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	170	167	98.24	3	1.76	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	728	703	96.57	19	2.61	5	0.69	0	0.00	0	0.00	1	0.14
2016 Total		1,451	1,417	97.66	28	1.93	5	0.34	0	0.00	0	0.00	1	0.07
2017	LDGT1	178	174	97.75	2	1.12	2	1.12	0	0.00	0	0.00	0	0.00
	LDGT2	65	65	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	392	390	99.49	2	0.51	0	0.00	0	0.00	0	0.00	0	0.00
2017 Total		635	629	99.06	4	0.63	2	0.31	0	0.00	0	0.00	0	0.00
2018	LDGT1	28	28	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	11	11	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	33	33	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2018 Total		72	72	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2019	LDGT1	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2019 Total		4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Grand Total		268,268	255,213	95.13	9,508	3.54	2,387	0.89	700	0.26	239	0.09	221	0.08

Initial OBD Pass DTC Report - Summary by Veh (V 1.02)

			Count of Tests by Number of DTC Present											
Type	Total Pass	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %	
LDGT1	94,104	90,915	96.61	2,411	2.56	565	0.60	128	0.14	41	0.04	44	0.05	
LDGT2	60,416	56,124	92.90	2,759	4.57	953	1.58	360	0.60	122	0.20	98	0.16	
LDGV	113,748	108,174	95.10	4,338	3.81	869	0.76	212	0.19	76	0.07	79	0.07	

		Count of Tests by Number of DTC Present											
Type	Total Pass	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
Grand Total	268,268	255,213	95.13	9,508	3.54	2,387	0.89	700	0.26	239	0.09	221	0.08

Appendix A8

Initial OBD Pass Readiness Monitor Summary Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Pass Readiness Monitor Summary Report (V 1.03)

Model Year	Type	Total Pass	% of Total Pass with Unset Readiness Monitors	CAT				EVAP				SAIR				O2				HO2				EGR			
				Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %
1996	LDGV	64	15.63	64	100.00	57	89.06	34	53.13	28	82.35	27	42.19	26	96.30	64	100.00	57	89.06	64	100.00	58	90.63	24	37.50	19	79.17
	LDGT1	20	10.00	19	95.00	19	100.00	13	65.00	11	84.62	0	0.00	0	0.00	19	95.00	19	100.00	7	35.00	7	100.00	15	75.00	15	100.00
	LDGT2	12	8.33	11	91.67	11	100.00	1	8.33	1	100.00	1	8.33	0	0.00	11	91.67	11	100.00	11	91.67	11	100.00	7	58.33	6	85.71
1996 Total		96	13.54	94	97.92	87	92.55	48	50.00	40	83.33	28	29.17	26	92.86	94	97.92	87	92.55	82	85.42	76	92.68	46	47.92	40	86.96
1997	LDGV	70	28.57	70	100.00	62	88.57	43	61.43	28	65.12	15	21.43	12	80.00	70	100.00	62	88.57	70	100.00	62	88.57	34	48.57	24	70.59
	LDGT1	31	3.23	28	90.32	28	100.00	9	29.03	8	88.89	0	0.00	0	0.00	28	90.32	28	100.00	23	74.19	23	100.00	8	25.81	8	100.00
	LDGT2	28	3.57	28	100.00	28	100.00	8	28.57	8	100.00	0	0.00	0	0.00	28	100.00	28	100.00	28	100.00	28	100.00	15	53.57	14	93.33
1997 Total		129	17.05	126	97.67	118	93.65	60	46.51	44	73.33	15	11.63	12	80.00	126	97.67	118	93.65	121	93.80	113	93.39	57	44.19	46	80.70
1998	LDGV	85	29.41	83	97.65	81	97.59	81	95.29	60	74.07	17	20.00	14	82.35	83	97.65	82	98.80	83	97.65	82	98.80	33	38.82	28	84.85
	LDGT1	32	6.25	30	93.75	30	100.00	13	40.63	11	84.62	0	0.00	0	0.00	30	93.75	30	100.00	30	93.75	30	100.00	11	34.38	10	90.91
	LDGT2	22	13.64	18	81.82	18	100.00	12	54.55	9	75.00	0	0.00	0	0.00	18	81.82	18	100.00	18	81.82	18	100.00	12	54.55	12	100.00
1998 Total		139	21.58	131	94.24	129	98.47	106	76.26	80	75.47	17	12.23	14	82.35	131	94.24	130	99.24	131	94.24	130	99.24	56	40.29	50	89.29
1999	LDGV	122	17.21	121	99.18	121	100.00	121	99.18	103	85.12	55	45.08	54	98.18	121	99.18	121	100.00	121	99.18	121	100.00	33	27.05	31	93.94
	LDGT1	51	9.80	42	82.35	42	100.00	25	49.02	20	80.00	0	0.00	0	0.00	42	82.35	42	100.00	42	82.35	42	100.00	16	31.37	15	93.75
	LDGT2	526	34.03	518	98.48	518	100.00	514	97.72	335	65.18	12	2.28	11	91.67	518	98.48	518	100.00	518	98.48	518	100.00	514	97.72	506	98.44
1999 Total		699	29.33	681	97.42	681	100.00	660	94.42	458	69.39	67	9.59	65	97.01	681	97.42	681	100.00	681	97.42	681	100.00	563	80.54	552	98.05
2000	LDGV	209	17.22	208	99.52	208	100.00	205	98.09	175	85.37	76	36.36	69	90.79	208	99.52	208	100.00	208	99.52	208	100.00	77	36.84	75	97.40
	LDGT1	225	4.89	211	93.78	211	100.00	188	83.56	177	94.15	1	0.44	1	100.00	211	93.78	211	100.00	211	93.78	211	100.00	11	4.89	11	100.00
	LDGT2	1,148	20.30	1,145	99.74	1,145	100.00	1,107	96.43	877	79.22	40	3.48	36	90.00	1,145	99.74	1,145	100.00	1,145	99.74	1,145	100.00	1,098	95.64	1,094	99.64
2000 Total		1,582	17.70	1,564	98.86	1,564	100.00	1,500	94.82	1,229	81.93	117	7.40	106	90.60	1,564	98.86	1,564	100.00	1,564	98.86	1,564	100.00	1,186	74.97	1,180	99.49
2001	LDGV	333	11.71	319	95.80	319	100.00	316	94.89	286	90.51	134	40.24	126	94.03	319	95.80	319	100.00	318	95.50	318	100.00	64	19.22	63	98.44
	LDGT1	333	12.01	226	67.87	226	100.00	226	67.87	187	82.74	0	0.00	0	0.00	226	67.87	226	100.00	226	67.87	226	100.00	18	5.41	17	94.44
	LDGT2	1,147	21.36	1,143	99.65	1,143	100.00	1,143	99.65	923	80.75	19	1.66	15	78.95	1,143	99.65	1,143	100.00	1,143	99.65	1,143	100.00	1,040	90.67	1,019	97.98
2001 Total		1,813	17.87	1,688	93.11	1,688	100.00	1,685	92.94	1,396	82.85	153	8.44	141	92.16	1,688	93.11	1,688	100.00	1,687	93.05	1,687	100.00	1,122	61.89	1,099	97.95
2002	LDGV	461	10.41	453	98.26	453	100.00	448	97.18	405	90.40	167	36.23	162	97.01	453	98.26	453	100.00	450	97.61	450	100.00	64	13.88	64	100.00
	LDGT1	149	13.42	136	91.28	136	100.00	136	91.28	116	85.29	6	4.03	6	100.00	136	91.28	136	100.00	136	91.28	136	100.00	12	8.05	12	100.00
	LDGT2	2,083	15.36	2,079	99.81	2,079	100.00	2,079	99.81	1,759	84.61	4	0.19	4	100.00	2,079	99.81	2,079	100.00	2,079	99.81	2,079	100.00	201	9.65	201	100.00
2002 Total		2,693	14.41	2,668	99.07	2,668	100.00	2,663	98.89	2,280	85.62	177	6.57	172	97.18	2,668	99.07	2,668	100.00	2,665	98.96	2,665	100.00	277	10.29	277	100.00
2003	LDGV	533	13.13	523	98.12	523	100.00	519	97.37	460	88.63	194	36.40	184	94.85	523	98.12	523	100.00	510	95.68	510	100.00	197	36.96	196	99.49
	LDGT1	46	13.04	39	84.78	39	100.00	39	84.78	33	84.62	4	8.70	4	100.00	39	84.78	39	100.00	38	82.61	38	100.00	6	13.04	6	100.00
	LDGT2	1,596	35.53	1,591	99.69	1,591	100.00	1,591	99.69	1,024	64.36	5	0.31	5	100.00	1,591	99.69	1,591	100.00	1,442	90.35	1,442	100.00	13	0.81	13	100.00
2003 Total		2,175	29.56	2,153	98.99	2,153	100.00	2,149	98.80	1,517	70.59	203	9.33	193	95.07	2,153	98.99	2,153	100.00	1,990	91.49	1,990	100.00	216	9.93	215	99.54
2004	LDGV	877	9.46	865	98.63	865	100.00	859	97.95	784	91.27	262	29.87	255	97.33	863	98.40	863	100.00	616	70.24	616	100.00	190	21.66	189	99.47
	LDGT1	79	11.39	74	93.67	74	100.00	74	93.67	65	87.84	6	7.59	6	100.00	74	93.67	74	100.00	74	93.67	74	100.00	5	6.33	5	100.00
	LDGT2	2,124	26.13	2,119	99.76	2,119	100.00	2,119	99.76	1,564	73.81	5	0.24	5	100.00	2,119	99.76	2,119	100.00	2,118	99.72	2,118	100.00	55	2.59	55	100.00
2004 Total		3,080	21.01	3,058	99.29	3,058	100.00	3,052	99.09	2,413	79.06	273	8.86	266	97.44	3,056	99.22	3,056	100.00	2,808	91.17	2,808	100.00	250	8.12	249	99.60
2005	LDGV	1,407	10.95	1,383	98.29	1,383	100.00	1,381	98.15	1,235	89.43	174	12.37	168	96.55	1,382	98.22	1,382	100.00	710	50.46	710	100.00	283	20.11	281	99.29
	LDGT1	124	9.68	121	97.58	121	100.00	121	97.58	109	90.08	9	7.26	9	100.00	121	97.58	121	100.00	93	75.00	93	100.00	59	47.58	59	100.00
	LDGT2	1,618	17.92	1,606	99.26	1,606	100.00	1,606	99.26	1,316	81.94	56	3.46	56	100.00	1,606	99.26	1,606	100.00	1,553	95.98	1,553	100.00	236	14.59	236	100.00
2005 Total		3,149	14.48	3,110	98.76	3,110	100.00	3,108	98.70	2,660	85.59	239	7.59	233	97.49	3,109	98.73	3,109	100.00	2,356	74.82	2,356	100.00	578	18.36	576	99.65
2006	LDGV	1,596	10.28	1,564	97.99	1,564	100.00	1,560	97.74	1,410	90.38	239	14.97	229	95.82	1,564	97.99	1,564	100.00	1,061	66.48	1,061	100.00	431	27.01	427	99.07
	LDGT1	863	6.72	853	98.84	853	100.00	853	98.84	797	93.43	39	4.52	38	97.44	853	98.84	853	100.00	161	18.66	161	100.00	110	12.75	109	99.09
	LDGT2																										

Model Year	Type	Total Pass	% of Total Pass with Unset Readiness Monitors	CAT				EVAP				SAIR				O2				HO2				EGR			
				Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %	Supported Count	Supported %	Ready Count	Ready %
2010	LDGV	13,133	5.38	13,104	99.78	13,104	100.00	13,103	99.77	12,436	94.91	1,000	7.61	993	99.30	13,104	99.78	13,104	100.00	13,101	99.76	13,101	100.00	12,089	92.05	12,056	99.73
	LDGT1	9,839	3.90	9,824	99.85	9,824	100.00	9,823	99.84	9,445	96.15	387	3.93	385	99.48	9,824	99.85	9,824	100.00	9,824	99.85	9,824	100.00	8,756	88.99	8,752	99.95
	LDGT2	5,772	9.68	5,747	99.57	5,747	100.00	5,745	99.53	5,190	90.34	636	11.02	634	99.69	5,747	99.57	5,747	100.00	5,747	99.57	5,747	100.00	4,268	73.94	4,266	99.95
2010 Total		28,744	5.74	28,675	99.76	28,675	100.00	28,671	99.75	27,071	94.42	2,023	7.04	2,012	99.46	28,675	99.76	28,675	100.00	28,672	99.75	28,672	100.00	25,113	87.37	25,074	99.84
2011	LDGV	29,862	3.50	29,825	99.88	29,825	100.00	29,820	99.86	28,850	96.75	2,586	8.66	2,570	99.38	29,825	99.88	29,825	100.00	29,825	99.88	29,825	100.00	28,866	96.66	28,808	99.80
	LDGT1	32,886	2.17	32,873	99.96	32,873	100.00	32,871	99.95	32,191	97.93	785	2.39	785	100.00	32,873	99.96	32,873	100.00	32,873	99.96	32,873	100.00	32,505	98.84	32,471	99.90
	LDGT2	15,902	5.26	15,885	99.89	15,885	100.00	15,884	99.89	15,058	94.80	1,253	7.88	1,252	99.92	15,885	99.89	15,885	100.00	15,885	99.89	15,885	100.00	15,407	96.89	15,398	99.94
2011 Total		78,650	3.30	78,583	99.91	78,583	100.00	78,575	99.90	76,099	96.85	4,624	5.88	4,607	99.63	78,583	99.91	78,583	100.00	78,583	99.91	78,583	100.00	76,778	97.62	76,677	99.87
2012	LDGV	5,672	6.21	5,669	99.95	5,669	100.00	5,664	99.86	5,318	93.89	480	8.46	478	99.58	5,669	99.95	5,669	100.00	5,669	99.95	5,669	100.00	5,554	97.92	5,550	99.93
	LDGT1	3,744	4.97	3,741	99.92	3,741	100.00	3,740	99.89	3,560	95.19	256	6.84	255	99.61	3,741	99.92	3,741	100.00	3,741	99.92	3,741	100.00	3,738	99.84	3,733	99.87
	LDGT2	2,313	8.52	2,306	99.70	2,306	100.00	2,306	99.70	2,110	91.50	187	8.08	187	100.00	2,306	99.70	2,306	100.00	2,306	99.70	2,306	100.00	2,283	98.70	2,282	99.96
2012 Total		11,729	6.27	11,716	99.89	11,716	100.00	11,710	99.84	10,988	93.83	923	7.87	920	99.67	11,716	99.89	11,716	100.00	11,716	99.89	11,716	100.00	11,575	98.69	11,565	99.91
2013	LDGV	2,506	7.78	2,435	97.17	2,435	100.00	2,435	97.17	2,251	92.44	195	7.78	195	100.00	2,435	97.17	2,435	100.00	2,435	97.17	2,435	100.00	2,416	96.41	2,405	99.54
	LDGT1	1,723	5.34	1,722	99.94	1,722	100.00	1,722	99.94	1,633	94.83	118	6.85	118	100.00	1,722	99.94	1,722	100.00	1,722	99.94	1,722	100.00	1,722	99.94	1,719	99.83
	LDGT2	865	6.13	855	98.84	855	100.00	854	98.73	801	93.79	65	7.51	65	100.00	855	98.84	855	100.00	855	98.84	855	100.00	848	98.03	848	100.00
2013 Total		5,094	6.67	5,012	98.39	5,012	100.00	5,011	98.37	4,685	93.49	378	7.42	378	100.00	5,012	98.39	5,012	100.00	5,012	98.39	5,012	100.00	4,986	97.88	4,972	99.72
2014	LDGV	1,444	7.34	1,418	98.20	1,418	100.00	1,416	98.06	1,316	92.94	108	7.48	107	99.07	1,418	98.20	1,418	100.00	1,418	98.20	1,418	100.00	1,397	96.75	1,392	99.64
	LDGT1	1,055	5.78	1,053	99.81	1,053	100.00	1,050	99.53	990	94.29	64	6.07	64	100.00	1,053	99.81	1,053	100.00	1,053	99.81	1,053	100.00	1,053	99.81	1,052	99.91
	LDGT2	625	6.08	621	99.36	621	100.00	618	98.88	580	93.85	47	7.52	47	100.00	620	99.20	620	100.00	621	99.36	621	100.00	617	98.72	617	100.00
2014 Total		3,124	6.56	3,092	98.98	3,092	100.00	3,084	98.72	2,886	93.58	219	7.01	218	99.54	3,091	98.94	3,091	100.00	3,092	98.98	3,092	100.00	3,067	98.18	3,061	99.80
2015	LDGV	1,087	6.53	1,074	98.80	1,074	100.00	1,074	98.80	1,009	93.95	68	6.26	68	100.00	1,074	98.80	1,074	100.00	1,074	98.80	1,074	100.00	1,045	96.14	1,039	99.43
	LDGT1	844	4.98	843	99.88	843	100.00	843	99.88	802	95.14	66	7.82	66	100.00	843	99.88	843	100.00	843	99.88	843	100.00	843	99.88	842	99.88
	LDGT2	363	5.79	362	99.72	362	100.00	362	99.72	342	94.48	21	5.79	21	100.00	362	99.72	362	100.00	362	99.72	362	100.00	362	99.72	361	99.72
2015 Total		2,294	5.84	2,279	99.35	2,279	100.00	2,279	99.35	2,153	94.47	155	6.76	155	100.00	2,279	99.35	2,279	100.00	2,279	99.35	2,279	100.00	2,250	98.08	2,242	99.64
2016	LDGV	728	5.63	725	99.59	725	100.00	725	99.59	685	94.48	28	3.85	28	100.00	725	99.59	725	100.00	725	99.59	725	100.00	725	99.59	724	99.86
	LDGT1	553	4.70	552	99.82	552	100.00	552	99.82	527	95.47	12	2.17	12	100.00	552	99.82	552	100.00	552	99.82	552	100.00	552	99.82	551	99.82
	LDGT2	170	2.35	167	98.24	167	100.00	167	98.24	163	97.60	16	9.41	16	100.00	167	98.24	167	100.00	167	98.24	167	100.00	167	98.24	167	100.00
2016 Total		1,451	4.89	1,444	99.52	1,444	100.00	1,444	99.52	1,375	95.22	56	3.86	56	100.00	1,444	99.52	1,444	100.00	1,444	99.52	1,444	100.00	1,444	99.52	1,442	99.86
2017	LDGV	392	2.55	387	98.72	387	100.00	387	98.72	377	97.42	7	1.79	7	100.00	387	98.72	387	100.00	387	98.72	387	100.00	387	98.72	387	100.00
	LDGT1	178	3.93	177	99.44	177	100.00	177	99.44	171	96.61	5	2.81	5	100.00	177	99.44	177	100.00	177	99.44	177	100.00	177	99.44	176	99.44
	LDGT2	65	4.62	63	96.92	63	100.00	63	96.92	60	95.24	6	9.23	6	100.00	63	96.92	63	100.00	63	96.92	63	100.00	63	96.92	63	100.00
2017 Total		635	3.15	627	98.74	627	100.00	627	98.74	608	96.97	18	2.83	18	100.00	627	98.74	627	100.00	627	98.74	627	100.00	627	98.74	626	99.84
2018	LDGV	33	6.06	32	96.97	32	100.00	32	96.97	30	93.75	2	6.06	2	100.00	32	96.97	32	100.00	31	93.94	31	100.00	32	96.97	32	100.00
	LDGT1	28	0.00	27	96.43	27	100.00	27	96.43	27	100.00	0	0.00	0	0.00	27	96.43	27	100.00	27	96.43	27	100.00	27	96.43	27	100.00
	LDGT2	11	0.00	11	100.00	11	100.00	11	100.00	11	100.00	2	18.18	2	100.00	11	100.00	11	100.00	11	100.00	11	100.00	11	100.00	11	100.00
2018 Total		72	2.78	70	97.22	70	100.00	70	97.22	68	97.14	4	5.56	4	100.00	70	97.22	70	100.00	69	95.83	69	100.00	70	97.22	70	100.00
2019	LDGV	1	0.00	1	100.00	1	100.00	1	100.00	1	100.00	0	0.00	0	0.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00
	LDGT1	2	0.00	2	100.00	2	100.00	2	100.00	2	100.00	0	0.00	0	0.00	2	100.00	2	100.00	2	100.00	2	100.00	2	100.00	2	100.00
	LDGT2	1	0.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00
2019 Total		4	0.00	4	100.00	4	100.00	4	100.00	4	100.00	1	25.00	1	100.00	4	100.00	4	100.00	4	100.00	4	100.00	4	100.00	4	100.00
Overall Total		268,268	6.11	267,268	99.63	267,251	99.99	266,982	99.52	251,251	94.11	19,994	7.45	19,831	99.18	267,261	99.62	267,245	99.99	263,631	98.27	263,616	99.99	184,795	68.88	184,265	99.71

Appendix A9

OBD Initial Inspection Emissions Report

Date Range
Between 1/1/2018 and 12/31/2018

OBD Initial Inspection Emissions Report (V 1.02)

Model Year	Type	Overall Total	Passing Initial OBD Inspection												Failing Initial OBD Inspection											
			Count	%	Pass IM240 Count	Pass IM240 %	Pass IM240 Avg HC (gpm)	Pass IM240 Avg CO (gpm)	Pass IM240 Avg Nox (gpm)	Fail IM240 Count	Fail IM240 %	Fail IM240 Avg HC (gpm)	Fail IM240 Avg CO (gpm)	Fail IM240 Avg Nox (gpm)	Count	%	Pass IM240 Count	Pass IM240 %	Pass IM240 Avg HC (gpm)	Pass IM240 Avg CO (gpm)	Pass IM240 Avg Nox (gpm)	Fail IM240 Count	Fail IM240 %	Fail IM240 Avg HC (gpm)	Fail IM240 Avg CO (gpm)	Fail IM240 Avg Nox (gpm)
1996	LDGT1	3,511	2,360	67.22	2,273	96.31	0.41	4.93	1.29	87	3.69	1.28	18.00	3.17	1,151	32.78	1,022	88.79	0.43	5.94	1.60	129	11.21	1.84	27.54	2.89
	LDGT2	1,807	1,225	67.79	1,172	95.67	0.49	5.85	1.26	53	4.33	1.28	18.17	3.41	582	32.21	504	86.60	0.54	6.40	1.42	78	13.40	3.04	23.96	2.75
	LDGV	4,331	3,202	73.93	3,117	97.35	0.31	3.68	0.80	85	2.65	1.09	16.86	1.41	1,129	26.07	971	86.01	0.36	4.34	0.95	158	13.99	1.78	21.22	1.96
1996 Total		9,649	6,787	70.34	6,562	96.68	0.38	4.50	1.05	225	3.32	1.21	17.61	2.56	2,862	29.66	2,497	87.25	0.42	5.41	1.31	365	12.75	2.07	24.04	2.46
1997	LDGT1	5,208	3,527	67.72	3,361	95.29	0.37	4.80	1.21	166	4.71	1.03	16.67	2.83	1,681	32.28	1,412	84.00	0.40	5.91	1.49	269	16.00	1.86	26.92	2.78
	LDGT2	2,224	1,322	59.44	1,264	95.61	0.43	5.41	1.30	58	4.39	1.16	13.35	3.26	902	40.56	735	81.49	0.46	6.27	1.51	167	18.51	2.44	22.22	3.19
	LDGV	5,504	4,019	73.02	3,920	97.54	0.33	3.71	0.76	99	2.46	1.17	15.64	1.55	1,485	26.98	1,274	85.79	0.37	4.67	0.90	211	14.21	1.71	23.47	1.85
1997 Total		12,936	8,868	68.55	8,545	96.36	0.36	4.39	1.02	323	3.64	1.10	15.76	2.52	4,068	31.45	3,421	84.10	0.40	5.53	1.27	647	15.90	1.96	24.58	2.58
1998	LDGT1	7,840	5,955	75.96	5,779	97.04	0.33	4.23	1.04	176	2.96	0.98	15.95	2.78	1,885	24.04	1,538	81.59	0.35	5.65	1.29	347	18.41	1.55	24.97	2.70
	LDGT2	2,940	2,041	69.42	1,966	96.33	0.33	4.06	1.13	75	3.67	1.05	15.76	3.13	899	30.58	691	76.86	0.40	5.36	1.40	208	23.14	2.50	22.74	2.85
	LDGV	8,354	6,456	77.28	6,276	97.21	0.25	3.29	0.64	180	2.79	1.30	15.36	1.26	1,898	22.72	1,630	85.88	0.29	4.18	0.70	268	14.12	1.89	22.99	1.71
1998 Total		19,134	14,452	75.53	14,021	97.02	0.29	3.79	0.87	431	2.98	1.13	15.67	2.21	4,682	24.47	3,859	82.42	0.33	4.97	1.06	823	17.58	1.90	23.76	2.41
1999	LDGT1	7,874	6,284	79.81	6,081	96.77	0.25	3.74	0.82	203	3.23	0.65	12.64	2.24	1,590	20.19	1,305	82.08	0.26	4.27	0.91	285	17.92	1.45	22.92	2.55
	LDGT2	3,764	2,635	70.01	2,494	94.65	0.27	3.10	0.88	141	5.35	0.85	10.69	2.75	1,129	29.99	867	76.79	0.33	4.01	1.05	262	23.21	3.12	23.37	2.40
	LDGV	9,111	7,036	77.23	6,862	97.53	0.22	3.07	0.60	174	2.47	1.10	13.35	1.52	2,075	22.77	1,730	83.37	0.26	3.87	0.69	345	16.63	1.23	19.16	1.96
1999 Total		20,749	15,955	76.90	15,437	96.75	0.24	3.34	0.73	518	3.25	0.85	12.35	2.14	4,794	23.10	3,902	81.39	0.28	4.04	0.85	892	18.61	1.86	21.60	2.28
2000	LDGT1	11,055	9,030	81.68	8,762	97.03	0.23	3.07	0.76	268	2.97	0.60	11.22	2.36	2,025	18.32	1,678	82.86	0.27	3.82	0.83	347	17.14	1.64	25.76	2.50
	LDGT2	4,458	3,512	78.78	3,425	97.52	0.21	2.86	0.72	87	2.48	0.74	11.10	2.66	946	21.22	783	82.77	0.31	3.89	0.92	163	17.23	2.61	27.46	2.58
	LDGV	13,603	10,544	77.51	10,341	98.07	0.16	2.55	0.46	203	1.93	0.97	11.65	1.88	3,059	22.49	2,661	86.99	0.23	3.67	0.63	398	13.01	1.22	16.85	1.98
2000 Total		29,116	23,086	79.29	22,528	97.58	0.20	2.80	0.61	558	2.42	0.75	11.36	2.23	6,030	20.71	5,122	84.94	0.26	3.75	0.74	908	15.06	1.63	22.16	2.29
2001	LDGT1	10,488	7,686	73.28	7,579	98.61	0.14	2.77	0.48	107	1.39	0.69	20.66	1.97	2,802	26.72	2,496	89.08	0.20	3.66	0.63	306	10.92	1.40	23.15	2.62
	LDGT2	4,591	3,542	77.15	3,459	97.66	0.22	2.73	0.63	83	2.34	0.61	9.99	2.72	1,049	22.85	899	85.70	0.29	3.70	0.82	150	14.30	2.09	22.55	2.64
	LDGV	12,657	9,375	74.07	9,263	98.81	0.12	2.23	0.33	112	1.19	1.87	15.62	1.86	3,282	25.93	2,886	87.93	0.18	3.25	0.49	396	12.07	1.36	20.83	1.97
2001 Total		27,736	20,603	74.28	20,301	98.53	0.14	2.52	0.44	302	1.47	1.11	15.86	2.13	7,133	25.72	6,281	88.06	0.20	3.47	0.59	852	11.94	1.50	21.97	2.32
2002	LDGT1	15,678	12,524	79.88	12,411	99.10	0.12	3.05	0.40	113	0.90	0.80	23.10	1.68	3,154	20.12	2,806	88.97	0.18	3.81	0.58	348	11.03	1.43	27.78	2.31
	LDGT2	5,495	4,519	82.24	4,463	98.76	0.18	2.35	0.65	56	1.24	0.51	6.57	2.67	976	17.76	841	86.17	0.25	3.54	0.83	135	13.83	1.51	16.39	2.83
	LDGV	17,829	14,188	79.58	14,029	98.88	0.10	2.54	0.28	159	1.12	1.31	12.43	2.28	3,641	20.42	3,239	88.96	0.18	3.58	0.45	402	11.04	0.95	14.85	2.32
2002 Total		39,002	31,231	80.08	30,903	98.95	0.12	2.72	0.38	328	1.05	1.00	15.11	2.14	7,771	19.92	6,886	88.61	0.19	3.67	0.55	885	11.39	1.22	20.17	2.39
2003	LDGT1	13,366	11,014	82.40	10,939	99.32	0.10	2.05	0.35	75	0.68	0.71	22.05	1.71	2,352	17.60	2,118	90.05	0.17	3.08	0.54	234	9.95	1.34	28.89	2.23
	LDGT2	5,355	4,289	80.09	4,251	99.11	0.15	2.03	0.44	38	0.89	0.92	11.59	2.52	1,066	19.91	915	85.83	0.23	3.52	0.65	151	14.17	3.10	33.09	2.92
	LDGV	16,036	12,982	80.96	12,877	99.19	0.08	1.70	0.26	105	0.81	1.01	10.35	2.18	3,054	19.04	2,719	89.03	0.14	2.66	0.40	335	10.97	1.19	16.31	2.24
2003 Total		34,757	28,285	81.38	28,067	99.23	0.10	1.89	0.32	218	0.77	0.89	14.59	2.08	6,472	18.62	5,752	88.88	0.16	2.95	0.49	720	11.12	1.64	23.92	2.38
2004	LDGT1	20,427	17,961	87.93	17,879	99.54	0.08	1.62	0.21	82	0.46	0.87	26.33	1.32	2,466	12.07	2,212	89.70	0.14	3.10	0.38	254	10.30	1.78	29.24	2.49
	LDGT2	7,852	6,757	86.05	6,735	99.67	0.09	1.44	0.21	22	0.33	0.90	13.74	2.66	1,095	13.95	996	90.96	0.15	2.90	0.40	99	9.04	1.34	23.52	2.69
	LDGV	19,491	16,671	85.53	16,585	99.48	0.06	1.39	0.18	86	0.52	2.53	12.73	2.12	2,820	14.47	2,591	91.88	0.12	2.49	0.32	229	8.12	1.30	17.13	2.35
2004 Total		47,770	41,389	86.64	41,199	99.54	0.07	1.50	0.20	190	0.46	1.63	18.72	1.84	6,381	13.36	5,799	90.88	0.14	2.79	0.35	582	9.12	1.52	23.50	2.47
2005	LDGT1	16,943	14,811	87.42	14,794	99.89	0.07	1.31	0.14	17	0.11	0.73	16.20	1.23	2,132	12.58	1,978	92.78	0.12	2.39	0.25	154	7.22	1.30	26.47	2.62
	LDGT2	5,639	4,936	87.53	4,881	98.89	0.11	1.62	0.22	55	1.11	0.93	13.79	2.43	703	12.47	616	87.62	0.17	2.93	0.39	87	12.38	2.87	34.92	3.02
	LDGV	17,795	15,376	86.41	15,293	99.46	0.05	1.20	0.16	83	0.54	1.58	17.23	2.01	2,419	13.59	2,231	92.23	0.09	2.08	0.25	188	7.77	1.50	18.59	2.32
2005 Total		40,377	35,123	86.99	34,968	99.56	0.07	1.31	0.16	155	0.44	1.26	15.90	2.08	5,254	13.01	4,825	91.83	0.12	2.32	0.27	429	8.17	1.71	24.73	2.57
2006	LDGT1	19,332	17,712	91.62	17,688	99.86	0.05	1.34	0.13	24	0.14	1.64	19.78	1.58	1,620	8.38	1,537	94.88	0.08	2.33	0.21	83	5.12	0.84	19.41	2.46
	LDGT2	8,071	7,444	92.23	7,407	99.50	0.08	1.21	0.14	37	0.50	0.84	13.75	2.87	627	7.77	569	90.75	0.13	2.24	0.29	58	9.25	1.33	19.2	

Model Year	Type	Overall Total	Passing Initial OBD Inspection												Failing Initial OBD Inspection											
			Count	%	Pass IM240 Count	Pass IM240 %	Pass IM240 Avg HC (gpm)	Pass IM240 Avg CO (gpm)	Pass IM240 Avg Nox (gpm)	Fail IM240 Count	Fail IM240 %	Fail IM240 Avg HC (gpm)	Fail IM240 Avg CO (gpm)	Fail IM240 Avg Nox (gpm)	Count	%	Pass IM240 Count	Pass IM240 %	Pass IM240 Avg HC (gpm)	Pass IM240 Avg CO (gpm)	Pass IM240 Avg Nox (gpm)	Fail IM240 Count	Fail IM240 %	Fail IM240 Avg HC (gpm)	Fail IM240 Avg CO (gpm)	Fail IM240 Avg Nox (gpm)
	LDGV	19,701	18,198	92.37	18,126	99.60	0.05	1.25	0.11	72	0.40	1.33	17.40	2.04	1,503	7.63	1,419	94.41	0.07	2.02	0.16	84	5.59	0.92	21.49	2.29
2007 Total		44,297	41,107	92.80	40,992	99.72	0.05	1.21	0.11	115	0.28	1.11	20.93	1.74	3,190	7.20	2,997	93.95	0.08	1.98	0.16	193	6.05	1.37	20.97	2.62
2008	LDGT1	1,225	1,186	96.82	1,182	99.66	0.04	1.19	0.09	4	0.34	0.24	20.03	1.21	39	3.18	38	97.44	0.06	3.26	0.11	1	2.56	2.55	22.10	6.12
	LDGT2	365	350	95.89	350	100.00	0.06	1.88	0.10	0	0.00	0.00	0.00	0.00	15	4.11	12	80.00	0.07	2.27	0.11	3	20.00	3.28	90.86	1.40
	LDGV	1,112	1,039	93.44	1,036	99.71	0.04	1.10	0.07	3	0.29	1.10	15.68	2.99	73	6.56	66	90.41	0.06	1.76	0.15	7	9.59	2.20	9.41	2.15
2008 Total		2,702	2,575	95.30	2,568	99.73	0.04	1.25	0.08	7	0.27	0.61	18.17	1.97	127	4.70	116	91.34	0.06	2.31	0.13	11	8.66	2.53	32.78	2.31
2009	LDGT1	804	782	97.26	780	99.74	0.03	1.32	0.07	2	0.26	0.04	10.08	1.53	22	2.74	22	100.00	0.08	3.91	0.10	0	0.00	0.00	0.00	0.00
	LDGT2	229	225	98.25	225	100.00	0.05	1.67	0.08	0	0.00	0.00	0.00	0.00	4	1.75	4	100.00	0.14	3.48	0.14	0	0.00	0.00	0.00	0.00
	LDGV	1,039	1,003	96.54	1,001	99.80	0.03	0.98	0.07	2	0.20	0.80	20.84	0.13	36	3.46	35	97.22	0.06	1.28	0.09	1	2.78	0.35	20.63	0.71
2009 Total		2,072	2,010	97.01	2,006	99.80	0.03	1.19	0.07	4	0.20	0.42	15.46	0.83	62	2.99	61	98.39	0.07	2.38	0.10	1	1.61	0.35	20.63	0.71
2010	LDGT1	176	173	98.30	172	99.42	0.03	1.38	0.07	1	0.58	0.04	15.30	0.02	3	1.70	3	100.00	0.02	0.65	0.16	0	0.00	0.00	0.00	0.00
	LDGT2	80	74	92.50	74	100.00	0.04	1.52	0.07	0	0.00	0.00	0.00	0.00	6	7.50	6	100.00	0.06	1.85	0.12	0	0.00	0.00	0.00	0.00
	LDGV	195	187	95.90	187	100.00	0.04	1.16	0.08	0	0.00	0.00	0.00	0.00	8	4.10	7	87.50	0.03	1.04	0.11	1	12.50	4.79	31.88	4.60
2010 Total		451	434	96.23	433	99.77	0.03	1.31	0.07	1	0.23	0.04	15.30	0.02	17	3.77	16	94.12	0.04	1.27	0.13	1	5.88	4.79	31.88	4.60
2011	LDGT1	211	207	98.10	205	99.03	0.04	1.64	0.07	2	0.97	0.96	22.68	0.03	4	1.90	3	75.00	0.06	2.70	0.07	1	25.00	0.12	25.97	0.08
	LDGT2	87	85	97.70	85	100.00	0.04	1.29	0.07	0	0.00	0.00	0.00	0.00	2	2.30	2	100.00	0.26	3.92	0.81	0	0.00	0.00	0.00	0.00
	LDGV	145	142	97.93	142	100.00	0.04	1.18	0.07	0	0.00	0.00	0.00	0.00	3	2.07	3	100.00	0.37	5.65	0.10	0	0.00	0.00	0.00	0.00
2011 Total		443	434	97.97	432	99.54	0.04	1.42	0.07	2	0.46	0.96	22.68	0.03	9	2.03	8	88.89	0.23	4.11	0.26	1	11.11	0.12	25.97	0.08
2012	LDGT2	1	1	100.00	1	100.00	0.08	1.36	0.12	0	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00
	LDGV	0	0		0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0		0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00
2012 Total		1	1	100.00	1	100.00	0.08	1.36	0.12	0	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00
Grand Total		381,338	318,163	83.43	314,612	98.88	0.12	2.06	0.34	3,551	1.12	1.04	14.87	2.19	63,175	16.57	55,583	87.98	0.21	3.48	0.61	7,592	12.02	1.65	22.63	2.41

OBD Initial Inspection Emissions Report - Summary by Veh (V 1.02)

Type	Overall Total	Passing Initial OBD Inspection												Failing Initial OBD Inspection											
		Count	%	Pass IM240 Count	Pass IM240 %	Pass IM240 Avg HC (gpm)	Pass IM240 Avg CO (gpm)	Pass IM240 Avg Nox (gpm)	Fail IM240 Count	Fail IM240 %	Fail IM240 Avg HC (gpm)	Fail IM240 Avg CO (gpm)	Fail IM240 Avg Nox (gpm)	Count	%	Pass IM240 Count	Pass IM240 %	Pass IM240 Avg HC (gpm)	Pass IM240 Avg CO (gpm)	Pass IM240 Avg Nox (gpm)	Fail IM240 Count	Fail IM240 %	Fail IM240 Avg HC (gpm)	Fail IM240 Avg CO (gpm)	Fail IM240 Avg Nox (gpm)
LDGT1	151,595	127,535	84.13	126,174	98.93	0.12	2.21	0.37	1,361	1.07	0.82	17.10	2.24	24,060	15.87	21,230	88.24	0.21	3.72	0.68	2,830	11.76	1.53	25.83	2.55
LDGT2	60,097	49,543	82.44	48,829	98.56	0.15	2.08	0.43	714	1.44	0.87	12.24	2.83	10,554	17.56	8,956	84.86	0.28	3.85	0.82	1,598	15.14	2.46	24.40	2.79
LDGV	169,646	141,085	83.16	139,609	98.95	0.10	1.91	0.28	1,476	1.05	1.33	14.09	1.84	28,561	16.84	25,397	88.92	0.18	3.15	0.47	3,164	11.08	1.35	18.87	2.09
Grand Total	381,338	318,163	83.43	314,612	98.88	0.12	2.06	0.34	3,551	1.12	1.04	14.87	2.19	63,175	16.57	55,583	87.98	0.21	3.48	0.61	7,592	12.02	1.65	22.63	2.41

Appendix A10

Initial OBD Incomplete Inspection Report

Date Range
Between 1/1/2018 and 12/31/2018

Initial OBD Incomplete Inspection Report (V 1.00)

Model Year	Type	OBD Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors	
			Count	%	Count	%	Count	%	Count	%	Count	%
1996	LDGT1	45	20	44.44	1	5.00	0	0.00	19	95.00	0	0.00
	LDGT2	24	7	29.17	0	0.00	0	0.00	7	100.00	0	0.00
	LDGV	161	78	48.45	8	10.26	0	0.00	70	89.74	0	0.00
1996 Total		230	105	45.65	9	8.57	0	0.00	96	91.43	0	0.00
1997	LDGT1	95	59	62.11	0	0.00	0	0.00	59	100.00	0	0.00
	LDGT2	70	27	38.57	3	11.11	0	0.00	24	88.89	0	0.00
	LDGV	143	48	33.57	3	6.25	2	4.17	43	89.58	0	0.00
1997 Total		308	134	43.51	6	4.48	2	1.49	126	94.03	0	0.00
1998	LDGT1	69	30	43.48	3	10.00	0	0.00	27	90.00	0	0.00
	LDGT2	36	9	25.00	2	22.22	0	0.00	7	77.78	0	0.00
	LDGV	168	49	29.17	8	16.33	1	2.04	40	81.63	0	0.00
1998 Total		273	88	32.23	13	14.77	1	1.14	74	84.09	0	0.00
1999	LDGT1	74	16	21.62	1	6.25	0	0.00	15	93.75	0	0.00
	LDGT2	946	259	27.38	54	20.85	0	0.00	205	79.15	0	0.00
	LDGV	216	64	29.63	17	26.56	0	0.00	47	73.44	0	0.00
1999 Total		1,236	339	27.43	72	21.24	0	0.00	267	78.76	0	0.00
2000	LDGT1	367	101	27.52	13	12.87	1	0.99	87	86.14	0	0.00
	LDGT2	1,848	422	22.84	89	21.09	0	0.00	333	78.91	0	0.00
	LDGV	369	99	26.83	17	17.17	0	0.00	82	82.83	0	0.00
2000 Total		2,584	622	24.07	119	19.13	1	0.16	502	80.71	0	0.00
2001	LDGT1	521	104	19.96	6	5.77	0	0.00	98	94.23	0	0.00
	LDGT2	1,922	440	22.89	113	25.68	0	0.00	327	74.32	0	0.00
	LDGV	573	150	26.18	40	26.67	3	2.00	107	71.33	0	0.00
2001 Total		3,016	694	23.01	159	22.91	3	0.43	532	76.66	0	0.00
2002	LDGT1	223	42	18.83	6	14.29	1	2.38	35	83.33	0	0.00
	LDGT2	3,139	618	19.69	174	28.16	0	0.00	444	71.84	0	0.00
	LDGV	771	196	25.42	21	10.71	0	0.00	174	88.78	1	0.51
2002 Total		4,133	856	20.71	201	23.48	1	0.12	653	76.29	1	0.12
2003	LDGT1	69	9	13.04	0	0.00	0	0.00	9	100.00	0	0.00
	LDGT2	2,550	527	20.67	206	39.09	0	0.00	321	60.91	0	0.00
	LDGV	875	193	22.06	17	8.81	2	1.04	174	90.16	0	0.00
2003 Total		3,494	729	20.86	223	30.59	2	0.27	504	69.14	0	0.00
2004	LDGT1	107	21	19.63	3	14.29	0	0.00	18	85.71	0	0.00
	LDGT2	3,258	727	22.31	308	42.37	1	0.14	418	57.50	0	0.00
	LDGV	1,263	228	18.05	32	14.04	0	0.00	196	85.96	0	0.00
2004 Total		4,628	976	21.09	343	35.14	1	0.10	632	64.75	0	0.00
2005	LDGT1	195	58	29.74	2	3.45	0	0.00	56	96.55	0	0.00
	LDGT2	2,390	537	22.47	200	37.24	0	0.00	337	62.76	0	0.00
	LDGV	1,811	228	12.59	25	10.96	1	0.44	202	88.60	0	0.00
2005 Total		4,396	823	18.72	227	27.58	1	0.12	595	72.30	0	0.00
2006	LDGT1	1,019	123	12.07	14	11.38	0	0.00	109	88.62	0	0.00

Model Year	Type	OBD Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors	
			Count	%	Count	%	Count	%	Count	%	Count	%
	LDGT2	1,990	415	20.85	159	38.31	1	0.24	255	61.45	0	0.00
	LDGV	2,073	298	14.38	26	8.72	0	0.00	272	91.28	0	0.00
2006 Total		5,082	836	16.45	199	23.80	1	0.12	636	76.08	0	0.00
2007	LDGT1	904	124	13.72	19	15.32	0	0.00	105	84.68	0	0.00
	LDGT2	3,972	558	14.05	145	25.99	3	0.54	410	73.48	0	0.00
	LDGV	2,741	333	12.15	51	15.32	1	0.30	281	84.38	0	0.00
2007 Total		7,617	1,015	13.33	215	21.18	4	0.39	796	78.42	0	0.00
2008	LDGT1	25,439	127	0.50	8	6.30	2	1.57	117	92.13	0	0.00
	LDGT2	13,575	526	3.87	83	15.78	1	0.19	442	84.03	0	0.00
	LDGV	27,852	276	0.99	18	6.52	1	0.36	257	93.12	0	0.00
2008 Total		66,866	929	1.39	109	11.73	4	0.43	816	87.84	0	0.00
2009	LDGT1	17,646	62	0.35	9	14.52	0	0.00	53	85.48	0	0.00
	LDGT2	8,457	286	3.38	40	13.99	0	0.00	246	86.01	0	0.00
	LDGV	26,493	239	0.90	45	18.83	1	0.42	193	80.75	0	0.00
2009 Total		52,596	587	1.12	94	16.01	1	0.17	492	83.82	0	0.00
2010	LDGT1	10,378	55	0.53	5	9.09	0	0.00	50	90.91	0	0.00
	LDGT2	6,411	201	3.14	29	14.43	0	0.00	172	85.57	0	0.00
	LDGV	14,029	147	1.05	19	12.93	2	1.36	126	85.71	0	0.00
2010 Total		30,818	403	1.31	53	13.15	2	0.50	348	86.35	0	0.00
2011	LDGT1	33,953	84	0.25	9	10.71	1	1.19	74	88.10	0	0.00
	LDGT2	17,519	403	2.30	88	21.84	4	0.99	311	77.17	0	0.00
	LDGV	31,364	249	0.79	45	18.07	1	0.40	203	81.53	0	0.00
2011 Total		82,836	736	0.89	142	19.29	6	0.82	588	79.89	0	0.00
2012	LDGT1	3,868	8	0.21	4	50.00	0	0.00	4	50.00	0	0.00
	LDGT2	2,530	56	2.21	2	3.57	0	0.00	54	96.43	0	0.00
	LDGV	6,043	61	1.01	3	4.92	1	1.64	57	93.44	0	0.00
2012 Total		12,441	125	1.00	9	7.20	1	0.80	115	92.00	0	0.00
2013	LDGT1	1,773	3	0.17	0	0.00	0	0.00	3	100.00	0	0.00
	LDGT2	968	32	3.31	6	18.75	0	0.00	26	81.25	0	0.00
	LDGV	2,624	19	0.72	0	0.00	0	0.00	19	100.00	0	0.00
2013 Total		5,365	54	1.01	6	11.11	0	0.00	48	88.89	0	0.00
2014	LDGT1	1,080	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	690	25	3.62	0	0.00	0	0.00	25	100.00	0	0.00
	LDGV	1,500	13	0.87	1	7.69	0	0.00	12	92.31	0	0.00
2014 Total		3,270	38	1.16	1	2.63	0	0.00	37	97.37	0	0.00
2015	LDGT1	867	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	388	9	2.32	0	0.00	0	0.00	9	100.00	0	0.00
	LDGV	1,133	9	0.79	3	33.33	0	0.00	6	66.67	0	0.00
2015 Total		2,388	18	0.75	3	16.67	0	0.00	15	83.33	0	0.00
2016	LDGT1	566	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	182	4	2.20	0	0.00	0	0.00	4	100.00	0	0.00
	LDGV	754	2	0.27	0	0.00	0	0.00	2	100.00	0	0.00
2016 Total		1,502	6	0.40	0	0.00	0	0.00	6	100.00	0	0.00
2017	LDGT1	181	1	0.55	0	0.00	0	0.00	1	100.00	0	0.00
	LDGT2	67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Model Year	Type	OBD Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors	
			Count	%	Count	%	Count	%	Count	%	Count	%
	LDGV	396	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2017 Total		644	1	0.16	0	0.00	0	0.00	1	100.00	0	0.00
2018	LDGT1	28	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	12	1	8.33	0	0.00	0	0.00	1	100.00	0	0.00
	LDGV	33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2018 Total		73	1	1.37	0	0.00	0	0.00	1	100.00	0	0.00
2019	LDGT1	2	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	1	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	2	1	50.00	0	0.00	1	100.00	0	0.00	0	0.00
2019 Total		5	1	20.00	0	0.00	1	100.00	0	0.00	0	0.00
Grand Total		295,801	10,116	3.42	2,203	21.78	32	0.32	7,880	77.90	1	0.01

Initial OBD Incomplete Inspection Report - Summary by Veh (V 1.00)

Type	OBD Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors	
		Count	%	Count	%	Count	%	Count	%	Count	%
LDGT1	99,469	1,047	1.05	103	9.84	5	0.48	939	89.68	0	0.00
LDGT2	72,945	6,089	8.35	1,701	27.94	10	0.16	4,378	71.90	0	0.00
LDGV	123,387	2,980	2.42	399	13.39	17	0.57	2,563	86.01	1	0.03
Grand Total	295,801	10,116	3.42	2,203	21.78	32	0.32	7,880	77.90	1	0.01

Appendix A11

OBD Retest Incomplete Inspection Report

Date Range
Between 1/1/2018 and 12/31/2018

OBD Retest Incomplete Inspection Report (V 1.00)

Model Year	Type	OBD Retest Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors		Retest # 1	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
1996	LDGT1	10	3	30.00	0	0.00	0	0.00	3	100.00	0	0.00	2	66.67
	LDGT2	11	5	45.45	0	0.00	0	0.00	5	100.00	0	0.00	5	100.00
	LDGV	39	22	56.41	2	9.09	0	0.00	20	90.91	0	0.00	22	100.00
1996 Total		60	30	50.00	2	6.67	0	0.00	28	93.33	0	0.00	29	96.67
1997	LDGT1	8	4	50.00	0	0.00	0	0.00	4	100.00	0	0.00	3	75.00
	LDGT2	27	7	25.93	0	0.00	0	0.00	7	100.00	0	0.00	3	42.86
	LDGV	41	17	41.46	1	5.88	0	0.00	16	94.12	0	0.00	13	76.47
1997 Total		76	28	36.84	1	3.57	0	0.00	27	96.43	0	0.00	19	67.86
1998	LDGT1	14	7	50.00	2	28.57	0	0.00	5	71.43	0	0.00	3	42.86
	LDGT2	18	7	38.89	0	0.00	0	0.00	7	100.00	0	0.00	2	28.57
	LDGV	62	31	50.00	3	9.68	0	0.00	28	90.32	0	0.00	18	58.06
1998 Total		94	45	47.87	5	11.11	0	0.00	40	88.89	0	0.00	23	51.11
1999	LDGT1	13	6	46.15	1	16.67	0	0.00	5	83.33	0	0.00	6	100.00
	LDGT2	396	183	46.21	6	3.28	0	0.00	177	96.72	0	0.00	92	50.27
	LDGV	48	18	37.50	0	0.00	0	0.00	18	100.00	0	0.00	9	50.00
1999 Total		457	207	45.30	7	3.38	0	0.00	200	96.62	0	0.00	107	51.69
2000	LDGT1	63	29	46.03	4	13.79	0	0.00	25	86.21	0	0.00	24	82.76
	LDGT2	592	277	46.79	8	2.89	0	0.00	269	97.11	0	0.00	209	75.45
	LDGV	91	44	48.35	6	13.64	0	0.00	38	86.36	0	0.00	35	79.55
2000 Total		746	350	46.92	18	5.14	0	0.00	332	94.86	0	0.00	268	76.57
2001	LDGT1	120	45	37.50	2	4.44	0	0.00	43	95.56	0	0.00	33	73.33
	LDGT2	729	312	42.80	16	5.13	0	0.00	296	94.87	0	0.00	222	71.15
	LDGV	155	60	38.71	5	8.33	0	0.00	55	91.67	0	0.00	41	68.33
2001 Total		1,004	417	41.53	23	5.52	0	0.00	394	94.48	0	0.00	296	70.98
2002	LDGT1	82	33	40.24	3	9.09	0	0.00	30	90.91	0	0.00	22	66.67
	LDGT2	878	358	40.77	24	6.70	0	0.00	334	93.30	0	0.00	240	67.04
	LDGV	194	86	44.33	8	9.30	0	0.00	78	90.70	0	0.00	58	67.44
2002 Total		1,154	477	41.33	35	7.34	0	0.00	442	92.66	0	0.00	320	67.09
2003	LDGT1	19	2	10.53	0	0.00	0	0.00	2	100.00	0	0.00	2	100.00
	LDGT2	714	229	32.07	25	10.92	0	0.00	204	89.08	0	0.00	180	78.60
	LDGV	263	102	38.78	1	0.98	0	0.00	101	99.02	0	0.00	67	65.69
2003 Total		996	333	33.43	26	7.81	0	0.00	307	92.19	0	0.00	249	74.77
2004	LDGT1	12	5	41.67	2	40.00	0	0.00	3	60.00	0	0.00	3	60.00
	LDGT2	667	210	31.48	11	5.24	0	0.00	199	94.76	0	0.00	167	79.52
	LDGV	230	79	34.35	6	7.59	0	0.00	73	92.41	0	0.00	57	72.15
2004 Total		909	294	32.34	19	6.46	0	0.00	275	93.54	0	0.00	227	77.21
2005	LDGT1	58	17	29.31	1	5.88	0	0.00	16	94.12	0	0.00	11	64.71
	LDGT2	439	170	38.72	21	12.35	0	0.00	149	87.65	0	0.00	135	79.41
	LDGV	311	117	37.62	4	3.42	0	0.00	113	96.58	0	0.00	82	70.09
2005 Total		808	304	37.62	26	8.55	0	0.00	278	91.45	0	0.00	228	75.00

Model Year	Type	OBD Retest Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors		Retest # 1	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
2006	LDGT1	153	63	41.18	3	4.76	0	0.00	60	95.24	0	0.00	30	47.62
	LDGT2	333	127	38.14	4	3.15	0	0.00	123	96.85	0	0.00	102	80.31
	LDGV	365	128	35.07	3	2.34	1	0.01	124	96.88	0	0.00	89	69.53
2006 Total		851	318	37.37	10	3.14	1	0.00	307	96.54	0	0.00	221	69.50
2007	LDGT1	399	168	42.11	10	5.95	0	0.00	158	94.05	0	0.00	100	59.52
	LDGT2	710	263	37.04	11	4.18	0	0.00	252	95.82	0	0.00	215	81.75
	LDGV	713	280	39.27	10	3.57	1	0.00	269	96.07	0	0.00	164	58.57
2007 Total		1,822	711	39.02	31	4.36	1	0.00	679	95.50	0	0.00	479	67.37
2008	LDGT1	2,039	652	31.98	15	2.30	2	0.00	635	97.39	0	0.00	571	87.58
	LDGT2	1,536	437	28.45	10	2.29	0	0.00	427	97.71	0	0.00	375	85.81
	LDGV	2,769	1,023	36.94	31	3.03	4	0.00	988	96.58	0	0.00	845	82.60
2008 Total		6,344	2,112	33.29	56	2.65	6	0.00	2,050	97.06	0	0.00	1,791	84.80
2009	LDGT1	1,225	353	28.82	6	1.70	1	0.00	346	98.02	0	0.00	313	88.67
	LDGT2	830	270	32.53	6	2.22	0	0.00	264	97.78	0	0.00	228	84.44
	LDGV	1,763	621	35.22	24	3.86	0	0.00	597	96.14	0	0.00	503	81.00
2009 Total		3,818	1,244	32.58	36	2.89	1	0.00	1,207	97.03	0	0.00	1,044	83.92
2010	LDGT1	674	174	25.82	2	1.15	0	0.00	172	98.85	0	0.00	156	89.66
	LDGT2	713	259	36.33	5	1.93	0	0.00	254	98.07	0	0.00	228	88.03
	LDGV	1,133	379	33.45	17	4.49	0	0.00	362	95.51	0	0.00	320	84.43
2010 Total		2,520	812	32.22	24	2.96	0	0.00	788	97.04	0	0.00	704	86.70
2011	LDGT1	1,329	390	29.35	8	2.05	0	0.00	382	97.95	0	0.00	365	93.59
	LDGT2	1,565	367	23.45	12	3.27	1	0.00	354	96.46	0	0.00	311	84.74
	LDGV	1,719	525	30.54	14	2.67	2	0.00	509	96.95	0	0.00	480	91.43
2011 Total		4,613	1,282	27.79	34	2.65	3	0.00	1,245	97.11	0	0.00	1,156	90.17
2012	LDGT1	138	28	20.29	3	10.71	0	0.00	25	89.29	0	0.00	22	78.57
	LDGT2	183	38	20.77	0	0.00	0	0.00	38	100.00	0	0.00	36	94.74
	LDGV	373	107	28.69	1	0.93	0	0.00	106	99.07	0	0.00	95	88.79
2012 Total		694	173	24.93	4	2.31	0	0.00	169	97.69	0	0.00	153	88.44
2013	LDGT1	39	10	25.64	0	0.00	0	0.00	10	100.00	0	0.00	9	90.00
	LDGT2	66	8	12.12	0	0.00	0	0.00	8	100.00	0	0.00	8	100.00
	LDGV	102	26	25.49	0	0.00	0	0.00	26	100.00	0	0.00	24	92.31
2013 Total		207	44	21.26	0	0.00	0	0.00	44	100.00	0	0.00	41	93.18
2014	LDGT1	28	9	32.14	0	0.00	0	0.00	9	100.00	0	0.00	9	100.00
	LDGT2	34	1	2.94	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00
	LDGV	40	11	27.50	0	0.00	0	0.00	11	100.00	0	0.00	8	72.73
2014 Total		102	21	20.59	0	0.00	0	0.00	21	100.00	0	0.00	18	85.71
2015	LDGT1	14	1	7.14	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00
	LDGT2	16	5	31.25	0	0.00	0	0.00	5	100.00	0	0.00	5	100.00
	LDGV	32	6	18.75	0	0.00	0	0.00	6	100.00	0	0.00	5	83.33
2015 Total		62	12	19.35	0	0.00	0	0.00	12	100.00	0	0.00	11	91.67
2016	LDGT1	9	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	6	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	24	5	20.83	1	20.00	0	0.00	4	80.00	0	0.00	5	100.00
2016 Total		39	5	12.82	1	20.00	0	0.00	4	80.00	0	0.00	5	100.00

Model Year	Type	OBD Retest Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors		Retest # 1	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
2017	LDGT1	1	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	3	1	33.33	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00
	LDGV	4	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2017 Total		8	1	12.50	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00
Grand Total		27,384	9,220	33.67	358	3.88	12	0.00	8,850	95.99	0	0.00	7,390	80.15

OBD Retest Incomplete Inspection Report - Summary by Veh (V 1.00)

Type	OBD Retest Total All	Incomplete Total		Unable to Communicate - Communication Error		Unable to Communicate - Inaccessible		MIL Commanded Off and Not Ready		Potential Tampering Readiness Monitors		Retest # 1		
		Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
LDGT1	6,447	1,999	31.01	62	3.10	3	0.00	1,934	96.75	0	0.00	1,685	84.29	
LDGT2	10,466	3,534	33.77	159	4.50	1	0.00	3,374	95.47	0	0.00	2,765	78.24	
LDGV	10,471	3,687	35.21	137	3.72	8	0.00	3,542	96.07	0	0.00	2,940	79.74	
Grand Total		27,384	9,220	33.67	358	3.88	12	0.00	8,850	95.99	0	0.00	7,390	80.15

Appendix B1

I/M240 Initial Inspection Report

Date
Between 1/1/2018 and 12/31/2018

Initial Inspection Report (V1.01)

Vehicle		All Initial Inspections				Passing Initial Inspections					Failing Initial Inspections				
Year	Type	Total	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)
1982	LDGV	174	2.2553	27.8428	2.0855	136	78.16%	1.7311	19.4400	2.1282	38	21.84%	4.1315	57.9161	1.9325
	LDGT1	192	2.9976	41.4165	2.6293	133	69.27%	2.2483	27.4476	2.7399	59	30.73%	4.6866	72.9057	2.3797
	LDGT2	34	3.8372	73.0259	2.7737	23	67.65%	2.3217	29.8186	3.3644	11	32.35%	7.0059	163.3684	1.5387
1982 Total		400	2.7461	38.1987	2.4050	292	73.00%	2.0132	23.9048	2.5042	108	27.00%	4.7275	76.8453	2.1367
1983	LDGV	209	2.2159	23.7375	1.9616	164	78.47%	1.2883	11.7117	2.0100	45	21.53%	5.5964	67.5647	1.7851
	LDGT1	205	3.8004	43.2851	2.4444	140	68.29%	2.9483	32.0608	2.5787	65	31.71%	5.6355	67.4605	2.1552
	LDGT2	68	3.8807	57.0613	3.1348	35	51.47%	2.7295	34.3030	2.9352	33	48.53%	5.1017	81.1990	3.3465
1983 Total		482	3.1247	36.7526	2.3325	339	70.33%	2.1227	22.4479	2.3404	143	29.67%	5.5000	70.6637	2.3137
1984	LDGV	456	1.8068	19.8100	1.9072	353	77.41%	1.2661	10.8933	1.9364	103	22.59%	3.6600	50.3690	1.8071
	LDGT1	421	2.7137	31.4383	2.6366	319	75.77%	1.9607	22.8187	2.6414	102	24.23%	5.0686	58.3955	2.6215
	LDGT2	166	3.5197	54.2548	2.9823	93	56.02%	2.2598	26.7868	3.2820	73	43.98%	5.1247	89.2481	2.6005
1984 Total		1043	2.4455	29.9858	2.3728	765	73.35%	1.6766	17.7983	2.3940	278	26.65%	4.5614	63.5232	2.3143
1985	LDGV	555	1.6279	18.8849	1.9490	421	75.86%	1.0953	10.4392	1.9447	134	24.14%	3.3014	45.4195	1.9626
	LDGT1	519	2.5520	28.2297	2.6990	396	76.30%	1.9001	18.5564	2.7678	123	23.70%	4.6507	59.3729	2.4778
	LDGT2	144	2.8977	41.7889	3.0430	87	60.42%	2.0523	24.2882	2.9027	57	39.58%	4.1881	68.5006	3.2571
1985 Total		1218	2.1718	25.5746	2.3980	904	74.22%	1.5399	15.3278	2.3975	314	25.78%	3.9909	55.0752	2.3994
1986	LDGV	872	1.3364	12.1576	1.8674	734	84.17%	0.9679	8.0631	1.8515	138	15.83%	3.2959	33.9355	1.9524
	LDGT1	884	1.9469	21.3754	2.5294	718	81.22%	1.5938	16.0160	2.5526	166	18.78%	3.4742	44.5564	2.4290
	LDGT2	217	3.2655	40.1971	2.7124	134	61.75%	1.8064	20.1027	2.9253	83	38.25%	5.6212	72.6387	2.3688
1986 Total		1973	1.8221	19.3715	2.2570	1586	80.39%	1.3221	12.6807	2.2596	387	19.61%	3.8711	46.7919	2.2462
1987	LDGV	837	1.3714	12.6312	1.9107	672	80.29%	0.9168	7.8028	1.8147	165	19.71%	3.2227	32.2958	2.3018
	LDGT1	801	1.8056	21.2975	2.4012	621	77.53%	1.4308	14.2844	2.3795	180	22.47%	3.0989	45.4928	2.4762
	LDGT2	263	2.4436	26.2687	2.7112	189	71.86%	1.8264	14.0994	2.7688	74	28.14%	4.0200	57.3497	2.5642
1987 Total		1901	1.7027	18.1695	2.2281	1482	77.96%	1.2482	11.3218	2.1730	419	22.04%	3.3104	42.3900	2.4230
1988	LDGV	1164	1.1294	10.4168	1.6050	999	85.82%	0.7623	7.8977	1.5792	165	14.18%	3.3521	25.6686	1.7616
	LDGT1	1229	1.7074	16.9184	2.2959	999	81.29%	1.3079	11.8675	2.2021	230	18.71%	3.4428	38.8572	2.7030
	LDGT2	458	1.7828	16.3567	2.8709	342	74.67%	1.4946	11.6708	2.7091	116	25.33%	2.6326	30.1719	3.3482
1988 Total		2851	1.4835	14.1737	2.1062	2340	82.08%	1.1022	10.1439	2.0103	511	17.92%	3.2296	32.6270	2.5455
1989	LDGV	1216	1.0908	10.5657	1.7342	1026	84.38%	0.7809	7.9355	1.6461	190	15.63%	2.7647	24.7683	2.2101
	LDGT1	1318	1.6037	18.1490	2.2013	1071	81.26%	1.2022	12.5806	2.1321	247	18.74%	3.3444	42.2939	2.5017
	LDGT2	531	1.9013	16.2080	2.8054	424	79.85%	1.4453	12.0185	2.6861	107	20.15%	3.7082	32.8090	3.2784
1989 Total		3065	1.4518	14.8041	2.1207	2521	82.25%	1.0716	10.5956	2.0275	544	17.75%	3.2135	34.3072	2.5526
1990	LDGV	2148	0.9367	10.0644	1.6391	1901	88.50%	0.6942	7.4965	1.5796	247	11.50%	2.8025	29.8278	2.0968
	LDGT1	1646	1.4664	15.6432	2.1559	1361	82.69%	1.1315	10.9077	2.0634	285	17.31%	3.0661	38.2576	2.5979
	LDGT2	635	1.8098	15.9618	2.7126	502	79.06%	1.4608	13.6115	2.6598	133	20.94%	3.1268	24.8330	2.9118
1990 Total		4429	1.2587	12.9833	1.9851	3764	84.99%	0.9546	9.5455	1.8986	665	15.01%	2.9803	32.4416	2.4746
1991	LDGV	2275	0.8390	9.3775	1.5733	1943	85.41%	0.5986	6.8036	1.4775	332	14.59%	2.2460	24.4407	2.1341
	LDGT1	1853	1.2835	14.1123	1.9850	1543	83.27%	0.9959	10.8553	1.8612	310	16.73%	2.7152	30.3235	2.6012
	LDGT2	614	1.5621	17.6699	2.6176	474	77.20%	1.3034	14.8110	2.4298	140	22.80%	2.4380	27.3492	3.2534

Vehicle		All Initial Inspections				Passing Initial Inspections					Failing Initial Inspections				
Year	Type	Total	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)
1991 Total		4742	1.1063	12.3014	1.8694	3960	83.51%	0.8377	9.3408	1.7410	782	16.49%	2.4664	27.2935	2.5197
1992	LDGV	3137	0.7590	8.3787	1.4937	2693	85.85%	0.5608	6.0939	1.4258	444	14.15%	1.9606	22.2369	1.9056
	LDGT1	2138	1.1358	12.5638	1.8724	1839	86.01%	0.9565	9.8423	1.7781	299	13.99%	2.2384	29.3025	2.4528
	LDGT2	1102	1.6627	17.0266	2.5860	861	78.13%	1.3539	13.7242	2.4285	241	21.87%	2.7659	28.8249	3.1485
1992 Total		6377	1.0415	11.2763	1.8094	5393	84.57%	0.8224	8.5903	1.7060	984	15.43%	2.2422	25.9974	2.3763
1993	LDGV	3240	0.7129	8.0252	1.5961	2796	86.30%	0.5710	5.8126	1.5048	444	13.70%	1.6070	21.9585	2.1714
	LDGT1	2726	1.1673	12.3068	2.1575	2315	84.92%	0.9795	9.8012	2.0116	411	15.08%	2.2248	26.4199	2.9793
	LDGT2	1177	1.8253	17.3132	2.5706	928	78.84%	1.3966	14.2602	2.3909	249	21.16%	3.4227	28.6915	3.2402
1993 Total		7143	1.0696	11.1897	1.9709	6039	84.54%	0.8545	8.6397	1.8352	1104	15.46%	2.2465	25.1380	2.7132
1994	LDGV	4196	0.5789	6.5144	1.2530	3732	88.94%	0.4326	5.0144	1.1843	464	11.06%	1.7561	18.5789	1.8058
	LDGT1	3995	0.9559	10.3847	1.8956	3394	84.96%	0.7738	8.1015	1.7595	601	15.04%	1.9838	23.2784	2.6641
	LDGT2	2293	1.3104	13.7280	2.3151	1716	74.84%	0.9891	10.5960	2.0849	577	25.16%	2.2662	23.0425	3.0000
1994 Total		10484	0.8826	9.5669	1.7302	8842	84.34%	0.6716	7.2826	1.5798	1642	15.66%	2.0187	21.8675	2.5396
1995	LDGV	5440	0.5706	6.4214	1.1223	4838	88.93%	0.4148	4.8252	1.0463	602	11.07%	1.8223	19.2487	1.7334
	LDGT1	4284	0.9082	10.0927	1.9630	3620	84.50%	0.7246	7.8792	1.7991	664	15.50%	1.9094	22.1603	2.8566
	LDGT2	2702	1.2455	13.4261	2.2516	2063	76.35%	0.9249	10.4393	2.0353	639	23.65%	2.2804	23.0688	2.9503
1995 Total		12426	0.8337	9.2102	1.6577	10521	84.67%	0.6214	6.9768	1.4992	1905	15.33%	2.0063	21.5450	2.5331
1996	LDGV	7152	0.4055	4.9340	0.8994	6410	89.63%	0.3253	3.8424	0.8299	742	10.37%	1.0986	14.3647	1.4995
	LDGT1	5451	0.4980	6.5096	1.5405	4769	87.49%	0.4188	5.2867	1.4295	682	12.51%	1.0521	15.0609	2.3167
	LDGT2	2849	0.6487	7.5988	1.4817	2422	85.01%	0.5051	6.0460	1.3381	427	14.99%	1.4635	16.4062	2.2963
1996 Total		15452	0.4830	5.9812	1.2329	13601	88.02%	0.3901	4.7412	1.1306	1851	11.98%	1.1656	15.0922	1.9844
1997	LDGV	8687	0.4271	5.2670	0.8693	7682	88.43%	0.3420	4.0370	0.8054	1005	11.57%	1.0775	14.6694	1.3578
	LDGT1	7814	0.4948	6.7254	1.4666	6678	85.46%	0.3861	5.1324	1.3213	1136	14.54%	1.1336	16.0898	2.3207
	LDGT2	3313	0.6190	7.6853	1.5780	2761	83.34%	0.4278	5.7461	1.3922	552	16.66%	1.5755	17.3848	2.5073
1997 Total		19814	0.4859	6.2465	1.2233	17121	86.41%	0.3731	4.7399	1.1012	2693	13.59%	1.2032	15.8252	1.9996
1998	LDGV	11803	0.3381	4.6276	0.7109	10551	89.39%	0.2595	3.5668	0.6560	1252	10.61%	0.9999	13.5670	1.1731
	LDGT1	11281	0.4161	5.8390	1.2543	9915	87.89%	0.3386	4.5784	1.1238	1366	12.11%	0.9787	14.9886	2.2017
	LDGT2	4231	0.5317	6.4120	1.3886	3578	84.57%	0.3482	4.4811	1.2039	653	15.43%	1.5375	16.9920	2.4007
1998 Total		27315	0.4003	5.4043	1.0403	24044	88.02%	0.3053	4.1200	0.9305	3271	11.98%	1.0984	14.8444	1.8477
1999	LDGV	12747	0.3023	4.2071	0.7029	11436	89.72%	0.2359	3.2885	0.6226	1311	10.28%	0.8819	12.2203	1.4034
	LDGT1	11100	0.3244	4.9712	0.9765	9754	87.87%	0.2596	3.8939	0.8441	1346	12.13%	0.7945	12.7782	1.9359
	LDGT2	5552	0.4944	5.1170	1.1194	4651	83.77%	0.2873	3.3709	0.9225	901	16.23%	1.5634	14.1307	2.1359
1999 Total		29399	0.3469	4.6675	0.8849	25841	87.90%	0.2541	3.5319	0.7602	3558	12.10%	1.0214	12.9151	1.7903
2000	LDGV	18589	0.2393	3.5806	0.5804	16945	91.16%	0.1842	2.8698	0.5030	1644	8.84%	0.8071	10.9063	1.3782
	LDGT1	14970	0.2993	4.2332	0.8859	13359	89.24%	0.2399	3.2344	0.7706	1611	10.76%	0.7920	12.5158	1.8414
	LDGT2	6519	0.3372	4.3391	0.8877	5809	89.11%	0.2333	3.1677	0.7675	710	10.89%	1.1873	13.9231	1.8712
2000 Total		40078	0.2777	3.9477	0.7445	36113	90.11%	0.2127	3.0526	0.6446	3965	9.89%	0.8691	12.1005	1.6547
2001	LDGV	17468	0.1972	3.2595	0.4559	16015	91.68%	0.1388	2.5514	0.3845	1453	8.32%	0.8407	11.0641	1.2431
	LDGT1	14030	0.2129	3.9456	0.6036	12692	90.46%	0.1588	3.0319	0.5200	1338	9.54%	0.7265	12.6129	1.3966
	LDGT2	6666	0.3112	4.0029	0.7949	5905	88.58%	0.2403	3.0831	0.6899	761	11.42%	0.8615	11.1405	1.6101
2001 Total		38164	0.2229	3.6416	0.5694	34612	90.69%	0.1635	2.8183	0.4863	3552	9.31%	0.8021	11.6639	1.3795
2002	LDGV	23435	0.1603	3.2697	0.3965	21586	92.11%	0.1232	2.8525	0.3244	1849	7.89%	0.5935	8.1410	1.2376
	LDGT1	20061	0.1731	4.1257	0.5035	18464	92.04%	0.1324	3.2613	0.4406	1597	7.96%	0.6448	14.1196	1.2308

Vehicle		All Initial Inspections				Passing Initial Inspections					Failing Initial Inspections				
Year	Type	Total	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)
	LDGT2	7366	0.2420	3.2225	0.7856	6630	90.01%	0.1997	2.6488	0.6949	736	9.99%	0.6231	8.3908	1.6029
2002 Total		50862	0.1772	3.6005	0.4951	46680	91.78%	0.1377	2.9852	0.4230	4182	8.22%	0.6183	10.4680	1.2993
2003	LDGV	20964	0.1356	2.3575	0.3555	19358	92.34%	0.0947	1.9193	0.2929	1606	7.66%	0.6290	7.6402	1.1106
	LDGT1	16876	0.1547	2.9879	0.4540	15579	92.31%	0.1211	2.3085	0.4033	1297	7.69%	0.5589	11.1484	1.0638
	LDGT2	7325	0.2688	3.5112	0.5936	6670	91.06%	0.1733	2.4030	0.4984	655	8.94%	1.2415	14.7957	1.5626
2003 Total		45165	0.1644	2.7802	0.4309	41607	92.12%	0.1172	2.1426	0.3672	3558	7.88%	0.7162	10.2363	1.1767
2004	LDGV	24633	0.1113	1.9376	0.2559	23132	93.91%	0.0782	1.6305	0.2131	1501	6.09%	0.6230	6.6702	0.9161
	LDGT1	24588	0.1169	2.3547	0.2776	23105	93.97%	0.0872	1.8662	0.2371	1483	6.03%	0.5796	9.9658	0.9077
	LDGT2	10653	0.1317	2.2865	0.3157	9890	92.84%	0.1016	1.7869	0.2565	763	7.16%	0.5221	8.7619	1.0830
2004 Total		59874	0.1172	2.1710	0.2754	56127	93.74%	0.0860	1.7551	0.2306	3747	6.26%	0.5852	8.4005	0.9468
2005	LDGV	22588	0.0906	1.7357	0.2202	21229	93.98%	0.0628	1.3852	0.1785	1359	6.02%	0.5244	7.2095	0.8725
	LDGT1	21277	0.0949	1.7857	0.1965	20342	95.61%	0.0794	1.4990	0.1645	935	4.39%	0.4323	8.0230	0.8929
	LDGT2	7434	0.1781	2.6352	0.3387	6950	93.49%	0.1206	1.8930	0.2547	484	6.51%	1.0040	13.2923	1.5459
2005 Total		51299	0.1050	1.8868	0.2276	48521	94.58%	0.0780	1.5057	0.1835	2778	5.42%	0.5770	8.5431	0.9967
2006	LDGV	27827	0.0753	1.7114	0.1631	26774	96.22%	0.0562	1.4676	0.1307	1053	3.78%	0.5607	7.9105	0.9867
	LDGT1	23561	0.0629	1.6189	0.1599	22762	96.61%	0.0553	1.4787	0.1419	799	3.39%	0.2777	5.6140	0.6736
	LDGT2	9942	0.1091	1.6797	0.2119	9427	94.82%	0.0871	1.3892	0.1655	515	5.18%	0.5134	6.9967	1.0610
2006 Total		61330	0.0760	1.6707	0.1698	58963	96.14%	0.0608	1.4593	0.1406	2367	3.86%	0.4549	6.9365	0.8972
2007	LDGV	24048	0.0649	1.5560	0.1422	23244	96.66%	0.0505	1.3555	0.1170	804	3.34%	0.4803	7.3520	0.8696
	LDGT1	20755	0.0527	1.5651	0.1298	19912	95.94%	0.0440	1.3556	0.1155	843	4.06%	0.2583	6.5144	0.4685
	LDGT2	8681	0.0801	1.2201	0.1422	8238	94.90%	0.0674	1.0507	0.1135	443	5.10%	0.3159	4.3709	0.6770
2007 Total		53484	0.0626	1.5050	0.1374	51394	96.09%	0.0507	1.3067	0.1159	2090	3.91%	0.3559	6.3823	0.6670
2008	LDGV	3500	0.0857	1.8684	0.1660	3345	95.57%	0.0557	1.4589	0.1132	155	4.43%	0.7336	10.7060	1.3038
	LDGT1	3049	0.0507	1.5886	0.1405	2950	96.75%	0.0452	1.4714	0.1181	99	3.25%	0.2170	5.0781	0.8061
	LDGT2	1349	0.1143	2.8417	0.2157	1247	92.44%	0.0751	1.8691	0.1454	102	7.56%	0.5932	14.7322	1.0750
2008 Total		7898	0.0771	1.9266	0.1646	7542	95.49%	0.0548	1.5316	0.1205	356	4.51%	0.5497	10.2945	1.0998
2009	LDGV	2759	0.0742	1.7641	0.1325	2659	96.38%	0.0465	1.3158	0.0989	100	3.62%	0.8089	13.6844	1.0267
	LDGT1	1907	0.0480	1.7163	0.1137	1861	97.59%	0.0432	1.5604	0.1066	46	2.41%	0.2434	8.0264	0.4022
	LDGT2	779	0.0677	1.7489	0.1273	730	93.71%	0.0619	1.4246	0.1151	49	6.29%	0.1536	6.5801	0.3091
2009 Total		5445	0.0641	1.7452	0.1252	5250	96.42%	0.0475	1.4176	0.1039	195	3.58%	0.5108	10.5645	0.6991
2010	LDGV	1179	0.0952	2.1091	0.1758	1114	94.49%	0.0509	1.5469	0.1005	65	5.51%	0.8549	11.7437	1.4660
	LDGT1	829	0.0509	1.5597	0.1102	798	96.26%	0.0442	1.4345	0.0930	31	3.74%	0.2226	4.7818	0.5547
	LDGT2	593	0.0693	1.7266	0.1409	559	94.27%	0.0662	1.6027	0.1281	34	5.73%	0.1207	3.7642	0.3510
2010 Total		2601	0.0752	1.8468	0.1469	2471	95.00%	0.0522	1.5232	0.1043	130	5.00%	0.5121	7.9966	0.9571
2011	LDGV	1787	0.0966	2.1971	0.1726	1699	95.08%	0.0513	1.6942	0.0925	88	4.92%	0.9715	11.9064	1.7192
	LDGT1	1530	0.0545	1.9585	0.1094	1478	96.60%	0.0423	1.6179	0.0868	52	3.40%	0.4007	11.6403	0.7496
	LDGT2	900	0.0749	1.4776	0.1235	829	92.11%	0.0594	1.2883	0.0971	71	7.89%	0.2560	3.6879	0.4324
2011 Total		4217	0.0767	1.9570	0.1392	4006	95.00%	0.0497	1.5821	0.0914	211	5.00%	0.5900	9.0753	1.0472
2012	LDGV	525	0.0553	1.9824	0.1146	499	95.05%	0.0457	1.7135	0.0907	26	4.95%	0.2388	7.1438	0.5747
	LDGT1	289	0.0516	2.1713	0.1165	280	96.89%	0.0462	2.0227	0.0927	9	3.11%	0.2195	6.7935	0.8568
	LDGT2	202	0.1114	2.0658	0.1648	184	91.09%	0.0553	1.2860	0.1067	18	8.91%	0.6848	10.0375	0.7587
2012 Total		1016	0.0654	2.0527	0.1252	963	94.78%	0.0477	1.7217	0.0943	53	5.22%	0.3870	8.0671	0.6851
2013	LDGV	231	0.0955	2.0241	0.1704	211	91.34%	0.0405	1.5524	0.0815	20	8.66%	0.6751	7.0005	1.1081

Vehicle		All Initial Inspections				Passing Initial Inspections					Failing Initial Inspections				
Year	Type	Total	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)
	LDGT1	88	0.0379	1.7225	0.0741	86	97.73%	0.0366	1.4705	0.0701	2	2.27%	0.0903	12.5618	0.2458
	LDGT2	88	0.1229	1.6615	0.2219	85	96.59%	0.0673	1.2159	0.1319	3	3.41%	1.6984	14.2872	2.7707
2013 Total		407	0.0889	1.8805	0.1607	382	93.86%	0.0456	1.4591	0.0902	25	6.14%	0.7511	8.3198	1.2386
2014	LDGV	93	0.1232	2.1916	0.2495	87	93.55%	0.0460	1.5548	0.0802	6	6.45%	1.2429	11.4253	2.7048
	LDGT1	53	0.0348	1.7228	0.0765	52	98.11%	0.0347	1.6727	0.0767	1	1.89%	0.0413	4.3266	0.0639
	LDGT2	47	0.0486	1.2310	0.0685	47	100.00%	0.0486	1.2310	0.0685	0	0.00%	0.0000	0.0000	0.0000
2014 Total		193	0.0808	1.8289	0.1579	186	96.37%	0.0435	1.5059	0.0763	7	3.63%	1.0712	10.4112	2.3275
2015	LDGV	64	0.0235	1.0558	0.0517	64	100.00%	0.0235	1.0558	0.0517	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	41	0.0303	1.0844	0.0466	41	100.00%	0.0303	1.0844	0.0466	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	10	0.0326	0.4900	0.0674	9	90.00%	0.0333	0.4549	0.0703	1	10.00%	0.0262	0.8057	0.0409
2015 Total		115	0.0267	1.0168	0.0512	114	99.13%	0.0267	1.0186	0.0513	1	0.87%	0.0262	0.8057	0.0409
2016	LDGV	43	0.2699	2.1753	0.1749	40	93.02%	0.0468	1.5402	0.0828	3	6.98%	3.2449	10.6436	1.4026
	LDGT1	14	0.0257	1.6930	0.0695	14	100.00%	0.0257	1.6930	0.0695	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	5	0.0303	0.5668	0.0471	5	100.00%	0.0303	0.5668	0.0471	0	0.00%	0.0000	0.0000	0.0000
2016 Total		62	0.1954	1.9367	0.1408	59	95.16%	0.0404	1.4940	0.0766	3	4.84%	3.2449	10.6436	1.4026
2017	LDGV	17	0.0827	1.5906	0.2512	16	94.12%	0.0155	0.7253	0.0469	1	5.88%	1.1584	15.4345	3.5202
	LDGT1	3	0.0160	0.7705	0.0449	3	100.00%	0.0160	0.7705	0.0449	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	2	0.0258	0.2827	0.0710	2	100.00%	0.0258	0.2827	0.0710	0	0.00%	0.0000	0.0000	0.0000
2017 Total		22	0.0684	1.3598	0.2067	21	95.45%	0.0165	0.6896	0.0489	1	4.55%	1.1584	15.4345	3.5202
2018	LDGV	2	0.0105	0.3795	0.0410	2	100.00%	0.0105	0.3795	0.0410	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	3	0.0126	0.4281	0.0271	3	100.00%	0.0126	0.4281	0.0271	0	0.00%	0.0000	0.0000	0.0000
2018 Total		5	0.0117	0.4087	0.0327	5	100.00%	0.0117	0.4087	0.0327	0	0.00%	0.0000	0.0000	0.0000
Overall Total		572751	0.2870	4.0057	0.6176	524371	91.55%	0.2065	2.9892	0.5262	48380	8.45%	1.1585	15.0234	1.6087

Summary by Vehicle Type (V1.01)

Vehicle Type	All Initial Inspections				Passing Initial Inspections					Failing Initial Inspections				
	Total	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)	Total	Total %	Avg HC (gpm)	Avg CO (gpm)	Avg NOx (gpm)
LDGV	256060	0.2341	3.3723	0.4918	236506	92.36%	0.1681	2.5947	0.4237	19554	7.64%	1.0324	12.7774	1.3154
LDGT1	221781	0.2958	4.3434	0.6730	203366	91.70%	0.2222	3.2626	0.5803	18415	8.30%	1.1091	16.2795	1.6959
LDGT2	94910	0.4089	4.9256	0.8278	84499	89.03%	0.2766	3.4355	0.6828	10411	10.97%	1.4830	17.0201	2.0053
Overall Total	572751	0.2870	4.0057	0.6176	524371	91.55%	0.2065	2.9892	0.5262	48380	8.45%	1.1585	15.0234	1.6087

Appendix B2

I/M240 Initial Failure Report

Date
Between 1/1/2018 and 12/31/2018

Initial Failure Report (V1.03)

Vehicle		Failure for Both Exhaust and Other					Failure for Exhaust Only					Failure for Other				
Year	Type	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1982	LDGT1	7	3.65%	8.9865	145.0328	1.1276	27	14.06%	5.7696	95.0787	2.1365	25	13.02%	2.3130	28.7632	2.9931
	LDGT2	4	11.76%	8.6529	198.1537	1.7033	7	20.59%	6.0647	143.4911	1.4447	0	0.00%	0.0000	0.0000	0.0000
	LDGV	3	1.72%	4.8319	56.5805	2.3096	21	12.07%	5.4707	83.0310	1.4267	14	8.05%	1.9725	20.5298	2.6106
1982 Total		14	3.50%	8.0009	141.2562	1.5454	55	13.75%	5.6930	96.6403	1.7774	39	9.75%	2.1908	25.8076	2.8558
1983	LDGT1	8	3.90%	7.7578	128.7532	1.6383	25	12.20%	8.1495	95.0750	1.7577	32	15.61%	3.1409	30.5634	2.5950
	LDGT2	7	10.29%	5.3406	93.6190	3.4604	13	19.12%	6.4892	110.4540	3.1665	13	19.12%	3.5855	45.2562	3.4652
	LDGV	7	3.35%	7.2494	80.5802	1.6224	25	11.96%	7.2092	91.6005	1.7736	13	6.22%	1.6047	14.3339	1.8949
1983 Total		22	4.56%	6.8269	102.2464	2.2130	63	13.07%	7.4338	96.8697	2.0547	58	12.03%	2.8962	30.2190	2.6331
1984	LDGT1	16	3.80%	8.1461	88.7015	2.6154	35	8.31%	7.9075	95.8640	2.2637	51	12.11%	2.1548	23.1741	2.8690
	LDGT2	21	12.65%	5.9085	91.9660	2.4970	42	25.30%	5.4322	103.5296	2.3709	10	6.02%	2.1873	23.5585	3.7821
	LDGV	14	3.07%	6.6973	125.5454	1.7039	47	10.31%	4.6355	60.6292	1.4419	42	9.21%	1.5558	13.8285	2.2501
1984 Total		51	4.89%	6.8270	100.1597	2.3164	124	11.89%	5.8289	85.1053	1.9885	103	9.88%	1.9137	19.4006	2.7053
1985	LDGT1	19	3.66%	4.7400	89.5968	2.6019	63	12.14%	6.3650	77.5795	2.1788	41	7.90%	1.9752	17.3907	2.8797
	LDGT2	12	8.33%	4.6144	92.5374	2.3090	34	23.61%	4.6038	73.8668	3.7078	11	7.64%	2.4380	25.6922	2.8983
	LDGV	18	3.24%	4.4492	66.8478	1.7209	91	16.40%	3.6409	50.9630	1.9842	25	4.50%	1.2391	9.8127	2.0581
1985 Total		49	4.02%	4.6024	81.9602	2.2065	188	15.44%	4.7279	64.0245	2.3611	77	6.32%	1.8023	16.1163	2.6156
1986	LDGT1	16	1.81%	7.5841	67.6297	2.7207	75	8.48%	4.2277	67.2361	2.0285	75	8.48%	1.8439	16.9545	2.7673
	LDGT2	15	6.91%	6.5178	101.1821	2.6935	43	19.82%	7.2922	93.0318	2.1664	25	11.52%	2.2091	20.4364	2.5220
	LDGV	18	2.06%	5.7245	86.0741	1.7168	71	8.14%	4.2668	38.5569	2.1173	49	5.62%	0.9970	8.0863	1.8001
1986 Total		49	2.48%	6.5746	84.6763	2.3436	189	9.58%	4.9396	62.3313	2.0932	149	7.55%	1.6266	14.6223	2.4081
1987	LDGT1	13	1.62%	3.9630	60.1796	2.6791	104	12.98%	3.8893	61.9419	2.3096	63	7.87%	1.6159	15.3080	2.7093
	LDGT2	13	4.94%	5.3446	102.9824	2.3594	43	16.35%	4.5315	61.2022	2.3410	18	6.84%	1.8417	15.1898	3.2453
	LDGV	24	2.87%	6.9362	53.5145	2.5409	100	11.95%	3.2317	37.0567	2.4534	41	4.90%	1.0270	8.2634	1.7921
1987 Total		50	2.63%	5.7494	68.1091	2.5296	247	12.99%	3.7349	51.7381	2.3733	122	6.42%	1.4513	12.9231	2.4801
1988	LDGT1	21	1.71%	4.6786	52.5510	2.5752	131	10.66%	4.3922	51.6411	2.8572	78	6.35%	1.5156	13.6999	2.4782
	LDGT2	16	3.49%	3.7133	30.5149	2.8381	66	14.41%	2.8732	39.1797	3.9124	34	7.42%	1.6570	12.5250	2.4928
	LDGV	17	1.46%	4.6604	29.4102	2.2552	107	9.19%	4.1021	31.3696	1.6882	41	3.52%	0.8522	9.2393	1.7487
1988 Total		54	1.89%	4.3868	38.7367	2.5523	304	10.66%	3.9603	41.8006	2.6749	153	5.37%	1.3693	12.2435	2.2860
1989	LDGT1	31	2.35%	4.5872	68.5439	2.3270	129	9.78%	4.4249	56.2053	2.7503	87	6.60%	1.2996	12.3131	2.1953
	LDGT2	9	1.69%	8.7907	84.2718	3.2032	64	12.05%	4.1174	36.5169	3.5645	34	6.40%	1.5926	12.2069	2.7598
	LDGV	18	1.48%	3.8990	31.5806	3.2302	108	8.88%	3.7383	33.8153	2.3016	64	5.26%	0.8030	7.5855	1.7688
1989 Total		58	1.89%	5.0259	59.5130	2.7433	301	9.82%	4.1132	43.9854	2.7624	185	6.03%	1.1816	10.6581	2.1515
1990	LDGT1	32	1.94%	5.5188	67.5615	3.2878	159	9.66%	3.5475	48.1879	2.6496	94	5.71%	1.4167	11.4848	2.2757
	LDGT2	10	1.57%	6.1907	57.6236	2.4197	55	8.66%	4.7400	33.6674	3.2555	68	10.71%	1.3715	12.8654	2.7061
	LDGV	12	0.56%	2.8890	27.9005	3.5028	155	7.22%	3.8306	41.5982	2.1592	80	3.72%	0.7978	7.3118	1.7650
1990 Total		54	1.22%	5.0588	56.9076	3.1748	369	8.33%	3.8442	43.2556	2.5339	242	5.46%	1.1994	10.4932	2.2278
1991	LDGT1	26	1.40%	3.8077	56.5201	3.2698	174	9.39%	3.5842	38.5976	3.0203	110	5.94%	1.0825	11.0435	1.7803
	LDGT2	13	2.12%	3.3710	44.2986	2.2814	88	14.33%	2.7356	30.1847	3.7824	39	6.35%	1.4556	15.3013	2.3837
	LDGV	29	1.27%	3.7211	33.2298	3.0017	204	8.97%	2.7985	31.5490	2.3022	99	4.35%	0.6754	7.2187	1.5334
1991 Total		68	1.43%	3.6873	44.2510	2.9665	466	9.83%	3.0800	33.9232	2.8499	248	5.23%	0.9787	10.1862	1.7766
1992	LDGT1	27	1.26%	2.5655	28.9050	4.0783	148	6.92%	3.2190	45.8330	2.5817	124	5.80%	0.9967	9.6592	1.9451

Vehicle		Failure for Both Exhaust and Other					Failure for Exhaust Only					Failure for Other				
Year	Type	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT2	19	1.72%	5.4338	58.4948	3.2287	153	13.88%	3.0777	31.9918	3.4730	69	6.26%	1.3399	13.6327	2.4069
	LDGV	27	0.86%	3.2987	34.4583	2.8151	299	9.53%	2.3765	27.3662	2.0240	118	3.76%	0.6004	6.4433	1.3974
1992 Total		73	1.14%	3.5832	38.6604	3.3900	600	9.41%	2.7631	33.1008	2.5311	311	4.88%	0.9225	9.3206	1.8397
1993	LDGT1	24	0.88%	3.4055	41.8671	3.9649	237	8.69%	2.8367	35.3456	3.3578	150	5.50%	1.0692	9.8456	2.2237
	LDGT2	13	1.10%	3.2544	26.7665	3.8284	175	14.87%	4.1316	34.0060	3.4031	61	5.18%	1.4249	13.8553	2.6474
	LDGV	31	0.96%	2.7975	24.5611	2.1081	286	8.83%	1.9158	28.6099	2.4324	127	3.92%	0.6208	6.3445	1.5990
1993 Total		68	0.95%	3.0994	31.0907	3.0923	698	9.77%	2.7840	32.2498	2.9900	338	4.73%	0.9649	9.2538	2.0654
1994	LDGT1	47	1.18%	3.9055	37.0019	3.3606	346	8.66%	2.4246	30.3732	3.0713	208	5.21%	0.8162	8.3755	1.8293
	LDGT2	45	1.96%	3.8140	29.0947	4.0901	371	16.18%	2.6226	27.8498	3.2588	161	7.02%	1.0124	10.2732	2.0988
	LDGV	26	0.62%	2.7190	20.8013	2.4377	299	7.13%	2.2680	24.5109	2.0509	139	3.31%	0.4747	5.4030	1.1606
1994 Total		118	1.13%	3.6092	30.4168	3.4354	1,016	9.69%	2.4508	27.7265	2.8395	508	4.85%	0.7849	8.1636	1.7317
1995	LDGT1	36	0.84%	2.8199	33.5175	3.9523	407	9.50%	2.4752	29.0807	3.3716	221	5.16%	0.7191	7.5656	1.7298
	LDGT2	57	2.11%	3.2679	31.4599	3.3283	418	15.47%	2.6825	27.1477	3.2413	164	6.07%	0.9123	9.7560	2.0771
	LDGV	42	0.77%	3.0383	29.9812	2.2002	379	6.97%	2.3439	24.7521	2.0180	181	3.33%	0.4481	5.2348	1.0292
1995 Total		135	1.09%	3.0770	31.5486	3.1437	1,204	9.69%	2.5058	27.0470	2.9003	566	4.55%	0.6884	7.4549	1.6064
1996	LDGT1	24	0.44%	2.0224	29.2061	3.1623	334	6.13%	1.5598	23.2162	3.0315	324	5.94%	0.4569	5.6061	1.5171
	LDGT2	26	0.91%	2.0632	30.1181	2.9677	227	7.97%	2.0684	22.7162	2.8674	174	6.11%	0.5849	6.1253	1.4509
	LDGV	40	0.56%	2.0594	27.8305	1.9370	415	5.80%	1.5022	20.0230	1.8716	287	4.01%	0.3809	4.3062	0.9005
1996 Total		90	0.58%	2.0506	28.8582	2.5615	976	6.32%	1.6536	21.7421	2.5002	785	5.08%	0.4575	5.2459	1.2770
1997	LDGT1	60	0.77%	1.4500	17.3086	2.8926	643	8.23%	1.5815	23.0042	2.8882	433	5.54%	0.4247	5.6531	1.3987
	LDGT2	36	1.09%	2.0583	20.5449	3.2258	340	10.26%	2.1003	22.8445	3.0192	176	5.31%	0.4629	6.1911	1.3714
	LDGV	33	0.38%	1.7351	34.3655	1.6659	536	6.17%	1.6259	21.7389	1.7527	436	5.02%	0.3535	4.4876	0.8491
1997 Total		129	0.65%	1.6927	22.5752	2.6718	1,519	7.67%	1.7133	22.5220	2.5168	1,045	5.27%	0.4014	5.2574	1.1648
1998	LDGT1	60	0.53%	1.4325	16.5994	3.1284	800	7.09%	1.3073	21.2778	2.7790	506	4.49%	0.4053	4.8541	1.1790
	LDGT2	32	0.76%	1.6475	20.1236	3.6903	420	9.93%	2.0757	22.4518	2.8521	201	4.75%	0.3955	5.0851	1.2522
	LDGV	54	0.46%	1.4692	16.2586	1.7141	665	5.63%	1.5627	21.2518	1.5584	533	4.52%	0.2502	3.7063	0.6376
1998 Total		146	0.53%	1.4932	17.2458	2.7285	1,885	6.90%	1.5686	21.5302	2.3647	1,240	4.54%	0.3370	4.3982	0.9581
1999	LDGT1	47	0.42%	1.1930	22.5156	2.9105	805	7.25%	1.0733	17.5328	2.5066	494	4.45%	0.3022	4.1037	0.9132
	LDGT2	49	0.88%	1.4850	17.6071	2.9364	607	10.93%	2.0686	17.9444	2.5124	245	4.41%	0.3273	3.9870	1.0431
	LDGV	60	0.47%	1.0983	21.4407	1.9480	751	5.89%	1.2886	17.3116	1.8823	500	3.92%	0.2451	3.4667	0.6186
1999 Total		156	0.53%	1.2483	20.5604	2.5485	2,163	7.36%	1.4273	17.5715	2.2915	1,239	4.21%	0.2841	3.8236	0.8200
2000	LDGT1	54	0.36%	1.2775	21.6921	2.5793	902	6.03%	1.1290	18.4232	2.5274	655	4.38%	0.2880	3.6244	0.8359
	LDGT2	30	0.46%	1.7988	30.0408	2.3471	387	5.94%	1.8325	20.3758	2.5947	293	4.49%	0.2726	3.7501	0.8669
	LDGV	50	0.27%	1.3984	17.6431	1.6563	905	4.87%	1.2291	16.5817	1.9730	689	3.71%	0.2099	2.9628	0.5768
2000 Total		134	0.33%	1.4393	22.0504	2.1829	2,194	5.47%	1.2944	18.0080	2.3106	1,637	4.08%	0.2524	3.3684	0.7324
2001	LDGT1	45	0.32%	1.0506	23.4316	2.6860	558	3.98%	1.4228	24.3929	2.3994	735	5.24%	0.1779	3.0073	0.5563
	LDGT2	28	0.42%	0.8335	9.9098	2.8357	345	5.18%	1.5337	19.9294	2.5634	388	5.82%	0.2658	3.4145	0.6739
	LDGV	48	0.27%	2.0914	20.8318	2.2547	712	4.08%	1.4335	18.6874	1.9884	693	3.97%	0.1450	2.5552	0.4073
2001 Total		121	0.32%	1.4132	19.2713	2.5495	1,615	4.23%	1.4512	20.9240	2.2532	1,816	4.76%	0.1841	2.9218	0.5246
2002	LDGT1	36	0.18%	1.9040	28.9858	1.9369	660	3.29%	1.2575	28.2157	2.2061	901	4.49%	0.1457	3.2000	0.4882
	LDGT2	24	0.33%	1.3912	14.4831	2.8556	305	4.14%	1.0817	14.6499	2.6623	407	5.53%	0.2341	3.3410	0.7351
	LDGV	46	0.20%	1.0728	13.5574	2.4736	797	3.40%	1.1627	14.6213	2.2936	1,006	4.29%	0.1207	2.7594	0.3445
2002 Total		106	0.21%	1.4272	19.0068	2.3778	1,762	3.46%	1.1842	19.7183	2.3246	2,314	4.55%	0.1504	3.0333	0.4692
2003	LDGT1	30	0.18%	1.0692	26.6744	2.3566	438	2.60%	1.3230	26.4691	2.1593	829	4.91%	0.1367	2.4919	0.4382

Vehicle		Failure for Both Exhaust and Other					Failure for Exhaust Only					Failure for Other				
Year	Type	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT2	17	0.23%	2.0935	19.9780	4.2077	287	3.92%	2.4463	28.9963	2.6192	351	4.79%	0.2151	2.9334	0.5705
	LDGV	30	0.14%	1.1674	14.2835	1.9596	644	3.07%	1.3505	15.6931	2.2460	932	4.45%	0.1131	1.8618	0.2988
2003 Total		77	0.17%	1.3336	20.3683	2.6106	1,369	3.03%	1.5714	21.9297	2.2965	2,112	4.68%	0.1394	2.2872	0.3986
2004	LDGT1	28	0.11%	1.5929	28.2125	2.2072	448	1.82%	1.5770	26.4341	2.2778	1,007	4.10%	0.1076	2.1320	0.2620
	LDGT2	16	0.15%	0.9784	17.5919	2.8376	228	2.14%	1.3886	23.6570	2.7692	519	4.87%	0.1274	1.9461	0.2881
	LDGV	24	0.10%	3.5504	13.8884	2.6153	486	1.97%	1.5620	16.5481	2.2175	991	4.02%	0.0916	1.6512	0.2367
2004 Total		68	0.11%	2.1392	20.6580	2.4996	1,162	1.94%	1.5337	21.7544	2.3490	2,517	4.20%	0.1054	1.9044	0.2574
2005	LDGT1	15	0.07%	1.9188	33.2222	1.4973	257	1.21%	1.1892	22.5628	2.6368	663	3.12%	0.1053	1.8168	0.2032
	LDGT2	10	0.13%	6.1785	38.6456	2.0940	223	3.00%	1.7296	24.7536	2.9049	251	3.38%	0.1532	2.0994	0.3166
	LDGV	30	0.13%	1.7971	16.4856	2.5263	422	1.87%	1.4100	19.0508	2.2086	907	4.02%	0.0703	1.3933	0.1961
2005 Total		55	0.11%	2.6269	25.0792	2.1671	902	1.76%	1.4261	21.4613	2.5027	1,821	3.55%	0.0944	1.6448	0.2153
2006	LDGT1	5	0.02%	6.8651	20.0232	2.1352	169	0.72%	0.8423	19.8406	2.4853	625	2.65%	0.0724	1.6518	0.1720
	LDGT2	3	0.03%	0.7402	15.2768	2.7434	162	1.63%	1.4223	19.2083	2.9726	350	3.52%	0.0908	1.2735	0.1618
	LDGV	14	0.05%	0.9924	25.2998	2.2436	395	1.42%	1.3556	17.5391	2.3029	644	2.31%	0.0637	1.6267	0.1521
2006 Total		22	0.04%	2.2928	22.7338	2.2871	726	1.18%	1.2510	18.4473	2.4948	1,619	2.64%	0.0729	1.5601	0.1619
2007	LDGT1	8	0.04%	1.1811	34.0217	1.5293	156	0.75%	1.1164	26.0315	1.9917	679	3.27%	0.0502	1.7062	0.1060
	LDGT2	8	0.09%	1.5968	15.1545	3.3723	73	0.84%	1.4089	19.7720	3.1059	362	4.17%	0.0672	1.0269	0.1276
	LDGV	6	0.02%	1.1974	54.9436	1.2580	270	1.12%	1.2921	17.3474	2.3291	528	2.20%	0.0570	1.6999	0.1188
2007 Total		22	0.04%	1.3367	32.8669	2.1255	499	0.93%	1.2543	20.4170	2.3373	1,569	2.93%	0.0564	1.5474	0.1153
2008	LDGT1	4	0.13%	1.1986	10.6978	4.4141	20	0.66%	0.6157	15.5737	2.7891	75	2.46%	0.0584	1.9796	0.0849
	LDGT2	3	0.22%	0.4052	26.3718	0.9882	42	3.11%	1.3061	31.2010	2.2263	57	4.23%	0.0779	1.9848	0.2312
	LDGV	3	0.09%	1.3456	7.8271	2.4617	73	2.09%	1.4529	20.6463	2.5357	79	2.26%	0.0457	1.6300	0.1216
2008 Total		10	0.13%	1.0047	14.5388	2.8006	135	1.71%	1.2832	23.1785	2.4769	211	2.67%	0.0589	1.8501	0.1382
2009	LDGT1	0	0.00%	0.0000	0.0000	0.0000	10	0.52%	0.9899	30.5028	1.5873	36	1.89%	0.0361	1.7830	0.0730
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	8	1.03%	0.5629	28.1812	1.0113	41	5.26%	0.0737	2.3653	0.1720
	LDGV	0	0.00%	0.0000	0.0000	0.0000	48	1.74%	1.6422	27.0659	2.0642	52	1.88%	0.0396	1.3323	0.0691
2009 Total		0	0.00%	0.0000	0.0000	0.0000	66	1.21%	1.4126	27.7218	1.8643	129	2.37%	0.0495	1.7864	0.1029
2010	LDGT1	0	0.00%	0.0000	0.0000	0.0000	7	0.84%	0.7803	14.2086	2.1883	24	2.90%	0.0599	2.0324	0.0782
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	4	0.67%	0.7135	20.6534	2.2666	30	5.06%	0.0416	1.5123	0.0956
	LDGV	2	0.17%	1.2906	21.6077	1.7694	32	2.71%	1.5892	20.6637	2.7423	31	2.63%	0.0688	1.8995	0.1290
2010 Total		2	0.08%	1.2906	21.6077	1.7694	43	1.65%	1.3761	19.6119	2.6079	85	3.27%	0.0567	1.8004	0.1029
2011	LDGT1	0	0.00%	0.0000	0.0000	0.0000	16	1.05%	1.1852	32.9218	2.0504	36	2.35%	0.0520	2.1819	0.1715
	LDGT2	1	0.11%	0.8664	8.5503	2.4353	10	1.11%	1.5021	17.1911	2.3989	60	6.67%	0.0381	1.3563	0.0713
	LDGV	0	0.00%	0.0000	0.0000	0.0000	51	2.85%	1.6281	19.0662	2.8693	37	2.07%	0.0665	2.0374	0.1338
2011 Total		1	0.02%	0.8664	8.5503	2.4353	77	1.83%	1.5197	21.7018	2.6381	133	3.15%	0.0498	1.7692	0.1158
2012	LDGT1	0	0.00%	0.0000	0.0000	0.0000	4	1.38%	0.4468	12.9378	1.7520	5	1.73%	0.0376	1.8781	0.1407
	LDGT2	1	0.50%	2.3790	21.8021	6.0301	2	0.99%	4.6110	67.1181	3.2525	15	7.43%	0.0483	1.6424	0.0748
	LDGV	0	0.00%	0.0000	0.0000	0.0000	7	1.33%	0.7938	20.4549	1.8273	19	3.62%	0.0344	2.2397	0.1132
2012 Total		1	0.10%	2.3790	21.8021	6.0301	13	1.28%	1.2743	25.3209	2.0234	39	3.84%	0.0401	1.9636	0.1019
2013	LDGT1	0	0.00%	0.0000	0.0000	0.0000	1	1.14%	0.1349	21.1530	0.4192	1	1.14%	0.0457	3.9705	0.0723
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	1	1.14%	5.0497	42.1456	8.2366	2	2.27%	0.0228	0.3580	0.0378
	LDGV	0	0.00%	0.0000	0.0000	0.0000	8	3.46%	1.6265	14.5860	2.6150	12	5.19%	0.0408	1.9435	0.1035
2013 Total		0	0.00%	0.0000	0.0000	0.0000	10	2.46%	1.8197	17.9987	2.9575	15	3.69%	0.0387	1.8673	0.0926
2014	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	1	1.89%	0.0413	4.3266	0.0639

Vehicle		Failure for Both Exhaust and Other					Failure for Exhaust Only					Failure for Other				
Year	Type	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGV	0	0.00%	0.0000	0.0000	0.0000	4	4.30%	1.8275	16.9205	4.0298	2	2.15%	0.0737	0.4350	0.0548
2014 Total		0	0.00%	0.0000	0.0000	0.0000	4	2.07%	1.8275	16.9205	4.0298	3	1.55%	0.0629	1.7322	0.0578
2015	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	1	10.00%	0.0262	0.8057	0.0409
	LDGV	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2015 Total		0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	1	0.87%	0.0262	0.8057	0.0409
2016	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGV	0	0.00%	0.0000	0.0000	0.0000	2	4.65%	4.8599	15.6605	2.0835	1	2.33%	0.0147	0.6097	0.0409
2016 Total		0	0.00%	0.0000	0.0000	0.0000	2	3.23%	4.8600	15.6605	2.0835	1	1.61%	0.0147	0.6097	0.0409
2017	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGV	0	0.00%	0.0000	0.0000	0.0000	1	5.88%	1.1584	15.4345	3.5202	0	0.00%	0.0000	0.0000	0.0000
2017 Total		0	0.00%	0.0000	0.0000	0.0000	1	4.55%	1.1584	15.4345	3.5202	0	0.00%	0.0000	0.0000	0.0000
2018	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGV	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2018 Total		0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
Grand Total		2,003	0.35%	2.8111	34.7712	2.6695	22,947	4.01%	1.8928	24.7437	2.4505	23,430	4.09%	0.2982	3.8153	0.6936

Initial Failure Report - Summary by Veh (V1.03)

Vehicle		Failure for Both Exhaust and Other					Failure for Exhaust Only					Failure for Other				
Type	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	
LDGT1	739	0.33%	2.8238	38.1443	2.8578	8,288	3.74%	1.8261	27.8798	2.6166	9,388	4.23%	0.3411	4.3174	0.7917	
LDGT2	538	0.57%	3.0907	37.4472	3.0732	5,243	5.52%	2.2833	25.9625	2.8894	4,630	4.88%	0.3899	4.5201	0.8800	
LDGV	726	0.28%	2.5910	29.3546	2.1786	9,416	3.68%	1.7341	21.3047	2.0600	9,412	3.68%	0.2102	2.9678	0.5040	
Grand Total		2,003	0.35%	2.8111	34.7712	2.6695	22,947	4.01%	1.8928	24.7437	2.4505	23,430	4.09%	0.2982	3.8153	0.6936

Appendix B3

I/M240 Initial Exhaust Failure Report

Date
Between 1/1/2018 and 12/31/2018

Initial Exhaust Failure Report (V1.01)

Vehicle		HC Failures					CO Failures					NOX Failures				
Year	Type	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1982	LDGV	15	62.50%	7.1985	87.7683	1.6157	18	75.00%	5.7845	99.5301	0.6914	3	12.50%	3.5909	13.9295	5.8689
	LDGT1	16	47.06%	10.0017	109.2355	2.1044	29	85.29%	6.2873	118.9849	1.5550	2	5.88%	4.6435	64.9055	6.6584
	LDGT2	7	63.64%	9.8060	200.5599	1.1980	11	100.00%	7.0059	163.3684	1.5387	0	0.00%	0.0000	0.0000	0.0000
1982 Total		38	55.07%	8.8591	117.5846	1.7445	58	84.06%	6.2675	121.3648	1.2839	5	7.25%	4.0120	34.3199	6.1847
1983	LDGV	15	46.88%	13.2057	135.0065	1.1147	27	84.38%	8.1999	102.3259	1.1668	4	12.50%	1.3072	18.6220	5.4087
	LDGT1	15	45.45%	13.0438	111.1691	1.7118	27	81.82%	7.4670	117.9232	1.3450	1	3.03%	2.7896	21.9245	6.0881
	LDGT2	7	35.00%	10.5308	123.2453	3.0788	13	65.00%	6.8834	140.9993	2.0247	4	20.00%	2.9792	23.7316	6.5753
1983 Total		37	43.53%	12.6340	123.1176	1.7284	67	78.82%	7.6491	116.1152	1.4051	9	10.59%	2.2150	21.2599	6.0027
1984	LDGV	34	55.74%	7.6844	92.4610	1.5784	52	85.25%	4.9130	85.4139	1.3350	2	3.28%	1.7926	31.5513	5.6419
	LDGT1	31	60.78%	11.2326	103.8513	2.0116	40	78.43%	7.7414	112.9841	1.5909	5	9.80%	2.4622	21.0863	7.2068
	LDGT2	24	38.10%	10.0000	124.8583	2.4342	50	79.37%	5.7209	118.6859	1.5638	8	12.70%	3.3464	27.0161	7.4190
1984 Total		89	50.86%	9.5447	105.1648	1.9601	142	81.14%	5.9942	104.8957	1.4877	15	8.57%	2.8445	25.6442	7.1113
1985	LDGV	67	61.47%	5.2432	69.3317	1.7635	82	75.23%	4.0385	68.0246	1.3325	13	11.93%	1.9457	9.3616	5.4637
	LDGT1	38	46.34%	9.8387	99.5404	2.1379	65	79.27%	6.4371	95.2476	1.4948	10	12.20%	2.8704	20.0398	7.4237
	LDGT2	19	41.30%	7.2002	106.5092	2.0465	36	78.26%	5.1999	97.1158	2.0607	11	23.91%	2.6381	17.4106	7.8438
1985 Total		124	52.32%	6.9514	84.2858	1.9216	183	77.22%	5.1189	83.4168	1.5334	34	14.35%	2.4417	15.1063	6.8102
1986	LDGV	57	64.04%	6.2706	60.0988	1.8349	67	75.28%	4.8802	60.0465	1.5012	10	11.24%	2.2017	13.1699	5.6038
	LDGT1	37	40.66%	8.5586	81.4344	2.2816	68	74.73%	4.2136	83.4185	1.3270	9	9.89%	2.4483	10.2938	7.4001
	LDGT2	35	60.34%	10.0371	109.7812	2.0587	46	79.31%	6.5889	113.5487	1.9317	3	5.17%	5.0620	30.2356	7.2194
1986 Total		129	54.20%	7.9488	79.6980	2.0238	181	76.05%	5.0640	82.4244	1.5452	22	9.24%	2.6926	14.3205	6.5589
1987	LDGV	74	59.68%	5.5386	48.5090	2.2846	76	61.29%	4.2882	58.5586	1.7364	35	28.23%	2.4108	14.1370	4.7665
	LDGT1	51	43.59%	6.2420	82.0318	2.1600	91	77.78%	3.8546	74.9308	1.6173	18	15.38%	2.5343	16.7523	7.0086
	LDGT2	29	51.79%	7.1465	88.7661	2.2927	44	78.57%	4.5887	86.1687	1.8908	4	7.14%	1.8176	10.8092	6.1704
1987 Total		154	51.85%	6.0743	67.1916	2.2449	211	71.04%	4.1639	71.3772	1.7172	57	19.19%	2.4082	14.7293	5.5730
1988	LDGV	81	65.32%	5.7720	33.7973	1.7004	75	60.48%	3.3636	45.0799	1.1286	16	12.90%	2.0550	9.2020	4.9077
	LDGT1	64	42.11%	8.1026	79.1627	2.0330	105	69.08%	5.3876	68.6845	1.8835	36	23.68%	1.7806	15.1209	6.0553
	LDGT2	30	36.59%	5.2643	49.2401	3.7991	53	64.63%	3.4048	51.0863	2.7557	27	32.93%	2.5911	20.6348	6.4384
1988 Total		175	48.88%	6.5373	53.0354	2.1818	233	65.08%	4.2851	57.0834	1.8389	79	22.07%	2.1132	15.8066	5.9538
1989	LDGV	66	52.38%	6.1434	42.4914	2.1040	77	61.11%	3.3843	49.0349	1.4873	30	23.81%	1.5668	10.1028	5.2659
	LDGT1	88	55.00%	6.6705	77.3197	2.3458	113	70.63%	4.8327	76.8504	1.8926	31	19.38%	2.6032	15.9635	6.0052
	LDGT2	34	46.58%	8.3984	62.8680	2.8684	41	56.16%	5.9564	64.5015	2.4648	27	36.99%	2.1413	14.9954	6.0074
1989 Total		188	52.37%	6.7980	62.4791	2.3554	231	64.35%	4.5494	65.3868	1.8591	88	24.51%	2.1082	13.6685	5.7538
1990	LDGV	89	53.29%	6.0319	54.2300	1.9194	98	58.68%	4.3629	61.8376	1.3502	50	29.94%	2.3773	11.5561	4.4827
	LDGT1	85	44.50%	6.5296	74.0270	2.2717	141	73.82%	4.3268	65.1291	1.8561	41	21.47%	1.7681	13.9445	6.3603
	LDGT2	36	55.38%	7.6327	38.5984	2.7154	37	56.92%	5.3367	55.8641	2.2537	18	27.69%	2.1412	15.8781	6.1352
1990 Total		210	49.65%	6.5078	59.5634	2.1984	276	65.25%	4.4750	62.7183	1.7298	109	25.77%	2.1092	13.1682	5.4618
1991	LDGV	168	72.10%	3.7139	37.7671	2.0072	106	45.49%	3.8591	57.9766	1.2990	73	31.33%	1.4868	11.7058	4.4333
	LDGT1	110	55.00%	5.3424	52.5993	2.5583	113	56.50%	4.5180	61.3450	2.0470	63	31.50%	1.8318	15.8743	5.6332
	LDGT2	44	43.56%	4.5274	43.0388	2.8609	52	51.49%	3.4519	49.8469	2.3130	45	44.55%	1.8064	14.3038	5.6856

Vehicle		HC Failures					CO Failures					NOX Failures				
Year	Type	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1991 Total		322	60.30%	4.3814	43.5544	2.3121	271	50.75%	4.0557	57.8212	1.8055	181	33.90%	1.6863	13.8026	5.1623
1992	LDGV	189	57.98%	3.6207	33.6837	2.0189	210	64.42%	2.5123	38.7590	1.4220	79	24.23%	1.6810	10.6692	4.3912
	LDGT1	82	46.86%	4.8448	59.8205	2.5018	112	64.00%	3.2803	58.5877	1.8597	53	30.29%	2.4721	19.9692	5.4277
	LDGT2	93	54.07%	4.8668	41.7744	2.7718	87	50.58%	4.1842	52.6730	2.4849	60	34.88%	1.9069	19.8573	5.6975
1992 Total		364	54.09%	4.2149	41.6388	2.3201	409	60.77%	3.0782	47.1486	1.7679	192	28.53%	1.9700	16.1077	5.0855
1993	LDGV	168	53.00%	3.1229	38.8196	2.0741	185	58.36%	2.4635	42.8789	1.4607	103	32.49%	1.1273	9.6441	4.6447
	LDGT1	128	49.04%	4.4233	48.5015	2.7768	125	47.89%	3.7329	60.3215	1.9037	114	43.68%	2.0121	16.1541	5.5769
	LDGT2	113	60.11%	5.8096	41.6951	2.6949	94	50.00%	4.9906	52.0767	2.4750	69	36.70%	3.1384	16.7446	5.6888
1993 Total		409	53.39%	4.2722	42.6441	2.4655	404	52.74%	3.4442	50.4158	1.8338	286	37.34%	1.9652	13.9521	5.2682
1994	LDGV	209	64.31%	3.2213	28.9066	1.8022	156	48.00%	3.0429	42.4132	1.2533	108	33.23%	1.6643	8.9520	3.9093
	LDGT1	186	47.33%	4.2900	42.8914	2.7330	214	54.45%	3.2990	46.7885	1.9342	169	43.00%	1.6521	15.0125	5.0910
	LDGT2	229	55.05%	4.1299	33.5590	3.0491	228	54.81%	3.4212	40.2676	2.5776	168	40.38%	1.9686	16.3501	5.4390
1994 Total		624	55.03%	3.8733	34.7825	2.5373	598	52.73%	3.2788	43.1609	2.0019	445	39.24%	1.7746	14.0466	4.9356
1995	LDGV	237	56.29%	3.8194	35.2034	1.5620	205	48.69%	3.5192	45.0405	1.2487	173	41.09%	1.4122	9.4146	3.5872
	LDGT1	182	41.08%	4.5542	44.6762	2.8078	213	48.08%	3.5215	48.8581	2.1004	212	47.86%	1.4085	13.2661	5.1505
	LDGT2	266	56.00%	4.0245	31.8795	3.0431	288	60.63%	3.2931	36.8097	2.5442	181	38.11%	2.2461	17.6369	5.2309
1995 Total		685	51.16%	4.0943	36.4295	2.4682	706	52.73%	3.4277	42.8347	2.0341	566	42.27%	1.6775	13.4866	4.6984
1996	LDGV	193	42.42%	2.9439	32.3613	1.4059	193	42.42%	2.0985	40.5254	1.0375	224	49.23%	0.8296	8.1056	3.0049
	LDGT1	180	50.28%	2.5631	33.3988	2.9931	183	51.12%	1.9916	37.7939	2.3336	183	51.12%	1.1740	11.6020	4.4942
	LDGT2	149	58.89%	3.0797	29.5586	2.8164	155	61.26%	2.6478	32.4445	2.6246	93	36.76%	1.4862	14.2473	4.5231
1996 Total		522	48.97%	2.8513	31.9190	2.3558	531	49.81%	2.2220	37.2252	1.9474	500	46.90%	1.0778	10.5276	3.8324
1997	LDGV	239	42.00%	3.1560	33.9643	1.4087	287	50.44%	2.1555	38.3163	1.0192	259	45.52%	0.9654	9.4513	2.9014
	LDGT1	273	38.83%	3.1587	35.2645	2.9155	363	51.64%	2.1610	35.6418	2.1788	389	55.33%	1.2215	11.4941	4.1369
	LDGT2	179	47.61%	3.7472	31.5360	2.9821	203	53.99%	2.9639	34.1819	2.6787	205	54.52%	1.3510	13.3406	4.2283
1997 Total		691	41.93%	3.3102	33.8489	2.4116	853	51.76%	2.3502	36.1942	1.9076	853	51.76%	1.1748	11.3176	3.7837
1998	LDGV	281	39.08%	3.2474	32.7710	1.3205	305	42.42%	1.9622	40.7137	0.9590	375	52.16%	0.8517	8.6787	2.4494
	LDGT1	273	31.74%	3.1079	40.7785	2.6640	343	39.88%	2.2688	40.8349	2.0777	588	68.37%	0.8547	10.7077	3.5788
	LDGT2	176	38.94%	4.3757	36.1466	2.9625	223	49.34%	3.3789	36.7703	2.5264	299	66.15%	1.3802	13.8672	3.7372
1998 Total		730	35.94%	3.4673	36.5794	2.2188	871	42.89%	2.4457	39.7518	1.8008	1,262	62.14%	0.9783	10.8533	3.2807
1999	LDGV	273	33.66%	2.9042	30.8218	1.8037	290	35.76%	1.8820	38.0395	1.0873	529	65.23%	0.7823	8.4699	2.5678
	LDGT1	199	23.36%	3.2938	43.4484	2.2796	296	34.74%	2.2266	39.6812	1.6987	628	73.71%	0.6847	8.9390	3.1331
	LDGT2	214	32.62%	5.0569	33.8786	2.5772	243	37.04%	4.2268	35.6749	2.2041	497	75.76%	1.3736	10.9813	3.0408
1999 Total		686	29.58%	3.6888	35.4382	2.1830	829	35.75%	2.6924	37.9326	1.6330	1,654	71.32%	0.9229	9.4026	2.9246
2000	LDGV	300	31.41%	3.0485	29.1063	1.8284	344	36.02%	1.8703	35.1207	1.0663	629	65.86%	0.8138	8.5295	2.6644
	LDGT1	230	24.06%	3.5440	45.6027	2.3710	328	34.31%	2.4293	41.6796	1.7866	703	73.54%	0.7313	9.9844	3.1453
	LDGT2	139	33.33%	4.5073	44.2084	2.4168	149	35.73%	3.5642	45.5656	2.0995	313	75.06%	1.2551	11.4729	3.1432
2000 Total		669	28.74%	3.5220	37.9155	2.1372	821	35.27%	2.4011	39.6367	1.5416	1,645	70.66%	0.8625	9.7113	2.9610
2001	LDGV	274	36.05%	3.3306	32.5903	1.8916	274	36.05%	2.4228	40.9150	1.0386	496	65.26%	0.8465	8.3009	2.8035
	LDGT1	165	27.36%	4.1096	53.8677	1.9928	271	44.94%	2.1861	47.0252	1.1998	357	59.20%	0.8905	9.6738	3.6461
	LDGT2	109	29.22%	3.9349	41.9094	2.3814	119	31.90%	3.2693	44.3185	2.0418	283	75.87%	0.9907	10.3267	3.1445
2001 Total		548	31.57%	3.6854	40.8504	2.0195	664	38.25%	2.4779	44.0187	1.2842	1,136	65.44%	0.8963	9.2370	3.1532
2002	LDGV	265	31.44%	2.7805	24.9604	2.1784	277	32.86%	1.6090	32.8252	1.3416	598	70.94%	0.8604	8.0897	3.0350
	LDGT1	217	31.18%	3.1707	55.1241	1.9277	387	55.60%	1.7291	45.6005	1.2296	354	50.86%	1.0224	10.0544	3.7322

Vehicle		HC Failures					CO Failures					NOX Failures				
Year	Type	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT2	73	22.19%	3.4263	35.3452	2.2204	75	22.80%	2.8594	41.0430	2.0991	272	82.67%	0.7458	8.4610	3.0910
2002 Total		555	29.71%	3.0180	38.1201	2.0859	739	39.56%	1.7988	40.3494	1.3598	1,224	65.52%	0.8818	8.7404	3.2491
2003	LDGV	211	31.31%	3.3239	27.6981	2.3613	209	31.01%	2.2844	36.4476	1.3664	488	72.40%	0.9852	8.6387	2.8851
	LDGT1	134	28.63%	3.5083	54.8095	1.9275	243	51.92%	1.8701	44.4891	1.2208	262	55.98%	0.7749	10.0785	3.3714
	LDGT2	125	41.12%	5.2149	50.4827	2.8658	154	50.66%	4.0706	47.9421	2.5134	211	69.41%	1.1425	16.6739	3.6625
2003 Total		470	32.50%	3.8794	41.4875	2.3718	606	41.91%	2.5722	42.5932	1.5995	961	66.46%	0.9624	10.7955	3.1884
2004	LDGV	172	33.73%	4.0919	26.2329	2.1934	191	37.45%	2.1248	33.9462	1.5347	342	67.06%	0.9702	9.8919	3.1168
	LDGT1	130	27.31%	4.6297	59.2297	1.7435	249	52.31%	2.4460	45.6993	1.0701	256	53.78%	1.0028	9.4423	3.8023
	LDGT2	72	29.51%	3.5890	50.0724	3.1545	114	46.72%	2.2585	41.3774	2.2948	174	71.31%	1.0429	12.3727	3.6286
2004 Total		374	30.41%	4.1820	42.2918	2.2220	554	45.04%	2.2967	40.7579	1.4823	772	62.76%	0.9974	10.3019	3.4595
2005	LDGV	159	35.18%	3.2558	30.9553	2.3857	189	41.81%	2.1037	36.6440	1.4218	308	68.14%	1.0456	10.1092	3.0961
	LDGT1	75	27.57%	3.4527	46.6629	2.9711	143	52.57%	1.8112	39.2153	1.5947	157	57.72%	0.9101	9.1178	4.0899
	LDGT2	70	30.04%	4.9924	49.8306	3.3969	135	57.94%	2.8118	37.1073	2.6651	169	72.53%	1.6131	18.0707	3.6116
2005 Total		304	31.77%	3.7043	39.1768	2.7629	467	48.80%	2.2188	37.5653	1.8342	634	66.25%	1.1633	11.9859	3.4796
2006	LDGV	147	35.94%	2.9958	26.8439	2.6426	172	42.05%	1.9240	33.4199	1.7712	286	69.93%	1.0254	10.9283	3.1222
	LDGT1	38	21.84%	3.4218	50.2807	2.4766	73	41.95%	1.5136	40.6119	1.4607	116	66.67%	0.6216	7.4592	3.5123
	LDGT2	51	30.91%	3.3728	31.8923	3.5805	81	49.09%	2.1838	29.7350	2.6055	127	76.97%	1.1400	15.0051	3.6000
2006 Total		236	31.55%	3.1459	31.7086	2.8185	326	43.58%	1.8967	34.1148	1.9089	529	70.72%	0.9644	11.1463	3.3224
2007	LDGV	94	34.06%	2.9903	27.3178	2.4240	115	41.67%	1.9172	36.9493	1.7673	189	68.48%	1.0734	9.3389	3.2303
	LDGT1	29	17.68%	4.7128	57.8599	2.1423	95	57.93%	1.6024	42.4751	0.7222	77	46.95%	0.5626	8.9823	3.7786
	LDGT2	27	33.33%	3.1500	28.7854	3.8306	42	51.85%	2.0452	29.9349	2.3946	58	71.60%	1.5858	13.8661	4.1888
2007 Total		150	28.79%	3.3521	33.4868	2.6227	252	48.37%	1.8198	37.8634	1.4779	324	62.19%	1.0437	10.0646	3.5322
2008	LDGV	29	38.16%	3.0275	31.4856	3.0127	37	48.68%	2.1322	34.0134	1.8763	58	76.32%	1.3818	12.0690	3.2189
	LDGT1	5	20.83%	2.1434	18.2473	6.5268	13	54.17%	0.9305	22.9600	2.4852	16	66.67%	0.9120	9.5243	4.4507
	LDGT2	13	28.89%	3.1519	58.4003	3.8042	34	75.56%	1.3769	38.0127	1.9286	21	46.67%	1.6138	24.1738	3.7335
2008 Total		47	32.41%	2.9679	37.5218	3.6055	84	57.93%	1.6405	33.9215	1.9917	95	65.52%	1.3539	14.3162	3.5401
2009	LDGV	19	39.58%	3.1855	40.1456	2.5307	28	58.33%	1.8920	40.6785	1.8170	30	62.50%	1.4463	15.3825	3.0732
	LDGT1	4	40.00%	2.1199	48.4996	2.4239	7	70.00%	0.9300	39.9919	1.0335	4	40.00%	1.4937	10.6291	3.8173
	LDGT2	1	12.50%	1.7823	10.9689	1.8627	7	87.50%	0.3887	30.6400	0.8897	1	12.50%	0.8260	17.6888	2.3300
2009 Total		24	36.36%	2.9494	40.3222	2.4851	42	63.64%	1.4811	38.8910	1.5319	35	53.03%	1.4340	14.9051	3.1370
2010	LDGV	16	47.06%	2.6850	27.0727	3.3767	22	64.71%	2.0529	28.1756	2.5206	26	76.47%	1.8059	16.8570	3.4480
	LDGT1	1	14.29%	2.0636	0.8222	0.0154	3	42.86%	0.5343	26.6315	1.2616	4	57.14%	0.7223	8.8348	3.7905
	LDGT2	1	25.00%	1.5407	18.7398	5.4621	4	100.00%	0.7135	20.6534	2.2666	1	25.00%	1.5407	18.7398	5.4621
2010 Total		18	40.00%	2.5869	25.1514	3.3059	29	64.44%	1.7111	26.9783	2.3553	31	68.89%	1.6576	15.8826	3.5572
2011	LDGV	28	54.90%	2.4116	21.3192	3.6077	27	52.94%	2.0417	27.2880	3.1557	38	74.51%	1.6670	16.3801	3.6639
	LDGT1	7	43.75%	2.0425	45.2986	3.2952	12	75.00%	1.2451	41.5884	2.0836	7	43.75%	1.4478	20.5753	4.2293
	LDGT2	3	27.27%	4.2490	23.3187	3.7887	3	27.27%	3.2872	47.9697	1.4007	8	72.73%	1.2678	8.8391	3.0083
2011 Total		38	48.72%	2.4886	25.8943	3.5644	42	53.85%	1.9031	32.8511	2.7240	53	67.95%	1.5778	15.7959	3.6396
2012	LDGV	2	28.57%	1.6134	19.0075	2.2979	3	42.86%	1.0540	37.4189	1.2247	4	57.14%	0.7319	11.2161	2.7666
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	2	50.00%	0.3598	19.9230	0.5208	2	50.00%	0.5338	5.9526	2.9833
	LDGT2	3	100.00%	3.8670	52.0128	4.1784	3	100.00%	3.8670	52.0128	4.1784	2	66.67%	2.2281	20.2873	5.7620
2012 Total		5	35.71%	2.9655	38.8106	3.4262	8	57.14%	1.9353	38.5176	2.1563	8	57.14%	1.0564	12.1681	3.5696
2013	LDGV	4	50.00%	2.5566	15.9592	3.4922	2	25.00%	1.4488	24.2092	2.1447	6	75.00%	1.8684	13.3863	3.3830

Vehicle		HC Failures					CO Failures					NOX Failures				
Year	Type	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	1	100.00%	0.1349	21.1530	0.4192	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	1	100.00%	5.0497	42.1456	8.2366	1	100.00%	5.0497	42.1456	8.2366	1	100.00%	5.0497	42.1456	8.2366
2013 Total		5	50.00%	3.0552	21.1965	4.4411	4	40.00%	2.0205	27.9293	3.2363	7	70.00%	2.3229	17.4948	4.0764
2014	LDGV	2	50.00%	2.8555	23.9359	5.3035	2	50.00%	2.8555	23.9359	5.3035	4	100.00%	1.8275	16.9205	4.0298
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2014 Total		2	50.00%	2.8555	23.9359	5.3035	2	50.00%	2.8555	23.9359	5.3035	4	100.00%	1.8275	16.9205	4.0298
2015	LDGV	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2015 Total		0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2016	LDGV	2	100.00%	4.8599	15.6605	2.0835	1	50.00%	3.3014	21.6420	4.1016	1	50.00%	3.3014	21.6420	4.1016
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2016 Total		2	100.00%	4.8599	15.6605	2.0835	1	50.00%	3.3014	21.6420	4.1016	1	50.00%	3.3014	21.6420	4.1016
2017	LDGV	0	0.00%	0.0000	0.0000	0.0000	1	100.00%	1.1584	15.4345	3.5202	1	100.00%	1.1584	15.4345	3.5202
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2017 Total		0	0.00%	0.0000	0.0000	0.0000	1	100.00%	1.1584	15.4345	3.5202	1	100.00%	1.1584	15.4345	3.5202
2018	LDGV	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2018 Total		0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
Grand Total		9,624	38.57%	4.0755	41.6181	2.3210	11,696	46.88%	2.8791	45.6645	1.7130	13,817	55.38%	1.1130	10.8360	3.5430

Summary by Vehicle Type (V1.01)

Vehicle Type	HC Failures					CO Failures					NOX Failures				
	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
LDGV	4,179	41.20%	3.5968	34.2362	1.9283	4,403	43.41%	2.5200	41.7914	1.2970	5,590	55.12%	1.0085	9.2335	3.0543
LDGT1	3,073	34.04%	4.2933	51.5058	2.4491	4,468	49.50%	2.8061	49.6985	1.6894	4,867	53.92%	1.0193	10.8240	3.8812
LDGT2	2,372	41.03%	4.6368	41.8135	2.8469	2,825	48.87%	3.5543	45.3208	2.3987	3,360	58.12%	1.4227	13.5193	3.8663
Grand Total	9,624	38.57%	4.0755	41.6181	2.3210	11,696	46.88%	2.8791	45.6645	1.7130	13,817	55.38%	1.1130	10.8360	3.5430

Appendix B4

I/M240 Initial Failure for Other Report

Date
Between 1/1/2018 and 12/31/2018

Initial Failure for Other Report (V1.03)

Vehicle		Visual Overall					CAT				AIS				O2				Gas Cap				Opacity			
Year	Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
1982	LDGT1	192	160	83.33	32	16.67	185	97.37	5	2.60	153	96.23	6	3.77	44	95.65	2	4.35	157	86.26	25	13.74	192	100.00	0	0.00
	LDGT2	34	30	88.24	4	11.76	29	87.88	4	11.76	30	100.00	0	0.00	5	100.00	0	0.00	31	91.18	3	8.82	34	100.00	0	0.00
	LDGV	174	157	90.23	17	9.77	172	98.85	2	1.15	112	95.73	5	4.27	136	99.27	1	0.73	136	93.15	10	6.85	173	99.43	1	0.57
1982 Total		400	347	86.75	53	13.25	386	97.23	11	2.75	295	96.41	11	3.59	185	98.40	3	1.60	324	89.50	38	10.50	399	99.75	1	0.25
1983	LDGT1	205	165	80.49	40	19.51	197	96.10	8	3.90	148	91.36	14	8.64	71	100.00	0	0.00	155	83.78	30	16.22	205	100.00	0	0.00
	LDGT2	68	48	70.59	20	29.41	61	93.85	4	5.88	54	87.10	8	12.90	11	78.57	3	21.43	55	82.09	12	17.91	68	100.00	0	0.00
	LDGV	209	189	90.43	20	9.57	205	98.09	4	1.91	115	96.64	4	3.36	167	98.82	2	1.18	169	92.86	13	7.14	207	99.04	2	0.96
1983 Total		482	402	83.40	80	16.60	463	96.66	16	3.32	317	92.42	26	7.58	249	98.03	5	1.97	379	87.33	55	12.67	480	99.59	2	0.41
1984	LDGT1	421	354	84.09	67	15.91	410	98.09	8	1.90	314	94.86	17	5.14	193	99.48	1	0.52	320	86.72	49	13.28	419	99.52	2	0.48
	LDGT2	166	135	81.33	31	18.67	157	96.91	5	3.01	141	89.24	17	10.76	41	95.35	2	4.65	143	88.82	18	11.18	166	100.00	0	0.00
	LDGV	456	400	87.72	56	12.28	447	98.68	6	1.32	269	95.39	13	4.61	402	99.26	3	0.74	397	91.47	37	8.53	454	99.56	2	0.44
1984 Total		1,043	889	85.23	154	14.77	1014	98.16	19	1.82	724	93.90	47	6.10	636	99.07	6	0.93	860	89.21	104	10.79	1039	99.62	4	0.38
1985	LDGT1	519	459	88.44	60	11.56	508	98.26	9	1.73	277	93.27	20	6.73	328	99.39	2	0.61	435	92.16	37	7.84	517	99.61	2	0.39
	LDGT2	144	121	84.03	23	15.97	139	97.89	3	2.08	132	94.96	7	5.04	39	97.50	1	2.50	126	89.36	15	10.64	142	98.61	2	1.39
	LDGV	555	512	92.25	43	7.75	545	98.55	8	1.44	286	97.28	8	2.72	498	99.40	3	0.60	502	94.54	29	5.46	553	99.64	2	0.36
1985 Total		1,218	1092	89.66	126	10.34	1192	98.35	20	1.64	695	95.21	35	4.79	865	99.31	6	0.69	1,063	92.92	81	7.08	1212	99.51	6	0.49
1986	LDGT1	884	793	89.71	91	10.29	878	99.55	4	0.45	478	95.98	20	4.02	633	98.29	11	1.71	775	92.59	62	7.41	880	99.55	4	0.45
	LDGT2	217	177	81.57	40	18.43	212	97.70	5	2.30	192	93.66	13	6.34	69	93.24	5	6.76	186	87.74	26	12.26	217	100.00	0	0.00
	LDGV	872	805	92.32	67	7.68	865	99.31	6	0.69	386	96.74	13	3.26	810	99.75	2	0.25	794	94.30	48	5.70	870	99.77	2	0.23
1986 Total		1,973	1775	89.96	198	10.04	1955	99.24	15	0.76	1056	95.83	46	4.17	1,512	98.82	18	1.18	1,755	92.81	136	7.19	1967	99.70	6	0.30
1987	LDGT1	801	725	90.51	76	9.49	796	99.50	4	0.50	343	95.54	16	4.46	648	99.69	2	0.31	688	92.10	59	7.90	799	99.75	2	0.25
	LDGT2	263	232	88.21	31	11.79	258	98.47	4	1.52	237	95.95	10	4.05	193	98.97	2	1.03	240	91.95	21	8.05	263	100.00	0	0.00
	LDGV	837	772	92.23	65	7.77	823	98.33	14	1.67	316	96.64	11	3.36	796	99.25	6	0.75	767	94.57	44	5.43	835	99.76	2	0.24
1987 Total		1,901	1729	90.95	172	9.05	1877	98.84	22	1.16	896	96.03	37	3.97	1,637	99.39	10	0.61	1,695	93.18	124	6.82	1897	99.79	4	0.21
1988	LDGT1	1,229	1130	91.94	99	8.06	1225	99.76	3	0.24	671	97.81	15	2.19	1,142	99.83	2	0.17	1,133	93.40	80	6.60	1228	99.92	1	0.08
	LDGT2	458	408	89.08	50	10.92	453	99.56	2	0.44	416	98.35	7	1.65	420	99.29	3	0.71	415	91.01	41	8.99	457	99.78	1	0.22
	LDGV	1,164	1106	95.02	58	4.98	1158	99.48	6	0.52	400	97.32	11	2.68	1,120	99.73	3	0.27	1,100	96.24	43	3.76	1161	99.74	3	0.26
1988 Total		2,851	2644	92.74	207	7.26	2836	99.61	11	0.39	1487	97.83	33	2.17	2,682	99.70	8	0.30	2,648	94.17	164	5.83	2846	99.82	5	0.18
1989	LDGT1	1,319	1201	91.05	118	8.95	1311	99.54	6	0.45	548	97.86	12	2.14	1,238	99.52	6	0.48	1,191	92.18	101	7.82	1318	99.92	1	0.08
	LDGT2	531	488	91.90	43	8.10	527	99.25	4	0.75	274	97.86	6	2.14	497	100.00	0	0.00	497	93.60	34	6.40	530	99.81	1	0.19
	LDGV	1,216	1134	93.26	82	6.74	1206	99.26	9	0.74	391	97.26	11	2.74	1,176	99.75	3	0.25	1,135	94.74	63	5.26	1215	99.92	1	0.08
1989 Total		3,066	2823	92.07	243	7.93	3044	99.38	19	0.62	1213	97.67	29	2.33	2,911	99.69	9	0.31	2,823	93.45	198	6.55	3063	99.90	3	0.10
1990	LDGT1	1,646	1520	92.35	126	7.65	1627	99.09	15	0.91	687	97.45	18	2.55	1,601	99.44	9	0.56	1,511	93.85	99	6.15	1642	99.76	4	0.24
	LDGT2	635	557	87.72	78	12.28	627	98.74	8	1.26	264	98.14	5	1.86	631	99.37	4	0.63	567	89.57	66	10.43	634	99.84	1	0.16
	LDGV	2,148	2056	95.72	92	4.28	2139	99.72	6	0.28	423	99.06	4	0.94	2,137	99.81	4	0.19	2,048	96.38	77	3.62	2146	99.91	2	0.09
1990 Total		4,429	4133	93.32	296	6.68	4393	99.34	29	0.65	1374	98.07	27	1.93	4,369	99.61	17	0.39	4,126	94.46	242	5.54	4422	99.84	7	0.16
1991	LDGT1	1,853	1717	92.66	136	7.34	1841	99.46	10	0.54	623	99.05	6	0.95	1,841	99.89	2	0.11	1,713	93.56	118	6.44	1849	99.78	4	0.22
	LDGT2	614	562	91.53	52	8.47	606	98.70	8	1.30	271	96.79	9	3.21	607	99.51	3	0.49	575	93.65	39	6.35	614	100.00	0	0.00
	LDGV	2,275	2147	94.37	128	5.63	2265	99.69	7	0.31	315	98.44	5	1.56	2,262	99.65	8	0.35	2,147	95.46	102	4.54	2266	99.60	9	0.40
1991 Total		4,742	4426	93.34	316	6.66	4712	99.47	25	0.53	1209	98.37	20	1.63	4,710	99.72	13	0.28	4,435	94.48	259	5.52	4729	99.73	13	0.27
1992	LDGT1	2,138	1987	92.94	151	7.06	2127	99.63	8	0.37	692	99.00	7	1.00	2,132	99.91	2	0.09	1,998	93.54	138	6.46	2135	99.86	3	0.14
	LDGT2	1,102	1014	92.01	88	7.99	1092	99.18	9	0.82	460	98.92	5	1.08	1,099	99.73	3	0.27	1,027	93.19	75	6.81				

Vehicle		Visual Overall					CAT				AIS				O2				Gas Cap				Opacity			
Year	Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
2009	LDGT1	1,907	1871	98.11	36	1.89	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,762	98.00	36	2.00	1907	100.00	0	0.00
	LDGT2	779	738	94.74	41	5.26	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	628	94.01	40	5.99	778	99.87	1	0.13
	LDGV	2,759	2707	98.12	52	1.88	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,692	98.14	51	1.86	2758	99.96	1	0.04
2009 Total		5,445	5316	97.63	129	2.37	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5,082	97.56	127	2.44	5443	99.96	2	0.04
2010	LDGT1	829	805	97.10	24	2.90	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	745	96.88	24	3.12	829	100.00	0	0.00
	LDGT2	593	563	94.94	30	5.06	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	371	92.75	29	7.25	592	99.83	1	0.17
	LDGV	1,179	1146	97.20	33	2.80	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,065	96.99	33	3.01	1179	100.00	0	0.00
2010 Total		2,601	2514	96.66	87	3.34	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,181	96.21	86	3.79	2600	99.96	1	0.04
2011	LDGT1	1,530	1494	97.65	36	2.35	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,392	97.55	35	2.45	1529	99.93	1	0.07
	LDGT2	900	839	93.22	61	6.78	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	659	91.53	61	8.47	900	100.00	0	0.00
	LDGV	1,787	1750	97.93	37	2.07	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,566	97.75	36	2.25	1786	99.94	1	0.06
2011 Total		4,217	4083	96.82	134	3.18	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3,617	96.48	132	3.52	4215	99.95	2	0.05
2012	LDGT1	289	284	98.27	5	1.73	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	262	98.13	5	1.87	289	100.00	0	0.00
	LDGT2	202	186	92.08	16	7.92	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	158	91.86	14	8.14	200	99.01	2	0.99
	LDGV	525	506	96.38	19	3.62	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	427	95.74	19	4.26	525	100.00	0	0.00
2012 Total		1,016	976	96.06	40	3.94	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	847	95.71	38	4.29	1014	99.80	2	0.20
2013	LDGT1	88	87	98.86	1	1.14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	74	98.67	1	1.33	88	100.00	0	0.00
	LDGT2	88	86	97.73	2	2.27	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	46	95.83	2	4.17	88	100.00	0	0.00
	LDGV	231	219	94.81	12	5.19	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	191	94.09	12	5.91	231	100.00	0	0.00
2013 Total		407	392	96.31	15	3.69	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	311	95.40	15	4.60	407	100.00	0	0.00
2014	LDGT1	53	52	98.11	1	1.89	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	45	97.83	1	2.17	53	100.00	0	0.00
	LDGT2	47	47	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	28	100.00	0	0.00	47	100.00	0	0.00
	LDGV	93	91	97.85	2	2.15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	81	97.59	2	2.41	93	100.00	0	0.00
2014 Total		193	190	98.45	3	1.55	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	154	98.09	3	1.91	193	100.00	0	0.00
2015	LDGT1	41	41	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	40	100.00	0	0.00	41	100.00	0	0.00
	LDGT2	10	9	90.00	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	75.00	1	25.00	10	100.00	0	0.00
	LDGV	64	64	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	59	100.00	0	0.00	64	100.00	0	0.00
2015 Total		115	114	99.13	1	0.87	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	102	99.03	1	0.97	115	100.00	0	0.00
2016	LDGT1	14	14	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	12	100.00	0	0.00	14	100.00	0	0.00
	LDGT2	5	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	5	100.00	0	0.00
	LDGV	43	42	97.67	1	2.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	38	97.44	1	2.56	43	100.00	0	0.00
2016 Total		62	61	98.39	1	1.61	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	53	98.15	1	1.85	62	100.00	0	0.00
2017	LDGT1	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
	LDGT2	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00
	LDGV	17	17	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	14	100.00	0	0.00	17	100.00	0	0.00
2017 Total		22	22	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	18	100.00	0	0.00	22	100.00	0	0.00
2018	LDGT1	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
	LDGV	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
2018 Total		5	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	5	100.00	0	0.00
Grand Total		572,755	547322	95.56	25433	4.44	58146	99.44	328	0.06	16637	97.74	385	2.26	56,093	99.72	156	0.28	545,682	95.72	24,416	4.28	572306	99.92	449	0.08

Initial Failure for Other Report - Summary by Veh (V1.03)

Vehicle	Visual Overall					CAT				AIS				O2				Gas Cap				Opacity			
Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
LDGT1	221,782	211655	95.43	10127	4.57	22072	99.48	116	0.05	7339	97.76	168	2.24	20,847	99.74	55	0.26	211,158	95.57	9,779	4.43	221654	99.94	128	0.06
LDGT2	94,910	89742	94.55	5168	5.45	10287	99.04	100	0.11	4664	97.74	108	2.26	9,768	99.60	39	0.40	89,273	94.76	4,937	5.24	94828	99.91	82	0.09
LDGV	256,063	245925	96.04	10138	3.96	25787	99.57	112	0.04	4634	97.70	109	2.30	25,478	99.76	62	0.24								

Appendix B5

I/M240 Retest Pass Reduction Report

Date
Between 1/1/2018 and 12/31/2018

Retest Pass Reduction Report (V1.01)

Vehicle		Initial Exhaust Emissions				Passing Retest Exhaust Emissions					Emission Reductions						Average Repair Costs
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Avg HC(gpm)	Avg HC%(gpm)	Avg CO(gpm)	Avg CO%(gpm)	Avg NOx(gpm)	Avg NOx%(gpm)	
1982	LDGV	52	4.1925	52.2266	2.9954	31	59.62%	1.5384	19.0099	2.0614	2.5311	62.20%	29.2543	60.61%	0.2244	9.82%	419.50
	LDGT1	98	5.3656	79.8674	2.1087	54	55.10%	2.0506	31.9298	2.3986	2.4554	54.49%	37.9628	54.32%	0.0421	1.73%	295.83
	LDGT2	22	6.8449	154.0270	1.0626	8	36.36%	2.4076	26.4378	3.0750	4.3952	64.61%	116.2728	81.47%	-1.9630	-176.53%	393.25
1982 Total		172	5.2002	80.9964	2.2430	93	54.07%	1.9106	27.1507	2.3444	2.6475	58.08%	41.7963	60.62%	-0.0696	-3.06%	348.92
1983	LDGV	88	4.6841	69.3561	1.8376	37	42.05%	1.4493	15.4791	2.0502	2.5914	64.13%	39.7995	72.00%	-0.0491	-2.46%	543.67
	LDGT1	92	4.8473	70.6510	1.9556	53	57.61%	2.8692	31.0347	2.4658	1.4967	34.28%	19.0029	37.98%	-0.0048	-0.20%	399.50
	LDGT2	66	5.2683	86.8912	3.7672	23	34.85%	2.5246	35.9483	3.2970	2.4460	49.21%	36.9563	50.69%	0.4822	12.76%	0.00
1983 Total		246	4.9019	74.5449	2.3994	113	45.93%	2.3341	26.9413	2.4989	2.0483	46.74%	29.4666	52.24%	0.0798	3.09%	461.29
1984	LDGV	162	3.8967	56.4237	1.7854	82	50.62%	1.5075	14.9046	2.0062	1.6072	51.60%	26.4616	63.97%	-0.1236	-6.56%	783.57
	LDGT1	140	4.6317	72.7350	2.2218	82	58.57%	2.2352	24.2586	2.7307	1.6219	42.05%	23.8055	49.53%	-0.1003	-3.81%	409.20
	LDGT2	128	5.6102	105.4102	2.3729	54	42.19%	2.3274	28.2768	2.9856	2.4364	51.14%	48.3280	63.09%	-0.0298	-1.01%	640.60
1984 Total		430	4.6460	76.3164	2.1023	218	50.70%	1.9843	21.7355	2.5213	1.8181	47.81%	30.8790	58.69%	-0.0916	-3.77%	631.41
1985	LDGV	208	3.7295	57.8380	1.8370	85	40.87%	1.1773	9.8589	1.9956	1.4349	54.93%	25.2080	71.89%	-0.0156	-0.79%	268.00
	LDGT1	201	4.4012	71.8132	2.5451	101	50.25%	2.0288	20.7741	2.6256	1.6026	44.13%	33.5014	61.72%	-0.1548	-6.26%	428.50
	LDGT2	105	5.0050	89.5091	2.6851	45	42.86%	1.9507	24.2809	2.8038	2.2152	53.18%	47.8259	66.33%	0.2590	8.46%	450.50
1985 Total		514	4.2527	69.7728	2.2872	231	44.94%	1.7002	17.4408	2.4285	1.6603	49.41%	33.2402	65.59%	-0.0230	-0.95%	386.47
1986	LDGV	215	4.0672	38.9317	1.9879	115	53.49%	1.0822	8.6641	1.7136	1.5578	59.01%	15.6960	64.43%	0.4389	20.39%	292.67
	LDGT1	254	4.1965	54.3745	2.3435	135	53.15%	1.6516	17.9864	2.3969	1.4313	46.43%	25.5242	58.66%	0.0538	2.19%	309.33
	LDGT2	154	6.1714	85.4878	2.7865	65	42.21%	1.7558	18.9661	2.8828	3.3392	65.54%	48.6874	71.97%	-0.3998	-16.10%	73.75
1986 Total		623	4.6401	56.7361	2.3303	315	50.56%	1.4653	14.7852	2.2477	1.8712	56.08%	26.7159	64.37%	0.1008	4.29%	259.68
1987	LDGV	248	3.2556	37.4554	2.1369	127	51.21%	1.1122	9.6535	1.8827	1.4013	55.75%	14.9393	60.75%	0.3393	15.27%	239.29
	LDGT1	297	3.7085	57.1925	2.4457	151	50.84%	1.4712	14.4290	2.3865	1.3260	47.40%	28.2673	66.21%	-0.0020	-0.08%	608.00
	LDGT2	115	4.1207	66.8165	2.5513	57	49.57%	1.6662	14.1604	2.7489	1.6692	50.04%	27.2469	65.80%	0.0645	2.29%	365.00
1987 Total		660	3.6101	51.4531	2.3481	335	50.76%	1.3683	12.5729	2.2572	1.4129	50.80%	23.0410	64.70%	0.1387	5.79%	446.58
1988	LDGV	266	3.4543	28.9403	1.7454	129	48.50%	0.9465	8.3862	1.6248	1.9701	67.55%	15.7066	65.19%	0.1864	10.29%	227.38
	LDGT1	363	3.1944	42.9349	2.7206	190	52.34%	1.4498	13.2301	2.4098	1.4253	49.57%	18.0134	57.65%	0.4098	14.53%	281.22
	LDGT2	196	3.2184	37.4587	3.4531	95	48.47%	1.4339	12.7462	2.5720	0.9733	40.43%	12.7416	49.99%	0.8952	25.82%	303.90
1988 Total		825	3.2839	37.1217	2.5802	414	50.18%	1.2894	11.6097	2.2024	1.4913	53.63%	16.0849	58.08%	0.4516	17.01%	266.44
1989	LDGV	280	2.9148	26.2043	2.1522	172	61.43%	0.8732	8.2473	1.7528	1.6334	65.16%	12.3440	59.95%	0.4224	19.42%	459.67
	LDGT1	434	3.5052	51.2320	2.7429	218	50.23%	1.3126	12.3657	2.2940	1.7511	57.16%	21.8370	63.85%	0.4837	17.41%	565.08
	LDGT2	178	2.9595	33.0412	3.3187	90	50.56%	1.4678	12.1537	2.8794	1.3739	48.35%	13.7258	53.04%	0.5486	16.00%	276.60
1989 Total		892	3.2110	39.7458	2.6724	480	53.81%	1.1842	10.8502	2.2098	1.6382	58.04%	16.9145	60.92%	0.4739	17.66%	478.63
1990	LDGV	370	2.5274	31.3900	2.2731	220	59.46%	0.8156	7.5724	1.7703	0.8978	52.40%	15.9438	67.80%	0.3703	17.30%	287.00
	LDGT1	434	3.1998	40.5886	2.6917	234	53.92%	1.2578	12.1130	2.0459	1.4963	54.33%	20.2875	62.61%	0.5466	21.08%	320.62
	LDGT2	218	3.7082	30.0196	3.0995	129	59.17%	1.5192	12.8816	2.4317	1.7376	53.35%	12.2747	48.79%	0.4836	16.59%	310.71
1990 Total		1022	3.0648	35.0039	2.6271	583	57.05%	1.1488	10.5696	2.0273	1.3239	53.54%	16.8754	61.49%	0.4662	18.70%	304.74
1991	LDGV	517	2.6546	30.5084	2.1451	261	50.48%	0.7120	6.9714	1.5582	1.2272	63.28%	14.3831	67.35%	0.5494	26.07%	468.47
	LDGT1	459	3.2043	40.3830	2.5271	252	54.90%	1.0891	11.1546	1.8743	1.0158	48.26%	15.0748	57.47%	0.6357	25.33%	587.83

Vehicle		Initial Exhaust Emissions				Passing Retest Exhaust Emissions					Emission Reductions						Average Repair Costs
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Avg HC(gpm)	Avg HC%(gpm)	Avg CO(gpm)	Avg CO%(gpm)	Avg NOx(gpm)	Avg NOx%(gpm)	
	LDGT2	235	2.3939	30.0335	3.4021	121	51.49%	1.2762	13.7156	2.5459	0.9313	42.19%	13.7377	50.04%	0.7916	23.72%	367.25
1991 Total		1211	2.8123	34.1589	2.5338	634	52.35%	0.9696	9.9213	1.8723	1.0867	52.85%	14.5349	59.43%	0.6299	25.17%	474.05
1992	LDGV	648	2.3096	25.2318	2.1156	353	54.48%	0.6844	6.6524	1.5472	0.8512	55.43%	12.2894	64.88%	0.3969	20.41%	484.32
	LDGT1	418	2.5438	27.9752	2.7892	264	63.16%	1.1230	10.7600	1.9501	0.8706	43.67%	11.8124	52.33%	0.5338	21.49%	278.67
	LDGT2	419	3.2962	31.0767	3.0976	213	50.84%	1.3579	13.2659	2.2763	1.1984	46.88%	12.3593	48.23%	0.7623	25.09%	205.44
1992 Total		1485	2.6539	27.6532	2.5823	830	55.89%	0.9968	9.6561	1.8625	0.9465	48.71%	12.1556	55.73%	0.5342	22.29%	366.46
1993	LDGV	685	1.9518	24.2703	2.3174	357	52.12%	0.6122	6.0571	1.5992	0.9461	60.71%	14.1797	70.07%	0.6027	27.37%	399.00
	LDGT1	578	2.4704	31.6284	3.1259	351	60.73%	1.0437	9.6983	1.9828	1.0884	51.05%	15.3314	61.25%	0.8887	30.95%	315.50
	LDGT2	405	3.5815	34.9748	3.3220	208	51.36%	1.4067	13.0682	2.2389	1.5481	52.39%	17.8740	57.77%	1.0007	30.89%	364.17
1993 Total		1668	2.5272	29.4192	2.8415	916	54.92%	0.9580	9.0444	1.8914	1.1373	54.28%	15.4599	63.09%	0.8027	29.79%	372.67
1994	LDGV	619	1.7306	17.0495	1.9805	365	58.97%	0.5343	5.5529	1.3080	0.8766	62.13%	9.9555	64.19%	0.3350	20.39%	400.19
	LDGT1	889	2.2186	27.3119	2.7364	509	57.26%	0.8735	8.9095	1.8672	0.9700	52.62%	11.7743	56.93%	0.7760	29.36%	384.85
	LDGT2	937	2.4511	23.8620	3.2084	468	49.95%	0.9713	9.9037	1.9884	0.9420	49.23%	11.3816	53.47%	0.9099	31.39%	412.32
1994 Total		2445	2.1842	23.3917	2.7259	1342	54.89%	0.8153	8.3433	1.7574	0.9348	53.41%	11.1427	57.18%	0.7027	28.57%	399.34
1995	LDGV	930	1.7863	18.9395	1.8455	480	51.61%	0.5159	5.3555	1.1900	0.9451	64.69%	11.7277	68.65%	0.3991	25.11%	541.35
	LDGT1	1009	2.1455	23.8638	3.0703	553	54.81%	0.7960	8.1525	1.8850	0.8780	52.45%	10.7432	56.86%	0.8330	30.65%	301.61
	LDGT2	1100	2.7439	26.3035	3.0109	546	49.64%	0.9554	10.4978	1.9885	1.2108	55.89%	12.0783	53.50%	0.8910	30.94%	374.82
1995 Total		3039	2.2522	23.2399	2.6740	1579	51.96%	0.7660	8.1132	1.7095	1.0135	56.95%	11.5041	58.64%	0.7212	29.67%	385.52
1996	LDGV	941	1.2974	15.3506	1.7050	588	62.49%	0.4108	4.6264	0.9471	0.5969	59.23%	7.3878	61.49%	0.5363	36.15%	410.11
	LDGT1	864	1.2521	16.2761	2.5403	607	70.25%	0.4556	5.3636	1.5382	0.5538	54.86%	9.1442	63.03%	0.6472	29.61%	410.96
	LDGT2	597	2.0442	20.8809	2.4618	364	60.97%	0.5351	6.0378	1.4425	1.0032	65.21%	10.8247	64.19%	0.7253	33.46%	456.86
1996 Total		2402	1.4667	17.0580	2.1936	1559	64.90%	0.4573	5.2429	1.2929	0.6750	59.61%	8.8741	62.86%	0.6236	32.54%	421.95
1997	LDGV	1257	1.1866	15.1772	1.5429	841	66.91%	0.3695	4.7384	0.8817	0.5164	58.29%	7.4375	61.08%	0.4217	32.35%	625.57
	LDGT1	1566	1.4234	17.3831	2.5699	979	62.52%	0.4347	6.0040	1.4444	0.6309	59.21%	9.1802	60.46%	0.7391	33.85%	491.95
	LDGT2	808	1.9790	20.5671	2.7311	444	54.95%	0.4885	6.2754	1.4584	0.6125	55.63%	9.4949	60.21%	0.8915	37.94%	575.67
1997 Total		3631	1.4650	17.3279	2.2502	2264	62.35%	0.4210	5.5871	1.2382	0.5847	58.14%	8.5946	60.60%	0.6511	34.46%	542.08
1998	LDGV	1669	1.0840	14.0618	1.3644	1085	65.01%	0.3033	4.0465	0.7051	0.5971	66.32%	7.9216	66.19%	0.3906	35.65%	341.60
	LDGT1	1888	1.0198	15.4332	2.5157	1152	61.02%	0.3687	4.6998	1.2393	0.4793	56.52%	8.4638	64.30%	0.8440	40.51%	365.69
	LDGT2	932	1.4998	17.4262	2.6784	534	57.30%	0.4040	5.2083	1.2981	0.9106	69.26%	10.8156	67.50%	0.9429	42.08%	745.09
1998 Total		4489	1.1433	15.3371	2.1214	2771	61.73%	0.3499	4.5420	1.0415	0.6085	63.49%	8.7047	65.71%	0.6855	39.69%	431.47
1999	LDGV	1707	0.8490	12.1523	1.5217	1088	63.74%	0.2839	3.7830	0.6796	0.4537	61.51%	7.3103	65.90%	0.5340	44.00%	548.40
	LDGT1	1889	0.8289	13.6229	2.1774	1153	61.04%	0.3032	4.2211	1.0202	0.3509	53.65%	6.9708	62.28%	0.7800	43.33%	337.65
	LDGT2	1355	1.5378	12.8924	2.4715	733	54.10%	0.3617	3.9188	1.0847	0.7827	68.39%	7.5157	65.73%	0.9935	47.81%	386.33
1999 Total		4951	1.0299	12.9159	2.0319	2974	60.07%	0.3106	3.9863	0.9115	0.4949	61.44%	7.2293	64.46%	0.7426	44.90%	400.72
2000	LDGV	2216	0.9279	11.8106	1.5819	1391	62.77%	0.2497	3.5465	0.6146	0.4282	63.17%	6.2203	63.69%	0.5994	49.37%	389.71
	LDGT1	2247	0.6983	13.0656	2.1397	1402	62.39%	0.2795	4.0826	0.9910	0.3043	52.13%	6.3174	60.74%	0.7265	42.30%	386.96
	LDGT2	942	1.1211	14.3719	2.1829	572	60.72%	0.3103	4.0668	0.9704	0.4775	60.61%	7.3062	64.24%	0.7061	42.12%	375.19
2000 Total		5405	0.8661	12.7787	1.9186	3365	62.26%	0.2724	3.8583	0.8319	0.3850	58.56%	6.4453	62.55%	0.6705	44.63%	386.15
2001	LDGV	1856	0.8451	12.3744	1.4723	1263	68.05%	0.1927	3.1284	0.4798	0.4749	71.13%	6.8408	68.62%	0.6370	57.04%	383.38
	LDGT1	1681	0.9405	15.5935	1.7381	1179	70.14%	0.2012	3.8024	0.6330	0.4527	69.23%	7.0322	64.90%	0.6039	48.82%	489.27
	LDGT2	1043	1.1782	15.4585	1.8709	667	63.95%	0.3022	3.8455	0.8637	0.4114	57.65%	5.3233	58.06%	0.5971	40.87%	641.73

Vehicle		Initial Exhaust Emissions				Passing Retest Exhaust Emissions					Emission Reductions						Average Repair Costs
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Avg HC(gpm)	Avg HC%(gpm)	Avg CO(gpm)	Avg CO%(gpm)	Avg NOx(gpm)	Avg NOx%(gpm)	
2001 Total		4580	0.9560	14.2583	1.6606	3109	67.88%	0.2194	3.5378	0.6203	0.4528	67.36%	6.5878	65.06%	0.6159	49.82%	448.03
2002	LDGV	2216	0.7278	8.9841	1.4566	1603	72.34%	0.1728	3.1304	0.4182	0.3732	68.36%	4.1292	56.88%	0.6457	60.69%	487.47
	LDGT1	1980	0.8121	17.1916	1.5075	1406	71.01%	0.1703	3.8138	0.5649	0.3411	66.70%	8.3003	68.52%	0.5444	49.07%	391.17
	LDGT2	992	0.6685	9.4201	1.9832	639	64.42%	0.2507	3.3436	0.8620	0.2389	48.80%	3.7922	53.14%	0.5862	40.48%	473.23
2002 Total		5188	0.7486	12.1999	1.5767	3648	70.32%	0.1854	3.4312	0.5525	0.3373	64.53%	5.6778	62.33%	0.5962	51.90%	443.76
2003	LDGV	1943	0.8130	10.0579	1.3015	1380	71.02%	0.1442	2.2522	0.3778	0.3384	70.11%	4.3981	66.13%	0.5366	58.68%	277.72
	LDGT1	1505	0.7174	11.8221	1.2513	1173	77.94%	0.1575	3.0399	0.4968	0.3134	66.55%	6.1230	66.82%	0.4579	47.96%	375.40
	LDGT2	810	1.4357	18.8113	1.7706	582	71.85%	0.2391	3.3974	0.6831	0.6420	72.86%	9.3863	73.42%	0.6777	49.80%	411.82
2003 Total		4258	0.8977	12.3466	1.3730	3135	73.63%	0.1668	2.7595	0.4790	0.3854	69.79%	5.9695	68.39%	0.5334	52.68%	332.13
2004	LDGV	1717	0.6799	7.3782	1.1054	1341	78.10%	0.1213	2.1311	0.2982	0.4002	76.74%	3.3581	61.18%	0.4839	61.87%	235.21
	LDGT1	1732	0.6646	11.9808	1.0991	1361	78.58%	0.1243	2.6209	0.3227	0.2777	69.08%	5.9646	69.47%	0.4597	58.76%	305.00
	LDGT2	931	0.7726	10.0959	1.4201	689	74.01%	0.1560	2.5730	0.3977	0.3898	71.42%	5.4527	67.94%	0.5118	56.27%	404.36
2004 Total		4380	0.6936	9.7759	1.1698	3391	77.42%	0.1296	2.4175	0.3282	0.3489	72.92%	4.8298	66.64%	0.4798	59.38%	290.60
2005	LDGV	1585	0.7205	9.5148	1.0733	1229	77.54%	0.1151	2.1135	0.2529	0.3626	75.91%	4.1496	66.25%	0.5153	67.08%	219.19
	LDGT1	1033	0.4220	8.0941	1.1152	869	84.12%	0.1268	2.3856	0.2763	0.1787	58.48%	3.7290	60.99%	0.4940	64.13%	173.26
	LDGT2	636	1.0349	14.0775	1.9726	426	66.98%	0.2159	3.3810	0.4969	0.5566	72.06%	7.5396	69.04%	0.9238	65.02%	450.33
2005 Total		3254	0.6872	9.9555	1.2624	2524	77.57%	0.1361	2.4211	0.3021	0.3320	70.92%	4.5770	65.40%	0.5769	65.63%	265.52
2006	LDGV	1246	0.6052	8.9693	1.2304	960	77.05%	0.1187	2.2465	0.2369	0.3116	72.42%	4.5155	66.78%	0.6482	73.24%	291.38
	LDGT1	848	0.3090	5.7660	0.8920	742	87.50%	0.0814	1.8961	0.2154	0.1487	64.63%	2.7879	59.52%	0.3692	63.16%	198.75
	LDGT2	594	0.8523	9.4101	1.2973	470	79.12%	0.1425	2.0134	0.3227	0.3424	70.61%	4.2762	67.99%	0.6148	65.58%	199.70
2006 Total		2688	0.5664	8.0562	1.1384	2172	80.80%	0.1111	2.0764	0.2481	0.2626	70.27%	3.8735	65.10%	0.5457	68.74%	245.25
2007	LDGV	853	0.4969	8.2905	0.9149	693	81.24%	0.0951	2.1072	0.2000	0.2244	70.23%	3.8298	64.51%	0.4716	70.21%	209.43
	LDGT1	928	0.2213	9.3240	0.5993	792	85.34%	0.0656	2.1405	0.1546	0.0938	58.85%	3.6021	62.73%	0.2668	63.32%	136.96
	LDGT2	471	0.4256	5.1764	0.8677	408	86.62%	0.0832	1.3347	0.1758	0.1204	59.16%	2.2725	63.00%	0.3209	64.61%	208.83
2007 Total		2252	0.3684	8.0651	0.7750	1893	84.06%	0.0802	1.9546	0.1758	0.1474	64.76%	3.3989	63.49%	0.3534	66.78%	175.81
2008	LDGV	204	0.9094	16.9172	1.6179	138	67.65%	0.1283	2.6240	0.2577	0.5128	79.99%	7.0141	72.77%	1.0064	79.62%	326.86
	LDGT1	122	0.3006	5.8373	1.3485	94	77.05%	0.0769	2.4668	0.1441	0.1204	61.04%	2.4792	50.13%	0.4031	73.67%	10.00
	LDGT2	132	0.7019	19.6885	1.3195	90	68.18%	0.1562	3.8858	0.3132	0.3552	69.45%	8.5412	68.73%	0.7870	71.53%	1017.50
2008 Total		458	0.6874	14.7645	1.4601	322	70.31%	0.1211	2.9308	0.2400	0.3542	74.52%	6.1171	67.61%	0.7690	76.21%	433.30
2009	LDGV	117	0.8026	14.4776	1.1899	85	72.65%	0.1332	2.5341	0.2015	0.4162	75.75%	7.4295	74.57%	0.6852	77.28%	1423.00
	LDGT1	55	0.3726	12.1206	0.6162	46	83.64%	0.0545	2.5432	0.1624	0.2525	82.26%	6.7065	72.51%	0.2482	60.45%	0.00
	LDGT2	48	0.1657	8.8081	0.3308	42	87.50%	0.0999	2.7982	0.2523	0.0029	2.79%	0.9869	26.07%	-0.0352	-16.23%	222.00
2009 Total		220	0.5562	12.6514	0.8590	173	78.64%	0.1042	2.6007	0.2034	0.2723	72.32%	5.6732	68.57%	0.3941	65.96%	622.33
2010	LDGV	94	1.0589	14.1245	1.8122	65	69.15%	0.1277	2.4794	0.1806	0.6856	84.30%	8.5008	77.42%	1.2296	87.19%	394.00
	LDGT1	39	0.2668	6.0916	0.8335	33	84.62%	0.0790	1.9186	0.0900	0.1380	63.60%	2.9527	60.61%	0.5234	85.33%	1409.00
	LDGT2	32	0.0929	3.7900	0.2432	31	96.88%	0.0561	1.8744	0.1265	0.0197	25.96%	1.5745	45.65%	0.0480	27.51%	0.00
2010 Total		165	0.6843	10.2215	1.2765	129	78.18%	0.0980	2.1905	0.1444	0.3855	79.73%	5.4171	71.21%	0.7650	84.12%	901.50
2011	LDGV	107	1.1528	11.7655	1.7563	72	67.29%	0.1619	2.8278	0.2717	0.6351	79.69%	7.1052	71.53%	1.2391	82.02%	0.00
	LDGT1	63	0.5998	11.1044	1.0787	54	85.71%	0.0873	2.6426	0.1925	0.2980	77.34%	6.0699	69.67%	0.5770	74.99%	631.00
	LDGT2	75	0.1904	5.3675	0.4217	68	90.67%	0.0427	1.4860	0.0746	0.0660	60.71%	1.4663	49.67%	0.2575	77.54%	0.00
2011 Total		245	0.7159	9.6369	1.1735	194	79.18%	0.0994	2.3059	0.1805	0.3418	77.48%	4.8405	67.73%	0.7107	79.74%	631.00

Vehicle		Initial Exhaust Emissions				Passing Retest Exhaust Emissions					Emission Reductions						Average Repair Costs
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Avg HC(gpm)	Avg HC%(gpm)	Avg CO(gpm)	Avg CO%(gpm)	Avg NOx(gpm)	Avg NOx%(gpm)	
2012	LDGV	28	0.2646	8.1074	0.5578	24	85.71%	0.0911	2.9511	0.2186	0.1347	59.67%	2.6683	47.48%	0.3250	59.78%	0.00
	LDGT1	14	0.3504	8.8109	1.0720	9	64.29%	0.0667	3.0871	0.3358	0.1525	69.56%	1.7285	35.89%	0.4952	59.60%	0.00
	LDGT2	14	0.6960	11.0113	0.5132	14	100.00%	0.0534	1.4630	0.0930	0.6427	92.33%	9.5483	86.71%	0.4202	81.88%	0.00
2012 Total		56	0.3939	9.0093	0.6752	47	83.93%	0.0752	2.5339	0.2036	0.2894	79.38%	4.5377	64.17%	0.3860	65.46%	0.00
2013	LDGV	18	0.6102	6.0737	0.8006	15	83.33%	0.0439	1.9895	0.1031	0.3232	88.04%	2.6215	56.85%	0.4999	82.91%	0.00
	LDGT1	1	0.0457	3.9705	0.0723	1	100.00%	0.1530	5.5847	0.2209	-0.1073	-234.79%	-1.6142	-40.65%	-0.1486	-205.53%	0.00
	LDGT2	3	3.3739	28.2162	5.5036	2	66.67%	0.1329	0.6858	0.5966	2.4031	94.76%	20.5657	96.77%	3.5405	85.58%	0.00
2013 Total		22	0.9614	8.9975	1.4088	18	81.82%	0.0599	2.0444	0.1644	0.5304	89.86%	4.3800	68.18%	0.8017	82.98%	0.00
2014	LDGV	5	0.6376	6.2900	1.7472	2	40.00%	0.0119	0.3522	0.0543	0.0618	83.84%	0.0828	19.03%	0.0005	1.00%	0.00
	LDGT1	1	0.0413	4.3266	0.0639	1	100.00%	0.0421	5.2367	0.1734	-0.0008	-1.94%	-0.9101	-21.03%	-0.1095	-171.36%	0.00
2014 Total		6	0.5382	5.9628	1.4667	3	50.00%	0.0220	1.9804	0.0940	0.0409	65.06%	-0.2482	-14.33%	-0.0361	-62.48%	0.00
2015	LDGT2	1	0.0262	0.8057	0.0409	1	100.00%	0.0185	0.4732	0.0372	0.0077	29.39%	0.3325	41.27%	0.0037	9.05%	0.00
2015 Total		1	0.0262	0.8057	0.0409	1	100.00%	0.0185	0.4732	0.0372	0.0077	29.39%	0.3325	41.27%	0.0037	9.05%	0.00
2016	LDGV	2	3.2166	5.1444	0.0531	2	100.00%	0.0224	1.2020	0.0042	3.1942	99.30%	3.9424	76.63%	0.0490	92.19%	0.00
2016 Total		2	3.2166	5.1444	0.0531	2	100.00%	0.0224	1.2020	0.0042	3.1942	99.30%	3.9424	76.63%	0.0490	92.19%	0.00
Grand Total		63885	1.3815	17.9655	1.8812	41777	65.39%	0.3880	4.8161	0.8938	0.5678	59.41%	8.0700	62.63%	0.5864	39.62%	383.11

Retest Pass Reduction Report - Summary by Veh (V1.01)

Vehicle		Initial Exhaust Emissions				Passing Retest Exhaust Emissions					Emission Reductions						Average Repair Costs
Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total%	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Avg HC(gpm)	Avg HC%(gpm)	Avg CO(gpm)	Avg CO%(gpm)	Avg NOx(gpm)	Avg NOx%(gpm)		
LDGV	25069	1.2020	14.8250	1.5181	16679	66.53%	0.2952	3.7700	0.6599	0.5447	64.85%	7.0127	65.04%	0.5264	44.37%	382.28	
LDGT1	24122	1.3119	19.5136	1.9858	16200	67.16%	0.4144	5.3143	0.9883	0.5081	55.08%	8.5713	61.73%	0.5820	37.06%	364.90	
LDGT2	14694	1.8018	20.7820	2.3291	8898	60.56%	0.5138	5.8698	1.1602	0.7198	58.35%	9.1390	60.89%	0.7068	37.86%	420.72	
Grand Total		63885	1.3815	17.9655	41777	65.39%	0.3880	4.8161	0.8938	0.5678	59.41%	8.0700	62.63%	0.5864	39.62%	383.11	

Appendix B6

I/M240 Retest Frequency Report

Date
Between 1/1/2018 and 12/31/2018

Retest Frequency Report (V1.01)

Vehicle			Avg Retest	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5			
Year	Type	Total	#	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%
1982	LDGV	52	1.2	34	65.38%	25	73.53%	9	17.31%	6	66.67%	1	1.92%	0	0.00%	3	5.77%	0	0.00%	5	9.62%	0	0.00%
	LDGT1	98	1.8	56	57.14%	34	60.71%	21	21.43%	8	38.10%	11	11.22%	6	54.55%	5	5.10%	3	60.00%	5	5.10%	3	60.00%
	LDGT2	22	2.6	10	45.45%	4	40.00%	4	18.18%	0	0.00%	4	18.18%	3	75.00%	0	0.00%	0	0.00%	4	18.18%	1	25.00%
1982 Total		172	1.7	100	58.14%	63	63.00%	34	19.77%	14	41.18%	16	9.30%	9	56.25%	8	4.65%	3	37.50%	14	8.14%	4	28.57%
1983	LDGV	88	2.2	43	48.86%	25	58.14%	15	17.05%	3	20.00%	11	12.50%	1	9.09%	6	6.82%	1	16.67%	13	14.77%	7	53.85%
	LDGT1	92	1.4	61	66.30%	45	73.77%	14	15.22%	3	21.43%	7	7.61%	2	28.57%	4	4.35%	0	0.00%	6	6.52%	3	50.00%
	LDGT2	66	1.9	28	42.42%	15	53.57%	13	19.70%	3	23.08%	7	10.61%	2	28.57%	6	9.09%	1	16.67%	12	18.18%	2	16.67%
1983 Total		246	1.8	132	53.66%	85	64.39%	42	17.07%	9	21.43%	25	10.16%	5	20.00%	16	6.50%	2	12.50%	31	12.60%	12	38.71%
1984	LDGV	162	1.7	91	56.17%	51	56.04%	36	22.22%	14	38.89%	19	11.73%	9	47.37%	12	7.41%	6	50.00%	4	2.47%	2	50.00%
	LDGT1	140	1.5	88	62.86%	61	69.32%	24	17.14%	13	54.17%	10	7.14%	4	40.00%	6	4.29%	1	16.67%	12	8.57%	3	25.00%
	LDGT2	128	2.0	62	48.44%	30	48.39%	29	22.66%	8	27.59%	18	14.06%	10	55.56%	9	7.03%	3	33.33%	10	7.81%	3	30.00%
1984 Total		430	1.7	241	56.05%	142	58.92%	89	20.70%	35	39.33%	47	10.93%	23	48.94%	27	6.28%	10	37.04%	26	6.05%	8	30.77%
1985	LDGV	208	1.6	112	53.85%	57	50.89%	40	19.23%	14	35.00%	28	13.46%	9	32.14%	10	4.81%	3	30.00%	18	8.65%	2	11.11%
	LDGT1	201	1.8	113	56.22%	60	53.10%	46	22.89%	20	43.48%	24	11.94%	9	37.50%	12	5.97%	9	75.00%	6	2.99%	3	50.00%
	LDGT2	105	2.0	52	49.52%	24	46.15%	24	22.86%	11	45.83%	16	15.24%	4	25.00%	7	6.67%	4	57.14%	6	5.71%	2	33.33%
1985 Total		514	1.8	277	53.89%	141	50.90%	110	21.40%	45	40.91%	68	13.23%	22	32.35%	29	5.64%	16	55.17%	30	5.84%	7	23.33%
1986	LDGV	215	1.6	129	60.00%	81	62.79%	44	20.47%	14	31.82%	23	10.70%	10	43.48%	10	4.65%	5	50.00%	9	4.19%	5	55.56%
	LDGT1	254	1.6	156	61.42%	100	64.10%	43	16.93%	17	39.53%	24	9.45%	4	16.67%	19	7.48%	8	42.11%	12	4.72%	6	50.00%
	LDGT2	154	2.1	72	46.75%	35	48.61%	34	22.08%	16	47.06%	15	9.74%	2	13.33%	14	9.09%	3	21.43%	19	12.34%	9	47.37%
1986 Total		623	1.7	357	57.30%	216	60.50%	121	19.42%	47	38.84%	62	9.95%	16	25.81%	43	6.90%	16	37.21%	40	6.42%	20	50.00%
1987	LDGV	248	1.5	148	59.68%	88	59.46%	48	19.35%	21	43.75%	26	10.48%	13	50.00%	13	5.24%	4	30.77%	13	5.24%	1	7.69%
	LDGT1	297	1.7	163	54.88%	96	58.90%	62	20.88%	33	53.23%	29	9.76%	8	27.59%	20	6.73%	8	40.00%	23	7.74%	6	26.09%
	LDGT2	115	1.5	66	57.39%	42	63.64%	22	19.13%	7	31.82%	14	12.17%	6	42.86%	7	6.09%	1	14.29%	6	5.22%	1	16.67%
1987 Total		660	1.6	377	57.12%	226	59.95%	132	20.00%	61	46.21%	69	10.45%	27	39.13%	40	6.06%	13	32.50%	42	6.36%	8	19.05%
1988	LDGV	266	1.7	146	54.89%	92	63.01%	47	17.67%	15	31.91%	29	10.90%	9	31.03%	21	7.89%	9	42.86%	23	8.65%	4	17.39%
	LDGT1	363	1.7	213	58.68%	140	65.73%	63	17.36%	24	38.10%	34	9.37%	10	29.41%	15	4.13%	2	13.33%	38	10.47%	14	36.84%
	LDGT2	196	1.8	104	53.06%	61	58.65%	39	19.90%	16	41.03%	24	12.24%	11	45.83%	10	5.10%	2	20.00%	19	9.69%	5	26.32%
1988 Total		825	1.7	463	56.12%	293	63.28%	149	18.06%	55	36.91%	87	10.55%	30	34.48%	46	5.58%	13	28.26%	80	9.70%	23	28.75%
1989	LDGV	280	1.5	179	63.93%	122	68.16%	55	19.64%	31	56.36%	20	7.14%	9	45.00%	10	3.57%	3	30.00%	16	5.71%	7	43.75%
	LDGT1	434	1.8	235	54.15%	141	60.00%	86	19.82%	41	47.67%	42	9.68%	13	30.95%	28	6.45%	6	21.43%	43	9.91%	17	39.53%
	LDGT2	178	1.6	99	55.62%	61	61.62%	37	20.79%	14	37.84%	18	10.11%	10	55.56%	9	5.06%	4	44.44%	15	8.43%	1	6.67%
1989 Total		892	1.7	513	57.51%	324	63.16%	178	19.96%	86	48.31%	80	8.97%	32	40.00%	47	5.27%	13	27.66%	74	8.30%	25	33.78%
1990	LDGV	370	1.6	229	61.89%	157	68.56%	63	17.03%	34	53.97%	32	8.65%	17	53.13%	13	3.51%	4	30.77%	33	8.92%	8	24.24%
	LDGT1	434	1.6	263	60.60%	163	61.98%	89	20.51%	41	46.07%	37	8.53%	13	35.14%	19	4.38%	8	42.11%	26	5.99%	9	34.62%
	LDGT2	218	1.5	138	63.30%	86	62.32%	49	22.48%	26	53.06%	21	9.63%	13	61.90%	5	2.29%	2	40.00%	5	2.29%	2	40.00%

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5				
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	
1990 Total			1022	1.6	630	61.64%	406	64.44%	201	19.67%	101	50.25%	90	8.81%	43	47.78%	37	3.62%	14	37.84%	64	6.26%	19	29.69%
1991	LDGV	517	1.7	301	58.22%	174	57.81%	100	19.34%	43	43.00%	51	9.86%	19	37.25%	27	5.22%	15	55.56%	38	7.35%	10	26.32%	
	LDGT1	459	1.6	275	59.91%	178	64.73%	94	20.48%	44	46.81%	40	8.71%	15	37.50%	21	4.58%	3	14.29%	29	6.32%	12	41.38%	
	LDGT2	235	1.9	129	54.89%	80	62.02%	46	19.57%	19	41.30%	23	9.79%	8	34.78%	15	6.38%	7	46.67%	22	9.36%	7	31.82%	
1991 Total			1211	1.7	705	58.22%	432	61.28%	240	19.82%	106	44.17%	114	9.41%	42	36.84%	63	5.20%	25	39.68%	89	7.35%	29	32.58%
1992	LDGV	648	1.6	395	60.96%	256	64.81%	122	18.83%	57	46.72%	55	8.49%	15	27.27%	30	4.63%	11	36.67%	46	7.10%	14	30.43%	
	LDGT1	418	1.4	285	68.18%	204	71.58%	70	16.75%	34	48.57%	38	9.09%	14	36.84%	16	3.83%	6	37.50%	9	2.15%	6	66.67%	
	LDGT2	419	1.9	224	53.46%	132	58.93%	84	20.05%	42	50.00%	37	8.83%	18	48.65%	21	5.01%	7	33.33%	53	12.65%	14	26.42%	
1992 Total			1485	1.6	904	60.88%	592	65.49%	276	18.59%	133	48.19%	130	8.75%	47	36.15%	67	4.51%	24	35.82%	108	7.27%	34	31.48%
1993	LDGV	685	1.6	405	59.12%	235	58.02%	139	20.29%	72	51.80%	62	9.05%	25	40.32%	33	4.82%	11	33.33%	46	6.72%	14	30.43%	
	LDGT1	578	1.5	380	65.74%	265	69.74%	105	18.17%	45	42.86%	50	8.65%	23	46.00%	24	4.15%	10	41.67%	19	3.29%	8	42.11%	
	LDGT2	405	1.9	214	52.84%	121	56.54%	95	23.46%	46	48.42%	41	10.12%	24	58.54%	20	4.94%	7	35.00%	35	8.64%	10	28.57%	
1993 Total			1668	1.6	999	59.89%	621	62.16%	339	20.32%	163	48.08%	153	9.17%	72	47.06%	77	4.62%	28	36.36%	100	6.00%	32	32.00%
1994	LDGV	619	1.5	404	65.27%	272	67.33%	108	17.45%	50	46.30%	48	7.75%	22	45.83%	23	3.72%	8	34.78%	36	5.82%	13	36.11%	
	LDGT1	889	1.6	551	61.98%	368	66.79%	163	18.34%	77	47.24%	74	8.32%	28	37.84%	43	4.84%	14	32.56%	58	6.52%	22	37.93%	
	LDGT2	937	1.7	533	56.88%	301	56.47%	202	21.56%	87	43.07%	98	10.46%	38	38.78%	50	5.34%	20	40.00%	54	5.76%	22	40.74%	
1994 Total			2445	1.6	1488	60.86%	941	63.24%	473	19.35%	214	45.24%	220	9.00%	88	40.00%	116	4.74%	42	36.21%	148	6.05%	57	38.51%
1995	LDGV	930	1.6	550	59.14%	329	59.82%	185	19.89%	79	42.70%	93	10.00%	37	39.78%	54	5.81%	23	42.59%	48	5.16%	12	25.00%	
	LDGT1	1009	1.6	618	61.25%	378	61.17%	210	20.81%	103	49.05%	89	8.82%	33	37.08%	46	4.56%	25	54.35%	46	4.56%	14	30.43%	
	LDGT2	1100	1.7	595	54.09%	345	57.98%	237	21.55%	97	40.93%	128	11.64%	50	39.06%	68	6.18%	33	48.53%	72	6.55%	21	29.17%	
1995 Total			3039	1.6	1763	58.01%	1052	59.67%	632	20.80%	279	44.15%	310	10.20%	120	38.71%	168	5.53%	81	48.21%	166	5.46%	47	28.31%
1996	LDGV	941	1.4	643	68.33%	440	68.43%	170	18.07%	92	54.12%	67	7.12%	28	41.79%	33	3.51%	18	54.55%	28	2.98%	10	35.71%	
	LDGT1	864	1.3	648	75.00%	503	77.62%	128	14.81%	66	51.56%	49	5.67%	19	38.78%	23	2.66%	12	52.17%	16	1.85%	7	43.75%	
	LDGT2	597	1.5	384	64.32%	275	71.61%	102	17.09%	47	46.08%	51	8.54%	21	41.18%	29	4.86%	9	31.03%	31	5.19%	12	38.71%	
1996 Total			2402	1.4	1675	69.73%	1218	72.72%	400	16.65%	205	51.25%	167	6.95%	68	40.72%	85	3.54%	39	45.88%	75	3.12%	29	38.67%
1997	LDGV	1257	1.3	908	72.24%	681	75.00%	198	15.75%	88	44.44%	86	6.84%	44	51.16%	35	2.78%	16	45.71%	30	2.39%	12	40.00%	
	LDGT1	1566	1.4	1072	68.45%	746	69.59%	267	17.05%	127	47.57%	122	7.79%	59	48.36%	53	3.38%	23	43.40%	52	3.32%	24	46.15%	
	LDGT2	808	1.5	501	62.00%	320	63.87%	154	19.06%	64	41.56%	77	9.53%	29	37.66%	40	4.95%	20	50.00%	36	4.46%	11	30.56%	
1997 Total			3631	1.4	2481	68.33%	1747	70.42%	619	17.05%	279	45.07%	285	7.85%	132	46.32%	128	3.53%	59	46.09%	118	3.25%	47	39.83%
1998	LDGV	1669	1.4	1147	68.72%	843	73.50%	271	16.24%	138	50.92%	123	7.37%	50	40.65%	66	3.95%	30	45.45%	62	3.71%	24	38.71%	
	LDGT1	1888	1.4	1247	66.05%	879	70.49%	326	17.27%	154	47.24%	144	7.63%	55	38.19%	78	4.13%	29	37.18%	93	4.93%	35	37.63%	
	LDGT2	932	1.5	582	62.45%	390	67.01%	178	19.10%	86	48.31%	79	8.48%	24	30.38%	41	4.40%	16	39.02%	52	5.58%	18	34.62%	
1998 Total			4489	1.5	2976	66.30%	2112	70.97%	775	17.26%	378	48.77%	346	7.71%	129	37.28%	185	4.12%	75	40.54%	207	4.61%	77	37.20%
1999	LDGV	1707	1.4	1176	68.89%	846	71.94%	290	16.99%	142	48.97%	126	7.38%	60	47.62%	47	2.75%	16	34.04%	68	3.98%	24	35.29%	
	LDGT1	1889	1.5	1240	65.64%	870	70.16%	328	17.36%	164	50.00%	144	7.62%	54	37.50%	78	4.13%	29	37.18%	99	5.24%	36	36.36%	
	LDGT2	1355	1.7	804	59.34%	486	60.45%	289	21.33%	127	43.94%	139	10.26%	70	50.36%	58	4.28%	20	34.48%	65	4.80%	30	46.15%	
1999 Total			4951	1.5	3220	65.04%	2202	68.39%	907	18.32%	433	47.74%	409	8.26%	184	44.99%	183	3.70%	65	35.52%	232	4.69%	90	38.79%
2000	LDGV	2216	1.4	1521	68.64%	1097	72.12%	366	16.52%	162	44.26%	176	7.94%	78	44.32%	76	3.43%	26	34.21%	77	3.47%	28	36.36%	
	LDGT1	2247	1.4	1498	66.67%	1053	70.29%	405	18.02%	207	51.11%	181	8.06%	76	41.99%	88	3.92%	43	48.86%	75	3.34%	23	30.67%	

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5			
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%
	LDGT2	942	1.4	646	68.58%	454	70.28%	163	17.30%	65	39.88%	66	7.01%	29	43.94%	36	3.82%	14	38.89%	31	3.29%	10	32.26%
2000 Total		5405	1.4	3665	67.81%	2604	71.05%	934	17.28%	434	46.47%	423	7.83%	183	43.26%	200	3.70%	83	41.50%	183	3.39%	61	33.33%
2001	LDGV	1856	1.4	1339	72.14%	1024	76.47%	272	14.66%	129	47.43%	126	6.79%	52	41.27%	62	3.34%	32	51.61%	57	3.07%	26	45.61%
	LDGT1	1681	1.3	1238	73.65%	982	79.32%	226	13.44%	122	53.98%	95	5.65%	42	44.21%	50	2.97%	15	30.00%	72	4.28%	18	25.00%
	LDGT2	1043	1.4	729	69.89%	539	73.94%	163	15.63%	71	43.56%	72	6.90%	26	36.11%	33	3.16%	11	33.33%	46	4.41%	20	43.48%
2001 Total		4580	1.3	3306	72.18%	2545	76.98%	661	14.43%	322	48.71%	293	6.40%	120	40.96%	145	3.17%	58	40.00%	175	3.82%	64	36.57%
2002	LDGV	2216	1.3	1692	76.35%	1341	79.26%	308	13.90%	165	53.57%	112	5.05%	53	47.32%	48	2.17%	19	39.58%	56	2.53%	25	44.64%
	LDGT1	1980	1.3	1475	74.49%	1199	81.29%	244	12.32%	112	45.90%	117	5.91%	40	34.19%	62	3.13%	29	46.77%	82	4.14%	26	31.71%
	LDGT2	992	1.3	686	69.15%	522	76.09%	148	14.92%	66	44.59%	73	7.36%	23	31.51%	40	4.03%	16	40.00%	45	4.54%	12	26.67%
2002 Total		5188	1.3	3853	74.27%	3062	79.47%	700	13.49%	343	49.00%	302	5.82%	116	38.41%	150	2.89%	64	42.67%	183	3.53%	63	34.43%
2003	LDGV	1943	1.3	1469	75.60%	1177	80.12%	232	11.94%	100	43.10%	117	6.02%	52	44.44%	61	3.14%	29	47.54%	64	3.29%	22	34.38%
	LDGT1	1505	1.2	1218	80.93%	1034	84.89%	156	10.37%	80	51.28%	70	4.65%	34	48.57%	27	1.79%	11	40.74%	34	2.26%	14	41.18%
	LDGT2	810	1.3	606	74.81%	490	80.86%	110	13.58%	55	50.00%	48	5.93%	20	41.67%	22	2.72%	9	40.91%	24	2.96%	8	33.33%
2003 Total		4258	1.3	3293	77.34%	2701	82.02%	498	11.70%	235	47.19%	235	5.52%	106	45.11%	110	2.58%	49	44.55%	122	2.87%	44	36.07%
2004	LDGV	1717	1.2	1401	81.60%	1192	85.08%	183	10.66%	94	51.37%	72	4.19%	31	43.06%	32	1.86%	11	34.38%	29	1.69%	13	44.83%
	LDGT1	1732	1.2	1406	81.18%	1213	86.27%	164	9.47%	83	50.61%	75	4.33%	27	36.00%	44	2.54%	20	45.45%	43	2.48%	18	41.86%
	LDGT2	931	1.2	712	76.48%	592	83.15%	115	12.35%	58	50.43%	50	5.37%	20	40.00%	31	3.33%	12	38.71%	23	2.47%	7	30.43%
2004 Total		4380	1.2	3519	80.34%	2997	85.17%	462	10.55%	235	50.87%	197	4.50%	78	39.59%	107	2.44%	43	40.19%	95	2.17%	38	40.00%
2005	LDGV	1585	1.2	1280	80.76%	1085	84.77%	177	11.17%	91	51.41%	66	4.16%	30	45.45%	31	1.96%	16	51.61%	31	1.96%	7	22.58%
	LDGT1	1033	1.1	893	86.45%	790	88.47%	90	8.71%	51	56.67%	31	3.00%	18	58.06%	12	1.16%	7	58.33%	7	0.68%	3	42.86%
	LDGT2	636	1.4	453	71.23%	338	74.61%	91	14.31%	38	41.76%	51	8.02%	26	50.98%	24	3.77%	13	54.17%	17	2.67%	11	64.71%
2005 Total		3254	1.2	2626	80.70%	2213	84.27%	358	11.00%	180	50.28%	148	4.55%	74	50.00%	67	2.06%	36	53.73%	55	1.69%	21	38.18%
2006	LDGV	1246	1.2	990	79.45%	836	84.44%	141	11.32%	74	52.48%	59	4.74%	25	42.37%	29	2.33%	11	37.93%	27	2.17%	14	51.85%
	LDGT1	848	1.1	752	88.68%	688	91.49%	61	7.19%	34	55.74%	23	2.71%	12	52.17%	9	1.06%	6	66.67%	3	0.35%	2	66.67%
	LDGT2	594	1.2	484	81.48%	413	85.33%	61	10.27%	32	52.46%	25	4.21%	11	44.00%	17	2.86%	11	64.71%	7	1.18%	3	42.86%
2006 Total		2688	1.2	2226	82.81%	1937	87.02%	263	9.78%	140	53.23%	107	3.98%	48	44.86%	55	2.05%	28	50.91%	37	1.38%	19	51.35%
2007	LDGV	853	1.1	721	84.53%	631	87.52%	76	8.91%	41	53.95%	31	3.63%	11	35.48%	13	1.52%	6	46.15%	12	1.41%	4	33.33%
	LDGT1	928	1.2	800	86.21%	742	92.75%	54	5.82%	27	50.00%	24	2.59%	11	45.83%	12	1.29%	4	33.33%	38	4.09%	8	21.05%
	LDGT2	471	1.1	416	88.32%	383	92.07%	26	5.52%	11	42.31%	14	2.97%	8	57.14%	6	1.27%	3	50.00%	9	1.91%	3	33.33%
2007 Total		2252	1.1	1937	86.01%	1756	90.66%	156	6.93%	79	50.64%	69	3.06%	30	43.48%	31	1.38%	13	41.94%	59	2.62%	15	25.42%
2008	LDGV	204	1.3	146	71.57%	117	80.14%	24	11.76%	10	41.67%	14	6.86%	6	42.86%	7	3.43%	0	0.00%	13	6.37%	5	38.46%
	LDGT1	122	1.2	98	80.33%	83	84.69%	13	10.66%	6	46.15%	6	4.92%	2	33.33%	4	3.28%	3	75.00%	1	0.82%	0	0.00%
	LDGT2	132	1.3	94	71.21%	77	81.91%	17	12.88%	5	29.41%	11	8.33%	4	36.36%	5	3.79%	1	20.00%	5	3.79%	3	60.00%
2008 Total		458	1.3	338	73.80%	277	81.95%	54	11.79%	21	38.89%	31	6.77%	12	38.71%	16	3.49%	4	25.00%	19	4.15%	8	42.11%
2009	LDGV	117	1.2	91	77.78%	72	79.12%	17	14.53%	8	47.06%	7	5.98%	4	57.14%	2	1.71%	1	50.00%	0	0.00%	0	0.00%
	LDGT1	55	1.2	46	83.64%	40	86.96%	6	10.91%	5	83.33%	1	1.82%	0	0.00%	1	1.82%	0	0.00%	1	1.82%	1	100.00%
	LDGT2	48	1.0	46	95.83%	42	91.30%	2	4.17%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2009 Total		220	1.2	183	83.18%	154	84.15%	25	11.36%	13	52.00%	8	3.64%	4	50.00%	3	1.36%	1	33.33%	1	0.45%	1	100.00%
2010	LDGV	94	1.4	68	72.34%	53	77.94%	13	13.83%	6	46.15%	6	6.38%	3	50.00%	3	3.19%	0	0.00%	4	4.26%	3	75.00%

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5			
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%
	LDGT1	39	1.2	33	84.62%	29	87.88%	4	10.26%	2	50.00%	2	5.13%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT2	32	1.0	31	96.88%	31	100.00%	1	3.13%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2010 Total		165	1.2	132	80.00%	113	85.61%	18	10.91%	8	44.44%	8	4.85%	5	62.50%	3	1.82%	0	0.00%	4	2.42%	3	75.00%
2011	LDGV	107	1.4	76	71.03%	58	76.32%	15	14.02%	8	53.33%	6	5.61%	1	16.67%	5	4.67%	3	60.00%	5	4.67%	2	40.00%
	LDGT1	63	1.1	55	87.30%	47	85.45%	7	11.11%	6	85.71%	1	1.59%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT2	75	1.1	68	90.67%	63	92.65%	5	6.67%	4	80.00%	1	1.33%	0	0.00%	1	1.33%	1	100.00%	0	0.00%	0	0.00%
2011 Total		245	1.2	199	81.22%	168	84.42%	27	11.02%	18	66.67%	8	3.27%	2	25.00%	6	2.45%	4	66.67%	5	2.04%	2	40.00%
2012	LDGV	28	1.1	25	89.29%	22	88.00%	2	7.14%	1	50.00%	1	3.57%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT1	14	1.2	10	71.43%	8	80.00%	2	14.29%	0	0.00%	2	14.29%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT2	14	1.0	14	100.00%	14	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2012 Total		56	1.1	49	87.50%	44	89.80%	4	7.14%	1	25.00%	3	5.36%	2	66.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2013	LDGV	18	1.1	16	88.89%	14	87.50%	2	11.11%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT1	1	1.0	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT2	3	1.5	2	66.67%	1	50.00%	1	33.33%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2013 Total		22	1.1	19	86.36%	16	84.21%	3	13.64%	2	66.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2014	LDGV	5	1.0	3	60.00%	2	66.67%	1	20.00%	0	0.00%	1	20.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT1	1	1.0	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2014 Total		6	1.0	4	66.67%	3	75.00%	1	16.67%	0	0.00%	1	16.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2015	LDGT2	1	1.0	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2015 Total		1	1.0	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2016	LDGV	2	1.0	2	100.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2016 Total		2	1.0	2	100.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Overall Total		63885	1.4	44653	69.90%	33406	74.81%	9881	15.47%	4674	47.30%	4511	7.06%	1869	41.43%	2,258	3.53%	921	40.79%	2582	4.04%	907	35.13%

Retest Frequency Report Summary by Veh (V1.01)

Vehicle		Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5				
Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	
LDGV	25069	1.4	17880	71.32%	13497	75.49%	3769	15.03%	1803	47.84%	1694	6.76%	724	42.74%	815	3.25%	337	41.35%	911	3.63%	318	34.91%	
LDGT1	24122	1.4	17188	71.25%	13141	76.45%	3571	14.80%	1749	48.98%	1596	6.62%	635	39.79%	819	3.40%	334	40.78%	948	3.93%	341	35.97%	
LDGT2	14694	1.5	9585	65.23%	6768	70.61%	2541	17.29%	1122	44.16%	1221	8.31%	510	41.77%	624	4.25%	250	40.06%	723	4.92%	248	34.30%	
Overall Total		63885	1.4	44653	69.90%	33406	74.81%	9881	15.47%	4674	47.30%	4511	7.06%	1869	41.43%	2,258	3.53%	921	40.79%	2582	4.04%	907	35.13%

Appendix B7

I/M240 Fleet Characterization Summary Report

Initial Inspection Component

Date
Between 1/1/2018 and 12/31/2018

IM240 Fleet Initial Inspection Report (V1.01)

Vehicle		Overall Initial Exhaust Emissions				Pass Initial Test Exhaust Emissions					Pass or Waived Retest Initial Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1982	LDGV	168	2.1815	25.3645	2.1548	136	80.95%	1.7311	19.4400	2.1282	32	19.05%	4.0955	50.5437	2.2677
	LDGT1	189	2.9350	40.4409	2.6411	133	70.37%	2.2483	27.4476	2.7399	56	29.63%	4.5660	71.2997	2.4065
	LDGT2	32	3.6521	62.3701	2.7192	23	71.88%	2.3217	29.8186	3.3644	9	28.13%	7.0521	145.5572	1.0706
1982 Total		389	2.6686	35.7337	2.4375	292	75.06%	2.0132	23.9048	2.5042	97	24.94%	4.6414	71.3422	2.2367
1983	LDGV	202	1.8770	20.2225	2.0070	164	81.19%	1.2883	11.7117	2.0100	38	18.81%	4.4176	56.9532	1.9938
	LDGT1	193	3.3376	36.9974	2.5464	140	72.54%	2.9483	32.0608	2.5787	53	27.46%	4.3658	50.0375	2.4610
	LDGT2	59	3.6034	50.1870	3.2181	35	59.32%	2.7295	34.3030	2.9352	24	40.68%	4.8778	73.3511	3.6307
1983 Total		454	2.7223	31.2477	2.3937	339	74.67%	2.1227	22.4479	2.3404	115	25.33%	4.4898	57.1881	2.5507
1984	LDGV	437	1.6157	16.7449	1.9249	353	80.78%	1.2661	10.8933	1.9364	84	19.22%	3.0850	41.3353	1.8764
	LDGT1	402	2.3467	27.9610	2.6516	319	79.35%	1.9607	22.8187	2.6414	83	20.65%	3.8302	47.7244	2.6904
	LDGT2	150	3.2233	46.6464	3.1282	93	62.00%	2.2598	26.7868	3.2820	57	38.00%	4.7954	79.0488	2.8771
1984 Total		989	2.1567	25.8390	2.4028	765	77.35%	1.6766	17.7983	2.3940	224	22.65%	3.7964	53.2994	2.4327
1985	LDGV	509	1.3730	15.1679	1.9436	421	82.71%	1.0953	10.4392	1.9447	88	17.29%	2.7019	37.7902	1.9382
	LDGT1	497	2.2519	25.8152	2.7074	396	79.68%	1.9001	18.5564	2.7678	101	20.32%	3.6314	54.2755	2.4709
	LDGT2	135	2.7849	42.8931	2.9060	87	64.44%	2.0523	24.2882	2.9027	48	35.56%	4.1127	76.6147	2.9119
1985 Total		1141	1.9229	23.0860	2.3902	904	79.23%	1.5399	15.3278	2.3975	237	20.77%	3.3838	52.6788	2.3624
1986	LDGV	851	1.1940	10.3296	1.8891	734	86.25%	0.9679	8.0631	1.8515	117	13.75%	2.6124	24.5486	2.1252
	LDGT1	858	1.8672	20.8656	2.5319	718	83.68%	1.5938	16.0160	2.5526	140	16.32%	3.2696	45.7369	2.4257
	LDGT2	201	2.9061	36.2871	2.7611	134	66.67%	1.8064	20.1027	2.9253	67	33.33%	5.1054	68.6557	2.4327
1986 Total		1910	1.6766	17.7942	2.2696	1586	83.04%	1.3221	12.6807	2.2596	324	16.96%	3.4119	42.8250	2.3186
1987	LDGV	803	1.1794	10.6692	1.8782	672	83.69%	0.9168	7.8028	1.8147	131	16.31%	2.5263	25.3731	2.2042
	LDGT1	776	1.7125	20.3393	2.3735	621	80.03%	1.4308	14.2844	2.3795	155	19.97%	2.8411	44.5976	2.3493
	LDGT2	249	2.2094	21.7180	2.7625	189	75.90%	1.8264	14.0994	2.7688	60	24.10%	3.4157	45.7164	2.7427
1987 Total		1828	1.5460	16.2792	2.2089	1482	81.07%	1.2482	11.3218	2.1730	346	18.93%	2.8215	37.5130	2.3626
1988	LDGV	1131	1.0125	9.7958	1.6093	999	88.33%	0.7623	7.8977	1.5792	132	11.67%	2.9059	24.1607	1.8372
	LDGT1	1190	1.5590	14.9696	2.3039	999	83.95%	1.3079	11.8675	2.2021	191	16.05%	2.8722	31.1950	2.8361
	LDGT2	438	1.6942	14.8021	2.8698	342	78.08%	1.4946	11.6708	2.7091	96	21.92%	2.4051	25.9572	3.4423
1988 Total		2759	1.3564	12.8221	2.1090	2340	84.81%	1.1022	10.1439	2.0103	419	15.19%	2.7758	27.7789	2.6603
1989	LDGV	1199	1.0304	9.7692	1.7218	1026	85.57%	0.7809	7.9355	1.6461	173	14.43%	2.5100	20.6443	2.1708
	LDGT1	1295	1.5254	16.5388	2.2441	1071	82.70%	1.2022	12.5806	2.1321	224	17.30%	3.0709	35.4635	2.7800
	LDGT2	515	1.6881	14.4831	2.8115	424	82.33%	1.4453	12.0185	2.6861	91	17.67%	2.8194	25.9666	3.3956
1989 Total		3009	1.3560	13.4895	2.1331	2521	83.78%	1.0716	10.5956	2.0275	488	16.22%	2.8252	28.4390	2.6788
1990	LDGV	2124	0.8213	9.2214	1.6392	1901	89.50%	0.6942	7.4965	1.5796	223	10.50%	1.9044	23.9254	2.1471
	LDGT1	1598	1.3730	14.1585	2.1436	1361	85.17%	1.1315	10.9077	2.0634	237	14.83%	2.7600	32.8267	2.6042
	LDGT2	632	1.8285	15.9993	2.7104	502	79.43%	1.4608	13.6115	2.6598	130	20.57%	3.2484	25.2201	2.9057
1990 Total		4354	1.1700	12.0172	1.9798	3764	86.45%	0.9546	9.5455	1.8986	590	13.55%	2.5442	27.7863	2.4979
1991	LDGV	2211	0.7635	8.6717	1.5515	1943	87.88%	0.5986	6.8036	1.4775	268	12.12%	1.9592	22.2154	2.0883
	LDGT1	1797	1.1545	13.1143	1.9513	1543	85.87%	0.9959	10.8553	1.8612	254	14.13%	2.1180	26.8372	2.4984
	LDGT2	597	1.4913	17.4804	2.6109	474	79.40%	1.3034	14.8110	2.4298	123	20.60%	2.2156	27.7672	3.3086
1991 Total		4605	1.0104	11.5473	1.8448	3960	85.99%	0.8377	9.3408	1.7410	645	14.01%	2.0706	25.0942	2.4825

Vehicle		Overall Initial Exhaust Emissions				Pass Initial Test Exhaust Emissions					Pass or Waived Retest Initial Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1992	LDGV	3053	0.6818	7.6260	1.4871	2693	88.21%	0.5608	6.0939	1.4258	360	11.79%	1.5864	19.0870	1.9454
	LDGT1	2106	1.0917	11.4678	1.8662	1839	87.32%	0.9565	9.8423	1.7781	267	12.68%	2.0229	22.6639	2.4729
	LDGT2	1078	1.6033	16.5520	2.5491	861	79.87%	1.3539	13.7242	2.4285	217	20.13%	2.5926	27.7724	3.0274
1992 Total		6237	0.9795	10.4660	1.7986	5393	86.47%	0.8224	8.5903	1.7060	844	13.53%	1.9832	22.4516	2.3904
1993	LDGV	3163	0.6856	7.4830	1.5893	2796	88.40%	0.5710	5.8126	1.5048	367	11.60%	1.5586	20.2091	2.2330
	LDGT1	2668	1.1326	11.8053	2.1274	2315	86.77%	0.9795	9.8012	2.0116	353	13.23%	2.1366	24.9484	2.8869
	LDGT2	1138	1.6938	17.3363	2.5462	928	81.55%	1.3966	14.2602	2.3909	210	18.45%	3.0069	30.9298	3.2326
1993 Total		6969	1.0214	10.7468	1.9516	6039	86.66%	0.8545	8.6397	1.8352	930	13.34%	2.1051	24.4288	2.7069
1994	LDGV	4107	0.5327	5.9680	1.2311	3732	90.87%	0.4326	5.0144	1.1843	375	9.13%	1.5293	15.4588	1.6975
	LDGT1	3912	0.9184	9.8259	1.8748	3394	86.76%	0.7738	8.1015	1.7595	518	13.24%	1.8657	21.1240	2.6306
	LDGT2	2196	1.1915	12.9524	2.2720	1716	78.14%	0.9891	10.5960	2.0849	480	21.86%	1.9154	21.3767	2.9410
1994 Total		10215	0.8221	8.9469	1.7014	8842	86.56%	0.6716	7.2826	1.5798	1373	13.44%	1.7912	19.6650	2.4843
1995	LDGV	5329	0.5133	5.9868	1.0961	4838	90.79%	0.4148	4.8252	1.0463	491	9.21%	1.4834	17.4319	1.5872
	LDGT1	4181	0.8553	9.4222	1.9234	3620	86.58%	0.7246	7.8792	1.7991	561	13.42%	1.6992	19.3792	2.7256
	LDGT2	2615	1.1933	13.1032	2.2118	2063	78.89%	0.9249	10.4393	2.0353	552	21.11%	2.1961	23.0589	2.8716
1995 Total		12125	0.7779	8.7062	1.6220	10521	86.77%	0.6214	6.9768	1.4992	1604	13.23%	1.8041	20.0494	2.4274
1996	LDGV	7006	0.3847	4.5410	0.8872	6410	91.49%	0.3253	3.8424	0.8299	596	8.51%	1.0231	12.0551	1.5038
	LDGT1	5380	0.4864	6.3380	1.5160	4769	88.64%	0.4188	5.2867	1.4295	611	11.36%	1.0137	14.5436	2.1909
	LDGT2	2786	0.6401	7.4592	1.4465	2422	86.93%	0.5051	6.0460	1.3381	364	13.07%	1.5383	16.8625	2.1678
1996 Total		15172	0.4676	5.7141	1.2129	13601	89.65%	0.3901	4.7412	1.1306	1571	10.35%	1.1388	14.1368	1.9249
1997	LDGV	8535	0.3991	4.8816	0.8551	7682	90.01%	0.3420	4.0370	0.8054	853	9.99%	0.9128	12.4879	1.3027
	LDGT1	7671	0.4747	6.4647	1.4339	6678	87.06%	0.3861	5.1324	1.3213	993	12.94%	1.0699	15.4243	2.1917
	LDGT2	3212	0.5264	7.1630	1.5271	2761	85.96%	0.4278	5.7461	1.3922	451	14.04%	1.1299	15.8373	2.3530
1997 Total		19418	0.4500	5.8844	1.1949	17121	88.17%	0.3731	4.7399	1.1012	2297	11.83%	1.0233	14.4150	1.8932
1998	LDGV	11651	0.3203	4.3673	0.6994	10551	90.56%	0.2595	3.5668	0.6560	1100	9.44%	0.9033	12.0461	1.1151
	LDGT1	11081	0.3923	5.4907	1.2258	9915	89.48%	0.3386	4.5784	1.1238	1166	10.52%	0.8487	13.2478	2.0935
	LDGT2	4116	0.4738	5.9803	1.3406	3578	86.93%	0.3482	4.4811	1.2039	538	13.07%	1.3096	15.9508	2.2498
1998 Total		26848	0.3735	5.0783	1.0150	24044	89.56%	0.3053	4.1200	0.9305	2804	10.44%	0.9586	13.2950	1.7397
1999	LDGV	12536	0.2796	3.9685	0.6752	11436	91.23%	0.2359	3.2885	0.6226	1100	8.77%	0.7348	11.0384	1.2217
	LDGT1	10923	0.3045	4.6977	0.9471	9754	89.30%	0.2596	3.8939	0.8441	1169	10.70%	0.6795	11.4038	1.8065
	LDGT2	5396	0.4061	4.4849	1.0856	4651	86.19%	0.2873	3.3709	0.9225	745	13.81%	1.1477	11.4393	2.1033
1999 Total		28855	0.3127	4.3411	0.8549	25841	89.55%	0.2541	3.5319	0.7602	3014	10.45%	0.8154	11.2792	1.6664
2000	LDGV	18352	0.2232	3.4128	0.5579	16945	92.33%	0.1842	2.8698	0.5030	1407	7.67%	0.6921	9.9518	1.2189
	LDGT1	14784	0.2740	3.9444	0.8645	13359	90.36%	0.2399	3.2344	0.7706	1425	9.64%	0.5931	10.6007	1.7446
	LDGT2	6393	0.2899	4.0116	0.8514	5809	90.87%	0.2333	3.1677	0.7675	584	9.13%	0.8526	12.4060	1.6860
2000 Total		39529	0.2530	3.7085	0.7201	36113	91.36%	0.2127	3.0526	0.6446	3416	8.64%	0.6782	10.6421	1.5181
2001	LDGV	17285	0.1781	3.0988	0.4391	16015	92.65%	0.1388	2.5514	0.3845	1270	7.35%	0.6728	10.0027	1.1273
	LDGT1	13881	0.2012	3.7071	0.5821	12692	91.43%	0.1588	3.0319	0.5200	1189	8.57%	0.6540	10.9145	1.2448
	LDGT2	6573	0.2885	3.7016	0.7684	5905	89.84%	0.2403	3.0831	0.6899	668	10.16%	0.7140	9.1692	1.4628
2001 Total		37739	0.2058	3.4276	0.5490	34612	91.71%	0.1635	2.8183	0.4863	3127	8.29%	0.6745	10.1713	1.2437
2002	LDGV	23200	0.1526	3.1605	0.3767	21586	93.04%	0.1232	2.8525	0.3244	1614	6.96%	0.5448	7.2805	1.0762
	LDGT1	19882	0.1619	3.8971	0.4893	18464	92.87%	0.1324	3.2613	0.4406	1418	7.13%	0.5470	12.1754	1.1232
	LDGT2	7278	0.2259	3.0508	0.7636	6630	91.10%	0.1997	2.6488	0.6949	648	8.90%	0.4938	7.1636	1.4666

Vehicle		Overall Initial Exhaust Emissions				Pass Initial Test Exhaust Emissions					Pass or Waived Retest Initial Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
2002 Total		50360	0.1669	3.4354	0.4771	46680	92.69%	0.1377	2.9852	0.4230	3680	7.31%	0.5367	9.1461	1.1631
2003	LDGV	20746	0.1209	2.2380	0.3353	19358	93.31%	0.0947	1.9193	0.2929	1388	6.69%	0.4864	6.6837	0.9266
	LDGT1	16761	0.1460	2.8028	0.4432	15579	92.95%	0.1211	2.3085	0.4033	1182	7.05%	0.4747	9.3183	0.9694
	LDGT2	7253	0.2301	3.2358	0.5683	6670	91.96%	0.1733	2.4030	0.4984	583	8.04%	0.8799	12.7638	1.3677
2003 Total		44760	0.1480	2.6112	0.4134	41607	92.96%	0.1172	2.1426	0.3672	3153	7.04%	0.5548	8.7956	1.0242
2004	LDGV	24476	0.1027	1.8440	0.2448	23132	94.51%	0.0782	1.6305	0.2131	1344	5.49%	0.5249	5.5185	0.7900
	LDGT1	24473	0.1049	2.2413	0.2683	23105	94.41%	0.0872	1.8662	0.2371	1368	5.59%	0.4040	8.5763	0.7948
	LDGT2	10581	0.1307	2.1946	0.2999	9890	93.47%	0.1016	1.7869	0.2565	691	6.53%	0.5464	8.0292	0.9209
2004 Total		59530	0.1086	2.0696	0.2642	56127	94.28%	0.0860	1.7551	0.2306	3403	5.72%	0.4807	7.2575	0.8185
2005	LDGV	22462	0.0861	1.6540	0.2111	21229	94.51%	0.0628	1.3852	0.1785	1233	5.49%	0.4869	6.2810	0.7735
	LDGT1	21215	0.0890	1.6971	0.1900	20342	95.88%	0.0794	1.4990	0.1645	873	4.12%	0.3123	6.3136	0.7847
	LDGT2	7378	0.1584	2.4185	0.3225	6950	94.20%	0.1206	1.8930	0.2547	428	5.80%	0.7715	10.9507	1.4238
2005 Total		51055	0.0977	1.7824	0.2184	48521	95.04%	0.0780	1.5057	0.1835	2534	4.96%	0.4748	7.0810	0.8872
2006	LDGV	27738	0.0693	1.6519	0.1571	26774	96.52%	0.0562	1.4676	0.1307	964	3.48%	0.4316	6.7703	0.8907
	LDGT1	23506	0.0610	1.5808	0.1561	22762	96.83%	0.0553	1.4787	0.1419	744	3.17%	0.2355	4.7031	0.5907
	LDGT2	9900	0.1062	1.6270	0.2026	9427	95.22%	0.0871	1.3892	0.1655	473	4.78%	0.4879	6.3667	0.9433
2006 Total		61144	0.0721	1.6205	0.1641	58963	96.43%	0.0608	1.4593	0.1406	2181	3.57%	0.3769	5.9776	0.7998
2007	LDGV	23939	0.0583	1.4896	0.1332	23244	97.10%	0.0505	1.3555	0.1170	695	2.90%	0.3209	5.9739	0.6735
	LDGT1	20706	0.0485	1.5257	0.1272	19912	96.17%	0.0440	1.3556	0.1155	794	3.83%	0.1593	5.7917	0.4205
	LDGT2	8646	0.0738	1.1713	0.1315	8238	95.28%	0.0674	1.0507	0.1135	408	4.72%	0.2036	3.6072	0.4967
2007 Total		53291	0.0570	1.4520	0.1306	51394	96.44%	0.0507	1.3067	0.1159	1897	3.56%	0.2280	5.3886	0.5296
2008	LDGV	3484	0.0794	1.7875	0.1608	3345	96.01%	0.0557	1.4589	0.1132	139	3.99%	0.6499	9.6945	1.3067
	LDGT1	3044	0.0498	1.5787	0.1314	2950	96.91%	0.0452	1.4714	0.1181	94	3.09%	0.1972	4.9460	0.5472
	LDGT2	1337	0.1045	2.5798	0.2097	1247	93.27%	0.0751	1.8691	0.1454	90	6.73%	0.5115	12.4270	1.1002
2008 Total		7865	0.0722	1.8414	0.1577	7542	95.89%	0.0548	1.5316	0.1205	323	4.11%	0.4796	9.0740	1.0281
2009	LDGV	2744	0.0621	1.5837	0.1233	2659	96.90%	0.0465	1.3158	0.0989	85	3.10%	0.5494	9.9636	0.8867
	LDGT1	1907	0.0495	1.7459	0.1139	1861	97.59%	0.0432	1.5604	0.1066	46	2.41%	0.3070	9.2497	0.4106
	LDGT2	772	0.0641	1.5530	0.1206	730	94.56%	0.0619	1.4246	0.1151	42	5.44%	0.1028	3.7852	0.2171
2009 Total		5423	0.0580	1.6363	0.1196	5250	96.81%	0.0475	1.4176	0.1039	173	3.19%	0.3765	8.2738	0.5975
2010	LDGV	1179	0.0929	2.0670	0.1727	1114	94.49%	0.0509	1.5469	0.1005	65	5.51%	0.8132	10.9802	1.4103
	LDGT1	831	0.0511	1.5710	0.1136	798	96.03%	0.0442	1.4345	0.0930	33	3.97%	0.2170	4.8713	0.6133
	LDGT2	590	0.0667	1.6997	0.1305	559	94.75%	0.0662	1.6027	0.1281	31	5.25%	0.0758	3.4489	0.1745
2010 Total		2600	0.0736	1.8251	0.1443	2471	95.04%	0.0522	1.5232	0.1043	129	4.96%	0.4835	7.6076	0.9094
2011	LDGV	1772	0.0837	2.0616	0.1504	1699	95.88%	0.0513	1.6942	0.0925	73	4.12%	0.8389	10.6123	1.4981
	LDGT1	1532	0.0544	1.8680	0.1109	1478	96.48%	0.0423	1.6179	0.0868	54	3.52%	0.3853	8.7125	0.7695
	LDGT2	897	0.0631	1.4144	0.1149	829	92.42%	0.0594	1.2883	0.0971	68	7.58%	0.1088	2.9523	0.3320
2011 Total		4201	0.0686	1.8528	0.1284	4006	95.36%	0.0497	1.5821	0.0914	195	4.64%	0.4587	7.4150	0.8897
2012	LDGV	523	0.0540	1.8927	0.1115	499	95.41%	0.0457	1.7135	0.0907	24	4.59%	0.2258	5.6194	0.5437
	LDGT1	289	0.0516	2.1097	0.1157	280	96.89%	0.0462	2.0227	0.0927	9	3.11%	0.2192	4.8156	0.8310
	LDGT2	198	0.1006	1.9736	0.1355	184	92.93%	0.0553	1.2860	0.1067	14	7.07%	0.6960	11.0113	0.5132
2012 Total		1010	0.0624	1.9707	0.1174	963	95.35%	0.0477	1.7217	0.0943	47	4.65%	0.3646	7.0716	0.5896
2013	LDGV	226	0.0622	1.7554	0.1161	211	93.36%	0.0405	1.5524	0.0815	15	6.64%	0.3671	4.6110	0.6030
	LDGT1	87	0.0367	1.4992	0.0702	86	98.85%	0.0366	1.4705	0.0701	1	1.15%	0.0457	3.9705	0.0723

Vehicle		Overall Initial Exhaust Emissions				Pass Initial Test Exhaust Emissions					Pass or Waived Retest Initial Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT2	87	0.1240	1.6765	0.2240	85	97.70%	0.0673	1.2159	0.1319	2	2.30%	2.5359	21.2515	4.1370
2013 Total		400	0.0701	1.6825	0.1296	382	95.50%	0.0456	1.4591	0.0902	18	4.50%	0.5902	6.4243	0.9662
2014	LDGV	89	0.0466	1.5296	0.0796	87	97.75%	0.0460	1.5548	0.0802	2	2.25%	0.0737	0.4350	0.0548
	LDGT1	53	0.0348	1.7228	0.0765	52	98.11%	0.0347	1.6727	0.0767	1	1.89%	0.0413	4.3266	0.0639
	LDGT2	47	0.0486	1.2310	0.0685	47	100.00%	0.0486	1.2310	0.0685	0	0.00%	0.0000	0.0000	0.0000
2014 Total		189	0.0438	1.5095	0.0760	186	98.41%	0.0435	1.5059	0.0763	3	1.59%	0.0629	1.7322	0.0578
2015	LDGV	64	0.0235	1.0558	0.0517	64	100.00%	0.0235	1.0558	0.0517	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	41	0.0303	1.0844	0.0466	41	100.00%	0.0303	1.0844	0.0466	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	10	0.0326	0.4900	0.0674	9	90.00%	0.0333	0.4549	0.0703	1	10.00%	0.0262	0.8057	0.0409
2015 Total		115	0.0267	1.0168	0.0512	114	99.13%	0.0267	1.0186	0.0513	1	0.87%	0.0262	0.8057	0.0409
2016	LDGV	42	0.1977	1.7118	0.0814	40	95.24%	0.0468	1.5402	0.0828	2	4.76%	3.2166	5.1444	0.0531
	LDGT1	14	0.0257	1.6930	0.0695	14	100.00%	0.0257	1.6930	0.0695	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	5	0.0303	0.5668	0.0471	5	100.00%	0.0303	0.5668	0.0471	0	0.00%	0.0000	0.0000	0.0000
2016 Total		61	0.1445	1.6137	0.0759	59	96.72%	0.0404	1.4940	0.0766	2	3.28%	3.2166	5.1444	0.0531
2017	LDGV	16	0.0155	0.7253	0.0469	16	100.00%	0.0155	0.7253	0.0469	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	3	0.0160	0.7705	0.0449	3	100.00%	0.0160	0.7705	0.0449	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	2	0.0258	0.2827	0.0710	2	100.00%	0.0258	0.2827	0.0710	0	0.00%	0.0000	0.0000	0.0000
2017 Total		21	0.0165	0.6896	0.0489	21	100.00%	0.0165	0.6896	0.0489	0	0.00%	0.0000	0.0000	0.0000
2018	LDGV	2	0.0105	0.3795	0.0410	2	100.00%	0.0105	0.3795	0.0410	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	3	0.0126	0.4281	0.0271	3	100.00%	0.0126	0.4281	0.0271	0	0.00%	0.0000	0.0000	0.0000
2018 Total		5	0.0117	0.4087	0.0327	5	100.00%	0.0117	0.4087	0.0327	0	0.00%	0.0000	0.0000	0.0000
Grand Total		566575	0.2635	3.7426	0.5981	524371	92.55%	0.2065	2.9892	0.5262	42204	7.45%	0.9714	13.1030	1.4911

IM240 Fleet Initial Inspection Report - Summary by Veh (V1.01)

Vehicle		Overall Initial Exhaust Emissions				Pass Initial Test Exhaust Emissions					Pass or Waived Retest Initial Exhaust Emissions				
Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	
LDGV	253354	0.2139	3.1490	0.4751	236506	93.35%	0.1681	2.5947	0.4237	16848	6.65%	0.8566	10.9313	1.1976	
LDGT1	219729	0.2754	4.0701	0.6549	203366	92.55%	0.2222	3.2626	0.5803	16363	7.45%	0.9367	14.1070	1.5820	
LDGT2	93492	0.3702	4.5810	0.7975	84499	90.38%	0.2766	3.4355	0.6828	8993	9.62%	1.2499	15.3447	1.8757	
Grand Total		566575	0.2635	3.7426	524371	92.55%	0.2065	2.9892	0.5262	42204	7.45%	0.9714	13.1030	1.4911	

Appendix B8

I/M240 Fleet Characterization Summary Report

Final Inspection Component

Date
Between 1/1/2018 and 12/31/2018

IM240 Fleet Final Inspection Report (V1.01)

Vehicle		Overall Final Exhaust Emissions				Pass Retest Exhaust Emissions					Waived Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1982	LDGV	168	1.8087	21.6909	2.1033	31	18.45%	1.5384	19.0099	2.0614	1	0.60%	20.7346	410.9337	0.0180
	LDGT1	189	2.2721	29.5199	2.6313	54	28.57%	2.0506	31.9298	2.3986	2	1.06%	9.8305	102.2594	1.6876
	LDGT2	32	2.3754	31.3490	3.1910	8	25.00%	2.4076	26.4378	3.0750	1	3.13%	3.3525	105.8390	0.1303
1982 Total		389	2.0804	26.2892	2.4493	93	23.91%	1.9106	27.1507	2.3444	4	1.03%	10.9371	180.3229	0.8809
1983	LDGV	202	1.3252	12.5518	2.0109	37	18.32%	1.4493	15.4791	2.0502	1	0.50%	2.7748	42.0107	0.7058
	LDGT1	193	2.9266	31.7790	2.5477	53	27.46%	2.8692	31.0347	2.4658	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	59	2.6705	36.1070	3.0603	23	38.98%	2.5246	35.9483	3.2970	1	1.69%	3.9600	102.8953	1.9968
1983 Total		454	2.1808	23.7866	2.3755	113	24.89%	2.3341	26.9413	2.4989	2	0.44%	3.3674	72.4530	1.3513
1984	LDGV	437	1.3190	11.8908	1.9470	82	18.76%	1.5075	14.9046	2.0062	2	0.46%	2.9360	64.3709	1.3804
	LDGT1	402	2.0337	23.8555	2.6531	82	20.40%	2.2352	24.2586	2.7307	1	0.25%	8.8010	321.5112	0.0050
	LDGT2	150	2.3197	28.7209	3.1452	54	36.00%	2.3274	28.2768	2.9856	3	2.00%	4.0341	96.6710	1.7777
1984 Total		989	1.7613	19.3067	2.4157	218	22.04%	1.9843	21.7355	2.5213	6	0.61%	4.4626	123.3777	1.3498
1985	LDGV	509	1.1209	10.5087	1.9546	85	16.70%	1.1773	9.8589	1.9956	3	0.59%	3.1195	38.6772	2.1895
	LDGT1	497	1.9262	19.0071	2.7389	101	20.32%	2.0288	20.7741	2.6256	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	135	2.0509	26.2360	2.8323	45	33.33%	1.9507	24.2809	2.8038	3	2.22%	3.5134	112.0485	1.2189
1985 Total		1141	1.5817	16.0713	2.4001	231	20.25%	1.7002	17.4408	2.4285	6	0.53%	3.3164	75.3629	1.7042
1986	LDGV	851	0.9841	8.1936	1.8291	115	13.51%	1.0822	8.6641	1.7136	2	0.24%	1.2788	29.0430	0.2623
	LDGT1	858	1.6173	16.6367	2.5264	135	15.73%	1.6516	17.9864	2.3969	5	0.58%	4.0674	69.3140	2.2632
	LDGT2	201	1.8191	20.4916	2.8916	65	32.34%	1.7558	18.9661	2.8828	2	1.00%	4.7262	96.1240	0.9192
1986 Total		1910	1.3564	13.2805	2.2542	315	16.49%	1.4653	14.7852	2.2477	9	0.47%	3.5941	66.3227	1.5199
1987	LDGV	803	0.9584	8.3396	1.8243	127	15.82%	1.1122	9.6535	1.8827	4	0.50%	3.0551	56.7938	1.5842
	LDGT1	776	1.4466	14.5942	2.3800	151	19.46%	1.4712	14.4290	2.3865	4	0.52%	2.9812	68.9197	2.2143
	LDGT2	249	1.8048	14.7642	2.7540	57	22.89%	1.6662	14.1604	2.7489	3	1.20%	3.0737	68.1167	1.9191
1987 Total		1828	1.2809	11.8698	2.1868	335	18.33%	1.3683	12.5729	2.2572	11	0.60%	3.0333	64.2913	1.9047
1988	LDGV	1131	0.7855	7.9805	1.5873	129	11.41%	0.9465	8.3862	1.6248	3	0.27%	1.5917	18.0934	2.6920
	LDGT1	1190	1.3310	12.0896	2.2384	190	15.97%	1.4498	13.2301	2.4098	1	0.08%	1.8780	17.3371	5.9158
	LDGT2	438	1.4842	12.0411	2.6767	95	21.69%	1.4339	12.7462	2.5720	1	0.23%	2.7156	71.6856	1.5498
1988 Total		2759	1.1317	10.3974	2.0411	414	15.01%	1.2894	11.6097	2.2024	5	0.18%	1.8738	28.6606	3.1083
1989	LDGV	1199	0.7946	7.9964	1.6612	172	14.35%	0.8732	8.2473	1.7528	1	0.08%	1.3950	27.2769	1.4230
	LDGT1	1295	1.2325	12.8739	2.1614	218	16.83%	1.3126	12.3657	2.2940	6	0.46%	3.7423	83.6769	2.5879
	LDGT2	515	1.4498	12.1741	2.7165	90	17.48%	1.4678	12.1537	2.8794	1	0.19%	1.7135	79.9674	0.9844
1989 Total		3009	1.0952	10.8106	2.0571	480	15.95%	1.1842	10.8502	2.2098	8	0.27%	3.1953	76.1632	2.2419
1990	LDGV	2124	0.7109	7.5207	1.6027	220	10.36%	0.8156	7.5724	1.7703	3	0.14%	3.6058	19.0328	3.9766
	LDGT1	1598	1.1545	11.2239	2.0636	234	14.64%	1.2578	12.1130	2.0459	3	0.19%	3.5566	85.3223	3.5335
	LDGT2	632	1.4730	13.5232	2.6121	129	20.41%	1.5192	12.8816	2.4317	1	0.16%	1.6177	51.9668	1.9310
1990 Total		4354	0.9843	9.7511	1.9184	583	13.39%	1.1488	10.5696	2.0273	7	0.16%	3.3007	52.1474	3.4945
1991	LDGV	2211	0.6187	6.9849	1.4866	261	11.80%	0.7120	6.9714	1.5582	7	0.32%	2.7351	57.8136	1.3351
	LDGT1	1797	1.0113	10.9932	1.8613	252	14.02%	1.0891	11.1546	1.8743	2	0.11%	3.1441	97.0804	0.3148
	LDGT2	597	1.3035	14.7415	2.4503	121	20.27%	1.2762	13.7156	2.5459	2	0.34%	2.9873	60.3211	1.5181
1991 Total		4605	0.8607	9.5547	1.7577	634	13.77%	0.9696	9.9213	1.8723	11	0.24%	2.8553	65.4089	1.1828

Vehicle		Overall Final Exhaust Emissions				Pass Retest Exhaust Emissions					Waived Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1992	LDGV	3053	0.5800	6.1773	1.4419	353	11.56%	0.6844	6.6524	1.5472	7	0.23%	2.6966	14.3059	2.2918
	LDGT1	2106	0.9864	10.0084	1.7990	264	12.54%	1.1230	10.7600	1.9501	3	0.14%	7.2819	45.6847	1.3583
	LDGT2	1078	1.3615	13.9351	2.3949	213	19.76%	1.3579	13.2659	2.2763	4	0.37%	3.1784	94.9863	1.4682
1992 Total		6237	0.8523	8.8118	1.7272	830	13.31%	0.9968	9.6561	1.8625	14	0.22%	3.8168	44.0815	1.8564
1993	LDGV	3163	0.5789	5.8688	1.5213	357	11.29%	0.6122	6.0571	1.5992	10	0.32%	1.5959	14.8621	3.3414
	LDGT1	2668	0.9892	9.7893	2.0103	351	13.16%	1.0437	9.6983	1.9828	2	0.07%	2.5618	12.0047	5.4234
	LDGT2	1138	1.4031	14.0775	2.3601	208	18.28%	1.4067	13.0682	2.2389	2	0.18%	4.0534	34.2663	0.6391
1993 Total		6969	0.8705	8.7102	1.8455	916	13.14%	0.9580	9.0444	1.8914	14	0.20%	2.0850	17.2259	3.2528
1994	LDGV	4107	0.4546	5.0836	1.2007	365	8.89%	0.5343	5.5529	1.3080	10	0.24%	5.7483	13.7691	3.4142
	LDGT1	3912	0.7917	8.2795	1.7737	509	13.01%	0.8735	8.9095	1.8672	9	0.23%	2.9178	39.7576	1.8619
	LDGT2	2196	0.9919	10.5777	2.0740	468	21.31%	0.9713	9.9037	1.9884	12	0.55%	2.2019	34.2481	3.8686
1994 Total		10215	0.6992	7.4886	1.6079	1342	13.14%	0.8153	8.3433	1.7574	31	0.30%	3.5538	29.2415	3.1394
1995	LDGV	5329	0.4288	4.9663	1.0597	480	9.01%	0.5159	5.3555	1.1900	11	0.21%	2.7762	50.0488	1.2917
	LDGT1	4181	0.7391	7.9945	1.8127	553	13.23%	0.7960	8.1525	1.8850	8	0.19%	3.3682	49.2826	2.9803
	LDGT2	2615	0.9358	10.4841	2.0262	546	20.88%	0.9554	10.4978	1.9885	6	0.23%	2.9010	24.6400	2.3545
1995 Total		12125	0.6451	7.2006	1.5278	1579	13.02%	0.7660	8.1132	1.7095	25	0.21%	2.9956	43.7055	2.0871
1996	LDGV	7006	0.3332	3.9181	0.8425	588	8.39%	0.4108	4.6264	0.9471	8	0.11%	0.9386	12.5663	3.2771
	LDGT1	5380	0.4243	5.3124	1.4431	607	11.28%	0.4556	5.3636	1.5382	4	0.07%	2.2651	28.1564	3.2114
	LDGT2	2786	0.5090	6.0449	1.3517	364	13.07%	0.5351	6.0378	1.4425	0	0.00%	0.0000	0.0000	0.0000
1996 Total		15172	0.3978	4.8031	1.1490	1559	10.28%	0.4573	5.2429	1.2929	12	0.08%	1.3808	17.7630	3.2552
1997	LDGV	8535	0.3481	4.1397	0.8135	841	9.85%	0.3695	4.7384	0.8817	12	0.14%	2.7598	27.9199	1.2612
	LDGT1	7671	0.3941	5.2907	1.3388	979	12.76%	0.4347	6.0040	1.4444	14	0.18%	1.3283	30.8894	2.3114
	LDGT2	3212	0.4387	5.8469	1.4040	444	13.82%	0.4885	6.2754	1.4584	7	0.22%	1.5572	18.4550	2.5939
1997 Total		19418	0.3813	4.8768	1.1187	2264	11.66%	0.4210	5.5871	1.2382	33	0.17%	1.8974	27.1720	1.9894
1998	LDGV	11651	0.2643	3.6207	0.6625	1085	9.31%	0.3033	4.0465	0.7051	15	0.13%	0.8015	10.7597	2.1428
	LDGT1	11081	0.3424	4.6072	1.1380	1152	10.40%	0.3687	4.6998	1.2393	14	0.13%	0.8423	17.3396	2.8301
	LDGT2	4116	0.3556	4.5778	1.2187	534	12.97%	0.4040	5.2083	1.2981	4	0.10%	0.4965	6.9503	3.8230
1998 Total		26848	0.3105	4.1746	0.9440	2771	10.32%	0.3499	4.5420	1.0415	33	0.12%	0.7818	13.0894	2.6380
1999	LDGV	12536	0.2407	3.3342	0.6288	1088	8.68%	0.2839	3.7830	0.6796	12	0.10%	0.9354	6.2473	1.9321
	LDGT1	10923	0.2678	3.9781	0.8652	1153	10.56%	0.3032	4.2211	1.0202	16	0.15%	2.6984	37.7957	2.5742
	LDGT2	5396	0.3001	3.4662	0.9524	733	13.58%	0.3617	3.9188	1.0847	12	0.22%	1.4639	12.7776	4.4577
1999 Total		28855	0.2620	3.6027	0.7788	2974	10.31%	0.3106	3.9863	0.9115	40	0.14%	1.7992	20.8257	2.9466
2000	LDGV	18352	0.1900	2.9416	0.5126	1391	7.58%	0.2497	3.5465	0.6146	16	0.09%	1.1062	26.3352	1.7809
	LDGT1	14784	0.2454	3.3386	0.7956	1402	9.48%	0.2795	4.0826	0.9910	23	0.16%	1.3706	18.5159	3.3812
	LDGT2	6393	0.2442	3.3291	0.7874	572	8.95%	0.3103	4.0668	0.9704	12	0.19%	2.4020	46.2746	1.7047
2000 Total		39529	0.2195	3.1527	0.6629	3365	8.51%	0.2724	3.8583	0.8319	51	0.13%	1.5303	27.5005	2.4847
2001	LDGV	17285	0.1432	2.5983	0.3923	1263	7.31%	0.1927	3.1284	0.4798	7	0.04%	1.1352	14.4380	2.5812
	LDGT1	13881	0.1634	3.1054	0.5313	1179	8.49%	0.2012	3.8024	0.6330	10	0.07%	1.5808	14.1759	2.8257
	LDGT2	6573	0.2467	3.1620	0.7079	667	10.15%	0.3022	3.8455	0.8637	1	0.02%	1.1974	13.6081	3.1369
2001 Total		37739	0.1686	2.8830	0.4984	3109	8.24%	0.2194	3.5378	0.6203	18	0.05%	1.3862	14.2463	2.7479
2002	LDGV	23200	0.1268	2.8761	0.3321	1603	6.91%	0.1728	3.1304	0.4182	11	0.05%	0.3688	12.1362	2.7566
	LDGT1	19882	0.1354	3.3098	0.4507	1406	7.07%	0.1703	3.8138	0.5649	12	0.06%	0.7452	18.9630	2.5256
	LDGT2	7278	0.2050	2.7175	0.7125	639	8.78%	0.2507	3.3436	0.8620	9	0.12%	0.8262	8.9088	3.0838

Vehicle		Overall Final Exhaust Emissions				Pass Retest Exhaust Emissions					Waived Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
2002 Total		50360	0.1415	3.0244	0.4339	3648	7.24%	0.1854	3.4312	0.5525	32	0.06%	0.6386	13.7885	2.7620
2003	LDGV	20746	0.0984	1.9458	0.2994	1380	6.65%	0.1442	2.2522	0.3778	8	0.04%	1.0648	13.2758	2.5897
	LDGT1	16761	0.1241	2.3727	0.4109	1173	7.00%	0.1575	3.0399	0.4968	9	0.05%	0.9671	26.5602	2.5066
	LDGT2	7253	0.1785	2.4825	0.5138	582	8.02%	0.2391	3.3974	0.6831	1	0.01%	0.0939	0.2172	4.8603
2003 Total		44760	0.1210	2.1926	0.3759	3135	7.00%	0.1668	2.7595	0.4790	18	0.04%	0.9620	19.1925	2.6743
2004	LDGV	24476	0.0808	1.6600	0.2183	1341	5.48%	0.1213	2.1311	0.2982	3	0.01%	2.1394	18.6319	4.3962
	LDGT1	24473	0.0894	1.9092	0.2426	1361	5.56%	0.1243	2.6209	0.3227	7	0.03%	0.7260	5.3789	2.8544
	LDGT2	10581	0.1052	1.8396	0.2667	689	6.51%	0.1560	2.5730	0.3977	2	0.02%	0.6085	9.3094	5.2402
2004 Total		59530	0.0887	1.7943	0.2369	3391	5.70%	0.1296	2.4175	0.3282	12	0.02%	1.0598	9.3472	3.6375
2005	LDGV	22462	0.0659	1.4271	0.1829	1229	5.47%	0.1151	2.1135	0.2529	4	0.02%	1.3779	12.7970	2.2514
	LDGT1	21215	0.0816	1.5441	0.1696	869	4.10%	0.1268	2.3856	0.2763	4	0.02%	1.4495	47.7894	2.8145
	LDGT2	7378	0.1263	1.9837	0.2693	426	5.77%	0.2159	3.3810	0.4969	2	0.03%	0.6988	19.3765	2.4944
2005 Total		51055	0.0811	1.5561	0.1898	2524	4.94%	0.1361	2.4211	0.3021	10	0.02%	1.2707	28.1098	2.5253
2006	LDGV	27738	0.0585	1.4956	0.1347	960	3.46%	0.1187	2.2465	0.2369	4	0.01%	0.7654	9.0405	2.4195
	LDGT1	23506	0.0563	1.4934	0.1442	742	3.16%	0.0814	1.8961	0.2154	2	0.01%	1.6311	19.0241	0.5362
	LDGT2	9900	0.0899	1.4235	0.1734	470	4.75%	0.1425	2.0134	0.3227	3	0.03%	0.8962	16.7614	1.8284
2006 Total		61144	0.0627	1.4831	0.1446	2172	3.55%	0.1111	2.0764	0.2481	9	0.01%	1.0014	13.8327	1.8040
2007	LDGV	23939	0.0518	1.3776	0.1196	693	2.89%	0.0951	2.1072	0.2000	2	0.01%	0.3669	4.9419	1.9176
	LDGT1	20706	0.0449	1.3883	0.1170	792	3.82%	0.0656	2.1405	0.1546	2	0.01%	0.1435	29.0434	0.0937
	LDGT2	8646	0.0681	1.0641	0.1164	408	4.72%	0.0832	1.3347	0.1758	0	0.00%	0.0000	0.0000	0.0000
2007 Total		53291	0.0518	1.3309	0.1181	1893	3.55%	0.0802	1.9546	0.1758	4	0.01%	0.2552	16.9926	1.0057
2008	LDGV	3484	0.0585	1.5050	0.1198	138	3.96%	0.1283	2.6240	0.2577	1	0.03%	0.0892	1.2108	3.2067
	LDGT1	3044	0.0461	1.5022	0.1189	94	3.09%	0.0769	2.4668	0.1441	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	1337	0.0806	2.0048	0.1567	90	6.73%	0.1562	3.8858	0.3132	0	0.00%	0.0000	0.0000	0.0000
2008 Total		7865	0.0575	1.5889	0.1257	322	4.09%	0.1211	2.9308	0.2400	1	0.01%	0.0892	1.2108	3.2067
2009	LDGV	2744	0.0492	1.3535	0.1021	85	3.10%	0.1332	2.5341	0.2015	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	1907	0.0435	1.5841	0.1079	46	2.41%	0.0545	2.5432	0.1624	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	772	0.0640	1.4993	0.1226	42	5.44%	0.0999	2.7982	0.2523	0	0.00%	0.0000	0.0000	0.0000
2009 Total		5423	0.0493	1.4554	0.1070	173	3.19%	0.1042	2.6007	0.2034	0	0.00%	0.0000	0.0000	0.0000
2010	LDGV	1179	0.0551	1.5983	0.1049	65	5.51%	0.1277	2.4794	0.1806	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	831	0.0456	1.4538	0.0929	33	3.97%	0.0790	1.9186	0.0900	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	590	0.0657	1.6170	0.1280	31	5.25%	0.0561	1.8744	0.1265	0	0.00%	0.0000	0.0000	0.0000
2010 Total		2600	0.0545	1.5564	0.1063	129	4.96%	0.0980	2.1905	0.1444	0	0.00%	0.0000	0.0000	0.0000
2011	LDGV	1772	0.0585	1.7744	0.1001	72	4.06%	0.1619	2.8278	0.2717	1	0.06%	4.8730	62.2014	0.5848
	LDGT1	1532	0.0439	1.6540	0.0905	54	3.52%	0.0873	2.6426	0.1925	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	897	0.0581	1.3033	0.0954	68	7.58%	0.0427	1.4860	0.0746	0	0.00%	0.0000	0.0000	0.0000
2011 Total		4201	0.0531	1.6299	0.0956	194	4.62%	0.0994	2.3059	0.1805	1	0.02%	4.8730	62.2014	0.5848
2012	LDGV	523	0.0478	1.7703	0.0965	24	4.59%	0.0911	2.9511	0.2186	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	289	0.0468	2.0559	0.1003	9	3.11%	0.0667	3.0871	0.3358	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	198	0.0551	1.2985	0.1058	14	7.07%	0.0534	1.4630	0.0930	0	0.00%	0.0000	0.0000	0.0000
2012 Total		1010	0.0490	1.7595	0.0994	47	4.65%	0.0752	2.5339	0.2036	0	0.00%	0.0000	0.0000	0.0000
2013	LDGV	226	0.0408	1.5814	0.0829	15	6.64%	0.0439	1.9895	0.1031	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	87	0.0380	1.5178	0.0719	1	1.15%	0.1530	5.5847	0.2209	0	0.00%	0.0000	0.0000	0.0000

Vehicle		Overall Final Exhaust Emissions				Pass Retest Exhaust Emissions					Waived Exhaust Emissions				
Year	Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
	LDGT2	87	0.0688	1.2037	0.1426	2	2.30%	0.1329	0.6858	0.5966	0	0.00%	0.0000	0.0000	0.0000
2013 Total		400	0.0462	1.4854	0.0935	18	4.50%	0.0599	2.0444	0.1644	0	0.00%	0.0000	0.0000	0.0000
2014	LDGV	89	0.0452	1.5278	0.0796	2	2.25%	0.0119	0.3522	0.0543	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	53	0.0348	1.7400	0.0785	1	1.89%	0.0421	5.2367	0.1734	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	47	0.0486	1.2310	0.0685	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2014 Total		189	0.0431	1.5135	0.0765	3	1.59%	0.0220	1.9804	0.0940	0	0.00%	0.0000	0.0000	0.0000
2015	LDGV	64	0.0235	1.0558	0.0517	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	41	0.0303	1.0844	0.0466	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	10	0.0318	0.4568	0.0670	1	10.00%	0.0185	0.4732	0.0372	0	0.00%	0.0000	0.0000	0.0000
2015 Total		115	0.0267	1.0139	0.0512	1	0.87%	0.0185	0.4732	0.0372	0	0.00%	0.0000	0.0000	0.0000
2016	LDGV	42	0.0456	1.5241	0.0791	2	4.76%	0.0224	1.2020	0.0042	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	14	0.0257	1.6930	0.0695	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	5	0.0303	0.5668	0.0471	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2016 Total		61	0.0398	1.4844	0.0743	2	3.28%	0.0224	1.2020	0.0042	0	0.00%	0.0000	0.0000	0.0000
2017	LDGV	16	0.0155	0.7253	0.0469	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	3	0.0160	0.7705	0.0449	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	2	0.0258	0.2827	0.0710	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2017 Total		21	0.0165	0.6896	0.0489	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2018	LDGV	2	0.0105	0.3795	0.0410	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	3	0.0126	0.4281	0.0271	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2018 Total		5	0.0117	0.4087	0.0327	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
Grand Total		566575	0.2213	3.1455	0.5548	41777	7.37%	0.3880	4.8161	0.8938	427	0.08%	2.0565	31.6790	2.4975

Summary by Vehicle Type (V1.01)

Vehicle		Overall Final Exhaust Emissions				Pass Retest Exhaust Emissions					Waived Exhaust Emissions				
Type	Total	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	Total	Total %	Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)	
LDGV	253354	0.1777	2.6865	0.4404	16679	6.58%	0.2952	3.7700	0.6599	169	0.07%	1.9840	24.3428	2.2442	
LDGT1	219729	0.2377	3.4377	0.6119	16200	7.37%	0.4144	5.3143	0.9883	163	0.07%	2.1118	35.4766	2.6328	
LDGT2	93492	0.3010	3.7025	0.7303	8898	9.52%	0.5138	5.8698	1.1602	95	0.10%	2.0906	38.2139	2.7160	
Grand Total	566575	0.2213	3.1455	0.5548	41777	7.37%	0.3880	4.8161	0.8938	427	0.08%	2.0565	31.6790	2.4975	

Appendix B9

I/M240 Fleet Characterization Summary Report

Emissions Reduction Component

Date
Between 1/1/2018 and 12/31/2018

IM240 Fleet Emission Reduction Report (V1.01)

Vehicle		Overall Initial Exhaust Emissions				Overall Final Exhaust Emissions				Emission Reduction					
Year	Type	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Avg HC (gpm)	% Improvement	Avg CO (gpm)	% Improvement	Avg NOx(gpm)	% Improvement
1982	LDGV	168	2.1815	25.3645	2.1548	168	1.8087	21.6909	2.1033	0.3728	17.09%	3.6736	14.48%	0.0515	2.39%
	LDGT1	189	2.9350	40.4409	2.6411	189	2.2721	29.5199	2.6313	0.6630	22.59%	10.9209	27.00%	0.0099	0.37%
	LDGT2	32	3.6521	62.3701	2.7192	32	2.3754	31.3490	3.1910	1.2767	34.96%	31.0211	49.74%	-0.4717	-17.35%
1982 Total		389	2.6686	35.7337	2.4375	389	2.0804	26.2892	2.4493	0.5881	22.04%	9.4444	26.43%	-0.0118	-0.48%
1983	LDGV	202	1.8770	20.2225	2.0070	202	1.3252	12.5518	2.0109	0.5518	29.40%	7.6707	37.93%	-0.0040	-0.20%
	LDGT1	193	3.3376	36.9974	2.5464	193	2.9266	31.7790	2.5477	0.4110	12.31%	5.2184	14.10%	-0.0013	-0.05%
	LDGT2	59	3.6034	50.1870	3.2181	59	2.6705	36.1070	3.0603	0.9329	25.89%	14.0800	28.06%	0.1578	4.90%
1983 Total		454	2.7223	31.2477	2.3937	454	2.1808	23.7866	2.3755	0.5415	19.89%	7.4611	23.88%	0.0182	0.76%
1984	LDGV	437	1.6157	16.7449	1.9249	437	1.3190	11.8908	1.9470	0.2967	18.36%	4.8541	28.99%	-0.0221	-1.15%
	LDGT1	402	2.3467	27.9610	2.6516	402	2.0337	23.8555	2.6531	0.3130	13.34%	4.1055	14.68%	-0.0015	-0.06%
	LDGT2	150	3.2233	46.6464	3.1282	150	2.3197	28.7209	3.1452	0.9037	28.04%	17.9255	38.43%	-0.0171	-0.55%
1984 Total		989	2.1567	25.8390	2.4028	989	1.7613	19.3067	2.4157	0.3954	18.33%	6.5323	25.28%	-0.0130	-0.54%
1985	LDGV	509	1.3730	15.1679	1.9436	509	1.1209	10.5087	1.9546	0.2521	18.36%	4.6591	30.72%	-0.0111	-0.57%
	LDGT1	497	2.2519	25.8152	2.7074	497	1.9262	19.0071	2.7389	0.3257	14.46%	6.8081	26.37%	-0.0315	-1.16%
	LDGT2	135	2.7849	42.8931	2.9060	135	2.0509	26.2360	2.8323	0.7340	26.36%	16.6572	38.83%	0.0737	2.53%
1985 Total		1141	1.9229	23.0860	2.3902	1141	1.5817	16.0713	2.4001	0.3412	17.74%	7.0148	30.39%	-0.0099	-0.42%
1986	LDGV	851	1.1940	10.3296	1.8891	851	0.9841	8.1936	1.8291	0.2099	17.58%	2.1360	20.68%	0.0600	3.18%
	LDGT1	858	1.8672	20.8656	2.5319	858	1.6173	16.6367	2.5264	0.2499	13.38%	4.2289	20.27%	0.0055	0.22%
	LDGT2	201	2.9061	36.2871	2.7611	201	1.8191	20.4916	2.8916	1.0870	37.40%	15.7955	43.53%	-0.1305	-4.73%
1986 Total		1910	1.6766	17.7942	2.2696	1910	1.3564	13.2805	2.2542	0.3202	19.10%	4.5136	25.37%	0.0155	0.68%
1987	LDGV	803	1.1794	10.6692	1.8782	803	0.9584	8.3396	1.8243	0.2210	18.74%	2.3296	21.84%	0.0539	2.87%
	LDGT1	776	1.7125	20.3393	2.3735	776	1.4466	14.5942	2.3800	0.2658	15.52%	5.7451	28.25%	-0.0065	-0.28%
	LDGT2	249	2.2094	21.7180	2.7625	249	1.8048	14.7642	2.7540	0.4046	18.31%	6.9538	32.02%	0.0085	0.31%
1987 Total		1828	1.5460	16.2792	2.2089	1828	1.2809	11.8698	2.1868	0.2651	17.14%	4.4094	27.09%	0.0221	1.00%
1988	LDGV	1131	1.0125	9.7958	1.6093	1131	0.7855	7.9805	1.5873	0.2270	22.42%	1.8153	18.53%	0.0220	1.36%
	LDGT1	1190	1.5590	14.9696	2.3039	1190	1.3310	12.0896	2.2384	0.2279	14.62%	2.8800	19.24%	0.0655	2.84%
	LDGT2	438	1.6942	14.8021	2.8698	438	1.4842	12.0411	2.6767	0.2099	12.39%	2.7610	18.65%	0.1931	6.73%
1988 Total		2759	1.3564	12.8221	2.1090	2759	1.1317	10.3974	2.0411	0.2247	16.56%	2.4247	18.91%	0.0679	3.22%
1989	LDGV	1199	1.0304	9.7692	1.7218	1199	0.7946	7.9964	1.6612	0.2357	22.88%	1.7729	18.15%	0.0606	3.52%
	LDGT1	1295	1.5254	16.5388	2.2441	1295	1.2325	12.8739	2.1614	0.2929	19.20%	3.6649	22.16%	0.0827	3.69%
	LDGT2	515	1.6881	14.4831	2.8115	515	1.4498	12.1741	2.7165	0.2384	14.12%	2.3090	15.94%	0.0949	3.38%
1989 Total		3009	1.3560	13.4895	2.1331	3009	1.0952	10.8106	2.0571	0.2608	19.23%	2.6789	19.86%	0.0760	3.56%
1990	LDGV	2124	0.8213	9.2214	1.6392	2124	0.7109	7.5207	1.6027	0.1104	13.44%	1.7007	18.44%	0.0364	2.22%
	LDGT1	1598	1.3730	14.1585	2.1436	1598	1.1545	11.2239	2.0636	0.2185	15.91%	2.9346	20.73%	0.0800	3.73%
	LDGT2	632	1.8285	15.9993	2.7104	632	1.4730	13.5232	2.6121	0.3555	19.44%	2.4761	15.48%	0.0983	3.63%
1990 Total		4354	1.1700	12.0172	1.9798	4354	0.9843	9.7511	1.9184	0.1856	15.87%	2.2661	18.86%	0.0614	3.10%
1991	LDGV	2211	0.7635	8.6717	1.5515	2211	0.6187	6.9849	1.4866	0.1448	18.96%	1.6868	19.45%	0.0650	4.19%
	LDGT1	1797	1.1545	13.1143	1.9513	1797	1.0113	10.9932	1.8613	0.1431	12.40%	2.1211	16.17%	0.0899	4.61%
	LDGT2	597	1.4913	17.4804	2.6109	597	1.3035	14.7415	2.4503	0.1878	12.59%	2.7389	15.67%	0.1606	6.15%
1991 Total		4605	1.0104	11.5473	1.8448	4605	0.8607	9.5547	1.7577	0.1497	14.82%	1.9927	17.26%	0.0871	4.72%

Vehicle		Overall Initial Exhaust Emissions				Overall Final Exhaust Emissions				Emission Reduction					
Year	Type	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Avg HC (gpm)	% Improvement	Avg CO (gpm)	% Improvement	Avg NOx(gpm)	% Improvement
1992	LDGV	3053	0.6818	7.6260	1.4871	3053	0.5800	6.1773	1.4419	0.1017	14.92%	1.4487	19.00%	0.0452	3.04%
	LDGT1	2106	1.0917	11.4678	1.8662	2106	0.9864	10.0084	1.7990	0.1053	9.65%	1.4594	12.73%	0.0671	3.60%
	LDGT2	1078	1.6033	16.5520	2.5491	1078	1.3615	13.9351	2.3949	0.2418	15.08%	2.6169	15.81%	0.1542	6.05%
1992 Total		6237	0.9795	10.4660	1.7986	6237	0.8523	8.8118	1.7272	0.1272	12.98%	1.6542	15.81%	0.0715	3.97%
1993	LDGV	3163	0.6856	7.4830	1.5893	3163	0.5789	5.8688	1.5213	0.1067	15.56%	1.6142	21.57%	0.0680	4.28%
	LDGT1	2668	1.1326	11.8053	2.1274	2668	0.9892	9.7893	2.0103	0.1435	12.67%	2.0160	17.08%	0.1170	5.50%
	LDGT2	1138	1.6938	17.3363	2.5462	1138	1.4031	14.0775	2.3601	0.2906	17.16%	3.2588	18.80%	0.1862	7.31%
1993 Total		6969	1.0214	10.7468	1.9516	6969	0.8705	8.7102	1.8455	0.1508	14.77%	2.0366	18.95%	0.1061	5.44%
1994	LDGV	4107	0.5327	5.9680	1.2311	4107	0.4546	5.0836	1.2007	0.0782	14.67%	0.8845	14.82%	0.0304	2.47%
	LDGT1	3912	0.9184	9.8259	1.8748	3912	0.7917	8.2795	1.7737	0.1267	13.79%	1.5464	15.74%	0.1011	5.39%
	LDGT2	2196	1.1915	12.9524	2.2720	2196	0.9919	10.5777	2.0740	0.1996	16.76%	2.3747	18.33%	0.1979	8.71%
1994 Total		10215	0.8221	8.9469	1.7014	10215	0.6992	7.4886	1.6079	0.1229	14.94%	1.4583	16.30%	0.0935	5.50%
1995	LDGV	5329	0.5133	5.9868	1.0961	5329	0.4288	4.9663	1.0597	0.0845	16.46%	1.0204	17.04%	0.0364	3.32%
	LDGT1	4181	0.8553	9.4222	1.9234	4181	0.7391	7.9945	1.8127	0.1163	13.59%	1.4277	15.15%	0.1107	5.75%
	LDGT2	2615	1.1933	13.1032	2.2118	2615	0.9358	10.4841	2.0262	0.2574	21.57%	2.6191	19.99%	0.1856	8.39%
1995 Total		12125	0.7779	8.7062	1.6220	12125	0.6451	7.2006	1.5278	0.1327	17.06%	1.5056	17.29%	0.0942	5.81%
1996	LDGV	7006	0.3847	4.5410	0.8872	7006	0.3332	3.9181	0.8425	0.0515	13.38%	0.6229	13.72%	0.0447	5.04%
	LDGT1	5380	0.4864	6.3380	1.5160	5380	0.4243	5.3124	1.4431	0.0620	12.75%	1.0256	16.18%	0.0729	4.81%
	LDGT2	2786	0.6401	7.4592	1.4465	2786	0.5090	6.0449	1.3517	0.1311	20.48%	1.4143	18.96%	0.0948	6.55%
1996 Total		15172	0.4676	5.7141	1.2129	15172	0.3978	4.8031	1.1490	0.0698	14.93%	0.9110	15.94%	0.0639	5.27%
1997	LDGV	8535	0.3991	4.8816	0.8551	8535	0.3481	4.1397	0.8135	0.0509	12.76%	0.7419	15.20%	0.0415	4.86%
	LDGT1	7671	0.4747	6.4647	1.4339	7671	0.3941	5.2907	1.3388	0.0806	16.98%	1.1740	18.16%	0.0951	6.64%
	LDGT2	3212	0.5264	7.1630	1.5271	3212	0.4387	5.8469	1.4040	0.0877	16.66%	1.3161	18.37%	0.1231	8.06%
1997 Total		19418	0.4500	5.8844	1.1949	19418	0.3813	4.8768	1.1187	0.0687	15.28%	1.0076	17.12%	0.0762	6.38%
1998	LDGV	11651	0.3203	4.3673	0.6994	11651	0.2643	3.6207	0.6625	0.0560	17.49%	0.7466	17.10%	0.0369	5.27%
	LDGT1	11081	0.3923	5.4907	1.2258	11081	0.3424	4.6072	1.1380	0.0499	12.72%	0.8835	16.09%	0.0879	7.17%
	LDGT2	4116	0.4738	5.9803	1.3406	4116	0.3556	4.5778	1.2187	0.1183	24.96%	1.4025	23.45%	0.1219	9.10%
1998 Total		26848	0.3735	5.0783	1.0150	26848	0.3105	4.1746	0.9440	0.0630	16.88%	0.9037	17.79%	0.0710	6.99%
1999	LDGV	12536	0.2796	3.9685	0.6752	12536	0.2407	3.3342	0.6288	0.0389	13.93%	0.6343	15.98%	0.0464	6.87%
	LDGT1	10923	0.3045	4.6977	0.9471	10923	0.2678	3.9781	0.8652	0.0368	12.07%	0.7195	15.32%	0.0819	8.65%
	LDGT2	5396	0.4061	4.4849	1.0856	5396	0.3001	3.4662	0.9524	0.1061	26.12%	1.0186	22.71%	0.1331	12.26%
1999 Total		28855	0.3127	4.3411	0.8549	28855	0.2620	3.6027	0.7788	0.0507	16.20%	0.7384	17.01%	0.0760	8.89%
2000	LDGV	18352	0.2232	3.4128	0.5579	18352	0.1900	2.9416	0.5126	0.0332	14.86%	0.4712	13.81%	0.0453	8.12%
	LDGT1	14784	0.2740	3.9444	0.8645	14784	0.2454	3.3386	0.7956	0.0285	10.41%	0.6058	15.36%	0.0689	7.97%
	LDGT2	6393	0.2899	4.0116	0.8514	6393	0.2442	3.3291	0.7874	0.0456	15.74%	0.6826	17.01%	0.0640	7.52%
2000 Total		39529	0.2530	3.7085	0.7201	39529	0.2195	3.1527	0.6629	0.0334	13.22%	0.5557	14.99%	0.0572	7.94%
2001	LDGV	17285	0.1781	3.0988	0.4391	17285	0.1432	2.5983	0.3923	0.0349	19.59%	0.5005	16.15%	0.0467	10.64%
	LDGT1	13881	0.2012	3.7071	0.5821	13881	0.1634	3.1054	0.5313	0.0378	18.78%	0.6017	16.23%	0.0508	8.73%
	LDGT2	6573	0.2885	3.7016	0.7684	6573	0.2467	3.1620	0.7079	0.0417	14.46%	0.5396	14.58%	0.0605	7.88%
2001 Total		37739	0.2058	3.4276	0.5490	37739	0.1686	2.8830	0.4984	0.0371	18.05%	0.5445	15.89%	0.0506	9.22%
2002	LDGV	23200	0.1526	3.1605	0.3767	23200	0.1268	2.8761	0.3321	0.0258	16.90%	0.2844	9.00%	0.0447	11.86%
	LDGT1	19882	0.1619	3.8971	0.4893	19882	0.1354	3.3098	0.4507	0.0265	16.38%	0.5872	15.07%	0.0386	7.90%
	LDGT2	7278	0.2259	3.0508	0.7636	7278	0.2050	2.7175	0.7125	0.0209	9.27%	0.3332	10.92%	0.0511	6.69%

Vehicle		Overall Initial Exhaust Emissions				Overall Final Exhaust Emissions					Emission Reduction				
Year	Type	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Avg HC (gpm)	% Improvement	Avg CO (gpm)	% Improvement	Avg NOx(gpm)	% Improvement
2002 Total		50360	0.1669	3.4354	0.4771	50360	0.1415	3.0244	0.4339	0.0254	15.21%	0.4110	11.96%	0.0432	9.06%
2003	LDGV	20746	0.1209	2.2380	0.3353	20746	0.0984	1.9458	0.2994	0.0225	18.64%	0.2922	13.06%	0.0359	10.70%
	LDGT1	16761	0.1460	2.8028	0.4432	16761	0.1241	2.3727	0.4109	0.0219	15.02%	0.4301	15.35%	0.0322	7.28%
	LDGT2	7253	0.2301	3.2358	0.5683	7253	0.1785	2.4825	0.5138	0.0515	22.40%	0.7533	23.28%	0.0544	9.58%
2003 Total		44760	0.1480	2.6112	0.4134	44760	0.1210	2.1926	0.3759	0.0270	18.25%	0.4186	16.03%	0.0375	9.07%
2004	LDGV	24476	0.1027	1.8440	0.2448	24476	0.0808	1.6600	0.2183	0.0219	21.34%	0.1840	9.98%	0.0265	10.83%
	LDGT1	24473	0.1049	2.2413	0.2683	24473	0.0894	1.9092	0.2426	0.0155	14.74%	0.3321	14.82%	0.0257	9.57%
	LDGT2	10581	0.1307	2.1946	0.2999	10581	0.1052	1.8396	0.2667	0.0254	19.45%	0.3550	16.18%	0.0333	11.09%
2004 Total		59530	0.1086	2.0696	0.2642	59530	0.0887	1.7943	0.2369	0.0199	18.32%	0.2753	13.30%	0.0274	10.35%
2005	LDGV	22462	0.0861	1.6540	0.2111	22462	0.0659	1.4271	0.1829	0.0202	23.45%	0.2269	13.72%	0.0282	13.37%
	LDGT1	21215	0.0890	1.6971	0.1900	21215	0.0816	1.5441	0.1696	0.0074	8.30%	0.1531	9.02%	0.0204	10.76%
	LDGT2	7378	0.1584	2.4185	0.3225	7378	0.1263	1.9837	0.2693	0.0321	20.27%	0.4348	17.98%	0.0532	16.50%
2005 Total		51055	0.0977	1.7824	0.2184	51055	0.0811	1.5561	0.1898	0.0166	16.98%	0.2262	12.69%	0.0286	13.09%
2006	LDGV	27738	0.0693	1.6519	0.1571	27738	0.0585	1.4956	0.1347	0.0108	15.56%	0.1562	9.46%	0.0224	14.26%
	LDGT1	23506	0.0610	1.5808	0.1561	23506	0.0563	1.4934	0.1442	0.0047	7.78%	0.0874	5.53%	0.0119	7.59%
	LDGT2	9900	0.1062	1.6270	0.2026	9900	0.0899	1.4235	0.1734	0.0163	15.32%	0.2035	12.51%	0.0292	14.41%
2006 Total		61144	0.0721	1.6205	0.1641	61144	0.0627	1.4831	0.1446	0.0094	12.97%	0.1374	8.48%	0.0194	11.85%
2007	LDGV	23939	0.0583	1.4896	0.1332	23939	0.0518	1.3776	0.1196	0.0065	11.20%	0.1120	7.52%	0.0136	10.21%
	LDGT1	20706	0.0485	1.5257	0.1272	20706	0.0449	1.3883	0.1170	0.0036	7.39%	0.1374	9.01%	0.0102	8.02%
	LDGT2	8646	0.0738	1.1713	0.1315	8646	0.0681	1.0641	0.1164	0.0057	7.70%	0.1072	9.16%	0.0151	11.51%
2007 Total		53291	0.0570	1.4520	0.1306	53291	0.0518	1.3309	0.1181	0.0052	9.21%	0.1211	8.34%	0.0125	9.60%
2008	LDGV	3484	0.0794	1.7875	0.1608	3484	0.0585	1.5050	0.1198	0.0208	26.24%	0.2825	15.80%	0.0410	25.49%
	LDGT1	3044	0.0498	1.5787	0.1314	3044	0.0461	1.5022	0.1189	0.0037	7.46%	0.0766	4.85%	0.0124	9.48%
	LDGT2	1337	0.1045	2.5798	0.2097	1337	0.0806	2.0048	0.1567	0.0239	22.88%	0.5750	22.29%	0.0530	25.27%
2008 Total		7865	0.0722	1.8414	0.1577	7865	0.0575	1.5889	0.1257	0.0147	20.40%	0.2525	13.71%	0.0320	20.28%
2009	LDGV	2744	0.0621	1.5837	0.1233	2744	0.0492	1.3535	0.1021	0.0129	20.75%	0.2301	14.53%	0.0212	17.22%
	LDGT1	1907	0.0495	1.7459	0.1139	1907	0.0435	1.5841	0.1079	0.0061	12.29%	0.1618	9.27%	0.0060	5.26%
	LDGT2	772	0.0641	1.5530	0.1206	772	0.0640	1.4993	0.1226	0.0002	0.24%	0.0537	3.46%	-0.0019	-1.59%
2009 Total		5423	0.0580	1.6363	0.1196	5423	0.0493	1.4554	0.1070	0.0087	14.98%	0.1810	11.06%	0.0126	10.51%
2010	LDGV	1179	0.0929	2.0670	0.1727	1179	0.0551	1.5983	0.1049	0.0378	40.69%	0.4687	22.67%	0.0678	39.25%
	LDGT1	831	0.0511	1.5710	0.1136	831	0.0456	1.4538	0.0929	0.0055	10.72%	0.1173	7.46%	0.0208	18.29%
	LDGT2	590	0.0667	1.6997	0.1305	590	0.0657	1.6170	0.1280	0.0010	1.55%	0.0827	4.87%	0.0025	1.93%
2010 Total		2600	0.0736	1.8251	0.1443	2600	0.0545	1.5564	0.1063	0.0191	25.99%	0.2688	14.73%	0.0380	26.31%
2011	LDGV	1772	0.0837	2.0616	0.1504	1772	0.0585	1.7744	0.1001	0.0252	30.14%	0.2872	13.93%	0.0503	33.47%
	LDGT1	1532	0.0544	1.8680	0.1109	1532	0.0439	1.6540	0.0905	0.0105	19.30%	0.2140	11.45%	0.0203	18.34%
	LDGT2	897	0.0631	1.4144	0.1149	897	0.0581	1.3033	0.0954	0.0050	7.93%	0.1112	7.86%	0.0195	16.99%
2011 Total		4201	0.0686	1.8528	0.1284	4201	0.0531	1.6299	0.0956	0.0155	22.64%	0.2229	12.03%	0.0328	25.56%
2012	LDGV	523	0.0540	1.8927	0.1115	523	0.0478	1.7703	0.0965	0.0062	11.45%	0.1224	6.47%	0.0149	13.38%
	LDGT1	289	0.0516	2.1097	0.1157	289	0.0468	2.0559	0.1003	0.0047	9.20%	0.0538	2.55%	0.0154	13.33%
	LDGT2	198	0.1006	1.9736	0.1355	198	0.0551	1.2985	0.1058	0.0454	45.19%	0.6751	34.21%	0.0297	21.93%
2012 Total		1010	0.0624	1.9707	0.1174	1010	0.0490	1.7595	0.0994	0.0135	21.57%	0.2112	10.72%	0.0180	15.30%
2013	LDGV	226	0.0622	1.7554	0.1161	226	0.0408	1.5814	0.0829	0.0215	34.49%	0.1740	9.91%	0.0332	28.57%
	LDGT1	87	0.0367	1.4992	0.0702	87	0.0380	1.5178	0.0719	-0.0012	-3.36%	-0.0186	-1.24%	-0.0017	-2.43%

Vehicle		Overall Initial Exhaust Emissions				Overall Final Exhaust Emissions				Emission Reduction					
Year	Type	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Avg HC (gpm)	% Improvement	Avg CO (gpm)	% Improvement	Avg NOx(gpm)	% Improvement
	LDGT2	87	0.1240	1.6765	0.2240	87	0.0688	1.2037	0.1426	0.0552	44.55%	0.4728	28.20%	0.0814	36.33%
2013	Total	400	0.0701	1.6825	0.1296	400	0.0462	1.4854	0.0935	0.0239	34.04%	0.1971	11.71%	0.0361	27.84%
2014	LDGV	89	0.0466	1.5296	0.0796	89	0.0452	1.5278	0.0796	0.0014	2.98%	0.0019	0.12%	0.0000	0.02%
	LDGT1	53	0.0348	1.7228	0.0765	53	0.0348	1.7400	0.0785	-0.0000	-0.04%	-0.0172	-1.00%	-0.0021	-2.70%
	LDGT2	47	0.0486	1.2310	0.0685	47	0.0486	1.2310	0.0685	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2014	Total	189	0.0438	1.5095	0.0760	189	0.0431	1.5135	0.0765	0.0006	1.48%	-0.0039	-0.26%	-0.0006	-0.76%
2015	LDGV	64	0.0235	1.0558	0.0517	64	0.0235	1.0558	0.0517	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT1	41	0.0303	1.0844	0.0466	41	0.0303	1.0844	0.0466	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT2	10	0.0326	0.4900	0.0674	10	0.0318	0.4568	0.0670	0.0008	2.36%	0.0333	6.79%	0.0004	0.55%
2015	Total	115	0.0267	1.0168	0.0512	115	0.0267	1.0139	0.0512	0.0001	0.25%	0.0029	0.28%	0.0000	0.06%
2016	LDGV	42	0.1977	1.7118	0.0814	42	0.0456	1.5241	0.0791	0.1521	76.94%	0.1877	10.97%	0.0023	2.87%
	LDGT1	14	0.0257	1.6930	0.0695	14	0.0257	1.6930	0.0695	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT2	5	0.0303	0.5668	0.0471	5	0.0303	0.5668	0.0471	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2016	Total	61	0.1445	1.6137	0.0759	61	0.0398	1.4844	0.0743	0.1047	72.47%	0.1293	8.01%	0.0016	2.12%
2017	LDGV	16	0.0155	0.7253	0.0469	16	0.0155	0.7253	0.0469	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT1	3	0.0160	0.7705	0.0449	3	0.0160	0.7705	0.0449	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT2	2	0.0258	0.2827	0.0710	2	0.0258	0.2827	0.0710	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2017	Total	21	0.0165	0.6896	0.0489	21	0.0165	0.6896	0.0489	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2018	LDGV	2	0.0105	0.3795	0.0410	2	0.0105	0.3795	0.0410	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT1	3	0.0126	0.4281	0.0271	3	0.0126	0.4281	0.0271	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2018	Total	5	0.0117	0.4087	0.0327	5	0.0117	0.4087	0.0327	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
Grand Total		566575	0.2635	3.7426	0.5981	566575	0.2213	3.1455	0.5548	0.0422	16.02%	0.5970	15.95%	0.0433	7.24%

IM240 Fleet Emission Reduction Report -Summary by Veh (V1.01)

Vehicle		Overall Initial Exhaust Emissions				Overall Final Exhaust Emissions				Emission Reduction					
Type	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Total	Avg HC (gpm)	Avg CO(gpm)	Avg NOx (gpm)	Avg HC (gpm)	% Improvement	Avg CO (gpm)	% Improvement	Avg NOx(gpm)	% Improvement	
LDGV	253354	0.2139	3.1490	0.4751	253354	0.1777	2.6865	0.4404	0.0362	16.93%	0.4625	14.69%	0.0347	7.30%	
LDGT1	219729	0.2754	4.0701	0.6549	219729	0.2377	3.4377	0.6119	0.0376	13.67%	0.6324	15.54%	0.0430	6.57%	
LDGT2	93492	0.3702	4.5810	0.7975	93492	0.3010	3.7025	0.7303	0.0692	18.69%	0.8785	19.18%	0.0672	8.43%	
Grand Total	566575	0.2635	3.7426	0.5981	566575	0.2213	3.1455	0.5548	0.0422	16.02%	0.5970	15.95%	0.0433	7.24%	

Appendix C1

Idle Initial Inspection Report

Date
Between 1/1/2018 and 12/31/2018

Idle Initial Inspection Report (V1.01)

Vehicle		All Initial Inspections					Passing Initial Inspections						Failing Initial Inspections					
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
1974	LDGV	533	479.17	2.58	428.33	3.18	343	64.35%	285.91	1.24	292.94	2.19	190	35.65%	828.06	4.99	672.75	4.98
	LDGT	295	403.01	2.10	365.30	2.81	212	71.86%	279.09	1.05	282.65	2.22	83	28.14%	719.53	4.79	576.38	4.34
	HDGT	332	389.92	2.22	392.85	2.93	286	86.14%	276.72	1.78	320.82	2.75	46	13.86%	1093.69	4.97	840.65	4.09
1974 Total		1,160	434.26	2.36	402.15	3.02	841	72.50%	281.07	1.38	299.83	2.39	319	27.50%	838.13	4.94	671.89	4.68
1975	LDGV	33	181.31	1.05	226.48	1.50	25	75.76%	151.82	0.42	234.54	0.94	8	24.24%	273.46	3.00	201.29	3.26
	LDGT	12	335.98	1.84	292.53	1.78	5	41.67%	132.36	0.48	133.16	1.00	7	58.33%	481.41	2.81	406.37	2.34
	HDGT	57	434.85	2.20	337.73	2.40	46	80.70%	253.13	1.52	215.79	1.73	11	19.30%	1194.78	5.00	847.65	5.22
1975 Total		102	341.19	1.78	296.42	2.04	76	74.51%	211.86	1.09	216.52	1.42	26	25.49%	719.24	3.80	529.97	3.84
1976	LDGV	207	377.48	1.84	298.00	2.30	137	66.18%	153.92	0.52	159.88	1.40	70	33.82%	815.00	4.40	568.34	4.06
	LDGT	111	278.85	1.39	212.74	2.06	71	63.96%	147.04	0.61	138.06	1.43	40	36.04%	512.81	2.76	345.31	3.18
	HDGT	339	420.05	2.07	348.94	2.62	274	80.83%	282.68	1.52	267.64	2.33	65	19.17%	999.15	4.35	691.70	3.83
1976 Total		657	382.78	1.88	309.88	2.42	482	73.36%	226.10	1.11	217.92	1.93	175	26.64%	814.33	4.01	563.18	3.77
1977	LDGV	244	265.36	1.33	229.83	1.74	143	58.61%	95.40	0.25	87.72	0.82	101	41.39%	506.01	2.86	431.04	3.04
	LDGT	99	362.61	1.61	264.65	1.67	47	47.47%	132.21	0.35	201.31	0.98	52	52.53%	570.86	2.74	321.90	2.29
	HDGT	469	364.76	2.20	315.60	2.35	393	83.80%	269.05	1.74	237.17	2.12	76	16.20%	859.67	4.56	721.17	3.59
1977 Total		812	334.63	1.87	283.62	2.09	583	71.80%	215.42	1.26	197.62	1.71	229	28.20%	638.11	3.40	502.55	3.05
1978	LDGV	283	218.03	1.03	213.91	1.66	199	70.32%	103.16	0.27	122.16	0.96	84	29.68%	490.15	2.85	431.27	3.32
	LDGT	153	288.59	1.63	251.06	1.82	77	50.33%	102.43	0.43	107.54	1.13	76	49.67%	477.21	2.84	396.47	2.53
	HDGT	565	373.57	1.98	322.65	2.22	479	84.78%	280.21	1.57	263.66	2.00	86	15.22%	893.52	4.23	651.23	3.50
1978 Total		1,001	316.61	1.66	280.97	2.00	755	75.42%	215.42	1.11	210.44	1.64	246	24.58%	627.17	3.33	497.42	3.14
1979	LDGV	355	255.21	1.23	217.01	1.91	235	66.20%	99.10	0.26	104.76	1.08	120	33.80%	560.92	3.15	436.83	3.55
	LDGT	457	247.04	1.16	244.56	1.74	286	62.58%	95.62	0.26	119.72	1.11	171	37.42%	500.30	2.65	453.36	2.81
	HDGT	159	376.27	1.81	324.91	1.88	119	74.84%	205.35	1.06	159.72	1.45	40	25.16%	884.75	4.02	816.37	3.16
1979 Total		971	271.19	1.29	247.64	1.83	640	65.91%	117.30	0.41	121.66	1.16	331	34.09%	568.74	3.00	491.23	3.12
1980	LDGV	218	180.75	0.78	174.49	1.34	167	76.61%	84.22	0.19	101.45	0.81	51	23.39%	496.84	2.71	413.63	3.09
	LDGT	247	206.53	0.93	194.71	1.78	166	67.21%	82.44	0.21	103.86	1.24	81	32.79%	460.84	2.40	380.90	2.90
	HDGT	81	272.37	1.34	207.96	1.59	66	81.48%	160.95	0.81	129.68	1.19	15	18.52%	762.59	3.67	552.38	3.33
1980 Total		546	206.00	0.93	188.60	1.58	399	73.08%	96.17	0.30	107.12	1.05	147	26.92%	504.12	2.64	409.76	3.01
1981	LDGV	166	167.80	0.56	191.06	1.45	101	60.84%	52.46	0.10	52.36	0.26	65	39.16%	347.03	1.27	406.57	3.29
	LDGT	249	194.54	0.94	164.71	1.33	133	53.41%	59.87	0.15	54.88	0.30	116	46.59%	348.95	1.86	290.64	2.52
	HDGT	130	177.43	1.11	127.59	1.27	105	80.77%	127.88	0.71	83.69	0.96	25	19.23%	385.52	2.78	311.96	2.58
1981 Total		545	182.32	0.87	163.88	1.35	339	62.20%	78.73	0.31	63.05	0.49	206	37.80%	352.78	1.78	329.81	2.77
1982	LDGV	2	56.60	0.44	102.70	1.30	0	0.00%	0.00	0.00	0.00	0.00	2	100.00%	56.60	0.44	102.70	1.30
	HDGT	95	196.22	1.17	150.73	0.98	78	82.11%	124.25	0.90	75.00	0.78	17	17.89%	526.45	2.42	498.22	1.91
1982 Total		97	193.34	1.15	149.74	0.99	78	80.41%	124.25	0.90	75.00	0.78	19	19.59%	476.99	2.21	456.59	1.85
1983	LDGV	2	96.20	0.53	81.80	0.69	1	50.00%	141.10	0.86	121.20	0.92	1	50.00%	51.30	0.20	42.40	0.45
	LDGT	1	346.10	0.20	584.00	0.15	0	0.00%	0.00	0.00	0.00	0.00	1	100.00%	346.10	0.20	584.00	0.15
	HDGT	126	296.99	1.29	173.86	1.15	95	75.40%	150.96	0.87	70.13	0.76	31	24.60%	744.49	2.57	491.72	2.32
1983 Total		129	294.26	1.27	175.61	1.13	96	74.42%	150.86	0.87	70.66	0.77	33	25.58%	711.42	2.43	480.90	2.20

Vehicle		All Initial Inspections					Passing Initial Inspections						Failing Initial Inspections					
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
1984	LDGV	5	66.92	0.36	63.72	0.36	5	100.00%	66.92	0.36	63.72	0.36	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	213	212.84	1.18	135.52	0.98	180	84.51%	122.43	0.78	91.01	0.75	33	15.49%	705.99	3.35	378.32	2.22
1984 Total		218	209.49	1.16	133.88	0.96	185	84.86%	120.93	0.77	90.27	0.74	33	15.14%	705.99	3.35	378.32	2.22
1985	LDGV	8	154.75	0.35	158.59	0.38	6	75.00%	78.77	0.20	79.20	0.24	2	25.00%	382.70	0.79	396.75	0.83
	LDGT	3	196.83	2.80	53.47	0.61	2	66.67%	24.70	0.13	25.10	0.11	1	33.33%	541.10	8.14	110.20	1.62
	HDGT	236	260.56	1.20	191.46	1.03	180	76.27%	130.17	0.74	91.10	0.71	56	23.73%	679.67	2.68	514.06	2.04
1985 Total		247	256.36	1.19	188.72	1.00	188	76.11%	127.41	0.72	90.02	0.69	59	23.89%	667.25	2.71	503.24	1.99
1986	LDGV	3	35.40	0.19	29.77	0.25	3	100.00%	35.40	0.19	29.77	0.25	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	2	157.40	0.16	54.05	0.25	1	50.00%	22.90	0.00	27.80	0.01	1	50.00%	291.90	0.31	80.30	0.49
	HDGT	225	199.40	1.07	125.29	0.94	161	71.56%	87.14	0.65	52.64	0.60	64	28.44%	481.82	2.12	308.05	1.79
1986 Total		230	196.90	1.05	123.42	0.92	165	71.74%	85.81	0.64	52.07	0.59	65	28.26%	478.90	2.10	304.55	1.77
1987	LDGV	8	160.39	0.94	251.35	2.00	4	50.00%	73.30	0.34	273.33	2.54	4	50.00%	247.48	1.54	229.38	1.46
	LDGT	13	160.64	0.46	109.37	0.65	7	53.85%	92.14	0.45	73.43	0.45	6	46.15%	240.55	0.46	151.30	0.88
	HDGT	200	207.33	0.90	158.85	0.83	140	70.00%	82.98	0.53	70.99	0.59	60	30.00%	497.48	1.77	363.85	1.38
1987 Total		221	202.89	0.88	159.29	0.86	151	68.33%	83.15	0.52	76.46	0.64	70	31.67%	461.17	1.65	337.95	1.34
1988	LDGV	2	372.55	2.47	384.20	2.61	1	50.00%	19.70	0.00	169.10	0.51	1	50.00%	725.40	4.94	599.30	4.71
	LDGT	19	154.47	0.24	142.89	0.56	11	57.89%	94.89	0.18	87.92	0.37	8	42.11%	236.40	0.31	218.49	0.83
	HDGT	317	124.53	0.50	133.52	0.60	269	84.86%	71.26	0.31	70.85	0.45	48	15.14%	423.07	1.59	484.74	1.48
1988 Total		338	127.68	0.50	135.53	0.61	281	83.14%	72.00	0.30	71.87	0.44	57	16.86%	402.17	1.47	449.38	1.44
1989	LDGV	19	128.45	0.53	139.21	0.51	12	63.16%	56.68	0.09	44.35	0.16	7	36.84%	251.47	1.30	301.83	1.10
	LDGT	16	174.38	0.43	142.66	0.71	12	75.00%	162.59	0.41	96.71	0.63	4	25.00%	209.75	0.50	280.50	0.98
	HDGT	462	127.15	0.49	116.23	0.59	394	85.28%	72.44	0.28	71.86	0.45	68	14.72%	444.17	1.72	373.33	1.37
1989 Total		497	128.72	0.49	117.96	0.59	418	84.10%	74.58	0.28	71.78	0.45	79	15.90%	415.22	1.62	362.29	1.33
1990	LDGV	23	72.59	0.30	108.08	0.94	15	65.22%	52.25	0.16	51.50	0.28	8	34.78%	110.74	0.56	214.18	2.19
	LDGT	25	239.82	0.35	173.53	0.44	16	64.00%	138.01	0.32	109.96	0.36	9	36.00%	420.80	0.41	286.54	0.58
	HDGT	471	113.97	0.58	81.08	0.58	405	85.99%	69.52	0.29	52.77	0.42	66	14.01%	386.73	2.35	254.83	1.53
1990 Total		519	118.20	0.56	86.73	0.59	436	84.01%	71.44	0.29	54.82	0.41	83	15.99%	363.82	1.96	254.35	1.49
1991	LDGV	25	46.66	0.20	40.53	0.25	25	100.00%	46.66	0.20	40.53	0.25	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	20	123.01	0.89	81.09	0.85	14	70.00%	71.86	0.26	55.48	0.23	6	30.00%	242.33	2.36	140.83	2.28
	HDGT	388	104.27	0.59	85.90	0.70	342	88.14%	68.63	0.29	58.24	0.48	46	11.86%	369.25	2.84	291.53	2.29
1991 Total		433	101.81	0.58	83.06	0.68	381	87.99%	67.30	0.28	56.98	0.46	52	12.01%	354.61	2.79	274.14	2.29
1992	LDGV	7	198.46	1.20	187.63	1.30	4	57.14%	15.58	0.01	25.78	0.17	3	42.86%	442.30	2.78	403.43	2.80
	LDGT	25	154.16	0.95	90.50	0.96	15	60.00%	92.05	0.30	66.07	0.38	10	40.00%	247.31	1.92	127.13	1.82
	HDGT	581	99.61	0.48	83.23	0.65	522	89.85%	66.66	0.27	52.82	0.48	59	10.15%	391.11	2.28	352.20	2.11
1992 Total		613	102.96	0.50	84.71	0.67	541	88.25%	66.99	0.27	52.99	0.48	72	11.75%	373.27	2.25	323.07	2.10
1993	LDGV	7	88.46	0.20	83.50	0.23	4	57.14%	52.50	0.13	31.90	0.14	3	42.86%	136.40	0.29	152.30	0.35
	LDGT	7	124.31	0.70	147.11	0.75	5	71.43%	125.80	0.34	92.60	0.47	2	28.57%	120.60	1.61	283.40	1.45
	HDGT	647	97.41	0.53	81.08	0.71	564	87.17%	60.99	0.25	47.01	0.46	83	12.83%	344.95	2.50	312.61	2.47
1993 Total		661	97.60	0.53	81.81	0.71	573	86.69%	61.49	0.25	47.30	0.45	88	13.31%	332.74	2.41	306.48	2.37
1994	LDGV	23	44.87	0.18	108.28	0.26	20	86.96%	35.18	0.08	41.88	0.13	3	13.04%	109.53	0.85	550.93	1.11
	LDGT	41	206.29	0.64	156.60	0.93	26	63.41%	78.32	0.24	53.80	0.36	15	36.59%	428.10	1.35	334.80	1.90
	HDGT	919	92.76	0.52	75.41	0.60	832	90.53%	54.94	0.26	47.15	0.40	87	9.47%	454.41	2.93	345.65	2.44
1994 Total		983	96.37	0.51	79.56	0.60	878	89.32%	55.18	0.26	47.22	0.40	105	10.68%	440.80	2.65	349.96	2.32

Vehicle		All Initial Inspections					Passing Initial Inspections						Failing Initial Inspections					
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
1995	LDGV	29	41.80	0.10	44.57	0.25	24	82.76%	18.78	0.05	27.50	0.18	5	17.24%	152.26	0.38	126.48	0.57
	LDGT	21	63.38	0.24	41.80	0.17	19	90.48%	46.47	0.06	35.40	0.13	2	9.52%	224.00	1.90	102.65	0.55
	HDGT	1,079	94.80	0.56	70.79	0.64	970	89.90%	58.12	0.28	46.89	0.45	109	10.10%	421.24	3.03	283.50	2.39
1995 Total		1,129	92.86	0.54	69.58	0.62	1013	89.73%	56.97	0.27	46.21	0.43	116	10.27%	406.25	2.90	273.61	2.28
1996	LDGV	5	53.22	0.17	58.84	0.17	4	80.00%	17.95	0.04	15.55	0.04	1	20.00%	194.30	0.69	232.00	0.68
	LDGT	5	41.32	0.17	44.22	0.19	4	80.00%	44.23	0.21	47.95	0.23	1	20.00%	29.70	0.02	29.30	0.05
	HDGT	1,282	76.78	0.32	56.03	0.37	1204	93.92%	51.54	0.19	37.89	0.29	78	6.08%	466.47	2.32	335.96	1.67
1996 Total		1,292	76.56	0.32	55.99	0.37	1212	93.81%	51.40	0.19	37.85	0.29	80	6.19%	457.61	2.27	330.83	1.63
1997	LDGV	10	38.21	0.12	45.83	0.14	10	100.00%	38.21	0.12	45.83	0.14	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	8	101.84	0.37	101.43	0.43	8	100.00%	101.84	0.37	101.43	0.43	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	1,426	83.09	0.31	56.96	0.32	1340	93.97%	57.89	0.21	40.36	0.25	86	6.03%	475.74	1.83	315.58	1.36
1997 Total		1,444	82.88	0.31	57.13	0.32	1358	94.04%	58.00	0.21	40.76	0.25	86	5.96%	475.74	1.83	315.58	1.36
1998	LDGV	4	11.13	0.06	11.38	0.04	4	100.00%	11.13	0.06	11.38	0.04	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	13	39.16	0.22	46.30	0.44	12	92.31%	27.57	0.13	35.40	0.38	1	7.69%	178.30	1.27	177.10	1.26
	HDGT	1,218	109.88	0.27	70.00	0.29	1127	92.53%	69.22	0.20	46.94	0.25	91	7.47%	613.38	1.14	355.57	0.80
1998 Total		1,235	108.82	0.27	69.56	0.29	1143	92.55%	68.58	0.20	46.69	0.25	92	7.45%	608.65	1.14	353.63	0.80
1999	LDGV	4	52.30	0.03	53.85	0.03	4	100.00%	52.30	0.03	53.85	0.03	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	7	99.74	0.73	109.13	0.75	6	85.71%	60.60	0.29	73.03	0.33	1	14.29%	334.60	3.37	325.70	3.32
	HDGT	2,018	81.31	0.21	65.54	0.30	1912	94.75%	53.06	0.15	45.70	0.24	106	5.25%	590.82	1.38	423.38	1.35
1999 Total		2,029	81.31	0.22	65.67	0.30	1922	94.73%	53.08	0.15	45.81	0.24	107	5.27%	588.42	1.39	422.47	1.37
2000	LDGV	7	19.13	0.22	20.96	0.22	6	85.71%	3.28	0.00	4.78	0.01	1	14.29%	114.20	1.53	118.00	1.54
	LDGT	15	73.99	0.14	78.70	0.15	13	86.67%	40.11	0.12	42.95	0.12	2	13.33%	294.25	0.30	311.05	0.30
	HDGT	2,492	68.83	0.17	53.89	0.21	2397	96.19%	47.80	0.12	37.15	0.16	95	3.81%	599.52	1.27	476.16	1.37
2000 Total		2,514	68.72	0.17	53.94	0.21	2416	96.10%	47.65	0.12	37.10	0.16	98	3.90%	588.34	1.26	469.14	1.35
2001	LDGV	8	5.26	0.00	6.32	0.00	8	100.00%	5.26	0.00	6.32	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	8	9.38	0.01	11.73	0.01	8	100.00%	9.38	0.01	11.73	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,200	52.81	0.14	44.43	0.21	2159	98.14%	44.44	0.11	36.66	0.19	41	1.86%	493.87	1.56	453.81	1.29
2001 Total		2,216	52.48	0.14	44.18	0.21	2175	98.15%	44.16	0.11	36.45	0.18	41	1.85%	493.87	1.56	453.81	1.29
2002	LDGV	11	30.36	0.06	29.89	0.07	11	100.00%	30.36	0.06	29.89	0.07	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	12	10.42	0.01	10.55	0.01	12	100.00%	10.42	0.01	10.55	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,289	50.06	0.13	39.21	0.20	2252	98.38%	44.02	0.11	33.96	0.18	37	1.62%	417.35	1.05	358.62	1.06
2002 Total		2,312	49.76	0.12	39.01	0.20	2275	98.40%	43.78	0.11	33.82	0.18	37	1.60%	417.35	1.05	358.62	1.06
2003	LDGV	4	2.58	0.01	7.85	0.11	4	100.00%	2.58	0.01	7.85	0.11	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	20	9.39	0.00	10.30	0.01	20	100.00%	9.39	0.00	10.30	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,050	40.14	0.12	32.41	0.18	2009	98.00%	33.14	0.10	27.01	0.15	41	2.00%	382.88	1.39	296.96	1.23
2003 Total		2,074	39.77	0.12	32.14	0.17	2033	98.02%	32.85	0.10	26.80	0.15	41	1.98%	382.88	1.39	296.96	1.23
2004	LDGV	19	33.31	0.09	40.25	0.10	17	89.47%	22.49	0.07	28.72	0.08	2	10.53%	125.25	0.24	138.25	0.26
	LDGT	14	15.19	0.01	17.88	0.01	14	100.00%	15.19	0.01	17.88	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,427	29.37	0.08	24.19	0.12	2398	98.81%	24.71	0.06	20.28	0.10	29	1.19%	413.96	1.67	346.97	1.58
2004 Total		2,460	29.31	0.08	24.28	0.12	2429	98.74%	24.64	0.06	20.33	0.10	31	1.26%	395.34	1.58	333.50	1.49
2005	LDGV	6	10.00	0.03	6.32	0.01	6	100.00%	10.00	0.03	6.32	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	8	25.31	0.03	27.55	0.03	8	100.00%	25.31	0.03	27.55	0.03	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	1,734	33.13	0.09	26.84	0.12	1722	99.31%	29.09	0.07	22.54	0.11	12	0.69%	612.63	1.77	643.79	1.76

Vehicle		All Initial Inspections					Passing Initial Inspections						Failing Initial Inspections					
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
2005 Total		1,748	33.01	0.08	26.77	0.12	1736	99.31%	29.00	0.07	22.51	0.11	12	0.69%	612.63	1.77	643.79	1.76
2006	LDGV	7	45.66	0.11	42.31	0.20	6	85.71%	12.03	0.05	15.45	0.11	1	14.29%	247.40	0.46	203.50	0.76
	LDGT	17	14.58	0.02	18.12	0.03	16	94.12%	14.54	0.02	17.38	0.02	1	5.88%	15.30	0.02	30.10	0.07
	HDGT	2,285	30.98	0.07	25.29	0.10	2262	98.99%	25.24	0.06	20.62	0.09	23	1.01%	595.00	1.06	485.22	0.84
2006 Total		2,309	30.90	0.07	25.29	0.10	2284	98.92%	25.13	0.06	20.58	0.09	25	1.08%	557.90	1.00	455.75	0.80
2007	LDGV	10	21.81	0.05	21.49	0.05	10	100.00%	21.81	0.05	21.49	0.05	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	24	9.98	0.01	12.16	0.01	24	100.00%	9.98	0.01	12.16	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	1,532	20.79	0.05	17.79	0.07	1522	99.35%	16.41	0.04	13.24	0.07	10	0.65%	687.07	0.56	709.13	1.08
2007 Total		1,566	20.63	0.05	17.72	0.07	1556	99.36%	16.35	0.04	13.28	0.07	10	0.64%	687.07	0.56	709.13	1.08
2008	LDGV	5	3.94	0.01	4.50	0.01	5	100.00%	3.94	0.01	4.50	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	13	6.80	0.01	8.08	0.01	13	100.00%	6.80	0.01	8.08	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,378	16.11	0.04	15.74	0.08	2365	99.45%	13.85	0.04	14.59	0.08	13	0.55%	426.60	1.67	225.44	1.02
2008 Total		2,396	16.03	0.04	15.68	0.08	2383	99.46%	13.79	0.04	14.53	0.07	13	0.54%	426.60	1.67	225.44	1.02
2009	LDGV	4	0.75	0.00	1.05	0.00	4	100.00%	0.75	0.00	1.05	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	8	9.96	0.01	13.39	0.06	8	100.00%	9.96	0.01	13.39	0.06	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	1,362	15.30	0.04	15.68	0.10	1361	99.93%	15.13	0.04	15.62	0.10	1	0.07%	245.00	2.21	101.00	1.15
2009 Total		1,374	15.23	0.04	15.62	0.10	1373	99.93%	15.06	0.04	15.56	0.10	1	0.07%	245.00	2.21	101.00	1.15
2010	LDGV	2	2.20	0.01	2.80	0.02	2	100.00%	2.20	0.01	2.80	0.02	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	2	0.95	0.00	1.60	0.00	2	100.00%	0.95	0.00	1.60	0.00	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	659	14.99	0.03	14.44	0.09	654	99.24%	12.71	0.03	13.76	0.08	5	0.76%	313.46	0.61	103.24	0.40
2010 Total		663	14.91	0.03	14.36	0.09	658	99.25%	12.64	0.03	13.69	0.08	5	0.75%	313.46	0.61	103.24	0.40
2011	LDGV	4	5.05	0.00	5.15	0.01	4	100.00%	5.05	0.00	5.15	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	11	4.28	0.01	3.64	0.00	11	100.00%	4.28	0.01	3.64	0.00	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,395	15.76	0.04	17.38	0.09	2386	99.62%	15.13	0.03	17.14	0.09	9	0.38%	180.71	1.10	81.50	0.52
2011 Total		2,410	15.69	0.04	17.30	0.09	2401	99.63%	15.07	0.03	17.06	0.09	9	0.37%	180.71	1.10	81.50	0.52
2012	LDGT	1	2.00	0.00	2.00	0.00	1	100.00%	2.00	0.00	2.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	509	14.76	0.03	16.73	0.07	509	100.00%	14.76	0.03	16.73	0.07	0	0.00%	0.00	0.00	0.00	0.00
2012 Total		510	14.74	0.03	16.70	0.07	510	100.00%	14.74	0.03	16.70	0.07	0	0.00%	0.00	0.00	0.00	0.00
2013	HDGT	204	11.10	0.02	11.34	0.08	204	100.00%	11.10	0.02	11.34	0.08	0	0.00%	0.00	0.00	0.00	0.00
2013 Total		204	11.10	0.02	11.34	0.08	204	100.00%	11.10	0.02	11.34	0.08	0	0.00%	0.00	0.00	0.00	0.00
2014	HDGT	164	22.12	0.04	16.44	0.08	163	99.39%	20.47	0.04	15.92	0.08	1	0.61%	291.00	0.37	101.00	0.39
2014 Total		164	22.12	0.04	16.44	0.08	163	99.39%	20.47	0.04	15.92	0.08	1	0.61%	291.00	0.37	101.00	0.39
2015	HDGT	113	11.05	0.02	10.97	0.05	113	100.00%	11.05	0.02	10.97	0.05	0	0.00%	0.00	0.00	0.00	0.00
2015 Total		113	11.05	0.02	10.97	0.05	113	100.00%	11.05	0.02	10.97	0.05	0	0.00%	0.00	0.00	0.00	0.00
2016	HDGT	88	18.20	0.04	18.09	0.08	88	100.00%	18.20	0.04	18.09	0.08	0	0.00%	0.00	0.00	0.00	0.00
2016 Total		88	18.20	0.04	18.09	0.08	88	100.00%	18.20	0.04	18.09	0.08	0	0.00%	0.00	0.00	0.00	0.00
2017	HDGT	35	9.70	0.03	13.81	0.05	35	100.00%	9.70	0.03	13.81	0.05	0	0.00%	0.00	0.00	0.00	0.00
2017 Total		35	9.70	0.03	13.81	0.05	35	100.00%	9.70	0.03	13.81	0.05	0	0.00%	0.00	0.00	0.00	0.00
2018	HDGT	3	15.70	0.00	17.37	0.06	3	100.00%	15.70	0.00	17.37	0.06	0	0.00%	0.00	0.00	0.00	0.00
2018 Total		3	15.70	0.00	17.37	0.06	3	100.00%	15.70	0.00	17.37	0.06	0	0.00%	0.00	0.00	0.00	0.00
2019	HDGT	6	1.13	0.00	2.42	0.04	6	100.00%	1.13	0.00	2.42	0.04	0	0.00%	0.00	0.00	0.00	0.00
2019 Total		6	1.13	0.00	2.42	0.04	6	100.00%	1.13	0.00	2.42	0.04	0	0.00%	0.00	0.00	0.00	0.00
Grand Total		43,274	92.69	0.40	77.50	0.51	39975	92.38%	54.52	0.21	47.98	0.34	3,299	7.62%	555.25	2.69	435.19	2.56

Summary by Vehicle Type (V1.01)

Vehicle Type	All Initial Inspections					Passing Initial Inspections						Failing Initial Inspections					
	Total	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
LDGV	2,312	276.85	1.37	251.06	1.92	1579	68.30%	131.15	0.46	139.56	1.10	733	31.70%	590.70	3.34	491.25	3.68
LDGT	2,002	241.34	1.16	214.55	1.62	1305	65.18%	114.12	0.38	122.48	1.02	697	34.82%	479.54	2.63	386.92	2.75
HDGT	38,960	74.12	0.30	60.15	0.37	37091	95.20%	49.16	0.19	41.46	0.28	1869	4.80%	569.59	2.46	431.20	2.05
Overall Total	43,274	92.69	0.40	77.50	0.51	39975	92.38%	54.52	0.21	47.98	0.34	3299	7.62%	555.25	2.69	435.19	2.56

Appendix C2

Idle Initial Failure Report

Date
Between 1/1/2018 and 12/31/2018

Idle Initial Failure Report (V1.03)

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
1974	HDGV	0	0.00%	0.00	0.00	0.00	0.00	10	9.35%	1258.18	4.47	968.78	3.69	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	83	28.14%	719.53	4.79	576.38	4.34	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	34	15.11%	1085.09	5.27	833.60	4.27	2	0.89%	417.40	2.37	319.85	3.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	188	35.27%	831.88	5.01	674.01	5.00	2	0.38%	469.35	3.05	554.50	3.03
1974 Total		0	0.00%	0.00	0.00	0.00	0.00	315	27.16%	843.14	4.96	674.87	4.71	4	0.34%	443.38	2.71	437.18	3.02
1975	HDGV	0	0.00%	0.00	0.00	0.00	0.00	5	27.78%	1205.42	4.86	888.92	5.38	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	2	16.67%	327.70	4.42	307.70	3.80	4	33.33%	610.45	2.67	500.58	1.48	1	8.33%	272.70	0.14	226.90	2.85
	LDGT2	1	2.56%	2000.00	7.27	2000.00	7.27	4	10.26%	1143.03	4.71	576.55	4.64	1	2.56%	543.40	4.63	573.40	4.76
	LDGV	2	6.06%	449.55	3.70	252.10	1.03	4	12.12%	273.60	4.03	240.55	5.96	2	6.06%	97.10	0.26	71.95	0.10
1975 Total		5	4.90%	710.90	4.70	623.92	3.38	17	16.67%	831.49	4.11	571.49	4.42	4	3.92%	252.58	1.32	236.05	1.95
1976	HDGV	0	0.00%	0.00	0.00	0.00	0.00	13	18.31%	1464.52	3.90	920.74	3.15	2	2.82%	449.45	4.07	739.90	9.39
	LDGT1	7	6.31%	447.89	3.79	201.94	2.76	25	22.52%	629.94	3.10	426.92	3.51	8	7.21%	203.58	0.79	215.70	2.51
	LDGT2	5	1.87%	1143.56	6.44	828.88	4.52	29	10.82%	1185.80	5.64	813.22	4.56	16	5.97%	306.33	1.77	236.45	2.14
	LDGV	12	5.80%	748.21	4.42	619.58	3.68	48	23.19%	946.93	5.12	641.45	4.74	10	4.83%	261.94	0.95	155.92	1.25
1976 Total		24	3.65%	742.98	4.66	541.37	3.59	115	17.50%	996.76	4.67	669.70	4.25	36	5.48%	279.11	1.45	237.44	2.37
1977	HDGV	1	0.81%	1948.20	6.31	2000.00	6.19	19	15.45%	969.29	5.17	869.01	4.09	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	15	15.15%	756.85	3.60	457.79	3.68	30	30.30%	576.51	2.86	296.67	1.83	7	7.07%	148.09	0.38	138.86	1.31
	LDGT2	4	1.16%	1053.55	7.06	596.50	5.37	39	11.27%	964.88	4.88	760.62	3.60	13	3.76%	240.45	1.82	326.77	2.09
	LDGV	19	7.79%	539.78	3.86	425.13	3.67	71	29.10%	554.56	2.98	483.76	3.15	11	4.51%	134.29	0.35	100.93	1.23
1977 Total		39	4.80%	712.07	4.15	495.65	3.91	159	19.58%	708.91	3.69	562.41	3.12	31	3.82%	181.92	0.97	204.20	1.61
1978	HDGV	1	0.82%	2000.00	6.12	2000.00	6.28	20	16.39%	1295.73	4.58	1107.61	3.49	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	18	11.76%	396.32	4.78	347.76	3.49	47	30.72%	585.27	2.65	467.41	2.38	11	7.19%	147.84	0.54	173.05	1.55
	LDGT2	3	0.68%	1361.07	4.10	1160.97	4.30	40	9.03%	947.85	5.63	535.19	4.25	22	4.97%	315.03	1.29	316.51	1.90
	LDGV	10	3.53%	806.84	4.02	434.31	4.83	66	23.32%	483.02	2.97	466.90	3.36	8	2.83%	153.15	0.34	133.50	1.04
1978 Total		32	3.20%	665.17	4.52	502.68	4.07	173	17.28%	712.23	3.68	556.90	3.32	41	4.10%	238.59	0.90	242.31	1.64
1979	HDGV	1	0.63%	473.30	5.33	323.50	4.48	36	22.64%	943.39	4.02	889.09	3.21	3	1.89%	318.20	3.49	108.00	2.11
	LDGT1	12	7.19%	497.63	5.25	431.48	3.56	36	21.56%	436.68	3.07	421.08	3.80	13	7.78%	150.82	0.52	241.38	1.80
	LDGT2	25	8.62%	669.55	3.01	540.94	2.89	63	21.72%	658.54	3.02	559.81	2.68	22	7.59%	166.93	0.38	239.01	1.64
	LDGV	14	3.94%	622.73	3.95	434.30	4.63	91	25.63%	615.79	3.49	483.62	3.76	15	4.23%	170.40	0.35	155.30	1.26
1979 Total		52	5.36%	613.50	3.83	482.79	3.54	226	23.27%	651.36	3.37	559.48	3.38	53	5.46%	172.52	0.58	208.48	1.60
1980	HDGV	1	1.23%	472.60	3.66	518.10	1.99	11	13.58%	968.24	4.31	680.08	4.13	3	3.70%	105.20	1.32	95.57	0.84
	LDGT1	11	7.01%	574.82	2.89	524.66	4.04	26	16.56%	480.04	2.51	431.14	3.43	10	6.37%	99.58	0.22	80.10	0.73
	LDGT2	6	6.67%	775.25	4.31	511.60	4.10	19	21.11%	632.07	3.54	482.28	2.95	9	10.00%	96.34	0.26	93.14	1.46
	LDGV	8	3.67%	817.68	4.65	636.75	4.20	32	14.68%	547.69	3.05	447.42	3.44	11	5.05%	115.56	0.31	153.06	1.26
1980 Total		26	4.76%	691.87	3.79	555.88	4.02	88	16.12%	598.49	3.15	479.22	3.42	33	6.04%	104.54	0.36	109.38	1.12
1981	HDGV	4	3.08%	594.73	2.74	506.00	3.15	14	10.77%	427.62	3.72	350.87	3.09	7	5.38%	181.79	0.91	123.26	1.25
	LDGT1	21	12.50%	403.20	3.52	228.06	3.89	53	31.55%	332.24	1.58	341.10	2.45	7	4.17%	97.67	0.26	76.36	0.39
	LDGT2	8	9.88%	277.53	1.69	167.85	2.17	25	30.86%	457.02	1.68	356.25	2.41	2	2.47%	36.55	0.16	31.70	0.06
	LDGV	9	5.42%	834.50	3.45	766.31	5.40	53	31.93%	277.82	0.96	362.52	3.10	3	1.81%	107.33	0.24	105.47	0.37
1981 Total		42	7.71%	489.92	3.08	358.40	3.82	145	26.61%	343.07	1.58	352.48	2.74	19	3.49%	123.75	0.49	93.53	0.67
1982	HDGV	0	0.00%	0.00	0.00	0.00	0.00	10	10.53%	754.78	3.44	721.38	2.38	7	7.37%	200.27	0.98	179.43	1.24

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	100.00%	56.60	0.44	102.70	1.30	0	0.00%	0.00	0.00	0.00	0.00
1982 Total		0	0.00%	0.00	0.00	0.00	0.00	12	12.37%	638.42	2.94	618.27	2.20	7	7.22%	200.27	0.98	179.43	1.24
1983	HDGV	4	3.17%	836.03	3.51	753.80	1.82	19	15.08%	941.40	3.04	571.36	2.55	8	6.35%	231.08	1.00	171.55	2.02
	LDGT2	1	100.00%	346.10	0.20	584.00	0.15	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	51.30	0.20	42.40	0.45
1983 Total		5	3.88%	738.04	2.84	719.84	1.49	19	14.73%	941.40	3.04	571.36	2.55	9	6.98%	211.10	0.91	157.20	1.84
1984	HDGV	3	1.41%	1409.30	1.80	775.47	0.90	26	12.21%	700.24	3.82	369.38	2.26	4	1.88%	215.93	1.50	138.53	2.95
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1984 Total		3	1.38%	1409.30	1.80	775.47	0.90	26	11.93%	700.24	3.82	369.38	2.26	4	1.83%	215.93	1.50	138.53	2.95
1985	HDGV	10	4.24%	961.20	4.77	499.66	2.19	36	15.25%	732.23	2.51	623.98	2.21	10	4.24%	208.90	1.20	132.78	1.29
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	33.33%	541.10	8.14	110.20	1.62	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	25.00%	382.70	0.79	396.75	0.83	0	0.00%	0.00	0.00	0.00	0.00
1985 Total		10	4.05%	961.20	4.77	499.66	2.19	39	15.79%	709.41	2.57	599.15	2.12	10	4.05%	208.90	1.20	132.78	1.29
1986	HDGV	14	6.22%	658.64	2.69	445.79	3.03	45	20.00%	470.41	2.11	291.82	1.38	5	2.22%	89.40	0.65	68.50	1.95
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	291.90	0.31	80.30	0.49	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1986 Total		14	6.09%	658.64	2.69	445.79	3.03	46	20.00%	466.53	2.07	287.22	1.36	5	2.17%	89.40	0.65	68.50	1.95
1987	HDGV	3	1.50%	414.53	2.26	288.50	0.60	47	23.50%	584.30	1.98	424.31	1.35	10	5.00%	114.35	0.68	102.29	1.74
	LDGT1	2	15.38%	226.15	0.55	177.45	0.63	4	30.77%	247.75	0.42	138.23	1.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	25.00%	441.55	2.90	395.05	2.61	2	25.00%	53.40	0.18	63.70	0.31
1987 Total		5	2.26%	339.18	1.57	244.08	0.61	53	23.98%	553.51	1.89	401.62	1.37	12	5.43%	104.19	0.59	95.86	1.50
1988	HDGV	3	0.95%	610.97	0.90	1006.47	3.45	37	11.67%	475.55	1.86	515.03	1.55	8	2.52%	109.89	0.61	148.98	0.41
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	6	35.29%	261.20	0.25	243.52	0.77	1	5.88%	162.00	0.21	102.00	0.52
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	162.00	0.78	184.80	1.52	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	725.40	4.94	599.30	4.71	0	0.00%	0.00	0.00	0.00	0.00
1988 Total		3	0.89%	610.97	0.90	1006.47	3.45	45	13.31%	445.55	1.69	473.36	1.52	9	2.66%	115.68	0.57	143.76	0.42
1989	HDGV	2	0.43%	435.55	0.39	647.70	0.35	52	11.26%	525.10	2.07	440.89	1.62	14	3.03%	144.79	0.60	83.17	0.58
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	3	23.08%	221.33	0.54	327.33	1.08	1	7.69%	175.00	0.38	140.00	0.69
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	2	10.53%	388.80	3.79	279.05	1.92	5	26.32%	196.54	0.30	310.94	0.77	0	0.00%	0.00	0.00	0.00	0.00
1989 Total		4	0.80%	412.18	2.09	463.38	1.13	60	12.07%	482.53	1.84	424.38	1.52	15	3.02%	146.81	0.58	86.96	0.58
1990	HDGV	4	0.85%	871.95	2.92	760.88	2.78	52	11.04%	406.77	2.67	253.10	1.60	10	2.12%	88.44	0.47	61.38	0.68
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	8	34.78%	446.90	0.39	308.11	0.58	1	4.35%	212.00	0.56	114.00	0.58
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	8	34.78%	110.74	0.56	214.18	2.19	0	0.00%	0.00	0.00	0.00	0.00
1990 Total		4	0.77%	871.95	2.92	760.88	2.78	68	13.10%	376.66	2.15	254.99	1.55	11	2.12%	99.67	0.47	66.16	0.67
1991	HDGV	3	0.77%	835.03	4.73	960.20	3.77	37	9.54%	381.93	3.12	279.51	2.52	6	1.55%	58.20	0.16	31.28	0.15
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	5	27.78%	251.20	2.67	149.40	2.61	1	5.56%	198.00	0.81	98.00	0.64
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1991 Total		3	0.69%	835.03	4.73	960.20	3.77	42	9.70%	366.37	3.07	264.02	2.53	7	1.62%	78.17	0.25	40.81	0.22
1992	HDGV	1	0.17%	133.60	4.91	107.60	1.16	48	8.25%	459.26	2.59	415.57	2.42	10	1.72%	89.75	0.50	72.46	0.70
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	7	31.82%	291.01	2.15	132.49	1.71	2	9.09%	131.00	0.38	84.50	0.31
	LDGT2	1	33.33%	174.00	3.40	174.90	5.61	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	3	42.86%	442.30	2.78	403.43	2.80	0	0.00%	0.00	0.00	0.00	0.00
1992 Total		2	0.33%	153.80	4.16	141.25	3.39	58	9.45%	438.08	2.55	380.78	2.35	12	1.95%	96.63	0.48	74.47	0.64
1993	HDGV	4	0.62%	740.63	1.88	619.15	1.21	67	10.36%	368.49	2.93	340.46	2.90	12	1.85%	81.66	0.33	54.95	0.45
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	16.67%	56.00	0.44	382.00	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	100.00%	185.20	2.77	184.80	2.88	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	1	14.29%	308.00	0.72	318.50	0.82	0	0.00%	0.00	0.00	0.00	0.00	2	28.57%	50.60	0.08	69.20	0.11
1993 Total		5	0.76%	654.10	1.64	559.02	1.13	69	10.44%	361.30	2.89	338.81	2.86	14	2.12%	77.22	0.29	56.99	0.40
1994	HDGV	2	0.22%	389.65	2.56	594.75	1.16	73	7.94%	511.59	3.33	387.44	2.78	12	1.31%	117.35	0.58	49.93	0.57
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	10	40.00%	533.70	1.45	406.10	2.11	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	4	25.00%	229.35	1.26	199.25	1.67	1	6.25%	167.10	0.65	164.00	0.67
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	4.35%	212.00	2.43	1603.80	3.23	2	8.70%	58.30	0.06	24.50	0.06
1994 Total		2	0.20%	389.65	2.56	594.75	1.16	88	8.95%	497.87	3.01	394.83	2.66	15	1.53%	112.79	0.52	54.14	0.51
1995	HDGV	5	0.46%	384.90	3.49	327.98	1.97	90	8.34%	479.87	3.44	320.09	2.76	14	1.30%	57.33	0.23	32.36	0.17
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	6.25%	319.10	3.27	72.40	0.59	1	6.25%	128.90	0.53	132.90	0.51
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	3	10.34%	246.33	0.63	199.73	0.95	2	6.90%	11.15	0.00	16.60	0.01
1995 Total		5	0.44%	384.90	3.49	327.98	1.97	94	8.33%	470.71	3.35	313.62	2.68	17	1.51%	56.11	0.22	36.42	0.17
1996	HDGV	1	0.08%	172.60	2.54	42.40	0.16	77	6.01%	470.29	2.32	339.77	1.68	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	29.70	0.02	29.30	0.05
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	20.00%	194.30	0.69	232.00	0.68	0	0.00%	0.00	0.00	0.00	0.00
1996 Total		1	0.08%	172.60	2.54	42.40	0.16	78	6.04%	466.75	2.30	338.39	1.67	1	0.08%	29.70	0.02	29.30	0.05
1997	HDGV	0	0.00%	0.00	0.00	0.00	0.00	79	5.54%	512.50	1.98	338.35	1.45	7	0.49%	60.84	0.15	58.69	0.36
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1997 Total		0	0.00%	0.00	0.00	0.00	0.00	79	5.47%	512.50	1.98	338.35	1.45	7	0.48%	60.84	0.15	58.69	0.36
1998	HDGV	1	0.08%	1129.50	4.33	1189.30	4.37	86	7.06%	633.23	1.14	359.18	0.77	4	0.33%	57.48	0.21	69.50	0.44
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	33.33%	178.30	1.27	177.10	1.26	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1998 Total		1	0.08%	1129.50	4.33	1189.30	4.37	87	7.04%	628.01	1.15	357.09	0.78	4	0.32%	57.48	0.21	69.50	0.44
1999	HDGV	0	0.00%	0.00	0.00	0.00	0.00	102	5.05%	611.21	1.42	435.57	1.39	4	0.20%	70.68	0.18	112.78	0.28
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	16.67%	334.60	3.37	325.70	3.32	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1999 Total		0	0.00%	0.00	0.00	0.00	0.00	103	5.08%	608.53	1.44	434.50	1.41	4	0.20%	70.68	0.18	112.78	0.28
2000	HDGV	0	0.00%	0.00	0.00	0.00	0.00	89	3.57%	634.61	1.35	504.85	1.45	6	0.24%	79.07	0.17	50.65	0.23
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	2	16.67%	294.25	0.30	311.05	0.30	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	14.29%	114.20	1.53	118.00	1.54	0	0.00%	0.00	0.00	0.00	0.00
2000 Total		0	0.00%	0.00	0.00	0.00	0.00	92	3.66%	621.55	1.33	496.43	1.42	6	0.24%	79.07	0.17	50.65	0.23
2001	HDGV	0	0.00%	0.00	0.00	0.00	0.00	31	1.41%	616.59	1.93	572.51	1.56	10	0.45%	113.44	0.42	85.83	0.47
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2001 Total		0	0.00%	0.00	0.00	0.00	0.00	31	1.40%	616.59	1.93	572.51	1.56	10	0.45%	113.44	0.42	85.83	0.47
2002	HDGV	0	0.00%	0.00	0.00	0.00	0.00	29	1.27%	514.14	1.29	442.83	1.27	8	0.35%	66.48	0.17	53.33	0.32
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2002 Total		0	0.00%	0.00	0.00	0.00	0.00	29	1.25%	514.14	1.29	442.83	1.27	8	0.35%	66.48	0.17	53.33	0.32
2003	HDGV	0	0.00%	0.00	0.00	0.00	0.00	32	1.56%	471.27	1.74	362.48	1.50	9	0.44%	68.60	0.12	64.03	0.26
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2003 Total		0	0.00%	0.00	0.00	0.00	0.00	32	1.54%	471.27	1.74	362.48	1.50	9	0.43%	68.60	0.12	64.03	0.26
2004	HDGV	0	0.00%	0.00	0.00	0.00	0.00	24	0.99%	481.85	1.94	411.78	1.84	5	0.21%	88.12	0.38	35.88	0.31
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	5.26%	207.90	0.46	224.60	0.49	1	5.26%	42.60	0.02	51.90	0.02
2004 Total		0	0.00%	0.00	0.00	0.00	0.00	25	1.02%	470.89	1.88	404.29	1.79	6	0.24%	80.53	0.32	38.55	0.27
2005	HDGV	0	0.00%	0.00	0.00	0.00	0.00	11	0.63%	667.07	1.93	701.05	1.92	1	0.06%	13.70	0.00	13.90	0.03
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2005 Total		0	0.00%	0.00	0.00	0.00	0.00	11	0.63%	667.07	1.93	701.05	1.92	1	0.06%	13.70	0.00	13.90	0.03
2006	HDGV	1	0.04%	1117.80	0.08	570.30	0.17	19	0.83%	650.44	1.26	545.55	0.96	3	0.13%	69.60	0.15	74.80	0.26
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	6.67%	15.30	0.02	30.10	0.07
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	14.29%	247.40	0.46	203.50	0.76	0	0.00%	0.00	0.00	0.00	0.00
2006 Total		1	0.04%	1117.80	0.08	570.30	0.17	20	0.87%	630.29	1.22	528.44	0.95	4	0.17%	56.03	0.12	63.63	0.22
2007	HDGV	0	0.00%	0.00	0.00	0.00	0.00	7	0.46%	955.61	0.69	986.33	1.49	3	0.20%	60.47	0.26	62.33	0.10
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2007 Total		0	0.00%	0.00	0.00	0.00	0.00	7	0.45%	955.61	0.69	986.33	1.49	3	0.19%	60.47	0.26	62.33	0.10
2008	HDGV	0	0.00%	0.00	0.00	0.00	0.00	6	0.25%	876.92	3.54	459.57	2.05	7	0.29%	40.61	0.06	24.76	0.14
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2008 Total		0	0.00%	0.00	0.00	0.00	0.00	6	0.25%	876.92	3.54	459.57	2.05	7	0.29%	40.61	0.06	24.76	0.14
2009	HDGV	0	0.00%	0.00	0.00	0.00	0.00	1	0.07%	245.00	2.21	101.00	1.15	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2009 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.07%	245.00	2.21	101.00	1.15	0	0.00%	0.00	0.00	0.00	0.00
2010	HDGV	0	0.00%	0.00	0.00	0.00	0.00	1	0.15%	1428.50	2.79	330.40	1.59	4	0.61%	34.70	0.06	46.45	0.10
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2010 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.15%	1428.50	2.79	330.40	1.59	4	0.60%	34.70	0.06	46.45	0.10
2011	HDGV	0	0.00%	0.00	0.00	0.00	0.00	5	0.21%	303.78	1.93	128.48	0.74	4	0.17%	26.88	0.07	22.78	0.25
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2011 Total		0	0.00%	0.00	0.00	0.00	0.00	5	0.21%	303.78	1.93	128.48	0.74	4	0.17%	26.88	0.07	22.78	0.25
2012	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2012 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2013	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2013 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2014	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	101.00	0.39
2014 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	101.00	0.39
2015	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2015 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2016	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2016 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2017	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2017 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2018	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2018 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2019	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2019 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
Grand Total		288	0.67%	651.15	3.70	496.63	3.40	2,564	5.92%	615.40	2.94	480.25	2.71	446	1.03%	148.17	0.64	137.12	1.12

Idle Initial Failure Report - Summary by Veh (V1.03)

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	
HDGV	69	0.18%	751.28	3.12	605.29	2.38	1,366	3.63%	588.69	2.42	447.83	1.98	220	0.58%	111.52	0.56	85.45	0.79	
LDGT1	88	6.09%	494.22	3.92	355.10	3.58	353	24.41%	526.24	2.89	420.81	2.96	64	4.43%	144.20	0.45	155.54	1.34	
LDGT2	54	2.88%	743.44	3.67	568.67	3.41	261	13.91%	835.57	4.17	613.25	3.46	90	4.79%	236.38	1.13	252.15	1.83	
LDGV	77	3.33%	676.07	3.97	510.48	4.10	584	25.26%	633.35	3.62	532.56	3.95	72	3.11%	153.40	0.46	135.59	1.05	
Grand Total		288	0.67%	651.15	3.70	496.63	3.40	2,564	5.92%	615.40	2.94	480.25	2.71	446	1.03%	148.17	0.64	137.12	1.12

Appendix C3

Idle Initial Exhaust Failure Report

Date
Between 1/1/2018 and 12/31/2018

Idle Initial Failure Report (V1.03)

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
1974	HDGV	0	0.00%	0.00	0.00	0.00	0.00	10	9.35%	1258.18	4.47	968.78	3.69	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	83	28.14%	719.53	4.79	576.38	4.34	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	34	15.11%	1085.09	5.27	833.60	4.27	2	0.89%	417.40	2.37	319.85	3.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	188	35.27%	831.88	5.01	674.01	5.00	2	0.38%	469.35	3.05	554.50	3.03
1974 Total		0	0.00%	0.00	0.00	0.00	0.00	315	27.16%	843.14	4.96	674.87	4.71	4	0.34%	443.38	2.71	437.18	3.02
1975	HDGV	0	0.00%	0.00	0.00	0.00	0.00	5	27.78%	1205.42	4.86	888.92	5.38	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	2	16.67%	327.70	4.42	307.70	3.80	4	33.33%	610.45	2.67	500.58	1.48	1	8.33%	272.70	0.14	226.90	2.85
	LDGT2	1	2.56%	2000.00	7.27	2000.00	7.27	4	10.26%	1143.03	4.71	576.55	4.64	1	2.56%	543.40	4.63	573.40	4.76
	LDGV	2	6.06%	449.55	3.70	252.10	1.03	4	12.12%	273.60	4.03	240.55	5.96	2	6.06%	97.10	0.26	71.95	0.10
1975 Total		5	4.90%	710.90	4.70	623.92	3.38	17	16.67%	831.49	4.11	571.49	4.42	4	3.92%	252.58	1.32	236.05	1.95
1976	HDGV	0	0.00%	0.00	0.00	0.00	0.00	13	18.31%	1464.52	3.90	920.74	3.15	2	2.82%	449.45	4.07	739.90	9.39
	LDGT1	7	6.31%	447.89	3.79	201.94	2.76	25	22.52%	629.94	3.10	426.92	3.51	8	7.21%	203.58	0.79	215.70	2.51
	LDGT2	5	1.87%	1143.56	6.44	828.88	4.52	29	10.82%	1185.80	5.64	813.22	4.56	16	5.97%	306.33	1.77	236.45	2.14
	LDGV	12	5.80%	748.21	4.42	619.58	3.68	48	23.19%	946.93	5.12	641.45	4.74	10	4.83%	261.94	0.95	155.92	1.25
1976 Total		24	3.65%	742.98	4.66	541.37	3.59	115	17.50%	996.76	4.67	669.70	4.25	36	5.48%	279.11	1.45	237.44	2.37
1977	HDGV	1	0.81%	1948.20	6.31	2000.00	6.19	19	15.45%	969.29	5.17	869.01	4.09	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	15	15.15%	756.85	3.60	457.79	3.68	30	30.30%	576.51	2.86	296.67	1.83	7	7.07%	148.09	0.38	138.86	1.31
	LDGT2	4	1.16%	1053.55	7.06	596.50	5.37	39	11.27%	964.88	4.88	760.62	3.60	13	3.76%	240.45	1.82	326.77	2.09
	LDGV	19	7.79%	539.78	3.86	425.13	3.67	71	29.10%	554.56	2.98	483.76	3.15	11	4.51%	134.29	0.35	100.93	1.23
1977 Total		39	4.80%	712.07	4.15	495.65	3.91	159	19.58%	708.91	3.69	562.41	3.12	31	3.82%	181.92	0.97	204.20	1.61
1978	HDGV	1	0.82%	2000.00	6.12	2000.00	6.28	20	16.39%	1295.73	4.58	1107.61	3.49	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	18	11.76%	396.32	4.78	347.76	3.49	47	30.72%	585.27	2.65	467.41	2.38	11	7.19%	147.84	0.54	173.05	1.55
	LDGT2	3	0.68%	1361.07	4.10	1160.97	4.30	40	9.03%	947.85	5.63	535.19	4.25	22	4.97%	315.03	1.29	316.51	1.90
	LDGV	10	3.53%	806.84	4.02	434.31	4.83	66	23.32%	483.02	2.97	466.90	3.36	8	2.83%	153.15	0.34	133.50	1.04
1978 Total		32	3.20%	665.17	4.52	502.68	4.07	173	17.28%	712.23	3.68	556.90	3.32	41	4.10%	238.59	0.90	242.31	1.64
1979	HDGV	1	0.63%	473.30	5.33	323.50	4.48	36	22.64%	943.39	4.02	889.09	3.21	3	1.89%	318.20	3.49	108.00	2.11
	LDGT1	12	7.19%	497.63	5.25	431.48	3.56	36	21.56%	436.68	3.07	421.08	3.80	13	7.78%	150.82	0.52	241.38	1.80
	LDGT2	25	8.62%	669.55	3.01	540.94	2.89	63	21.72%	658.54	3.02	559.81	2.68	22	7.59%	166.93	0.38	239.01	1.64
	LDGV	14	3.94%	622.73	3.95	434.30	4.63	91	25.63%	615.79	3.49	483.62	3.76	15	4.23%	170.40	0.35	155.30	1.26
1979 Total		52	5.36%	613.50	3.83	482.79	3.54	226	23.27%	651.36	3.37	559.48	3.38	53	5.46%	172.52	0.58	208.48	1.60
1980	HDGV	1	1.23%	472.60	3.66	518.10	1.99	11	13.58%	968.24	4.31	680.08	4.13	3	3.70%	105.20	1.32	95.57	0.84
	LDGT1	11	7.01%	574.82	2.89	524.66	4.04	26	16.56%	480.04	2.51	431.14	3.43	10	6.37%	99.58	0.22	80.10	0.73
	LDGT2	6	6.67%	775.25	4.31	511.60	4.10	19	21.11%	632.07	3.54	482.28	2.95	9	10.00%	96.34	0.26	93.14	1.46
	LDGV	8	3.67%	817.68	4.65	636.75	4.20	32	14.68%	547.69	3.05	447.42	3.44	11	5.05%	115.56	0.31	153.06	1.26
1980 Total		26	4.76%	691.87	3.79	555.88	4.02	88	16.12%	598.49	3.15	479.22	3.42	33	6.04%	104.54	0.36	109.38	1.12
1981	HDGV	4	3.08%	594.73	2.74	506.00	3.15	14	10.77%	427.62	3.72	350.87	3.09	7	5.38%	181.79	0.91	123.26	1.25
	LDGT1	21	12.50%	403.20	3.52	228.06	3.89	53	31.55%	332.24	1.58	341.10	2.45	7	4.17%	97.67	0.26	76.36	0.39
	LDGT2	8	9.88%	277.53	1.69	167.85	2.17	25	30.86%	457.02	1.68	356.25	2.41	2	2.47%	36.55	0.16	31.70	0.06
	LDGV	9	5.42%	834.50	3.45	766.31	5.40	53	31.93%	277.82	0.96	362.52	3.10	3	1.81%	107.33	0.24	105.47	0.37
1981 Total		42	7.71%	489.92	3.08	358.40	3.82	145	26.61%	343.07	1.58	352.48	2.74	19	3.49%	123.75	0.49	93.53	0.67
1982	HDGV	0	0.00%	0.00	0.00	0.00	0.00	10	10.53%	754.78	3.44	721.38	2.38	7	7.37%	200.27	0.98	179.43	1.24

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	100.00%	56.60	0.44	102.70	1.30	0	0.00%	0.00	0.00	0.00	0.00
1982 Total		0	0.00%	0.00	0.00	0.00	0.00	12	12.37%	638.42	2.94	618.27	2.20	7	7.22%	200.27	0.98	179.43	1.24
1983	HDGV	4	3.17%	836.03	3.51	753.80	1.82	19	15.08%	941.40	3.04	571.36	2.55	8	6.35%	231.08	1.00	171.55	2.02
	LDGT2	1	100.00%	346.10	0.20	584.00	0.15	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	51.30	0.20	42.40	0.45
1983 Total		5	3.88%	738.04	2.84	719.84	1.49	19	14.73%	941.40	3.04	571.36	2.55	9	6.98%	211.10	0.91	157.20	1.84
1984	HDGV	3	1.41%	1409.30	1.80	775.47	0.90	26	12.21%	700.24	3.82	369.38	2.26	4	1.88%	215.93	1.50	138.53	2.95
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1984 Total		3	1.38%	1409.30	1.80	775.47	0.90	26	11.93%	700.24	3.82	369.38	2.26	4	1.83%	215.93	1.50	138.53	2.95
1985	HDGV	10	4.24%	961.20	4.77	499.66	2.19	36	15.25%	732.23	2.51	623.98	2.21	10	4.24%	208.90	1.20	132.78	1.29
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	33.33%	541.10	8.14	110.20	1.62	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	25.00%	382.70	0.79	396.75	0.83	0	0.00%	0.00	0.00	0.00	0.00
1985 Total		10	4.05%	961.20	4.77	499.66	2.19	39	15.79%	709.41	2.57	599.15	2.12	10	4.05%	208.90	1.20	132.78	1.29
1986	HDGV	14	6.22%	658.64	2.69	445.79	3.03	45	20.00%	470.41	2.11	291.82	1.38	5	2.22%	89.40	0.65	68.50	1.95
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	291.90	0.31	80.30	0.49	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1986 Total		14	6.09%	658.64	2.69	445.79	3.03	46	20.00%	466.53	2.07	287.22	1.36	5	2.17%	89.40	0.65	68.50	1.95
1987	HDGV	3	1.50%	414.53	2.26	288.50	0.60	47	23.50%	584.30	1.98	424.31	1.35	10	5.00%	114.35	0.68	102.29	1.74
	LDGT1	2	15.38%	226.15	0.55	177.45	0.63	4	30.77%	247.75	0.42	138.23	1.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	25.00%	441.55	2.90	395.05	2.61	2	25.00%	53.40	0.18	63.70	0.31
1987 Total		5	2.26%	339.18	1.57	244.08	0.61	53	23.98%	553.51	1.89	401.62	1.37	12	5.43%	104.19	0.59	95.86	1.50
1988	HDGV	3	0.95%	610.97	0.90	1006.47	3.45	37	11.67%	475.55	1.86	515.03	1.55	8	2.52%	109.89	0.61	148.98	0.41
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	6	35.29%	261.20	0.25	243.52	0.77	1	5.88%	162.00	0.21	102.00	0.52
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	162.00	0.78	184.80	1.52	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	725.40	4.94	599.30	4.71	0	0.00%	0.00	0.00	0.00	0.00
1988 Total		3	0.89%	610.97	0.90	1006.47	3.45	45	13.31%	445.55	1.69	473.36	1.52	9	2.66%	115.68	0.57	143.76	0.42
1989	HDGV	2	0.43%	435.55	0.39	647.70	0.35	52	11.26%	525.10	2.07	440.89	1.62	14	3.03%	144.79	0.60	83.17	0.58
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	3	23.08%	221.33	0.54	327.33	1.08	1	7.69%	175.00	0.38	140.00	0.69
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	2	10.53%	388.80	3.79	279.05	1.92	5	26.32%	196.54	0.30	310.94	0.77	0	0.00%	0.00	0.00	0.00	0.00
1989 Total		4	0.80%	412.18	2.09	463.38	1.13	60	12.07%	482.53	1.84	424.38	1.52	15	3.02%	146.81	0.58	86.96	0.58
1990	HDGV	4	0.85%	871.95	2.92	760.88	2.78	52	11.04%	406.77	2.67	253.10	1.60	10	2.12%	88.44	0.47	61.38	0.68
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	8	34.78%	446.90	0.39	308.11	0.58	1	4.35%	212.00	0.56	114.00	0.58
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	8	34.78%	110.74	0.56	214.18	2.19	0	0.00%	0.00	0.00	0.00	0.00
1990 Total		4	0.77%	871.95	2.92	760.88	2.78	68	13.10%	376.66	2.15	254.99	1.55	11	2.12%	99.67	0.47	66.16	0.67
1991	HDGV	3	0.77%	835.03	4.73	960.20	3.77	37	9.54%	381.93	3.12	279.51	2.52	6	1.55%	58.20	0.16	31.28	0.15
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	5	27.78%	251.20	2.67	149.40	2.61	1	5.56%	198.00	0.81	98.00	0.64
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1991 Total		3	0.69%	835.03	4.73	960.20	3.77	42	9.70%	366.37	3.07	264.02	2.53	7	1.62%	78.17	0.25	40.81	0.22
1992	HDGV	1	0.17%	133.60	4.91	107.60	1.16	48	8.25%	459.26	2.59	415.57	2.42	10	1.72%	89.75	0.50	72.46	0.70
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	7	31.82%	291.01	2.15	132.49	1.71	2	9.09%	131.00	0.38	84.50	0.31
	LDGT2	1	33.33%	174.00	3.40	174.90	5.61	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	3	42.86%	442.30	2.78	403.43	2.80	0	0.00%	0.00	0.00	0.00	0.00
1992 Total		2	0.33%	153.80	4.16	141.25	3.39	58	9.45%	438.08	2.55	380.78	2.35	12	1.95%	96.63	0.48	74.47	0.64
1993	HDGV	4	0.62%	740.63	1.88	619.15	1.21	67	10.36%	368.49	2.93	340.46	2.90	12	1.85%	81.66	0.33	54.95	0.45
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	16.67%	56.00	0.44	382.00	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	100.00%	185.20	2.77	184.80	2.88	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	1	14.29%	308.00	0.72	318.50	0.82	0	0.00%	0.00	0.00	0.00	0.00	2	28.57%	50.60	0.08	69.20	0.11
1993 Total		5	0.76%	654.10	1.64	559.02	1.13	69	10.44%	361.30	2.89	338.81	2.86	14	2.12%	77.22	0.29	56.99	0.40
1994	HDGV	2	0.22%	389.65	2.56	594.75	1.16	73	7.94%	511.59	3.33	387.44	2.78	12	1.31%	117.35	0.58	49.93	0.57
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	10	40.00%	533.70	1.45	406.10	2.11	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	4	25.00%	229.35	1.26	199.25	1.67	1	6.25%	167.10	0.65	164.00	0.67
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	4.35%	212.00	2.43	1603.80	3.23	2	8.70%	58.30	0.06	24.50	0.06
1994 Total		2	0.20%	389.65	2.56	594.75	1.16	88	8.95%	497.87	3.01	394.83	2.66	15	1.53%	112.79	0.52	54.14	0.51
1995	HDGV	5	0.46%	384.90	3.49	327.98	1.97	90	8.34%	479.87	3.44	320.09	2.76	14	1.30%	57.33	0.23	32.36	0.17
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	6.25%	319.10	3.27	72.40	0.59	1	6.25%	128.90	0.53	132.90	0.51
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	3	10.34%	246.33	0.63	199.73	0.95	2	6.90%	11.15	0.00	16.60	0.01
1995 Total		5	0.44%	384.90	3.49	327.98	1.97	94	8.33%	470.71	3.35	313.62	2.68	17	1.51%	56.11	0.22	36.42	0.17
1996	HDGV	1	0.08%	172.60	2.54	42.40	0.16	77	6.01%	470.29	2.32	339.77	1.68	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	29.70	0.02	29.30	0.05
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	20.00%	194.30	0.69	232.00	0.68	0	0.00%	0.00	0.00	0.00	0.00
1996 Total		1	0.08%	172.60	2.54	42.40	0.16	78	6.04%	466.75	2.30	338.39	1.67	1	0.08%	29.70	0.02	29.30	0.05
1997	HDGV	0	0.00%	0.00	0.00	0.00	0.00	79	5.54%	512.50	1.98	338.35	1.45	7	0.49%	60.84	0.15	58.69	0.36
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1997 Total		0	0.00%	0.00	0.00	0.00	0.00	79	5.47%	512.50	1.98	338.35	1.45	7	0.48%	60.84	0.15	58.69	0.36
1998	HDGV	1	0.08%	1129.50	4.33	1189.30	4.37	86	7.06%	633.23	1.14	359.18	0.77	4	0.33%	57.48	0.21	69.50	0.44
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	33.33%	178.30	1.27	177.10	1.26	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1998 Total		1	0.08%	1129.50	4.33	1189.30	4.37	87	7.04%	628.01	1.15	357.09	0.78	4	0.32%	57.48	0.21	69.50	0.44
1999	HDGV	0	0.00%	0.00	0.00	0.00	0.00	102	5.05%	611.21	1.42	435.57	1.39	4	0.20%	70.68	0.18	112.78	0.28
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	1	16.67%	334.60	3.37	325.70	3.32	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
1999 Total		0	0.00%	0.00	0.00	0.00	0.00	103	5.08%	608.53	1.44	434.50	1.41	4	0.20%	70.68	0.18	112.78	0.28
2000	HDGV	0	0.00%	0.00	0.00	0.00	0.00	89	3.57%	634.61	1.35	504.85	1.45	6	0.24%	79.07	0.17	50.65	0.23
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	2	16.67%	294.25	0.30	311.05	0.30	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	14.29%	114.20	1.53	118.00	1.54	0	0.00%	0.00	0.00	0.00	0.00
2000 Total		0	0.00%	0.00	0.00	0.00	0.00	92	3.66%	621.55	1.33	496.43	1.42	6	0.24%	79.07	0.17	50.65	0.23
2001	HDGV	0	0.00%	0.00	0.00	0.00	0.00	31	1.41%	616.59	1.93	572.51	1.56	10	0.45%	113.44	0.42	85.83	0.47
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2001 Total		0	0.00%	0.00	0.00	0.00	0.00	31	1.40%	616.59	1.93	572.51	1.56	10	0.45%	113.44	0.42	85.83	0.47
2002	HDGV	0	0.00%	0.00	0.00	0.00	0.00	29	1.27%	514.14	1.29	442.83	1.27	8	0.35%	66.48	0.17	53.33	0.32
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2002 Total		0	0.00%	0.00	0.00	0.00	0.00	29	1.25%	514.14	1.29	442.83	1.27	8	0.35%	66.48	0.17	53.33	0.32
2003	HDGV	0	0.00%	0.00	0.00	0.00	0.00	32	1.56%	471.27	1.74	362.48	1.50	9	0.44%	68.60	0.12	64.03	0.26
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2003 Total		0	0.00%	0.00	0.00	0.00	0.00	32	1.54%	471.27	1.74	362.48	1.50	9	0.43%	68.60	0.12	64.03	0.26
2004	HDGV	0	0.00%	0.00	0.00	0.00	0.00	24	0.99%	481.85	1.94	411.78	1.84	5	0.21%	88.12	0.38	35.88	0.31
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	5.26%	207.90	0.46	224.60	0.49	1	5.26%	42.60	0.02	51.90	0.02
2004 Total		0	0.00%	0.00	0.00	0.00	0.00	25	1.02%	470.89	1.88	404.29	1.79	6	0.24%	80.53	0.32	38.55	0.27
2005	HDGV	0	0.00%	0.00	0.00	0.00	0.00	11	0.63%	667.07	1.93	701.05	1.92	1	0.06%	13.70	0.00	13.90	0.03
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2005 Total		0	0.00%	0.00	0.00	0.00	0.00	11	0.63%	667.07	1.93	701.05	1.92	1	0.06%	13.70	0.00	13.90	0.03
2006	HDGV	1	0.04%	1117.80	0.08	570.30	0.17	19	0.83%	650.44	1.26	545.55	0.96	3	0.13%	69.60	0.15	74.80	0.26
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	6.67%	15.30	0.02	30.10	0.07
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	14.29%	247.40	0.46	203.50	0.76	0	0.00%	0.00	0.00	0.00	0.00
2006 Total		1	0.04%	1117.80	0.08	570.30	0.17	20	0.87%	630.29	1.22	528.44	0.95	4	0.17%	56.03	0.12	63.63	0.22
2007	HDGV	0	0.00%	0.00	0.00	0.00	0.00	7	0.46%	955.61	0.69	986.33	1.49	3	0.20%	60.47	0.26	62.33	0.10
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2007 Total		0	0.00%	0.00	0.00	0.00	0.00	7	0.45%	955.61	0.69	986.33	1.49	3	0.19%	60.47	0.26	62.33	0.10
2008	HDGV	0	0.00%	0.00	0.00	0.00	0.00	6	0.25%	876.92	3.54	459.57	2.05	7	0.29%	40.61	0.06	24.76	0.14
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2008 Total		0	0.00%	0.00	0.00	0.00	0.00	6	0.25%	876.92	3.54	459.57	2.05	7	0.29%	40.61	0.06	24.76	0.14
2009	HDGV	0	0.00%	0.00	0.00	0.00	0.00	1	0.07%	245.00	2.21	101.00	1.15	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2009 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.07%	245.00	2.21	101.00	1.15	0	0.00%	0.00	0.00	0.00	0.00
2010	HDGV	0	0.00%	0.00	0.00	0.00	0.00	1	0.15%	1428.50	2.79	330.40	1.59	4	0.61%	34.70	0.06	46.45	0.10
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Year	Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2010 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.15%	1428.50	2.79	330.40	1.59	4	0.60%	34.70	0.06	46.45	0.10
2011	HDGV	0	0.00%	0.00	0.00	0.00	0.00	5	0.21%	303.78	1.93	128.48	0.74	4	0.17%	26.88	0.07	22.78	0.25
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2011 Total		0	0.00%	0.00	0.00	0.00	0.00	5	0.21%	303.78	1.93	128.48	0.74	4	0.17%	26.88	0.07	22.78	0.25
2012	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2012 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2013	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2013 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2014	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	101.00	0.39
2014 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	101.00	0.39
2015	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2015 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2016	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2016 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2017	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2017 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2018	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2018 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2019	HDGV	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2019 Total		0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
Grand Total		288	0.67%	651.15	3.70	496.63	3.40	2,564	5.92%	615.40	2.94	480.25	2.71	446	1.03%	148.17	0.64	137.12	1.12

Idle Initial Failure Report - Summary by Veh (V1.03)

Vehicle		Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
Type	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC	Avg CO	Avg HC 2500 rpm	Avg CO 2500 rpm	
HDGV	69	0.18%	751.28	3.12	605.29	2.38	1,366	3.63%	588.69	2.42	447.83	1.98	220	0.58%	111.52	0.56	85.45	0.79	
LDGT1	88	6.09%	494.22	3.92	355.10	3.58	353	24.41%	526.24	2.89	420.81	2.96	64	4.43%	144.20	0.45	155.54	1.34	
LDGT2	54	2.88%	743.44	3.67	568.67	3.41	261	13.91%	835.57	4.17	613.25	3.46	90	4.79%	236.38	1.13	252.15	1.83	
LDGV	77	3.33%	676.07	3.97	510.48	4.10	584	25.26%	633.35	3.62	532.56	3.95	72	3.11%	153.40	0.46	135.59	1.05	
Grand Total		288	0.67%	651.15	3.70	496.63	3.40	2,564	5.92%	615.40	2.94	480.25	2.71	446	1.03%	148.17	0.64	137.12	1.12

Appendix C4

Idle Initial Failure for Other Report

Date
Between 1/1/2018 and 12/31/2018

Idle Initial Failure for Other Report (V1.03)

Vehicle		Other Overall					CAT				AIS				O2				Gas Cap				Opacity			
Year	Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
1974	HDGV	107	107	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	107	100.00	0	0.00
	LDGT1	295	295	100.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	295	100.00	0	0.00
	LDGT2	225	223	99.11	2	3.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	223	99.11	2	0.89
	LDGV	533	531	99.62	2	1.64	0	0.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	531	99.62	2	0.38
1974 Total		1,160	1156	99.66	4	1.59	1	100.00	0	0.00	3	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1156	99.66	4	0.34
1975	HDGV	18	18	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	18	100.00	0	0.00
	LDGT1	12	9	75.00	3	25.00	4	100.00	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	6	66.67	3	33.33	12	100.00	0	0.00
	LDGT2	39	37	94.87	2	5.13	3	100.00	0	0.00	1	50.00	1	50.00	0	0.00	0	0.00	3	100.00	0	0.00	38	97.44	1	2.56
	LDGV	33	29	87.88	4	12.12	27	96.43	1	3.03	13	100.00	0	0.00	1	100.00	0	0.00	23	85.19	4	14.81	33	100.00	0	0.00
1975 Total		102	93	91.18	9	8.82	35	97.22	1	0.98	19	95.00	1	5.00	1	100.00	0	0.00	36	83.72	7	16.28	101	99.02	1	0.98
1976	HDGV	71	69	97.18	2	2.82	6	85.71	1	1.41	8	88.89	1	11.11	0	0.00	0	0.00	13	100.00	0	0.00	71	100.00	0	0.00
	LDGT1	111	96	86.49	15	13.51	44	97.78	1	0.90	39	92.86	3	7.14	2	100.00	0	0.00	71	84.52	13	15.48	111	100.00	0	0.00
	LDGT2	268	247	92.16	21	7.84	9	69.23	4	1.49	18	78.26	5	21.74	3	100.00	0	0.00	55	83.33	11	16.67	265	98.88	3	1.12
	LDGV	207	185	89.37	22	10.63	126	95.45	6	2.90	81	90.00	9	10.00	4	100.00	0	0.00	146	94.19	9	5.81	206	99.52	1	0.48
1976 Total		657	597	90.87	60	9.13	185	93.91	12	1.83	146	89.02	18	10.98	9	100.00	0	0.00	285	89.62	33	10.38	653	99.39	4	0.61
1977	HDGV	123	122	99.19	1	0.81	12	100.00	0	0.00	9	100.00	0	0.00	1	100.00	0	0.00	34	97.14	1	2.86	123	100.00	0	0.00
	LDGT1	99	77	77.78	22	22.22	64	88.89	8	8.08	43	79.63	11	20.37	7	100.00	0	0.00	72	85.71	12	14.29	97	97.98	2	2.02
	LDGT2	346	329	95.09	17	4.91	17	85.00	3	0.87	27	93.10	2	6.90	4	100.00	0	0.00	66	86.84	10	13.16	343	99.13	3	0.87
	LDGV	244	214	87.70	30	12.30	190	95.96	8	3.28	119	92.97	9	7.03	7	87.50	1	12.50	173	92.51	14	7.49	243	99.59	1	0.41
1977 Total		812	742	91.38	70	8.62	283	93.71	19	2.34	198	90.00	22	10.00	19	95.00	1	5.00	345	90.31	37	9.69	806	99.26	6	0.74
1978	HDGV	122	121	99.18	1	0.82	16	100.00	0	0.00	9	100.00	0	0.00	3	100.00	0	0.00	27	100.00	0	0.00	121	99.18	1	0.82
	LDGT1	153	124	81.05	29	18.95	83	90.22	9	5.88	71	88.75	9	11.25	1	50.00	1	50.00	108	85.04	19	14.96	153	100.00	0	0.00
	LDGT2	443	418	94.36	25	5.64	41	87.23	6	1.35	47	94.00	3	6.00	2	100.00	0	0.00	62	83.78	12	16.22	436	98.42	7	1.58
	LDGV	283	265	93.64	18	6.36	243	97.59	6	2.12	151	95.57	7	4.43	9	100.00	0	0.00	203	95.75	9	4.25	283	100.00	0	0.00
1978 Total		1,001	928	92.71	73	7.29	383	94.80	21	2.10	278	93.60	19	6.40	15	93.75	1	6.25	400	90.91	40	9.09	993	99.20	8	0.80
1979	HDGV	159	155	97.48	4	2.52	19	95.00	1	0.63	89	97.80	2	2.20	1	100.00	0	0.00	37	97.37	1	2.63	159	100.00	0	0.00
	LDGT1	167	142	85.03	25	14.97	128	94.81	7	4.19	99	89.19	12	10.81	4	100.00	0	0.00	121	91.67	11	8.33	167	100.00	0	0.00
	LDGT2	290	243	83.79	47	16.21	248	93.23	18	6.21	149	91.41	14	8.59	3	100.00	0	0.00	210	89.36	25	10.64	287	98.97	3	1.03
	LDGV	355	326	91.83	29	8.17	302	98.37	5	1.41	160	97.56	4	2.44	19	100.00	0	0.00	245	92.45	20	7.55	354	99.72	1	0.28
1979 Total		971	866	89.19	105	10.81	697	95.74	31	3.19	497	93.95	32	6.05	27	100.00	0	0.00	613	91.49	57	8.51	967	99.59	4	0.41
1980	HDGV	81	77	95.06	4	4.94	4	57.14	3	3.70	46	93.88	3	6.12	1	100.00	0	0.00	14	100.00	0	0.00	81	100.00	0	0.00
	LDGT1	157	136	86.62	21	13.38	137	98.56	2	1.27	112	95.73	5	4.27	9	90.00	1	10.00	113	88.28	15	11.72	155	98.73	2	1.27
	LDGT2	90	75	83.33	15	16.67	76	96.20	3	3.33	62	89.86	7	10.14	2	100.00	0	0.00	62	87.32	9	12.68	90	100.00	0	0.00
	LDGV	218	199	91.28	19	8.72	202	96.65	7	3.21	146	94.19	9	5.81	53	96.36	2	3.64	160	95.81	7	4.19	216	99.08	2	0.92
1980 Total		546	487	89.19	59	10.81	419	96.54	15	2.75	366	93.85	24	6.15	65	95.59	3	4.41	349	91.84	31	8.16	542	99.27	4	0.73
1981	HDGV	130	119	91.54	11	8.46	11	91.67	1	0.77	116	93.55	8	6.45	1	100.00	0	0.00	5	62.50	3	37.50	129	99.23	1	0.77
	LDGT1	168	140	83.33	28	16.67	154	96.25	6	3.57	119	91.54	11	8.46	25	96.15	1	3.85	128	88.28	17	11.72	168	100.00	0	0.00
	LDGT2	81	71	87.65	10	12.35	74	97.37	2	2.47	68	98.55	1	1.45	0	0.00	0	0.00	55	87.30	8	12.70	81	100.00	0	0.00
	LDGV	166	154	92.77	12	7.23	160	97.56	4	2.41	110	94.83	6	5.17	108	99.08	1	0.92	122	96.06	5	3.94	166	100.00	0	0.00
1981 Total		545	484	88.81	61	11.19	399	96.84	13	2.39	413	94.08	26	5.92	134	98.53	2	1.47	310	90.38	33	9.62	544	99.82	1	0.18
1982	HDGV	95	88	92.63	7	7.37	13	100.00	0	0.00	83	92.22	7	7.78	2	100.00	0	0.00	1	100.00	0	0.00	95	100.00	0	0.00
	LDGV	2	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00
1982 Total		97	90	92.78	7	7.22	15	100.00	0	0.00	85	92.39	7	7.61	2	100.00	0	0.00	2	100.00	0	0.00	97	100.00	0	0.00
1983	HDGV	126	114	90.48	12	9.52	10	83.33	2	1.59	113	93.39	8	6.61	4	100.00	0	0.00	3	75.00	1	25.00	124	98.41	2	1.59

Vehicle		Other Overall					CAT				AIS				O2				Gas Cap				Opacity			
Year	Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
	LDGV	8	8	100.00	0	0.00	8	100.00	0	0.00	6	100.00	0	0.00	6	100.00	0	0.00	4	100.00	0	0.00	8	100.00	0	0.00
1985 Total		247	227	91.90	20	8.10	34	97.14	1	0.40	217	92.34	18	7.66	24	100.00	0	0.00	8	100.00	0	0.00	245	99.19	2	0.81
1986	HDGV	225	206	91.56	19	8.44	16	94.12	1	0.44	204	92.73	16	7.27	9	90.00	1	10.00	0	0.00	1	100.00	225	100.00	0	0.00
	LDGT1	2	2	100.00	0	0.00	2	100.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGV	3	3	100.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00	2	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00
1986 Total		230	211	91.74	19	8.26	21	95.45	1	0.43	208	92.86	16	7.14	12	92.31	1	7.69	3	75.00	1	25.00	230	100.00	0	0.00
1987	HDGV	200	187	93.50	13	6.50	76	97.44	2	1.00	178	93.19	13	6.81	53	100.00	0	0.00	6	100.00	0	0.00	200	100.00	0	0.00
	LDGT1	13	11	84.62	2	15.38	13	100.00	0	0.00	1	100.00	0	0.00	13	100.00	0	0.00	12	92.31	1	7.69	12	92.31	1	7.69
	LDGV	8	6	75.00	2	25.00	7	100.00	0	0.00	4	80.00	1	20.00	4	100.00	0	0.00	4	80.00	1	20.00	8	100.00	0	0.00
1987 Total		221	204	92.31	17	7.69	96	97.96	2	0.90	183	92.89	14	7.11	70	100.00	0	0.00	22	91.67	2	8.33	220	99.55	1	0.45
1988	HDGV	317	306	96.53	11	3.47	258	98.47	4	1.26	294	97.35	8	2.65	237	99.58	1	0.42	6	85.71	1	14.29	317	100.00	0	0.00
	LDGT1	17	16	94.12	1	5.88	17	100.00	0	0.00	1	100.00	0	0.00	17	100.00	0	0.00	16	94.12	1	5.88	17	100.00	0	0.00
	LDGT2	2	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGV	2	2	100.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00
1988 Total		338	326	96.45	12	3.55	278	98.58	4	1.18	298	97.39	8	2.61	256	99.61	1	0.39	25	92.59	2	7.41	338	100.00	0	0.00
1989	HDGV	462	446	96.54	16	3.46	404	98.78	5	1.08	350	97.49	9	2.51	361	99.18	3	0.82	4	80.00	1	20.00	460	99.57	2	0.43
	LDGT1	13	12	92.31	1	7.69	13	100.00	0	0.00	0	0.00	0	0.00	13	100.00	0	0.00	12	92.31	1	7.69	13	100.00	0	0.00
	LDGT2	3	3	100.00	0	0.00	3	100.00	0	0.00	2	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
	LDGV	19	17	89.47	2	10.53	17	100.00	0	0.00	6	100.00	0	0.00	16	100.00	0	0.00	14	87.50	2	12.50	19	100.00	0	0.00
1989 Total		497	478	96.18	19	3.82	437	98.87	5	1.01	358	97.55	9	2.45	391	99.24	3	0.76	33	89.19	4	10.81	495	99.60	2	0.40
1990	HDGV	471	457	97.03	14	2.97	452	98.47	7	1.49	313	99.05	3	0.95	452	99.12	4	0.88	2	50.00	2	50.00	471	100.00	0	0.00
	LDGT1	23	22	95.65	1	4.35	23	100.00	0	0.00	0	0.00	0	0.00	23	100.00	0	0.00	22	95.65	1	4.35	23	100.00	0	0.00
	LDGT2	2	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGV	23	23	100.00	0	0.00	22	100.00	0	0.00	5	100.00	0	0.00	22	100.00	0	0.00	20	100.00	0	0.00	23	100.00	0	0.00
1990 Total		519	504	97.11	15	2.89	499	98.62	7	1.35	320	99.07	3	0.93	499	99.20	4	0.80	46	93.88	3	6.12	519	100.00	0	0.00
1991	HDGV	388	379	97.68	9	2.32	380	99.22	3	0.77	218	98.20	4	1.80	382	99.74	1	0.26	5	71.43	2	28.57	387	99.74	1	0.26
	LDGT1	18	17	94.44	1	5.56	18	100.00	0	0.00	0	0.00	0	0.00	18	100.00	0	0.00	17	94.44	1	5.56	18	100.00	0	0.00
	LDGT2	2	2	100.00	0	0.00	2	100.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGV	25	25	100.00	0	0.00	24	100.00	0	0.00	4	100.00	0	0.00	24	100.00	0	0.00	22	100.00	0	0.00	25	100.00	0	0.00
1991 Total		433	423	97.69	10	2.31	424	99.30	3	0.69	223	98.24	4	1.76	426	99.77	1	0.23	46	93.88	3	6.12	432	99.77	1	0.23
1992	HDGV	582	571	98.11	11	1.89	573	99.31	4	0.69	336	98.53	5	1.47	578	99.66	2	0.34	5	62.50	3	37.50	582	100.00	0	0.00
	LDGT1	22	20	90.91	2	9.09	22	100.00	0	0.00	1	100.00	0	0.00	22	100.00	0	0.00	20	90.91	2	9.09	22	100.00	0	0.00
	LDGT2	3	2	66.67	1	33.33	2	66.67	1	33.33	0	0.00	0	0.00	2	66.67	1	33.33	3	100.00	0	0.00	3	100.00	0	0.00
	LDGV	7	7	100.00	0	0.00	7	100.00	0	0.00	2	100.00	0	0.00	6	100.00	0	0.00	7	100.00	0	0.00	7	100.00	0	0.00
1992 Total		614	600	97.72	14	2.28	604	99.18	5	0.81	339	98.55	5	1.45	608	99.51	3	0.49	35	87.50	5	12.50	614	100.00	0	0.00
1993	HDGV	647	631	97.53	16	2.47	632	98.90	7	1.08	342	98.56	5	1.44	639	99.69	2	0.31	4	57.14	3	42.86	646	99.85	1	0.15
	LDGT1	6	6	100.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	5	100.00	0	0.00	6	100.00	0	0.00
	LDGT2	1	1	100.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00
	LDGV	7	4	57.14	3	42.86	7	100.00	0	0.00	0	0.00	0	0.00	6	85.71	1	14.29	5	71.43	2	28.57	7	100.00	0	0.00
1993 Total		661	642	97.13	19	2.87	646	98.93	7	1.06	343	98.56	5	1.44	652	99.54	3	0.46	15	75.00	5	25.00	660	99.85	1	0.15
1994	HDGV	919	905	98.48	14	1.52	880	99.21	7	0.76	487	99.39	3	0.61	911	99.56	4	0.44	1	50.00	1	50.00	918	99.89	1	0.11
	LDGT1	25	25	100.00	0	0.00	25	100.00	0	0.00	1	100.00	0	0.00	25	100.00	0	0.00	24	100.00	0	0.00	25	100.00	0	0.00
	LDGT2	16	15	93.75	1	6.25	16	100.00	0	0.00	5	100.00	0	0.00	16	100.00	0	0.00	15	93.75	1	6.25	16	100.00	0	0.00
	LDGV	23	21	91.30	2	8.70	23	100.00	0	0.00	5	100.00	0	0.00	22	95.65	1	4.35	22	95.65	1	4.35	23	100.00	0	0.00
1994 Total		983	966	98.27	17	1.73	944	99.26	7	0.71	498	99.40	3	0.60	974	99.49	5	0.51	62	95.38	3	4.62	982	99.90	1	0.10
1995	HDGV	1,079	1060	98.24	19	1.76	1027	99.52	5	0.46	542	98.55	8	1.45	1,074	99.91	1	0.09	5	50.00	5	50.00	1078	99.91	1	0.09
	LDGT1	5	5	100.00	0	0.00	5	100.00	0	0.00	1	100.00	0	0.00	5	100.00	0	0.00	5	100.00	0	0.00	5	100.00	0	0.00
	LDGT2	16	15	93.75	1	6.25	16	100.00	0	0.00	0	0.00	0	0.00	16	100.00	0	0.00	15	93.75	1	6.25	16	100.00	0	0.00
	LDGV	29	27																							

Vehicle		Other Overall					CAT				AIS				O2				Gas Cap				Opacity			
Year	Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
	LDGT1	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	3	100.00	0	0.00
	LDGT2	5	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	5	100.00	0	0.00
	LDGV	10	10	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10	100.00	0	0.00	10	100.00	0	0.00
1997 Total		1,444	1437	99.52	7	0.48	19	100.00	0	0.00	2	100.00	0	0.00	19	100.00	0	0.00	20	76.92	6	23.08	1443	99.93	1	0.07
1998	HDGV	1,218	1213	99.59	5	0.41	11	100.00	0	0.00	0	0.00	0	0.00	11	100.00	0	0.00	2	33.33	4	66.67	1217	99.92	1	0.08
	LDGT1	10	10	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	9	100.00	0	0.00	10	100.00	0	0.00
	LDGT2	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
	LDGV	4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	4	100.00	0	0.00
1998 Total		1,235	1230	99.60	5	0.40	11	100.00	0	0.00	0	0.00	0	0.00	11	100.00	0	0.00	18	81.82	4	18.18	1234	99.92	1	0.08
1999	HDGV	2,018	2014	99.80	4	0.20	5	100.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	8	72.73	3	27.27	2017	99.95	1	0.05
	LDGT1	6	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	6	100.00	0	0.00
	LDGT2	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00
	LDGV	4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	4	100.00	0	0.00
1999 Total		2,029	2025	99.80	4	0.20	5	100.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	18	85.71	3	14.29	2028	99.95	1	0.05
2000	HDGV	2,492	2486	99.76	6	0.24	20	100.00	0	0.00	0	0.00	0	0.00	20	100.00	0	0.00	44	89.80	5	10.20	2491	99.96	1	0.04
	LDGT1	12	12	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	12	100.00	0	0.00	12	100.00	0	0.00
	LDGT2	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
	LDGV	7	7	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7	100.00	0	0.00	7	100.00	0	0.00
2000 Total		2,514	2508	99.76	6	0.24	20	100.00	0	0.00	0	0.00	0	0.00	20	100.00	0	0.00	66	92.96	5	7.04	2513	99.96	1	0.04
2001	HDGV	2,200	2190	99.55	10	0.45	21	100.00	0	0.00	0	0.00	0	0.00	21	100.00	0	0.00	14	66.67	7	33.33	2197	99.86	3	0.14
	LDGT1	7	7	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7	100.00	0	0.00	7	100.00	0	0.00
	LDGT2	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00
	LDGV	8	8	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8	100.00	0	0.00	8	100.00	0	0.00
2001 Total		2,216	2206	99.55	10	0.45	21	100.00	0	0.00	0	0.00	0	0.00	21	100.00	0	0.00	30	81.08	7	18.92	2213	99.86	3	0.14
2002	HDGV	2,289	2281	99.65	8	0.35	15	100.00	0	0.00	1	100.00	0	0.00	15	100.00	0	0.00	37	84.09	7	15.91	2288	99.96	1	0.04
	LDGT1	9	9	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	9	100.00	0	0.00	9	100.00	0	0.00
	LDGT2	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
	LDGV	11	11	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11	100.00	0	0.00	11	100.00	0	0.00
2002 Total		2,312	2304	99.65	8	0.35	15	100.00	0	0.00	1	100.00	0	0.00	15	100.00	0	0.00	60	89.55	7	10.45	2311	99.96	1	0.04
2003	HDGV	2,050	2041	99.56	9	0.44	39	100.00	0	0.00	0	0.00	0	0.00	39	100.00	0	0.00	52	86.67	8	13.33	2049	99.95	1	0.05
	LDGT1	16	16	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	16	100.00	0	0.00	16	100.00	0	0.00
	LDGT2	4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	4	100.00	0	0.00
	LDGV	4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	4	100.00	0	0.00
2003 Total		2,074	2065	99.57	9	0.43	39	100.00	0	0.00	0	0.00	0	0.00	39	100.00	0	0.00	76	90.48	8	9.52	2073	99.95	1	0.05
2004	HDGV	2,427	2422	99.79	5	0.21	33	100.00	0	0.00	1	100.00	0	0.00	33	100.00	0	0.00	39	88.64	5	11.36	2427	100.00	0	0.00
	LDGT1	14	14	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	14	100.00	0	0.00	14	100.00	0	0.00
	LDGV	19	18	94.74	1	5.26	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	18	94.74	1	5.26	19	100.00	0	0.00
2004 Total		2,460	2454	99.76	6	0.24	33	100.00	0	0.00	1	100.00	0	0.00	33	100.00	0	0.00	71	92.21	6	7.79	2460	100.00	0	0.00
2005	HDGV	1,734	1733	99.94	1	0.06	27	100.00	0	0.00	0	0.00	0	0.00	27	100.00	0	0.00	33	97.06	1	2.94	1734	100.00	0	0.00
	LDGT1	6	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	6	100.00	0	0.00
	LDGT2	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGV	6	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	6	100.00	0	0.00
2005 Total		1,748	1747	99.94	1	0.06	27	100.00	0	0.00	0	0.00	0	0.00	27	100.00	0	0.00	46	97.87	1	2.13	1748	100.00	0	0.00
2006	HDGV	2,285	2281	99.82	4	0.18	33	100.00	0	0.00	0	0.00	0	0.00	33	100.00	0	0.00	27	93.10	2	6.90	2283	99.91	2	0.09
	LDGT1	15	14	93.33	1	6.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	14	93.33	1	6.67	15	100.00	0	0.00
	LDGT2	2	2	100.00	0	0.00																				

Vehicle		Other Overall					CAT				AIS				O2				Gas Cap				Opacity			
Year	Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %
	LDGV	5	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	5	100.00	0	0.00
2008 Total		2,396	2389	99.71	7	0.29	45	100.00	0	0.00	0	0.00	0	0.00	45	100.00	0	0.00	48	88.89	6	11.11	2395	99.96	1	0.04
2009	HDGV	1,362	1362	100.00	0	0.00	54	100.00	0	0.00	0	0.00	0	0.00	54	100.00	0	0.00	34	100.00	0	0.00	1362	100.00	0	0.00
	LDGT1	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGT2	6	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	6	100.00	0	0.00
	LDGV	4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	4	100.00	0	0.00
2009 Total		1,374	1374	100.00	0	0.00	54	100.00	0	0.00	0	0.00	0	0.00	54	100.00	0	0.00	46	100.00	0	0.00	1374	100.00	0	0.00
2010	HDGV	659	655	99.39	4	0.61	33	100.00	0	0.00	3	100.00	0	0.00	33	100.00	0	0.00	10	76.92	3	23.08	658	99.85	1	0.15
	LDGT2	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
	LDGV	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	2	100.00	0	0.00
2010 Total		663	659	99.40	4	0.60	33	100.00	0	0.00	3	100.00	0	0.00	33	100.00	0	0.00	14	82.35	3	17.65	662	99.85	1	0.15
2011	HDGV	2,395	2391	99.83	4	0.17	50	100.00	0	0.00	0	0.00	0	0.00	50	100.00	0	0.00	22	88.00	3	12.00	2394	99.96	1	0.04
	LDGT1	5	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	5	100.00	0	0.00
	LDGT2	6	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	6	100.00	0	0.00
	LDGV	4	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	4	100.00	0	0.00
2011 Total		2,410	2406	99.83	4	0.17	50	100.00	0	0.00	0	0.00	0	0.00	50	100.00	0	0.00	36	92.31	3	7.69	2409	99.96	1	0.04
2012	HDGV	509	509	100.00	0	0.00	9	100.00	0	0.00	1	100.00	0	0.00	9	100.00	0	0.00	1	100.00	0	0.00	509	100.00	0	0.00
	LDGT2	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00	0	0.00
2012 Total		510	510	100.00	0	0.00	9	100.00	0	0.00	1	100.00	0	0.00	9	100.00	0	0.00	2	100.00	0	0.00	510	100.00	0	0.00
2013	HDGV	204	204	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	204	100.00	0	0.00
2013 Total		204	204	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	204	100.00	0	0.00
2014	HDGV	164	164	100.00	0	0.00	15	100.00	0	0.00	0	0.00	0	0.00	15	100.00	0	0.00	0	0.00	0	0.00	164	100.00	0	0.00
2014 Total		164	164	100.00	0	0.00	15	100.00	0	0.00	0	0.00	0	0.00	15	100.00	0	0.00	0	0.00	0	0.00	164	100.00	0	0.00
2015	HDGV	113	113	100.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	113	100.00	0	0.00
2015 Total		113	113	100.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	113	100.00	0	0.00
2016	HDGV	88	88	100.00	0	0.00	9	100.00	0	0.00	0	0.00	0	0.00	9	100.00	0	0.00	0	0.00	0	0.00	88	100.00	0	0.00
2016 Total		88	88	100.00	0	0.00	9	100.00	0	0.00	0	0.00	0	0.00	9	100.00	0	0.00	0	0.00	0	0.00	88	100.00	0	0.00
2017	HDGV	35	35	100.00	0	0.00	8	100.00	0	0.00	0	0.00	0	0.00	8	100.00	0	0.00	16	100.00	0	0.00	35	100.00	0	0.00
2017 Total		35	35	100.00	0	0.00	8	100.00	0	0.00	0	0.00	0	0.00	8	100.00	0	0.00	16	100.00	0	0.00	35	100.00	0	0.00
2018	HDGV	3	3	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	3	100.00	0	0.00
2018 Total		3	3	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	3	100.00	0	0.00
2019	HDGV	6	6	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	6	100.00	0	0.00
2019 Total		6	6	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	6	100.00	0	0.00
Grand Total		43,275	42541	98.30	734	1.73	8037	98.04	161	0.38	5884	95.80	258	4.20	5,844	99.47	31	0.53	3,388	90.88	340	9.12	43217	99.87	58	0.13

Idle Initial Failure for Other Report - Summary by Veh (V1.03)

Vehicle		Visual Overall					CAT				AIS				O2				Gas Cap				Opacity			
Type	Total	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	Pass	Pass %	Fail	Fail %	
HDGV	37,640	37351	99.23	289	0.77	5355	99.00	54	0.14	4163	97.02	128	2.98	5,253	99.64	19	0.36	583	86.89	88	13.11	37613	99.93	27	0.07	
LDGT1	1,446	1294	89.49	152	12.62	762	95.85	33	2.74	495	90.66	51	9.34	193	98.47	3	1.53	891	90.09	98	9.91	1441	99.65	5	0.35	
LDGT2	1,877	1733	92.33	144	8.40	513	93.27	37	2.16	386	92.12	33	7.88	56	96.55	2	3.45	603	88.55	78	11.45	1858	98.99	19	1.01	
LDGV	2,312	2163	93.56	149	7.84	1407	97.44	37	1.95	840	94.81	46	5.19	342	97.99	7	2.01	1,311	94.52	76	5.48	2305	99.70	7	0.30	
Grand Total	43,275	42541	98.30	734	1.73	8037	98.04	161	0.38	5884	95.80	258	4.20	5,844	99.47	31	0.53	3,388	90.88	340	9.12	43217	99.87	58	0.13	

Appendix C5

Idle Retest Pass Reduction Report

Date
Between 1/1/2018 and 12/31/2018

Idle Retest Pass Reduction Report (V1.01)

Vehicle		Initial Exhaust Emissions					Passing Retest Exhaust Emissions						Emission Reductions								Average Repair Costs
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC2500 rpm	Avg CO2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC2500 rpm	Avg CO2500 rpm	Avg HC Idle	Avg HC % Idle	Avg CO Idle	Avg CO % Idle	Avg HC2500 rpm	Avg HC% 2500rpm	Avg CO2500 rpm	Avg CO% 2500rpm	
1974	LDGV	163	820.82	5.34	642.21	5.36	90	55.21%	326.72	1.39	378.62	2.92	358.02	52.29%	3.70	72.67%	177.88	31.96%	2.03	40.97%	302.50
	LDGT	77	745.41	5.11	509.85	4.06	45	58.44%	294.10	1.21	301.03	2.44	337.14	53.41%	3.76	75.72%	117.70	28.11%	1.19	32.82%	132.00
	HDGT	56	1272.36	5.21	997.67	4.40	34	60.71%	390.21	2.61	376.23	3.19	809.95	67.49%	2.72	50.95%	559.67	59.80%	1.20	27.35%	60.00
1974 Total		296	886.63	5.25	675.03	4.84	169	57.09%	330.81	1.59	357.48	2.85	443.38	57.27%	3.52	68.90%	238.67	40.03%	1.64	36.53%	176.83
1975	LDGV	15	540.30	5.15	297.97	5.26	6	40.00%	177.42	0.22	176.43	1.33	317.12	64.12%	3.31	93.85%	170.57	49.15%	2.33	63.73%	0.00
	LDGT	5	501.76	1.98	354.00	2.97	4	80.00%	241.73	0.66	780.90	6.79	254.88	51.32%	0.19	21.83%	-475.25	-155.49%	-4.64	-216.18%	0.00
	HDGT	12	878.16	4.71	624.43	4.94	8	66.67%	289.28	2.31	219.69	3.82	610.46	67.85%	2.23	49.13%	458.61	67.61%	1.15	23.12%	0.00
1975 Total		32	660.98	4.49	429.15	4.78	18	56.25%	241.42	1.25	329.98	3.65	433.66	64.24%	2.14	63.13%	155.07	31.97%	0.25	6.52%	0.00
1976	LDGV	88	882.20	4.67	569.56	4.43	46	52.27%	149.52	0.62	167.00	2.04	515.60	77.52%	3.35	84.45%	300.49	64.28%	1.46	41.70%	752.50
	LDGT	49	536.24	3.18	283.36	2.71	28	57.14%	216.74	0.96	168.47	2.02	309.35	58.80%	1.74	64.41%	117.02	40.99%	0.83	29.24%	52.33
	HDGT	71	939.33	4.31	641.76	3.46	46	64.79%	307.86	1.75	312.93	2.26	509.33	62.33%	2.53	59.07%	218.53	41.12%	1.06	31.97%	79.50
1976 Total		208	820.20	4.19	526.78	3.70	120	57.69%	225.90	1.13	223.29	2.12	465.07	67.31%	2.66	70.14%	226.26	50.33%	1.16	35.39%	260.14
1977	LDGV	129	602.96	3.08	485.94	3.44	67	51.94%	134.04	0.51	143.99	1.23	373.64	73.60%	2.43	82.71%	284.82	66.42%	1.86	60.19%	115.00
	LDGT	54	521.98	3.63	336.66	2.62	29	53.70%	139.01	0.41	136.07	0.90	361.36	72.22%	2.94	87.80%	126.80	48.24%	1.56	63.46%	0.00
	HDGT	90	952.52	4.71	658.24	3.56	60	66.67%	303.31	2.08	333.45	2.74	547.46	64.35%	2.73	56.79%	310.17	48.19%	0.66	19.50%	241.50
1977 Total		273	702.18	3.73	513.22	3.32	156	57.14%	200.07	1.09	215.39	1.75	438.21	68.65%	2.64	70.71%	265.19	55.18%	1.34	43.42%	165.60
1978	LDGV	89	529.27	2.96	374.77	3.15	46	51.69%	130.81	0.42	129.27	1.62	274.68	67.74%	1.93	81.95%	188.30	59.29%	1.09	40.11%	71.00
	LDGT	92	560.43	3.00	387.14	2.50	54	58.70%	113.42	0.41	126.52	1.39	374.46	76.75%	2.22	84.34%	224.27	63.93%	0.96	40.91%	531.50
	HDGT	114	992.49	4.81	630.22	3.55	77	67.54%	329.91	1.83	262.30	2.30	632.94	65.74%	2.58	58.54%	350.30	57.18%	1.12	32.65%	134.71
1978 Total		295	717.99	3.69	477.34	3.10	177	60.00%	212.12	1.03	186.30	1.85	460.97	68.49%	2.30	69.06%	269.75	59.15%	1.06	36.49%	261.67
1979	LDGV	154	598.44	3.02	468.87	3.00	87	56.49%	124.59	0.37	124.93	1.35	370.69	74.84%	2.44	86.76%	241.55	65.91%	1.41	51.18%	286.67
	LDGT	213	553.05	2.58	457.87	2.74	125	58.69%	141.72	0.39	232.38	1.68	329.09	69.90%	2.22	84.94%	184.80	44.30%	1.04	38.40%	194.43
	HDGT	45	811.22	3.13	700.63	3.26	29	64.44%	304.57	1.63	431.39	2.41	380.60	55.55%	1.90	53.80%	178.46	29.26%	0.49	16.91%	607.50
1979 Total		412	598.21	2.81	488.50	2.90	241	58.50%	155.13	0.54	217.54	1.65	350.31	69.31%	2.26	80.86%	204.52	48.46%	1.11	40.30%	286.33
1980	LDGV	58	491.42	2.37	426.17	2.87	40	68.97%	115.48	0.32	144.25	1.35	317.48	73.33%	1.81	85.07%	250.01	63.41%	1.32	49.44%	120.00
	LDGT	86	520.42	3.10	337.89	2.83	52	60.47%	119.12	0.35	151.16	1.67	300.08	71.58%	2.06	85.63%	164.87	52.17%	0.72	30.15%	141.50
	HDGT	25	930.94	3.44	690.14	2.93	17	68.00%	261.62	1.02	183.35	0.89	550.40	67.78%	2.01	66.43%	364.36	66.52%	1.09	54.90%	0.00
1980 Total		169	571.19	2.90	420.29	2.86	109	64.50%	140.01	0.44	153.64	1.43	345.51	71.16%	1.96	81.67%	227.23	59.66%	1.00	41.08%	137.20
1981	LDGV	88	324.71	1.58	365.93	3.43	44	50.00%	61.95	0.19	68.68	0.39	218.40	77.90%	0.88	82.10%	239.59	77.72%	1.98	83.60%	164.50
	LDGT	195	400.15	1.86	350.67	2.66	86	44.10%	60.32	0.16	55.58	0.28	306.17	83.54%	1.59	90.89%	251.48	81.90%	2.07	88.12%	493.57
	HDGT	39	529.35	2.99	348.35	2.48	25	64.10%	177.50	1.03	142.44	1.14	311.83	63.73%	1.74	62.92%	165.48	53.74%	1.44	55.98%	0.00
1981 Total		322	395.18	1.92	354.56	2.85	155	48.14%	79.68	0.31	73.31	0.45	282.17	77.98%	1.41	82.07%	234.23	76.16%	1.94	81.26%	420.44
1982	LDGV	4	91.55	1.03	94.45	1.30	2	50.00%	61.35	0.08	64.25	0.08	25.95	29.73%	0.62	88.57%	38.45	37.44%	1.22	93.85%	0.00
	LDGT	4	587.70	1.39	564.20	1.25	0	0.00%	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
	HDGT	27	699.95	3.99	484.61	1.83	15	55.56%	123.82	1.18	85.70	0.96	473.29	79.26%	1.28	52.04%	367.43	81.09%	0.98	50.67%	726.00
1982 Total		35	617.59	3.35	449.12	1.70	17	48.57%	116.47	1.05	83.18	0.85	420.66	78.32%	1.20	53.38%	328.73	79.81%	1.01	54.22%	726.00
1983	HDGT	54	774.14	3.11	453.51	2.49	23	42.59%	158.19	0.68	116.33	1.21	525.29	76.86%	1.95	74.13%	216.72	65.07%	0.98	44.94%	335.00
1983 Total		54	774.14	3.11	453.51	2.49	23	42.59%	158.19	0.68	116.33	1.21	525.29	76.86%	1.95	74.13%	216.72	65.07%	0.98	44.94%	335.00
1984	HDGT	60	813.98	3.52	557.88	2.43	32	53.33%	196.81	0.91	109.01	0.95	558.24	73.93%	2.39	72.48%	362.01	76.86%	1.44	60.31%	374.33

Vehicle		Initial Exhaust Emissions					Passing Retest Exhaust Emissions						Emission Reductions								Average Repair Costs
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC2500 rpm	Avg CO2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC2500 rpm	Avg CO2500 rpm	Avg HC Idle	Avg HC % Idle	Avg CO Idle	Avg CO % Idle	Avg HC2500 rpm	Avg HC% 2500rpm	Avg CO2500 rpm	Avg CO% 2500rpm	
1984 Total		60	813.98	3.52	557.88	2.43	32	53.33%	196.81	0.91	109.01	0.95	558.24	73.93%	2.39	72.48%	362.01	76.86%	1.44	60.31%	374.33
1985	LDGV	6	940.93	2.87	951.52	4.01	3	50.00%	89.90	0.23	85.83	0.70	837.83	90.31%	2.76	92.31%	845.33	90.78%	3.43	83.04%	0.00
	LDGT	5	541.10	8.14	110.20	1.62	0	0.00%	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
	HDGT	74	824.85	2.49	555.86	1.71	38	51.35%	209.97	1.06	117.97	0.86	513.02	70.96%	1.49	58.30%	388.86	76.72%	0.99	53.46%	466.50
1985 Total		85	816.35	2.85	557.57	1.87	41	48.24%	201.18	1.00	115.62	0.85	536.79	72.74%	1.58	61.18%	422.26	78.50%	1.16	57.90%	466.50
1986	LDGV	2	175.10	2.19	175.40	2.13	1	50.00%	7.90	0.00	29.30	0.01	167.20	95.49%	2.19	100.00%	146.10	83.30%	2.12	99.53%	0.00
	LDGT	2	341.10	2.09	46.35	0.75	2	100.00%	121.90	0.47	63.45	0.32	219.20	64.26%	1.62	77.51%	-17.10	-36.89%	0.44	58.00%	0.00
	HDGT	93	544.21	2.10	288.84	1.47	46	49.46%	99.11	0.79	65.13	0.93	345.25	77.70%	0.83	51.15%	190.63	74.54%	0.14	12.68%	780.00
1986 Total		97	532.42	2.10	281.50	1.47	49	50.52%	98.18	0.76	64.33	0.89	336.48	77.41%	0.89	53.83%	181.24	73.80%	0.19	17.46%	780.00
1987	LDGV	6	324.20	2.04	284.60	1.84	4	66.67%	64.43	0.30	79.75	0.42	198.53	75.50%	1.31	81.44%	149.63	65.23%	1.05	71.58%	0.00
	LDGT	8	271.46	0.45	264.89	0.93	4	50.00%	94.08	0.21	74.00	0.47	121.25	56.31%	0.30	58.91%	92.20	55.48%	0.56	54.74%	0.00
	HDGT	73	643.14	1.90	372.07	1.10	36	49.32%	105.49	0.51	92.23	0.59	430.38	80.31%	1.59	75.62%	180.26	66.15%	0.73	55.17%	426.00
1987 Total		87	586.97	1.78	356.18	1.13	44	50.57%	100.72	0.46	89.44	0.57	381.20	79.10%	1.44	75.66%	169.47	65.46%	0.74	56.80%	426.00
1988	LDGV	2	195.00	0.32	311.70	0.36	2	100.00%	107.20	0.54	76.05	0.55	87.80	45.03%	-0.22	-68.75%	235.65	75.60%	-0.20	-54.93%	0.00
	LDGT	11	284.22	0.55	207.63	0.86	7	63.64%	141.44	0.29	131.26	0.36	123.17	46.55%	0.18	37.61%	106.40	44.77%	0.36	50.20%	0.00
	HDGT	84	497.24	2.18	428.96	1.58	47	55.95%	100.31	0.64	112.03	0.86	323.71	76.34%	1.37	68.23%	262.27	70.07%	0.68	44.21%	177.33
1988 Total		97	466.85	1.96	401.44	1.47	56	57.73%	105.70	0.59	113.15	0.79	290.22	73.30%	1.17	66.32%	241.83	68.13%	0.61	43.70%	177.33
1989	LDGV	11	293.09	2.17	259.25	1.72	6	54.55%	63.47	0.29	46.88	0.32	202.73	76.16%	1.48	83.57%	207.18	81.55%	1.48	82.26%	0.00
	LDGT	6	357.03	0.98	247.05	2.17	3	50.00%	175.33	0.19	85.80	0.44	316.47	64.35%	0.97	83.86%	52.20	37.83%	1.55	78.06%	0.00
	HDGT	115	587.18	2.25	406.64	1.58	65	56.52%	120.56	0.53	106.58	0.70	440.65	78.52%	1.49	73.64%	306.84	74.22%	0.65	48.33%	560.00
1989 Total		132	552.21	2.19	387.10	1.62	74	56.06%	118.15	0.50	100.90	0.66	416.33	77.89%	1.47	74.61%	288.44	74.08%	0.76	53.55%	560.00
1990	LDGV	14	97.25	0.43	245.23	2.78	8	57.14%	55.32	0.21	54.96	0.36	79.70	59.03%	0.52	71.02%	118.49	68.31%	1.61	81.59%	864.00
	LDGT	6	207.50	0.26	86.17	0.37	3	50.00%	111.67	0.31	113.67	0.56	139.33	55.51%	-0.00	-1.08%	-5.67	-5.25%	-0.09	-18.31%	0.00
	HDGT	80	544.55	2.84	270.39	1.61	40	50.00%	102.82	0.53	61.41	0.54	299.25	74.43%	1.85	77.60%	152.26	71.26%	0.92	63.00%	510.00
1990 Total		100	461.71	2.35	255.81	1.70	51	51.00%	95.89	0.47	63.47	0.51	255.40	72.70%	1.53	76.50%	137.67	68.44%	0.97	65.35%	628.00
1991	LDGV	10	301.40	0.98	494.71	2.44	6	60.00%	59.77	0.23	68.63	0.36	153.43	71.97%	0.73	76.17%	263.20	79.32%	2.44	87.28%	175.00
	LDGT	4	248.75	2.71	145.50	2.80	4	100.00%	90.75	0.63	59.00	0.40	158.00	63.52%	2.08	76.75%	86.50	59.45%	2.39	85.60%	0.00
	HDGT	99	550.56	3.24	299.01	2.41	47	47.47%	108.07	0.58	96.75	1.21	260.71	70.70%	2.11	78.53%	111.88	53.63%	0.94	43.68%	699.00
1991 Total		113	517.82	3.02	310.89	2.43	57	50.44%	101.77	0.54	91.14	1.06	242.21	70.41%	1.97	78.30%	126.03	58.03%	1.20	53.00%	524.33
1992	LDGV	5	383.70	2.97	333.56	3.11	3	60.00%	80.83	0.41	98.90	0.62	319.57	79.81%	2.25	84.71%	282.87	74.09%	2.26	78.54%	342.00
	LDGT	9	218.20	1.13	117.16	1.21	6	66.67%	93.58	0.32	86.68	0.41	130.72	58.28%	0.65	66.72%	38.05	30.51%	0.56	57.71%	0.00
	HDGT	86	479.53	2.70	317.25	1.84	53	61.63%	101.07	0.55	64.89	0.66	270.77	72.82%	1.96	78.16%	174.58	72.90%	0.85	56.59%	407.00
1992 Total		100	451.22	2.57	300.05	1.85	62	62.00%	99.36	0.52	68.65	0.63	259.58	72.32%	1.84	78.06%	166.60	70.82%	0.89	58.67%	390.75
1993	LDGV	4	189.70	1.31	128.65	0.96	2	50.00%	55.50	0.09	60.55	0.09	11.60	17.29%	0.03	21.74%	8.65	12.50%	0.03	22.73%	0.00
	LDGT	4	392.13	3.73	158.88	2.24	1	25.00%	22.10	0.08	24.20	0.06	163.10	88.07%	2.69	97.11%	160.60	86.90%	2.82	97.92%	0.00
	HDGT	107	436.51	3.27	305.29	2.58	67	62.62%	104.23	0.60	112.63	0.94	313.77	75.06%	2.59	81.31%	182.74	61.87%	1.44	60.45%	127.00
1993 Total		115	426.39	3.21	294.05	2.51	70	60.87%	101.67	0.57	109.88	0.90	302.98	74.88%	2.52	81.45%	177.45	61.76%	1.42	61.07%	127.00
1994	LDGV	8	420.14	1.63	725.93	2.33	5	62.50%	51.64	0.11	52.66	0.10	244.00	82.53%	1.08	90.60%	421.30	88.89%	1.68	94.39%	0.00
	LDGT	23	377.67	2.06	291.76	2.77	11	47.83%	62.65	0.21	62.15	0.33	272.37	81.30%	1.53	87.77%	216.29	77.68%	2.20	86.83%	0.00
	HDGT	164	655.79	3.48	371.38	3.06	72	43.90%	115.56	0.57	76.35	0.84	427.86	78.73%	2.47	81.28%	201.54	72.53%	1.73	67.20%	333.88
1994 Total		195	613.32	3.24	376.53	2.99	88	45.13%	105.32	0.50	73.23	0.74	397.98	79.07%	2.28	82.01%	215.87	74.67%	1.79	70.76%	333.88
1995	LDGV	7	227.04	0.26	258.80	0.49	3	42.86%	65.70	0.17	67.20	0.21	96.97	59.61%	0.10	36.71%	131.83	66.24%	0.41	66.31%	0.00
	LDGT	5	336.78	1.52	275.04	0.97	3	60.00%	120.47	0.32	79.33	0.39	117.70	49.42%	1.12	77.78%	70.87	47.18%	0.16	29.09%	0.00

Vehicle		Initial Exhaust Emissions					Passing Retest Exhaust Emissions						Emission Reductions								Average Repair Costs
Year	Type	Total	Avg HC Idle	Avg CO Idle	Avg HC2500 rpm	Avg CO2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC2500 rpm	Avg CO2500 rpm	Avg HC Idle	Avg HC % Idle	Avg CO Idle	Avg CO % Idle	Avg HC2500 rpm	Avg HC% 2500rpm	Avg CO2500 rpm	Avg CO% 2500rpm	
	HDGT	213	656.63	3.40	279.19	2.42	101	47.42%	108.59	0.45	104.19	0.84	432.34	79.93%	2.43	84.47%	164.34	61.20%	1.47	63.55%	383.88
1995 Total		225	636.16	3.26	278.46	2.33	107	47.56%	107.72	0.43	102.45	0.81	414.11	79.36%	2.32	84.25%	160.81	61.08%	1.40	63.34%	383.88
1996	LDGV	1	227.40	0.62	232.00	0.68	1	100.00%	113.40	0.21	97.00	0.37	114.00	50.13%	0.41	66.13%	135.00	58.19%	0.31	45.59%	0.00
	LDGT	2	706.65	4.54	190.05	4.21	1	50.00%	33.50	0.09	32.10	0.07	-0.60	-1.82%	0.00	0.00%	-2.80	-9.56%	-0.02	-40.00%	0.00
	HDGT	117	576.90	2.91	320.91	1.89	65	55.56%	99.35	0.44	81.47	0.79	406.88	80.37%	2.27	83.66%	195.11	70.54%	0.66	45.61%	145.67
1996 Total		120	576.15	2.92	317.99	1.91	67	55.83%	98.57	0.43	80.97	0.77	396.43	80.09%	2.21	83.56%	191.26	70.26%	0.65	45.57%	145.67
1997	HDGT	127	575.60	2.14	347.07	1.36	68	53.54%	110.68	0.44	68.72	0.45	414.70	78.93%	1.77	80.17%	236.68	77.50%	0.86	65.66%	0.00
1997 Total		127	575.60	2.14	347.07	1.36	68	53.54%	110.68	0.44	68.72	0.45	414.70	78.93%	1.77	80.17%	236.68	77.50%	0.86	65.66%	0.00
1998	HDGT	122	827.35	1.57	411.93	0.89	74	60.66%	133.14	0.31	81.46	0.49	525.69	79.79%	1.04	76.89%	210.35	72.09%	0.27	35.85%	637.20
1998 Total		122	827.35	1.57	411.93	0.89	74	60.66%	133.14	0.31	81.46	0.49	525.69	79.79%	1.04	76.89%	210.35	72.09%	0.27	35.85%	637.20
1999	LDGT	2	334.60	3.37	325.70	3.32	1	50.00%	66.90	0.01	72.10	0.02	267.70	80.01%	3.36	99.70%	253.60	77.86%	3.30	99.40%	0.00
	HDGT	122	800.16	1.76	383.54	1.12	80	65.57%	115.19	0.37	84.04	0.50	601.58	83.93%	1.42	79.34%	280.85	76.97%	0.75	59.98%	604.67
1999 Total		124	792.65	1.79	382.61	1.16	81	65.32%	114.60	0.36	83.89	0.49	597.46	83.91%	1.44	79.81%	280.51	76.98%	0.78	61.25%	604.67
2000	LDGT	4	703.68	0.78	714.20	0.78	1	25.00%	64.80	0.01	126.40	0.06	161.40	71.35%	0.17	94.44%	108.30	46.14%	0.12	66.67%	180.00
	HDGT	126	773.82	1.57	432.44	1.18	75	59.52%	113.03	0.30	85.19	0.40	536.61	82.60%	1.40	82.28%	263.70	75.58%	0.89	68.87%	568.33
2000 Total		130	771.67	1.55	441.11	1.17	76	58.46%	112.40	0.30	85.74	0.40	531.68	82.55%	1.39	82.29%	261.66	75.32%	0.88	68.87%	471.25
2001	HDGT	52	696.24	2.03	425.78	1.28	39	75.00%	112.22	0.36	120.71	0.65	475.47	80.90%	1.41	79.45%	259.73	68.27%	0.53	45.06%	0.00
2001 Total		52	696.24	2.03	425.78	1.28	39	75.00%	112.22	0.36	120.71	0.65	475.47	80.90%	1.41	79.45%	259.73	68.27%	0.53	45.06%	0.00
2002	HDGT	40	594.92	1.14	390.52	1.01	31	77.50%	94.76	0.26	75.46	0.32	420.02	81.59%	0.80	75.88%	231.01	75.38%	0.60	65.15%	0.00
2002 Total		40	594.92	1.14	390.52	1.01	31	77.50%	94.76	0.26	75.46	0.32	420.02	81.59%	0.80	75.88%	231.01	75.38%	0.60	65.15%	0.00
2003	LDGT	4	117.18	0.72	55.70	0.34	4	100.00%	104.13	0.33	82.23	0.32	13.05	11.14%	0.39	54.51%	-26.53	-47.62%	0.02	5.93%	0.00
	HDGT	43	501.16	1.83	271.72	1.32	37	86.05%	85.44	0.25	55.15	0.43	400.92	82.43%	1.49	85.49%	244.66	81.61%	0.82	65.56%	22.00
2003 Total		47	468.48	1.73	253.33	1.24	41	87.23%	87.26	0.26	57.79	0.42	363.08	80.62%	1.38	84.16%	218.20	79.06%	0.75	63.87%	22.00
2004	LDGV	2	147.45	0.25	138.25	0.26	2	100.00%	117.05	0.25	124.45	0.26	30.40	20.62%	0.01	2.00%	13.80	9.98%	-0.01	-1.96%	0.00
	HDGT	33	675.97	2.21	467.67	1.74	28	84.85%	100.48	0.27	91.38	0.59	539.00	84.29%	2.09	88.54%	373.03	80.32%	1.21	67.15%	696.50
2004 Total		35	645.77	2.10	448.85	1.65	30	85.71%	101.58	0.27	93.58	0.57	505.09	83.26%	1.95	87.89%	349.08	78.86%	1.13	66.46%	696.50
2005	HDGT	20	753.29	1.42	659.19	1.30	12	60.00%	73.42	0.25	61.07	0.34	440.55	85.72%	0.58	69.45%	313.62	83.70%	0.34	50.00%	1864.00
2005 Total		20	753.29	1.42	659.19	1.30	12	60.00%	73.42	0.25	61.07	0.34	440.55	85.72%	0.58	69.45%	313.62	83.70%	0.34	50.00%	1864.00
2006	LDGV	2	247.40	0.46	203.50	0.76	0	0.00%	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
	LDGT	1	23.50	0.02	30.10	0.07	1	100.00%	22.70	0.02	37.00	0.03	0.80	3.40%	0.00	0.00%	-6.90	-22.92%	0.04	57.14%	0.00
	HDGT	29	617.52	0.97	308.83	0.66	21	72.41%	89.01	0.27	66.14	0.27	523.94	85.48%	0.59	68.51%	219.14	76.81%	0.17	38.52%	0.00
2006 Total		32	575.83	0.91	293.54	0.64	22	68.75%	86.00	0.26	64.82	0.26	500.16	85.33%	0.57	68.44%	208.86	76.32%	0.16	38.66%	0.00
2007	HDGT	14	855.08	1.21	702.21	1.32	9	64.29%	101.92	0.25	86.02	0.19	534.50	83.99%	0.68	72.90%	475.10	84.67%	1.26	86.80%	0.00
2007 Total		14	855.08	1.21	702.21	1.32	9	64.29%	101.92	0.25	86.02	0.19	534.50	83.99%	0.68	72.90%	475.10	84.67%	1.26	86.80%	0.00
2008	HDGT	14	626.91	2.02	204.94	0.97	12	85.71%	53.75	0.16	68.34	0.17	415.38	88.54%	1.43	90.16%	143.49	67.74%	0.78	81.97%	0.00
2008 Total		14	626.91	2.02	204.94	0.97	12	85.71%	53.75	0.16	68.34	0.17	415.38	88.54%	1.43	90.16%	143.49	67.74%	0.78	81.97%	0.00
2009	HDGT	2	122.50	1.11	50.50	0.58	2	100.00%	13.25	0.00	12.85	0.01	109.25	89.18%	1.11	100.00%	37.65	74.55%	0.57	98.26%	0.00
2009 Total		2	122.50	1.11	50.50	0.58	2	100.00%	13.25	0.00	12.85	0.01	109.25	89.18%	1.11	100.00%	37.65	74.55%	0.57	98.26%	0.00
2010	HDGT	6	487.78	0.97	133.17	0.92	4	66.67%	3.45	0.00	3.15	0.01	13.98	80.20%	0.05	95.24%	31.40	90.88%	0.58	97.87%	0.00
2010 Total		6	487.78	0.97	133.17	0.92	4	66.67%	3.45	0.00	3.15	0.01	13.98	80.20%	0.05	95.24%	31.40	90.88%	0.58	97.87%	0.00
2011	HDGT	19	135.03	1.04	108.80	0.77	15	78.95%	36.35	0.09	38.37	0.21	67.71	65.07%	0.64	88.12%	33.11	46.32%	0.26	55.38%	400.00
2011 Total		19	135.03	1.04	108.80	0.77	15	78.95%	36.35	0.09	38.37	0.21	67.71	65.07%	0.64	88.12%	33.11	46.32%	0.26	55.38%	400.00
Grand Total		4406	635.14	2.90	422.47	2.50	2499	56.72%	148.30	0.66	142.97	1.16	403.62	73.13%	1.99	75.20%	229.07	61.57%	1.09	48.46%	367.61

Summary by Vehicle Type (V1.01)

Vehicle Type	Initial Exhaust Emissions				Passing Retest Exhaust Emissions				Emission Reductions								Average Repair Costs			
	Total	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	Avg HC Idle	Avg HC % Idle	Avg CO Idle	Avg CO% Idle	Avg HC 2500 rpm		Avg HC% 2500 rpm	Avg CO 2500 rpm	Avg CO% 2500 rpm
LDGV	868	597.46	3.31	478.29	3.65	474	54.61%	155.57	0.58	171.56	1.53	335.89	68.35%	2.38	80.52%	234.78	57.78%	1.63	51.56%	306.82
LDGT	871	506.57	2.74	375.98	2.69	475	54.54%	135.99	0.45	164.40	1.33	309.87	69.50%	2.09	82.32%	169.58	50.78%	1.17	46.73%	284.17
HDGT	2667	689.39	2.81	419.49	2.06	1550	58.12%	149.86	0.75	127.66	1.00	453.06	75.14%	1.85	71.21%	245.56	65.80%	0.91	47.57%	413.05
Grand Total	4406	635.14	2.90	422.47	2.50	2499	56.72%	148.30	0.66	142.97	1.16	403.62	73.13%	1.99	75.20%	229.07	61.57%	1.09	48.46%	367.61

Appendix C6

Idle Retest Frequency Report

Date
Between 1/1/2018 and 12/31/2018

Idle Retest Frequency Report (V1.01)

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5			
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%
1974	LDGV	163	1.4	113	69.33%	69	61.06%	29	17.79%	11	37.93%	11	6.75%	5	45.45%	5	3.07%	2	40.00%	5	3	3	60.00%
	LDGT	77	1.4	55	71.43%	32	58.18%	17	22.08%	10	58.82%	4	5.19%	2	50.00%	1	1.30%	1	100.00%	0	0	0	0.00%
	HDGT	56	1.6	35	62.50%	25	71.43%	10	17.86%	4	40.00%	6	10.71%	2	33.33%	3	5.36%	1	33.33%	2	4	2	100.00%
1974 Total		296	1.4	203	68.58%	126	62.07%	56	18.92%	25	44.64%	21	7.09%	9	42.86%	9	3.04%	4	44.44%	7	2	5	71.43%
1975	LDGV	15	2.3	7	46.67%	4	57.14%	2	13.33%	0	0.00%	2	13.33%	0	0.00%	2	13.33%	1	50.00%	2	13	1	50.00%
	LDGT	5	1.3	4	80.00%	3	75.00%	1	20.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	12	1.3	9	75.00%	6	66.67%	3	25.00%	2	66.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
1975 Total		32	1.6	20	62.50%	13	65.00%	6	18.75%	3	50.00%	2	6.25%	0	0.00%	2	6.25%	1	50.00%	2	6	1	50.00%
1976	LDGV	88	1.8	51	57.95%	28	54.90%	20	22.73%	11	55.00%	7	7.95%	2	28.57%	5	5.68%	3	60.00%	5	6	2	40.00%
	LDGT	49	1.2	36	73.47%	22	61.11%	10	20.41%	6	60.00%	3	6.12%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	71	1.5	50	70.42%	31	62.00%	15	21.13%	9	60.00%	6	8.45%	6	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
1976 Total		208	1.5	137	65.87%	81	59.12%	45	21.63%	26	57.78%	16	7.69%	8	50.00%	5	2.40%	3	60.00%	5	2	2	40.00%
1977	LDGV	129	1.8	74	57.36%	38	51.35%	32	24.81%	19	59.38%	9	6.98%	4	44.44%	5	3.88%	2	40.00%	9	7	4	44.44%
	LDGT	54	1.6	34	62.96%	20	58.82%	10	18.52%	5	50.00%	5	9.26%	1	20.00%	3	5.56%	1	33.33%	2	4	2	100.00%
	HDGT	90	1.3	64	71.11%	46	71.88%	17	18.89%	10	58.82%	6	6.67%	3	50.00%	2	2.22%	0	0.00%	1	1	1	100.00%
1977 Total		273	1.6	172	63.00%	104	60.47%	59	21.61%	34	57.63%	20	7.33%	8	40.00%	10	3.66%	3	30.00%	12	4	7	58.33%
1978	LDGV	89	1.6	55	61.80%	31	56.36%	20	22.47%	9	45.00%	8	8.99%	2	25.00%	5	5.62%	3	60.00%	1	1	1	100.00%
	LDGT	92	1.6	59	64.13%	33	55.93%	21	22.83%	13	61.90%	8	8.70%	4	50.00%	4	4.35%	4	100.00%	0	0	0	0.00%
	HDGT	114	1.4	80	70.18%	60	75.00%	17	14.91%	9	52.94%	9	7.89%	5	55.56%	4	3.51%	2	50.00%	4	4	1	25.00%
1978 Total		295	1.5	194	65.76%	124	63.92%	58	19.66%	31	53.45%	25	8.47%	11	44.00%	13	4.41%	9	69.23%	5	2	2	40.00%
1979	LDGV	154	1.6	93	60.39%	58	62.37%	34	22.08%	16	47.06%	13	8.44%	8	61.54%	5	3.25%	2	40.00%	9	6	3	33.33%
	LDGT	213	1.5	143	67.14%	92	64.34%	38	17.84%	19	50.00%	14	6.57%	6	42.86%	7	3.29%	5	71.43%	11	5	3	27.27%
	HDGT	45	1.4	30	66.67%	22	73.33%	10	22.22%	5	50.00%	3	6.67%	0	0.00%	2	4.44%	2	100.00%	0	0	0	0.00%
1979 Total		412	1.6	266	64.56%	172	64.66%	82	19.90%	40	48.78%	30	7.28%	14	46.67%	14	3.40%	9	64.29%	20	5	6	30.00%
1980	LDGV	58	1.4	43	74.14%	32	74.42%	8	13.79%	3	37.50%	4	6.90%	3	75.00%	1	1.72%	0	0.00%	2	3	2	100.00%
	LDGT	86	1.3	59	68.60%	42	71.19%	15	17.44%	7	46.67%	5	5.81%	0	0.00%	4	4.65%	1	25.00%	3	3	2	66.67%
	HDGT	25	1.4	18	72.00%	13	72.22%	4	16.00%	2	50.00%	3	12.00%	2	66.67%	0	0.00%	0	0.00%	0	0	0	0.00%
1980 Total		169	1.4	120	71.01%	87	72.50%	27	15.98%	12	44.44%	12	7.10%	5	41.67%	5	2.96%	1	20.00%	5	3	4	80.00%
1981	LDGV	88	1.6	55	62.50%	30	54.55%	18	20.45%	6	33.33%	9	10.23%	4	44.44%	4	4.55%	2	50.00%	2	2	2	100.00%
	LDGT	195	2.1	97	49.74%	44	45.36%	47	24.10%	21	44.68%	24	12.31%	13	54.17%	9	4.62%	0	0.00%	18	9	8	44.44%
	HDGT	39	1.8	23	58.97%	14	60.87%	10	25.64%	7	70.00%	2	5.13%	1	50.00%	2	5.13%	1	50.00%	2	5	2	100.00%
1981 Total		322	1.9	175	54.35%	88	50.29%	75	23.29%	34	45.33%	35	10.87%	18	51.43%	15	4.66%	3	20.00%	22	7	12	54.55%
1982	LDGV	4	2.0	2	50.00%	1	50.00%	1	25.00%	0	0.00%	1	25.00%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	4	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	25.00%	0	0.00%	1	25.00%	0	0.00%	2	50	0	0.00%
	HDGT	27	1.2	17	62.96%	12	70.59%	6	22.22%	3	50.00%	2	7.41%	0	0.00%	2	7.41%	0	0.00%	0	0	0	0.00%
1982 Total		35	1.3	19	54.29%	13	68.42%	7	20.00%	3	42.86%	4	11.43%	1	25.00%	3	8.57%	0	0.00%	2	6	0	0.00%
1983	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	54	1.6	30	55.56%	15	50.00%	14	25.93%	4	28.57%	6	11.11%	3	50.00%	3	5.56%	0	0.00%	1	2	1	100.00%

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5				
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	
1983 Total			54	1.6	30	55.56%	15	50.00%	14	25.93%	4	28.57%	6	11.11%	3	50.00%	3	5.56%	0	0.00%	1	2	1	100.00%
1984	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	60	1.8	31	51.67%	19	61.29%	14	23.33%	6	42.86%	8	13.33%	3	37.50%	5	8.33%	3	60.00%	2	3	1	50.00%	
1984 Total			60	1.8	31	51.67%	19	61.29%	14	23.33%	6	42.86%	8	13.33%	3	37.50%	5	8.33%	3	60.00%	2	3	1	50.00%
1985	LDGV	6	5.7	2	33.33%	1	50.00%	1	16.67%	0	0.00%	1	16.67%	1	100.00%	0	0.00%	0	0.00%	2	33	1	50.00%	
	LDGT	5	0.0	1	20.00%	0	0.00%	1	20.00%	0	0.00%	1	20.00%	0	0.00%	1	20.00%	0	0.00%	1	20	0	0.00%	
	HDGT	74	1.7	44	59.46%	22	50.00%	19	25.68%	9	47.37%	6	8.11%	3	50.00%	4	5.41%	3	75.00%	1	1	1	100.00%	
1985 Total			85	2.0	47	55.29%	23	48.94%	21	24.71%	9	42.86%	8	9.41%	4	50.00%	5	5.88%	3	60.00%	4	5	2	50.00%
1986	LDGV	2	5.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50	1	100.00%	
	LDGT	2	1.5	1	50.00%	1	100.00%	1	50.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	93	1.7	55	59.14%	27	49.09%	24	25.81%	11	45.83%	10	10.75%	6	60.00%	2	2.15%	1	50.00%	2	2	1	50.00%	
1986 Total			97	1.7	56	57.73%	28	50.00%	25	25.77%	12	48.00%	10	10.31%	6	60.00%	3	3.09%	1	33.33%	3	3	2	66.67%
1987	LDGV	6	1.5	4	66.67%	2	50.00%	2	33.33%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	LDGT	8	1.5	6	75.00%	2	33.33%	2	25.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	73	1.5	42	57.53%	25	59.52%	17	23.29%	8	47.06%	6	8.22%	2	33.33%	3	4.11%	0	0.00%	5	7	1	20.00%	
1987 Total			87	1.5	52	59.77%	29	55.77%	21	24.14%	12	57.14%	6	6.90%	2	33.33%	3	3.45%	0	0.00%	5	6	1	20.00%
1988	LDGV	2	2.5	1	50.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	50.00%	1	100.00%	0	0	0	0.00%	
	LDGT	11	1.4	8	72.73%	5	62.50%	2	18.18%	1	50.00%	1	9.09%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	84	1.6	53	63.10%	30	56.60%	22	26.19%	9	40.91%	8	9.52%	7	87.50%	0	0.00%	0	0.00%	1	1	1	100.00%	
1988 Total			97	1.6	62	63.92%	36	58.06%	24	24.74%	10	41.67%	9	9.28%	8	88.89%	1	1.03%	1	100.00%	1	1	1	100.00%
1989	LDGV	11	1.3	8	72.73%	5	62.50%	2	18.18%	0	0.00%	1	9.09%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	LDGT	6	1.7	3	50.00%	1	33.33%	2	33.33%	2	100.00%	0	0.00%	0	0.00%	1	16.67%	0	0.00%	0	0	0	0.00%	
	HDGT	115	1.9	62	53.91%	34	54.84%	30	26.09%	16	53.33%	12	10.43%	8	66.67%	7	6.09%	4	57.14%	4	3	3	75.00%	
1989 Total			132	1.8	73	55.30%	40	54.79%	34	25.76%	18	52.94%	13	9.85%	9	69.23%	8	6.06%	4	50.00%	4	3	3	75.00%
1990	LDGV	14	1.9	7	50.00%	5	71.43%	3	21.43%	2	66.67%	1	7.14%	0	0.00%	1	7.14%	0	0.00%	2	14	1	50.00%	
	LDGT	6	2.0	3	50.00%	1	33.33%	2	33.33%	1	50.00%	1	16.67%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	80	1.5	51	63.75%	28	54.90%	17	21.25%	7	41.18%	9	11.25%	4	44.44%	2	2.50%	1	50.00%	1	1	0	0.00%	
1990 Total			100	1.5	61	61.00%	34	55.74%	22	22.00%	10	45.45%	11	11.00%	5	45.45%	3	3.00%	1	33.33%	3	3	1	33.33%
1991	LDGV	10	3.3	2	20.00%	1	50.00%	4	40.00%	2	50.00%	2	20.00%	1	50.00%	1	10.00%	1	100.00%	1	10	1	100.00%	
	LDGT	4	1.0	4	100.00%	4	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	99	1.7	53	53.54%	30	56.60%	24	24.24%	11	45.83%	9	9.09%	3	33.33%	5	5.05%	0	0.00%	8	8	3	37.50%	
1991 Total			113	1.8	59	52.21%	35	59.32%	28	24.78%	13	46.43%	11	9.73%	4	36.36%	6	5.31%	1	16.67%	9	8	4	44.44%
1992	LDGV	5	1.7	3	60.00%	1	33.33%	2	40.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	LDGT	9	1.3	7	77.78%	4	57.14%	2	22.22%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	86	1.7	53	61.63%	33	62.26%	19	22.09%	12	63.16%	6	6.98%	4	66.67%	3	3.49%	1	33.33%	5	6	3	60.00%	
1992 Total			100	1.7	63	63.00%	38	60.32%	23	23.00%	16	69.57%	6	6.00%	4	66.67%	3	3.00%	1	33.33%	5	5	3	60.00%
1993	LDGV	4	1.0	3	75.00%	2	66.67%	0	0.00%	0	0.00%	1	25.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	LDGT	4	1.0	3	75.00%	1	33.33%	0	0.00%	0	0.00%	1	25.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%	
	HDGT	107	1.6	67	62.62%	45	67.16%	20	18.69%	12	60.00%	10	9.35%	5	50.00%	6	5.61%	2	33.33%	4	4	3	75.00%	
1993 Total			115	1.6	73	63.48%	48	65.75%	20	17.39%	12	60.00%	12	10.43%	5	41.67%	6	5.22%	2	33.33%	4	3	3	75.00%
1994	LDGV	8	1.8	4	50.00%	3	75.00%	2	25.00%	0	0.00%	2	25.00%	2	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%	

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5			
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%
	LDGT	23	2.0	14	60.87%	7	50.00%	4	17.39%	2	50.00%	1	4.35%	1	100.00%	0	0.00%	0	0.00%	4	17	1	25.00%
	HDGT	164	1.7	78	47.56%	39	50.00%	44	26.83%	22	50.00%	20	12.20%	7	35.00%	11	6.71%	3	27.27%	11	7	1	9.09%
1994 Total		195	1.8	96	49.23%	49	51.04%	50	25.64%	24	48.00%	23	11.79%	10	43.48%	11	5.64%	3	27.27%	15	8	2	13.33%
1995	LDGV	7	1.7	4	57.14%	2	50.00%	2	28.57%	0	0.00%	1	14.29%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	5	1.3	3	60.00%	2	66.67%	1	20.00%	1	100.00%	0	0.00%	0	0.00%	1	20.00%	0	0.00%	0	0	0	0.00%
	HDGT	213	1.8	109	51.17%	61	55.96%	45	21.13%	19	42.22%	30	14.08%	10	33.33%	15	7.04%	7	46.67%	14	7	4	28.57%
1995 Total		225	1.8	116	51.56%	65	56.03%	48	21.33%	20	41.67%	31	13.78%	11	35.48%	16	7.11%	7	43.75%	14	6	4	28.57%
1996	LDGV	1	1.0	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	2	1.0	2	100.00%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	117	1.6	70	59.83%	41	58.57%	29	24.79%	15	51.72%	12	10.26%	6	50.00%	3	2.56%	1	33.33%	3	3	2	66.67%
1996 Total		120	1.6	73	60.83%	43	58.90%	29	24.17%	15	51.72%	12	10.00%	6	50.00%	3	2.50%	1	33.33%	3	3	2	66.67%
1997	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	127	1.6	80	62.99%	47	58.75%	26	20.47%	12	46.15%	11	8.66%	5	45.45%	6	4.72%	1	16.67%	4	3	3	75.00%
1997 Total		127	1.6	80	62.99%	47	58.75%	26	20.47%	12	46.15%	11	8.66%	5	45.45%	6	4.72%	1	16.67%	4	3	3	75.00%
1998	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	122	1.4	77	63.11%	56	72.73%	21	17.21%	9	42.86%	12	9.84%	6	50.00%	6	4.92%	2	33.33%	6	5	1	16.67%
1998 Total		122	1.4	77	63.11%	56	72.73%	21	17.21%	9	42.86%	12	9.84%	6	50.00%	6	4.92%	2	33.33%	6	5	1	16.67%
1999	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	2	2.0	1	50.00%	0	0.00%	1	50.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	122	1.3	92	75.41%	62	67.39%	22	18.03%	14	63.64%	6	4.92%	2	33.33%	2	1.64%	2	100.00%	0	0	0	0.00%
1999 Total		124	1.3	93	75.00%	62	66.67%	23	18.55%	15	65.22%	6	4.84%	2	33.33%	2	1.61%	2	100.00%	0	0	0	0.00%
2000	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	4	2.0	2	50.00%	0	0.00%	1	25.00%	1	100.00%	1	25.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	126	1.4	91	72.22%	58	63.74%	21	16.67%	10	47.62%	8	6.35%	4	50.00%	3	2.38%	1	33.33%	3	2	2	66.67%
2000 Total		130	1.4	93	71.54%	58	62.37%	22	16.92%	11	50.00%	9	6.92%	4	44.44%	3	2.31%	1	33.33%	3	2	2	66.67%
2001	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	52	1.4	38	73.08%	30	78.95%	9	17.31%	7	77.78%	2	3.85%	0	0.00%	2	3.85%	1	50.00%	1	2	1	100.00%
2001 Total		52	1.4	38	73.08%	30	78.95%	9	17.31%	7	77.78%	2	3.85%	0	0.00%	2	3.85%	1	50.00%	1	2	1	100.00%
2002	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	40	1.2	33	82.50%	27	81.82%	6	15.00%	3	50.00%	1	2.50%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2002 Total		40	1.2	33	82.50%	27	81.82%	6	15.00%	3	50.00%	1	2.50%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2003	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	4	1.3	3	75.00%	3	100.00%	1	25.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	43	1.1	38	88.37%	33	86.84%	5	11.63%	4	80.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2003 Total		47	1.1	41	87.23%	36	87.80%	6	12.77%	5	83.33%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2004	LDGV	2	1.0	2	100.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	33	1.2	28	84.85%	24	85.71%	4	12.12%	3	75.00%	1	3.03%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5				
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	
2004 Total			35	1.2	30	85.71%	26	86.67%	4	11.43%	3	75.00%	1	2.86%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2005	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	20	1.8	14	70.00%	9	64.29%	2	10.00%	0	0.00%	2	10.00%	1	50.00%	1	5.00%	1	100.00%	1	5	1	100.00%	
2005 Total			20	1.8	14	70.00%	9	64.29%	2	10.00%	0	0.00%	2	10.00%	1	50.00%	1	5.00%	1	100.00%	1	5	1	100.00%
2006	LDGV	2	0.0	1	50.00%	0	0.00%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	1	1.0	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	29	1.5	20	68.97%	15	75.00%	5	17.24%	3	60.00%	2	6.90%	1	50.00%	2	6.90%	2	100.00%	0	0.00%	0	0.00%	
2006 Total			32	1.5	22	68.75%	16	72.73%	6	18.75%	3	50.00%	2	6.25%	1	50.00%	2	6.25%	2	100.00%	0	0.00%	0	0.00%
2007	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	14	1.6	9	64.29%	6	66.67%	3	21.43%	2	66.67%	1	7.14%	0	0.00%	1	7.14%	1	100.00%	0	0.00%	0	0.00%	
2007 Total			14	1.6	9	64.29%	6	66.67%	3	21.43%	2	66.67%	1	7.14%	0	0.00%	1	7.14%	1	100.00%	0	0.00%	0	0.00%
2008	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	14	1.0	13	92.86%	12	92.31%	1	7.14%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2008 Total			14	1.0	13	92.86%	12	92.31%	1	7.14%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2009	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	2	1.0	2	100.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2009 Total			2	1.0	2	100.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2010	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	6	1.0	5	83.33%	4	80.00%	1	16.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2010 Total			6	1.0	5	83.33%	4	80.00%	1	16.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2011	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	HDGT	19	1.3	15	78.95%	12	80.00%	3	15.79%	2	66.67%	1	5.26%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2011 Total			19	1.3	15	78.95%	12	80.00%	3	15.79%	2	66.67%	1	5.26%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2012	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2012 Total			0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2013	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2013 Total			0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2014	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2014 Total			0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2015	LDGT	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2015 Total			0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2016	LDGV	0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	
2016 Total			0	0.0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Vehicle			Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5				
Year	Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	
Overall Total			4,406	1.6	2763	62.71%	1713	62.00%	921	20.90%	461	50.05%	379	8.60%	176	46.44%	175	3.97%	72	41.14%	168	4	77	45.83%

Idle Retest Frequency Report (V1.01)

Vehicle		Avg Retest #	Retest #1				Retest #2				Retest #3				Retest #4				Retest >= #5				
Type	Total		Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt %	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	Cnt	Cnt%	Goal	Goal%	
LDGV	868	1.7	535	61.64%	317	59.25%	183	21.08%	83	45.36%	73	8.41%	35	47.95%	36	4.15%	17	47.22%	41	5	22	53.66%	
LDGT	871	1.6	549	63.03%	321	58.47%	179	20.55%	97	54.19%	70	8.04%	29	41.43%	32	3.67%	12	37.50%	41	5	16	39.02%	
HDGT	2,667	1.5	1679	62.95%	1075	64.03%	559	20.96%	281	50.27%	236	8.85%	112	47.46%	107	4.01%	43	40.19%	86	3	39	45.35%	
Overall Total		4,406	1.6	2763	62.71%	1713	62.00%	921	20.90%	461	50.05%	379	8.60%	176	46.44%	175	3.97%	72	41.14%	168	4	77	45.83%

Appendix D1

I/M Eligible Vehicle Report

Evaluated Vehicles

Colorado

I/M Eligible Vehicle Report, Evaluated Vehicles

Monday, 15-April-2019

Report Start: **Jan, 2018** Report Period: **Year**

County: **All Counties**

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated	
			No			Yes									
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits								
1982															
	P	16	0	9	0	0	7	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			0.00%	56.25%	0.00%	0.00%	43.75%	Not Clean:	7	100.00%	1.6221	245.9571	1,074.3143	0.86	43.75%
	T	27	0	18	0	0	9	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			0.00%	66.67%	0.00%	0.00%	33.33%	Not Clean:	9	100.00%	1.8067	227.2056	1,542.9111	0.81	33.33%
	U	428	428	0	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			100.00%	0.00%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1982		471	428	27	0	0	16	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			90.87%	5.73%	0.00%	0.00%	3.40%	Not Clean:	16	100.00%	1.7259	235.4094	1,337.9000	0.83	3.40%
1983															
	P	21	0	12	0	0	9	Clean:	4	44.44%	0.2525	37.0125	325.2500	2.25	
			0.00%	57.14%	0.00%	0.00%	42.86%	Not Clean:	5	55.56%	1.4050	120.1200	794.5100	1.11	42.86%
	T	23	0	14	0	0	9	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			0.00%	60.87%	0.00%	0.00%	39.13%	Not Clean:	9	100.00%	2.7128	119.1833	795.7444	1.48	39.13%
	U	538	538	0	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			100.00%	0.00%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1983		582	538	26	0	0	18	Clean:	4	22.22%	0.2525	37.0125	325.2500	2.25	
			92.44%	4.47%	0.00%	0.00%	3.09%	Not Clean:	14	77.78%	2.2457	119.5179	795.3036	1.35	3.09%
1984															
	P	36	0	25	0	0	11	Clean:	1	9.09%	0.2300	11.9000	335.7500	0.65	
			0.00%	69.44%	0.00%	0.00%	30.56%	Not Clean:	10	90.91%	1.9610	183.0300	913.1700	1.65	30.56%
	T	58	0	37	0	0	21	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			0.00%	63.79%	0.00%	0.00%	36.21%	Not Clean:	21	100.00%	1.8471	258.7595	1,384.7904	1.05	36.21%
	U	947	946	1	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.89%	0.11%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1984		1,041	946	63	0	0	32	Clean:	1	3.13%	0.2300	11.9000	335.7500	0.65	
			90.87%	6.05%	0.00%	0.00%	3.07%	Not Clean:	31	96.88%	1.8839	234.3306	1,232.6548	1.25	3.07%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated	
			No			Yes									
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits								
1985															
P	37	0	22	0	0	15	Clean:	3	20.00%	0.1517	29.1833	377.9667	1.62		
			0.00%	59.46%	0.00%	0.00%	40.54%	Not Clean:	12	80.00%	0.8721	203.9375	1,452.9083	0.30	40.54%
T	68	0	43	0	0	25	Clean:	1	4.00%	0.1500	106.9500	457.0500	0.50		
			0.00%	63.24%	0.00%	0.00%	36.76%	Not Clean:	24	96.00%	2.5646	307.1771	941.2917	0.95	36.76%
U	1,016	1,012	2	0	0	2	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.61%	0.20%	0.00%	0.00%	0.20%	Not Clean:	2	100.00%	2.0275	151.9000	1,136.3000	3.87	0.20%
Total For 1985	1,121	1,012	67	0	0	42	Clean:	4	9.52%	0.1513	48.6250	397.7375	1.34		
			90.28%	5.98%	0.00%	0.00%	3.75%	Not Clean:	38	90.48%	2.0018	266.4026	1,113.1184	0.90	3.75%
1986															
P	46	0	28	0	0	18	Clean:	4	22.22%	0.1500	40.1875	394.4000	1.46		
			0.00%	60.87%	0.00%	0.00%	39.13%	Not Clean:	14	77.78%	0.9414	146.0893	1,028.9679	0.45	39.13%
T	123	0	66	0	0	57	Clean:	5	8.77%	0.1580	45.2600	504.5100	1.13		
			0.00%	53.66%	0.00%	0.00%	46.34%	Not Clean:	52	91.23%	1.5412	286.2077	1,171.2414	1.09	46.34%
U	1,597	1,596	0	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.94%	0.00%	0.00%	0.00%	0.06%	Not Clean:	1	100.00%	0.2150	41.8000	1,324.6000	3.70	0.06%
Total For 1986	1,766	1,596	94	0	0	76	Clean:	9	11.84%	0.1544	43.0056	455.5722	1.28		
			90.37%	5.32%	0.00%	0.00%	4.30%	Not Clean:	67	88.16%	1.3961	253.2813	1,143.8015	0.99	4.30%
1987															
P	65	0	40	0	0	25	Clean:	4	16.00%	0.1225	22.8875	246.7750	1.32		
			0.00%	61.54%	0.00%	0.00%	38.46%	Not Clean:	21	84.00%	1.1205	182.4476	1,350.8214	0.29	38.46%
T	156	0	86	1	0	69	Clean:	3	4.35%	0.1350	73.3167	466.5333	1.02		
			0.00%	55.13%	0.64%	0.00%	44.23%	Not Clean:	66	95.65%	1.2233	175.6326	1,115.1667	1.10	44.23%
U	1,363	1,363	0	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			100.00%	0.00%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1987	1,584	1,363	126	1	0	94	Clean:	7	7.45%	0.1279	44.5000	340.9571	1.19		
			86.05%	7.95%	0.06%	0.00%	5.93%	Not Clean:	87	92.55%	1.1985	177.2776	1,172.0489	0.90	5.93%
1988															
P	100	0	60	0	0	40	Clean:	7	17.50%	0.1743	46.8500	465.2071	0.19		
			0.00%	60.00%	0.00%	0.00%	40.00%	Not Clean:	33	82.50%	1.0561	185.4818	1,004.3621	1.02	40.00%
T	200	0	109	3	0	88	Clean:	14	15.91%	0.1404	61.4000	435.2643	1.35		
			0.00%	54.50%	1.50%	0.00%	44.00%	Not Clean:	74	84.09%	1.3206	259.2676	1,122.5791	1.19	44.00%
U	2,311	2,311	0	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			100.00%	0.00%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1988	2,611	2,311	169	3	0	128	Clean:	21	16.41%	0.1517	56.5500	445.2452	0.96		
			88.51%	6.47%	0.11%	0.00%	4.90%	Not Clean:	107	83.59%	1.2390	236.5112	1,086.1196	1.13	4.90%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated	
			No			Yes									
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits								
1989															
P	99	99	0	50	0	1	48	Clean:	9	18.37%	0.1444	31.2278	317.9000	1.51	
			0.00%	50.51%	0.00%	1.01%	48.48%	Not Clean:	40	81.63%	0.7336	144.6250	969.6387	0.87	49.49%
T	236	236	0	129	2	0	105	Clean:	22	20.95%	0.1543	45.9182	427.8432	0.67	
			0.00%	54.66%	0.85%	0.00%	44.49%	Not Clean:	83	79.05%	1.3451	154.5590	1,241.2988	1.29	44.49%
U	2,330	2,330	2,330	0	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			100.00%	0.00%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1989		2,665	2,330	179	2	1	153	Clean:	31	20.13%	0.1515	41.6532	395.9242	0.91	
			87.43%	6.72%	0.08%	0.04%	5.74%	Not Clean:	123	79.87%	1.1462	151.3285	1,152.9541	1.16	5.78%
1990															
P	259	259	0	144	0	5	110	Clean:	37	32.17%	0.1485	28.5865	295.6541	0.79	
			0.00%	55.60%	0.00%	1.93%	42.47%	Not Clean:	78	67.83%	1.0555	172.7590	1,235.7756	1.18	44.40%
T	341	341	0	167	1	7	166	Clean:	30	17.34%	0.1400	34.6983	294.9400	0.78	
			0.00%	48.97%	0.29%	2.05%	48.68%	Not Clean:	143	82.66%	1.0521	193.6273	1,221.8626	1.23	50.73%
U	3,425	3,425	3,421	3	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.88%	0.09%	0.00%	0.00%	0.03%	Not Clean:	1	100.00%	0.4750	40.8500	115.1000	0.95	0.03%
Total For 1990		4,025	3,421	314	1	12	277	Clean:	67	23.18%	0.1447	31.3231	295.3343	0.79	
			84.99%	7.80%	0.02%	0.30%	6.88%	Not Clean:	222	76.82%	1.0507	185.6070	1,221.7655	1.21	7.18%
1991															
P	270	270	0	159	0	6	105	Clean:	25	22.52%	0.1124	30.6100	290.3580	0.76	
			0.00%	58.89%	0.00%	2.22%	38.89%	Not Clean:	86	77.48%	0.9757	160.1390	1,100.0843	1.16	41.11%
T	376	376	0	206	2	5	163	Clean:	38	22.62%	0.1245	27.7092	293.5868	0.89	
			0.00%	54.79%	0.53%	1.33%	43.35%	Not Clean:	130	77.38%	1.3238	231.6119	1,135.1646	1.11	44.68%
U	3,197	3,197	3,195	0	0	0	2	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.94%	0.00%	0.00%	0.00%	0.06%	Not Clean:	2	100.00%	0.5300	257.3750	2,106.4749	6.00	0.06%
Total For 1991		3,843	3,195	365	2	11	270	Clean:	63	22.42%	0.1197	28.8603	292.3056	0.84	
			83.14%	9.50%	0.05%	0.29%	7.03%	Not Clean:	218	77.58%	1.1792	203.6525	1,130.2367	1.18	7.31%
1992															
P	411	411	0	231	0	1	179	Clean:	63	35.00%	0.1624	30.5127	328.8190	1.06	
			0.00%	56.20%	0.00%	0.24%	43.55%	Not Clean:	117	65.00%	1.1691	136.7688	950.8521	1.04	43.80%
T	521	521	0	270	2	8	241	Clean:	45	18.07%	0.1370	26.8478	266.2078	0.94	
			0.00%	51.82%	0.38%	1.54%	46.26%	Not Clean:	204	81.93%	0.9064	176.2532	1,185.7446	1.12	47.79%
U	4,668	4,668	4,666	1	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.96%	0.02%	0.00%	0.00%	0.02%	Not Clean:	1	100.00%	0.1100	59.5500	1,654.5500	1.30	0.02%
Total For 1992		5,600	4,666	502	2	9	421	Clean:	108	25.12%	0.1518	28.9856	302.7310	1.01	
			83.32%	8.96%	0.04%	0.16%	7.52%	Not Clean:	322	74.88%	0.9994	161.5439	1,101.8514	1.09	7.68%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated
			No			Yes								
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits							
1993														
P	429	0	229	0	7	193	Clean:	64	32.00%	0.1454	24.9836	317.4750	1.05	
		0.00%	53.38%	0.00%	1.63%	44.99%	Not Clean:	136	68.00%	1.0201	143.8504	1,186.8908	1.53	46.62%
T	691	0	305	4	14	368	Clean:	65	17.02%	0.1324	23.5054	250.1862	0.65	
		0.00%	44.14%	0.58%	2.03%	53.26%	Not Clean:	317	82.98%	0.7825	168.7678	1,175.8580	1.16	55.28%
U	4,768	4,767	1	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
		99.98%	0.02%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1993	5,888	4,767	535	4	21	561	Clean:	129	22.16%	0.1388	24.2388	283.5698	0.85	
		80.96%	9.09%	0.07%	0.36%	9.53%	Not Clean:	453	77.84%	0.8539	161.2871	1,179.1703	1.27	9.88%
1994														
P	589	0	293	0	25	271	Clean:	129	43.58%	0.1248	27.9078	259.1764	0.88	
		0.00%	49.75%	0.00%	4.24%	46.01%	Not Clean:	167	56.42%	0.8377	158.2461	1,026.8171	1.26	50.25%
T	1,136	0	547	3	15	571	Clean:	141	24.06%	0.1318	32.3713	294.8312	0.96	
		0.00%	48.15%	0.26%	1.32%	50.26%	Not Clean:	445	75.94%	0.9194	175.9972	1,168.0122	1.24	51.58%
U	7,219	7,219	0	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
		100.00%	0.00%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1994	8,944	7,219	840	3	40	842	Clean:	270	30.61%	0.1285	30.2387	277.7961	0.92	
		80.71%	9.39%	0.03%	0.45%	9.41%	Not Clean:	612	69.39%	0.8971	171.1533	1,129.4835	1.24	9.86%
1995														
P	899	0	446	0	52	401	Clean:	214	47.24%	0.1084	22.6988	197.1007	0.98	
		0.00%	49.61%	0.00%	5.78%	44.61%	Not Clean:	239	52.76%	0.8200	142.0538	874.0222	1.15	50.39%
T	1,417	0	626	11	39	741	Clean:	194	24.87%	0.1182	30.0495	249.8887	0.75	
		0.00%	44.18%	0.78%	2.75%	52.29%	Not Clean:	586	75.13%	0.7897	178.7382	1,163.4489	1.00	55.05%
U	7,869	7,867	0	0	0	2	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
		99.97%	0.00%	0.00%	0.00%	0.03%	Not Clean:	2	100.00%	0.7750	61.4250	803.2250	0.60	0.03%
Total For 1995	10,185	7,867	1,072	11	91	1,144	Clean:	408	33.04%	0.1131	26.1940	222.2009	0.87	
		77.24%	10.53%	0.11%	0.89%	11.23%	Not Clean:	827	66.96%	0.7984	167.8528	1,078.9345	1.04	12.13%
1996														
P	1,182	0	550	0	96	536	Clean:	377	59.65%	0.1045	19.5606	189.9780	0.96	
		0.00%	46.53%	0.00%	8.12%	45.35%	Not Clean:	255	40.35%	0.7954	115.5584	788.3678	1.39	53.47%
T	1,859	0	729	7	129	994	Clean:	519	46.22%	0.1144	19.4568	201.9222	0.81	
		0.00%	39.21%	0.38%	6.94%	53.47%	Not Clean:	604	53.78%	0.6578	162.7325	1,066.1560	1.22	60.41%
U	10,756	10,754	1	0	0	1	Clean:	1	100.00%	0.1750	36.0000	98.2000	2.85	
		99.98%	0.01%	0.00%	0.00%	0.01%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.01%
Total For 1996	13,797	10,754	1,280	7	225	1,531	Clean:	897	51.08%	0.1103	19.5189	196.7865	0.88	
		77.94%	9.28%	0.05%	1.63%	11.10%	Not Clean:	859	48.92%	0.6986	148.7286	983.6927	1.27	12.73%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated	
			No			Yes									
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits								
1997															
P	1,429	0	568	0	176	685	Clean:	499	57.96%	0.0919	15.4938	144.3613	0.76		
			0.00%	39.75%	0.00%	12.32%	47.94%	Not Clean:	362	42.04%	0.8055	107.8756	778.7424	1.20	60.25%
T	2,639	0	1092	14	79	1,454	Clean:	730	47.62%	0.1319	20.7816	239.3427	0.98		
			0.00%	41.38%	0.53%	2.99%	55.10%	Not Clean:	803	52.38%	0.6249	99.1969	993.1427	1.18	58.09%
U	12,274	12,269	2	0	0	3	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.96%	0.02%	0.00%	0.00%	0.02%	Not Clean:	3	100.00%	1.5917	382.7167	1,581.0500	0.57	0.02%
Total For 1997		16,342	12,269	1,662	14	255	2,142	Clean:	1,229	51.27%	0.1156	18.6347	200.7783	0.89	
			75.08%	10.17%	0.09%	1.56%	13.11%	Not Clean:	1,168	48.73%	0.6834	102.6149	928.2033	1.19	14.67%
1998															
P	2,135	0	874	0	261	1,000	Clean:	796	63.12%	0.0920	16.9146	141.5054	0.86		
			0.00%	40.94%	0.00%	12.22%	46.84%	Not Clean:	465	36.88%	0.8554	90.8156	695.8290	1.35	59.06%
T	4,096	0	1746	20	154	2,176	Clean:	1,227	52.66%	0.1205	18.6128	222.6443	1.02		
			0.00%	42.63%	0.49%	3.76%	53.13%	Not Clean:	1,103	47.34%	0.6022	84.6252	976.7533	1.28	56.88%
U	17,131	17,126	0	0	0	5	Clean:	2	40.00%	0.1450	19.0500	364.0750	1.55		
			99.97%	0.00%	0.00%	0.00%	0.03%	Not Clean:	3	60.00%	1.0617	75.4167	768.9000	2.10	0.03%
Total For 1998		23,362	17,126	2,620	20	415	3,181	Clean:	2,025	56.31%	0.1093	17.9457	190.8894	0.96	
			73.31%	11.21%	0.09%	1.78%	13.62%	Not Clean:	1,571	43.69%	0.6780	86.4399	893.2057	1.30	15.39%
1999															
P	2,339	0	845	0	342	1,152	Clean:	1,032	69.08%	0.0871	15.3906	131.8181	0.87		
			0.00%	36.13%	0.00%	14.62%	49.25%	Not Clean:	462	30.92%	0.8590	110.1082	715.0656	1.36	63.87%
T	4,762	0	1714	33	359	2,656	Clean:	1,991	66.04%	0.1017	15.4950	172.1403	0.91		
			0.00%	35.99%	0.69%	7.54%	55.77%	Not Clean:	1,024	33.96%	0.6185	104.8917	900.8622	1.19	63.31%
U	17,231	17,220	6	0	0	5	Clean:	2	40.00%	0.0875	43.3250	239.1250	0.95		
			99.94%	0.03%	0.00%	0.00%	0.03%	Not Clean:	3	60.00%	0.1850	46.2167	1,223.8500	0.53	0.03%
Total For 1999		24,332	17,220	2,565	33	701	3,813	Clean:	3,025	67.01%	0.0967	15.4778	158.4284	0.90	
			70.77%	10.54%	0.14%	2.88%	15.67%	Not Clean:	1,489	32.99%	0.6922	106.3920	843.8648	1.24	18.55%
2000															
P	3,613	0	1323	0	542	1,748	Clean:	1,680	73.36%	0.0821	13.9393	100.0017	0.83		
			0.00%	36.62%	0.00%	15.00%	48.38%	Not Clean:	610	26.64%	0.7854	108.8073	656.7789	1.18	63.38%
T	6,954	0	2162	35	932	3,825	Clean:	3,469	72.92%	0.0853	13.2952	143.4704	0.83		
			0.00%	31.09%	0.50%	13.40%	55.00%	Not Clean:	1,288	27.08%	0.6210	77.2806	823.4810	1.21	68.41%
U	26,223	26,208	7	0	0	8	Clean:	2	25.00%	0.1975	18.1500	4.5750	2.17		
			99.94%	0.03%	0.00%	0.00%	0.03%	Not Clean:	6	75.00%	0.5158	35.9667	901.7166	2.17	0.03%
Total For 2000		36,790	26,208	3,492	35	1,474	5,581	Clean:	5,151	73.01%	0.0843	13.5071	129.2391	0.83	
			71.24%	9.49%	0.10%	4.01%	15.17%	Not Clean:	1,904	26.99%	0.6734	87.2508	770.3199	1.21	19.18%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated	
			No			Yes									
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits								
2001															
P	3,408	0	1005	0	663	1,740	Clean:	1,871	77.86%	0.0715	12.5493	82.0575	0.79		
			0.00%	29.49%	0.00%	19.45%	51.06%	Not Clean:	532	22.14%	0.7905	102.9872	649.4609	1.27	70.51%
T	6,538	0	1777	42	1,003	3,716	Clean:	3,751	79.49%	0.0843	13.5624	113.1917	0.85		
			0.00%	27.18%	0.64%	15.34%	56.84%	Not Clean:	968	20.51%	0.6839	82.4383	689.9040	1.27	72.18%
U	22,400	22,391	6	0	0	3	Clean:	3	100.00%	0.0900	8.1833	273.2167	0.57		
			99.96%	0.03%	0.00%	0.00%	0.01%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.01%
Total For 2001	32,346	22,391	2,788	42	1,666	5,459	Clean:	5,625	78.95%	0.0801	13.2226	102.9212	0.83		
			69.22%	8.62%	0.13%	5.15%	16.88%	Not Clean:	1,500	21.05%	0.7217	89.7263	675.5602	1.27	22.03%
2002															
P	5,082	0	1370	0	1,127	2,585	Clean:	2,998	80.77%	0.0650	11.3250	69.0688	0.79		
			0.00%	26.96%	0.00%	22.18%	50.87%	Not Clean:	714	19.23%	0.7195	88.3368	610.3288	1.30	73.04%
T	9,859	0	2363	27	1,992	5,477	Clean:	6,191	82.89%	0.0731	11.2716	99.9979	0.80		
			0.00%	23.97%	0.27%	20.20%	55.55%	Not Clean:	1,278	17.11%	0.6429	86.1914	664.8169	1.21	75.76%
U	32,659	32,653	2	0	0	4	Clean:	1	25.00%	0.1400	17.1500	98.9500	3.15		
			99.98%	0.01%	0.00%	0.00%	0.01%	Not Clean:	3	75.00%	0.8250	72.8500	408.6833	1.82	0.01%
Total For 2002	47,600	32,653	3,735	27	3,119	8,066	Clean:	9,190	82.16%	0.0705	11.2896	89.9080	0.80		
			68.60%	7.85%	0.06%	6.55%	16.95%	Not Clean:	1,995	17.84%	0.6706	86.9392	644.9307	1.24	23.50%
2003															
P	4,269	0	1105	0	1,012	2,152	Clean:	2,618	82.74%	0.0614	9.9407	62.6484	0.75		
			0.00%	25.88%	0.00%	23.71%	50.41%	Not Clean:	546	17.26%	0.8359	107.7452	575.8427	1.50	74.12%
T	8,265	0	1588	26	1,907	4,744	Clean:	5,691	85.57%	0.0694	10.7442	77.1955	0.82		
			0.00%	19.21%	0.31%	23.07%	57.40%	Not Clean:	960	14.43%	0.7435	75.5078	594.4467	1.24	80.47%
U	24,441	24,432	4	0	0	5	Clean:	4	80.00%	0.1350	9.2500	77.9500	1.35		
			99.96%	0.02%	0.00%	0.00%	0.02%	Not Clean:	1	20.00%	0.8800	88.9000	387.5500	0.80	0.02%
Total For 2003	36,975	24,432	2,697	26	2,919	6,901	Clean:	8,313	84.65%	0.0669	10.4904	72.6146	0.80		
			66.08%	7.29%	0.07%	7.89%	18.66%	Not Clean:	1,507	15.35%	0.7771	87.1966	587.5690	1.33	26.56%
2004															
P	5,813	0	1147	0	1,736	2,930	Clean:	4,059	86.99%	0.0560	9.3410	51.8222	0.74		
			0.00%	19.73%	0.00%	29.86%	50.40%	Not Clean:	607	13.01%	0.8304	102.5291	526.1613	1.22	80.27%
T	14,216	0	2494	59	3,657	8,006	Clean:	10,506	90.08%	0.0579	9.4468	53.4086	0.80		
			0.00%	17.54%	0.42%	25.72%	56.32%	Not Clean:	1,157	9.92%	0.7466	92.7411	528.3393	1.24	82.04%
U	37,559	37,550	7	0	0	2	Clean:	2	100.00%	0.0550	5.5750	44.1500	0.95		
			99.98%	0.02%	0.00%	0.00%	0.01%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.01%
Total For 2004	57,588	37,550	3,648	59	5,393	10,938	Clean:	14,567	89.20%	0.0574	9.4168	52.9653	0.78		
			65.20%	6.33%	0.10%	9.36%	18.99%	Not Clean:	1,764	10.80%	0.7755	96.1092	527.5899	1.23	28.36%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated	
			No			Yes									
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits								
2005															
P	5,218	0	961	0	1,483	2,774	Clean:	3,740	87.86%	0.0564	9.0968	45.9804	0.77		
			0.00%	18.42%	0.00%	28.42%	53.16%	Not Clean:	517	12.14%	0.8340	70.8663	519.6635	1.48	81.58%
T	10,269	0	1660	40	2,609	5,960	Clean:	7,743	90.36%	0.0590	9.4417	51.8541	0.82		
			0.00%	16.17%	0.39%	25.41%	58.04%	Not Clean:	826	9.64%	0.7221	69.8876	469.7143	1.26	83.45%
U	26,173	26,161	9	0	0	3	Clean:	3	100.00%	0.0717	6.9833	64.9667	2.08		
			99.95%	0.03%	0.00%	0.00%	0.01%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.01%
Total For 2005	41,660	26,161	2,630	40	4,092	8,737	Clean:	11,486	89.53%	0.0582	9.3288	49.9450	0.80		
			62.80%	6.31%	0.10%	9.82%	20.97%	Not Clean:	1,343	10.47%	0.7651	70.2644	488.9427	1.35	30.79%
2006															
P	7,103	0	2049	0	1,495	3,559	Clean:	4,525	89.53%	0.0628	10.3705	46.9414	0.88		
			0.00%	28.85%	0.00%	21.05%	50.11%	Not Clean:	529	10.47%	0.7385	75.2638	404.5107	1.61	71.15%
T	14,260	0	2504	59	3,431	8,266	Clean:	10,774	92.11%	0.0581	9.3942	46.8932	0.85		
			0.00%	17.56%	0.41%	24.06%	57.97%	Not Clean:	923	7.89%	0.6902	64.5800	463.2389	1.26	82.03%
U	35,631	35,616	4	0	0	11	Clean:	9	81.82%	0.0694	12.6444	111.5500	1.66		
			99.96%	0.01%	0.00%	0.00%	0.03%	Not Clean:	2	18.18%	0.4650	14.2000	79.7500	-1.92	0.03%
Total For 2006	56,994	35,616	4,557	59	4,926	11,836	Clean:	15,308	91.33%	0.0595	9.6847	46.9454	0.86		
			62.49%	8.00%	0.10%	8.64%	20.77%	Not Clean:	1,454	8.67%	0.7075	68.3977	441.3447	1.38	29.41%
2007															
P	5,716	0	1440	0	1,292	2,984	Clean:	3,911	91.46%	0.0605	10.0076	41.6776	0.90		
			0.00%	25.19%	0.00%	22.60%	52.20%	Not Clean:	365	8.54%	0.7833	75.6514	391.5884	1.50	74.81%
T	11,530	0	2377	42	2,383	6,728	Clean:	8,480	93.07%	0.0631	9.7944	45.2917	0.93		
			0.00%	20.62%	0.36%	20.67%	58.35%	Not Clean:	631	6.93%	0.7760	60.0005	345.9357	1.42	79.02%
U	26,266	26,252	9	0	0	5	Clean:	1	20.00%	0.0300	2.5500	31.3500	0.45		
			99.95%	0.03%	0.00%	0.00%	0.02%	Not Clean:	4	80.00%	0.4412	58.2125	874.1375	1.30	0.02%
Total For 2007	43,512	26,252	3,826	42	3,675	9,717	Clean:	12,392	92.53%	0.0622	9.8611	44.1500	0.92		
			60.33%	8.79%	0.10%	8.45%	22.33%	Not Clean:	1,000	7.47%	0.7773	65.7059	364.7117	1.45	30.78%
2008															
P	8,740	0	2927	0	1,319	4,494	Clean:	5,308	91.31%	0.0682	10.9628	44.7760	1.04		
			0.00%	33.49%	0.00%	15.09%	51.42%	Not Clean:	505	8.69%	0.8170	82.1608	356.3651	1.52	66.51%
T	17,972	0	3983	70	3,357	10,562	Clean:	12,849	92.31%	0.0686	9.6985	42.9115	0.95		
			0.00%	22.16%	0.39%	18.68%	58.77%	Not Clean:	1,070	7.69%	0.7195	65.3450	272.7490	1.32	77.45%
U	39,939	39,920	12	0	0	7	Clean:	6	85.71%	0.0875	16.4000	78.2417	0.39		
			99.95%	0.03%	0.00%	0.00%	0.02%	Not Clean:	1	14.29%	0.0350	9.0500	1,348.9500	0.15	0.02%
Total For 2008	66,651	39,920	6,922	70	4,676	15,063	Clean:	18,163	92.02%	0.0685	10.0702	43.4680	0.98		
			59.89%	10.39%	0.11%	7.02%	22.60%	Not Clean:	1,576	7.98%	0.7503	70.6976	300.2251	1.39	29.62%

Model Year	Veh. Type	Emis. Due Veh.	Meet Time and Location Criteria					Total	Percent	CO	HC	NOX	Accel	Emis. Due Veh. Evaluated
			No			Yes								
			0 Hits	1 Hit	2+ Hits	1 Hit	2+ Hits							
2009														
P	8,385	0	2771	0	1,075	4,539	Clean:	5,218	92.95%	0.0708	11.4132	45.7158	1.11	
		0.00%	33.05%	0.00%	12.82%	54.13%	Not Clean:	396	7.05%	0.7291	68.8008	319.3870	1.60	66.95%
T	11,919	0	2811	50	1,783	7,275	Clean:	8,415	92.90%	0.0675	10.2517	41.3975	1.02	
		0.00%	23.58%	0.42%	14.96%	61.04%	Not Clean:	643	7.10%	0.7526	58.6547	210.7897	1.36	76.00%
U	36,349	34,245	1506	0	0	598	Clean:	536	89.63%	0.0838	13.4092	57.2918	1.19	
		94.21%	4.14%	0.00%	0.00%	1.65%	Not Clean:	62	10.37%	0.6552	57.1403	231.7694	1.43	1.65%
Total For 2009	56,653	34,245	7,088	50	2,858	12,412	Clean:	14,169	92.79%	0.0694	10.7989	43.5891	1.06	
		60.45%	12.51%	0.09%	5.04%	21.91%	Not Clean:	1,101	7.21%	0.7386	62.2187	251.0306	1.45	26.95%
2010														
P	1,397	0	429	0	132	836	Clean:	864	89.26%	0.0771	13.2755	52.1447	1.23	
		0.00%	30.71%	0.00%	9.45%	59.84%	Not Clean:	104	10.74%	0.7136	57.6990	270.7755	1.41	69.29%
T	2,246	0	486	10	305	1,445	Clean:	1,630	93.14%	0.0688	10.1458	41.8486	1.07	
		0.00%	21.64%	0.45%	13.58%	64.34%	Not Clean:	120	6.86%	0.8047	31.3537	225.6229	1.28	77.92%
U	7,202	6,270	611	0	0	321	Clean:	296	92.21%	0.0868	14.0718	52.3895	1.09	
		87.06%	8.48%	0.00%	0.00%	4.46%	Not Clean:	25	7.79%	0.7618	53.7460	311.3280	1.76	4.46%
Total For 2010	10,845	6,270	1,526	10	437	2,602	Clean:	2,790	91.81%	0.0733	11.5315	46.1554	1.12	
		57.81%	14.07%	0.09%	4.03%	23.99%	Not Clean:	249	8.19%	0.7623	44.6056	253.0867	1.38	28.02%
2011														
P	828	0	294	0	70	464	Clean:	509	95.32%	0.0603	10.6505	38.9273	1.05	
		0.00%	35.51%	0.00%	8.45%	56.04%	Not Clean:	25	4.68%	0.8348	41.5380	173.6420	1.56	64.49%
T	1,338	0	376	7	78	877	Clean:	903	94.55%	0.0707	10.5845	40.9919	1.19	
		0.00%	28.10%	0.52%	5.83%	65.55%	Not Clean:	52	5.45%	0.6566	19.8048	221.2788	1.39	71.38%
U	89,600	51,643	16366	0	0	21,591	Clean:	19,781	91.62%	0.0833	13.2524	51.5823	1.34	
		57.64%	18.27%	0.00%	0.00%	24.10%	Not Clean:	1,810	8.38%	0.7556	60.4826	199.0974	1.43	24.10%
Total For 2011	91,766	51,643	17,036	7	148	22,932	Clean:	21,193	91.82%	0.0822	13.0763	50.8271	1.32	
		56.28%	18.56%	0.01%	0.16%	24.99%	Not Clean:	1,887	8.18%	0.7539	59.1106	199.3714	1.43	25.15%
Overall Total	707,539	462,369	72,451	570	37,164	134,985	Clean:	146,645	85.18%	0.0706	11.2587	64.7286	0.95	
		65.35%	10.24%	0.08%	5.25%	19.08%	Not Clean:	25,504	14.82%	0.7548	95.3733	649.4398	1.29	24.33%

