

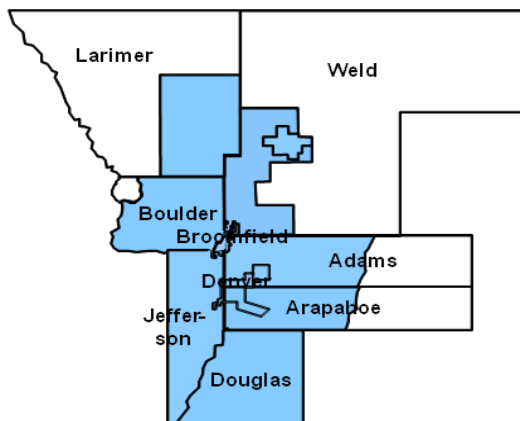


COLORADO

Air Pollution Control Division

Department of Public Health & Environment

Automobile Inspection and Readjustment (AIR) Program Annual Report Calendar Year 2015



July 1, 2016

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Executive Summary

The State of Colorado operates a 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.

The program's purpose 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 improvement in the Colorado Front Range area's air quality.

The Automobile Inspection and Readjustment (AIR) Program is an Inspection and Maintenance (I/M) Program. This program includes an electronic query of the vehicle's On-Board Diagnostic (OBD) system for vehicles that are 11 years old and newer. There is a dynamometer-based I/M240 inspection for model years 1982 through 12 years old light-duty gasoline-powered vehicles. A Two-Speed Idle inspection (TSI) is given to 1981 and older light-duty and all model year heavy-duty gasoline-powered vehicles. The program also involves a visual inspection to check for required emissions control equipment and gas cap pressure test along with an inspection for visible smoke. The State enforces the AIR program through denial of vehicle registrations.

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. Approximately 983,662 vehicles were exempt because they fall within the seven model year exemption period.

The I/M 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 are allowed to inspect all gasoline-powered vehicles regardless of age. There are also two independent test-only stations that may only inspect 1981 and older gasoline-powered vehicles. Additionally, there are 22 fleet self-inspection stations throughout the program area licensed to inspect qualifying commercial and governmental fleet vehicles.

The State has developed a clean screen roadside emissions inspection program, called "RapidScreen™", to increase motorist convenience and limit the number of vehicles undergoing traditional I/M inspections. RapidScreen uses Remote Sensing Devices (RSD) to measure tailpipe emissions while a vehicle drives past the devices on the road. There were a total of 22 RSD units operating throughout the nine-county program area in 2015. RSD units observed 265,455 unique vehicles that met clean screen program requirements. Of these, 178,581 vehicles participated in the program.

There were 295,443 initial OBD inspections, 541,863 initial I/M240 inspections and 49,815 Two-Speed Idle (TSI) inspections conducted throughout the I/M network in 2015. The OBD failure rate was 7.63%, the I/M240 failure rate was 9.74% and the TSI inspection failure rate was 9.21%.

The State estimates that the net cost of the total AIR program during 2015 was approximately \$50.7 million. Net cost is a combination of vehicle inspection costs, repair costs, vehicle

registration fees, and estimated fuel savings. For ozone precursors, the State estimates the cost-effectiveness of the inspection program to be \$4,626 per ton removed. For carbon monoxide (CO) the cost effectiveness is estimated at \$889 per ton removed.

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 enhanced 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 (I/M) Program that uses an electronic query of the On-Board Diagnostic system for light-duty gasoline powered vehicles that are 11 years old (model year 2005 in 2015) and newer. A dynamometer-based I/M240 inspection is used for model year 1982 through 12 years old (model year 2004 in 2015) light-duty gasoline powered vehicles. It includes a Two-Speed Idle (TSI) 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 and a visual opacity (smoke) inspection is performed on all vehicles.

The inspection cycle a vehicle receives depends on its age. 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 an exemption period. This allows the newest and cleanest model year vehicles to forgo periodic I/M inspection. The exemption period for new vehicles is seven years. Vehicles sold during their exemption period are also exempt from inspection as long as they have 12 months left on this period. Program enforcement is through denial of vehicle registrations at the County Clerk level.

To further improve motorist convenience, the State administers a remote-sensing based clean screen program called "RapidScreen." RapidScreen monitors vehicle emissions while simultaneously photographing the license plate while a vehicle passes through infrared and ultraviolet beams of light. County Clerks notify owners of vehicles meeting the RapidScreen criteria that their vehicle has passed the inspection process and are excused from their next regularly scheduled emissions inspection.

The current AIR Program covers the nine-county Front Range area, including all or portions of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld counties. The latter two North Front Range counties began inspecting gasoline-powered motor vehicles November 1, 2010.

The State contractor for the program is Envirotest Systems Corp. (Envirotest is a subsidiary of Opus Inspection Incorporated). They operate and maintain all of the Air Care Colorado vehicle emissions inspection stations, the RapidScreen program and handle 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 (CDPHE) designs, administers, and evaluates the program. The Emissions section in the Division of Motor Vehicles at the Colorado Department of Revenue (DOR) regulates the emissions inspection facilities and inspectors working in the emissions program areas.

Inspection and Maintenance (I/M) Program

I/M Network

The I/M 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 22 fleet stations that 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 RapidScreen roadside inspection program consists of 22 RSD units within the program area. Units are rotated among 117 locations throughout the program area, with the primary locations being highway on and off ramps.

The State also staffs six Emissions Technical Centers (ETCs) throughout the AIR program area to help both the motoring public and the repair industry. These centers perform a variety of support functions for the Mobile Sources program, including technical support of vehicle inspection programs, and motor vehicle clean fuels programs.

New Program Developments

In December 2012, the Air Quality Control Commission approved several I/M program changes to be implemented January 2015. Two principal changes included expanding the exemption period from four to seven model years and adding a pass/fail OBD inspection procedure for 8-through-11-year-old vehicles (two inspection cycles). Vehicles that are inspected during their exempt period also receive an OBD inspection. Mobile Sources Program staff completed these changes and successfully implemented the new program on January 1, 2015.

Another change for 2015 was the visual inspection requirement. Starting in 2015, visual inspection is no longer required for 1996 and newer model year vehicles.

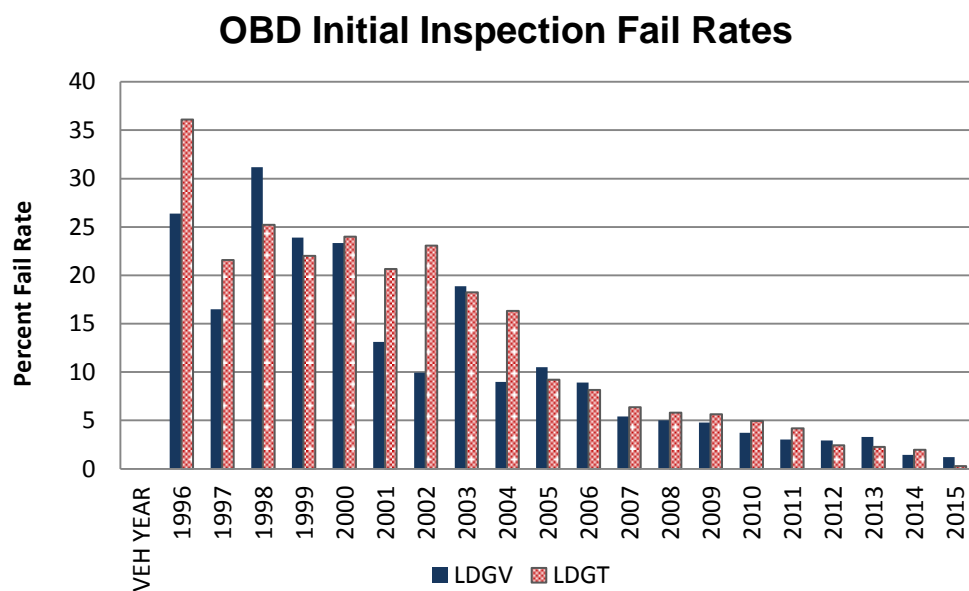
OBD Program Results

As part of the 2015 emissions program, vehicles that are 11 years old and newer receive an On-Board Diagnostic (OBD) emissions inspection. The OBD inspection involves a visual inspection of the Malfunction Indicator Light (MIL) and an electronic query of the computer control system to determine if there are emissions problems. The OBD inspection 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 295,443 initial OBD inspections conducted in 2015. Most vehicles pass this initial OBD inspection. A vehicle will fail the OBD inspection if the OBD Malfunction Indicator Light (MIL or “Check Engine light”) is illuminated or not functioning (Visual Fail) and/or the MIL is commanded on by the OBD system. A vehicle can also fail the OBD inspection if the gas cap is missing or it does not pass the pressure test, or if the vehicle is emitting visual smoke (opacity). Vehicles that fail their initial inspection must undergo repairs and then return to an emissions station for an after repair emissions inspection. In 2015, there were 22,557 vehicles that failed their initial OBD inspection resulting in an OBD initial failure rate of 7.63%. Figure 1 shows overall OBD failure rates by model year.

Figure 1 – OBD Initial Inspection Fail Rates (1996-2016)



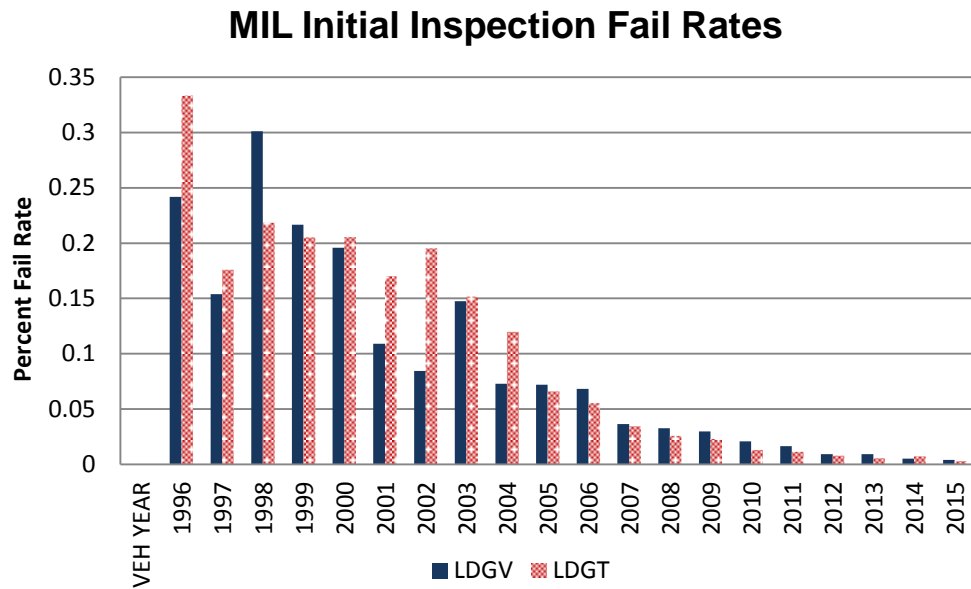
As Figure 1 shows, the lowest failure rates are associated with the newest model year vehicles. These low failure rates – combined with the very high probability that they will pass – has prompted the State to exempt all new vehicles from periodic emissions inspections for the first seven model years. Some motorists do, however, have their vehicles inspected even in the model year exemption period. This permits failure rates to be measured for 2009 and newer model year vehicles as shown in Figure 1.

In 2015, model year vehicles 1996 through 2004 receive an Alternate OBD inspection if the vehicle is incompatible with the I/M240 dynamometer allowing OBD fail rates to be measured for these vehicles, as explained in the I/M240 section. In 2015, model year vehicles 2005 through 2008 are required to receive an OBD inspection.

A vehicle’s OBD system will command the MIL on if emissions could be or are elevated 1.5 times the Environmental Protection Agency (EPA) certification levels. In 2015, 14,954 vehicles failed their initial OBD MIL inspection resulting in an OBD MIL initial failure rate of 5.06%. Figure 2 shows the MIL failure rates by model year. 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 gas cap pressure inspection results section, are also included.

Figure 2 – OBD MIL Fail Rates (1996-2016)



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

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/M 240 inspection. In 2015, 4,937 vehicles (2.66% of OBD test group 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 Alternate I/M240 inspection is to phase in the OBD inspection for the automotive repair community and customer convenience, as it reduces the number of required trips to the inspection station.

A vehicle’s OBD system must complete self-checks of various emissions control systems and have its readiness monitors set to “Ready” in order to get an OBD inspection. If the MIL passes the visual inspection but required readiness monitors are not set to “Ready” the vehicle is given an Alternate I/M 240 inspection. In 2015, 17,711 vehicles (9.55% of OBD test group 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.

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 2015, 272,886 passed the OBD inspection (92.37%), with 17,683 (6.48%) of those passing with at least one readiness monitor set to “Not Ready” and 14,954 (5.06%) failed the OBD inspection with 5,078 (33.96%) of those failing with at least one readiness monitor set to “Not Ready”. Additional 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 E and H.

Some vehicles are not compatible with the Alternate I/M240 inspection due to the vehicle's configuration, such as hybrids or long wheel base all-wheel drive trucks. If the MIL passes the visual inspection, but the OBD system is "Not Ready" 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 8,096 (2.74%) initial incomplete inspections in 2015.

A vehicle's OBD system stores Diagnostic Trouble Codes (DTCs) when it detects emissions problems. The presence of stored DTCs normally correlates with the MIL being commanded on. In 2015, of the 14,954 that failed the OBD inspection 14,218 (or 95.07%) had at least one DTC stored and 736 (4.92%) had no corresponding DTC. Sometimes a vehicle's MIL may not be commanded on, yet there are stored DTCs. In 2015, of the 272,886 vehicles that passed the OBD inspection, 16,573 (6.07%) of them had at least one stored DTC. Additional information on DTC status is available in the "Initial OBD Fail DTC Report" and "Initial OBD Pass DTC Report" in Appendix D and G.

The OBD system self-checks are set to turn the MIL on at a lower emissions standard than the current Colorado I/M240 tailpipe emissions standard. Because of this, many vehicles which fail their OBD inspection do not fail the corresponding I/M240 cutpoints, and thus do not show any excess emissions as measured by the I/M240 test. This is an expected result of the OBD inspection where standards are set by the federal emissions requirements, whereas Colorado's I/M240 tailpipe emissions standards are set high enough to minimize false failures, and so are somewhat higher.

As part of the 2015 emissions program, two percent of vehicles that receive an OBD inspection also receive an I/M240 inspection for comparison purposes. In addition, 1996 and newer vehicles that receive an I/M240 inspection also receive an advisory OBD inspection. The advisory OBD inspection includes a visual MIL inspection and a check of the MIL command status. In 2015, there were 327,516 comparison study and advisory OBD inspections. 266,030 (or 81.23%) vehicles passed the initial OBD inspection. 263,610 (or 99.09%) of these vehicles passed the OBD inspection without excess emissions and 2,420 (0.91%) passed the OBD inspection with excess emissions. These latter vehicles would have fail a mandatory I/M240 inspection.

There were 61,486 (or 18.77%) vehicles that failed the comparison study or advisory OBD inspection. However, 56,548 (91.97%) of those failed without excess emissions and 4,938 (8.03%) failed with excess emissions. Additional information on average emissions is available in the "OBD Initial Inspection Emissions Report" in Appendix I.

OBD – Gas Cap Pressure 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. There were 8,329 gas cap failures (2.82%) in 2015.

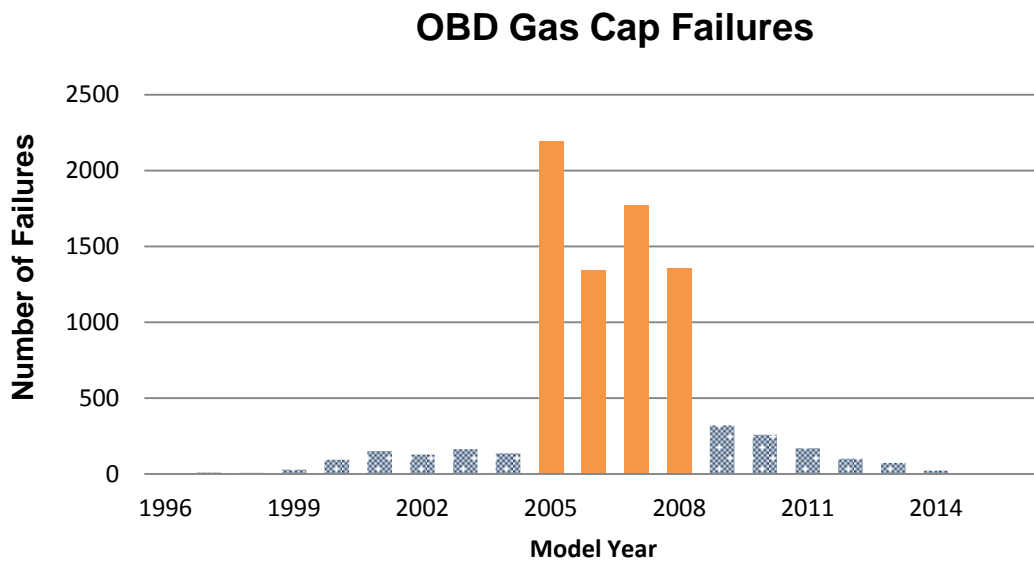
Additional information on Gas Cap inspection activity is available in the “Initial OBD Inspection Failure Report” in Appendix C.

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.

The relative percent contribution of mobile source ozone precursors released through gas cap or fuel system failures is expected to increase in the future, as tailpipe emissions continue to be reduced through fleet turnover and the introduction of advanced tailpipe emissions control technologies.

Figure 3 shows the number of gas cap pressure failures by model year.

Figure 3 – OBD Gas Cap Failures by Model Year (1996-2016)



The majority of the 1996-2004 model year vehicles that failed for gas cap are included in the I/M240 gas cap pressure results section. This chart only accounts for the gas cap failures associated with the OBD inspection, which is predominantly vehicles from model years 2005 through 2008 (two inspection cycles).

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. 12,636 vehicles (4.28%) failed the visual MIL inspection in

2015. 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 C.

OBD – Multiple Retests

Failing vehicles are required to undergo retesting after repairs are made. Some of the vehicles that fail their initial OBD inspection will continue to fail after their first repair attempt. In 2015, 18,503 vehicles (6.26%) were given an OBD first retest after repair. Of these vehicles, 2,204 failed a second time, resulting in an 11.91% OBD first retest failure rate. While vehicles undergoing retests after repair continue to show elevated failure rates compared to average vehicles undergoing initial testing, further analysis indicates that most vehicles that fail their initial OBD inspection are eventually repaired so that they pass their retest. Additional information on retest activity is available in the “OBD Retest Frequency Report” in Appendix F.

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 9,457 vehicles (3.20% of all initial OBD inspections) were “Not Ready” or had OBD communication issues during their first retest after repairs and received an incomplete retest. When a vehicle has its battery disconnected or has its Diagnostic Trouble Codes (DTCs) cleared, then its readiness monitors could be set to “Not Ready”.

OBD – Post-Repair Inspection Results

Vehicles that fail their OBD emissions inspection have potentially higher emissions than vehicles that pass. 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 F.

I/M240 Program Results

The I/M240 element of the program uses a 240-second loaded-mode dynamometer inspection cycle to measure exhaust emissions. This emissions inspection cycle is a derivative of the Federal Test Procedure (FTP) 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). An advisory visual inspection of the OBD MIL is performed on 1996 and newer model year vehicles receiving an I/M240 inspection.

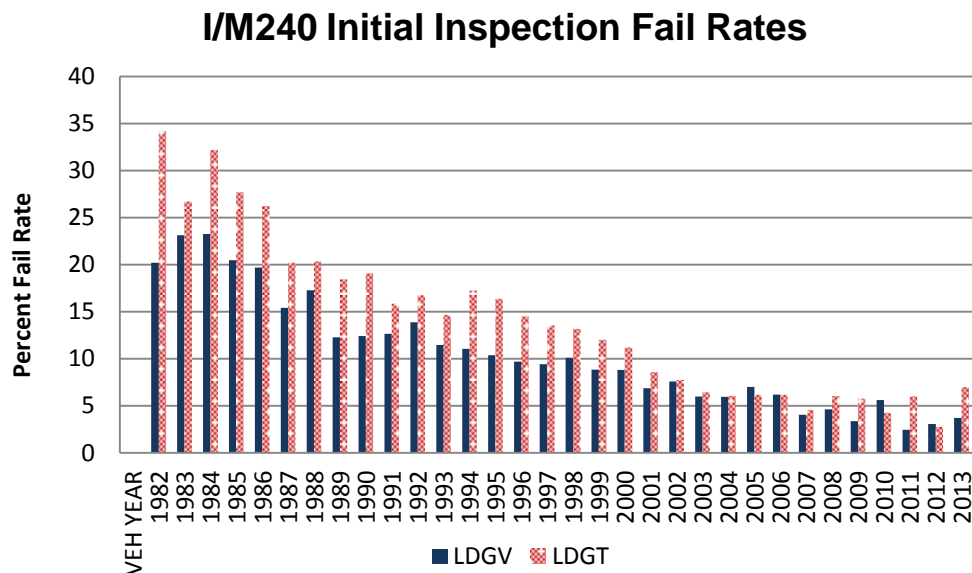
I/M240 – Initial Inspection Results

In 2015, there were a total of 541,863 initial I/M240 inspections conducted. The large majority of vehicles pass this initial I/M inspection. Vehicles that fail their initial inspection 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 2015, 52,761 vehicles failed their initial I/M240 inspections, resulting in an I/M240 initial failure rate of 9.74%. Of these, 27,366 vehicles failed for excess exhaust emissions, or an exhaust emissions failure rate of 5.05%.

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

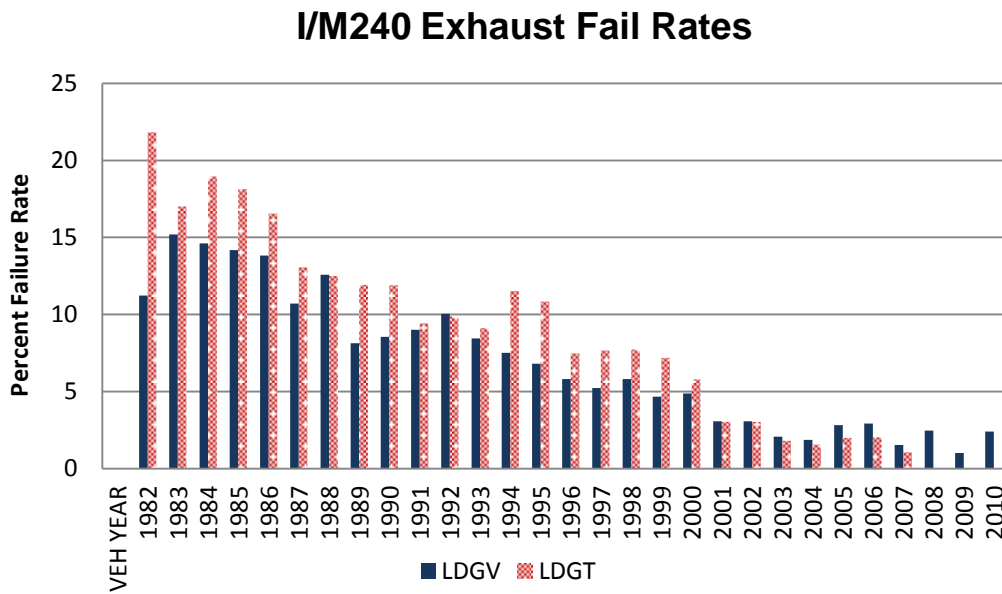
Figure 4 – I/M240 Initial Inspection Fail Rates (1982-2016)



In 2015, model year 2004 and older vehicles are required to receive an I/M240 inspection. However model year 2005 and newer vehicles may receive an Alternate I/M240 inspection if the vehicle’s OBD system is “not Ready” or does not communicate allowing I/M240 exhaust fail rates to be measured for these vehicles, as explained in the OBD section. In addition, as Figure 4 shows, some motorists voluntarily have their exempt vehicles inspected, allowing failure rates to be measured for 2009 and newer model year vehicles.

Figure 5 shows rates of vehicles that fail for excessive exhaust emissions, sorted by model year.

Figure 5 – I/M240 Exhaust Fail Rates (1982-2016)



In 2015, model year 2005 and newer vehicles should receive an OBD inspection. However, if the OBD system was “Not Ready” or did not communicate, the vehicle was given a I/M240 inspection. A small group of failing vehicles skew the chart for the newer model years in Figures 6, 7, and 8. For model years 2009 and newer this is ten or less vehicles per model year.

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

Figure 6 – I/M240 Average Hydrocarbon (HC) Emissions by Model Year (1982-2016)

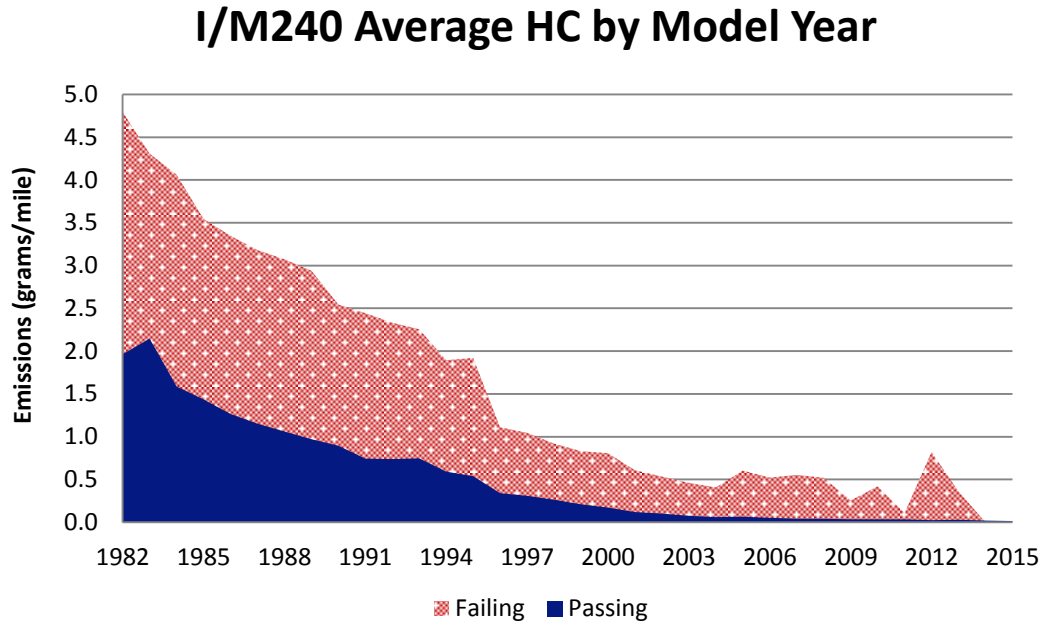


Figure 7 – I/M240 Average Carbon Monoxide (CO) Emissions by Model Year (1982-2016)

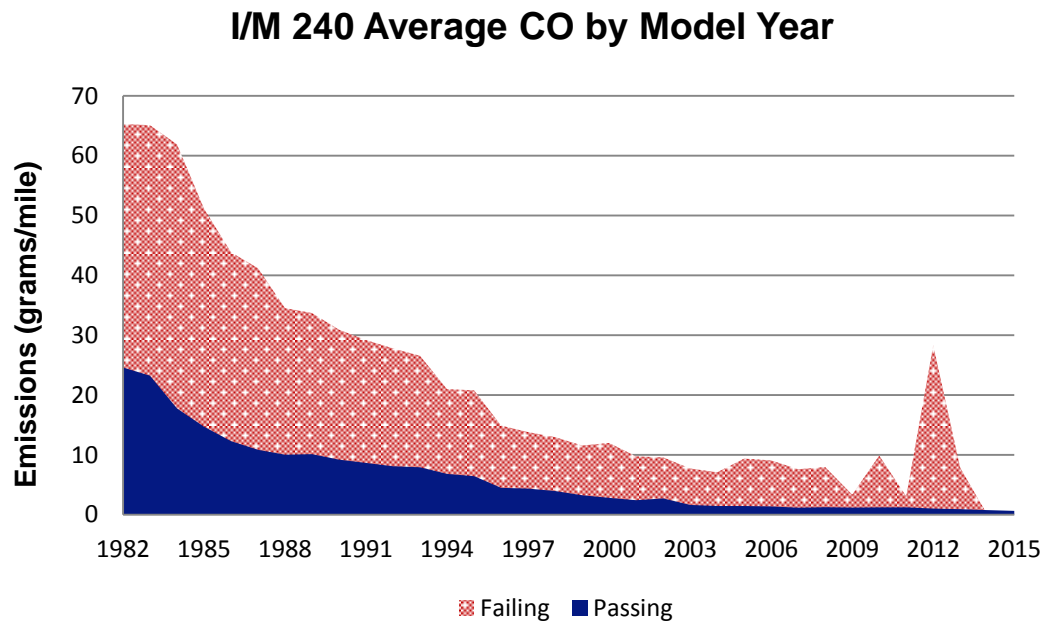
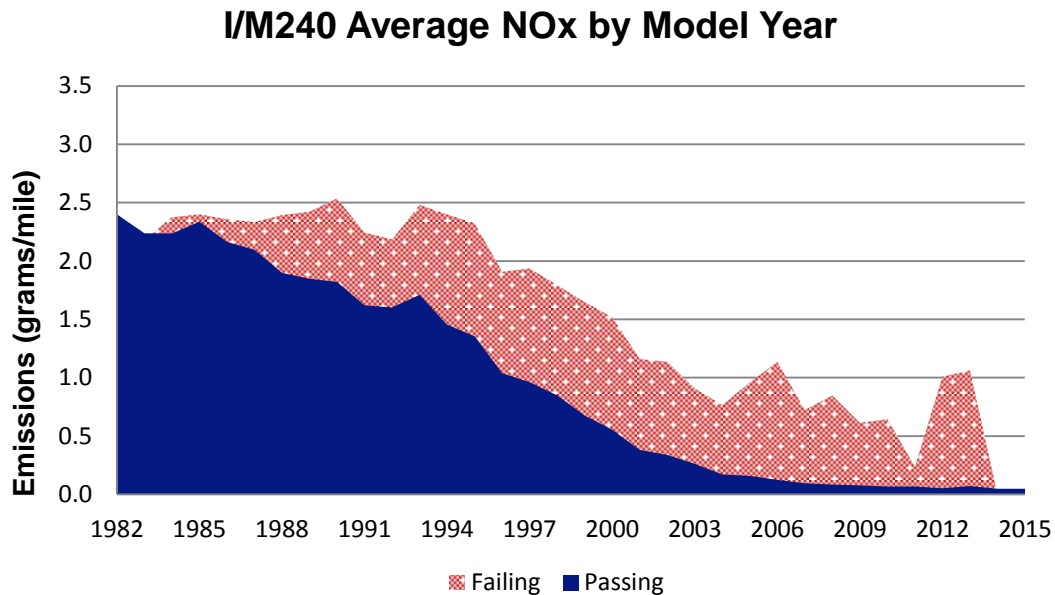


Figure 8 – I/M240 Average Nitrogen Oxides (NOx) Emissions by Model Year (1982-2016)



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 appropriately 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 NOx 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).

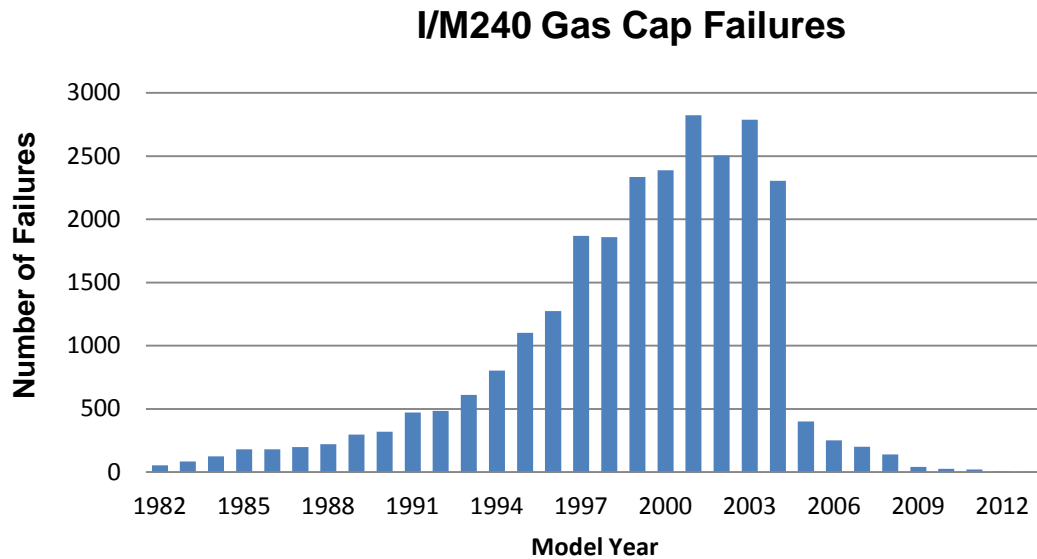
I/M240 – Gas Cap Pressure Inspection Results

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 cap fails and the motorist is required to install a functional 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. The relative contribution of mobile-source ozone precursors released through gas cap or fuel system failures is expected to increase in the future as tailpipe emissions continue to be reduced through fleet turnover and the proliferation of advanced emissions control technologies.

There were 26,373 gas cap pressure failures in 2015, resulting in a failure rate of 4.87%. Figure 9 shows the number of gas cap pressure failures by model year.

Figure 9 – I/M240 Gas Cap Failures by Model Year (1982-2016)



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 oxygen sensor(s).

In 2015, 479 vehicles failed for missing or improperly installed catalytic converter(s), 588 vehicles failed for missing or tampered air injection system and 232 vehicles failed for missing or tampered oxygen sensor(s). This resulted in an I/M240 visual inspection failure rate of 0.24%

I/M240 – Multiple Retests

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

In 2015, 49,261 vehicles were given a first I/M240 retest. 12,467 of these vehicles failed again, resulting in a 25.31% I/M240 first-retest after repair failure rate.

Vehicles undergoing retests after repair continue to show elevated failure rates compared to average vehicles undergoing initial testing. Further analysis indicates that most vehicles that fail their initial I/M240 inspection are eventually repaired so that they pass their retest. Additional information on retest activity is available in the “I/M240 Retest Frequency Report” in Appendix O.

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 pollutant and vehicle type in grams per mile (GPM).

Table 1 – I/M240 Passed Retest Inspection Results (2015)

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	1.29	16.78	1.58	0.32	4.05	0.76	64.31	67.27	39.97
Trucks	1.66	21.66	2.19	0.51	6.18	1.19	56.37	60.88	34.09
TOTAL	1.51	19.60	1.93	0.43	5.28	1.01	59.23	63.20	36.08

Two-Speed Idle Inspection Results

The I/M Program requires non-exempt* model year 1981 and older gasoline-powered vehicles to undergo annual Two-Speed Idle (TSI) inspection. Fleet vehicles model year 1995 and older are TSI inspected annually. Fleet 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 a TSI inspection, but on a biennial (every two years) basis.

The TSI inspection measures vehicle emissions at idle and raised (2500 rpm) idle. Only hydrocarbon (HC) and carbon monoxide (CO) emissions are measured, with no engine load placed on the vehicle. These inspections measure vehicle exhaust pollutant concentration levels only, not 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 and a visual inspection of the exhaust for opacity (smoke).

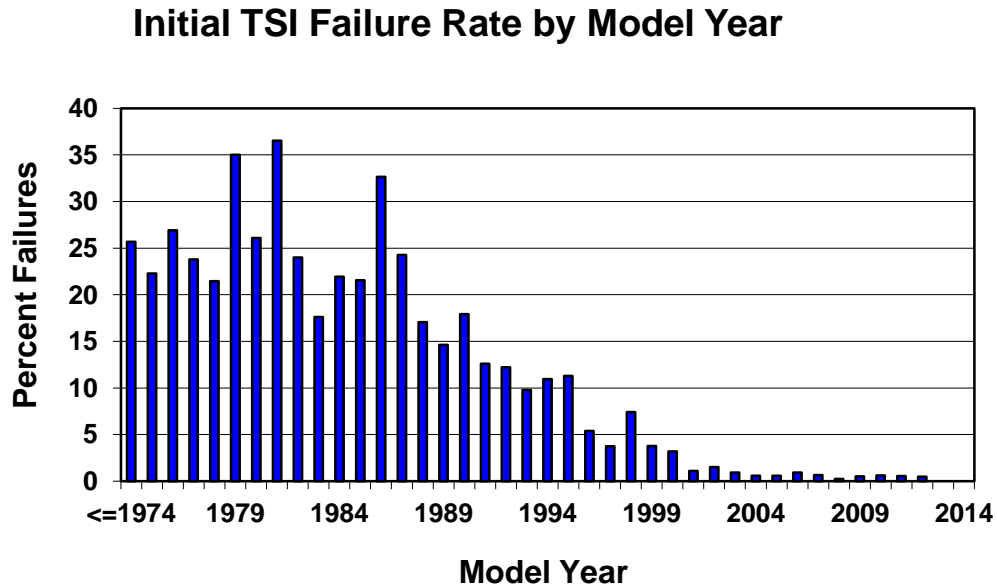
*Exempt vehicles include vehicles registered as collector series, street rods, or farm vehicles.

Two-Speed Idle – Initial Inspection Results

In 2015, 49,815 vehicles underwent a TSI inspection within the program area. 4,590 (or 9.21%) of these vehicles failed their initial inspection, with 3,915 (7.86%) 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. “1974” in these figures include all failing vehicles of model year 1974 and earlier.

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



In 2015, model year 2009 and newer vehicles were exempt from the emissions inspection, however a few were inspected. A few high emitting heavy-duty trucks skew Figure 11 and 12 for these model years. For instance one truck caused the model year 2012 HC spike.

Figure 11 – Two Speed Idle Inspection Mean HC by Model Year

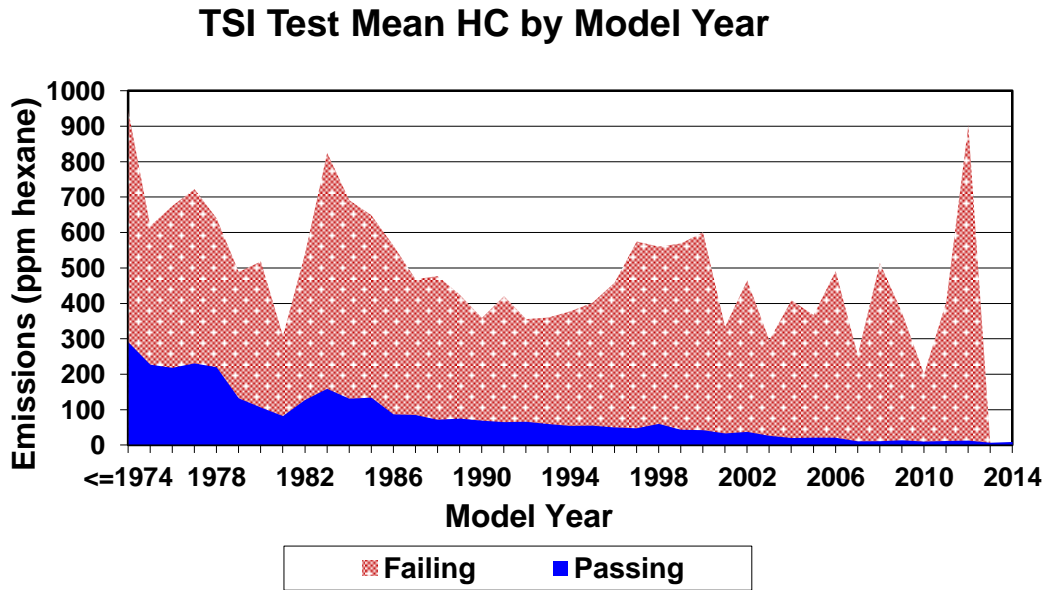
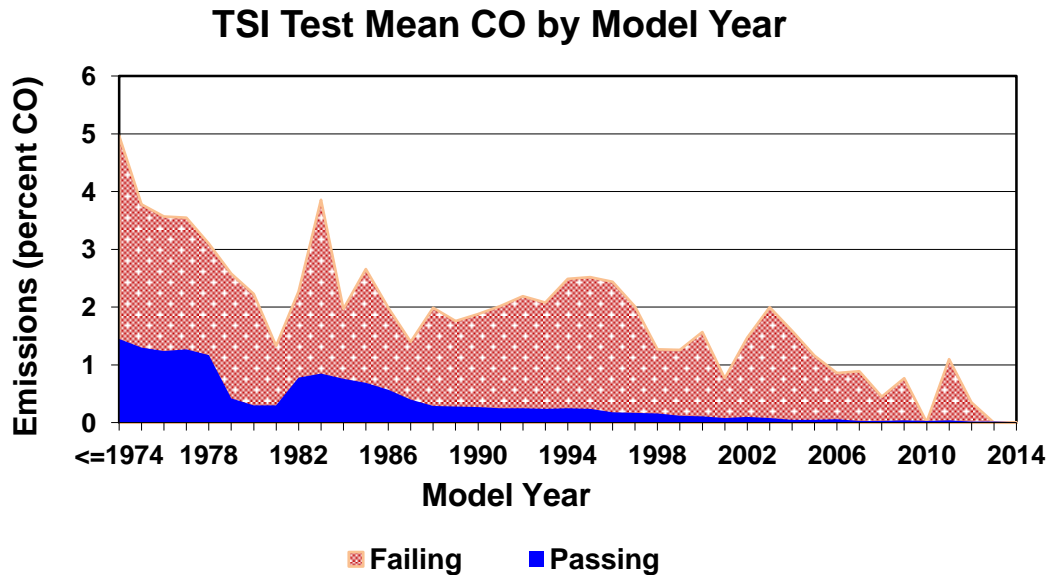


Figure 12 – Two Speed Idle Inspection Mean CO by Model Year



NO_x emissions are not measured as part of the two-speed idle inspection protocol because NO_x is not produced in significant amounts at idle and no load. As with the other inspection types, most non-exhaust failures were due to missing or malfunctioning gas caps.

Two-Speed Idle – Gas Cap Pressure 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 607 gas cap pressure failures during two-speed idle inspections in 2015. This is a failure rate of 1.22%. Gas cap testing is a new requirement for Two-Speed Idle tested vehicles, beginning in 2015.

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. 4,590 vehicles failed the Two-Speed Idle inspection in 2015 or 9.21%. Of these overall failures, 250 of these vehicles failed for missing or improperly installed catalytic converter(s), 381 of them failed for missing or tampered air injection system, and 47 failed for missing oxygen sensor(s). This is a visual failure rate of 1.36%.

Two-Speed Idle – Multiple Retests

Failing vehicles are required to undergo retesting after repairs are made. Some vehicles that failed their initial TSI inspection will continue to fail after their initial repair. 3,918 vehicles were given a first idle after-repair retest in 2015. 1,486 of these vehicles failed again, resulting in a 37.93% idle first retest failure rate. Additional information on retest activity is available in the "Idle Retest Frequency Report" in Appendix W.

Two-Speed Idle – Post-Repair Inspection Results

Vehicles that fail their initial TSI exhaust emissions inspection 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 at idle and raised idle (2500 rpm) from all vehicles that failed their initial TSI inspection and received a subsequent retest, average emissions from vehicles that passed a subsequent retest and the percent reduction by pollutant.

Table 2 – Two Speed Idle Passed Retest Inspection Results (2015)

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
Car	593.90	3.06	427.41	2.96	165.93	0.63	161.83	1.48	66.11	77.12	52.55	43.81
Truck	629.01	2.80	381.82	2.27	166.01	0.75	152.92	1.21	70.93	70.69	55.35	39.95
Total	620.26	2.86	393.18	2.45	165.99	0.72	155.15	1.28	69.86	72.38	54.65	41.12

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 system. Approximately 20.2% of failing vehicles in 2015 did not receive a passing retest in the 2015 calendar year. Out of the 79,908 initial failures of all types in 2015, there were 16,110 vehicles that were unresolved at the end of the calendar year. Many of these vehicles may have passed a subsequent inspection in the next calendar year (2016). The vast majority of these vehicles either are eventually successfully repaired outside of the analysis period (calendar year 2015), move out of the area, or leave the fleet.

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 due to re-entrainment of smoke into the passenger compartment, as well as where a motorist may receive diagnostic help in determining and repairing their vehicle’s problem. Listed are general phone numbers a motorist may call to receive more information, or make an appointment at one of the State’s Emissions Technical Centers. Although the smoking vehicle program is voluntary, the State encourages smoking vehicle owners to take advantage of diagnostic services available at State-operated Emission Technical Centers.

Vehicle information reported on the hotline is also transferred to Envirotest’s 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. 733 vehicles failed the visible smoke component of the emissions inspection in 2015 (177 OBD inspections, 484 I/M240 inspections and 72 Two-Speed Idle inspections). This represents 1.47% of all vehicles inspected.

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 2015, there were 422 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 2015, there were 348 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 2015, there were 47 Diagnostic Waivers issued by CDPHE Technical Center staff.

Waivers are not issued for vehicles that have tampered or missing emissions control equipment, or are visibly smoking. Vehicles that fail the evaporative systems inspection (i.e., gas cap pressure) 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.

Remote Sensing Program Results

The State also operates a remote-sensing based roadside emissions inspection program called 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 operates a total of 22 RSD units in the nine-county program area. These units operated a total of 24,424 hours in 2015, generating approximately 5.1 million valid emissions records.

According to Colorado's State Implementation Plan (SIP), RSD vehicle observations cannot exceed more than 50% of the emissions-testable fleet. An RSD vehicle observation is defined as any vehicle seen at least twice and qualifies to make a clean/not-clean determination.

For 2015, the overall RSD-observed fraction of testable vehicles was 35.13% (based on 755,601 total I/M eligible vehicles in the fleet, with 265,455 unique eligible vehicles observed by RSD). The number of unique eligible vehicles observed includes both vehicles that did and did not meet clean screen requirements.

Of the 265,455 vehicles observed by RSD, 221,372 (83.39%) were identified as being clean and issued a clean screen notice. Of those clean screen notices, 178,581 or 80.67% were redeemed. The redeemed numbers are calculated from each individual vehicle that met clean screen requirements whose owner chose to use the passing clean screen status to register their vehicle in lieu of getting a traditional emissions inspection.

Remote Sensing Average Vehicle Emissions Results

The remote sensing program measures vehicle emissions under actual operating conditions. While there is variation to these measurements when aggregated as a group, vehicle emissions trends may be observed. The following three graphs 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 entire post model year 1981 vehicle fleet that is observed 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 meet all the requirements for clean-screened vehicles. 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.

These charts do not show how the percentage of the fleet meeting clean-screen requirements increases substantially as newer vehicles are added to it. Note how the overall average fleet emissions lines converge on the clean-screen line, and then diverge from the non clean-screen vehicle red line as newer vehicles join the fleet.

Figure 13 – Remote Sensing Program Results – Average HC Emissions by model year

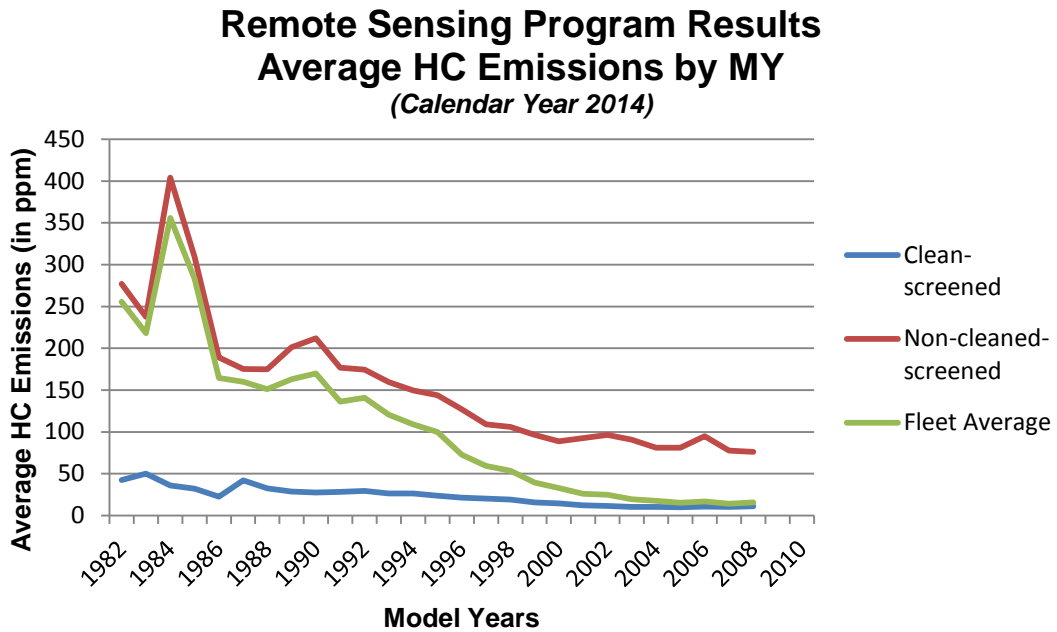


Figure 14 – Remote Sensing Program Results – Average CO Emissions by model year

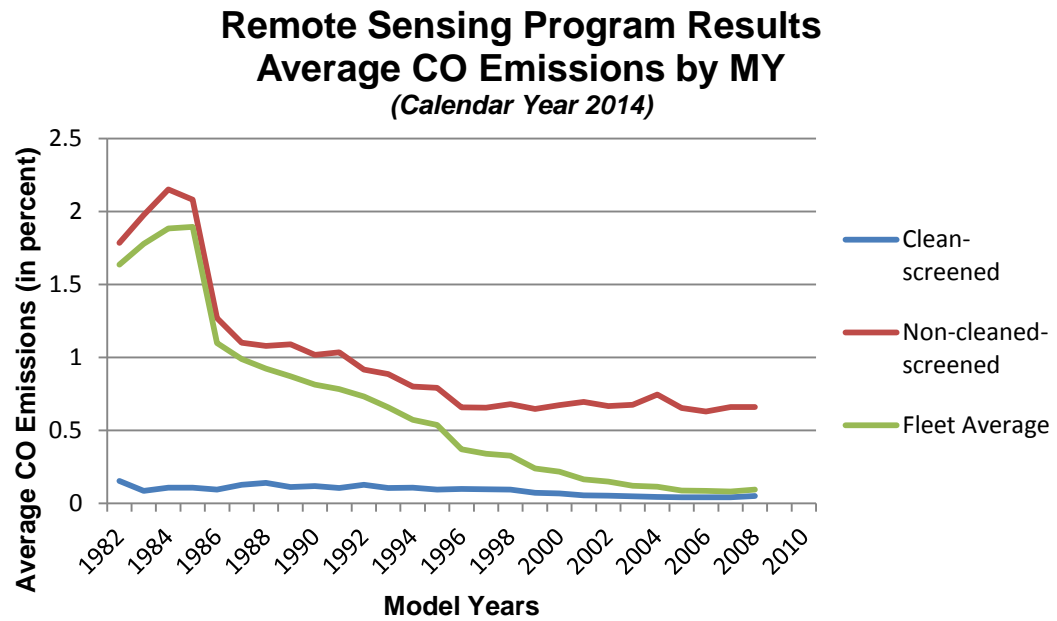
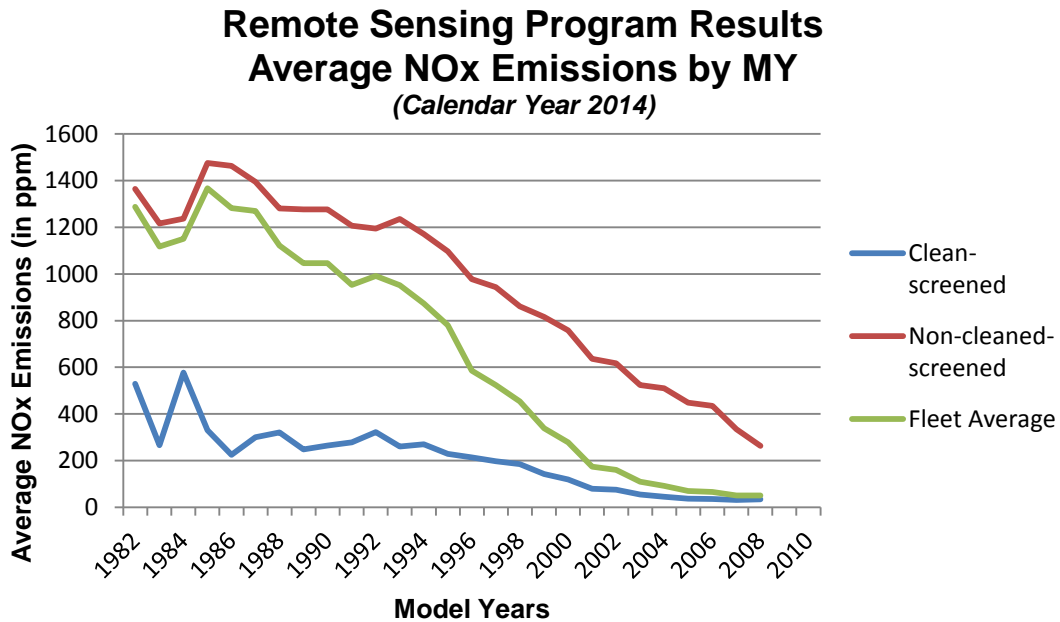


Figure 15 – Remote Sensing Program Results – Average NOx Emissions by model year



Cost-Effectiveness of the I/M Program

The purpose of the I/M Program is to improve air quality by reducing motor vehicle emissions. One way to evaluate this program’s effectiveness is to analyze its cost-effectiveness. Such analyses depend on assumptions about the control strategy examined.

The State typically looks at the program’s benefit as measured in tons per day of emissions reduced and the program cost per day to operate, using appropriate methodology typically used in State Implementation Plan development. A resulting cost per ton may then be obtained.

The State examined the cost of inspection, the number of vehicles inspected, registration fees connected to the operation of the I/M Program, the average cost of repairs for vehicles undergoing repair, and the fuel economy benefit obtained from repairing excessively emitting vehicles.

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

In 2015 there were a total of 1,065,702 initial inspections conducted. Of these inspections, 295,443 were initial OBD inspections, 541,863 were initial I/M240 inspections, 49,815 were initial TSI inspections, and 178,581 were for vehicles that went through the Clean Screen process.

Assuming that certain failing vehicles will undergo more than one paid I/M inspection before passing, the State estimates that the program’s inspection costs amounted to \$26,884,830 in 2015.

Table 3 shows overall inspection costs per type of inspection.

Table 3 – Overall Inspection Cost by Inspection Type (2015)

Inspection Type	Initial Inspections	Est. Total Paid Inspections	Cost
OBD	295,443	297,246	\$7,431,150
I/M240	541,863	552,129	\$13,803,225
Idle	49,815	51,630	\$1,185,930
Clean Screen	178,581	178,581	\$4,464,525
TOTAL	1,065,702	1,079,586	\$26,884,830

Registration Fees

The State adds a \$2.20 vehicle fee to the I/M program area’s gasoline motor vehicle registration fees. This helps to fund AIR program operations, administration, motorist and 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 are an estimated 2,981,095 I/M fee-eligible gasoline-powered vehicles registered in the enhanced nine-county I/M Program area as of December 31, 2015. This equates to a total registration-fee cost of \$6,558,409 for the entire program.

Repair Costs

Vehicles that failed their emissions inspection 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 2015, the average emissions repair cost for vehicles failing the OBD inspection was \$500.91 and for the I/M240 inspection was \$430.88. For vehicles receiving a TSI inspection, the average repair costs were \$201.18 for model year 1981 and older vehicles, and \$326.26 for model year 1982 and newer vehicles. For vehicles failing the gas cap pressure check element of the I/M inspection, the assumed replacement gas cap cost is \$10.00 each.

For the OBD inspected vehicles, 22,557 failed their initial OBD inspections. Of these vehicles, 14,954 failed for the MIL being commanded on and/or visual MIL inspection, and 8,329 of them 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, 52,761 vehicles failed their initial I/M240 inspections, with 27,366 of these vehicles failing for excess emissions only, or excess emissions in combination with failing the visual inspection. For the gas cap portion of the test, there were 26,373 I/M240 vehicles that failed. A few vehicles, not noted, failed for the visual and/or opacity only. Some 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.

In the two-speed idle tested vehicle group, 4,590 vehicles failed their initial TSI inspection. Of these vehicles, 3,915 failed the exhaust only, or in combination the exhaust and visual components of the inspection process. For the gas cap portion of the test, there were 607 vehicles that failed gas cap inspection. A few vehicles, not noted, failed for the visual and/or opacity only. Some 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 cost by inspection type.

Table 4 – Total Repair Costs by Inspection Type (2015)

Inspection Type	Excess Emissions/Visual		Gas Cap		TOTAL
	Count	Cost	Count	Cost	
OBD	14,954	\$7,490,608	8,329	\$83,290	\$7,573,898
I/M240	27,366	\$11,791,462	26,373	\$263,730	\$12,055,192
Idle	3,915	\$1,002,855	607	\$6,070	\$1,008,925
TOTAL	46,235	\$20,284,925	35,309	\$353,090	\$20,638,015

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 is tested on the IM240 cycle, fuel economy is measured. Based on Colorado’s IM240 testing, a fuel economy improvement of 6.6% was achieved for all vehicles failing their initial IM240 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 1,380,778 gallons of gasoline. Using a 2015 average cost of \$2.41 per gallon (Colorado

annual average from the U.S. Energy Information Administration), vehicles undergoing emission repairs saved an estimated \$3,327,675 on gasoline as a result of reduced fuel usage.

Overall Program Costs

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

Table 5 – Overall Program Cost (2015)

Annual I/M Program Cost (dollars)	
Inspection Fees	\$26,884,830
Registration Fees	\$6,558,409
Repair Costs	\$20,638,015
Fuel Economy Savings	-\$3,327,675
Total	\$50,753,579

Emission Benefits

Based on the U.S. EPA’s MOVES model, Colorado’s current AIR Program reduces total gaseous hydrocarbon (TGH) emissions by 13.9 tons per day (tpd), carbon monoxide (CO) emissions by 156.4 tpd, and nitrogen oxide (NO_x) emissions by 13.6 tpd. Table 6 details the overall emissions program benefit by pollutant.

Table 6 – Model Program Benefit (2015)

MOVES Emission Inventories and Program Benefit (tons/day)				
	TGH	CO	NO _x	TGH + (1/60)CO + NO _x
No IM	83.7	858.4	128.9	226.9
Current IM	69.9	702.0	115.3	196.9
TPD Benefit	13.9	156.4	13.6	30.1
% Benefit	16.6%	18.2%	10.6%	13.3%

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 + NO_x ozone precursor reduction would be equal to 30.1 tons per day. The generalized TGH + (1/60) CO + NO_x 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 (RVP) gasoline with a 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 \$50.7 million in 2015. This cost includes inspection costs, repair costs, and registration renewal fees used to fund administrative costs.

The State estimates the cost-effectiveness of the inspection program at \$4,626 per ton of ozone precursors removed from the I/M program area's air. For carbon monoxide, the program's cost-effectiveness is estimated at \$889 per ton. Table 7 gives the specific breakdown of cost per ton removed by pollutant.

Table 7 – AIR Program Cost Effectiveness (2015)

Cost Benefit Results	
Emission	Cost/Benefit (\$/ton)
HC	10,038
CO	889
NO _x	10,227
TGH + (1/60) CO + NO _x	4,626

2015 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, continues to operate the enhanced Colorado Vehicle Emissions Inspection and Maintenance (I/M) Program, which has been in place since 1995. During 2015, 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.).

2015 Audit Results

Pursuant to C.R.S. 42-5-305(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

DOR performed 240 record audits on all contractor-operated inspection centers and inspection-only facilities. Record audits were 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 9.5 million statewide vehicle registration records; this ensures that county clerks maintain a reasonable level of record accuracy.

Performance Audits

DOR executed overt performance audits pursuant to C.R.S. 42-4-305(6)(b)(I).

Performance audits were conducted contemporaneously with equipment audits at enhanced inspection centers, resulting in 562 performance audits completed. Forty overt performance audits were completed at independent inspection-only facilities and fleet testing facilities. There were three occasions where a fleet testing facility was placed on administrative hold as a result of equipment failure; therefore, a performance audit was unable to be conducted as scheduled. There were no violations associated with these performance audits.

Equipment Audits

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

During 2015, 194 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

40 initial equipment audits performed at 20 operational fleet inspection stations. There were three occasions where a fleet testing facility was placed on administrative hold as a result of equipment failure; therefore, an equipment audit was unable to be conducted as scheduled.

There were 116 initial audit deficiencies, seven of which resulted in the suspension of a testing lane. Upon verification of repair and a passing audit, failing lanes were released within two days of being suspended. The remaining initial audit deficiencies were corrected at the time of the audit and returned to service the same day. Table 8 categorizes the initial audit failures by equipment category.

Table 8 – Audit Failures by Equipment Category (2015)

2015 Initial Equipment Audit Failures by Category	
Emissions Analyzer	94
Dynamometer	19
Gas Cap Analyzer	3

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 2015, 278 covert inspections were conducted at enhanced inspection centers, resulting in 227 tests conducted properly and 51 tests conducted improperly. There were multiple tests in which more than one emissions control component was not correctly identified; this resulted in 55 emission control component violations. Table 9 categorizes these violations and the number of times components were incorrectly identified. In 26 of the 51 improper tests, the failing vehicles received passing results.

Table 9 – Emission components incorrectly identified as a result of covert vehicles (2015)

Emission Component Tampered	Number of Times Incorrectly Identified
Oxygen Sensor	13
Catalytic Converter	10
Air Injection System	17
Check Engine Light	15

Note: Covert inspection results may have had multiple components incorrectly identified.

Risk-Based Audits

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

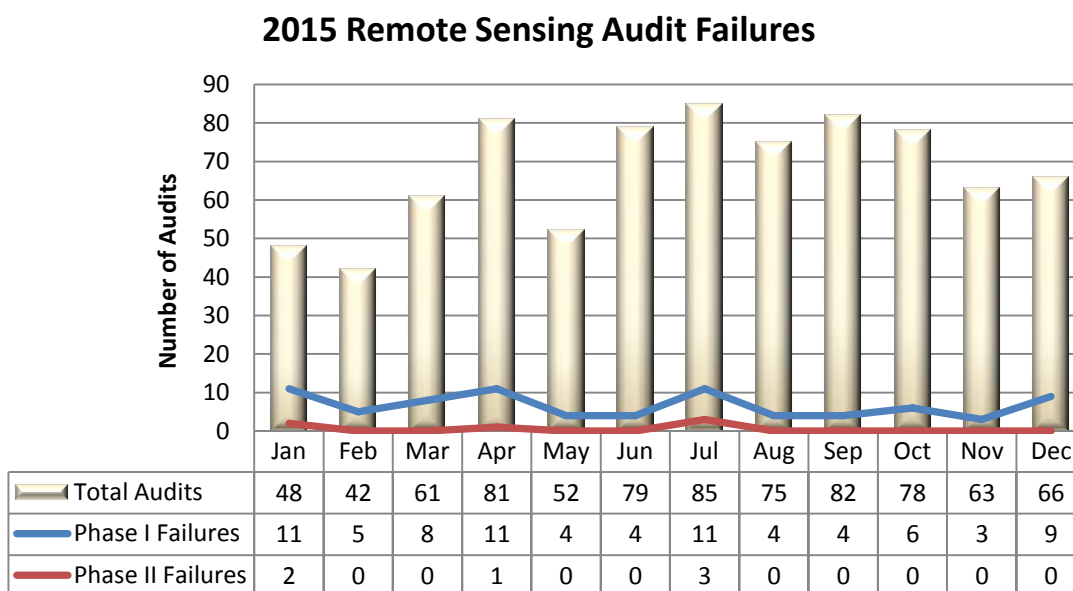
As a result of the above-named methods of detection, DOR conducted 448 risk-based equipment audits, resulting in 33 initial failures, one of which resulted in the suspension of a testing lane. A risk-based equipment audit only involves auditing specific pieces of what would, in its entirety, be included in a scheduled equipment audit. Thirty risk-based covert audits were conducted, resulting in three violations.

Remote Sensing Audits

Remote Sensing (i.e., Clean Screen, RapidScreen, or RSD) mobile emissions testing equipment audits were also performed by DOR for quality assurance purposes. A Phase I audit includes nine gas readings from three different known gas blends. In the event that a gas reading is outside the allowable tolerance, a Phase II audit was initiated. A Phase II audit includes six additional gas readings from the gas blend that was outside the allowable tolerance.

DOR performed 812 audits in 2015, resulting in 80 Phase I failures, or a 9.85% initial failure rate. All but six of the Phase I failures were immediately returned to service after passing a Phase II audit. Figure 16 shows the monthly number of audits completed in relation to Phase I and Phase II remote sensing device audit failures.

Figure 16 – Remote Sensing Audit Failures (2015)



Note: The overall audit result is not a failure unless a secondary audit (Phase II) also fails.

2015 Enforcement Results

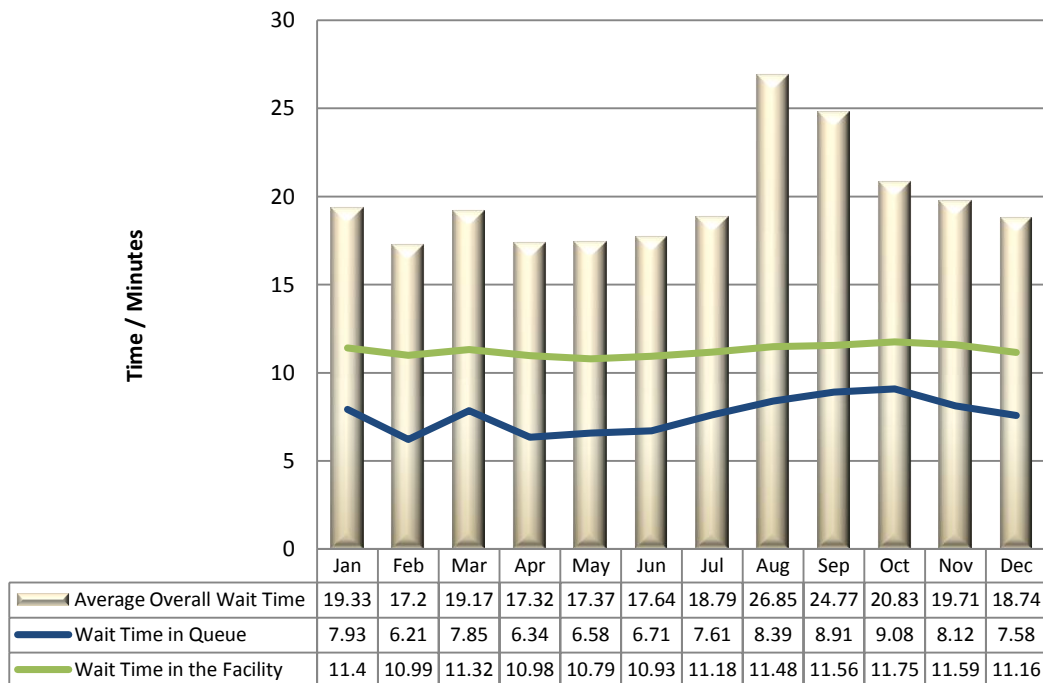
Hearing & Fines

In 2015, 97 hearings were conducted as a result of improper vehicle emission inspections. Hearing proceedings resulted in 38 inspectors placed on probation, and 8 inspector licenses revoked. Fines totaling \$74,400 were collected as a result of improper vehicle inspections.

Additionally, \$300,925 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 Envirotest. The total of all fines collected in 2015 was \$375,325. Figure 17 shows the average 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 (2015, Envirotest only)

2015 Average Vehicle Owner Wait Time Results (Envirotest)



Complaints

A total of 285 Vehicle Damage, Procedural and Statutory Non-Compliance complaints were opened against inspection stations operated by Envirotest. DOR involvement in the complaint mitigation process resulted in \$33,354 in refunds to consumers. DOR responded to 34 emissions-related

complaints against auto dealerships. A total of \$101,693 was refunded to consumers from those proceedings. Table 10 categorizes the 319 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 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 (2015)

2015 Complaints Opened by Category	
Vehicle Damage	271
Procedural Claims	14
Statutory Non-Compliance	34

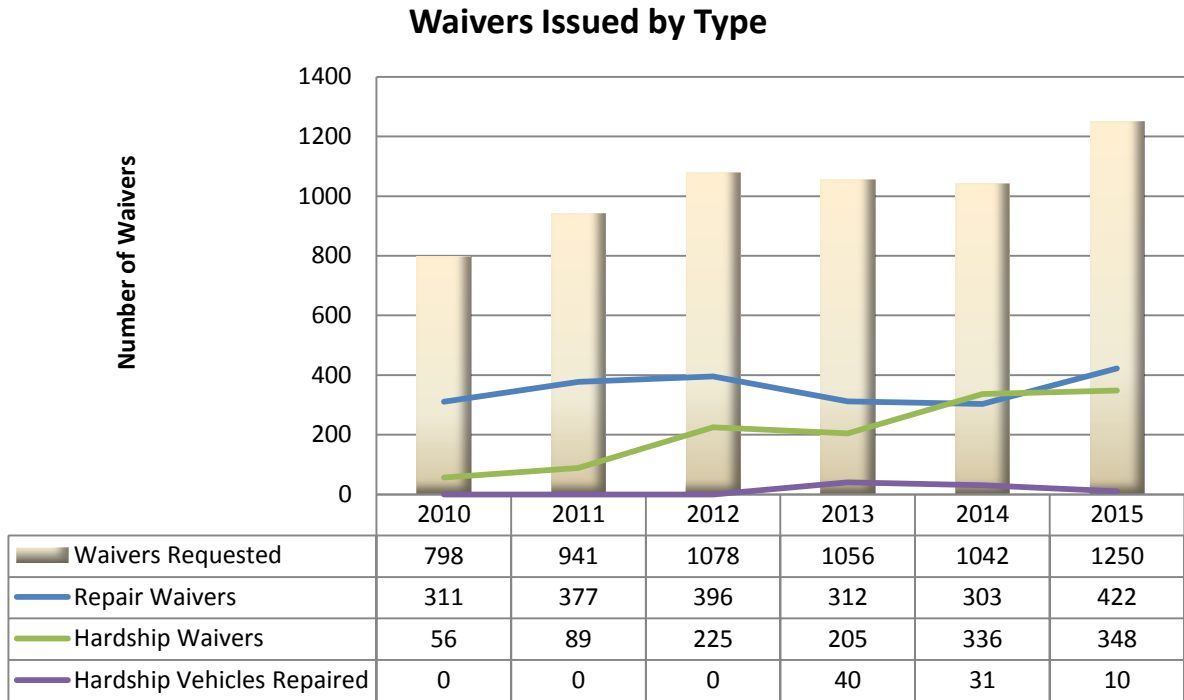
Waivers

In 2015, 1,268 waiver applications were submitted to and processed by DOR. Of the 1,268 applications, 422 resulted in the issuance of Repair Waivers, and 348 resulted in Economic Hardship Waivers.

In 2015, 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 10 vehicles 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 (2010 – 2015)



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

- November 2010: portions of Larimer and Weld counties were added to the enhanced emissions program.
- January 2012: the allowable emission standards were lowered in Larimer and Weld counties to mirror the standards of the Denver Metro Area. The original standards were less restrictive in the implementation year of the Northern Front Range enhanced program.
- February 2013: the hardship repair program was initiated and has reduced the amount of vehicles that would otherwise receive a hardship waiver.
- 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:

- **Waiver not pursued** - after completing the waiver application, the vehicle owner withdrew the request or did not respond to requests for information or availability.
- **Vehicle passed the 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.
- **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)

- **Vehicle was 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)
- **Minimum waiver limits for dollars spent to repair the vehicle had not been met** - 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)

2015 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 who work in those stations. DOR also licenses RapidScreen remote sensing devices and the inspectors who operate them. All RapidScreen testing site licenses are issued annually in conjunction with the Colorado Department of Transportation (CDOT), as testing sites require frequent review due to road or traffic configuration changes.

Table 11 shows the number of initial and renewed licenses by license type for 2015.

Table 11 – Licenses Issued and Renewed, by Type (2015)

License Type	Number of Initial Licenses	Number of Licenses Renewed
Fleet Inspector	24	55
Independent Inspector	0	2
Contractor Employed Inspectors	129	49
Independent Station	0	2
Fleet Station	0	17
RSD Site	0	165
Total	153	290

Appendix – Additional Reports

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

Report	Content
A 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.
B Initial OBD Inspection Report	Initial OBD inspection pass/fail statistics, including incomplete inspections by model year and vehicle type.
C Initial OBD Inspection Failure Report	Initial OBD inspection failure statistics by failure type, model year and vehicle type.
D Initial OBD Fail DTC Report	Initial OBD failing statistics with DTCs present by model year and vehicle type.
E Initial OBD Fail Readiness Monitor Summary Report	Initial OBD failing statistics with unset readiness monitors by model year and vehicle type.
F 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.
G Initial OBD Pass DTC Report	Initial OBD passing statistics with DTCs present by model year and vehicle type.
H Initial OBD Pass Readiness Monitor Summary Report	Initial OBD passing statistics with unset readiness monitors by model year and vehicle type.
I 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.

J 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.
K 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.
L I/M240 Initial Exhaust Failure Report	Initial exhaust failure statistics by model year, vehicle class, and pollutant.
M 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.
N I/M240 Retest Pass Reduction Report	Passing retest inspection statistics by model year and vehicle class.
O I/M240 Retest Frequency Report	Retest inspection statistics.
P 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.
Q 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.
R 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.

S Idle Initial Inspection Report	Initial idle inspection pass/fail statistics, including average emissions results for passing and failing inspections by model year.
T 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.
U Idle Initial Exhaust Failure Report	Initial idle exhaust failure statistics by model year, vehicle class, and pollutant.
V 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.
W Idle Retest Pass Reduction Report	Passing idle retest inspection statistics by model year and vehicle class.
X Idle Retest Frequency Report	Retest idle inspection statistics.
Y I/M Eligible Vehicle Report, Evaluated Vehicles	Clean Screen observations performed in 2015 by model year and vehicle type.

Appendix A

Initial Inspection Report All Test Type

Date Range
Between 1/1/2015 and 12/31/2015

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	%	Total	% of Overall Total	Pass	%	Fail	%
1974	HDGV	195	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	195	100.00	168	86.15	27	13.85
	LDGT1	490	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	490	100.00	360	73.47	130	26.53
	LDGT2	369	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	369	100.00	328	88.89	41	11.11
	LDGV	930	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	930	100.00	619	66.56	311	33.44
1974 Total		1,984	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,984	100.00	1,475	74.34	509	25.66
1975	HDGV	40	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	40	100.00	34	85.00	6	15.00
	LDGT1	22	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	22	100.00	12	54.55	10	45.45
	LDGT2	84	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	84	100.00	72	85.71	12	14.29
	LDGV	56	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	56	100.00	39	69.64	17	30.36
1975 Total		202	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	202	100.00	157	77.72	45	22.28
1976	HDGV	151	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	151	100.00	132	87.42	19	12.58
	LDGT1	178	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	178	100.00	105	58.99	73	41.01
	LDGT2	427	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	427	100.00	350	81.97	77	18.03
	LDGV	310	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	310	100.00	192	61.94	118	38.06
1976 Total		1,066	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,066	100.00	779	73.08	287	26.92
1977	HDGV	191	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	191	100.00	156	81.68	35	18.32
	LDGT1	135	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	135	100.00	83	61.48	52	38.52
	LDGT2	581	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	581	100.00	485	83.48	96	16.52
	LDGV	329	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	329	100.00	218	66.26	111	33.74
1977 Total		1,236	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,236	100.00	942	76.21	294	23.79
1978	HDGV	226	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	226	100.00	200	88.50	26	11.50
	LDGT1	219	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	219	100.00	131	59.82	88	40.18
	LDGT2	712	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	712	100.00	613	86.10	99	13.90
	LDGV	452	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	452	100.00	320	70.80	132	29.20
1978 Total		1,609	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,609	100.00	1,264	78.56	345	21.44
1979	HDGV	265	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	265	100.00	204	76.98	61	23.02
	LDGT1	279	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	279	100.00	178	63.80	101	36.20
	LDGT2	505	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	505	100.00	302	59.80	203	40.20
	LDGV	571	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	571	100.00	369	64.62	202	35.38
1979 Total		1,620	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,620	100.00	1,053	65.00	567	35.00
1980	HDGV	119	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	119	100.00	93	78.15	26	21.85
	LDGT1	229	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	229	100.00	157	68.56	72	31.44

			OBD						IM240						Two Speed Idle					
Model Year	Type	Overall Total	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGT2	176	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	176	100.00	121	68.75	55	31.25
	LDGV	354	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	354	100.00	278	78.53	76	21.47
1980 Total		878	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	878	100.00	649	73.92	229	26.08
1981	HDGV	183	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	183	100.00	152	83.06	31	16.94
	LDGT1	272	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	272	100.00	144	52.94	128	47.06
	LDGT2	144	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	144	100.00	82	56.94	62	43.06
	LDGV	307	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	307	100.00	197	64.17	110	35.83
1981 Total		906	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	906	100.00	575	63.47	331	36.53
1982	HDGV	131	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	131	100.00	107	81.68	24	18.32
	LDGT1	247	0	0.00	0	0.00	0	0.00	241	97.57	162	67.22	79	32.78	6	2.43	1	16.67	5	83.33
	LDGT2	69	0	0.00	0	0.00	0	0.00	66	95.65	40	60.61	26	39.39	3	4.35	1	33.33	2	66.67
	LDGV	277	0	0.00	0	0.00	0	0.00	267	96.39	213	79.78	54	20.22	10	3.61	5	50.00	5	50.00
1982 Total		724	0	0.00	0	0.00	0	0.00	574	79.28	415	72.30	159	27.70	150	20.72	114	76.00	36	24.00
1983	HDGV	181	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	181	100.00	154	85.08	27	14.92
	LDGT1	387	0	0.00	0	0.00	0	0.00	386	99.74	291	75.39	95	24.61	1	0.26	1	100.00	0	0.00
	LDGT2	162	0	0.00	0	0.00	0	0.00	161	99.38	110	68.32	51	31.68	1	0.62	0	0.00	1	100.00
	LDGV	438	0	0.00	0	0.00	0	0.00	428	97.72	329	76.87	99	23.13	10	2.28	4	40.00	6	60.00
1983 Total		1,168	0	0.00	0	0.00	0	0.00	975	83.48	730	74.87	245	25.13	193	16.52	159	82.38	34	17.62
1984	HDGV	291	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	291	100.00	233	80.07	58	19.93
	LDGT1	561	0	0.00	0	0.00	0	0.00	554	98.75	402	72.56	152	27.44	7	1.25	3	42.86	4	57.14
	LDGT2	199	0	0.00	0	0.00	0	0.00	195	97.99	106	54.36	89	45.64	4	2.01	0	0.00	4	100.00
	LDGV	610	0	0.00	0	0.00	0	0.00	602	98.69	462	76.74	140	23.26	8	1.31	6	75.00	2	25.00
1984 Total		1,661	0	0.00	0	0.00	0	0.00	1,351	81.34	970	71.80	381	28.20	310	18.66	242	78.06	68	21.94
1985	HDGV	359	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	359	100.00	292	81.34	67	18.66
	LDGT1	908	0	0.00	0	0.00	0	0.00	901	99.23	677	75.14	224	24.86	7	0.77	1	14.29	6	85.71
	LDGT2	286	0	0.00	0	0.00	0	0.00	284	99.30	180	63.38	104	36.62	2	0.70	0	0.00	2	100.00
	LDGV	1,004	0	0.00	0	0.00	0	0.00	987	98.31	785	79.53	202	20.47	17	1.69	9	52.94	8	47.06
1985 Total		2,557	0	0.00	0	0.00	0	0.00	2,172	84.94	1,642	75.60	530	24.40	385	15.06	302	78.44	83	21.56
1986	HDGV	302	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	302	100.00	203	67.22	99	32.78
	LDGT1	1,030	0	0.00	0	0.00	0	0.00	1,021	99.13	794	77.77	227	22.23	9	0.87	5	55.56	4	44.44
	LDGT2	283	0	0.00	0	0.00	0	0.00	279	98.59	165	59.14	114	40.86	4	1.41	2	50.00	2	50.00
	LDGV	1,140	0	0.00	0	0.00	0	0.00	1,121	98.33	900	80.29	221	19.71	19	1.67	15	78.95	4	21.05
1986 Total		2,755	0	0.00	0	0.00	0	0.00	2,421	87.88	1,859	76.79	562	23.21	334	12.12	225	67.37	109	32.63
1987	HDGV	318	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	318	100.00	245	77.04	73	22.96
	LDGT1	1,489	0	0.00	0	0.00	0	0.00	1,456	97.78	1,181	81.11	275	18.89	33	2.22	21	63.64	12	36.36
	LDGT2	434	0	0.00	0	0.00	0	0.00	429	98.85	323	75.29	106	24.71	5	1.15	2	40.00	3	60.00

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	1,623	0	0.00	0	0.00	0	0.00	1,596	98.34	1,350	84.59	246	15.41	27	1.66	22	81.48	5	18.52
1987 Total		3,864	0	0.00	0	0.00	0	0.00	3,481	90.09	2,854	81.99	627	18.01	383	9.91	290	75.72	93	24.28
1988	HDGV	372	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	372	100.00	318	85.48	54	14.52
	LDGT1	1,609	0	0.00	0	0.00	0	0.00	1,559	96.89	1,269	81.40	290	18.60	50	3.11	36	72.00	14	28.00
	LDGT2	549	0	0.00	0	0.00	0	0.00	545	99.27	407	74.68	138	25.32	4	0.73	1	25.00	3	75.00
	LDGV	1,604	0	0.00	0	0.00	0	0.00	1,590	99.13	1,315	82.70	275	17.30	14	0.87	10	71.43	4	28.57
1988 Total		4,134	0	0.00	0	0.00	0	0.00	3,694	89.36	2,991	80.97	703	19.03	440	10.64	365	82.95	75	17.05
1989	HDGV	723	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	723	100.00	634	87.69	89	12.31
	LDGT1	2,334	0	0.00	0	0.00	0	0.00	2,272	97.34	1,859	81.82	413	18.18	62	2.66	43	69.35	19	30.65
	LDGT2	884	0	0.00	0	0.00	0	0.00	876	99.10	708	80.82	168	19.18	8	0.90	3	37.50	5	62.50
	LDGV	2,652	0	0.00	0	0.00	0	0.00	2,604	98.19	2,284	87.71	320	12.29	48	1.81	38	79.17	10	20.83
1989 Total		6,593	0	0.00	0	0.00	0	0.00	5,752	87.24	4,851	84.34	901	15.66	841	12.76	718	85.37	123	14.63
1990	HDGV	554	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	554	100.00	474	85.56	80	14.44
	LDGT1	2,013	0	0.00	0	0.00	0	0.00	1,939	96.32	1,571	81.02	368	18.98	74	3.68	46	62.16	28	37.84
	LDGT2	836	0	0.00	0	0.00	0	0.00	829	99.16	669	80.70	160	19.30	7	0.84	7	100.00	0	0.00
	LDGV	3,306	0	0.00	0	0.00	0	0.00	3,249	98.28	2,846	87.60	403	12.40	57	1.72	41	71.93	16	28.07
1990 Total		6,709	0	0.00	0	0.00	0	0.00	6,017	89.69	5,086	84.53	931	15.47	692	10.31	568	82.08	124	17.92
1991	HDGV	628	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	628	100.00	563	89.65	65	10.35
	LDGT1	3,319	0	0.00	0	0.00	0	0.00	3,254	98.04	2,780	85.43	474	14.57	65	1.96	54	83.08	11	16.92
	LDGT2	937	0	0.00	0	0.00	0	0.00	929	99.15	740	79.66	189	20.34	8	0.85	6	75.00	2	25.00
	LDGV	4,986	0	0.00	0	0.00	0	0.00	4,917	98.62	4,294	87.33	623	12.67	69	1.38	50	72.46	19	27.54
1991 Total		9,870	0	0.00	0	0.00	0	0.00	9,100	92.20	7,814	85.87	1,286	14.13	770	7.80	673	87.40	97	12.60
1992	HDGV	714	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	714	100.00	634	88.80	80	11.20
	LDGT1	2,840	0	0.00	0	0.00	0	0.00	2,763	97.29	2,385	86.32	378	13.68	77	2.71	70	90.91	7	9.09
	LDGT2	1,287	0	0.00	0	0.00	0	0.00	1,281	99.53	982	76.66	299	23.34	6	0.47	3	50.00	3	50.00
	LDGV	5,055	0	0.00	0	0.00	0	0.00	4,984	98.60	4,292	86.12	692	13.88	71	1.40	55	77.46	16	22.54
1992 Total		9,896	0	0.00	0	0.00	0	0.00	9,028	91.23	7,659	84.84	1,369	15.16	868	8.77	762	87.79	106	12.21
1993	HDGV	908	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	908	100.00	837	92.18	71	7.82
	LDGT1	4,901	0	0.00	0	0.00	0	0.00	4,876	99.49	4,284	87.86	592	12.14	25	0.51	20	80.00	5	20.00
	LDGT2	1,891	0	0.00	0	0.00	0	0.00	1,880	99.42	1,481	78.78	399	21.22	11	0.58	7	63.64	4	36.36
	LDGV	6,850	0	0.00	0	0.00	0	0.00	6,803	99.31	6,023	88.53	780	11.47	47	0.69	30	63.83	17	36.17
1993 Total		14,550	0	0.00	0	0.00	0	0.00	13,559	93.19	11,788	86.94	1,771	13.06	991	6.81	894	90.21	97	9.79
1994	HDGV	1,087	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,087	100.00	978	89.97	109	10.03
	LDGT1	5,786	0	0.00	0	0.00	0	0.00	5,735	99.12	4,907	85.56	828	14.44	51	0.88	44	86.27	7	13.73
	LDGT2	2,853	0	0.00	0	0.00	0	0.00	2,824	98.98	2,177	77.09	647	22.91	29	1.02	22	75.86	7	24.14
	LDGV	7,778	0	0.00	0	0.00	0	0.00	7,703	99.04	6,850	88.93	853	11.07	75	0.96	62	82.67	13	17.33

			OBD						IM240						Two Speed Idle					
Model Year	Type	Overall Total	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
1994 Total		17,504	0	0.00	0	0.00	0	0.00	16,262	92.90	13,934	85.68	2,328	14.32	1,242	7.10	1,106	89.05	136	10.95
1995	HDGV	1,595	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,595	100.00	1,439	90.22	156	9.78
	LDGT1	7,262	0	0.00	0	0.00	0	0.00	7,247	99.79	6,233	86.01	1,014	13.99	15	0.21	11	73.33	4	26.67
	LDGT2	4,252	0	0.00	0	0.00	0	0.00	4,218	99.20	3,354	79.52	864	20.48	34	0.80	19	55.88	15	44.12
	LDGV	11,602	0	0.00	0	0.00	0	0.00	11,493	99.06	10,299	89.61	1,194	10.39	109	0.94	86	78.90	23	21.10
1995 Total		24,711	0	0.00	0	0.00	0	0.00	22,958	92.91	19,886	86.62	3,072	13.38	1,753	7.09	1,555	88.71	198	11.29
1996	HDGV	1,323	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,323	100.00	1,253	94.71	70	5.29
	LDGT1	7,303	23	0.31	16	69.57	7	30.43	7,274	99.60	6,242	85.81	1,032	14.19	6	0.08	6	100.00	0	0.00
	LDGT2	3,285	13	0.40	7	53.85	6	46.15	3,268	99.48	2,771	84.79	497	15.21	4	0.12	4	100.00	0	0.00
	LDGV	11,531	91	0.79	67	73.63	24	26.37	11,434	99.16	10,327	90.32	1,107	9.68	6	0.05	4	66.67	2	33.33
1996 Total		23,442	127	0.54	90	70.87	37	29.13	21,976	93.75	19,340	88.01	2,636	11.99	1,339	5.71	1,267	94.62	72	5.38
1997	HDGV	2,037	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,037	100.00	1,962	96.32	75	3.68
	LDGT1	12,531	77	0.61	63	81.82	14	18.18	12,447	99.33	10,807	86.82	1,640	13.18	7	0.06	7	100.00	0	0.00
	LDGT2	5,048	48	0.95	35	72.92	13	27.08	4,988	98.81	4,266	85.53	722	14.47	12	0.24	12	100.00	0	0.00
	LDGV	16,771	91	0.54	76	83.52	15	16.48	16,670	99.40	15,098	90.57	1,572	9.43	10	0.06	8	80.00	2	20.00
1997 Total		36,387	216	0.59	174	80.56	42	19.44	34,105	93.73	30,171	88.47	3,934	11.53	2,066	5.68	1,989	96.27	77	3.73
1998	HDGV	1,244	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,244	100.00	1,153	92.68	91	7.32
	LDGT1	13,607	68	0.50	60	88.24	8	11.76	13,502	99.23	11,846	87.74	1,656	12.26	37	0.27	34	91.89	3	8.11
	LDGT2	4,907	51	1.04	29	56.86	22	43.14	4,852	98.88	4,094	84.38	758	15.62	4	0.08	4	100.00	0	0.00
	LDGV	17,018	93	0.55	64	68.82	29	31.18	16,899	99.30	15,189	89.88	1,710	10.12	26	0.15	23	88.46	3	11.54
1998 Total		36,776	212	0.58	153	72.17	59	27.83	35,253	95.86	31,129	88.30	4,124	11.70	1,311	3.56	1,214	92.60	97	7.40
1999	HDGV	2,895	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,895	100.00	2,790	96.37	105	3.63
	LDGT1	17,047	103	0.60	91	88.35	12	11.65	16,935	99.34	15,095	89.13	1,840	10.87	9	0.05	8	88.89	1	11.11
	LDGT2	9,445	1,009	10.68	776	76.91	233	23.09	8,399	88.93	7,196	85.68	1,203	14.32	37	0.39	34	91.89	3	8.11
	LDGV	22,852	180	0.79	137	76.11	43	23.89	22,645	99.09	20,642	91.15	2,003	8.85	27	0.12	24	88.89	3	11.11
1999 Total		52,239	1,292	2.47	1,004	77.71	288	22.29	47,979	91.85	42,933	89.48	5,046	10.52	2,968	5.68	2,856	96.23	112	3.77
2000	HDGV	2,445	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,445	100.00	2,367	96.81	78	3.19
	LDGT1	17,408	276	1.59	232	84.06	44	15.94	17,108	98.28	15,226	89.00	1,882	11.00	24	0.14	23	95.83	1	4.17
	LDGT2	8,198	1,374	16.76	1,022	74.38	352	25.62	6,790	82.83	5,993	88.26	797	11.74	34	0.41	34	100.00	0	0.00
	LDGV	24,529	240	0.98	184	76.67	56	23.33	24,261	98.91	22,119	91.17	2,142	8.83	28	0.11	26	92.86	2	7.14
2000 Total		52,580	1,890	3.59	1,438	76.08	452	23.92	48,159	91.59	43,338	89.99	4,821	10.01	2,531	4.81	2,450	96.80	81	3.20
2001	HDGV	2,977	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,977	100.00	2,946	98.96	31	1.04
	LDGT1	21,691	637	2.94	541	84.93	96	15.07	20,797	95.88	19,125	91.96	1,672	8.04	257	1.18	257	100.00	0	0.00
	LDGT2	10,624	1,966	18.51	1,524	77.52	442	22.48	8,629	81.22	7,773	90.08	856	9.92	29	0.27	27	93.10	2	6.90
	LDGV	29,468	541	1.84	470	86.88	71	13.12	28,890	98.04	26,904	93.13	1,986	6.87	37	0.13	34	91.89	3	8.11
2001 Total		64,760	3,144	4.85	2,535	80.63	609	19.37	58,316	90.05	53,802	92.26	4,514	7.74	3,300	5.10	3,264	98.91	36	1.09

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	1,948	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,948	100.00	1,923	98.72	25	1.28
	LDGT1	19,972	139	0.70	107	76.98	32	23.02	19,813	99.20	18,395	92.84	1,418	7.16	20	0.10	20	100.00	0	0.00
	LDGT2	8,632	2,089	24.20	1,607	76.93	482	23.07	6,492	75.21	5,880	90.57	612	9.43	51	0.59	45	88.24	6	11.76
	LDGV	27,490	664	2.42	598	90.06	66	9.94	26,789	97.45	24,754	92.40	2,035	7.60	37	0.13	37	100.00	0	0.00
2002 Total		58,042	2,892	4.98	2,312	79.94	580	20.06	53,094	91.48	49,029	92.34	4,065	7.66	2,056	3.54	2,025	98.49	31	1.51
2003	HDGV	2,705	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,705	100.00	2,683	99.19	22	0.81
	LDGT1	23,445	104	0.44	87	83.65	17	16.35	23,276	99.28	21,843	93.84	1,433	6.16	65	0.28	65	100.00	0	0.00
	LDGT2	11,603	2,524	21.75	2,062	81.70	462	18.30	9,055	78.04	8,408	92.85	647	7.15	24	0.21	21	87.50	3	12.50
	LDGV	32,249	949	2.94	770	81.14	179	18.86	31,225	96.82	29,359	94.02	1,866	5.98	75	0.23	74	98.67	1	1.33
2003 Total		70,002	3,577	5.11	2,919	81.60	658	18.40	63,556	90.79	59,610	93.79	3,946	6.21	2,869	4.10	2,843	99.09	26	0.91
2004	HDGV	1,873	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,873	100.00	1,864	99.52	9	0.48
	LDGT1	20,182	130	0.64	119	91.54	11	8.46	20,032	99.26	18,892	94.31	1,140	5.69	20	0.10	20	100.00	0	0.00
	LDGT2	10,584	1,951	18.43	1,622	83.14	329	16.86	8,607	81.32	8,010	93.06	597	6.94	26	0.25	25	96.15	1	3.85
	LDGV	25,326	1,305	5.15	1,188	91.03	117	8.97	23,965	94.63	22,534	94.03	1,431	5.97	56	0.22	55	98.21	1	1.79
2004 Total		57,965	3,386	5.84	2,929	86.50	457	13.50	52,604	90.75	49,436	93.98	3,168	6.02	1,975	3.41	1,964	99.44	11	0.56
2005	HDGV	2,311	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,311	100.00	2,300	99.52	11	0.48
	LDGT1	28,409	24,602	86.60	22,362	90.90	2,240	9.10	3,781	13.31	3,565	94.29	216	5.71	26	0.09	25	96.15	1	3.85
	LDGT2	11,019	9,552	86.69	8,639	90.44	913	9.56	1,438	13.05	1,332	92.63	106	7.37	29	0.26	28	96.55	1	3.45
	LDGV	35,316	31,059	87.95	27,793	89.48	3,266	10.52	4,186	11.85	3,893	93.00	293	7.00	71	0.20	70	98.59	1	1.41
2005 Total		77,055	65,213	84.63	58,794	90.16	6,419	9.84	9,405	12.21	8,790	93.46	615	6.54	2,437	3.16	2,423	99.43	14	0.57
2006	HDGV	2,117	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2,117	100.00	2,099	99.15	18	0.85
	LDGT1	20,760	18,276	88.03	16,838	92.13	1,438	7.87	2,454	11.82	2,318	94.46	136	5.54	30	0.14	29	96.67	1	3.33
	LDGT2	9,521	8,424	88.48	7,680	91.17	744	8.83	1,057	11.10	977	92.43	80	7.57	40	0.42	40	100.00	0	0.00
	LDGV	28,234	25,021	88.62	22,788	91.08	2,233	8.92	3,124	11.06	2,931	93.82	193	6.18	89	0.32	87	97.75	2	2.25
2006 Total		60,632	51,721	85.30	47,306	91.46	4,415	8.54	6,635	10.94	6,226	93.84	409	6.16	2,276	3.75	2,255	99.08	21	0.92
2007	HDGV	1,927	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,927	100.00	1,920	99.64	7	0.36
	LDGT1	27,973	25,645	91.68	24,067	93.85	1,578	6.15	2,309	8.25	2,206	95.54	103	4.46	19	0.07	19	100.00	0	0.00
	LDGT2	13,193	12,065	91.45	11,244	93.20	821	6.80	1,090	8.26	1,038	95.23	52	4.77	38	0.29	35	92.11	3	7.89
	LDGV	36,704	33,407	91.02	31,603	94.60	1,804	5.40	3,224	8.78	3,093	95.94	131	4.06	73	0.20	70	95.89	3	4.11
2007 Total		79,797	71,117	89.12	66,914	94.09	4,203	5.91	6,623	8.30	6,337	95.68	286	4.32	2,057	2.58	2,044	99.37	13	0.63
2008	HDGV	1,584	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,584	100.00	1,580	99.75	4	0.25
	LDGT1	19,102	17,760	92.97	16,859	94.93	901	5.07	1,266	6.63	1,197	94.55	69	5.45	76	0.40	76	100.00	0	0.00
	LDGT2	10,503	9,722	92.56	9,030	92.88	692	7.12	746	7.10	694	93.03	52	6.97	35	0.33	35	100.00	0	0.00
	LDGV	25,058	23,073	92.08	21,913	94.97	1,160	5.03	1,863	7.43	1,777	95.38	86	4.62	122	0.49	122	100.00	0	0.00
2008 Total		56,247	50,555	89.88	47,802	94.55	2,753	5.45	3,875	6.89	3,668	94.66	207	5.34	1,817	3.23	1,813	99.78	4	0.22
2009	HDGV	484	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	484	100.00	481	99.38	3	0.62

			OBD						IM240						Two Speed Idle					
Model Year	Type	Overall Total	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGT1	3,911	3,595	91.92	3,397	94.49	198	5.51	303	7.75	286	94.39	17	5.61	13	0.33	13	100.00	0	0.00
	LDGT2	2,250	2,038	90.58	1,919	94.16	119	5.84	201	8.93	189	94.03	12	5.97	11	0.49	11	100.00	0	0.00
	LDGV	7,134	6,472	90.72	6,163	95.23	309	4.77	592	8.30	572	96.62	20	3.38	70	0.98	70	100.00	0	0.00
2009 Total		13,779	12,105	87.85	11,479	94.83	626	5.17	1,096	7.95	1,047	95.53	49	4.47	578	4.19	575	99.48	3	0.52
2010	HDGV	272	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	272	100.00	271	99.63	1	0.37
	LDGT1	3,196	2,971	92.96	2,848	95.86	123	4.14	217	6.79	212	97.70	5	2.30	8	0.25	8	100.00	0	0.00
	LDGT2	2,114	1,955	92.48	1,834	93.81	121	6.19	135	6.39	125	92.59	10	7.41	24	1.14	24	100.00	0	0.00
	LDGV	4,908	4,514	91.97	4,345	96.26	169	3.74	374	7.62	353	94.39	21	5.61	20	0.41	19	95.00	1	5.00
2010 Total		10,490	9,440	89.99	9,027	95.63	413	4.38	726	6.92	690	95.04	36	4.96	324	3.09	322	99.38	2	0.62
2011	HDGV	530	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	530	100.00	527	99.43	3	0.57
	LDGT1	2,433	2,259	92.85	2,197	97.26	62	2.74	164	6.74	158	96.34	6	3.66	10	0.41	10	100.00	0	0.00
	LDGT2	1,630	1,532	93.99	1,435	93.67	97	6.33	86	5.28	77	89.53	9	10.47	12	0.74	12	100.00	0	0.00
	LDGV	3,661	3,364	91.89	3,262	96.97	102	3.03	286	7.81	279	97.55	7	2.45	11	0.30	11	100.00	0	0.00
2011 Total		8,254	7,155	86.69	6,894	96.35	261	3.65	536	6.49	514	95.90	22	4.10	563	6.82	560	99.47	3	0.53
2012	HDGV	208	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	208	100.00	208	100.00	0	0.00
	LDGT1	1,465	1,389	94.81	1,363	98.13	26	1.87	74	5.05	71	95.95	3	4.05	2	0.14	2	100.00	0	0.00
	LDGT2	950	910	95.79	880	96.70	30	3.30	35	3.68	35	100.00	0	0.00	5	0.53	5	100.00	0	0.00
	LDGV	3,276	3,044	92.92	2,955	97.08	89	2.92	229	6.99	222	96.94	7	3.06	3	0.09	2	66.67	1	33.33
2012 Total		5,899	5,343	90.57	5,198	97.29	145	2.71	338	5.73	328	97.04	10	2.96	218	3.70	217	99.54	1	0.46
2013	HDGV	93	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	93	100.00	93	100.00	0	0.00
	LDGT1	953	929	97.48	919	98.92	10	1.08	24	2.52	22	91.67	2	8.33	0	0.00	0	0.00	0	0.00
	LDGT2	553	533	96.38	510	95.68	23	4.32	19	3.44	18	94.74	1	5.26	1	0.18	1	100.00	0	0.00
	LDGV	2,131	1,994	93.57	1,928	96.69	66	3.31	135	6.34	130	96.30	5	3.70	2	0.09	2	100.00	0	0.00
2013 Total		3,730	3,456	92.65	3,357	97.14	99	2.86	178	4.77	170	95.51	8	4.49	96	2.57	96	100.00	0	0.00
2014	HDGV	107	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	107	100.00	107	100.00	0	0.00
	LDGT1	608	602	99.01	595	98.84	7	1.16	6	0.99	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	382	367	96.07	355	96.73	12	3.27	10	2.62	10	100.00	0	0.00	5	1.31	5	100.00	0	0.00
	LDGV	1,013	981	96.84	967	98.57	14	1.43	32	3.16	32	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2014 Total		2,110	1,950	92.42	1,917	98.31	33	1.69	48	2.27	48	100.00	0	0.00	112	5.31	112	100.00	0	0.00
2015	HDGV	57	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	57	100.00	57	100.00	0	0.00
	LDGT1	294	288	97.96	287	99.65	1	0.35	5	1.70	5	100.00	0	0.00	1	0.34	1	100.00	0	0.00
	LDGT2	91	85	93.41	85	100.00	0	0.00	4	4.40	4	100.00	0	0.00	2	2.20	2	100.00	0	0.00
	LDGV	261	246	94.25	243	98.78	3	1.22	12	4.60	12	100.00	0	0.00	3	1.15	3	100.00	0	0.00
2015 Total		703	619	88.05	615	99.35	4	0.65	21	2.99	21	100.00	0	0.00	63	8.96	63	100.00	0	0.00
2016	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	24	23	95.83	21	91.30	2	8.70	1	4.17	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00

			OBD						IM240						Two Speed Idle					
Model Year	Type	Overall Total	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%
	LDGT2	4	4	100.00	3	75.00	1	25.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	7	6	85.71	5	83.33	1	16.67	1	14.29	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2016 Total		41	33	80.49	29	87.88	4	12.12	2	4.88	2	100.00	0	0.00	6	14.63	6	100.00	0	0.00
Grand Total		887,127	295,443	33.30	272,886	92.37	22,557	7.63	541,869	61.08	489,108	90.26	52,761	9.74	49,815	5.62	45,225	90.79	4,590	9.21

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

		OBD						IM240						Two Speed Idle						
Type	Overall Total	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	Total	% of Overall Total	Pass	%	Fail	%	
HDGV	38,676	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	38,676	100.00	36,840	95.25	1,836	4.75	
LDGT1	298,824	99,896	33.43	93,069	93.17	6,827	6.83	195,992	65.59	176,313	89.96	19,679	10.04	2,936	0.98	2,149	73.19	787	26.81	
LDGT2	142,456	58,212	40.86	52,298	89.84	5,914	10.16	80,697	56.65	70,332	87.16	10,365	12.84	3,547	2.49	2,830	79.79	717	20.21	
LDGV	407,171	137,335	33.73	127,519	92.85	9,816	7.15	265,180	65.13	242,463	91.43	22,717	8.57	4,656	1.14	3,406	73.15	1,250	26.85	
Grand Total		887,127	295,443	33.30	272,886	92.37	22,557	7.63	541,869	61.08	489,108	90.26	52,761	9.74	49,815	5.62	45,225	90.79	4,590	9.21

Appendix B

Initial OBD Inspection Report

Date Range
Between 1/1/2015 and 12/31/2015

Initial OBD Inspection Report (V 1.02)

Model Year	Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail		Unable to Communicate		MIL Commanded Off and Not Ready	
					Count	%	Count	%	Count	%	Count	%
1996	LDGT1	47	23	48.94	16	69.57	7	30.43	0	0.00	24	51.06
	LDGT2	22	13	59.09	7	53.85	6	46.15	1	4.55	8	36.36
	LDGV	160	91	56.88	67	73.63	24	26.37	5	3.13	64	40.00
1996 Total		229	127	55.46	90	70.87	37	29.13	6	2.62	96	41.92
1997	LDGT1	125	77	61.60	63	81.82	14	18.18	3	2.40	45	36.00
	LDGT2	80	48	60.00	35	72.92	13	27.08	1	1.25	31	38.75
	LDGV	155	91	58.71	76	83.52	15	16.48	10	6.45	54	34.84
1997 Total		360	216	60.00	174	80.56	42	19.44	14	3.89	130	36.11
1998	LDGT1	114	68	59.65	60	88.24	8	11.76	6	5.26	40	35.09
	LDGT2	75	51	68.00	29	56.86	22	43.14	5	6.67	19	25.33
	LDGV	127	93	73.23	64	68.82	29	31.18	8	6.30	26	20.47
1998 Total		316	212	67.09	153	72.17	59	27.83	19	6.01	85	26.90
1999	LDGT1	145	103	71.03	91	88.35	12	11.65	6	4.14	36	24.83
	LDGT2	1,291	1,009	78.16	776	76.91	233	23.09	59	4.57	223	17.27
	LDGV	268	180	67.16	137	76.11	43	23.89	12	4.48	76	28.36
1999 Total		1,704	1,292	75.82	1,004	77.71	288	22.29	77	4.52	335	19.66
2000	LDGT1	387	276	71.32	232	84.06	44	15.94	4	1.03	107	27.65
	LDGT2	1,955	1,374	70.28	1,022	74.38	352	25.62	141	7.21	440	22.51
	LDGV	309	240	77.67	184	76.67	56	23.33	17	5.50	52	16.83
2000 Total		2,651	1,890	71.29	1,438	76.08	452	23.92	162	6.11	599	22.60
2001	LDGT1	730	637	87.26	541	84.93	96	15.07	6	0.82	87	11.92
	LDGT2	2,548	1,966	77.16	1,524	77.52	442	22.48	153	6.00	429	16.84
	LDGV	697	541	77.62	470	86.88	71	13.12	28	4.02	128	18.36
2001 Total		3,975	3,144	79.09	2,535	80.63	609	19.37	187	4.70	644	16.20
2002	LDGT1	172	139	80.81	107	76.98	32	23.02	3	1.74	30	17.44
	LDGT2	2,800	2,089	74.61	1,607	76.93	482	23.07	223	7.96	488	17.43
	LDGV	800	664	83.00	598	90.06	66	9.94	23	2.88	113	14.12
2002 Total		3,772	2,892	76.67	2,312	79.94	580	20.06	249	6.60	631	16.73
2003	LDGT1	119	104	87.39	87	83.65	17	16.35	0	0.00	15	12.61
	LDGT2	3,164	2,524	79.77	2,062	81.70	462	18.30	237	7.49	403	12.74
	LDGV	1,091	949	86.98	770	81.14	179	18.86	16	1.47	126	11.55
2003 Total		4,374	3,577	81.78	2,919	81.60	658	18.40	253	5.78	544	12.44
2004	LDGT1	149	130	87.25	119	91.54	11	8.46	0	0.00	19	12.75
	LDGT2	2,648	1,951	73.68	1,622	83.14	329	16.86	326	12.31	371	14.01
	LDGV	1,462	1,305	89.26	1,188	91.03	117	8.97	24	1.64	133	9.10
2004 Total		4,259	3,386	79.50	2,929	86.50	457	13.50	350	8.22	523	12.28
2005	LDGT1	24,694	24,602	99.63	22,362	90.90	2,240	9.10	10	0.04	82	0.33
	LDGT2	10,166	9,552	93.96	8,639	90.44	913	9.56	337	3.31	277	2.72
	LDGV	31,243	31,059	99.41	27,793	89.48	3,266	10.52	26	0.08	158	0.51
2005 Total		66,103	65,213	98.65	58,794	90.16	6,419	9.84	373	0.56	517	0.78

Model Year	Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail		Unable to Communicate		MIL Commanded Off and Not Ready	
					Count	%	Count	%	Count	%	Count	%
2006	LDGT1	18,416	18,276	99.24	16,838	92.13	1,438	7.87	55	0.30	85	0.46
	LDGT2	8,760	8,424	96.16	7,680	91.17	744	8.83	188	2.15	148	1.69
	LDGV	25,168	25,021	99.42	22,788	91.08	2,233	8.92	38	0.15	109	0.43
2006 Total		52,344	51,721	98.81	47,306	91.46	4,415	8.54	281	0.54	342	0.65
2007	LDGT1	26,159	25,645	98.04	24,067	93.85	1,578	6.15	37	0.14	477	1.82
	LDGT2	12,415	12,065	97.18	11,244	93.20	821	6.80	131	1.06	219	1.76
	LDGV	33,568	33,407	99.52	31,603	94.60	1,804	5.40	39	0.12	122	0.36
2007 Total		72,142	71,117	98.58	66,914	94.09	4,203	5.91	207	0.29	818	1.13
2008	LDGT1	17,845	17,760	99.52	16,859	94.93	901	5.07	35	0.20	50	0.28
	LDGT2	9,902	9,722	98.18	9,030	92.88	692	7.12	44	0.44	136	1.37
	LDGV	23,207	23,073	99.42	21,913	94.97	1,160	5.03	33	0.14	101	0.44
2008 Total		50,954	50,555	99.22	47,802	94.55	2,753	5.45	112	0.22	287	0.56
2009	LDGT1	3,607	3,595	99.67	3,397	94.49	198	5.51	1	0.03	11	0.30
	LDGT2	2,101	2,038	97.00	1,919	94.16	119	5.84	9	0.43	54	2.57
	LDGV	6,507	6,472	99.46	6,163	95.23	309	4.77	5	0.08	30	0.46
2009 Total		12,215	12,105	99.10	11,479	94.83	626	5.17	15	0.12	95	0.78
2010	LDGT1	2,980	2,971	99.70	2,848	95.86	123	4.14	0	0.00	9	0.30
	LDGT2	1,989	1,955	98.29	1,834	93.81	121	6.19	2	0.10	32	1.61
	LDGV	4,536	4,514	99.51	4,345	96.26	169	3.74	7	0.15	15	0.33
2010 Total		9,505	9,440	99.32	9,027	95.63	413	4.38	9	0.09	56	0.59
2011	LDGT1	2,265	2,259	99.74	2,197	97.26	62	2.74	3	0.13	3	0.13
	LDGT2	1,550	1,532	98.84	1,435	93.67	97	6.33	2	0.13	16	1.03
	LDGV	3,381	3,364	99.50	3,262	96.97	102	3.03	0	0.00	17	0.50
2011 Total		7,196	7,155	99.43	6,894	96.35	261	3.65	5	0.07	36	0.50
2012	LDGT1	1,393	1,389	99.71	1,363	98.13	26	1.87	1	0.07	3	0.22
	LDGT2	914	910	99.56	880	96.70	30	3.30	2	0.22	2	0.22
	LDGV	3,056	3,044	99.61	2,955	97.08	89	2.92	4	0.13	8	0.26
2012 Total		5,363	5,343	99.63	5,198	97.29	145	2.71	7	0.13	13	0.24
2013	LDGT1	930	929	99.89	919	98.92	10	1.08	1	0.11	0	0.00
	LDGT2	537	533	99.26	510	95.68	23	4.32	0	0.00	4	0.74
	LDGV	2,004	1,994	99.50	1,928	96.69	66	3.31	2	0.10	8	0.40
2013 Total		3,471	3,456	99.57	3,357	97.14	99	2.86	3	0.09	12	0.35
2014	LDGT1	602	602	100.00	595	98.84	7	1.16	0	0.00	0	0.00
	LDGT2	368	367	99.73	355	96.73	12	3.27	0	0.00	1	0.27
	LDGV	982	981	99.90	967	98.57	14	1.43	0	0.00	1	0.10
2014 Total		1,952	1,950	99.90	1,917	98.31	33	1.69	0	0.00	2	0.10
2015	LDGT1	289	288	99.65	287	99.65	1	0.35	0	0.00	1	0.35
	LDGT2	86	85	98.84	85	100.00	0	0.00	0	0.00	1	1.16
	LDGV	246	246	100.00	243	98.78	3	1.22	0	0.00	0	0.00
2015 Total		621	619	99.68	615	99.35	4	0.65	0	0.00	2	0.32
2016	LDGT1	23	23	100.00	21	91.30	2	8.70	0	0.00	0	0.00
	LDGT2	4	4	100.00	3	75.00	1	25.00	0	0.00	0	0.00
	LDGV	6	6	100.00	5	83.33	1	16.67	0	0.00	0	0.00
2016 Total		33	33	100.00	29	87.88	4	12.12	0	0.00	0	0.00

Model Year	Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail		Unable to Communicate		MIL Commanded Off and Not Ready	
					Count	%	Count	%	Count	%	Count	%
Grand Total		303,539	295,443	97.33	272,886	92.37	22,557	7.63	2,329	0.77	5,767	1.90

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

Type	OBD Total All	OBD Total Pass/Fail	OBD Total Pass/Fail %	Pass		Fail		Unable to Communicate		MIL Commanded Off and Not Ready	
				Count	%	Count	%	Count	%	Count	%
LDGT1	101,191	99,896	98.72	93,069	93.17	6,827	6.83	171	0.17	1,124	1.11
LDGT2	63,375	58,212	91.85	52,298	89.84	5,914	10.16	1,861	2.94	3,302	5.21
LDGV	138,973	137,335	98.82	127,519	92.85	9,816	7.15	297	0.21	1,341	0.96
Grand Total	303,539	295,443	97.33	272,886	92.37	22,557	7.63	2,329	0.77	5,767	1.90

Appendix C

Initial OBD Inspection Failure Report

Date Range
Between 1/1/2015 and 12/31/2015

Initial OBD Inspection Failure Report (V 1.02)

Model Year	Type	Total Fail	Failed OBD Only		Failed Gas Cap Only		Failed Both OBD and Gas Cap		Failed Opacity		MIL Commanded On		Visual MIL Failure		Failed for Tampering	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
1996	LDGT1	7	5	71.43	0	0.00	2	28.57	0	0.00	7	100.00	5	71.43	0	0.00
	LDGT2	6	5	83.33	1	16.67	0	0.00	0	0.00	3	60.00	5	100.00	0	0.00
	LDGV	24	22	91.67	2	8.33	0	0.00	0	0.00	18	81.82	19	86.36	0	0.00
1996 Total		37	32	86.49	3	8.11	2	5.41	0	0.00	28	82.35	29	85.29	0	0.00
1997	LDGT1	14	9	64.29	4	28.57	1	7.14	0	0.00	8	80.00	9	90.00	0	0.00
	LDGT2	13	10	76.92	1	7.69	2	15.38	0	0.00	9	75.00	12	100.00	1	8.33
	LDGV	15	14	93.33	1	6.67	0	0.00	0	0.00	11	78.57	11	78.57	0	0.00
1997 Total		42	33	78.57	6	14.29	3	7.14	0	0.00	28	77.78	32	88.89	1	2.78
1998	LDGT1	8	5	62.50	3	37.50	0	0.00	0	0.00	3	60.00	5	100.00	0	0.00
	LDGT2	22	21	95.45	1	4.55	0	0.00	0	0.00	21	100.00	17	80.95	0	0.00
	LDGV	29	26	89.66	1	3.45	2	6.90	1	3.45	23	82.14	21	75.00	0	0.00
1998 Total		59	52	88.14	5	8.47	2	3.39	1	1.69	47	87.04	43	79.63	0	0.00
1999	LDGT1	12	5	41.67	3	25.00	3	25.00	1	8.33	5	62.50	6	75.00	0	0.00
	LDGT2	233	215	92.27	13	5.58	5	2.15	1	0.43	171	77.73	190	86.36	0	0.00
	LDGV	43	37	86.05	3	6.98	2	4.65	1	2.33	31	79.49	29	74.36	0	0.00
1999 Total		288	257	89.24	19	6.60	10	3.47	3	1.04	207	77.53	225	84.27	0	0.00
2000	LDGT1	44	27	61.36	14	31.82	3	6.82	1	2.27	23	76.67	24	80.00	0	0.00
	LDGT2	352	286	81.25	42	11.93	23	6.53	2	0.57	249	80.58	273	88.35	0	0.00
	LDGV	56	45	80.36	9	16.07	2	3.57	0	0.00	44	93.62	40	85.11	0	0.00
2000 Total		452	358	79.20	65	14.38	28	6.19	3	0.66	316	81.87	337	87.31	0	0.00
2001	LDGT1	96	55	57.29	30	31.25	11	11.46	0	0.00	48	72.73	50	75.76	0	0.00
	LDGT2	442	347	78.51	64	14.48	30	6.79	2	0.45	309	81.96	335	88.86	1	0.27
	LDGV	71	56	78.87	12	16.90	3	4.23	0	0.00	53	89.83	49	83.05	0	0.00
2001 Total		609	458	75.21	106	17.41	44	7.22	2	0.33	410	81.67	434	86.45	1	0.20
2002	LDGT1	32	21	65.63	7	21.88	4	12.50	0	0.00	23	92.00	19	76.00	0	0.00
	LDGT2	482	378	78.42	72	14.94	32	6.64	1	0.21	318	77.56	370	90.24	1	0.24
	LDGV	66	54	81.82	10	15.15	2	3.03	0	0.00	52	92.86	41	73.21	0	0.00
2002 Total		580	453	78.10	89	15.34	38	6.55	1	0.17	393	80.04	430	87.58	1	0.20
2003	LDGT1	17	10	58.82	6	35.29	1	5.88	0	0.00	8	72.73	7	63.64	0	0.00
	LDGT2	462	355	76.84	73	15.80	32	6.93	2	0.43	303	78.29	353	91.21	0	0.00
	LDGV	179	126	70.39	38	21.23	14	7.82	2	1.12	131	93.57	114	81.43	0	0.00
2003 Total		658	491	74.62	117	17.78	47	7.14	4	0.61	442	82.16	474	88.10	0	0.00
2004	LDGT1	11	6	54.55	3	27.27	1	9.09	1	9.09	7	100.00	3	42.86	0	0.00
	LDGT2	329	228	69.30	87	26.44	14	4.26	1	0.30	164	67.77	227	93.80	0	0.00
	LDGV	117	86	73.50	22	18.80	9	7.69	0	0.00	91	95.79	77	81.05	0	0.00

			Failed OBD Only		Failed Gas Cap Only		Failed Both OBD and Gas Cap		Failed Opacity		MIL Commanded On		Visual MIL Failure		Failed for Tampering	
Model Year	Type	Total Fail	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
2004 Total		457	320	70.02	112	24.51	24	5.25	2	0.44	262	76.16	307	89.24	0	0.00
2005	LDGT1	2,240	1,509	67.37	627	27.99	95	4.24	13	0.58	1,473	91.83	1,387	86.47	1	0.06
	LDGT2	913	609	66.70	262	28.70	34	3.72	12	1.31	535	83.20	565	87.87	0	0.00
	LDGV	3,266	2,083	63.78	1,020	31.23	155	4.75	17	0.52	2,085	93.16	1,889	84.41	3	0.13
2005 Total		6,419	4,201	65.45	1,909	29.74	284	4.42	42	0.65	4,093	91.26	3,841	85.64	4	0.09
2006	LDGT1	1,438	953	66.27	428	29.76	49	3.41	11	0.76	944	94.21	838	83.63	0	0.00
	LDGT2	744	441	59.27	267	35.89	29	3.90	7	0.94	397	84.47	402	85.53	0	0.00
	LDGV	2,233	1,647	73.76	512	22.93	60	2.69	18	0.81	1,584	92.79	1,409	82.54	0	0.00
2006 Total		4,415	3,041	68.88	1,207	27.34	138	3.13	36	0.82	2,925	92.01	2,649	83.33	0	0.00
2007	LDGT1	1,578	815	51.65	699	44.30	49	3.11	15	0.95	824	95.37	731	84.61	0	0.00
	LDGT2	821	408	49.70	383	46.65	24	2.92	6	0.73	388	89.81	373	86.34	0	0.00
	LDGV	1,804	1,177	65.24	573	31.76	42	2.33	17	0.94	1,162	95.32	1,014	83.18	1	0.08
2007 Total		4,203	2,400	57.10	1,655	39.38	115	2.74	38	0.90	2,374	94.39	2,118	84.21	1	0.04
2008	LDGT1	901	399	44.28	470	52.16	23	2.55	9	1.00	399	94.55	342	81.04	1	0.24
	LDGT2	692	263	38.01	406	58.67	22	3.18	2	0.29	273	95.79	234	82.11	0	0.00
	LDGV	1,160	715	61.64	398	34.31	38	3.28	16	1.38	709	94.16	621	82.47	1	0.13
2008 Total		2,753	1,377	50.02	1,274	46.28	83	3.01	27	0.98	1,381	94.59	1,197	81.99	2	0.14
2009	LDGT1	198	77	38.89	115	58.08	5	2.53	1	0.51	76	92.68	62	75.61	0	0.00
	LDGT2	119	38	31.93	73	61.34	8	6.72	0	0.00	44	95.65	37	80.43	0	0.00
	LDGV	309	188	60.84	114	36.89	5	1.62	2	0.65	182	94.30	163	84.46	0	0.00
2009 Total		626	303	48.40	302	48.24	18	2.88	3	0.48	302	94.08	262	81.62	0	0.00
2010	LDGT1	123	33	26.83	88	71.54	0	0.00	2	1.63	28	84.85	24	72.73	0	0.00
	LDGT2	121	24	19.83	88	72.73	6	4.96	3	2.48	28	93.33	27	90.00	0	0.00
	LDGV	169	90	53.25	72	42.60	4	2.37	3	1.78	90	95.74	69	73.40	0	0.00
2010 Total		413	147	35.59	248	60.05	10	2.42	8	1.94	146	92.99	120	76.43	0	0.00
2011	LDGT1	62	19	30.65	40	64.52	1	1.61	2	3.23	19	95.00	15	75.00	0	0.00
	LDGT2	97	18	18.56	75	77.32	4	4.12	0	0.00	20	90.91	19	86.36	0	0.00
	LDGV	102	52	50.98	46	45.10	3	2.94	1	0.98	54	98.18	42	76.36	0	0.00
2011 Total		261	89	34.10	161	61.69	8	3.07	3	1.15	93	95.88	76	78.35	0	0.00
2012	LDGT1	26	10	38.46	14	53.85	1	3.85	1	3.85	11	100.00	7	63.64	0	0.00
	LDGT2	30	7	23.33	23	76.67	0	0.00	0	0.00	7	100.00	5	71.43	0	0.00
	LDGV	89	27	30.34	60	67.42	1	1.12	1	1.12	25	89.29	19	67.86	0	0.00
2012 Total		145	44	30.34	97	66.90	2	1.38	2	1.38	43	93.48	31	67.39	0	0.00
2013	LDGT1	10	4	40.00	6	60.00	0	0.00	0	0.00	4	100.00	2	50.00	0	0.00
	LDGT2	23	3	13.04	19	82.61	1	4.35	0	0.00	4	100.00	3	75.00	0	0.00
	LDGV	66	17	25.76	46	69.70	1	1.52	2	3.03	15	83.33	14	77.78	0	0.00
2013 Total		99	24	24.24	71	71.72	2	2.02	2	2.02	23	88.46	19	73.08	0	0.00
2014	LDGT1	7	2	28.57	5	71.43	0	0.00	0	0.00	1	50.00	1	50.00	0	0.00

			Failed OBD Only		Failed Gas Cap Only		Failed Both OBD and Gas Cap		Failed Opacity		MIL Commanded On		Visual MIL Failure		Failed for Tampering	
Model Year	Type	Total Fail	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
	LDGT2	12	5	41.67	7	58.33	0	0.00	0	0.00	5	100.00	4	80.00	0	0.00
	LDGV	14	5	35.71	9	64.29	0	0.00	0	0.00	5	100.00	4	80.00	0	0.00
2014 Total		33	12	36.36	21	63.64	0	0.00	0	0.00	11	91.67	9	75.00	0	0.00
2015	LDGT1	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00
	LDGV	3	1	33.33	2	66.67	0	0.00	0	0.00	1	100.00	1	100.00	0	0.00
2015 Total		4	2	50.00	2	50.00	0	0.00	0	0.00	1	50.00	2	100.00	0	0.00
2016	LDGT1	2	0	0.00	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	1	100.00	1	100.00	0	0.00
	LDGV	1	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	0	0.00
2016 Total		4	2	50.00	2	50.00	0	0.00	0	0.00	2	100.00	1	50.00	0	0.00
Grand Total		22,557	14,096	62.49	7,471	33.12	858	3.80	177	0.78	13,527	90.46	12,636	84.50	10	0.07

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

		Failed OBD Only		Failed Gas Cap Only		Failed Both OBD and Gas Cap		Failed Opacity		MIL Commanded On		Visual MIL Failure		Failed for Tampering		
Type	Total Fail	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
LDGT1	6,827	3,965	58.08	2,564	37.56	249	3.65	57	0.83	3,911	92.81	3,538	83.96	2	0.05	
LDGT2	5,914	3,662	61.92	1,957	33.09	266	4.50	39	0.66	3,249	82.71	3,452	87.88	3	0.08	
LDGV	9,816	6,469	65.90	2,950	30.05	343	3.49	81	0.83	6,367	93.47	5,646	82.88	5	0.07	
Grand Total		22,557	14,096	62.49	7,471	33.12	858	3.80	177	0.78	13,527	90.46	12,636	84.50	10	0.07

Appendix D

Initial OBD Fail DTC Report

Date Range
Between 1/1/2015 and 12/31/2015

Initial OBD Fail DTC Report (V 1.02)

			Count of Tests by Number of DTC Present											
Model Year	Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
1996	LDGT1	7	0	0.00	5	71.43	2	28.57	0	0.00	0	0.00	0	0.00
	LDGT2	5	2	40.00	1	20.00	1	20.00	1	20.00	0	0.00	0	0.00
	LDGV	22	1	4.55	8	36.36	3	13.64	2	9.09	2	9.09	2	9.09
1996 Total		34	3	8.82	14	41.18	6	17.65	3	8.82	2	5.88	2	5.88
1997	LDGT1	10	2	20.00	6	60.00	0	0.00	2	20.00	0	0.00	0	0.00
	LDGT2	12	1	8.33	3	25.00	1	8.33	1	8.33	2	16.67	2	16.67
	LDGV	14	1	7.14	4	28.57	4	28.57	1	7.14	0	0.00	2	14.29
1997 Total		36	4	11.11	13	36.11	5	13.89	4	11.11	2	5.56	4	11.11
1998	LDGT1	5	1	20.00	2	40.00	1	20.00	0	0.00	0	0.00	0	0.00
	LDGT2	21	0	0.00	9	42.86	3	14.29	2	9.52	4	19.05	3	14.29
	LDGV	28	5	17.86	15	53.57	5	17.86	1	3.57	0	0.00	1	3.57
1998 Total		54	6	11.11	26	48.15	9	16.67	3	5.56	4	7.41	4	7.41
1999	LDGT1	8	1	12.50	3	37.50	2	25.00	1	12.50	0	0.00	0	0.00
	LDGT2	220	21	9.55	73	33.18	51	23.18	24	10.91	15	6.82	17	7.73
	LDGV	39	7	17.95	11	28.21	6	15.38	3	7.69	4	10.26	3	7.69
1999 Total		267	29	10.86	87	32.58	59	22.10	28	10.49	19	7.12	20	7.49
2000	LDGT1	30	7	23.33	13	43.33	4	13.33	3	10.00	1	3.33	1	3.33
	LDGT2	309	23	7.44	111	35.92	65	21.04	31	10.03	27	8.74	25	8.09
	LDGV	47	2	4.26	16	34.04	16	34.04	5	10.64	0	0.00	8	17.02
2000 Total		386	32	8.29	140	36.27	85	22.02	39	10.10	28	7.25	34	8.81
2001	LDGT1	66	3	4.55	26	39.39	17	25.76	7	10.61	3	4.55	10	15.15
	LDGT2	377	25	6.63	157	41.64	76	20.16	30	7.96	28	7.43	28	7.43
	LDGV	59	5	8.47	26	44.07	12	20.34	8	13.56	1	1.69	4	6.78
2001 Total		502	33	6.57	209	41.63	105	20.92	45	8.96	32	6.37	42	8.37
2002	LDGT1	25	1	4.00	9	36.00	8	32.00	4	16.00	1	4.00	2	8.00
	LDGT2	410	43	10.49	163	39.76	80	19.51	32	7.80	22	5.37	26	6.34
	LDGV	56	6	10.71	22	39.29	12	21.43	10	17.86	1	1.79	4	7.14
2002 Total		491	50	10.18	194	39.51	100	20.37	46	9.37	24	4.89	32	6.52
2003	LDGT1	11	4	36.36	3	27.27	4	36.36	0	0.00	0	0.00	0	0.00
	LDGT2	387	42	10.85	124	32.04	94	24.29	42	10.85	24	6.20	25	6.46
	LDGV	140	5	3.57	41	29.29	40	28.57	22	15.71	12	8.57	17	12.14
2003 Total		538	51	9.48	168	31.23	138	25.65	64	11.90	36	6.69	42	7.81

			Count of Tests by Number of DTC Present											
Model Year	Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
2004	LDGT1	7	0	0.00	2	28.57	5	71.43	0	0.00	0	0.00	0	0.00
	LDGT2	242	31	12.81	75	30.99	47	19.42	24	9.92	10	4.13	13	5.37
	LDGV	95	2	2.11	26	27.37	37	38.95	17	17.89	8	8.42	3	3.16
2004 Total		344	33	9.59	103	29.94	89	25.87	41	11.92	18	5.23	16	4.65
2005	LDGT1	1,604	71	4.43	838	52.24	384	23.94	154	9.60	50	3.12	59	3.68
	LDGT2	643	51	7.93	285	44.32	125	19.44	64	9.95	32	4.98	32	4.98
	LDGV	2,238	83	3.71	1,100	49.15	528	23.59	238	10.63	94	4.20	141	6.30
2005 Total		4,485	205	4.57	2,223	49.57	1,037	23.12	456	10.17	176	3.92	232	5.17
2006	LDGT1	1,002	37	3.69	521	52.00	230	22.95	106	10.58	34	3.39	54	5.39
	LDGT2	470	38	8.09	186	39.57	113	24.04	52	11.06	24	5.11	25	5.32
	LDGV	1,707	72	4.22	860	50.38	387	22.67	166	9.72	90	5.27	95	5.57
2006 Total		3,179	147	4.62	1,567	49.29	730	22.96	324	10.19	148	4.66	174	5.47
2007	LDGT1	864	28	3.24	471	54.51	177	20.49	94	10.88	37	4.28	42	4.86
	LDGT2	432	16	3.70	207	47.92	103	23.84	49	11.34	12	2.78	26	6.02
	LDGV	1,219	21	1.72	633	51.93	288	23.63	133	10.91	52	4.27	65	5.33
2007 Total		2,515	65	2.58	1,311	52.13	568	22.58	276	10.97	101	4.02	133	5.29
2008	LDGT1	422	16	3.79	227	53.79	91	21.56	48	11.37	15	3.55	22	5.21
	LDGT2	285	9	3.16	155	54.39	68	23.86	29	10.18	7	2.46	14	4.91
	LDGV	753	24	3.19	432	57.37	167	22.18	67	8.90	32	4.25	24	3.19
2008 Total		1,460	49	3.36	814	55.75	326	22.33	144	9.86	54	3.70	60	4.11
2009	LDGT1	82	3	3.66	46	56.10	19	23.17	7	8.54	2	2.44	2	2.44
	LDGT2	46	0	0.00	27	58.70	12	26.09	3	6.52	0	0.00	3	6.52
	LDGV	193	5	2.59	102	52.85	45	23.32	14	7.25	16	8.29	7	3.63
2009 Total		321	8	2.49	175	54.52	76	23.68	24	7.48	18	5.61	12	3.74
2010	LDGT1	33	3	9.09	23	69.70	3	9.09	4	12.12	0	0.00	0	0.00
	LDGT2	30	1	3.33	22	73.33	3	10.00	1	3.33	0	0.00	2	6.67
	LDGV	94	3	3.19	61	64.89	18	19.15	3	3.19	4	4.26	5	5.32
2010 Total		157	7	4.46	106	67.52	24	15.29	8	5.10	4	2.55	7	4.46
2011	LDGT1	20	2	10.00	14	70.00	3	15.00	1	5.00	0	0.00	0	0.00
	LDGT2	22	0	0.00	20	90.91	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	55	1	1.82	34	61.82	14	25.45	4	7.27	0	0.00	2	3.64
2011 Total		97	3	3.09	68	70.10	17	17.53	5	5.15	0	0.00	2	2.06
2012	LDGT1	11	0	0.00	7	63.64	3	27.27	1	9.09	0	0.00	0	0.00
	LDGT2	7	1	14.29	5	71.43	0	0.00	1	14.29	0	0.00	0	0.00
	LDGV	28	3	10.71	16	57.14	5	17.86	2	7.14	1	3.57	0	0.00
2012 Total		46	4	8.70	28	60.87	8	17.39	4	8.70	1	2.17	0	0.00

			Count of Tests by Number of DTC Present											
Model Year	Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %
2013	LDGT1	4	0	0.00	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	4	1	25.00	2	50.00	1	25.00	0	0.00	0	0.00	0	0.00
	LDGV	18	2	11.11	9	50.00	3	16.67	2	11.11	0	0.00	1	5.56
2013 Total		26	3	11.54	15	57.69	4	15.38	2	7.69	0	0.00	1	3.85
2014	LDGT1	2	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	5	0	0.00	4	80.00	1	20.00	0	0.00	0	0.00	0	0.00
	LDGV	5	1	20.00	2	40.00	2	40.00	0	0.00	0	0.00	0	0.00
2014 Total		12	3	25.00	6	50.00	3	25.00	0	0.00	0	0.00	0	0.00
2015	LDGT1	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	1	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2015 Total		2	1	50.00	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00
2016	LDGT1	0	0		0		0		0		0		0	
	LDGT2	1	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	1	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2016 Total		2	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Grand Total		14,954	736	4.92	7,270	48.62	3,389	22.66	1,516	10.14	667	4.46	817	5.46

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

			Count of Tests by Number of DTC Present											
Type	Total Fail	0 Count	0 %	1 Count	1 %	2 Count	2 %	3 Count	3 %	4 Count	4 %	>= 5 Count	>= 5 %	
LDGT1	4,214	182	4.32	2,220	52.68	953	22.62	432	10.25	143	3.39	192	4.56	
LDGT2	3,928	305	7.76	1,630	41.50	844	21.49	386	9.83	207	5.27	241	6.14	
LDGV	6,812	249	3.66	3,420	50.21	1,592	23.37	698	10.25	317	4.65	384	5.64	
Grand Total		14,954	736	4.92	7,270	48.62	3,389	22.66	1,516	10.14	667	4.46	817	5.46

Appendix E

Initial OBD Fail Readiness Monitor Summary Report

Model Year	Type	Total OBD Fail	% of Total Fail 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	94	47.87	92	97.87	73	79.35	93	98.94	55	59.14	10	10.64	9	90.00	93	98.94	71	76.34	93	98.94	88	94.62	87	92.55	75	86.21
	LDGT1	33	33.33	32	96.97	25	78.13	32	96.97	28	87.50	0	0.00	0	0.00	32	96.97	25	78.13	32	96.97	30	93.75	29	87.88	26	89.66
	LDGT2	30	33.33	28	93.33	23	82.14	28	93.33	18	64.29	2	6.67	2	100.00	28	93.33	21	75.00	28	93.33	24	85.71	26	86.67	24	92.31
2010 Total		157	42.04	152	96.82	121	79.61	153	97.45	101	66.01	12	7.64	11	91.67	153	97.45	117	76.47	153	97.45	142	92.81	142	90.45	125	88.03
2011	LDGV	55	40.00	55	100.00	47	85.45	55	100.00	38	69.09	10	18.18	9	90.00	55	100.00	44	80.00	55	100.00	52	94.55	55	100.00	52	94.55
	LDGT1	20	20.00	20	100.00	19	95.00	20	100.00	19	95.00	3	15.00	3	100.00	20	100.00	18	90.00	20	100.00	20	100.00	20	100.00	20	100.00
	LDGT2	22	54.55	20	90.91	15	75.00	20	90.91	13	65.00	1	4.55	0	0.00	20	90.91	10	50.00	20	90.91	17	85.00	20	90.91	16	80.00
2011 Total		97	39.18	95	97.94	81	85.26	95	97.94	70	73.68	14	14.43	12	85.71	95	97.94	72	75.79	95	97.94	89	93.68	95	97.94	88	92.63
2012	LDGV	28	42.86	27	96.43	18	66.67	27	96.43	16	59.26	4	14.29	3	75.00	27	96.43	16	59.26	27	96.43	22	81.48	25	89.29	20	80.00
	LDGT1	11	27.27	11	100.00	10	90.91	11	100.00	9	81.82	1	9.09	0	0.00	11	100.00	9	81.82	11	100.00	10	90.91	11	100.00	11	100.00
	LDGT2	7	42.86	7	100.00	6	85.71	7	100.00	5	71.43	0	0.00	0	0.00	7	100.00	5	71.43	7	100.00	7	100.00	7	100.00	7	100.00
2012 Total		46	39.13	45	97.83	34	75.56	45	97.83	30	66.67	5	10.87	3	60.00	45	97.83	30	66.67	45	97.83	39	86.67	43	93.48	38	88.37
2013	LDGV	18	33.33	17	94.44	13	76.47	17	94.44	12	70.59	3	16.67	3	100.00	17	94.44	13	76.47	17	94.44	16	94.12	17	94.44	17	100.00
	LDGT1	4	25.00	4	100.00	3	75.00	4	100.00	4	100.00	0	0.00	0	0.00	4	100.00	3	75.00	4	100.00	3	75.00	4	100.00	4	100.00
	LDGT2	4	0.00	4	100.00	4	100.00	4	100.00	4	100.00	0	0.00	0	0.00	4	100.00	4	100.00	4	100.00	4	100.00	4	100.00	4	100.00
2013 Total		26	26.92	25	96.15	20	80.00	25	96.15	20	80.00	3	11.54	3	100.00	25	96.15	20	80.00	25	96.15	23	92.00	25	96.15	25	100.00
2014	LDGV	5	20.00	5	100.00	4	80.00	5	100.00	4	80.00	0	0.00	0	0.00	5	100.00	4	80.00	5	100.00	5	100.00	5	100.00	5	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	5	40.00	5	100.00	5	100.00	5	100.00	4	80.00	0	0.00	0	0.00	5	100.00	4	80.00	5	100.00	5	100.00	5	100.00	4	80.00
2014 Total		12	25.00	12	100.00	11	91.67	12	100.00	10	83.33	0	0.00	0	0.00	12	100.00	10	83.33	12	100.00	12	100.00	12	100.00	11	91.67
2015	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	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
2015 Total		2	0.00	2	100.00	2	100.00	2	100.00	2	100.00	1	50.00	1	100.00	2	100.00	2	100.00	2	100.00	2	100.00	2	100.00	2	100.00
2016	LDGV	1	100.00	1	100.00	0	0.00	1	100.00	1	100.00	0	0.00	0	0.00	1	100.00	0	0.00	1	100.00	1	100.00	1	100.00	1	100.00
	LDGT1	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	0	0.00	0	0.00	0	0.00
	LDGT2	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
2016 Total		2	50.00	2	100.00	1	50.00	2	100.00	2	100.00	0	0.00	0	0.00	2	100.00	1	50.00	2	100.00	2	100.00	2	100.00	2	100.00
Grand Total		14,954	33.96	14,343	95.91	11,377	79.32	14,296	95.60	10,539	73.72	1,429	9.56	1,211	84.74	14,344	95.92	11,860	82.68	13,781	92.16	12,896	93.58	6,135	41.03	5,505	89.73

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

Type	Total OBD Fail	% of Total Fail 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 %
LDGV	6,812	31.78	6,639	97.46	5,345	80.51	6,626	97.27	5,080	76.67	852	12.51	699	82.04	6,640	97.48	5,487	82.64	6,266	91.98	5,905	94.24	3,039	44.61	2,755	90.65
LDGT1	4,214	33.01	4,094	97.15	3,279	80.09	4,079	96.80	3,084	75.61	425	10.09	384	90.35	4,094	97.15	3,359	82.05	3,982	94.49	3,773	94.75	1,695	40.22	1,485	87.61
LDGT2	3,928	38.75	3,610	91.90	2,753	76.26	3,591	91.42	2,375	66.14	152	3.87	128	84.21	3,610	91.90	3,014	83.49	3,533	89.94	3,218	91.08	1,401	35.67	1,265	90.29
Grand Total	14,954	33.96	14,343	95.91	11,377	79.32	14,296	95.60	10,539	73.72	1,429	9.56	1,211	84.74	14,344	95.92	11,860	82.68	13,781	92.16	12,896	93.58	6,135	41.03	5,505	89.73

Appendix F

OBD Retest Frequency Report

Date Range
Between 1/1/2015 and 12/31/2015

OBD Retest Frequency Report (V 1.04)

Model Year	Type	Total	Avg Retest #	# of Retests Not Ready	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	6	1.33	3	4	66.67	2	50.00	2	33.33	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	4	1.25	10	3	75.00	2	66.67	1	25.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	13	1.15	14	11	84.62	6	54.55	2	15.38	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1996 Total		23	1.22	27	18	78.26	10	55.56	5	21.74	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1997	LDGT1	10	1.20	8	8	80.00	5	62.50	2	20.00	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	8	1.38	19	6	75.00	3	50.00	1	12.50	0	0.00	1	12.50	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	15	1.27	15	11	73.33	3	27.27	4	26.67	1	25.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1997 Total		33	1.27	42	25	75.76	11	44.00	7	21.21	2	28.57	1	3.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1998	LDGT1	8	1.13	2	7	87.50	4	57.14	1	12.50	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	22	1.82	18	14	63.64	5	35.71	4	18.18	2	50.00	1	4.55	0	0.00	1	4.55	0	0.00	2	9.09	1	50.00
	LDGV	29	1.48	15	18	62.07	8	44.44	8	27.59	4	50.00	3	10.34	2	66.67	0	0.00	0	0.00	0	0.00	0	0.00
1998 Total		59	1.56	35	39	66.10	17	43.59	13	22.03	7	53.85	4	6.78	2	50.00	1	1.69	0	0.00	2	3.39	1	50.00
1999	LDGT1	9	1.11	8	8	88.89	6	75.00	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	218	1.27	184	172	78.90	120	69.77	36	16.51	22	61.11	8	3.67	3	37.50	2	0.92	1	50.00	0	0.00	0	0.00
	LDGV	34	1.47	25	25	73.53	17	68.00	5	14.71	2	40.00	2	5.88	1	50.00	1	2.94	0	0.00	1	2.94	1	100.00
1999 Total		261	1.29	217	205	78.54	143	69.76	42	16.09	25	59.52	10	3.83	4	40.00	3	1.15	1	33.33	1	0.38	1	100.00
2000	HDGV	2	1.50	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	0.00	0	0.00
	LDGT1	42	1.12	23	37	88.10	30	81.08	5	11.90	2	40.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	332	1.43	324	249	75.00	175	70.28	53	15.96	33	62.26	14	4.22	6	42.86	8	2.41	3	37.50	8	2.41	3	37.50
	LDGV	42	1.48	29	32	76.19	22	68.75	6	14.29	5	83.33	1	2.38	0	0.00	1	2.38	0	0.00	2	4.76	1	50.00
2000 Total		418	1.40	376	319	76.32	227	71.16	65	15.55	41	63.08	15	3.59	6	40.00	9	2.15	3	33.33	10	2.39	4	40.00
2001	HDGV	1	1.00	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
	LDGT1	71	1.15	42	63	88.73	50	79.37	6	8.45	5	83.33	1	1.41	0	0.00	1	1.41	0	0.00	0	0.00	0	0.00
	LDGT2	428	1.29	317	345	80.61	266	77.10	57	13.32	36	63.16	17	3.97	10	58.82	6	1.40	4	66.67	3	0.70	1	33.33
	LDGV	57	1.26	51	45	78.95	32	71.11	9	15.79	6	66.67	3	5.26	2	66.67	0	0.00	0	0.00	0	0.00	0	0.00
2001 Total		557	1.27	410	454	81.51	349	76.87	72	12.93	47	65.28	21	3.77	12	57.14	7	1.26	4	57.14	3	0.54	1	33.33
2002	HDGV	0	0.00	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
	LDGT1	38	1.76	13	25	65.79	18	72.00	5	13.16	2	40.00	3	7.89	0	0.00	3	7.89	2	66.67	2	5.26	1	50.00
	LDGT2	470	1.34	345	379	80.64	301	79.42	54	11.49	31	57.41	21	4.47	10	47.62	7	1.49	3	42.86	9	1.91	3	33.33
	LDGV	54	1.24	37	43	79.63	30	69.77	9	16.67	6	66.67	2	3.70	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
2002 Total		562	1.36	395	447	79.54	349	78.08	68	12.10	39	57.35	26	4.63	12	46.15	10	1.78	5	50.00	11	1.96	4	36.36
2003	HDGV	0	0.00	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
	LDGT1	13	1.23	3	11	84.62	10	90.91	1	7.69	0	0.00	1	7.69	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	436	1.21	232	368	84.40	307	83.42	51	11.70	28	54.90	13	2.98	9	69.23	3	0.69	2	66.67	1	0.23	1	100.00
	LDGV	151	1.16	67	133	88.08	104	78.20	13	8.61	6	46.15	4	2.65	1	25.00	1	0.66	0	0.00	0	0.00	0	0.00
2003 Total		600	1.20	302	512	85.33	421	82.23	65	10.83	34	52.31	18	3.00	11	61.11	4	0.67	2	50.00	1	0.17	1	100.00
2004	HDGV	1	1.00	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
	LDGT1	10	1.20	5	8	80.00	6	75.00	2	20.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	303	1.15	118	267	88.12	229	85.77	29	9.57	23	79.31	5	1.65	3	60.00	2	0.66	2	100.00	0	0.00	0	0.00

Model Year	Type	Total	Avg Retest #	# of Retests Not Ready	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	%
	LDGT2	9	1.11	5	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
	LDGV	16	1.44	2	12	75.00	9	75.00	2	12.50	1	50.00	1	6.25	0	0.00	1	6.25	1	100.00	0	0.00	0	0.00
2014 Total		31	1.26	7	26	83.87	22	84.62	3	9.68	2	66.67	1	3.23	0	0.00	1	3.23	1	100.00	0	0.00	0	0.00
2015	LDGT1	1	1.00	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
	LDGV	1	1.00	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		2	1.00	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	LDGT1	1	1.00	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	1	1.00	2	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 Total		2	1.00	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	0	0.00
Overall Total		20,655	1.14	10,518	18,503	89.58	16,299	88.09	1,634	7.91	1,139	69.71	349	1.69	191	54.73	110	0.53	62	56.36	59	0.29	33	55.93

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

Type	Total	Avg Retest #	# of Retests Not Ready	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	%
HDGV	4	1.25	0	3	75.00	2	66.67	1	25.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
LDGT1	6,274	1.11	3,098	5,749	91.63	5,196	90.38	416	6.63	308	74.04	78	1.24	43	55.13	25	0.40	18	72.00	6	0.10	4	66.67
LDGT2	5,578	1.18	2,843	4,888	87.63	4,214	86.21	504	9.04	338	67.06	119	2.13	61	51.26	42	0.75	25	59.52	25	0.45	11	44.00
LDGV	8,799	1.14	4,577	7,863	89.36	6,887	87.59	713	8.10	492	69.00	152	1.73	87	57.24	43	0.49	19	44.19	28	0.32	18	64.29
Overall Total	20,655	1.14	10,518	18,503	89.58	16,299	88.09	1,634	7.91	1,139	69.71	349	1.69	191	54.73	110	0.53	62	56.36	59	0.29	33	55.93

Appendix G

Initial OBD Pass DTC Report

Date Range
Between 1/1/2015 and 12/31/2015

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	16	14	87.50	2	12.50	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	7	6	85.71	1	14.29	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	67	62	92.54	3	4.48	2	2.99	0	0.00	0	0.00	0	0.00
1996 Total		90	82	91.11	6	6.67	2	2.22	0	0.00	0	0.00	0	0.00
1997	LDGT1	63	55	87.30	5	7.94	1	1.59	1	1.59	1	1.59	0	0.00
	LDGT2	35	32	91.43	2	5.71	1	2.86	0	0.00	0	0.00	0	0.00
	LDGV	76	73	96.05	2	2.63	1	1.32	0	0.00	0	0.00	0	0.00
1997 Total		174	160	91.95	9	5.17	3	1.72	1	0.57	1	0.57	0	0.00
1998	LDGT1	60	46	76.67	11	18.33	1	1.67	1	1.67	0	0.00	1	1.67
	LDGT2	29	25	86.21	2	6.90	1	3.45	0	0.00	1	3.45	0	0.00
	LDGV	64	55	85.94	7	10.94	1	1.56	1	1.56	0	0.00	0	0.00
1998 Total		153	126	82.35	20	13.07	3	1.96	2	1.31	1	0.65	1	0.65
1999	LDGT1	91	88	96.70	2	2.20	0	0.00	1	1.10	0	0.00	0	0.00
	LDGT2	776	660	85.05	49	6.31	49	6.31	12	1.55	4	0.52	2	0.26
	LDGV	137	122	89.05	10	7.30	2	1.46	1	0.73	1	0.73	1	0.73
1999 Total		1,004	870	86.65	61	6.08	51	5.08	14	1.39	5	0.50	3	0.30
2000	LDGT1	232	216	93.10	8	3.45	6	2.59	2	0.86	0	0.00	0	0.00
	LDGT2	1,022	889	86.99	61	5.97	43	4.21	14	1.37	11	1.08	4	0.39
	LDGV	184	144	78.26	27	14.67	6	3.26	2	1.09	3	1.63	2	1.09
2000 Total		1,438	1,249	86.86	96	6.68	55	3.82	18	1.25	14	0.97	6	0.42
2001	LDGT1	541	500	92.42	29	5.36	9	1.66	2	0.37	1	0.18	0	0.00
	LDGT2	1,524	1,345	88.25	92	6.04	42	2.76	22	1.44	16	1.05	7	0.46
	LDGV	470	431	91.70	28	5.96	4	0.85	2	0.43	5	1.06	0	0.00
2001 Total		2,535	2,276	89.78	149	5.88	55	2.17	26	1.03	22	0.87	7	0.28
2002	LDGT1	107	95	88.79	10	9.35	0	0.00	2	1.87	0	0.00	0	0.00
	LDGT2	1,607	1,418	88.24	111	6.91	41	2.55	27	1.68	9	0.56	1	0.06
	LDGV	598	549	91.81	33	5.52	12	2.01	2	0.33	0	0.00	2	0.33
2002 Total		2,312	2,062	89.19	154	6.66	53	2.29	31	1.34	9	0.39	3	0.13
2003	LDGT1	87	78	89.66	6	6.90	0	0.00	2	2.30	0	0.00	1	1.15
	LDGT2	2,062	1,820	88.26	152	7.37	42	2.04	19	0.92	13	0.63	16	0.78
	LDGV	770	695	90.26	50	6.49	20	2.60	3	0.39	1	0.13	1	0.13
2003 Total		2,919	2,593	88.83	208	7.13	62	2.12	24	0.82	14	0.48	18	0.62

			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	119	108	90.76	10	8.40	1	0.84	0	0.00	0	0.00	0	0.00
	LDGT2	1,622	1,471	90.69	75	4.62	29	1.79	40	2.47	7	0.43	0	0.00
	LDGV	1,188	1,104	92.93	59	4.97	13	1.09	10	0.84	1	0.08	1	0.08
2004 Total		2,929	2,683	91.60	144	4.92	43	1.47	50	1.71	8	0.27	1	0.03
2005	LDGT1	22,362	20,674	92.45	1,267	5.67	249	1.11	72	0.32	31	0.14	69	0.31
	LDGT2	8,639	7,988	92.46	445	5.15	102	1.18	80	0.93	19	0.22	5	0.06
	LDGV	27,793	25,505	91.77	1,742	6.27	370	1.33	112	0.40	37	0.13	27	0.10
2005 Total		58,794	54,167	92.13	3,454	5.87	721	1.23	264	0.45	87	0.15	101	0.17
2006	LDGT1	16,838	15,551	92.36	938	5.57	208	1.24	52	0.31	17	0.10	72	0.43
	LDGT2	7,680	6,991	91.03	464	6.04	134	1.74	62	0.81	12	0.16	17	0.22
	LDGV	22,788	21,025	92.26	1,385	6.08	259	1.14	62	0.27	22	0.10	35	0.15
2006 Total		47,306	43,567	92.10	2,787	5.89	601	1.27	176	0.37	51	0.11	124	0.26
2007	LDGT1	24,067	22,874	95.04	863	3.59	213	0.89	54	0.22	26	0.11	37	0.15
	LDGT2	11,244	10,644	94.66	400	3.56	141	1.25	41	0.36	15	0.13	3	0.03
	LDGV	31,603	29,863	94.49	1,316	4.16	291	0.92	73	0.23	26	0.08	34	0.11
2007 Total		66,914	63,381	94.72	2,579	3.85	645	0.96	168	0.25	67	0.10	74	0.11
2008	LDGT1	16,859	16,297	96.67	429	2.54	86	0.51	24	0.14	5	0.03	18	0.11
	LDGT2	9,030	8,535	94.52	345	3.82	112	1.24	24	0.27	6	0.07	8	0.09
	LDGV	21,913	20,843	95.12	857	3.91	135	0.62	46	0.21	17	0.08	15	0.07
2008 Total		47,802	45,675	95.55	1,631	3.41	333	0.70	94	0.20	28	0.06	41	0.09
2009	LDGT1	3,397	3,296	97.03	77	2.27	16	0.47	6	0.18	0	0.00	2	0.06
	LDGT2	1,919	1,812	94.42	79	4.12	25	1.30	2	0.10	1	0.05	0	0.00
	LDGV	6,163	5,958	96.67	161	2.61	31	0.50	9	0.15	3	0.05	1	0.02
2009 Total		11,479	11,066	96.40	317	2.76	72	0.63	17	0.15	4	0.03	3	0.03
2010	LDGT1	2,848	2,762	96.98	65	2.28	18	0.63	2	0.07	0	0.00	1	0.04
	LDGT2	1,834	1,755	95.69	60	3.27	14	0.76	3	0.16	2	0.11	0	0.00
	LDGV	4,345	4,236	97.49	85	1.96	17	0.39	5	0.12	2	0.05	0	0.00
2010 Total		9,027	8,753	96.96	210	2.33	49	0.54	10	0.11	4	0.04	1	0.01
2011	LDGT1	2,197	2,158	98.22	29	1.32	8	0.36	1	0.05	0	0.00	1	0.05
	LDGT2	1,435	1,384	96.45	39	2.72	11	0.77	1	0.07	0	0.00	0	0.00
	LDGV	3,262	3,181	97.52	68	2.08	11	0.34	2	0.06	0	0.00	0	0.00
2011 Total		6,894	6,723	97.52	136	1.97	30	0.44	4	0.06	0	0.00	1	0.01
2012	LDGT1	1,363	1,331	97.65	23	1.69	8	0.59	1	0.07	0	0.00	0	0.00
	LDGT2	880	852	96.82	18	2.05	10	1.14	0	0.00	0	0.00	0	0.00
	LDGV	2,955	2,876	97.33	64	2.17	9	0.30	3	0.10	1	0.03	2	0.07
2012 Total		5,198	5,059	97.33	105	2.02	27	0.52	4	0.08	1	0.02	2	0.04

			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	919	909	98.91	8	0.87	2	0.22	0	0.00	0	0.00	0	0.00
	LDGT2	510	501	98.24	8	1.57	1	0.20	0	0.00	0	0.00	0	0.00
	LDGV	1,928	1,877	97.35	42	2.18	7	0.36	1	0.05	0	0.00	1	0.05
2013 Total		3,357	3,287	97.91	58	1.73	10	0.30	1	0.03	0	0.00	1	0.03
2014	LDGT1	595	592	99.50	3	0.50	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	355	351	98.87	3	0.85	1	0.28	0	0.00	0	0.00	0	0.00
	LDGV	967	953	98.55	12	1.24	2	0.21	0	0.00	0	0.00	0	0.00
2014 Total		1,917	1,896	98.90	18	0.94	3	0.16	0	0.00	0	0.00	0	0.00
2015	LDGT1	287	282	98.26	4	1.39	1	0.35	0	0.00	0	0.00	0	0.00
	LDGT2	85	85	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	243	242	99.59	1	0.41	0	0.00	0	0.00	0	0.00	0	0.00
2015 Total		615	609	99.02	5	0.81	1	0.16	0	0.00	0	0.00	0	0.00
2016	LDGT1	21	21	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGT2	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	LDGV	5	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2016 Total		29	29	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Grand Total		272,886	256,313	93.93	12,147	4.45	2,819	1.03	904	0.33	316	0.12	387	0.14

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	93,069	87,947	94.50	3,789	4.07	827	0.89	223	0.24	81	0.09	202	0.22	
LDGT2	52,298	48,567	92.87	2,406	4.60	799	1.53	347	0.66	116	0.22	63	0.12	
LDGV	127,519	119,799	93.95	5,952	4.67	1,193	0.94	334	0.26	119	0.09	122	0.10	
Grand Total		272,886	256,313	93.93	12,147	4.45	2,819	1.03	904	0.33	316	0.12	387	0.14

Appendix H

Initial OBD Pass Readiness Monitor Summary Report

Appendix I

OBD Initial Inspection Emissions Report

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	901	872	96.78	869	99.66	0.03	0.85	0.06	3	0.34	0.52	31.95	1.30	29	3.22	27	93.10	0.05	1.71	0.16	2	6.90	0.37	3.33	2.04
2007 Total		1,875	1,821	97.12	1,814	99.62	0.03	1.00	0.07	7	0.38	0.30	22.00	1.02	54	2.88	52	96.30	0.06	2.22	0.17	2	3.70	0.37	3.33	2.04
2008	LDGT1	348	338	97.13	337	99.70	0.03	0.98	0.06	1	0.30	0.62	10.35	4.27	10	2.87	10	100.00	0.04	1.93	0.09	0	0.00	0.00	0.00	0.00
	LDGT2	127	120	94.49	120	100.00	0.04	1.62	0.06	0	0.00	0.00	0.00	0.00	7	5.51	6	85.71	0.03	2.09	0.03	1	14.29	0.35	2.01	2.22
	LDGV	386	373	96.63	372	99.73	0.03	0.98	0.05	1	0.27	0.26	3.58	1.57	13	3.37	13	100.00	0.07	1.96	0.08	0	0.00	0.00	0.00	0.00
2008 Total		861	831	96.52	829	99.76	0.03	1.07	0.06	2	0.24	0.44	6.97	2.92	30	3.48	29	96.67	0.05	1.98	0.07	1	3.33	0.35	2.01	2.22
2009	LDGT1	57	56	98.25	56	100.00	0.03	1.25	0.07	0	0.00	0.00	0.00	0.00	1	1.75	1	100.00	0.05	2.48	0.06	0	0.00	0.00	0.00	0.00
	LDGT2	23	23	100.00	23	100.00	0.02	0.97	0.04	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	99	97	97.98	97	100.00	0.03	0.95	0.07	0	0.00	0.00	0.00	0.00	2	2.02	2	100.00	0.01	1.68	0.03	0	0.00	0.00	0.00	0.00
2009 Total		179	176	98.32	176	100.00	0.03	1.05	0.07	0	0.00	0.00	0.00	0.00	3	1.68	3	100.00	0.02	1.94	0.04	0	0.00	0.00	0.00	0.00
2010	LDGT1	23	22	95.65	22	100.00	0.02	0.87	0.03	0	0.00	0.00	0.00	0.00	1	4.35	1	100.00	0.15	1.10	0.02	0	0.00	0.00	0.00	0.00
	LDGT2	14	14	100.00	14	100.00	0.02	1.04	0.03	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	24	23	95.83	23	100.00	0.02	1.10	0.08	0	0.00	0.00	0.00	0.00	1	4.17	1	100.00	0.02	0.98	0.02	0	0.00	0.00	0.00	0.00
2010 Total		61	59	96.72	59	100.00	0.02	1.00	0.05	0	0.00	0.00	0.00	0.00	2	3.28	2	100.00	0.08	1.04	0.02	0	0.00	0.00	0.00	0.00
2011	LDGT1	10	10	100.00	10	100.00	0.01	1.14	0.02	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
	LDGT2	3	3	100.00	3	100.00	0.03	0.65	0.02	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	5	5	100.00	5	100.00	0.01	0.88	0.03	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
2011 Total		18	18	100.00	18	100.00	0.02	0.99	0.02	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
2012	LDGV	2	2	100.00	2	100.00	0.04	2.59	0.03	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
2012 Total		2	2	100.00	2	100.00	0.04	2.59	0.03	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		327,516	266,030	81.23	263,610	99.09	0.13	2.34	0.42	2,420	0.91	1.02	15.28	2.23	61,486	18.77	56,548	91.97	0.21	3.51	0.65	4,938	8.03	1.63	23.32	2.30

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	121,005	99,877	82.54	98,904	99.03	0.14	2.59	0.48	973	0.97	0.83	16.46	2.36	21,128	17.46	19,417	91.90	0.21	3.83	0.76	1,711	8.10	1.52	26.66	2.48
LDGT2	45,269	36,719	81.11	36,277	98.80	0.18	2.53	0.57	442	1.20	0.96	14.28	2.87	8,550	18.89	7,590	88.77	0.28	4.00	0.90	960	11.23	2.21	26.24	2.66
LDGV	161,242	129,434	80.27	128,429	99.22	0.11	2.10	0.33	1,005	0.78	1.24	14.57	1.81	31,808	19.73	29,541	92.87	0.18	3.17	0.52	2,267	7.13	1.47	19.57	2.01
Grand Total	327,516	266,030	81.23	263,610	99.09	0.13	2.34	0.42	2,420	0.91	1.02	15.28	2.23	61,486	18.77	56,548	91.97	0.21	3.51	0.65	4,938	8.03	1.63	23.32	2.30

Appendix J

I/M240 Initial Inspection Report

Date

Between 1/1/2015 and 12/31/2015

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	267	1.9841	25.5924	1.9364	213	79.78%	1.5489	19.0157	1.9546	54	20.22%	3.7006	51.5340	1.8644
	LDGT1	241	3.1698	43.4329	2.8525	162	67.22%	2.3323	29.2973	3.0093	79	32.78%	4.8872	72.4198	2.5312
	LDGT2	66	4.2878	49.8075	2.6266	40	60.61%	2.6645	35.2500	2.3005	26	39.39%	6.7852	72.2036	3.1282
1982 Total		574	2.7468	35.8672	2.4004	415	72.30%	1.9623	24.5940	2.3997	159	27.70%	4.7945	65.2911	2.4024
1983	LDGV	428	1.7293	20.5495	1.8639	329	76.87%	1.2433	12.2553	1.8849	99	23.13%	3.3445	48.1129	1.7943
	LDGT1	386	3.4447	41.7591	2.3742	291	75.39%	2.9959	31.2429	2.4384	95	24.61%	4.8195	73.9718	2.1775
	LDGT2	161	3.4288	49.6097	2.8140	110	68.32%	2.5951	34.8096	2.7580	51	31.68%	5.2269	81.5315	2.9348
1983 Total		975	2.6891	33.7450	2.2228	730	74.87%	2.1456	23.2229	2.2371	245	25.13%	4.3083	65.0964	2.1803
1984	LDGV	602	1.8460	20.6870	1.8612	462	76.74%	1.2027	11.2285	1.8539	140	23.26%	3.9687	51.9000	1.8853
	LDGT1	554	2.4232	33.8474	2.4686	402	72.56%	1.8991	23.1208	2.4637	152	27.44%	3.8093	62.2165	2.4816
	LDGT2	195	3.2455	49.1997	3.0013	106	54.36%	2.0732	25.8128	3.0316	89	45.64%	4.6417	77.0537	2.9651
1984 Total		1351	2.2847	30.1991	2.2748	970	71.80%	1.5864	17.7508	2.2353	381	28.20%	4.0623	61.8915	2.3754
1985	LDGV	987	1.4194	16.7154	1.8985	785	79.53%	1.0058	10.6922	1.8838	202	20.47%	3.0266	40.1224	1.9557
	LDGT1	901	2.2333	26.8430	2.6561	677	75.14%	1.7891	17.5469	2.6849	224	24.86%	3.5758	54.9387	2.5692
	LDGT2	284	2.8941	37.1648	2.9573	180	63.38%	1.9758	21.4242	2.9931	104	36.62%	4.4835	64.4082	2.8954
1985 Total		2172	1.9498	23.5904	2.3512	1642	75.60%	1.4351	14.6949	2.3357	530	24.40%	3.5446	51.1499	2.3994
1986	LDGV	1121	1.2766	12.4058	1.8238	900	80.29%	0.8760	7.6125	1.7822	221	19.71%	2.9079	31.9259	1.9932
	LDGT1	1021	2.0283	22.6206	2.4614	794	77.77%	1.6007	16.1152	2.4671	227	22.23%	3.5236	45.3753	2.4413
	LDGT2	279	2.6163	37.5384	2.8299	165	59.14%	1.7648	19.2827	2.7824	114	40.86%	3.8488	63.9612	2.8986
1986 Total		2421	1.7480	19.6100	2.2086	1859	76.79%	1.2644	12.2799	2.1635	562	23.21%	3.3475	43.8566	2.3579
1987	LDGV	1596	1.1212	11.6207	1.7951	1350	84.59%	0.8003	7.3406	1.7742	246	15.41%	2.8822	35.1094	1.9100
	LDGT1	1456	1.6989	19.6266	2.2672	1181	81.11%	1.3772	14.2361	2.2601	275	18.89%	3.0805	42.7767	2.2977
	LDGT2	429	2.3698	22.4143	2.9736	323	75.29%	1.7912	12.9742	2.8309	106	24.71%	4.1327	51.1797	3.4081
1987 Total		3481	1.5167	16.2996	2.1378	2854	81.99%	1.1512	10.8315	2.0949	627	18.01%	3.1806	41.1891	2.3333
1988	LDGV	1590	1.0926	12.0021	1.6014	1315	82.70%	0.7418	7.8799	1.5409	275	17.30%	2.7702	31.7137	1.8908
	LDGT1	1559	1.6357	16.1397	2.1333	1269	81.40%	1.2680	11.5296	2.0562	290	18.60%	3.2447	36.3129	2.4710
	LDGT2	545	1.9103	18.3200	2.7281	407	74.68%	1.4343	12.2019	2.5573	138	25.32%	3.3139	36.3640	3.2317
1988 Total		3694	1.4425	14.6804	1.9921	2991	80.97%	1.0593	10.0165	1.8978	703	19.03%	3.0727	34.5238	2.3934
1989	LDGV	2604	0.9630	10.4751	1.5843	2284	87.71%	0.7037	7.7427	1.5417	320	12.29%	2.8136	29.9774	1.8885
	LDGT1	2272	1.4238	16.7753	2.0468	1859	81.82%	1.1197	12.1534	1.9366	413	18.18%	2.7929	37.5796	2.5428
	LDGT2	876	1.8402	15.9651	2.7034	708	80.82%	1.4367	12.3444	2.5990	168	19.18%	3.5405	31.2242	3.1436
1989 Total		5752	1.2786	13.7998	1.9374	4851	84.34%	0.9701	10.1046	1.8473	901	15.66%	2.9396	33.6946	2.4224
1990	LDGV	3249	0.8527	9.9946	1.5980	2846	87.60%	0.6555	7.2959	1.5334	403	12.40%	2.2454	29.0530	2.0543
	LDGT1	1939	1.3658	15.1382	2.1374	1571	81.02%	1.0811	10.7574	1.9866	368	18.98%	2.5811	33.8403	2.7811
	LDGT2	829	1.8024	16.5104	2.7523	669	80.70%	1.4651	13.5583	2.6479	160	19.30%	3.2128	28.8536	3.1889
1990 Total		6017	1.1489	12.5499	1.9309	5086	84.53%	0.8934	9.1889	1.8200	931	15.47%	2.5444	30.9110	2.5366
1991	LDGV	4917	0.7791	9.3124	1.4632	4294	87.33%	0.5477	6.4852	1.3968	623	12.67%	2.3740	28.7984	1.9210
	LDGT1	3254	1.1462	13.2295	1.8409	2780	85.43%	0.9049	10.3904	1.7421	474	14.57%	2.5615	29.8812	2.4205
	LDGT2	929	1.4931	17.4201	2.5394	740	79.66%	1.2672	14.5567	2.4570	189	20.34%	2.3773	28.6314	2.8620

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		9100	0.9833	11.5408	1.7081	7814	85.87%	0.7429	8.6390	1.6200	1286	14.13%	2.4436	29.1729	2.2434
1992	LDGV	4984	0.7313	8.6245	1.4388	4292	86.12%	0.5197	5.9476	1.3656	692	13.88%	2.0439	25.2277	1.8929
	LDGT1	2763	1.0608	12.4985	1.7693	2385	86.32%	0.8782	9.5812	1.6974	378	13.68%	2.2130	30.9056	2.2229
	LDGT2	1281	1.7729	17.5124	2.4960	982	76.66%	1.3539	13.7862	2.3997	299	23.34%	3.1490	29.7504	2.8121
1992 Total		9028	0.9799	11.0713	1.6900	7659	84.84%	0.7383	8.0841	1.6015	1369	15.16%	2.3319	27.7833	2.1848
1993	LDGV	6803	0.6654	7.7984	1.4684	6023	88.53%	0.5066	5.5082	1.3974	780	11.47%	1.8912	25.4830	2.0167
	LDGT1	4876	1.0272	11.3185	1.9995	4284	87.86%	0.8660	9.2111	1.9050	592	12.14%	2.1930	26.5683	2.6837
	LDGT2	1880	1.7291	17.0388	2.5603	1481	78.78%	1.3706	13.9271	2.4180	399	21.22%	3.0600	28.5890	3.0883
1993 Total		13559	0.9430	10.3455	1.8108	11788	86.94%	0.7458	7.9116	1.7101	1771	13.06%	2.2554	26.5456	2.4811
1994	LDGV	7703	0.5281	6.3809	1.1835	6850	88.93%	0.3994	4.9195	1.1082	853	11.07%	1.5616	18.1165	1.7879
	LDGT1	5735	0.8858	9.9167	1.8268	4907	85.56%	0.7123	7.9253	1.6823	828	14.44%	1.9140	21.7185	2.6829
	LDGT2	2824	1.2361	13.3128	2.2097	2177	77.09%	0.9181	10.2054	2.0219	647	22.91%	2.3059	23.7685	2.8417
1994 Total		16262	0.7772	8.8316	1.5886	13934	85.68%	0.5906	6.8039	1.4531	2328	14.32%	1.8938	20.9684	2.3991
1995	LDGV	11493	0.4966	5.8942	1.0408	10299	89.61%	0.3666	4.5586	0.9638	1194	10.39%	1.6185	17.4143	1.7047
	LDGT1	7247	0.8277	9.7009	1.7963	6233	86.01%	0.6490	7.5366	1.6640	1014	13.99%	1.9257	23.0046	2.6090
	LDGT2	4218	1.1576	12.7141	2.1538	3354	79.52%	0.8564	10.1098	1.9771	864	20.48%	2.3269	22.8241	2.8398
1995 Total		22958	0.7226	8.3488	1.4838	19886	86.62%	0.5377	6.4283	1.3542	3072	13.38%	1.9191	20.7810	2.3224
1996	LDGV	11434	0.3621	4.7482	0.8588	10327	90.32%	0.2889	3.7552	0.7901	1107	9.68%	1.0450	14.0121	1.5002
	LDGT1	7274	0.4609	6.4185	1.4593	6242	85.81%	0.3646	5.0311	1.3327	1032	14.19%	1.0432	14.8098	2.2251
	LDGT2	3268	0.6092	7.5937	1.4300	2771	84.79%	0.4690	5.9125	1.3002	497	15.21%	1.3903	16.9671	2.1537
1996 Total		21976	0.4315	5.7242	1.1425	19340	88.01%	0.3392	4.4761	1.0383	2636	11.99%	1.1094	14.8816	1.9072
1997	LDGV	16670	0.3486	4.6977	0.7842	15098	90.57%	0.2774	3.7251	0.7184	1572	9.43%	1.0327	14.0395	1.4154
	LDGT1	12447	0.3998	5.8844	1.3230	10807	86.82%	0.3198	4.7905	1.1865	1640	13.18%	0.9276	13.0931	2.2223
	LDGT2	4988	0.5248	6.8065	1.4212	4266	85.53%	0.3877	5.4418	1.2520	722	14.47%	1.3348	14.8703	2.4212
1997 Total		34105	0.3931	5.4393	1.0740	30171	88.47%	0.3082	4.3494	0.9615	3934	11.53%	1.0443	13.7974	1.9363
1998	LDGV	16899	0.2893	4.3457	0.6844	15189	89.88%	0.2262	3.4184	0.6187	1710	10.12%	0.8491	12.5828	1.2681
	LDGT1	13502	0.3524	5.2617	1.1715	11846	87.74%	0.2880	4.3858	1.0451	1656	12.26%	0.8131	11.5273	2.0753
	LDGT2	4852	0.4753	6.5247	1.3232	4094	84.38%	0.3217	4.6007	1.1313	758	15.62%	1.3049	16.9162	2.3600
1998 Total		35253	0.3390	4.9964	0.9589	31129	88.30%	0.2623	3.9420	0.8484	4124	11.70%	0.9184	12.9554	1.7929
1999	LDGV	22645	0.2356	3.6820	0.6214	20642	91.15%	0.1901	2.9964	0.5563	2003	8.85%	0.7042	10.7469	1.2927
	LDGT1	16935	0.2716	4.4609	0.8600	15095	89.13%	0.2171	3.5880	0.7542	1840	10.87%	0.7185	11.6228	1.7280
	LDGT2	8399	0.3836	4.5743	1.0340	7196	85.68%	0.2455	3.2008	0.8532	1203	14.32%	1.2102	12.7896	2.1157
1999 Total		47979	0.2742	4.1131	0.7779	42933	89.48%	0.2089	3.2387	0.6756	5046	10.52%	0.8301	11.5533	1.6476
2000	LDGV	24260	0.2007	3.3087	0.5194	22118	91.17%	0.1447	2.5829	0.4391	2142	8.83%	0.7793	10.8038	1.3496
	LDGT1	17108	0.2538	3.9978	0.7746	15226	89.00%	0.1978	3.0423	0.6727	1882	11.00%	0.7063	11.7282	1.5991
	LDGT2	6790	0.3075	4.4841	0.8015	5993	88.26%	0.1994	2.9885	0.6717	797	11.74%	1.1203	15.7300	1.7774
2000 Total		48158	0.2346	3.7192	0.6499	43337	89.99%	0.1709	2.8004	0.5533	4821	10.01%	0.8072	11.9791	1.5177
2001	LDGV	28890	0.1388	2.6997	0.3587	26904	93.13%	0.1003	2.1742	0.3060	1986	6.87%	0.6611	9.8182	1.0727
	LDGT1	20797	0.1436	3.1756	0.4711	19125	91.96%	0.1159	2.6189	0.4140	1672	8.04%	0.4603	9.5431	1.1243
	LDGT2	8629	0.2445	3.4227	0.6459	7773	90.08%	0.1868	2.7077	0.5593	856	9.92%	0.7691	9.9146	1.4317
2001 Total		58316	0.1562	2.9764	0.4413	53802	92.26%	0.1183	2.4094	0.3810	4514	7.74%	0.6072	9.7346	1.1599
2002	LDGV	26788	0.1229	2.9228	0.3263	24753	92.40%	0.0892	2.5247	0.2658	2035	7.60%	0.5326	7.7651	1.0619
	LDGT1	19812	0.1250	3.7143	0.4109	18394	92.84%	0.0986	3.0520	0.3571	1418	7.16%	0.4663	12.3057	1.1085

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	6492	0.2077	3.0382	0.6615	5880	90.57%	0.1573	2.3946	0.5796	612	9.43%	0.6924	9.2224	1.4484
2002 Total		53092	0.1340	3.2323	0.3989	49027	92.34%	0.1009	2.7069	0.3377	4065	7.66%	0.5335	9.5684	1.1364
2003	LDGV	31225	0.0852	1.7600	0.2558	29359	94.02%	0.0609	1.4863	0.2146	1866	5.98%	0.4687	6.0675	0.9047
	LDGT1	23276	0.0948	2.1697	0.3129	21843	93.84%	0.0760	1.7290	0.2823	1433	6.16%	0.3813	8.8869	0.7798
	LDGT2	9055	0.1523	2.3795	0.4319	8408	92.85%	0.1172	1.8038	0.3731	647	7.15%	0.6083	9.8613	1.1962
2003 Total		63556	0.0983	1.9983	0.3018	59610	93.79%	0.0744	1.6200	0.2617	3946	6.21%	0.4599	7.7134	0.9072
2004	LDGV	23963	0.0758	1.6066	0.1951	22532	94.03%	0.0531	1.3358	0.1554	1431	5.97%	0.4333	5.8720	0.8212
	LDGT1	20032	0.0781	1.9571	0.2088	18892	94.31%	0.0602	1.5374	0.1809	1140	5.69%	0.3741	8.9107	0.6721
	LDGT2	8607	0.0972	1.8377	0.2357	8010	93.06%	0.0743	1.4961	0.1928	597	6.94%	0.4056	6.4206	0.8114
2004 Total		52602	0.0802	1.7779	0.2070	49434	93.98%	0.0592	1.4388	0.1712	3168	6.02%	0.4068	7.0688	0.7657
2005	LDGV	4186	0.0879	2.0006	0.2060	3893	93.00%	0.0538	1.3394	0.1532	293	7.00%	0.5406	10.7865	0.9084
	LDGT1	3781	0.0747	1.6971	0.1829	3565	94.29%	0.0621	1.3677	0.1453	216	5.71%	0.2827	7.1334	0.8043
	LDGT2	1438	0.1963	2.5054	0.3004	1332	92.63%	0.0981	1.9098	0.2120	106	7.37%	1.4306	9.9901	1.4120
2005 Total		9405	0.0992	1.9558	0.2112	8790	93.46%	0.0639	1.4373	0.1589	615	6.54%	0.6034	9.3662	0.9586
2006	LDGV	3124	0.0871	2.0162	0.1909	2931	93.82%	0.0477	1.3669	0.1162	193	6.18%	0.6854	11.8763	1.3244
	LDGT1	2454	0.0584	1.5449	0.1625	2318	94.46%	0.0450	1.3224	0.1222	136	5.54%	0.2858	5.3374	0.8487
	LDGT2	1057	0.1102	1.9593	0.2358	977	92.43%	0.0761	1.4174	0.1589	80	7.57%	0.5265	8.5771	1.1741
2006 Total		6635	0.0802	1.8328	0.1875	6226	93.84%	0.0512	1.3583	0.1252	409	6.16%	0.5214	9.0567	1.1368
2007	LDGV	3223	0.0600	1.3893	0.1277	3092	95.94%	0.0403	1.1595	0.0946	131	4.06%	0.5253	6.8118	0.9094
	LDGT1	2309	0.0627	1.5266	0.1051	2206	95.54%	0.0354	1.2111	0.0955	103	4.46%	0.6486	8.2822	0.3112
	LDGT2	1090	0.0702	1.3924	0.1429	1038	95.23%	0.0520	1.0521	0.0965	52	4.77%	0.4327	8.1845	1.0694
2007 Total		6622	0.0627	1.4377	0.1223	6336	95.68%	0.0405	1.1599	0.0952	286	4.32%	0.5529	7.5909	0.7231
2008	LDGV	1863	0.0779	1.7478	0.1512	1777	95.38%	0.0419	1.3106	0.0868	86	4.62%	0.8207	10.7830	1.4819
	LDGT1	1266	0.0400	1.3576	0.1006	1197	94.55%	0.0327	1.1321	0.0866	69	5.45%	0.1679	5.2696	0.3441
	LDGT2	746	0.0797	1.6356	0.1028	694	93.03%	0.0493	1.2477	0.0753	52	6.97%	0.4860	6.8133	0.4698
2008 Total		3875	0.0659	1.5988	0.1254	3668	94.66%	0.0403	1.2404	0.0846	207	5.34%	0.5190	7.9480	0.8484
2009	LDGV	592	0.0466	1.3116	0.1101	572	96.62%	0.0320	1.1870	0.0772	20	3.38%	0.4645	4.8757	1.0507
	LDGT1	303	0.0332	1.3297	0.0854	286	94.39%	0.0337	1.3408	0.0857	17	5.61%	0.0257	1.1427	0.0816
	LDGT2	201	0.0499	1.0533	0.1007	189	94.03%	0.0390	0.8741	0.0667	12	5.97%	0.2229	3.8745	0.6373
2009 Total		1096	0.0435	1.2693	0.1016	1047	95.53%	0.0337	1.1726	0.0776	49	4.47%	0.2531	3.3354	0.6132
2010	LDGV	374	0.0739	2.1572	0.1281	353	94.39%	0.0368	1.3898	0.0717	21	5.61%	0.6982	15.0562	1.0760
	LDGT1	217	0.0285	1.2389	0.0660	212	97.70%	0.0280	1.1000	0.0666	5	2.30%	0.0498	7.1257	0.0406
	LDGT2	135	0.0335	0.8642	0.0559	125	92.59%	0.0347	0.9033	0.0570	10	7.41%	0.0186	0.3755	0.0426
2010 Total		726	0.0528	1.6423	0.0961	690	95.04%	0.0337	1.2126	0.0675	36	4.96%	0.4194	9.8768	0.6451
2011	LDGV	286	0.0402	1.5837	0.0863	279	97.55%	0.0340	1.4389	0.0724	7	2.45%	0.2867	7.3528	0.6405
	LDGT1	164	0.0240	0.9285	0.0540	158	96.34%	0.0243	0.9126	0.0538	6	3.66%	0.0154	1.3495	0.0592
	LDGT2	86	0.0438	0.9966	0.0762	77	89.53%	0.0453	1.0132	0.0803	9	10.47%	0.0305	0.8544	0.0411
2011 Total		536	0.0358	1.2890	0.0748	514	95.90%	0.0327	1.2133	0.0679	22	4.10%	0.1079	3.0571	0.2368
2012	LDGV	229	0.0399	1.2725	0.0776	222	96.94%	0.0243	1.1406	0.0572	7	3.06%	0.5346	5.4553	0.7252
	LDGT1	74	0.0820	4.0829	0.1145	71	95.95%	0.0225	0.8062	0.0486	3	4.05%	1.4894	81.6299	1.6727
	LDGT2	35	0.0232	0.6144	0.0377	35	100.00%	0.0232	0.6144	0.0377	0	0.00%	0.0000	0.0000	0.0000
2012 Total		338	0.0474	1.8196	0.0816	328	97.04%	0.0238	1.0121	0.0533	10	2.96%	0.8211	28.3077	1.0095
2013	LDGV	135	0.0441	1.2090	0.1130	130	96.30%	0.0285	0.9585	0.0755	5	3.70%	0.4497	7.7210	1.0868

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	24	0.0298	1.6401	0.0882	22	91.67%	0.0262	0.9391	0.0479	2	8.33%	0.0697	9.3516	0.5308
	LDGT2	19	0.0519	0.7397	0.1732	18	94.74%	0.0275	0.4863	0.0712	1	5.26%	0.4897	5.3015	2.0091
2013 Total		178	0.0430	1.2170	0.1161	170	95.51%	0.0281	0.9060	0.0715	8	4.49%	0.3597	7.8262	1.0631
2014	LDGV	32	0.0191	0.8627	0.0523	32	100.00%	0.0191	0.8627	0.0523	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	6	0.0137	0.7262	0.0392	6	100.00%	0.0137	0.7262	0.0392	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	10	0.0207	0.4257	0.0411	10	100.00%	0.0207	0.4257	0.0411	0	0.00%	0.0000	0.0000	0.0000
2014 Total		48	0.0188	0.7546	0.0484	48	100.00%	0.0188	0.7546	0.0484	0	0.00%	0.0000	0.0000	0.0000
2015	LDGV	12	0.0123	0.7968	0.0557	12	100.00%	0.0123	0.7968	0.0557	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	5	0.0131	0.4624	0.0412	5	100.00%	0.0131	0.4624	0.0412	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	4	0.0189	0.3197	0.0359	4	100.00%	0.0189	0.3197	0.0359	0	0.00%	0.0000	0.0000	0.0000
2015 Total		21	0.0137	0.6263	0.0485	21	100.00%	0.0137	0.6263	0.0485	0	0.00%	0.0000	0.0000	0.0000
2016	LDGV	1	0.0043	0.1998	0.0022	1	100.00%	0.0043	0.1998	0.0022	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	1	0.0129	0.4993	0.0403	1	100.00%	0.0129	0.4993	0.0403	0	0.00%	0.0000	0.0000	0.0000
2016 Total		2	0.0086	0.3495	0.0212	2	100.00%	0.0086	0.3495	0.0212	0	0.00%	0.0000	0.0000	0.0000
Overall Total		541863	0.3482	4.8341	0.7674	489102	90.26%	0.2534	3.5993	0.6700	52761	9.74%	1.2269	16.2806	1.6706

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	265175	0.2779	3.9934	0.6099	242458	91.43%	0.2011	3.0199	0.5394	22717	8.57%	1.0968	14.3839	1.3627
LDGT1	195991	0.3729	5.3811	0.8626	176312	89.96%	0.2841	4.0682	0.7602	19679	10.04%	1.1680	17.1440	1.7803
LDGT2	80697	0.5195	6.2682	1.0536	70332	87.16%	0.3567	4.4215	0.8939	10365	12.84%	1.6242	18.7986	2.1372
Overall Total	541863	0.3482	4.8341	0.7674	489102	90.26%	0.2534	3.5993	0.6700	52761	9.74%	1.2269	16.2806	1.6706

Appendix K

I/M240 Initial Failure Report

Date

Between 1/1/2015 and 12/31/2015

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	12	4.98%	8.0234	146.5743	1.5993	36	14.94%	6.1017	88.2955	2.3604	31	12.86%	2.2627	25.2785	3.0902		
	LDGT2	8	12.12%	11.2781	99.3045	2.8700	11	16.67%	5.9519	76.2085	3.1369	7	10.61%	2.9599	34.9376	3.4095		
	LDGV	5	1.87%	6.6928	114.8130	2.0617	25	9.36%	4.9583	66.4881	1.8288	24	8.99%	1.7670	22.7736	1.8604		
1982 Total		25	4.36%	8.7988	125.0957	2.0984	72	12.54%	5.6818	78.8769	2.2945	62	10.80%	2.1496	25.3994	2.6502		
1983	LDGT1	15	3.89%	7.5123	132.5920	1.2193	40	10.36%	5.6578	94.4186	2.0258	40	10.36%	2.9715	31.5425	2.6886		
	LDGT2	8	4.97%	5.0657	112.9459	2.6579	30	18.63%	6.5425	96.8301	3.3299	13	8.07%	2.2902	26.8949	2.1934		
	LDGV	6	1.40%	6.2073	70.0248	1.0998	59	13.79%	4.1332	65.4138	1.7708	34	7.94%	1.4706	14.2240	1.9577		
1983 Total		29	2.97%	6.5674	114.2274	1.5914	129	13.23%	5.1662	81.7137	2.2125	87	8.92%	2.2831	24.0799	2.3290		
1984	LDGT1	23	4.15%	7.5017	103.3850	2.2021	58	10.47%	4.3611	93.3057	2.2567	71	12.82%	2.1624	23.4833	2.7558		
	LDGT2	16	8.21%	7.6365	106.0892	3.2221	45	23.08%	5.1985	97.5831	2.6737	28	14.36%	2.0354	27.4682	3.2866		
	LDGV	15	2.49%	6.2828	81.1906	1.7767	73	12.13%	5.3145	74.1236	1.7839	52	8.64%	1.4120	12.2522	2.0589		
1984 Total		54	4.00%	7.2031	98.0211	2.3862	176	13.03%	4.9706	86.4431	2.1672	151	11.18%	1.8804	20.3546	2.6142		
1985	LDGT1	35	3.88%	3.9466	80.2327	2.2019	102	11.32%	4.8634	76.4323	2.7223	87	9.66%	1.9170	19.5635	2.5374		
	LDGT2	25	8.80%	6.7812	95.6969	2.9618	53	18.66%	4.7194	69.0731	2.7603	26	9.15%	1.7934	24.8135	3.1070		
	LDGV	23	2.33%	4.6429	56.3477	2.0973	117	11.85%	3.7461	52.7820	1.9442	62	6.28%	1.0694	10.2134	1.9247		
1985 Total		83	3.82%	4.9934	78.2718	2.4018	272	12.52%	4.3547	64.8252	2.3950	175	8.06%	1.5983	17.0309	2.4050		
1986	LDGT1	34	3.33%	5.6426	75.3401	2.3991	104	10.19%	4.4071	60.9194	2.3036	89	8.72%	1.6817	15.7642	2.6182		
	LDGT2	25	8.96%	5.0930	88.7362	2.3798	52	18.64%	4.5993	83.4164	3.0029	37	13.26%	1.9534	19.8790	3.1027		
	LDGV	23	2.05%	4.4032	47.2570	2.0957	132	11.78%	3.5939	40.9332	2.0609	66	5.89%	1.0149	8.5688	1.8221		
1986 Total		82	3.39%	5.1274	71.5473	2.3081	288	11.90%	4.0691	55.8210	2.3186	192	7.93%	1.5048	14.0838	2.4379		
1987	LDGT1	26	1.79%	4.1244	66.9473	2.3055	150	10.30%	3.9047	57.5056	2.1675	99	6.80%	1.5577	14.1123	2.4929		
	LDGT2	16	3.73%	5.3367	61.2063	3.3354	54	12.59%	5.4670	72.9558	3.6478	36	8.39%	1.5962	14.0593	3.0811		
	LDGV	21	1.32%	5.3217	79.8866	1.8939	150	9.40%	3.5641	42.3732	1.9107	75	4.70%	0.8353	8.0442	1.9130		
1987 Total		63	1.81%	4.8314	69.8024	2.4299	354	10.17%	3.9987	53.4504	2.2845	210	6.03%	1.3063	11.9360	2.3866		
1988	LDGT1	34	2.18%	4.5772	55.1239	2.5456	143	9.17%	4.3952	50.6028	2.5388	113	7.25%	1.3879	12.5694	2.3627		
	LDGT2	14	2.57%	3.2971	28.4893	4.1711	72	13.21%	4.6457	54.9899	3.5611	52	9.54%	1.4744	12.6943	2.5226		
	LDGV	29	1.82%	3.9553	42.4751	2.4959	171	10.75%	3.4213	40.1125	1.8833	75	4.72%	0.8272	8.4032	1.6741		
1988 Total		77	2.08%	4.1102	45.5174	2.8224	386	10.45%	4.0105	46.7739	2.4391	240	6.50%	1.2315	11.2945	2.1822		
1989	LDGT1	37	1.63%	4.5821	64.5110	2.7725	234	10.30%	3.4545	48.5618	2.8198	142	6.25%	1.2363	12.4651	2.0264		
	LDGT2	13	1.48%	3.8544	39.3377	3.9582	91	10.39%	4.8166	42.9689	3.3955	64	7.31%	1.6623	12.8766	2.6199		
	LDGV	28	1.08%	5.8127	42.2165	2.5649	184	7.07%	3.5589	41.3021	1.9300	108	4.15%	0.7662	7.5104	1.6425		
1989 Total		78	1.36%	4.9025	52.3123	2.8956	509	8.85%	3.7358	44.9375	2.6011	314	5.46%	1.1614	10.8448	2.0153		
1990	LDGT1	32	1.65%	4.8976	66.1858	2.8195	198	10.21%	3.1425	44.1772	3.1063	138	7.12%	1.2385	11.5086	2.3057		
	LDGT2	17	2.05%	4.4936	37.1331	3.3095	82	9.89%	4.2212	39.0344	3.5770	61	7.36%	1.5003	12.8604	2.6336		
	LDGV	28	0.86%	4.2315	37.1230	2.6526	250	7.69%	2.7614	38.8727	2.1962	125	3.85%	0.7686	7.6060	1.6367		
1990 Total		77	1.28%	4.5662	49.2033	2.8670	530	8.81%	3.1296	40.8794	2.7498	324	5.38%	1.1065	10.2575	2.1093		
1991	LDGT1	34	1.04%	4.5055	52.9655	3.4524	240	7.38%	3.5531	42.0801	2.7323	200	6.15%	1.0410	11.3181	1.8710		
	LDGT2	20	2.15%	4.2182	46.0687	3.7626	100	10.76%	2.7949	35.4648	3.0390	69	7.43%	1.2385	13.6736	2.3445		
	LDGV	42	0.85%	2.4615	41.7316	2.0182	401	8.16%	3.1532	37.4894	2.0830	180	3.66%	0.6176	6.4190	1.5376		
1991 Total		96	1.05%	3.5514	46.6139	2.8895	741	8.14%	3.2344	38.7031	2.4223	449	4.93%	0.9016	9.7161	1.8101		
1992	LDGT1	27	0.98%	3.5939	48.7739	3.1349	172	6.23%	3.3297	49.8836	2.4363	179	6.48%	0.9316	9.9746	1.8804		

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	25	1.95%	4.2971	36.3688	2.5321	175	13.66%	3.9926	37.8257	3.1606	99	7.73%	1.3678	13.8044	2.2667	
	LDGV	51	1.02%	2.5031	27.8770	2.2969	450	9.03%	2.6218	33.1844	2.0594	191	3.83%	0.5598	5.7742	1.3929	
1992 Total		103	1.14%	3.2245	35.4159	2.5737	797	8.83%	3.0756	37.8074	2.3825	469	5.19%	0.8722	9.0724	1.7634	
1993	LDGT1	36	0.74%	3.1768	37.6883	4.1030	301	6.17%	3.1065	39.4957	3.0008	255	5.23%	0.9759	9.7391	2.1090	
	LDGT2	28	1.49%	4.8188	47.7533	3.3538	251	13.35%	3.6518	33.1392	3.3597	120	6.38%	1.4117	14.6000	2.4587	
	LDGV	47	0.69%	2.3498	25.6965	2.6742	528	7.76%	2.3587	32.9481	2.1694	205	3.01%	0.5818	6.2069	1.4726	
1993 Total		111	0.82%	3.2408	35.1496	3.3090	1,080	7.97%	2.8676	34.8173	2.6778	580	4.28%	0.9267	9.4964	1.9564	
1994	LDGT1	49	0.85%	2.8341	31.5928	3.6132	494	8.61%	2.4331	28.4222	3.0620	285	4.97%	0.8559	8.4010	1.8657	
	LDGT2	48	1.70%	3.7472	44.9976	3.1782	395	13.99%	2.8323	28.2244	3.2192	204	7.22%	0.9474	10.1456	2.0317	
	LDGV	44	0.57%	3.4361	29.8613	2.6143	534	6.93%	1.9751	23.7345	2.0357	275	3.57%	0.4587	5.3284	1.1744	
1994 Total		141	0.87%	3.3328	35.6158	3.1534	1,423	8.75%	2.3721	26.6082	2.7205	764	4.70%	0.7374	7.7608	1.6612	
1995	LDGT1	66	0.91%	3.8951	30.9896	3.9629	585	8.07%	2.4564	31.4478	3.0159	363	5.01%	0.7125	7.9461	1.7071	
	LDGT2	65	1.54%	3.9254	29.0999	3.9735	525	12.45%	2.8598	28.5800	3.1140	274	6.50%	0.9265	10.3066	2.0454	
	LDGV	70	0.61%	3.4981	32.6240	2.2722	711	6.19%	2.1229	23.1936	2.0091	413	3.59%	0.4315	4.8868	1.0845	
1995 Total		201	0.88%	3.7666	30.9477	3.3775	1,821	7.93%	2.4425	27.3982	2.6511	1,050	4.57%	0.6578	7.3588	1.5505	
1996	LDGT1	56	0.77%	1.6743	22.0406	2.8784	454	6.24%	1.7389	24.5002	2.9901	522	7.18%	0.3705	5.6060	1.4897	
	LDGT2	23	0.70%	3.3850	31.4257	1.9736	255	7.80%	1.9748	24.8597	2.9430	219	6.70%	0.5001	6.2587	1.2535	
	LDGV	41	0.36%	1.6388	17.0679	2.0468	624	5.46%	1.5107	20.6719	1.9137	442	3.87%	0.3325	4.3266	0.8658	
1996 Total		120	0.55%	1.9901	22.1404	2.4209	1,333	6.07%	1.6772	22.7769	2.4772	1,183	5.38%	0.3803	5.2488	1.2129	
1997	LDGT1	78	0.63%	1.5325	24.1845	3.0675	812	6.52%	1.4051	19.3150	3.0669	750	6.03%	0.3476	5.2033	1.2199	
	LDGT2	42	0.84%	1.7283	30.6803	2.6454	403	8.08%	1.9105	19.4372	3.1459	277	5.55%	0.4374	5.8290	1.3328	
	LDGV	50	0.30%	1.0816	22.6872	1.6261	821	4.93%	1.6387	21.9135	1.9304	701	4.21%	0.3194	4.2008	0.7971	
1997 Total		170	0.50%	1.4483	25.3489	2.5393	2,036	5.97%	1.5993	20.3870	2.6243	1,728	5.07%	0.3506	4.8969	1.0665	
1998	LDGT1	72	0.53%	1.5123	23.6137	3.0908	835	6.18%	1.1607	16.6981	2.8818	749	5.55%	0.3584	4.6009	1.0787	
	LDGT2	46	0.95%	2.1648	29.7068	3.2240	463	9.54%	1.7272	21.9053	2.8574	249	5.13%	0.3607	5.2764	1.2754	
	LDGV	46	0.27%	1.0258	20.1243	1.6971	937	5.54%	1.3107	19.0995	1.7422	727	4.30%	0.2431	3.7064	0.6298	
1998 Total		164	0.47%	1.5589	24.3440	2.7372	2,235	6.34%	1.3409	18.7836	2.3990	1,725	4.89%	0.3101	4.3214	0.9179	
1999	LDGT1	78	0.46%	1.0170	15.9227	2.8745	924	5.46%	1.1034	18.1764	2.4518	838	4.95%	0.2663	3.9964	0.8233	
	LDGT2	60	0.71%	1.9044	19.0079	2.4714	754	8.98%	1.6315	16.9354	2.7008	389	4.63%	0.2864	3.7947	0.9268	
	LDGV	66	0.29%	1.3129	17.8727	1.6921	991	4.38%	1.1318	17.3820	1.9215	946	4.18%	0.2138	3.2991	0.6061	
1999 Total		204	0.43%	1.3738	17.4610	2.3734	2,669	5.56%	1.2632	17.5308	2.3252	2,173	4.53%	0.2470	3.6567	0.7473	
2000	LDGT1	69	0.40%	1.6220	20.8834	2.8264	866	5.06%	1.1355	20.2265	2.4268	947	5.54%	0.2472	3.2897	0.7528	
	LDGT2	37	0.54%	2.2607	27.0892	2.5396	412	6.07%	1.7449	24.8589	2.5665	348	5.13%	0.2594	3.7144	0.7622	
	LDGV	67	0.28%	1.7687	17.2490	2.1826	1,113	4.59%	1.2567	17.4135	2.0517	962	3.97%	0.1580	2.7078	0.4793	
2000 Total		173	0.36%	1.8154	20.8031	2.5157	2,391	4.96%	1.2970	19.7153	2.2763	2,257	4.69%	0.2110	3.1072	0.6377	
2001	LDGT1	39	0.19%	1.5612	34.7264	2.3630	509	2.45%	1.0810	22.5288	2.4397	1,124	5.40%	0.1410	2.7887	0.4857	
	LDGT2	36	0.42%	2.2325	18.1414	2.8122	307	3.56%	1.5394	20.4909	2.7075	513	5.95%	0.2054	3.0080	0.5714	
	LDGV	43	0.15%	1.5407	18.9296	1.9718	840	2.91%	1.3339	19.1113	1.9905	1,103	3.82%	0.1143	2.3857	0.3388	
2001 Total		118	0.20%	1.7585	23.9101	2.3575	1,656	2.84%	1.2943	20.4175	2.2615	2,740	4.70%	0.1423	2.6675	0.4426	
2002	LDGT1	19	0.10%	0.7223	20.5927	2.3759	537	2.71%	1.0408	27.0175	2.2547	862	4.35%	0.1028	2.9580	0.3666	
	LDGT2	14	0.22%	0.5734	9.4262	2.4892	228	3.51%	1.4841	19.2689	2.6138	370	5.70%	0.2091	3.0239	0.6909	
	LDGV	53	0.20%	1.9533	22.4464	1.9036	766	2.86%	1.1318	15.3427	2.2635	1,216	4.54%	0.0933	2.3519	0.2684	
2002 Total		86	0.16%	1.4567	19.9173	2.1033	1,531	2.88%	1.1523	20.0223	2.3126	2,448	4.61%	0.1141	2.6669	0.3668	
2003	LDGT1	26	0.11%	1.6554	36.7645	2.0162	339	1.46%	1.1871	28.6802	2.0774	1,068	4.59%	0.0945	1.9255	0.3379	

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	18	0.20%	2.2904	26.9961	3.0376	196	2.16%	1.4084	24.1878	2.5600	433	4.78%	0.1762	2.6641	0.5023		
	LDGV	39	0.12%	0.9844	14.3280	1.9139	606	1.94%	1.2364	14.9189	2.2047	1,221	3.91%	0.0713	1.4105	0.2273		
2003 Total		83	0.13%	1.4778	24.1036	2.1896	1,141	1.80%	1.2513	20.5997	2.2279	2,722	4.28%	0.0971	1.8120	0.3144		
2004	LDGT1	9	0.04%	3.8250	39.5284	3.1861	297	1.48%	1.1013	28.2773	1.8883	834	4.16%	0.0779	1.7245	0.2118		
	LDGT2	11	0.13%	1.0476	17.2993	2.3799	127	1.48%	1.4607	22.6583	2.7789	459	5.33%	0.0983	1.6671	0.2294		
	LDGV	21	0.09%	0.9442	14.5317	2.2614	426	1.78%	1.2615	15.8204	2.2639	984	4.11%	0.0638	1.3802	0.1659		
2004 Total		41	0.08%	1.6043	20.7613	2.4962	850	1.62%	1.2353	21.1947	2.2096	2,277	4.33%	0.0759	1.5642	0.1955		
2005	LDGT1	2	0.05%	0.9630	11.2555	3.0171	52	1.38%	0.8704	24.4602	2.6664	162	4.28%	0.0857	1.5208	0.1793		
	LDGT2	5	0.35%	1.0177	18.2780	3.5183	45	3.13%	3.1161	18.5326	2.6519	56	3.89%	0.1131	2.3856	0.2277		
	LDGV	9	0.22%	1.6074	36.7168	1.5060	109	2.60%	1.1877	23.2210	2.0459	175	4.18%	0.0827	1.7080	0.1692		
2005 Total		16	0.17%	1.3426	27.7720	2.3237	206	2.19%	1.5289	22.5096	2.3349	393	4.18%	0.0883	1.7274	0.1817		
2006	LDGT1	2	0.08%	2.7273	7.6779	2.9018	38	1.55%	0.7735	15.3692	2.6041	96	3.91%	0.0418	1.3177	0.1111		
	LDGT2	2	0.19%	0.9418	6.1255	2.3612	29	2.74%	1.2522	21.0133	2.8678	49	4.64%	0.0800	1.3170	0.1233		
	LDGV	4	0.13%	0.6172	14.1758	1.8062	87	2.78%	1.4087	23.8347	2.6895	102	3.27%	0.0711	1.5863	0.1412		
2006 Total		8	0.12%	1.2259	10.5388	2.2188	154	2.32%	1.2225	21.2145	2.7020	247	3.72%	0.0615	1.4285	0.1259		
2007	LDGT1	0	0.00%	0.0000	0.0000	0.0000	22	0.95%	2.8823	33.4492	1.1773	81	3.51%	0.0419	1.4467	0.0759		
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	17	1.56%	1.1610	21.6103	2.9449	35	3.21%	0.0789	1.6633	0.1585		
	LDGV	4	0.12%	2.6898	14.7339	2.3328	45	1.40%	1.2071	15.9389	2.2687	82	2.54%	0.0455	1.4167	0.0940		
2007 Total		4	0.06%	2.6898	14.7339	2.3328	84	1.27%	1.6365	21.6727	2.1197	198	2.99%	0.0499	1.4726	0.0980		
2008	LDGT1	0	0.00%	0.0000	0.0000	0.0000	10	0.79%	0.9911	28.8322	1.9849	59	4.66%	0.0284	1.2759	0.0660		
	LDGT2	1	0.13%	0.3547	2.0064	2.2162	10	1.34%	2.2331	28.4673	1.8315	41	5.50%	0.0631	1.6491	0.0951		
	LDGV	1	0.05%	5.6949	79.4820	1.1131	45	2.42%	1.4111	17.6672	2.7396	40	2.15%	0.0346	1.3209	0.0762		
2008 Total		2	0.05%	3.0248	40.7442	1.6647	65	1.68%	1.4730	21.0464	2.4838	140	3.61%	0.0403	1.3980	0.0774		
2009	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	17	5.61%	0.0257	1.1427	0.0816		
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	2	1.00%	1.1126	16.6785	3.5579	10	4.98%	0.0449	1.3137	0.0531		
	LDGV	1	0.17%	2.5166	16.5657	2.9695	5	0.84%	1.2739	12.5428	3.3545	14	2.36%	0.0289	1.3024	0.0909		
2009 Total		1	0.09%	2.5166	16.5657	2.9695	7	0.64%	1.2278	13.7244	3.4126	41	3.74%	0.0315	1.2389	0.0778		
2010	LDGT1	0	0.00%	0.0000	0.0000	0.0000	1	0.46%	0.1745	33.3370	0.0495	4	1.84%	0.0186	0.5729	0.0383		
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	10	7.41%	0.0186	0.3755	0.0426		
	LDGV	1	0.27%	1.5354	44.0396	3.0828	8	2.14%	1.5931	31.7965	2.3289	12	3.21%	0.0319	1.4808	0.0735		
2010 Total		1	0.14%	1.5354	44.0396	3.0828	9	1.24%	1.4355	31.9677	2.0757	26	3.58%	0.0247	0.9160	0.0562		
2011	LDGT1	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	6	3.66%	0.0154	1.3495	0.0592		
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	9	10.47%	0.0305	0.8544	0.0411		
	LDGV	0	0.00%	0.0000	0.0000	0.0000	2	0.70%	0.9260	21.5557	1.9311	5	1.75%	0.0309	1.6717	0.1243		
2011 Total		0	0.00%	0.0000	0.0000	0.0000	2	0.37%	0.9260	21.5557	1.9311	20	3.73%	0.0261	1.2073	0.0673		
2012	LDGT1	0	0.00%	0.0000	0.0000	0.0000	2	2.70%	2.2009	121.0380	2.4851	1	1.35%	0.0663	2.8139	0.0479		
	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	0.87%	1.8139	16.1832	2.3541	5	2.18%	0.0229	1.1641	0.0737		
2012 Total		0	0.00%	0.0000	0.0000	0.0000	4	1.18%	2.0074	68.6106	2.4196	6	1.78%	0.0302	1.4391	0.0694		
2013	LDGT1	0	0.00%	0.0000	0.0000	0.0000	1	4.17%	0.0935	16.1289	1.0229	1	4.17%	0.0460	2.5742	0.0387		
	LDGT2	0	0.00%	0.0000	0.0000	0.0000	1	5.26%	0.4897	5.3015	2.0091	0	0.00%	0.0000	0.0000	0.0000		
	LDGV	0	0.00%	0.0000	0.0000	0.0000	2	1.48%	1.1012	17.2893	2.6512	3	2.22%	0.0154	1.3422	0.0439		
2013 Total		0	0.00%	0.0000	0.0000	0.0000	4	2.25%	0.6964	14.0023	2.0836	4	2.25%	0.0231	1.6502	0.0426		
2014	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		

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	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000	
2014 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	
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	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	
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	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	
2016 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		2,411	0.44%	2.9686	37.0676	2.6436	24,955	4.61%	1.9521	26.3051	2.4296	25,395	4.69%	0.3489	4.4577	0.8324	

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	910	0.46%	3.0044	42.0679	2.9086	8,556	4.37%	1.8924	28.9628	2.6485	10,213	5.21%	0.3975	5.0253	0.9524		
LDGT2	623	0.77%	3.4767	39.8615	3.0186	5,185	6.43%	2.3973	27.6841	2.9347	4,557	5.65%	0.4913	5.8090	1.1092		
LDGV	878	0.33%	2.5709	29.9027	2.1027	11,214	4.23%	1.7919	23.6397	2.0290	10,625	4.01%	0.2413	3.3326	0.5983		
Grand Total	2,411	0.44%	2.9686	37.0676	2.6436	24,955	4.61%	1.9521	26.3051	2.4296	25,395	4.69%	0.3489	4.4577	0.8324		

Appendix L

I/M240 Initial Exhaust Failure Report

Date

Between 1/1/2015 and 12/31/2015

Initial Exhaust Failure Report (V1.01)

Year	Vehicle Type	Total	Total %	HC Failures			Total	Total %	CO Failures			Total	Total %	NOX Failures		
				Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)			Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)			Avg HC(gpm)	Avg CO(gpm)	Avg NOx(gpm)
1982	LDGV	17	56.67%	7.3592	84.5391	1.5099	22	73.33%	5.8009	93.1843	0.9813	4	13.33%	3.1130	21.6667	6.4599
	LDGT1	20	41.67%	11.1140	131.1587	1.6121	40	83.33%	6.5322	119.3293	1.3763	5	10.42%	2.3295	6.3171	7.7936
	LDGT2	7	36.84%	16.2825	114.5931	1.4781	13	68.42%	8.7559	113.1353	1.7447	4	21.05%	2.8368	23.0732	7.3371
1982 Total		44	45.36%	10.4855	110.5111	1.5513	75	77.32%	6.7031	110.5865	1.3243	13	13.40%	2.7266	16.1958	7.2428
1983	LDGV	32	49.23%	6.7467	81.6000	1.1551	51	78.46%	4.3942	79.5427	1.2032	7	10.77%	2.0769	11.0534	5.5220
	LDGT1	20	36.36%	9.4175	132.9072	1.7489	48	87.27%	6.0960	116.6063	1.1068	5	9.09%	6.6087	18.2706	7.7396
	LDGT2	14	36.84%	11.1369	107.8181	2.7454	28	73.68%	5.5119	127.8727	2.1131	7	18.42%	3.1057	21.7082	8.0289
1983 Total		66	41.77%	8.4873	102.7090	1.6724	127	80.38%	5.2838	104.2064	1.3673	19	12.03%	3.6485	16.8781	7.0291
1984	LDGV	51	57.95%	8.0830	97.3352	1.6955	74	84.09%	5.8547	86.2902	1.2593	9	10.23%	2.7285	16.8847	5.7132
	LDGT1	30	37.04%	8.8390	129.9718	1.9342	68	83.95%	5.2832	110.5950	1.4389	10	12.35%	2.4870	21.0003	7.6312
	LDGT2	22	36.07%	10.8586	110.1463	3.1713	48	78.69%	5.7990	120.9012	1.8554	10	16.39%	3.8700	26.5461	7.3448
1984 Total		103	44.78%	8.8960	109.5774	2.0803	190	82.61%	5.6361	103.7326	1.4742	29	12.61%	3.0388	21.6354	6.9372
1985	LDGV	72	51.43%	6.1152	71.6679	1.6808	115	82.14%	4.0245	62.5473	1.4695	19	13.57%	1.7898	13.0477	5.2385
	LDGT1	41	29.93%	9.6286	111.8093	2.2823	114	83.21%	4.8506	89.9830	1.7246	25	18.25%	2.6050	20.7336	7.2219
	LDGT2	31	39.74%	10.0466	103.0346	2.9333	62	79.49%	4.3382	92.5054	1.8889	9	11.54%	6.0465	12.9856	8.0821
1985 Total		144	40.56%	7.9619	89.8496	2.1217	291	81.97%	4.4150	79.6781	1.6588	53	14.93%	2.8971	16.6626	6.6570
1986	LDGV	87	56.13%	5.4869	50.4503	2.0129	111	71.61%	3.9671	54.2590	1.3557	19	12.26%	2.2492	9.8573	5.4412
	LDGT1	60	43.48%	7.7260	75.5745	2.2152	104	75.36%	4.7152	80.1808	1.4344	17	12.32%	2.4479	14.1788	7.5494
	LDGT2	32	41.56%	8.1589	112.6178	2.0841	62	80.52%	5.1430	103.9143	1.9824	10	12.99%	1.4730	6.4535	7.8994
1986 Total		179	48.38%	6.7151	69.9856	2.0934	277	74.86%	4.5112	75.1056	1.5255	46	12.43%	2.1539	10.7144	6.7547
1987	LDGV	91	53.22%	5.8941	60.8882	1.7879	124	72.51%	4.0554	61.1730	1.3069	28	16.37%	1.7466	9.6435	4.6366
	LDGT1	67	38.07%	7.1362	76.1212	2.2233	151	85.80%	3.9288	66.4655	1.7275	16	9.09%	1.6423	16.6480	7.3087
	LDGT2	34	48.57%	9.1526	111.6345	2.5260	44	62.86%	6.5190	104.5345	2.1002	21	30.00%	1.8865	11.2186	6.7704
1987 Total		192	46.04%	6.9046	75.1902	2.0705	319	76.50%	4.3353	69.6591	1.6154	65	15.59%	1.7661	11.8766	5.9837
1988	LDGV	131	65.50%	4.7042	46.3238	1.9725	127	63.50%	3.7412	57.7381	1.2022	32	16.00%	1.8743	10.7824	4.7641
	LDGT1	94	53.11%	6.7115	66.4111	2.1037	126	71.19%	4.8716	66.3323	1.8580	33	18.64%	2.3707	18.2269	5.9713
	LDGT2	41	47.67%	7.2909	71.8978	3.1749	51	59.30%	5.1116	76.2567	2.8059	26	30.23%	2.2640	15.8919	6.2152
1988 Total		266	57.45%	5.8123	57.3642	2.2042	304	65.66%	4.4396	64.4069	1.7431	91	19.65%	2.1657	14.9419	5.6165
1989	LDGV	140	66.04%	5.2524	49.5446	1.7614	127	59.91%	4.3620	62.3190	1.2733	34	16.04%	1.6852	11.8498	5.1532
	LDGT1	128	47.23%	5.7528	70.5861	2.3052	177	65.31%	3.8924	70.7052	1.6806	65	23.99%	2.1081	14.0923	6.3412
	LDGT2	52	50.00%	7.6151	60.2417	2.5554	55	52.88%	6.0090	67.7565	2.5066	31	29.81%	2.0137	14.1108	6.1881
1989 Total		320	54.51%	5.8365	59.6995	2.1079	359	61.16%	4.3828	67.2868	1.6630	130	22.15%	1.9750	13.5102	5.9940
1990	LDGV	140	50.36%	4.6773	52.5288	1.8026	173	62.23%	3.4770	56.4742	1.3751	89	32.01%	1.7605	11.8875	4.3953
	LDGT1	98	42.61%	5.6567	69.9812	2.3806	152	66.09%	3.7160	64.8009	2.0405	61	26.52%	1.8935	14.3677	6.2627
	LDGT2	49	49.49%	6.8824	52.2512	2.8150	60	60.61%	5.0915	55.0392	2.4652	32	32.32%	2.1147	15.2978	6.4373
1990 Total		287	47.28%	5.3882	58.4407	2.1728	385	63.43%	3.8230	59.5380	1.8077	182	29.98%	1.8674	13.3184	5.3802
1991	LDGV	321	72.46%	3.9247	44.6876	1.8029	261	58.92%	3.8193	57.1012	1.3034	96	21.67%	1.8360	13.1811	4.4509
	LDGT1	157	57.30%	5.3195	55.8110	2.1958	161	58.76%	4.6112	64.4838	1.6172	83	30.29%	1.8597	16.1189	5.6044
	LDGT2	66	55.00%	4.3606	46.7091	2.5594	58	48.33%	3.6005	62.3956	2.1729	42	35.00%	1.8104	15.1479	5.5536

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		544	64.99%	4.3801	48.1431	2.0081	480	57.35%	4.0585	60.2172	1.5137	221	26.40%	1.8401	14.6582	5.0937
1992	LDGV	295	58.88%	3.8487	42.6171	1.7000	314	62.67%	3.0248	47.1543	1.3615	121	24.15%	1.5539	9.7887	4.5668
	LDGT1	106	53.27%	5.0478	69.1777	1.9222	124	62.31%	3.8301	70.6760	1.4068	50	25.13%	1.6570	15.9744	5.6609
	LDGT2	120	60.00%	5.6715	43.5053	2.6215	109	54.50%	4.8162	55.1152	2.4086	55	27.50%	2.5809	20.0616	5.4932
1992 Total		521	57.89%	4.5125	48.2255	1.9575	547	60.78%	3.5643	54.0729	1.5804	226	25.11%	1.8267	13.6573	5.0343
1993	LDGV	318	55.30%	3.6379	44.4921	1.7206	329	57.22%	2.9607	50.4245	1.2910	169	29.39%	1.0976	8.7817	4.5256
	LDGT1	167	49.55%	4.7844	48.7520	2.9570	187	55.49%	3.7239	58.7294	1.9334	126	37.39%	2.5609	18.3698	5.5947
	LDGT2	158	56.63%	5.5303	43.8067	2.4987	140	50.18%	4.6919	53.7947	2.3699	89	31.90%	1.5661	16.4842	5.9366
1993 Total		643	53.99%	4.4007	45.4301	2.2329	656	55.08%	3.5477	53.5112	1.7044	384	32.24%	1.6863	13.7130	5.2034
1994	LDGV	342	59.17%	3.1268	30.4080	1.7174	299	51.73%	2.6941	40.2977	1.2400	192	33.22%	1.0483	9.1487	3.9875
	LDGT1	264	48.62%	3.8225	36.1053	2.8495	285	52.49%	2.9854	43.5750	2.1244	232	42.73%	1.6947	14.5734	5.0681
	LDGT2	250	56.43%	4.4016	37.6784	2.7990	247	55.76%	3.6662	43.2831	2.5541	172	38.83%	1.7145	16.1752	5.3669
1994 Total		856	54.73%	3.7137	34.2885	2.3824	831	53.13%	3.0829	42.3090	1.9339	596	38.11%	1.4922	13.2881	4.8062
1995	LDGV	464	59.41%	3.3896	32.1256	1.6770	333	42.64%	3.3383	47.0083	1.1092	328	42.00%	1.1366	8.3381	3.4682
	LDGT1	299	45.93%	4.4565	45.3362	2.5402	340	52.23%	3.5031	49.4554	1.7893	286	43.93%	1.4282	13.9121	5.1645
	LDGT2	340	57.63%	4.3256	33.7076	3.0191	352	59.66%	3.6113	38.1886	2.5944	228	38.64%	2.2072	18.4964	5.3327
1995 Total		1,103	54.55%	3.9673	36.1944	2.3247	1,025	50.69%	3.4867	44.7912	1.8449	842	41.64%	1.5255	12.9821	4.5493
1996	LDGV	287	43.16%	2.8391	31.1070	1.4397	259	38.95%	2.1649	42.2079	1.0864	354	53.23%	0.8361	8.6492	2.9248
	LDGT1	243	47.65%	2.9638	34.1324	2.8936	273	53.53%	2.2126	37.3592	2.2332	234	45.88%	1.1416	11.4408	4.6209
	LDGT2	174	62.59%	2.9840	31.1560	2.7949	196	70.50%	2.5047	32.2659	2.6761	105	37.77%	1.8330	15.5927	4.6250
1996 Total		704	48.45%	2.9179	32.1634	2.2765	728	50.10%	2.2742	37.7130	1.9444	693	47.69%	1.0903	10.6438	3.7551
1997	LDGV	332	38.12%	3.3751	36.9577	1.5317	369	42.37%	2.2260	42.6801	0.9839	466	53.50%	0.8707	8.1952	2.9053
	LDGT1	336	37.75%	2.8667	29.6514	3.0512	434	48.76%	1.9592	31.2106	2.2918	528	59.33%	1.0052	11.6359	4.2096
	LDGT2	224	50.34%	3.1841	27.0525	3.0827	240	53.93%	2.6796	30.2952	2.7646	250	56.18%	1.5746	13.5324	4.2264
1997 Total		892	40.44%	3.1356	31.7182	2.4936	1,043	47.28%	2.2194	35.0577	1.9379	1,244	56.39%	1.0692	10.7281	3.7244
1998	LDGV	340	34.59%	2.8658	33.6465	1.4969	378	38.45%	1.8488	39.2340	0.9835	600	61.04%	0.8618	8.7312	2.4496
	LDGT1	282	31.09%	2.8015	30.4270	2.8758	336	37.05%	2.0212	33.0250	2.1471	647	71.33%	0.7979	10.3077	3.5765
	LDGT2	190	37.33%	3.8694	37.9939	3.0948	251	49.31%	2.7966	36.7485	2.5542	330	64.83%	1.2517	13.7826	3.7263
1998 Total		812	33.85%	3.0783	33.5457	2.3497	965	40.23%	2.1554	36.4256	1.7972	1,577	65.74%	0.9172	10.4350	3.1791
1999	LDGV	283	26.77%	3.1175	37.0597	1.6405	331	31.32%	1.8994	41.9863	0.8686	737	69.73%	0.6635	7.6469	2.4949
	LDGT1	215	21.46%	3.7072	46.9711	2.4200	343	34.23%	2.2877	40.6501	1.6789	743	74.15%	0.6531	8.9618	3.0855
	LDGT2	288	35.38%	3.7268	29.6474	2.8538	297	36.49%	3.1866	33.3158	2.4378	630	77.40%	1.3269	11.6235	3.1945
1999 Total		786	27.36%	3.5020	37.0549	2.2983	971	33.80%	2.4303	38.8623	1.6348	2,110	73.44%	0.8579	9.2973	2.9117
2000	LDGV	366	31.02%	3.2519	32.3929	1.8892	394	33.39%	2.1813	39.4158	1.0362	828	70.17%	0.8403	8.4447	2.7114
	LDGT1	218	23.32%	3.7933	50.7047	2.2200	377	40.32%	2.2030	41.2367	1.7189	649	69.41%	0.6340	9.6378	3.2039
	LDGT2	148	32.96%	4.4442	54.2018	2.3094	164	36.53%	3.7496	55.0889	2.1019	326	72.61%	0.9606	11.6499	3.2425
2000 Total		732	28.55%	3.6542	42.2559	2.0726	935	36.47%	2.4652	42.8991	1.4984	1,803	70.32%	0.7878	9.4537	2.9847
2001	LDGV	273	30.92%	3.4230	36.4781	1.8480	330	37.37%	2.1346	41.1260	0.9756	577	65.35%	0.9548	8.3985	2.7961
	LDGT1	129	23.54%	3.4629	57.2053	1.8038	240	43.80%	1.7530	46.0345	1.1079	335	61.13%	0.6644	8.5546	3.6206
	LDGT2	96	27.99%	4.5946	47.2273	2.5289	105	30.61%	3.8477	49.3188	2.1694	273	79.59%	0.8448	9.9002	3.2643
2001 Total		498	28.07%	3.6592	43.9193	1.9678	675	38.05%	2.2654	44.1457	1.2084	1,185	66.80%	0.8474	8.7886	3.1370
2002	LDGV	231	28.21%	3.1296	30.8318	2.1551	252	30.77%	1.8660	37.6461	1.2264	598	73.02%	0.8318	8.1038	2.8958
	LDGT1	140	25.18%	2.9662	56.0499	1.8826	292	52.52%	1.5337	45.8973	1.1339	312	56.12%	0.6867	9.3421	3.6499

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	61	25.21%	4.3713	44.0138	2.3154	77	31.82%	3.3113	43.1262	1.9020	183	75.62%	0.9629	9.6573	3.2431
2002 Total		432	26.72%	3.2520	40.8657	2.0894	621	38.40%	1.8890	42.2054	1.2666	1,093	67.59%	0.8123	8.7174	3.1692
2003	LDGV	198	30.70%	3.0457	25.6986	2.2353	197	30.54%	1.8274	34.9243	1.2515	461	71.47%	0.9446	8.3924	2.9023
	LDGT1	105	28.77%	3.2630	63.0718	1.7812	197	53.97%	1.7521	48.4951	0.9659	190	52.05%	0.6239	9.0199	3.4915
	LDGT2	73	34.11%	3.3119	47.0360	2.2393	95	44.39%	2.5159	43.8022	1.9694	147	68.69%	1.0745	13.9399	3.4804
2003 Total		376	30.72%	3.1581	40.2779	2.1093	489	39.95%	1.9308	42.1162	1.2759	798	65.20%	0.8922	9.5637	3.1491
2004	LDGV	160	35.79%	2.6650	23.7472	2.3583	151	33.78%	1.7541	33.0661	1.5788	318	71.14%	0.9709	9.6973	3.0207
	LDGT1	87	28.43%	3.3453	62.0768	1.9612	185	60.46%	1.4408	43.3130	0.8885	138	45.10%	0.7299	8.5064	3.7124
	LDGT2	49	35.51%	3.1355	36.7773	3.3735	68	49.28%	2.0847	36.2679	2.4349	97	70.29%	1.4426	13.7643	3.6986
2004 Total		296	33.22%	2.9428	37.1700	2.4097	404	45.34%	1.6662	38.2973	1.4068	553	62.07%	0.9935	10.1135	3.3122
2005	LDGV	44	37.29%	2.4355	42.9699	2.0855	55	46.61%	1.6847	43.2589	1.4914	77	65.25%	1.0551	11.0285	2.8271
	LDGT1	11	20.37%	2.4464	62.0097	3.2508	22	40.74%	1.3448	47.6605	1.8203	40	74.07%	0.7630	11.9888	3.4692
	LDGT2	19	38.00%	6.6564	25.8399	3.4900	28	56.00%	4.7233	25.5113	2.8088	42	84.00%	2.9658	16.7385	3.1357
2005 Total		74	33.33%	3.5209	41.4019	2.6193	105	47.30%	2.4238	39.4485	1.9116	159	71.62%	1.4863	12.7784	3.0701
2006	LDGV	41	45.05%	2.4423	39.1878	2.7946	42	46.15%	2.0321	42.9230	2.4123	72	79.12%	1.1645	13.7585	3.2702
	LDGT1	6	15.00%	3.4345	39.3654	3.3604	12	30.00%	1.2579	33.4602	0.9012	30	75.00%	0.7689	8.0232	3.3420
	LDGT2	13	41.94%	2.2594	29.1895	3.3143	18	58.06%	1.5689	28.3195	2.7939	26	83.87%	1.0166	14.7298	3.2643
2006 Total		60	37.04%	2.5019	37.0393	2.9638	72	44.44%	1.7873	37.6950	2.2559	128	79.01%	1.0417	12.6116	3.2858
2007	LDGV	19	38.78%	2.6685	23.4257	2.4822	18	36.73%	1.8434	31.3815	2.2121	37	75.51%	1.0079	11.9806	2.8713
	LDGT1	4	18.18%	13.8419	94.3408	0.4674	14	63.64%	4.2811	48.5682	0.5370	9	40.91%	0.5133	8.0383	2.3035
	LDGT2	6	35.29%	2.1050	36.7073	3.1018	7	41.18%	1.5842	38.4081	2.4190	15	88.24%	0.9860	13.4352	3.1991
2007 Total		29	32.95%	4.0931	35.9550	2.3325	39	44.32%	2.6720	38.8123	1.6479	61	69.32%	0.9296	11.7566	2.8681
2008	LDGV	21	45.65%	2.6186	29.3570	2.8493	20	43.48%	2.3392	32.9118	2.4782	38	82.61%	1.4849	14.0771	3.1670
	LDGT1	2	20.00%	2.8925	62.8718	0.7865	4	40.00%	0.8750	67.4268	0.1090	5	50.00%	0.3677	3.6605	3.5735
	LDGT2	3	27.27%	6.4074	59.2227	2.5689	7	63.64%	1.2341	37.3049	1.9482	7	63.64%	1.3114	33.4703	2.8209
2008 Total		26	38.81%	3.0768	35.3811	2.6583	31	46.27%	1.9007	38.3573	2.0528	50	74.63%	1.3489	15.7505	3.1592
2009	LDGV	4	66.67%	1.8399	16.0477	3.6972	3	50.00%	1.9349	18.4500	3.2034	6	100.00%	1.4810	13.2132	3.2903
	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	1	50.00%	1.8983	23.2671	4.9721	1	50.00%	1.8983	23.2671	4.9721	2	100.00%	1.1126	16.6785	3.5579
2009 Total		5	62.50%	1.8515	17.4916	3.9522	4	50.00%	1.9257	19.6543	3.6456	8	100.00%	1.3889	14.0796	3.3572
2010	LDGV	4	44.44%	2.5117	25.4215	3.5386	7	77.78%	1.6976	39.5439	2.4001	6	66.67%	1.9178	22.0672	3.4183
	LDGT1	0	0.00%	0.0000	0.0000	0.0000	1	100.00%	0.1745	33.3370	0.0495	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
2010 Total		4	40.00%	2.5117	25.4215	3.5386	8	80.00%	1.5073	38.7680	2.1063	6	60.00%	1.9178	22.0672	3.4183
2011	LDGV	0	0.00%	0.0000	0.0000	0.0000	1	50.00%	0.7930	28.5273	0.1594	1	50.00%	1.0590	14.5840	3.7028
	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
2011 Total		0	0.00%	0.0000	0.0000	0.0000	1	50.00%	0.7930	28.5273	0.1594	1	50.00%	1.0590	14.5840	3.7028
2012	LDGV	1	50.00%	2.5505	25.0553	1.3310	1	50.00%	2.5505	25.0553	1.3310	1	50.00%	1.0772	7.3111	3.3772
	LDGT1	2	100.00%	2.2009	121.0380	2.4851	2	100.00%	2.2009	121.0380	2.4851	1	50.00%	1.7561	16.4620	4.9654
	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
2012 Total		3	75.00%	2.3175	89.0437	2.1004	3	75.00%	2.3175	89.0437	2.1004	2	50.00%	1.4167	11.8866	4.1713
2013	LDGV	1	50.00%	1.5653	27.1520	3.2164	1	50.00%	1.5653	27.1520	3.2164	2	100.00%	1.1012	17.2893	2.6512

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%	0.0935	16.1289	1.0229	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	100.00%	0.4897	5.3015	2.0091
2013 Total		1	25.00%	1.5653	27.1520	3.2164	2	50.00%	0.8294	21.6404	2.1197	3	75.00%	0.8974	13.2934	2.4372
2014	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
2014 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
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	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
2016 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		10,998	40.19%	4.0363	43.2262	2.2282	12,962	47.37%	2.9724	48.4601	1.6580	14,371	52.51%	1.0740	10.5609	3.5708

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	5,106	42.23%	3.6058	38.4957	1.7849	5,269	43.57%	2.7156	46.3088	1.1908	6,326	52.32%	0.9571	8.8098	3.0247
LDGT1	3,331	35.19%	4.2482	50.9643	2.4745	4,810	50.81%	2.8513	51.0699	1.7112	4,875	51.50%	0.9895	10.9667	3.9952
LDGT2	2,561	44.09%	4.6190	42.5928	2.7917	2,883	49.64%	3.6436	48.0379	2.4231	3,170	54.58%	1.4371	13.4312	4.0079
Grand Total	10,998	40.19%	4.0363	43.2262	2.2282	12,962	47.37%	2.9724	48.4601	1.6580	14,371	52.51%	1.0740	10.5609	3.5708

Appendix M

I/M240 Initial Failure for Other Report

Date
Between 1/1/2015 and 12/31/2015

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	241	198	82.16	43	17.84	231	97.47	6	2.49	168	91.80	15	8.20	56	96.55	2	3.45	173	86.93	26	13.07	240	99.59	1	0.41
	LDGT2	66	51	77.27	15	22.73	59	96.72	2	3.03	52	92.86	4	7.14	5	83.33	1	16.67	52	82.54	11	17.46	66	100.00	0	0.00
	LDGV	267	238	89.14	29	10.86	257	97.72	6	2.25	172	96.09	7	3.91	195	98.98	2	1.02	217	92.74	17	7.26	265	99.25	2	0.75
1982 Total		574	487	84.84	87	15.16	547	97.50	14	2.44	392	93.78	26	6.22	256	98.08	5	1.92	442	89.11	54	10.89	571	99.48	3	0.52
1983	LDGT1	386	331	85.75	55	14.25	378	98.44	6	1.55	324	96.14	13	3.86	120	96.00	5	4.00	307	87.97	42	12.03	384	99.48	2	0.52
	LDGT2	161	140	86.96	21	13.04	154	98.09	3	1.86	149	96.75	5	3.25	29	96.67	1	3.33	135	88.82	17	11.18	161	100.00	0	0.00
	LDGV	428	388	90.65	40	9.35	424	99.07	4	0.93	233	95.49	11	4.51	348	99.15	3	0.85	355	93.42	25	6.58	427	99.77	1	0.23
1983 Total		975	859	88.10	116	11.90	956	98.66	13	1.33	706	96.05	29	3.95	497	98.22	9	1.78	797	90.47	84	9.53	972	99.69	3	0.31
1984	LDGT1	554	460	83.03	94	16.97	542	98.37	9	1.62	418	93.93	27	6.07	250	96.90	8	3.10	437	87.75	61	12.25	552	99.64	2	0.36
	LDGT2	195	151	77.44	44	22.56	181	94.27	11	5.64	171	90.48	18	9.52	38	95.00	2	5.00	167	88.36	22	11.64	191	97.95	4	2.05
	LDGV	602	535	88.87	67	11.13	587	97.83	13	2.16	375	96.15	15	3.85	524	98.50	8	1.50	521	92.54	42	7.46	602	100.00	0	0.00
1984 Total		1,351	1146	84.83	205	15.17	1310	97.54	33	2.44	964	94.14	60	5.86	812	97.83	18	2.17	1,125	90.00	125	10.00	1345	99.56	6	0.44
1985	LDGT1	901	779	86.46	122	13.54	888	99.00	9	1.00	537	95.55	25	4.45	525	98.31	9	1.69	748	89.47	88	10.53	899	99.78	2	0.22
	LDGT2	284	233	82.04	51	17.96	271	97.83	6	2.11	251	93.31	18	6.69	70	93.33	5	6.67	237	87.13	35	12.87	283	99.65	1	0.35
	LDGV	987	902	91.39	85	8.61	978	98.19	8	0.81	500	96.34	19	3.66	900	99.34	6	0.66	888	93.87	58	6.13	984	99.70	3	0.30
1985 Total		2,172	1914	88.12	258	11.88	2137	98.94	23	1.06	1288	95.41	62	4.59	1,495	98.68	20	1.32	1,873	91.19	181	8.81	2166	99.72	6	0.28
1986	LDGT1	1,021	898	87.95	123	12.05	1002	98.62	14	1.37	534	95.70	24	4.30	742	99.07	7	0.93	868	90.51	91	9.49	1020	99.90	1	0.10
	LDGT2	279	217	77.78	62	22.22	269	97.11	8	2.87	243	93.10	18	6.90	101	91.82	9	8.18	232	85.61	39	14.39	277	99.28	2	0.72
	LDGV	1,121	1032	92.06	89	7.94	1104	98.57	16	1.43	477	95.98	20	4.02	1,054	99.53	5	0.47	1,003	95.16	51	4.84	1116	99.55	5	0.45
1986 Total		2,421	2147	88.68	274	11.32	2375	98.43	38	1.57	1254	95.29	62	4.71	1,897	98.91	21	1.09	2,103	92.08	181	7.92	2413	99.67	8	0.33
1987	LDGT1	1,456	1331	91.41	125	8.59	1441	99.11	13	0.89	635	95.92	27	4.08	1,172	99.32	8	0.68	1,279	93.43	90	6.57	1454	99.86	2	0.14
	LDGT2	429	377	87.88	52	12.12	418	98.35	7	1.63	384	96.73	13	3.27	332	99.10	3	0.90	388	91.08	38	8.92	427	99.53	2	0.47
	LDGV	1,596	1500	93.98	96	6.02	1582	99.12	14	0.88	589	97.36	16	2.64	1,523	99.67	5	0.33	1,442	95.37	70	4.63	1594	99.87	2	0.13
1987 Total		3,481	3208	92.16	273	7.84	3441	99.02	34	0.98	1608	96.63	56	3.37	3,027	99.47	16	0.53	3,109	94.01	198	5.99	3475	99.83	6	0.17
1988	LDGT1	1,559	1412	90.57	147	9.43	1542	99.04	15	0.96	800	95.92	34	4.08	1,465	99.46	8	0.54	1,428	93.58	98	6.42	1557	99.87	2	0.13
	LDGT2	545	479	87.89	66	12.11	535	98.53	8	1.47	497	96.88	16	3.12	498	99.60	2	0.40	488	91.21	47	8.79	545	100.00	0	0.00
	LDGV	1,590	1486	93.46	104	6.54	1573	98.99	16	1.01	524	97.40	14	2.60	1,555	99.87	2	0.13	1,441	94.93	77	5.07	1586	99.75	4	0.25
1988 Total		3,694	3377	91.42	317	8.58	3650	98.94	39	1.06	1821	96.60	64	3.40	3,518	99.66	12	0.34	3,357	93.80	222	6.20	3688	99.84	6	0.16
1989	LDGT1	2,272	2093	92.12	179	7.88	2261	99.52	11	0.48	967	97.19	28	2.81	2,133	99.67	7	0.33	2,082	93.70	140	6.30	2268	99.82	4	0.18
	LDGT2	876	799	91.21	77	8.79	871	99.43	5	0.57	428	98.17	8	1.83	827	99.76	2	0.24	809	92.78	63	7.22	873	99.66	3	0.34
	LDGV	2,604	2468	94.78	136	5.22	2587	99.39	16	0.61	732	97.47	19	2.53	2,531	99.76	6	0.24	2,441	96.25	95	3.75	2596	99.69	8	0.31
1989 Total		5,752	5360	93.18	392	6.82	5719	99.44	32	0.56	2127	97.48	55	2.52	5,491	99.73	15	0.27	5,332	94.71	298	5.29	5737	99.74	15	0.26
1990	LDGT1	1,939	1769	91.23	170	8.77	1925	99.38	12	0.62	837	97.89	18	2.11	1,888	99.79	4	0.21	1,750	92.54	141	7.46	1934	99.74	5	0.26
	LDGT2	829	751	90.59	78	9.41	820	98.91	9	1.09	391	98.49	6	1.51	822	99.52	4	0.48	762	92.59	61	7.41	827	99.76	2	0.24
	LDGV	3,249	3096	95.29	153	4.71	3241	99.82	6	0.18	531	97.07	16	2.93	3,238	99.82	6	0.18	3,073	96.27	119	3.73	3239	99.69	10	0.31
1990 Total		6,017	5616	93.34	401	6.66	5986	99.55	27	0.45	1759	97.78	40	2.22	5,948	99.77	14	0.23	5,585	94.56	321	5.44	6000	99.72	17	0.28
1991	LDGT1	3,254	3020	92.81	234	7.19	3243	99.66	11	0.34	1038	99.33	7	0.67	3,239	99.88	4	0.12	2,997	93.51	208	6.49	3249	99.85	5	0.15
	LDGT2	929	840	90.42	89	9.58	924	99.46	5	0.54	424	98.83	5	1.17	926	99.78	2	0.22	842	91.32	80	8.68	928	99.89	1	0.11
	LDGV	4,917	4695	95.49	222	4.51	4909	99.88	6	0.12	518	98.29	9	1.71	4,901	99.76	12	0.24	4,655	96.20	184	3.80	4904	99.74	13	0.26
1991 Total		9,100	8555	94.01	545	5.99	9076	99.76	22	0.24	1980	98.95	21	1.05	9,066	99.80	18	0.20	8,494	94.74	472	5.26	9081	99.79	19	0.21
1992	LDGT1	2,763	2557	92.54	206	7.46	2755	99.78	6	0.22	819	98.56	12	1.44	2,752	99.75	7	0.25	2,569	93.35	183	6.65	2759	99.86	4	0.14
	LDGT2	1,281	1157	90.32	124	9.68	1265	98.75	16	1.25	518	98.48	8	1.52	1,280	99.92	1	0.08	1,172	91.78	105	8.22	1281	100.00	0	0.00
	LDGV	4,984	4742	95.14	242	4.86	4964	99.68	16	0.32	434	97.97	9	2.03	4,969	99.82	9	0.18	4,728	96.00	197	4.00	4967	99.66	17	0.34
1992 Total		9,028	8456	93.66	572	6.34	8984	99.58	38	0.42	1771	98.39	29	1.61	9,001	99.81	17	0.19	8,469	94.58	485	5.42	9007	99.77	21	0.23
1993	LDGT1	4,876	4585	94.03	291	5.97	4861	99.75	12	0.25	1232	98.96	13	1.04	4,871	99.96	2	0.04	4,553	94.58	261	5.42	4868	99.84	8	0.16
	LDGT2	1,880	1732	92.13	148	7.87																				

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 %
1995	LDGT1	7,247	6818	94.08	429	5.92	7213	99.56	32	0.44	1130	99.47	6	0.53	7,227	99.83	12	0.17	6,803	94.63	386	5.37	7246	99.99	1	0.01
	LDGT2	4,218	3879	91.96	339	8.04	4197	99.55	19	0.45	1390	99.36	9	0.64	4,216	99.95	2	0.05	3,878	92.42	318	7.58	4218	100.00	0	0.00
	LDGV	11,493	11010	95.80	483	4.20	11459	99.77	26	0.23	840	97.90	18	2.10	11,462	99.77	26	0.23	10,986	96.50	398	3.50	11464	99.75	29	0.25
1995 Total		22,958	21707	94.55	1251	5.45	22869	99.66	77	0.34	3360	99.03	33	0.97	22,905	99.83	40	0.17	21,667	95.16	1,102	4.84	22928	99.87	30	0.13
1996	LDGT1	7,274	6696	92.05	578	7.95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6,665	92.06	575	7.94	7270	99.95	4	0.05
	LDGT2	3,268	3026	92.59	242	7.41	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3,011	92.56	242	7.44	3268	100.00	0	0.00
	LDGV	11,434	10951	95.78	483	4.22	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10,872	95.96	458	4.04	11408	99.77	26	0.23
1996 Total		21,976	20673	94.07	1303	5.93	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	20,548	94.16	1,275	5.84	21946	99.86	30	0.14
1997	LDGT1	12,447	11619	93.35	828	6.65	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11,533	93.32	826	6.68	12445	99.98	2	0.02
	LDGT2	4,988	4669	93.60	319	6.40	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4,651	93.68	314	6.32	4983	99.90	5	0.10
	LDGV	16,670	15919	95.49	751	4.51	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	15,743	95.57	730	4.43	16649	99.87	21	0.13
1997 Total		34,105	32207	94.43	1898	5.57	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	31,927	94.47	1,870	5.53	34077	99.92	28	0.08
1998	LDGT1	13,502	12681	93.92	821	6.08	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	12,648	93.96	813	6.04	13493	99.93	9	0.07
	LDGT2	4,852	4557	93.92	295	6.08	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4,539	93.94	293	6.06	4850	99.96	2	0.04
	LDGV	16,899	16126	95.43	773	4.57	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	15,934	95.49	752	4.51	16877	99.87	22	0.13
1998 Total		35,253	33364	94.64	1898	5.36	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	33,121	94.69	1,858	5.31	35220	99.91	33	0.09
1999	LDGT1	16,935	16019	94.59	916	5.41	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	15,981	94.61	911	5.39	16928	99.96	7	0.04
	LDGT2	8,399	7950	94.65	449	5.35	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7,913	94.70	443	5.30	8393	99.93	6	0.07
	LDGV	22,645	21633	95.53	1012	4.47	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	21,397	95.62	981	4.38	22614	99.86	31	0.14
1999 Total		47,979	45602	95.05	2377	4.95	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	45,291	95.10	2,335	4.90	47935	99.91	44	0.09
2000	LDGT1	17,108	16092	94.06	1016	5.94	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	16,030	94.09	1,006	5.91	17097	99.94	11	0.06
	LDGT2	6,790	6405	94.33	385	5.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6,355	94.36	380	5.64	6785	99.93	5	0.07
	LDGV	24,261	23232	95.76	1029	4.24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	22,977	95.83	1,001	4.17	24232	99.88	29	0.12
2000 Total		48,159	45729	94.95	2430	5.05	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	45,362	95.00	2,387	5.00	48114	99.91	45	0.09
2001	LDGT1	20,797	19634	94.41	1163	5.59	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	19,573	94.45	1,150	5.55	20782	99.93	15	0.07
	LDGT2	8,629	8080	93.64	549	6.36	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8,019	93.59	549	6.41	8629	100.00	0	0.00
	LDGV	28,890	27744	96.03	1146	3.97	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	27,382	96.06	1,124	3.94	28868	99.92	22	0.08
2001 Total		58,316	55458	95.10	2858	4.90	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	54,974	95.12	2,823	4.88	58279	99.94	37	0.06
2002	LDGT1	19,813	18932	95.55	881	4.45	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	18,777	95.59	867	4.41	19799	99.93	14	0.07
	LDGT2	6,492	6108	94.09	384	5.91	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6,060	94.06	383	5.94	6491	99.98	1	0.02
	LDGV	26,789	25520	95.26	1269	4.74	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	25,173	95.26	1,253	4.74	26773	99.94	16	0.06
2002 Total		53,094	50560	95.23	2534	4.77	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	50,010	95.23	2,503	4.77	53063	99.94	31	0.06
2003	LDGT1	23,276	22182	95.30	1094	4.70	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	22,054	95.29	1,089	4.71	23271	99.98	5	0.02
	LDGT2	9,055	8604	95.02	451	4.98	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8,552	95.02	448	4.98	9052	99.97	3	0.03
	LDGV	31,225	29965	95.96	1260	4.04	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	29,498	95.93	1,251	4.07	31216	99.97	9	0.03
2003 Total		63,556	60751	95.59	2805	4.41	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	60,104	95.57	2,788	4.43	63539	99.97	17	0.03
2004	LDGT1	20,032	19189	95.79	843	4.21	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	19,070	95.78	840	4.22	20029	99.99	3	0.01
	LDGT2	8,607	8137	94.54	470	5.46	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8,098	94.55	467	5.45	8604	99.97	3	0.03
	LDGV	23,965	22960	95.81	1005	4.19	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	22,555	95.76	998	4.24	23957	99.97	8	0.03
2004 Total		52,604	50286	95.59	2318	4.41	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	49,723	95.57	2,305	4.43	52590	99.97	14	0.03
2005	LDGT1	3,781	3617	95.66	164	4.34	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3,589	95.68	162	4.32	3779	99.95	2	0.05
	LDGT2	1,438	1377	95.76	61	4.24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1,366	95.73	61	4.27	1438	100.00	0	0.00
	LDGV	4,186	4002	95.60	184	4.40	0																			

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	303	286	94.39	17	5.61	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	262	94.24	16	5.76	302	99.67	1	0.33
	LDGT2	201	191	95.02	10	4.98	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	164	94.25	10	5.75	201	100.00	0	0.00
	LDGV	592	577	97.47	15	2.53	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	565	97.41	15	2.59	592	100.00	0	0.00
2009 Total		1,096	1054	96.17	42	3.83	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	991	96.03	41	3.97	1095	99.91	1	0.09
2010	LDGT1	217	213	98.16	4	1.84	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	189	97.93	4	2.07	217	100.00	0	0.00
	LDGT2	135	125	92.59	10	7.41	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	78	88.64	10	11.36	135	100.00	0	0.00
	LDGV	374	361	96.52	13	3.48	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	321	96.40	12	3.60	373	99.73	1	0.27
2010 Total		726	699	96.28	27	3.72	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	588	95.77	26	4.23	725	99.86	1	0.14
2011	LDGT1	164	158	96.34	6	3.66	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	143	95.97	6	4.03	164	100.00	0	0.00
	LDGT2	86	77	89.53	9	10.47	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	60	86.96	9	13.04	86	100.00	0	0.00
	LDGV	286	281	98.25	5	1.75	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	256	98.08	5	1.92	286	100.00	0	0.00
2011 Total		536	516	96.27	20	3.73	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	459	95.82	20	4.18	536	100.00	0	0.00
2012	LDGT1	74	73	98.65	1	1.35	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	65	98.48	1	1.52	74	100.00	0	0.00
	LDGT2	35	35	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	27	100.00	0	0.00	35	100.00	0	0.00
	LDGV	229	224	97.82	5	2.18	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	179	97.28	5	2.72	229	100.00	0	0.00
2012 Total		338	332	98.22	6	1.78	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	271	97.83	6	2.17	338	100.00	0	0.00
2013	LDGT1	24	23	95.83	1	4.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	19	95.00	1	5.00	24	100.00	0	0.00
	LDGT2	19	19	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	19	100.00	0	0.00
	LDGV	135	132	97.78	3	2.22	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	112	97.39	3	2.61	135	100.00	0	0.00
2013 Total		178	174	97.75	4	2.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	145	97.32	4	2.68	178	100.00	0	0.00
2014	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	5	100.00	0	0.00	6	100.00	0	0.00
	LDGT2	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	7	100.00	0	0.00	10	100.00	0	0.00
	LDGV	32	32	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	32	100.00	0	0.00
2014 Total		48	48	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	48	100.00	0	0.00
2015	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	4	100.00	0	0.00	5	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	3	100.00	0	0.00	4	100.00	0	0.00
	LDGV	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
2015 Total		21	21	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	19	100.00	0	0.00	21	100.00	0	0.00
2016	LDGT1	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	0		0		1	100.00	0	0.00
	LDGV	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	0		0		1	100.00	0	0.00
2016 Total		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	0		0		2	100.00	0	0.00
Grand Total		541,869	514063	94.87	27806	5.13	96770	99.51	479	0.09	24313	97.64	588	2.36	93,687	99.75	232	0.25	509,249	95.08	26,373	4.92	541385	99.91	484	0.09

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	195,992	184869	94.32	11123	5.68	33995	99.48	178	0.09	10669	97.70	251	2.30	32,168	99.73	87	0.27	183,744	94.54	10,622	5.46	195871	99.94	121	0.06	
LDGT2	80,697	75517	93.58	5180	6.42	14643	99.16	124	0.15	6597	97.92	140	2.08	13,840	99.70	41	0.30	75,138	93.84	4,934	6.16	80652	99.94	45	0.06	
LDGV	265,180	253677	95.66	11503	4.34	48132	99.63	177	0.07	7047	97.28	197	2.72	47,679	99.78	104	0.22	250,367	95.86	10,817	4.14	264862	99.88	318	0.12	
Grand Total	541,869	514063	94.87	27806	5.13	96770	99.51	479	0.09	24313	97.64	588	2.36	93,687	99.75	232	0.25	509,249	95.08	26,373	4.92	541385	99.91	484	0.09	

Appendix N

I/M240 Retest Pass Reduction Report

Date

Between 1/1/2015 and 12/31/2015

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	83	3.4354	57.1564	1.6557	42	50.60%	1.6097	20.9855	1.8583	1.2419	43.55%	21.9238	51.09%	0.0190	1.01%	560.50
	LDGT1	133	5.6411	93.0059	2.2153	75	56.39%	2.5158	28.2619	2.7139	2.5300	50.14%	46.3041	62.10%	-0.2465	-9.99%	165.00
	LDGT2	35	6.7201	79.5236	2.3930	21	60.00%	3.0699	41.7813	3.4312	3.8574	55.68%	35.6683	46.05%	-0.8544	-33.16%	40.00
1982 Total		251	5.0622	79.2713	2.0550	138	54.98%	2.3243	28.1047	2.5626	2.3400	50.17%	37.2655	57.01%	-0.2582	-11.20%	331.50
1983	LDGV	147	4.3583	56.7130	1.7566	76	51.70%	1.3933	15.8692	1.9046	1.8389	56.89%	25.5863	61.72%	-0.0721	-3.93%	471.50
	LDGT1	134	5.6725	76.3850	2.1619	79	58.96%	2.7395	34.2184	2.3769	2.0902	43.28%	31.1826	47.68%	-0.1172	-5.18%	1140.33
	LDGT2	100	5.5087	95.8520	2.8654	35	35.00%	2.7289	34.6664	2.7377	2.1823	44.44%	33.8137	49.38%	0.4959	15.34%	213.00
1983 Total		381	5.1224	73.9045	2.1902	190	49.87%	2.1991	26.9613	2.2544	2.0066	47.71%	29.4287	52.19%	0.0138	0.61%	762.83
1984	LDGV	222	3.8310	58.6867	1.6651	106	47.75%	1.3920	13.0128	1.8588	1.4758	51.46%	27.4108	67.81%	0.0305	1.62%	130.00
	LDGT1	228	3.9599	78.4668	2.1152	120	52.63%	2.2083	27.7691	2.5837	1.0750	32.74%	30.9565	52.71%	-0.2226	-9.43%	284.67
	LDGT2	136	4.9552	90.1405	2.6506	71	52.21%	2.0327	26.7167	3.0636	2.1638	51.56%	47.1477	63.83%	-0.1799	-6.24%	258.00
1984 Total		586	4.1421	73.6826	2.0689	297	50.68%	1.8750	22.2510	2.4397	1.4784	44.09%	33.5617	60.13%	-0.1220	-5.27%	251.14
1985	LDGV	352	3.2245	46.0315	1.8623	161	45.74%	1.1879	10.1207	1.9291	1.6581	58.26%	22.9681	69.41%	0.0600	3.02%	106.00
	LDGT1	365	4.1998	64.7045	2.8096	177	48.49%	1.8620	20.3750	2.6961	1.3496	42.02%	23.2008	53.24%	-0.0029	-0.11%	410.71
	LDGT2	184	6.9920	79.2142	2.7150	72	39.13%	1.7420	23.6366	2.8521	2.9759	63.08%	34.0220	59.01%	0.0275	0.96%	153.75
1985 Total		901	4.3890	60.3725	2.4202	410	45.50%	1.5762	16.9211	2.4223	1.7563	52.70%	25.0097	59.65%	0.0271	1.11%	242.71
1986	LDGV	345	3.1315	42.3952	1.7866	171	49.57%	1.0705	9.2799	1.9032	1.3800	56.31%	20.1195	68.43%	0.0398	2.05%	372.00
	LDGT1	325	3.7035	51.9255	2.4381	187	57.54%	1.7642	18.2461	2.4497	1.4766	45.56%	22.3833	55.09%	-0.0445	-1.85%	301.67
	LDGT2	197	4.7926	73.9231	3.3433	86	43.65%	1.7482	19.4318	3.2529	1.7164	49.54%	37.5127	65.88%	-0.0196	-0.61%	2016.50
1986 Total		867	3.7234	53.1315	2.3845	444	51.21%	1.4939	15.0226	2.3948	1.4858	49.86%	24.4419	61.93%	-0.0072	-0.30%	1079.44
1987	LDGV	388	2.8966	42.3100	1.9328	186	47.94%	0.9773	8.3061	1.7928	1.1010	52.98%	17.8855	68.29%	0.2490	12.20%	422.67
	LDGT1	418	3.6016	50.3902	2.2871	218	52.15%	1.4150	14.4598	2.2703	1.3038	47.95%	23.0993	61.50%	0.0859	3.65%	337.25
	LDGT2	166	5.4345	69.5833	3.1148	91	54.82%	1.4740	13.6971	3.1428	2.5141	63.04%	37.8766	73.44%	0.0639	1.99%	200.00
1987 Total		972	3.6332	50.4426	2.2870	495	50.93%	1.2614	12.0073	2.2513	1.4501	53.48%	23.8568	66.52%	0.1432	5.98%	362.27
1988	LDGV	450	2.9563	32.1670	2.0300	225	50.00%	0.8633	8.3106	1.6221	1.6080	65.07%	19.9220	70.56%	0.3109	16.08%	393.11
	LDGT1	436	3.0338	41.7925	2.5718	247	56.65%	1.3341	12.6989	2.1571	1.1296	45.85%	18.7924	59.67%	0.3578	14.23%	272.88
	LDGT2	219	3.1095	34.7586	3.4175	116	52.97%	1.3668	12.8303	2.5658	1.2279	47.32%	14.1493	52.44%	0.6226	19.53%	427.50
1988 Total		1105	3.0172	36.4786	2.5187	588	53.21%	1.1604	11.0456	2.0330	1.3321	53.44%	18.3087	62.37%	0.3921	16.17%	346.11
1989	LDGV	430	3.1848	32.4830	1.9866	251	58.37%	0.9035	8.4161	1.7049	1.3158	59.29%	18.7783	69.05%	0.1443	7.80%	332.30
	LDGT1	620	3.1377	44.7443	2.6929	344	55.48%	1.2263	12.4412	2.1506	1.2895	51.26%	19.7268	61.32%	0.3947	15.51%	462.57
	LDGT2	234	4.0528	33.3916	3.3873	148	63.25%	1.4807	12.2396	2.5505	2.2711	60.53%	17.0793	58.25%	0.5105	16.68%	292.78
1989 Total		1284	3.3202	38.5691	2.5830	743	57.87%	1.1679	11.0413	2.0797	1.4939	56.12%	18.8790	63.10%	0.3332	13.81%	353.69
1990	LDGV	599	2.5910	34.8573	2.1936	328	54.76%	0.7792	8.0882	1.6361	1.2619	61.82%	20.2911	71.50%	0.3579	17.95%	510.20
	LDGT1	621	3.3653	44.2919	2.8565	331	53.30%	1.2423	11.9672	2.3414	1.3454	51.99%	20.6828	63.35%	0.4538	16.24%	233.79
	LDGT2	282	4.0259	37.1885	3.1668	139	49.29%	1.4518	13.5647	2.3954	1.6405	53.05%	15.9497	54.04%	0.7205	23.12%	346.67
1990 Total		1502	3.1805	39.1957	2.6504	798	53.13%	1.0884	10.6511	2.0609	1.3625	55.59%	19.6974	64.90%	0.4609	18.28%	312.00
1991	LDGV	915	2.5800	28.4558	2.0678	483	52.79%	0.7051	7.4198	1.6007	1.1953	62.90%	15.9695	68.28%	0.3778	19.10%	319.57
	LDGT1	678	3.0980	37.6601	2.4985	422	62.24%	1.0448	10.7891	1.8208	1.3411	56.21%	16.9078	61.05%	0.4781	20.80%	381.63

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	338	3.1613	36.9620	2.9187	174	51.48%	1.2929	13.0747	2.2526	1.1093	46.18%	12.9509	49.76%	0.5873	20.68%	456.00
1991 Total		1931	2.8636	33.1765	2.3680	1079	55.88%	0.9328	9.6494	1.7919	1.2385	57.04%	15.8497	62.16%	0.4508	20.10%	382.19
1992	LDGV	1028	2.3769	26.8853	2.0011	553	53.79%	0.6469	6.3511	1.5127	1.1783	64.56%	15.7678	71.29%	0.2794	15.59%	199.63
	LDGT1	507	2.5352	32.9423	2.2312	332	65.48%	1.0708	11.2347	1.9401	0.8522	44.32%	13.8374	55.19%	0.2796	12.60%	426.00
	LDGT2	550	4.0222	38.1232	2.7377	266	48.36%	1.2838	12.6238	2.1337	1.6569	56.34%	16.7469	57.02%	0.5998	21.94%	423.00
1992 Total		2085	2.8494	31.3226	2.2514	1151	55.20%	0.9164	9.2094	1.7795	1.1949	56.60%	15.4373	62.63%	0.3535	16.57%	342.45
1993	LDGV	1159	2.0398	25.8996	2.1367	635	54.79%	0.6360	6.2801	1.5718	0.9639	60.25%	15.4064	71.04%	0.3805	19.49%	435.74
	LDGT1	846	2.5488	30.8256	2.8652	524	61.94%	0.9777	9.9632	1.9666	1.0255	51.19%	14.1441	58.67%	0.6763	25.59%	377.43
	LDGT2	664	3.5460	32.0534	3.1274	351	52.86%	1.3618	13.0844	2.3624	1.5297	52.90%	12.7328	49.32%	0.7361	23.76%	336.75
1993 Total		2669	2.5759	28.9920	2.6141	1510	56.58%	0.9233	9.1399	1.8926	1.1168	54.74%	14.3469	61.09%	0.5658	23.02%	402.97
1994	LDGV	1264	1.9227	20.6582	1.9952	697	55.14%	0.4930	5.2396	1.2470	0.9678	66.25%	12.0687	69.73%	0.4682	27.30%	540.42
	LDGT1	1290	2.2312	25.3236	2.8947	726	56.28%	0.8229	8.6133	1.7846	0.9526	53.65%	11.7834	57.77%	0.8862	33.18%	290.24
	LDGT2	1155	2.4944	25.6106	3.0272	602	52.12%	0.9546	9.8815	1.9353	1.2177	56.06%	12.9344	56.69%	0.8682	30.97%	432.88
1994 Total		3709	2.2080	23.8230	2.6294	2025	54.60%	0.7485	7.8291	1.6444	1.0366	58.07%	12.2238	60.96%	0.7370	30.95%	407.67
1995	LDGV	1739	1.8198	18.8268	1.8638	995	57.22%	0.4644	5.0364	1.1509	0.8901	65.71%	10.7100	68.02%	0.4824	29.54%	352.17
	LDGT1	1491	2.0462	24.5762	2.8776	866	58.08%	0.7317	7.8946	1.7433	0.8935	54.98%	12.1421	60.60%	0.8157	31.87%	499.06
	LDGT2	1405	2.9581	26.2182	2.9092	726	51.67%	0.9256	10.0030	1.8907	1.1680	55.79%	11.0020	52.38%	0.9117	32.53%	420.96
1995 Total		4635	2.2377	22.9168	2.5068	2587	55.81%	0.6833	7.3870	1.5568	0.9692	58.65%	11.2713	60.41%	0.7144	31.46%	422.45
1996	LDGV	1555	1.0669	15.2315	1.7279	926	59.55%	0.3488	4.4483	0.9147	0.4623	57.00%	7.0917	61.45%	0.4824	34.53%	342.33
	LDGT1	1327	1.1298	15.8095	2.5011	930	70.08%	0.4027	5.3839	1.4809	0.5498	57.72%	8.5922	61.48%	0.6665	31.04%	430.86
	LDGT2	695	1.5817	18.1621	2.4484	426	61.29%	0.5254	6.1801	1.3995	0.6367	54.79%	9.2256	59.88%	0.6807	32.72%	547.54
1996 Total		3577	1.1903	16.0153	2.1547	2282	63.80%	0.4037	5.1529	1.2360	0.5305	56.79%	8.1016	61.12%	0.5945	32.48%	460.73
1997	LDGV	2060	1.1480	15.8797	1.6095	1348	65.44%	0.3377	4.4247	0.8640	0.5018	59.77%	8.5937	66.01%	0.4462	34.06%	317.33
	LDGT1	2189	1.0653	14.7685	2.5107	1445	66.01%	0.3592	5.2845	1.3411	0.4525	55.75%	6.5515	55.35%	0.7766	36.67%	424.52
	LDGT2	1079	1.7626	16.9812	2.7418	637	59.04%	0.4335	5.7120	1.3426	0.7807	64.30%	8.8579	60.80%	0.9359	41.08%	380.50
1997 Total		5328	1.2385	15.6462	2.2091	3430	64.38%	0.3646	5.0260	1.1539	0.5328	59.38%	7.7824	60.76%	0.6764	36.95%	385.69
1998	LDGV	2311	0.9353	14.7079	1.4314	1472	63.70%	0.2624	3.8010	0.6770	0.4958	65.39%	8.6803	69.55%	0.4822	41.60%	522.12
	LDGT1	2183	0.9512	13.7216	2.3407	1491	68.30%	0.3375	4.5205	1.2007	0.4362	56.38%	7.1645	61.31%	0.7722	39.14%	466.74
	LDGT2	1110	1.4009	17.5275	2.6043	660	59.46%	0.3676	5.2439	1.2507	0.7030	65.67%	10.1145	65.86%	0.9879	44.13%	647.44
1998 Total		5604	1.0337	14.8822	2.0179	3623	64.65%	0.3124	4.3600	0.9970	0.5090	61.96%	8.3178	65.61%	0.6937	41.03%	515.19
1999	LDGV	2532	0.8122	12.1148	1.4932	1720	67.93%	0.2279	3.4047	0.6435	0.4081	64.17%	6.3045	64.93%	0.5588	46.48%	258.13
	LDGT1	2521	0.7929	11.8496	2.0351	1688	66.96%	0.2671	4.0844	0.9391	0.4184	61.04%	6.6285	61.87%	0.7006	42.73%	533.12
	LDGT2	1747	1.3048	12.9674	2.3691	1010	57.81%	0.3198	3.8258	1.0101	0.6440	66.81%	7.5288	66.31%	1.0110	50.02%	644.92
1999 Total		6800	0.9316	12.2355	1.9191	4418	64.97%	0.2639	3.7606	0.8403	0.4660	63.84%	6.7082	64.08%	0.7163	46.02%	468.40
2000	LDGV	2680	0.8203	11.3013	1.5763	1819	67.87%	0.2029	3.2584	0.5523	0.4104	66.91%	5.9038	64.44%	0.6847	55.35%	331.03
	LDGT1	2464	0.7327	13.2315	1.8563	1680	68.18%	0.2466	3.6192	0.8545	0.3757	60.38%	6.6597	64.79%	0.6397	42.81%	570.58
	LDGT2	1123	1.2388	17.0602	2.0892	706	62.87%	0.2905	3.9730	0.9037	0.6953	70.53%	10.5192	72.59%	0.7279	44.61%	389.00
2000 Total		6267	0.8608	13.0922	1.7783	4205	67.10%	0.2351	3.5225	0.7320	0.4444	65.40%	6.9807	66.46%	0.6740	47.93%	431.24
2001	LDGV	2451	0.7152	10.6985	1.3535	1792	73.11%	0.1554	2.7940	0.4204	0.4115	72.58%	6.0252	68.32%	0.5566	56.97%	493.43
	LDGT1	1963	0.7120	11.5971	1.4021	1553	79.11%	0.1651	3.2575	0.5406	0.2868	63.47%	5.1686	61.34%	0.4771	46.88%	453.37
	LDGT2	1066	0.8686	9.3193	1.7341	774	72.61%	0.2331	3.2509	0.7361	0.3276	58.42%	4.7597	59.42%	0.5700	43.64%	243.14

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		5480	0.7439	10.7521	1.4449	4119	75.16%	0.1737	3.0546	0.5251	0.3487	66.75%	5.4644	64.14%	0.5291	50.19%	442.14
2002	LDGV	2423	0.6865	8.8175	1.2657	1850	76.35%	0.1319	2.7330	0.3565	0.3652	73.47%	4.2132	60.66%	0.5982	62.65%	458.44
	LDGT1	1724	0.5871	16.0878	1.3333	1291	74.88%	0.1345	3.4128	0.4678	0.2900	68.33%	8.0503	70.23%	0.5511	54.08%	406.88
	LDGT2	751	0.9084	11.6412	1.7356	570	75.90%	0.2173	3.1586	0.7617	0.4624	68.02%	6.6201	67.70%	0.5944	43.83%	362.20
2002 Total		4898	0.6855	11.8095	1.3615	3711	75.77%	0.1459	3.0348	0.4575	0.3540	70.81%	5.9178	66.10%	0.5812	55.96%	424.95
2003	LDGV	2117	0.5361	6.8317	1.1210	1694	80.02%	0.1021	1.9101	0.2907	0.2509	71.08%	3.1038	61.90%	0.5105	63.72%	530.60
	LDGT1	1593	0.4594	11.0414	0.9096	1335	83.80%	0.1080	2.3457	0.3925	0.2200	67.08%	5.5356	70.24%	0.2970	43.07%	453.94
	LDGT2	765	0.7470	13.3268	1.5091	608	79.48%	0.1771	2.6563	0.5491	0.3712	67.70%	6.4943	70.97%	0.5565	50.34%	700.17
2003 Total		4475	0.5449	9.4406	1.1121	3637	81.27%	0.1168	2.1947	0.3713	0.2597	68.98%	4.5632	67.52%	0.4398	54.23%	547.44
2004	LDGV	1648	0.5161	6.8639	1.0138	1327	80.52%	0.1005	1.8408	0.2311	0.2645	72.47%	3.3061	64.23%	0.4833	67.65%	345.69
	LDGT1	1312	0.4534	11.0201	0.8438	1082	82.47%	0.0924	2.3920	0.2631	0.2195	70.38%	5.3661	69.17%	0.3577	57.62%	511.81
	LDGT2	689	0.6537	8.0905	1.0479	568	82.44%	0.1126	2.1204	0.2904	0.2490	68.87%	4.0206	65.47%	0.3862	57.08%	301.17
2004 Total		3649	0.5195	8.5899	0.9591	2977	81.58%	0.0999	2.0945	0.2540	0.2452	71.06%	4.1911	66.68%	0.4191	62.26%	414.00
2005	LDGV	421	0.6280	11.3337	1.2216	295	70.07%	0.1046	2.1047	0.2443	0.3570	77.33%	6.8646	76.53%	0.6441	72.50%	231.60
	LDGT1	262	0.4536	9.5589	1.0844	220	83.97%	0.1083	2.0760	0.2476	0.1693	60.99%	4.2902	67.39%	0.5174	67.63%	0.00
	LDGT2	162	1.1701	12.2367	1.6556	104	64.20%	0.1597	2.7446	0.4444	0.3244	67.01%	5.7515	67.70%	0.7009	61.20%	0.00
2005 Total		845	0.6778	10.9566	1.2623	619	73.25%	0.1152	2.2020	0.2791	0.2848	71.20%	5.7626	72.35%	0.6086	68.56%	193.00
2006	LDGV	309	1.0732	15.5558	1.6570	209	67.64%	0.1250	2.2470	0.2218	0.5302	80.92%	9.0363	80.09%	0.9433	80.96%	411.00
	LDGT1	162	0.3138	7.1230	1.1184	139	85.80%	0.0707	1.6319	0.2255	0.1986	73.76%	5.0068	75.42%	0.6360	73.82%	0.00
	LDGT2	117	1.2025	19.6848	1.6360	84	71.79%	0.1459	2.5311	0.3234	0.6467	81.59%	11.0225	81.33%	0.7977	71.15%	0.00
2006 Total		588	0.8897	14.0541	1.5044	432	73.47%	0.1116	2.1044	0.2428	0.4462	79.99%	8.1260	79.43%	0.8161	77.07%	411.00
2007	LDGV	165	0.5531	7.0961	1.0673	135	81.82%	0.0960	2.0356	0.2059	0.3344	77.70%	3.5635	63.64%	0.7065	77.44%	25.50
	LDGT1	119	0.8001	10.0901	0.4280	109	91.60%	0.0735	2.0404	0.1667	0.5273	87.76%	4.7131	69.79%	0.2189	56.77%	0.00
	LDGT2	59	0.7683	11.4792	1.1891	51	86.44%	0.1288	1.9249	0.2769	0.5890	82.05%	9.0832	82.51%	0.7355	72.65%	0.00
2007 Total		343	0.6758	8.8888	0.8665	295	86.01%	0.0934	2.0182	0.2037	0.4497	82.81%	4.9425	71.01%	0.5314	72.29%	25.50
2008	LDGV	138	0.9679	15.9736	1.4970	101	73.19%	0.1634	2.6504	0.2168	0.5059	75.58%	6.7313	71.75%	1.1469	84.10%	1050.00
	LDGT1	80	0.1212	3.6696	0.7897	71	88.75%	0.0357	1.0913	0.1047	0.0679	65.51%	2.6961	71.19%	0.4124	79.75%	0.00
	LDGT2	74	0.4265	8.4894	0.5582	58	78.38%	0.0977	2.3540	0.1975	0.3104	76.05%	3.0642	56.55%	0.2694	57.70%	0.00
2008 Total		292	0.5987	10.7059	1.0653	230	78.77%	0.1074	2.0944	0.1773	0.3214	74.94%	4.5609	68.53%	0.6989	79.76%	1050.00
2009	LDGV	38	0.5048	6.6936	1.6786	26	68.42%	0.0517	1.2889	0.1907	0.2372	82.12%	3.3592	72.27%	0.9609	83.44%	0.00
	LDGT1	20	0.0300	1.0955	0.0760	19	95.00%	0.0202	0.9859	0.0578	0.0107	34.54%	0.1424	12.62%	0.0201	25.74%	0.00
	LDGT2	9	0.0704	2.0668	0.2843	9	100.00%	0.0663	1.9089	0.2888	0.0041	5.76%	0.1579	7.64%	-0.0045	-1.59%	0.00
2009 Total		67	0.3047	4.4010	1.0129	54	80.60%	0.0430	1.2856	0.1603	0.1187	73.38%	1.6938	56.85%	0.4690	74.52%	0.00
2010	LDGV	20	0.7661	13.2626	1.3201	19	95.00%	0.1783	2.5936	0.2372	0.5939	76.91%	10.8539	80.71%	1.0247	81.20%	0.00
	LDGT1	8	0.0367	4.6735	0.3016	8	100.00%	0.0108	0.6203	0.0403	0.0259	70.63%	4.0532	86.73%	0.2613	86.64%	0.00
	LDGT2	11	0.0166	0.3415	0.0383	11	100.00%	0.0296	0.6239	0.0900	-0.0130	-78.30%	-0.2824	-82.71%	-0.0517	-135.05%	0.00
2010 Total		39	0.4051	7.8563	0.7496	38	97.44%	0.1000	1.6080	0.1531	0.2987	74.92%	6.1985	79.40%	0.5524	78.29%	0.00
2011	LDGV	11	0.1876	4.9805	0.5184	11	100.00%	0.0544	1.9792	0.3324	0.1332	70.99%	3.0013	60.26%	0.1860	35.88%	0.00
	LDGT1	9	0.0176	1.0617	0.0520	9	100.00%	0.0257	1.6522	0.0440	-0.0081	-45.90%	-0.5905	-55.62%	0.0081	15.48%	0.00
	LDGT2	8	0.0317	0.9155	0.0411	7	87.50%	0.0295	1.5824	0.0766	0.0038	11.54%	-0.6219	-64.74%	-0.0347	-82.88%	0.00
2011 Total		28	0.0884	2.5594	0.2321	27	96.43%	0.0384	1.7673	0.1699	0.0526	57.80%	0.8647	32.85%	0.0695	29.01%	0.00

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	4	0.2787	2.4907	0.8811	3	75.00%	0.0082	1.1533	0.2177	0.0043	34.57%	-0.2693	-30.47%	-0.1687	-344.35%	0.00
	LDGT1	2	0.9112	9.6380	2.5067	2	100.00%	0.1828	2.3610	0.3735	0.7283	79.93%	7.2770	75.50%	2.1332	85.10%	0.00
2012 Total		6	0.4895	4.8731	1.4229	5	83.33%	0.0781	1.6363	0.2800	0.2939	79.02%	2.7492	62.69%	0.7520	72.87%	0.00
2013	LDGV	4	0.1709	2.8633	0.5544	3	75.00%	0.0116	1.0882	0.0451	0.0038	24.68%	0.2539	18.92%	-0.0012	-2.81%	0.00
	LDGT1	2	0.0697	9.3516	0.5308	2	100.00%	0.0634	3.2938	0.3538	0.0064	9.18%	6.0577	64.78%	0.1771	33.36%	0.00
	LDGT2	2	0.2598	2.8597	1.0227	1	50.00%	0.0296	0.3079	0.0555	0.0003	1.00%	0.1099	26.30%	-0.0192	-52.89%	0.00
2013 Total		8	0.1678	4.4844	0.6656	6	75.00%	0.0318	1.6934	0.1497	0.0041	11.36%	2.1645	56.11%	0.0552	26.94%	0.00
Grand Total		71172	1.5081	19.5983	1.9312	46563	65.42%	0.4296	5.2824	1.0052	0.6240	59.23%	9.0713	63.20%	0.5673	36.07%	430.88

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	30008	1.2941	16.7782	1.5766	19659	65.51%	0.3209	4.0469	0.7556	0.5782	64.31%	8.3179	67.27%	0.5030	39.97%	390.08	
LDGT1	26032	1.4294	21.0006	2.0554	17722	68.08%	0.4696	5.9177	1.1241	0.5606	54.42%	9.2539	61.00%	0.5630	33.37%	442.67	
LDGT2	15132	2.0682	22.7780	2.4209	9182	60.68%	0.5852	6.7016	1.3104	0.8445	59.07%	10.3319	60.66%	0.7132	35.24%	474.84	
Grand Total		71172	1.5081	19.5983	1.9312	46563	65.42%	0.4296	5.2824	1.0052	0.6240	59.23%	9.0713	63.20%	0.5673	36.07%	430.88

Appendix O

I/M240 Retest Frequency Report

Date
Between 1/1/2015 and 12/31/2015

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	83	1.6	49	59.04%	29	59.18%	18	21.69%	7	38.89%	8	9.64%	1	12.50%	6	7.23%	3	50.00%	2	2.41%	2	100.00%
	LDGT1	133	1.6	80	60.15%	51	63.75%	23	17.29%	11	47.83%	15	11.28%	8	53.33%	6	4.51%	2	33.33%	9	6.77%	3	33.33%
	LDGT2	35	2.5	20	57.14%	12	60.00%	7	20.00%	5	71.43%	1	2.86%	0	0.00%	1	2.86%	1	100.00%	6	17.14%	3	50.00%
1982 Total		251	1.8	149	59.36%	92	61.74%	48	19.12%	23	47.92%	24	9.56%	9	37.50%	13	5.18%	6	46.15%	17	6.77%	8	47.06%
1983	LDGV	147	1.5	85	57.82%	57	67.06%	25	17.01%	8	32.00%	15	10.20%	7	46.67%	7	4.76%	1	14.29%	15	10.20%	3	20.00%
	LDGT1	134	1.7	78	58.21%	51	65.38%	30	22.39%	13	43.33%	15	11.19%	9	60.00%	6	4.48%	1	16.67%	5	3.73%	5	100.00%
	LDGT2	100	1.9	46	46.00%	20	43.48%	25	25.00%	6	24.00%	14	14.00%	4	28.57%	5	5.00%	1	20.00%	10	10.00%	4	40.00%
1983 Total		381	1.7	209	54.86%	128	61.24%	80	21.00%	27	33.75%	44	11.55%	20	45.45%	18	4.72%	3	16.67%	30	7.87%	12	40.00%
1984	LDGV	222	1.6	122	54.95%	76	62.30%	41	18.47%	14	34.15%	21	9.46%	6	28.57%	16	7.21%	6	37.50%	22	9.91%	4	18.18%
	LDGT1	228	1.7	126	55.26%	80	63.49%	46	20.18%	17	36.96%	30	13.16%	13	43.33%	12	5.26%	4	33.33%	14	6.14%	6	42.86%
	LDGT2	136	1.9	72	52.94%	46	63.89%	24	17.65%	10	41.67%	14	10.29%	7	50.00%	9	6.62%	2	22.22%	17	12.50%	6	35.29%
1984 Total		586	1.7	320	54.61%	202	63.13%	111	18.94%	41	36.94%	65	11.09%	26	40.00%	37	6.31%	12	32.43%	53	9.04%	16	30.19%
1985	LDGV	352	1.8	181	51.42%	96	53.04%	76	21.59%	34	44.74%	40	11.36%	12	30.00%	22	6.25%	8	36.36%	33	9.38%	11	33.33%
	LDGT1	365	1.6	212	58.08%	124	58.49%	68	18.63%	29	42.65%	34	9.32%	12	35.29%	17	4.66%	6	35.29%	34	9.32%	6	17.65%
	LDGT2	184	2.0	89	48.37%	42	47.19%	37	20.11%	12	32.43%	25	13.59%	8	32.00%	12	6.52%	5	41.67%	21	11.41%	5	23.81%
1985 Total		901	1.8	482	53.50%	262	54.36%	181	20.09%	75	41.44%	99	10.99%	32	32.32%	51	5.66%	19	37.25%	88	9.77%	22	25.00%
1986	LDGV	345	1.6	203	58.84%	117	57.64%	69	20.00%	27	39.13%	32	9.28%	12	37.50%	25	7.25%	10	40.00%	16	4.64%	5	31.25%
	LDGT1	325	1.5	202	62.15%	132	65.35%	63	19.38%	31	49.21%	33	10.15%	11	33.33%	18	5.54%	6	33.33%	9	2.77%	7	77.78%
	LDGT2	197	2.0	97	49.24%	49	50.52%	47	23.86%	18	38.30%	24	12.18%	10	41.67%	11	5.58%	4	36.36%	18	9.14%	5	27.78%
1986 Total		867	1.7	502	57.90%	298	59.36%	179	20.65%	76	42.46%	89	10.27%	33	37.08%	54	6.23%	20	37.04%	43	4.96%	17	39.53%
1987	LDGV	388	1.7	208	53.61%	126	60.58%	71	18.30%	26	36.62%	41	10.57%	16	39.02%	21	5.41%	6	28.57%	47	12.11%	12	25.53%
	LDGT1	418	1.7	245	58.61%	145	59.18%	87	20.81%	33	37.93%	50	11.96%	23	46.00%	20	4.78%	9	45.00%	16	3.83%	8	50.00%
	LDGT2	166	1.5	98	59.04%	65	66.33%	32	19.28%	17	53.13%	13	7.83%	5	38.46%	7	4.22%	0	0.00%	16	9.64%	4	25.00%
1987 Total		972	1.7	551	56.69%	336	60.98%	190	19.55%	76	40.00%	104	10.70%	44	42.31%	48	4.94%	15	31.25%	79	8.13%	24	30.38%
1988	LDGV	450	1.7	246	54.67%	150	60.98%	90	20.00%	33	36.67%	55	12.22%	16	29.09%	32	7.11%	13	40.63%	27	6.00%	13	48.15%
	LDGT1	436	1.6	264	60.55%	171	64.77%	89	20.41%	45	50.56%	36	8.26%	17	47.22%	18	4.13%	7	38.89%	29	6.65%	7	24.14%
	LDGT2	219	1.8	127	57.99%	76	59.84%	43	19.63%	16	37.21%	23	10.50%	10	43.48%	14	6.39%	9	64.29%	12	5.48%	5	41.67%
1988 Total		1105	1.7	637	57.65%	397	62.32%	222	20.09%	94	42.34%	114	10.32%	43	37.72%	64	5.79%	29	45.31%	68	6.15%	25	36.76%
1989	LDGV	430	1.5	279	64.88%	188	67.38%	78	18.14%	32	41.03%	36	8.37%	17	47.22%	18	4.19%	5	27.78%	19	4.42%	9	47.37%
	LDGT1	620	1.6	368	59.35%	239	64.95%	118	19.03%	62	52.54%	54	8.71%	20	37.04%	31	5.00%	8	25.81%	49	7.90%	15	30.61%
	LDGT2	234	1.5	158	67.52%	111	70.25%	42	17.95%	21	50.00%	17	7.26%	7	41.18%	8	3.42%	6	75.00%	9	3.85%	3	33.33%
1989 Total		1284	1.5	805	62.69%	538	66.83%	238	18.54%	115	48.32%	107	8.33%	44	41.12%	57	4.44%	19	33.33%	77	6.00%	27	35.06%
1990	LDGV	599	1.6	372	62.10%	233	62.63%	114	19.03%	54	47.37%	49	8.18%	17	34.69%	28	4.67%	9	32.14%	36	6.01%	15	41.67%
	LDGT1	621	1.6	354	57.00%	231	65.25%	118	19.00%	55	46.61%	55	8.86%	24	43.64%	30	4.83%	7	23.33%	64	10.31%	14	21.88%
	LDGT2	282	1.8	149	52.84%	88	59.06%	62	21.99%	21	33.87%	33	11.70%	16	48.48%	16	5.67%	6	37.50%	22	7.80%	8	36.36%
1990 Total		1502	1.6	875	58.26%	552	63.09%	294	19.57%	130	44.22%	137	9.12%	57	41.61%	74	4.93%	22	29.73%	122	8.12%	37	30.33%

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%
1991	LDGV	915	1.6	542	59.23%	340	62.73%	179	19.56%	76	42.46%	90	9.84%	35	38.89%	44	4.81%	15	34.09%	60	6.56%	17	28.33%
	LDGT1	678	1.5	445	65.63%	317	71.24%	114	16.81%	51	44.74%	60	8.85%	30	50.00%	27	3.98%	11	40.74%	32	4.72%	13	40.63%
	LDGT2	338	1.8	174	51.48%	113	64.94%	67	19.82%	26	38.81%	37	10.95%	16	43.24%	21	6.21%	7	33.33%	39	11.54%	12	30.77%
1991 Total		1931	1.6	1161	60.12%	770	66.32%	360	18.64%	153	42.50%	187	9.68%	81	43.32%	92	4.76%	33	35.87%	131	6.78%	42	32.06%
1992	LDGV	1028	1.6	619	60.21%	393	63.49%	191	18.58%	83	43.46%	91	8.85%	33	36.26%	51	4.96%	20	39.22%	76	7.39%	24	31.58%
	LDGT1	507	1.4	357	70.41%	254	71.15%	83	16.37%	39	46.99%	40	7.89%	20	50.00%	20	3.94%	16	80.00%	7	1.38%	3	42.86%
	LDGT2	550	1.9	276	50.18%	164	59.42%	114	20.73%	41	35.96%	68	12.36%	27	39.71%	44	8.00%	16	36.36%	48	8.73%	18	37.50%
1992 Total		2085	1.6	1252	60.05%	811	64.78%	388	18.61%	163	42.01%	199	9.54%	80	40.20%	115	5.52%	52	45.22%	131	6.28%	45	34.35%
1993	LDGV	1159	1.6	698	60.22%	442	63.32%	215	18.55%	95	44.19%	120	10.35%	52	43.33%	56	4.83%	24	42.86%	70	6.04%	22	31.43%
	LDGT1	846	1.5	548	64.78%	391	71.35%	154	18.20%	74	48.05%	78	9.22%	32	41.03%	37	4.37%	12	32.43%	29	3.43%	15	51.72%
	LDGT2	664	1.7	375	56.48%	230	61.33%	135	20.33%	55	40.74%	71	10.69%	29	40.85%	44	6.63%	19	43.18%	39	5.87%	18	46.15%
1993 Total		2669	1.6	1621	60.73%	1063	65.58%	504	18.88%	224	44.44%	269	10.08%	113	42.01%	137	5.13%	55	40.15%	138	5.17%	55	39.86%
1994	LDGV	1264	1.6	765	60.52%	494	64.58%	240	18.99%	103	42.92%	124	9.81%	52	41.94%	60	4.75%	17	28.33%	75	5.93%	31	41.33%
	LDGT1	1290	1.6	793	61.47%	504	63.56%	255	19.77%	123	48.24%	115	8.91%	49	42.61%	60	4.65%	26	43.33%	67	5.19%	24	35.82%
	LDGT2	1155	1.9	610	52.81%	376	61.64%	232	20.09%	98	42.24%	135	11.69%	50	37.04%	80	6.93%	40	50.00%	98	8.48%	38	38.78%
1994 Total		3709	1.7	2168	58.45%	1374	63.38%	727	19.60%	324	44.57%	374	10.08%	151	40.37%	200	5.39%	83	41.50%	240	6.47%	93	38.75%
1995	LDGV	1739	1.5	1094	62.91%	730	66.73%	321	18.46%	130	40.50%	147	8.45%	68	46.26%	77	4.43%	34	44.16%	100	5.75%	33	33.00%
	LDGT1	1491	1.5	939	62.98%	612	65.18%	286	19.18%	139	48.60%	130	8.72%	65	50.00%	61	4.09%	27	44.26%	75	5.03%	23	30.67%
	LDGT2	1405	1.7	802	57.08%	487	60.72%	276	19.64%	111	40.22%	155	11.03%	67	43.23%	74	5.27%	26	35.14%	98	6.98%	35	35.71%
1995 Total		4635	1.6	2835	61.17%	1829	64.51%	883	19.05%	380	43.04%	432	9.32%	200	46.30%	212	4.57%	87	41.04%	273	5.89%	91	33.33%
1996	LDGV	1555	1.5	1017	65.40%	695	68.34%	269	17.30%	132	49.07%	118	7.59%	48	40.68%	60	3.86%	24	40.00%	91	5.85%	27	29.67%
	LDGT1	1327	1.3	977	73.62%	749	76.66%	195	14.69%	108	55.38%	79	5.95%	42	53.16%	36	2.71%	14	38.89%	40	3.01%	17	42.50%
	LDGT2	695	1.5	457	65.76%	321	70.24%	122	17.55%	57	46.72%	61	8.78%	26	42.62%	30	4.32%	11	36.67%	25	3.60%	11	44.00%
1996 Total		3577	1.4	2451	68.52%	1765	72.01%	586	16.38%	297	50.68%	258	7.21%	116	44.96%	126	3.52%	49	38.89%	156	4.36%	55	35.26%
1997	LDGV	2060	1.4	1432	69.51%	1067	74.51%	323	15.68%	154	47.68%	148	7.18%	67	45.27%	71	3.45%	31	43.66%	86	4.17%	29	33.72%
	LDGT1	2189	1.4	1535	70.12%	1132	73.75%	352	16.08%	177	50.28%	156	7.13%	69	44.23%	79	3.61%	40	50.63%	67	3.06%	27	40.30%
	LDGT2	1079	1.5	686	63.58%	473	68.95%	194	17.98%	86	44.33%	98	9.08%	43	43.88%	48	4.45%	18	37.50%	53	4.91%	17	32.08%
1997 Total		5328	1.4	3653	68.56%	2672	73.15%	869	16.31%	417	47.99%	402	7.55%	179	44.53%	198	3.72%	89	44.95%	206	3.87%	73	35.44%
1998	LDGV	2311	1.4	1576	68.20%	1143	72.53%	387	16.75%	193	49.87%	163	7.05%	68	41.72%	88	3.81%	30	34.09%	97	4.20%	38	39.18%
	LDGT1	2183	1.4	1563	71.60%	1190	76.14%	341	15.62%	168	49.27%	154	7.05%	79	51.30%	64	2.93%	28	43.75%	61	2.79%	26	42.62%
	LDGT2	1110	1.5	706	63.60%	476	67.42%	217	19.55%	110	50.69%	88	7.93%	35	39.77%	47	4.23%	21	44.68%	52	4.68%	18	34.62%
1998 Total		5604	1.4	3845	68.61%	2809	73.06%	945	16.86%	471	49.84%	405	7.23%	182	44.94%	199	3.55%	79	39.70%	210	3.75%	82	39.05%
1999	LDGV	2532	1.4	1824	72.04%	1372	75.22%	391	15.44%	204	52.17%	165	6.52%	66	40.00%	94	3.71%	47	50.00%	58	2.29%	31	53.45%
	LDGT1	2521	1.4	1752	69.50%	1318	75.23%	401	15.91%	214	53.37%	169	6.70%	74	43.79%	94	3.73%	35	37.23%	105	4.17%	47	44.76%
	LDGT2	1747	1.5	1108	63.42%	725	65.43%	344	19.69%	163	47.38%	145	8.30%	61	42.07%	69	3.95%	30	43.48%	81	4.64%	31	38.27%
1999 Total		6800	1.4	4684	68.88%	3415	72.91%	1136	16.71%	581	51.14%	479	7.04%	201	41.96%	257	3.78%	112	43.58%	244	3.59%	109	44.67%
2000	LDGV	2680	1.4	1932	72.09%	1465	75.83%	391	14.59%	199	50.90%	183	6.83%	83	45.36%	83	3.10%	28	33.73%	91	3.40%	44	48.35%
	LDGT1	2464	1.4	1772	71.92%	1336	75.40%	389	15.79%	209	53.73%	157	6.37%	76	48.41%	67	2.72%	28	41.79%	79	3.21%	31	39.24%
	LDGT2	1123	1.5	746	66.43%	529	70.91%	202	17.99%	99	49.01%	93	8.28%	43	46.24%	40	3.56%	16	40.00%	42	3.74%	19	45.24%
2000 Total		6267	1.4	4450	71.01%	3330	74.83%	982	15.67%	507	51.63%	433	6.91%	202	46.65%	190	3.03%	72	37.89%	212	3.38%	94	44.34%

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%
2001	LDGV	2451	1.3	1857	75.76%	1509	81.26%	320	13.06%	171	53.44%	124	5.06%	55	44.35%	68	2.77%	29	42.65%	82	3.35%	28	34.15%
	LDGT1	1963	1.2	1603	81.66%	1383	86.28%	187	9.53%	95	50.80%	86	4.38%	37	43.02%	44	2.24%	20	45.45%	43	2.19%	18	41.86%
	LDGT2	1066	1.3	806	75.61%	654	81.14%	134	12.57%	64	47.76%	65	6.10%	31	47.69%	32	3.00%	12	37.50%	29	2.72%	13	44.83%
2001 Total		5480	1.3	4266	77.85%	3546	83.12%	641	11.70%	330	51.48%	275	5.02%	123	44.73%	144	2.63%	61	42.36%	154	2.81%	59	38.31%
2002	LDGV	2423	1.3	1911	78.87%	1578	82.57%	290	11.97%	152	52.41%	135	5.57%	79	58.52%	48	1.98%	27	56.25%	39	1.61%	14	35.90%
	LDGT1	1724	1.3	1334	77.38%	1109	83.13%	203	11.77%	100	49.26%	97	5.63%	41	42.27%	48	2.78%	19	39.58%	42	2.44%	22	52.38%
	LDGT2	751	1.3	583	77.63%	491	84.22%	88	11.72%	41	46.59%	42	5.59%	22	52.38%	16	2.13%	7	43.75%	22	2.93%	9	40.91%
2002 Total		4898	1.3	3828	78.15%	3178	83.02%	581	11.86%	293	50.43%	274	5.59%	142	51.82%	112	2.29%	53	47.32%	103	2.10%	45	43.69%
2003	LDGV	2117	1.2	1751	82.71%	1505	85.95%	206	9.73%	104	50.49%	97	4.58%	52	53.61%	36	1.70%	18	50.00%	27	1.28%	15	55.56%
	LDGT1	1593	1.2	1369	85.94%	1232	89.99%	108	6.78%	57	52.78%	52	3.26%	21	40.38%	28	1.76%	11	39.29%	36	2.26%	14	38.89%
	LDGT2	765	1.2	620	81.05%	537	86.61%	70	9.15%	38	54.29%	34	4.44%	16	47.06%	16	2.09%	6	37.50%	25	3.27%	11	44.00%
2003 Total		4475	1.2	3740	83.58%	3274	87.54%	384	8.58%	199	51.82%	183	4.09%	89	48.63%	80	1.79%	35	43.75%	88	1.97%	40	45.45%
2004	LDGV	1648	1.2	1362	82.65%	1186	87.08%	153	9.28%	87	56.86%	61	3.70%	26	42.62%	31	1.88%	10	32.26%	41	2.49%	18	43.90%
	LDGT1	1312	1.2	1109	84.53%	985	88.82%	115	8.77%	60	52.17%	46	3.51%	19	41.30%	22	1.68%	12	54.55%	20	1.52%	6	30.00%
	LDGT2	689	1.2	583	84.62%	521	89.37%	55	7.98%	25	45.45%	30	4.35%	11	36.67%	12	1.74%	6	50.00%	9	1.31%	5	55.56%
2004 Total		3649	1.2	3054	83.69%	2692	88.15%	323	8.85%	172	53.25%	137	3.75%	56	40.88%	65	1.78%	28	43.08%	70	1.92%	29	41.43%
2005	LDGV	421	1.4	304	72.21%	240	78.95%	58	13.78%	30	51.72%	26	6.18%	12	46.15%	16	3.80%	5	31.25%	17	4.04%	8	47.06%
	LDGT1	262	1.2	222	84.73%	197	88.74%	26	9.92%	14	53.85%	10	3.82%	8	80.00%	1	0.38%	0	0.00%	3	1.15%	1	33.33%
	LDGT2	162	1.4	110	67.90%	80	72.73%	28	17.28%	17	60.71%	11	6.79%	3	27.27%	6	3.70%	3	50.00%	7	4.32%	1	14.29%
2005 Total		845	1.3	636	75.27%	517	81.29%	112	13.25%	61	54.46%	47	5.56%	23	48.94%	23	2.72%	8	34.78%	27	3.20%	10	37.04%
2006	LDGV	309	1.5	208	67.31%	166	79.81%	46	14.89%	22	47.83%	22	7.12%	10	45.45%	11	3.56%	6	54.55%	22	7.12%	5	22.73%
	LDGT1	162	1.2	140	86.42%	125	89.29%	12	7.41%	6	50.00%	8	4.94%	6	75.00%	2	1.23%	2	100.00%	0	0.00%	0	0.00%
	LDGT2	117	1.3	88	75.21%	71	80.68%	15	12.82%	6	40.00%	7	5.98%	2	28.57%	6	5.13%	4	66.67%	1	0.85%	1	100.00%
2006 Total		588	1.3	436	74.15%	362	83.03%	73	12.41%	34	46.58%	37	6.29%	18	48.65%	19	3.23%	12	63.16%	23	3.91%	6	26.09%
2007	LDGV	165	1.2	137	83.03%	120	87.59%	14	8.48%	7	50.00%	8	4.85%	3	37.50%	5	3.03%	4	80.00%	1	0.61%	1	100.00%
	LDGT1	119	1.1	108	90.76%	102	94.44%	8	6.72%	5	62.50%	2	1.68%	1	50.00%	0	0.00%	0	0.00%	1	0.84%	1	100.00%
	LDGT2	59	1.1	53	89.83%	48	90.57%	3	5.08%	2	66.67%	2	3.39%	1	50.00%	1	1.69%	0	0.00%	0	0.00%	0	0.00%
2007 Total		343	1.2	298	86.88%	270	90.60%	25	7.29%	14	56.00%	12	3.50%	5	41.67%	6	1.75%	4	66.67%	2	0.58%	2	100.00%
2008	LDGV	138	1.4	96	69.57%	79	82.29%	21	15.22%	16	76.19%	7	5.07%	2	28.57%	4	2.90%	0	0.00%	10	7.25%	4	40.00%
	LDGT1	80	1.1	70	87.50%	63	90.00%	8	10.00%	7	87.50%	1	1.25%	1	100.00%	1	1.25%	0	0.00%	0	0.00%	0	0.00%
	LDGT2	74	1.3	56	75.68%	49	87.50%	8	10.81%	4	50.00%	4	5.41%	1	25.00%	4	5.41%	2	50.00%	2	2.70%	2	100.00%
2008 Total		292	1.3	222	76.03%	191	86.04%	37	12.67%	27	72.97%	12	4.11%	4	33.33%	9	3.08%	2	22.22%	12	4.11%	6	50.00%
2009	LDGV	38	1.5	26	68.42%	22	84.62%	4	10.53%	2	50.00%	2	5.26%	0	0.00%	2	5.26%	1	50.00%	4	10.53%	1	25.00%
	LDGT1	20	1.1	19	95.00%	18	94.74%	1	5.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT2	9	1.0	9	100.00%	9	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		67	1.2	54	80.60%	49	90.74%	5	7.46%	3	60.00%	2	2.99%	0	0.00%	2	2.99%	1	50.00%	4	5.97%	1	25.00%
2010	LDGV	20	1.1	18	90.00%	17	94.44%	2	10.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT1	8	1.0	8	100.00%	8	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	1.2	10	90.91%	10	100.00%	0	0.00%	0	0.00%	1	9.09%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2010 Total		39	1.1	36	92.31%	35	97.22%	2	5.13%	2	100.00%	1	2.56%	1	100.00%	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%
2011	LDGV	11	1.0	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%	0	0.00%
	LDGT1	9	1.1	8	88.89%	8	100.00%	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	8	1.0	8	100.00%	7	87.50%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2011 Total		28	1.0	27	96.43%	26	96.30%	1	3.57%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2012	LDGV	4	1.0	4	100.00%	3	75.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT1	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%
2012 Total		6	1.0	6	100.00%	5	83.33%	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	4	1.0	4	100.00%	3	75.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	LDGT1	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%
	LDGT2	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	0.00%	0	0.00%
2013 Total		8	1.0	8	100.00%	6	75.00%	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		71172	1.4	49261	69.21%	36794	74.69%	11107	15.61%	5310	47.81%	5201	7.31%	2274	43.72%	2,602	3.66%	1,060	40.74%	3001	4.22%	1,125	37.49%

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	30008	1.4	20933	69.76%	15652	74.77%	4603	15.34%	2197	47.73%	2128	7.09%	915	43.00%	1,080	3.60%	431	39.91%	1264	4.21%	464	36.71%
LDGT1	26032	1.4	18604	71.47%	14261	76.66%	3881	14.91%	1944	50.09%	1762	6.77%	807	45.80%	849	3.26%	351	41.34%	936	3.60%	359	38.35%
LDGT2	15132	1.5	9724	64.26%	6881	70.76%	2623	17.33%	1169	44.57%	1311	8.66%	552	42.11%	673	4.45%	278	41.31%	801	5.29%	302	37.70%
Overall Total	71172	1.4	49261	69.21%	36794	74.69%	11107	15.61%	5310	47.81%	5201	7.31%	2274	43.72%	2,602	3.66%	1,060	40.74%	3001	4.22%	1,125	37.49%

Appendix P

I/M240 Fleet Characterization Summary Report

Initial Inspection Component

Date

Between 1/1/2015 and 12/31/2015

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	256	1.7697	23.1032	1.9478	213	83.20%	1.5489	19.0157	1.9546	43	16.80%	2.8629	43.3505	1.9139
	LDGT1	238	3.1980	44.1267	2.8297	162	68.07%	2.3323	29.2973	3.0093	76	31.93%	5.0434	75.7368	2.4470
	LDGT2	63	4.1270	51.3803	2.4210	40	63.49%	2.6645	35.2500	2.3005	23	36.51%	6.6704	79.4331	2.6305
1982 Total		557	2.6466	35.2846	2.3782	415	74.51%	1.9623	24.5940	2.3997	142	25.49%	4.6466	66.5284	2.3153
1983	LDGV	409	1.6597	17.9520	1.8725	329	80.44%	1.2433	12.2553	1.8849	80	19.56%	3.3721	41.3797	1.8215
	LDGT1	370	3.3875	38.5361	2.4002	291	78.65%	2.9959	31.2429	2.4384	79	21.35%	4.8297	65.4010	2.2597
	LDGT2	146	3.1347	42.6438	2.9135	110	75.34%	2.5951	34.8096	2.7580	36	24.66%	4.7836	66.5815	3.3887
1983 Total		925	2.5836	30.0829	2.2479	730	78.92%	2.1456	23.2229	2.2371	195	21.08%	4.2232	55.7641	2.2884
1984	LDGV	570	1.5213	17.0142	1.8566	462	81.05%	1.2027	11.2285	1.8539	108	18.95%	2.8842	41.7645	1.8684
	LDGT1	523	2.2212	31.4467	2.4374	402	76.86%	1.8991	23.1208	2.4637	121	23.14%	3.2913	59.1081	2.3499
	LDGT2	178	3.1904	45.7471	2.9620	106	59.55%	2.0732	25.8128	3.0316	72	40.45%	4.8352	75.0947	2.8594
1984 Total		1271	2.0431	26.9770	2.2504	970	76.32%	1.5864	17.7508	2.2353	301	23.68%	3.5146	56.7092	2.2990
1985	LDGV	953	1.3303	15.0151	1.8938	785	82.37%	1.0058	10.6922	1.8838	168	17.63%	2.8467	35.2142	1.9402
	LDGT1	859	2.1018	23.3126	2.6903	677	78.81%	1.7891	17.5469	2.6849	182	21.19%	3.2648	44.7595	2.7103
	LDGT2	253	2.7741	32.1106	2.9555	180	71.15%	1.9758	21.4242	2.9931	73	28.85%	4.7426	58.4608	2.8628
1985 Total		2065	1.8281	20.5612	2.3552	1642	79.52%	1.4351	14.6949	2.3357	423	20.48%	3.3538	43.3330	2.4308
1986	LDGV	1075	1.1324	11.2490	1.8066	900	83.72%	0.8760	7.6125	1.7822	175	16.28%	2.4511	29.9509	1.9321
	LDGT1	985	1.9170	21.0934	2.4584	794	80.61%	1.6007	16.1152	2.4671	191	19.39%	3.2316	41.7882	2.4224
	LDGT2	252	2.3467	32.0626	2.9668	165	65.48%	1.7648	19.2827	2.7824	87	34.52%	3.4502	56.3003	3.3165
1986 Total		2312	1.5990	17.7117	2.2108	1859	80.41%	1.2644	12.2799	2.1635	453	19.59%	2.9721	40.0024	2.4047
1987	LDGV	1541	0.9641	9.7377	1.8078	1350	87.61%	0.8003	7.3406	1.7742	191	12.39%	2.1219	26.6808	2.0457
	LDGT1	1404	1.6160	18.1996	2.2713	1181	84.12%	1.3772	14.2361	2.2601	223	15.88%	2.8804	39.1905	2.3303
	LDGT2	416	2.2938	22.1182	2.9072	323	77.64%	1.7912	12.9742	2.8309	93	22.36%	4.0393	53.8765	3.1721
1987 Total		3361	1.4010	14.8049	2.1375	2854	84.92%	1.1512	10.8315	2.0949	507	15.08%	2.8072	37.1716	2.3775
1988	LDGV	1546	1.0044	10.9732	1.5996	1315	85.06%	0.7418	7.8799	1.5409	231	14.94%	2.4995	28.5820	1.9341
	LDGT1	1518	1.4730	14.9245	2.1320	1269	83.60%	1.2680	11.5296	2.0562	249	16.40%	2.5178	32.2263	2.5183
	LDGT2	524	1.7201	15.4781	2.6973	407	77.67%	1.4343	12.2019	2.5573	117	22.33%	2.7144	26.8748	3.1844
1988 Total		3588	1.3072	13.3028	1.9852	2991	83.36%	1.0593	10.0165	1.8978	597	16.64%	2.5492	29.7674	2.4228
1989	LDGV	2543	0.8764	9.8083	1.5714	2284	89.82%	0.7037	7.7427	1.5417	259	10.18%	2.3995	28.0231	1.8331
	LDGT1	2205	1.3412	15.3535	2.0304	1859	84.31%	1.1197	12.1534	1.9366	346	15.69%	2.5312	32.5470	2.5346
	LDGT2	861	1.8451	15.3998	2.6925	708	82.23%	1.4367	12.3444	2.5990	153	17.77%	3.7350	29.5385	3.1255
1989 Total		5609	1.2078	12.8465	1.9240	4851	86.49%	0.9701	10.1046	1.8473	758	13.51%	2.7292	30.3940	2.4142
1990	LDGV	3181	0.8092	9.7468	1.5807	2846	89.47%	0.6555	7.2959	1.5334	335	10.53%	2.1151	30.5683	1.9821
	LDGT1	1906	1.3447	14.6070	2.1285	1571	82.42%	1.0811	10.7574	1.9866	335	17.58%	2.5812	32.6603	2.7941
	LDGT2	810	1.7509	16.2976	2.7321	669	82.59%	1.4651	13.5583	2.6479	141	17.41%	3.1070	29.2944	3.1319
1990 Total		5897	1.1116	12.2175	1.9159	5086	86.25%	0.8934	9.1889	1.8200	811	13.75%	2.4801	31.2109	2.5174
1991	LDGV	4788	0.6883	8.2323	1.4572	4294	89.68%	0.5477	6.4852	1.3968	494	10.32%	1.9102	23.4181	1.9825
	LDGT1	3208	1.1039	12.6951	1.8160	2780	86.66%	0.9049	10.3904	1.7421	428	13.34%	2.3968	27.6648	2.2961
	LDGT2	918	1.4907	16.8366	2.5341	740	80.61%	1.2672	14.5567	2.4570	178	19.39%	2.4196	26.3145	2.8546
1991 Total		8914	0.9205	10.7245	1.6972	7814	87.66%	0.7429	8.6390	1.6200	1100	12.34%	2.1820	25.5391	2.2456

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	4854	0.6723	7.8395	1.4161	4292	88.42%	0.5197	5.9476	1.3656	562	11.58%	1.8383	22.2882	1.8013
	LDGT1	2721	1.0113	11.5495	1.7615	2385	87.65%	0.8782	9.5812	1.6974	336	12.35%	1.9557	25.5210	2.2163
	LDGT2	1252	1.6945	17.1366	2.4740	982	78.43%	1.3539	13.7862	2.3997	270	21.57%	2.9334	29.3219	2.7441
1992 Total		8827	0.9218	10.3018	1.6726	7659	86.77%	0.7383	8.0841	1.6015	1168	13.23%	2.1252	24.8441	2.1386
1993	LDGV	6669	0.6175	7.1084	1.4510	6023	90.31%	0.5066	5.5082	1.3974	646	9.69%	1.6511	22.0284	1.9511
	LDGT1	4816	0.9961	10.8781	1.9900	4284	88.95%	0.8660	9.2111	1.9050	532	11.05%	2.0434	24.3016	2.6750
	LDGT2	1837	1.6778	16.2646	2.5465	1481	80.62%	1.3706	13.9271	2.4180	356	19.38%	2.9556	25.9892	3.0808
1993 Total		13322	0.9006	9.7338	1.7969	11788	88.49%	0.7458	7.9116	1.7101	1534	11.51%	2.0899	23.7359	2.4643
1994	LDGV	7562	0.5026	6.1062	1.1650	6850	90.58%	0.3994	4.9195	1.1082	712	9.42%	1.4947	17.5235	1.7112
	LDGT1	5649	0.8610	9.6487	1.8113	4907	86.86%	0.7123	7.9253	1.6823	742	13.14%	1.8448	21.0462	2.6641
	LDGT2	2793	1.1977	12.9659	2.1965	2177	77.94%	0.9181	10.2054	2.0219	616	22.06%	2.1856	22.7216	2.8137
1994 Total		16004	0.7504	8.5538	1.5731	13934	87.07%	0.5906	6.8039	1.4531	2070	12.93%	1.8258	20.3331	2.3808
1995	LDGV	11311	0.4627	5.5626	1.0245	10299	91.05%	0.3666	4.5586	0.9638	1012	8.95%	1.4410	15.7803	1.6423
	LDGT1	7104	0.7715	9.0953	1.7728	6233	87.74%	0.6490	7.5366	1.6640	871	12.26%	1.6475	20.2501	2.5510
	LDGT2	4095	1.0931	12.1560	2.1262	3354	81.90%	0.8564	10.1098	1.9771	741	18.10%	2.1645	21.4180	2.8012
1995 Total		22510	0.6748	7.8770	1.4611	19886	88.34%	0.5377	6.4283	1.3542	2624	11.66%	1.7139	18.8560	2.2712
1996	LDGV	11267	0.3376	4.4300	0.8414	10327	91.66%	0.2889	3.7552	0.7901	940	8.34%	0.8717	11.8439	1.4047
	LDGT1	7184	0.4425	6.2013	1.4417	6242	86.89%	0.3646	5.0311	1.3327	942	13.11%	0.9593	13.9555	2.1641
	LDGT2	3202	0.5652	7.1978	1.4081	2771	86.54%	0.4690	5.9125	1.3002	431	13.46%	1.1832	15.4617	2.1016
1996 Total		21653	0.4061	5.4270	1.1244	19340	89.32%	0.3392	4.4761	1.0383	2313	10.68%	0.9654	13.3780	1.8438
1997	LDGV	16456	0.3241	4.4917	0.7680	15098	91.75%	0.2774	3.7251	0.7184	1358	8.25%	0.8430	13.0152	1.3191
	LDGT1	12269	0.3795	5.6581	1.2987	10807	88.08%	0.3198	4.7905	1.1865	1462	11.92%	0.8212	12.0712	2.1283
	LDGT2	4911	0.5036	6.6482	1.3888	4266	86.87%	0.3877	5.4418	1.2520	645	13.13%	1.2703	14.6274	2.2936
1997 Total		33636	0.3705	5.2320	1.0522	30171	89.70%	0.3082	4.3494	0.9615	3465	10.30%	0.9134	12.9170	1.8419
1998	LDGV	16681	0.2747	4.2368	0.6682	15189	91.06%	0.2262	3.4184	0.6187	1492	8.94%	0.7685	12.5693	1.1721
	LDGT1	13352	0.3438	5.2313	1.1511	11846	88.72%	0.2880	4.3858	1.0451	1506	11.28%	0.7833	11.8813	1.9845
	LDGT2	4763	0.4289	6.1517	1.2887	4094	85.95%	0.3217	4.6007	1.1313	669	14.05%	1.0851	15.6433	2.2521
1998 Total		34796	0.3224	4.8805	0.9384	31129	89.46%	0.2623	3.9420	0.8484	3667	10.54%	0.8323	12.8476	1.7028
1999	LDGV	22380	0.2251	3.5210	0.6074	20642	92.23%	0.1901	2.9964	0.5563	1738	7.77%	0.6409	9.7519	1.2142
	LDGT1	16805	0.2647	4.3144	0.8464	15095	89.82%	0.2171	3.5880	0.7542	1710	10.18%	0.6852	10.7268	1.6603
	LDGT2	8223	0.3357	4.2254	1.0005	7196	87.51%	0.2455	3.2008	0.8532	1027	12.49%	0.9678	11.4039	2.0330
1999 Total		47408	0.2583	3.9244	0.7603	42933	90.56%	0.2089	3.2387	0.6756	4475	9.44%	0.7328	10.5036	1.5726
2000	LDGV	23956	0.1808	3.0913	0.5014	22118	92.33%	0.1447	2.5829	0.4391	1838	7.67%	0.6160	9.2095	1.2519
	LDGT1	16928	0.2415	3.7936	0.7573	15226	89.95%	0.1978	3.0423	0.6727	1702	10.05%	0.6322	10.5147	1.5147
	LDGT2	6706	0.2834	4.2364	0.7757	5993	89.37%	0.1994	2.9885	0.6717	713	10.63%	0.9894	14.7251	1.6500
2000 Total		47590	0.2169	3.5025	0.6311	43337	91.06%	0.1709	2.8004	0.5533	4253	8.94%	0.6851	10.6565	1.4238
2001	LDGV	28709	0.1298	2.5933	0.3489	26904	93.71%	0.1003	2.1742	0.3060	1805	6.29%	0.5695	8.8393	0.9878
	LDGT1	20686	0.1415	3.0612	0.4605	19125	92.45%	0.1159	2.6189	0.4140	1561	7.55%	0.4554	8.4795	1.0302
	LDGT2	8552	0.2209	3.1911	0.6286	7773	90.89%	0.1868	2.7077	0.5593	779	9.11%	0.5609	8.0142	1.3200
2001 Total		57947	0.1474	2.8485	0.4300	53802	92.85%	0.1183	2.4094	0.3810	4145	7.15%	0.5249	8.5487	1.0662
2002	LDGV	26616	0.1189	2.8400	0.3146	24753	93.00%	0.0892	2.5247	0.2658	1863	7.00%	0.5141	7.0294	0.9624
	LDGT1	19699	0.1205	3.6129	0.4016	18394	93.38%	0.0986	3.0520	0.3571	1305	6.62%	0.4283	11.5194	1.0289
	LDGT2	6454	0.2035	3.0474	0.6505	5880	91.11%	0.1573	2.3946	0.5796	574	8.89%	0.6762	9.7349	1.3759

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		52769	0.1298	3.1539	0.3881	49027	92.91%	0.1009	2.7069	0.3377	3742	7.09%	0.5090	9.0103	1.0490
2003	LDGV	31059	0.0778	1.6857	0.2468	29359	94.53%	0.0609	1.4863	0.2146	1700	5.47%	0.3700	5.1296	0.8040
	LDGT1	23188	0.0908	2.0916	0.3065	21843	94.20%	0.0760	1.7290	0.2823	1345	5.80%	0.3320	7.9800	0.7009
	LDGT2	9017	0.1473	2.3243	0.4225	8408	93.25%	0.1172	1.8038	0.3731	609	6.75%	0.5628	9.5106	1.1038
2003 Total		63264	0.0925	1.9255	0.2937	59610	94.22%	0.0744	1.6200	0.2617	3654	5.78%	0.3882	6.9089	0.8160
2004	LDGV	23866	0.0708	1.5544	0.1868	22532	94.41%	0.0531	1.3358	0.1554	1334	5.59%	0.3696	5.2475	0.7179
	LDGT1	19979	0.0742	1.8775	0.2052	18892	94.56%	0.0602	1.5374	0.1809	1087	5.44%	0.3181	7.7869	0.6287
	LDGT2	8580	0.0935	1.8074	0.2255	8010	93.36%	0.0743	1.4961	0.1928	570	6.64%	0.3638	6.1816	0.6838
2004 Total		52425	0.0758	1.7189	0.2002	49434	94.29%	0.0592	1.4388	0.1712	2991	5.71%	0.3498	6.3484	0.6790
2005	LDGV	4188	0.0826	1.8768	0.2049	3893	92.96%	0.0538	1.3394	0.1532	295	7.04%	0.4616	8.9693	0.8883
	LDGT1	3787	0.0748	1.6635	0.1823	3565	94.14%	0.0621	1.3677	0.1453	222	5.86%	0.2779	6.4140	0.7780
	LDGT2	1438	0.1407	2.4266	0.2826	1332	92.63%	0.0981	1.9098	0.2120	106	7.37%	0.6760	8.9205	1.1706
2005 Total		9413	0.0883	1.8750	0.2077	8790	93.38%	0.0639	1.4373	0.1589	623	6.62%	0.4326	8.0505	0.8971
2006	LDGV	3141	0.0883	2.0287	0.1863	2931	93.31%	0.0477	1.3669	0.1162	210	6.69%	0.6538	11.2648	1.1633
	LDGT1	2457	0.0577	1.6232	0.1640	2318	94.34%	0.0450	1.3224	0.1222	139	5.66%	0.2693	6.6387	0.8615
	LDGT2	1062	0.1335	2.3938	0.2374	977	92.00%	0.0761	1.4174	0.1589	85	8.00%	0.7932	13.6169	1.1397
2006 Total		6660	0.0842	1.9373	0.1862	6226	93.48%	0.0512	1.3583	0.1252	434	6.52%	0.5579	10.2439	1.0621
2007	LDGV	3228	0.0568	1.3489	0.1296	3092	95.79%	0.0403	1.1595	0.0946	136	4.21%	0.4324	5.6539	0.9248
	LDGT1	2315	0.0620	1.4721	0.1092	2206	95.29%	0.0354	1.2111	0.0955	109	4.71%	0.6008	6.7535	0.3857
	LDGT2	1089	0.0832	1.5184	0.1394	1038	95.32%	0.0520	1.0521	0.0965	51	4.68%	0.7178	11.0082	1.0124
2007 Total		6632	0.0630	1.4197	0.1241	6336	95.54%	0.0405	1.1599	0.0952	296	4.46%	0.5436	6.9813	0.7414
2008	LDGV	1878	0.0757	1.7446	0.1555	1777	94.62%	0.0419	1.3106	0.0868	101	5.38%	0.6693	9.3817	1.3636
	LDGT1	1268	0.0366	1.2808	0.1107	1197	94.40%	0.0327	1.1321	0.0866	71	5.60%	0.1036	3.7875	0.5172
	LDGT2	753	0.0776	1.6107	0.1065	694	92.16%	0.0493	1.2477	0.0753	59	7.84%	0.4113	5.8803	0.4739
2008 Total		3899	0.0633	1.5679	0.1315	3668	94.08%	0.0403	1.2404	0.0846	231	5.92%	0.4295	6.7680	0.8762
2009	LDGV	598	0.0432	1.3375	0.1239	572	95.65%	0.0320	1.1870	0.0772	26	4.35%	0.2889	4.6481	1.1516
	LDGT1	305	0.0335	1.3276	0.0852	286	93.77%	0.0337	1.3408	0.0857	19	6.23%	0.0309	1.1284	0.0779
	LDGT2	198	0.0404	0.9283	0.0766	189	95.45%	0.0390	0.8741	0.0667	9	4.55%	0.0704	2.0668	0.2843
2009 Total		1101	0.0400	1.2612	0.1047	1047	95.10%	0.0337	1.1726	0.0776	54	4.90%	0.1617	2.9795	0.6293
2010	LDGV	372	0.0744	2.0057	0.1325	353	94.89%	0.0368	1.3898	0.0717	19	5.11%	0.7722	13.4474	1.2619
	LDGT1	220	0.0283	1.2300	0.0752	212	96.36%	0.0280	1.1000	0.0666	8	3.64%	0.0367	4.6735	0.3016
	LDGT2	136	0.0332	0.8578	0.0555	125	91.91%	0.0347	0.9033	0.0570	11	8.09%	0.0166	0.3415	0.0383
2010 Total		728	0.0528	1.5568	0.1008	690	94.78%	0.0337	1.2126	0.0675	38	5.22%	0.3986	7.8064	0.7055
2011	LDGV	290	0.0398	1.5733	0.0893	279	96.21%	0.0340	1.4389	0.0724	11	3.79%	0.1876	4.9805	0.5184
	LDGT1	167	0.0239	0.9206	0.0537	158	94.61%	0.0243	0.9126	0.0538	9	5.39%	0.0176	1.0617	0.0520
	LDGT2	84	0.0443	1.0088	0.0771	77	91.67%	0.0453	1.0132	0.0803	7	8.33%	0.0333	0.9605	0.0419
2011 Total		541	0.0356	1.2841	0.0764	514	95.01%	0.0327	1.2133	0.0679	27	4.99%	0.0909	2.6320	0.2394
2012	LDGV	225	0.0241	1.1371	0.0571	222	98.67%	0.0243	1.1406	0.0572	3	1.33%	0.0125	0.8839	0.0490
	LDGT1	73	0.0468	1.0482	0.1160	71	97.26%	0.0225	0.8062	0.0486	2	2.74%	0.9112	9.6380	2.5067
	LDGT2	35	0.0232	0.6144	0.0377	35	100.00%	0.0232	0.6144	0.0377	0	0.00%	0.0000	0.0000	0.0000
2012 Total		333	0.0290	1.0627	0.0680	328	98.50%	0.0238	1.0121	0.0533	5	1.50%	0.3720	4.3855	1.0321
2013	LDGV	133	0.0282	0.9672	0.0748	130	97.74%	0.0285	0.9585	0.0755	3	2.26%	0.0154	1.3422	0.0439
	LDGT1	24	0.0298	1.6401	0.0882	22	91.67%	0.0262	0.9391	0.0479	2	8.33%	0.0697	9.3516	0.5308

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	19	0.0277	0.4827	0.0693	18	94.74%	0.0275	0.4863	0.0712	1	5.26%	0.0299	0.4178	0.0363
2013 Total		176	0.0284	1.0066	0.0760	170	96.59%	0.0281	0.9060	0.0715	6	3.41%	0.0359	3.8579	0.2049
2014	LDGV	32	0.0191	0.8627	0.0523	32	100.00%	0.0191	0.8627	0.0523	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	6	0.0137	0.7262	0.0392	6	100.00%	0.0137	0.7262	0.0392	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	10	0.0207	0.4257	0.0411	10	100.00%	0.0207	0.4257	0.0411	0	0.00%	0.0000	0.0000	0.0000
2014 Total		48	0.0188	0.7546	0.0484	48	100.00%	0.0188	0.7546	0.0484	0	0.00%	0.0000	0.0000	0.0000
2015	LDGV	12	0.0123	0.7968	0.0557	12	100.00%	0.0123	0.7968	0.0557	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	5	0.0131	0.4624	0.0412	5	100.00%	0.0131	0.4624	0.0412	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	4	0.0189	0.3197	0.0359	4	100.00%	0.0189	0.3197	0.0359	0	0.00%	0.0000	0.0000	0.0000
2015 Total		21	0.0137	0.6263	0.0485	21	100.00%	0.0137	0.6263	0.0485	0	0.00%	0.0000	0.0000	0.0000
2016	LDGV	1	0.0043	0.1998	0.0022	1	100.00%	0.0043	0.1998	0.0022	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	1	0.0129	0.4993	0.0403	1	100.00%	0.0129	0.4993	0.0403	0	0.00%	0.0000	0.0000	0.0000
2016 Total		2	0.0086	0.3495	0.0212	2	100.00%	0.0086	0.3495	0.0212	0	0.00%	0.0000	0.0000	0.0000
Grand Total		536204	0.3257	4.5627	0.7502	489102	91.22%	0.2534	3.5993	0.6700	47102	8.78%	1.0761	14.5660	1.5838

Summary by Vehicle Type (V1.01)

Overall Initial Exhaust Emissions				Pass Initial Test Exhaust Emissions					Pass or Waived Retest Initial Exhaust Emissions				
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)
262346	0.2559	3.7446	0.5946	242458	92.42%	0.2011	3.0199	0.5394	19888	7.58%	0.9241	12.5797	1.2673
194224	0.3543	5.1121	0.8467	176312	90.78%	0.2841	4.0682	0.7602	17912	9.22%	1.0455	15.3873	1.6987
79634	0.4855	5.9178	1.0276	70332	88.32%	0.3567	4.4215	0.8939	9302	11.68%	1.4598	17.2311	2.0391
536204	0.3257	4.5627	0.7502	489102	91.22%	0.2534	3.5993	0.6700	47102	8.78%	1.0761	14.5660	1.5838

Appendix Q

I/M240 Fleet Characterization Summary Report

Final Inspection Component

Date

Between 1/1/2015 and 12/31/2015

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	256	1.5711	19.5399	1.9460	42	16.41%	1.6097	20.9855	1.8583	1	0.39%	4.6612	70.4877	3.7863
	LDGT1	238	2.5104	29.7773	2.9081	75	31.51%	2.5158	28.2619	2.7139	1	0.42%	30.9481	221.1814	1.0940
	LDGT2	63	2.9001	42.1311	2.6438	21	33.33%	3.0699	41.7813	3.4312	2	3.17%	5.8290	183.4276	1.2420
1982 Total		557	2.1227	26.4694	2.4360	138	24.78%	2.3243	28.1047	2.5626	4	0.72%	11.8168	164.6311	1.8411
1983	LDGV	409	1.3084	13.3131	1.8882	76	18.58%	1.3933	15.8692	1.9046	4	0.98%	5.0486	51.7487	1.8499
	LDGT1	370	2.9412	31.8782	2.4252	79	21.35%	2.7395	34.2184	2.3769	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	146	2.6103	34.5404	2.7865	35	23.97%	2.7289	34.6664	2.7377	1	0.68%	0.1370	0.5160	7.6276
1983 Total		925	2.1670	24.0896	2.2448	190	20.54%	2.1991	26.9613	2.2544	5	0.54%	4.0663	41.5021	3.0054
1984	LDGV	570	1.2542	12.1216	1.8497	106	18.60%	1.3920	13.0128	1.8588	2	0.35%	5.8363	171.2031	0.3910
	LDGT1	523	1.9722	24.2848	2.4867	120	22.94%	2.2083	27.7691	2.5837	1	0.19%	3.0202	74.0949	0.0588
	LDGT2	178	2.3274	26.9410	3.0337	71	39.89%	2.0327	26.7167	3.0636	1	0.56%	50.1872	162.4458	1.1340
1984 Total		1271	1.6999	19.2020	2.2776	297	23.37%	1.8750	22.2510	2.4397	4	0.31%	16.2200	144.7367	0.4937
1985	LDGV	953	1.0480	11.1521	1.8842	161	16.89%	1.1879	10.1207	1.9291	7	0.73%	2.5632	86.4491	0.8957
	LDGT1	859	1.8184	18.4696	2.6802	177	20.61%	1.8620	20.3750	2.6961	5	0.58%	4.2445	75.9532	1.4729
	LDGT2	253	1.9284	22.5053	2.9461	72	28.46%	1.7420	23.6366	2.8521	1	0.40%	6.8181	135.6561	1.2484
1985 Total		2065	1.4763	15.5870	2.3454	410	19.85%	1.5762	16.9211	2.4223	13	0.63%	3.5372	86.1974	1.1448
1986	LDGV	1075	0.9110	7.9828	1.8024	171	15.91%	1.0705	9.2799	1.9032	4	0.37%	1.9617	35.8487	2.0554
	LDGT1	985	1.6433	16.9198	2.4587	187	18.98%	1.7642	18.2461	2.4497	4	0.41%	4.4393	114.6373	1.2141
	LDGT2	252	1.7564	19.2599	2.9673	86	34.13%	1.7482	19.4318	3.2529	1	0.40%	1.0830	0.7191	8.9031
1986 Total		2312	1.3151	13.0195	2.2090	444	19.20%	1.4939	15.0226	2.3948	9	0.39%	2.9652	66.9626	2.4423
1987	LDGV	1541	0.8239	7.5325	1.7770	186	12.07%	0.9773	8.3061	1.7928	5	0.32%	1.4876	30.5848	1.9649
	LDGT1	1404	1.3942	14.5222	2.2581	218	15.53%	1.4150	14.4598	2.2703	5	0.36%	4.5101	84.8263	1.2477
	LDGT2	416	1.7321	13.6380	2.8954	91	21.88%	1.4740	13.6971	3.1428	2	0.48%	3.9315	118.1445	2.0547
1987 Total		3361	1.1746	11.2080	2.1164	495	14.73%	1.2614	12.0073	2.2513	12	0.36%	3.1543	67.7787	1.6810
1988	LDGV	1546	0.7685	8.0617	1.5500	225	14.55%	0.8633	8.3106	1.6221	6	0.39%	3.0670	38.5681	0.8410
	LDGT1	1518	1.2817	11.7428	2.0751	247	16.27%	1.3341	12.6989	2.1571	2	0.13%	3.5148	28.9160	3.9658
	LDGT2	524	1.4483	12.3458	2.5595	116	22.14%	1.3668	12.8303	2.5658	1	0.19%	16.5912	14.7150	2.7201
1988 Total		3588	1.0849	10.2447	1.9196	588	16.39%	1.1604	11.0456	2.0330	9	0.25%	4.6692	33.7728	1.7442
1989	LDGV	2543	0.7320	7.9178	1.5566	251	9.87%	0.9035	8.4161	1.7049	8	0.31%	3.4349	42.2680	1.1435
	LDGT1	2205	1.1383	12.2644	1.9684	344	15.60%	1.2263	12.4412	2.1506	2	0.09%	3.3143	85.0434	0.1465
	LDGT2	861	1.4433	12.4054	2.6012	148	17.19%	1.4807	12.2396	2.5505	5	0.58%	1.2697	25.9641	4.4082
1989 Total		5609	1.0009	10.3154	1.8788	743	13.25%	1.1679	11.0413	2.0797	15	0.27%	2.6971	42.5368	2.0988
1990	LDGV	3181	0.6749	7.5538	1.5439	328	10.31%	0.7792	8.0882	1.6361	7	0.22%	3.6931	87.3899	1.4918
	LDGT1	1906	1.1118	11.0203	2.0502	331	17.37%	1.2423	11.9672	2.3414	4	0.21%	2.3718	35.9221	2.9555
	LDGT2	810	1.4641	13.5403	2.6071	139	17.16%	1.4518	13.5647	2.3954	2	0.25%	2.0208	5.8103	3.6935
1990 Total		5897	0.9245	9.4965	1.8536	798	13.53%	1.0884	10.6511	2.0609	13	0.22%	3.0293	59.0030	2.2809
1991	LDGV	4788	0.5705	6.6206	1.4187	483	10.09%	0.7051	7.4198	1.6007	11	0.23%	3.5494	24.3745	2.0100
	LDGT1	3208	0.9275	10.4958	1.7531	422	13.15%	1.0448	10.7891	1.8208	6	0.19%	3.1350	38.7252	2.0837
	LDGT2	918	1.2779	14.3797	2.4184	174	18.95%	1.2929	13.0747	2.2526	4	0.44%	2.5895	38.3939	2.4991
1991 Total		8914	0.7718	8.8143	1.6420	1079	12.10%	0.9328	9.6494	1.7919	21	0.24%	3.2482	31.1451	2.1242

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	4854	0.5381	6.0475	1.3843	553	11.39%	0.6469	6.3511	1.5127	9	0.19%	2.6371	35.0587	2.4269
	LDGT1	2721	0.9051	9.8496	1.7266	332	12.20%	1.0708	11.2347	1.9401	4	0.15%	3.1801	54.9242	1.3941
	LDGT2	1252	1.3450	13.5498	2.3452	266	21.25%	1.2838	12.6238	2.1337	4	0.32%	3.2345	17.0968	3.0287
1992 Total		8827	0.7657	8.2837	1.6261	1151	13.04%	0.9164	9.2094	1.7795	17	0.19%	2.9055	35.5066	2.3254
1993	LDGV	6669	0.5220	5.6458	1.4143	635	9.52%	0.6360	6.2801	1.5718	11	0.16%	2.3919	44.3944	1.6169
	LDGT1	4816	0.8824	9.3311	1.9156	524	10.88%	0.9777	9.9632	1.9666	8	0.17%	3.4278	32.1791	4.2732
	LDGT2	1837	1.3802	13.8254	2.4060	351	19.11%	1.3618	13.0844	2.3624	5	0.27%	5.5294	35.7229	1.9067
1993 Total		13322	0.7707	8.1060	1.7323	1510	11.33%	0.9233	9.1399	1.8926	24	0.18%	3.3909	38.5160	2.5627
1994	LDGV	7562	0.4123	4.9979	1.1219	697	9.22%	0.4930	5.2396	1.2470	15	0.20%	2.5172	29.6041	1.5894
	LDGT1	5649	0.7326	8.0788	1.6979	726	12.85%	0.8229	8.6133	1.7846	16	0.28%	2.8490	30.9163	2.5267
	LDGT2	2793	0.9341	10.1820	2.0083	602	21.55%	0.9546	9.8815	1.9353	14	0.50%	2.5336	19.4640	3.0322
1994 Total		16004	0.6164	6.9901	1.4799	2025	12.65%	0.7485	7.8291	1.6444	45	0.28%	2.6403	26.9160	2.3715
1995	LDGV	11311	0.3799	4.6236	0.9816	995	8.80%	0.4644	5.0364	1.1509	17	0.15%	3.5427	19.8457	1.8238
	LDGT1	7104	0.6599	7.6114	1.6737	866	12.19%	0.7317	7.8946	1.7433	5	0.07%	1.8234	51.8311	1.6490
	LDGT2	4095	0.8804	10.1713	1.9631	726	17.73%	0.9256	10.0030	1.8907	15	0.37%	4.0501	32.0719	2.3278
1995 Total		22510	0.5593	6.5758	1.3785	2587	11.49%	0.6833	7.3870	1.5568	37	0.16%	3.5161	29.1246	2.0045
1996	LDGV	11267	0.2980	3.8395	0.8020	926	8.22%	0.3488	4.4483	0.9147	14	0.12%	3.6302	25.7812	2.1027
	LDGT1	7184	0.3716	5.0900	1.3552	930	12.95%	0.4027	5.3839	1.4809	12	0.17%	1.6376	12.9274	3.3226
	LDGT2	3202	0.4774	5.9639	1.3157	426	13.30%	0.5254	6.1801	1.3995	5	0.16%	1.0033	16.0842	2.7533
1996 Total		21653	0.3490	4.5685	1.0615	2282	10.54%	0.4037	5.1529	1.2360	31	0.14%	2.4352	19.2415	2.6799
1997	LDGV	16456	0.2827	3.7865	0.7313	1348	8.19%	0.3377	4.4247	0.8640	10	0.06%	0.8987	10.4715	2.3037
	LDGT1	12269	0.3262	4.8889	1.2070	1445	11.78%	0.3592	5.2845	1.3411	17	0.14%	1.6186	33.8135	2.8712
	LDGT2	4911	0.3968	5.4968	1.2673	637	12.97%	0.4335	5.7120	1.3426	8	0.16%	2.2915	17.6886	3.4429
1997 Total		33636	0.3152	4.4383	0.9831	3430	10.20%	0.3646	5.0260	1.1539	35	0.10%	1.5667	23.4587	2.8397
1998	LDGV	16681	0.2310	3.4680	0.6253	1472	8.82%	0.2624	3.8010	0.6770	20	0.12%	1.5463	16.6734	1.8155
	LDGT1	13352	0.2949	4.4299	1.0646	1491	11.17%	0.3375	4.5205	1.2007	15	0.11%	1.5516	30.2399	2.9384
	LDGT2	4763	0.3299	4.7420	1.1510	660	13.86%	0.3676	5.2439	1.2507	9	0.19%	1.2861	32.2133	2.7944
1998 Total		34796	0.2691	4.0115	0.8658	3623	10.41%	0.3124	4.3600	0.9970	44	0.13%	1.4949	24.4769	2.3986
1999	LDGV	22380	0.1935	3.0354	0.5645	1720	7.69%	0.2279	3.4047	0.6435	18	0.08%	0.8703	12.4746	2.3590
	LDGT1	16805	0.2225	3.6468	0.7753	1688	10.04%	0.2671	4.0844	0.9391	22	0.13%	0.5528	10.4800	2.6699
	LDGT2	8223	0.2570	3.2980	0.8764	1010	12.28%	0.3198	3.8258	1.0101	17	0.21%	1.4236	13.0812	2.7642
1999 Total		47408	0.2148	3.2977	0.6933	4418	9.32%	0.2639	3.7606	0.8403	57	0.12%	0.9128	11.8857	2.5998
2000	LDGV	23956	0.1495	2.6417	0.4497	1819	7.59%	0.2029	3.2584	0.5523	19	0.08%	0.7366	12.1127	3.0437
	LDGT1	16928	0.2038	3.1270	0.6938	1680	9.92%	0.2466	3.6192	0.8545	22	0.13%	1.0687	24.1242	3.0162
	LDGT2	6706	0.2102	3.1211	0.6988	706	10.53%	0.2905	3.9730	0.9037	7	0.10%	1.3953	30.7027	3.2874
2000 Total		47590	0.1774	2.8819	0.5716	4205	8.84%	0.2351	3.5225	0.7320	48	0.10%	0.9849	20.3290	3.0666
2001	LDGV	28709	0.1041	2.2160	0.3142	1792	6.24%	0.1554	2.7940	0.4204	13	0.05%	0.8528	8.9367	2.4620
	LDGT1	20686	0.1197	2.6683	0.4246	1553	7.51%	0.1651	3.2575	0.5406	8	0.04%	0.5711	6.3837	3.2713
	LDGT2	8552	0.1912	2.7593	0.5774	774	9.05%	0.2331	3.2509	0.7361	5	0.06%	0.5815	6.8725	4.1190
2001 Total		57947	0.1225	2.4577	0.3924	4119	7.11%	0.1737	3.0546	0.5251	26	0.04%	0.7140	7.7542	3.0297
2002	LDGV	26616	0.0926	2.5481	0.2731	1850	6.95%	0.1319	2.7330	0.3565	13	0.05%	0.9807	20.8689	2.2837
	LDGT1	19699	0.1015	3.0875	0.3654	1291	6.55%	0.1345	3.4128	0.4678	14	0.07%	0.8106	19.7727	1.8266
	LDGT2	6454	0.1626	2.4636	0.5976	570	8.83%	0.2173	3.1586	0.7617	4	0.06%	0.1848	4.8729	3.6057

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		52769	0.1045	2.7391	0.3472	3711	7.03%	0.1459	3.0348	0.4575	31	0.06%	0.8012	18.3099	2.2478
2003	LDGV	31059	0.0634	1.5174	0.2189	1694	5.45%	0.1021	1.9101	0.2907	6	0.02%	1.5442	43.1519	1.2517
	LDGT1	23188	0.0783	1.7755	0.2895	1335	5.76%	0.1080	2.3457	0.3925	10	0.04%	1.1447	27.0576	2.3877
	LDGT2	9017	0.1215	1.8657	0.3850	608	6.74%	0.1771	2.6563	0.5491	1	0.01%	3.0117	42.1900	0.2872
2003 Total		63264	0.0771	1.6616	0.2685	3637	5.75%	0.1168	2.1947	0.3713	17	0.03%	1.3955	33.6281	1.8632
2004	LDGV	23866	0.0560	1.3693	0.1601	1327	5.56%	0.1005	1.8408	0.2311	7	0.03%	1.0583	19.9071	1.9152
	LDGT1	19979	0.0624	1.5880	0.1857	1082	5.42%	0.0924	2.3920	0.2631	5	0.03%	1.8661	18.6356	1.7618
	LDGT2	8580	0.0770	1.5417	0.1999	568	6.62%	0.1126	2.1204	0.2904	2	0.02%	0.9693	19.5236	2.8720
2004 Total		52425	0.0619	1.4809	0.1764	2977	5.68%	0.0999	2.0945	0.2540	14	0.03%	1.3341	19.3982	1.9971
2005	LDGV	4188	0.0574	1.3933	0.1596	295	7.04%	0.1046	2.1047	0.2443	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	3787	0.0650	1.4105	0.1540	220	5.81%	0.1083	2.0760	0.2476	2	0.05%	0.4352	4.5779	5.4282
	LDGT2	1438	0.1041	1.9864	0.2325	104	7.23%	0.1597	2.7446	0.4444	2	0.14%	1.2314	13.6032	2.9129
2005 Total		9413	0.0676	1.4908	0.1685	619	6.58%	0.1152	2.2020	0.2791	4	0.04%	0.8333	9.0905	4.1705
2006	LDGV	3141	0.0530	1.4274	0.1235	209	6.65%	0.1250	2.2470	0.2218	1	0.03%	0.3598	7.3934	0.8010
	LDGT1	2457	0.0465	1.3399	0.1281	139	5.66%	0.0707	1.6319	0.2255	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	1062	0.0824	1.5188	0.1745	84	7.91%	0.1459	2.5311	0.3234	1	0.09%	0.9091	15.5696	2.8153
2006 Total		6660	0.0553	1.4097	0.1333	432	6.49%	0.1116	2.1044	0.2428	2	0.03%	0.6345	11.4815	1.8082
2007	LDGV	3228	0.0429	1.2004	0.1000	135	4.18%	0.0960	2.0356	0.2059	1	0.03%	0.7906	14.9260	2.5582
	LDGT1	2315	0.0372	1.2502	0.0989	109	4.71%	0.0735	2.0404	0.1667	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	1089	0.0556	1.0930	0.1050	51	4.68%	0.1288	1.9249	0.2769	0	0.00%	0.0000	0.0000	0.0000
2007 Total		6632	0.0430	1.2002	0.1004	295	4.45%	0.0934	2.0182	0.2037	1	0.02%	0.7906	14.9260	2.5582
2008	LDGV	1878	0.0485	1.3826	0.0938	101	5.38%	0.1634	2.6504	0.2168	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	1268	0.0328	1.1298	0.0876	71	5.60%	0.0357	1.0913	0.1047	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	753	0.0557	1.4435	0.0865	58	7.70%	0.0977	2.3540	0.1975	1	0.13%	2.0958	84.5225	1.3957
2008 Total		3899	0.0448	1.3122	0.0904	230	5.90%	0.1074	2.0944	0.1773	1	0.03%	2.0958	84.5225	1.3957
2009	LDGV	598	0.0329	1.1914	0.0821	26	4.35%	0.0517	1.2889	0.1907	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	305	0.0328	1.3187	0.0839	19	6.23%	0.0202	0.9859	0.0578	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	198	0.0402	0.9212	0.0768	9	4.55%	0.0663	1.9089	0.2888	0	0.00%	0.0000	0.0000	0.0000
2009 Total		1101	0.0342	1.1781	0.0817	54	4.90%	0.0430	1.2856	0.1603	0	0.00%	0.0000	0.0000	0.0000
2010	LDGV	372	0.0440	1.4513	0.0802	19	5.11%	0.1783	2.5936	0.2372	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	220	0.0274	1.0826	0.0657	8	3.64%	0.0108	0.6203	0.0403	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	136	0.0342	0.8807	0.0597	11	8.09%	0.0296	0.6239	0.0900	0	0.00%	0.0000	0.0000	0.0000
2010 Total		728	0.0372	1.2333	0.0720	38	5.22%	0.1000	1.6080	0.1531	0	0.00%	0.0000	0.0000	0.0000
2011	LDGV	290	0.0348	1.4594	0.0823	11	3.79%	0.0544	1.9792	0.3324	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	167	0.0244	0.9524	0.0533	9	5.39%	0.0257	1.6522	0.0440	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	84	0.0440	1.0606	0.0800	7	8.33%	0.0295	1.5824	0.0766	0	0.00%	0.0000	0.0000	0.0000
2011 Total		541	0.0330	1.2410	0.0730	27	4.99%	0.0384	1.7673	0.1699	0	0.00%	0.0000	0.0000	0.0000
2012	LDGV	225	0.0241	1.1407	0.0593	3	1.33%	0.0082	1.1533	0.2177	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	73	0.0269	0.8488	0.0575	2	2.74%	0.1828	2.3610	0.3735	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	35	0.0232	0.6144	0.0377	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2012 Total		333	0.0246	1.0214	0.0567	5	1.50%	0.0781	1.6363	0.2800	0	0.00%	0.0000	0.0000	0.0000
2013	LDGV	133	0.0282	0.9614	0.0748	3	2.26%	0.0116	1.0882	0.0451	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	24	0.0293	1.1353	0.0734	2	8.33%	0.0634	3.2938	0.3538	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	19	0.0277	0.4769	0.0703	1	5.26%	0.0296	0.3079	0.0555	0	0.00%	0.0000	0.0000	0.0000
2013 Total		176	0.0282	0.9328	0.0742	6	3.41%	0.0318	1.6934	0.1497	0	0.00%	0.0000	0.0000	0.0000
2014	LDGV	32	0.0191	0.8627	0.0523	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	6	0.0137	0.7262	0.0392	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	10	0.0207	0.4257	0.0411	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2014 Total		48	0.0188	0.7546	0.0484	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2015	LDGV	12	0.0123	0.7968	0.0557	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	5	0.0131	0.4624	0.0412	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT2	4	0.0189	0.3197	0.0359	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2015 Total		21	0.0137	0.6263	0.0485	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2016	LDGV	1	0.0043	0.1998	0.0022	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
	LDGT1	1	0.0129	0.4993	0.0403	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
2016 Total		2	0.0086	0.3495	0.0212	0	0.00%	0.0000	0.0000	0.0000	0	0.00%	0.0000	0.0000	0.0000
Grand Total		536204	0.2707	3.7719	0.7008	46563	8.68%	0.4296	5.2824	1.0052	539	0.10%	2.2290	29.8340	2.4128

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	262346	0.2118	3.1194	0.5569	19659	7.49%	0.3209	4.0469	0.7556	229	0.09%	2.1424	28.8992	1.9762
LDGT1	194224	0.3027	4.2640	0.7952	17722	9.12%	0.4696	5.9177	1.1241	190	0.10%	1.9788	31.7804	2.5986
LDGT2	79634	0.3867	4.7208	0.9450	9182	11.53%	0.5852	6.7016	1.3104	120	0.15%	2.7904	28.5361	2.9518
Grand Total		536204	0.2707	3.7719	46563	8.68%	0.4296	5.2824	1.0052	539	0.10%	2.2290	29.8340	2.4128

Appendix R

I/M240 Fleet Characterization Summary Report

Emissions Reduction Component

Date

Between 1/1/2015 and 12/31/2015

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	256	1.7697	23.1032	1.9478	256	1.5711	19.5399	1.9460	0.1986	11.22%	3.5633	15.42%	0.0018	0.09%
	LDGT1	238	3.1980	44.1267	2.8297	238	2.5104	29.7773	2.9081	0.6877	21.50%	14.3495	32.52%	-0.0784	-2.77%
	LDGT2	63	4.1270	51.3803	2.4210	63	2.9001	42.1311	2.6438	1.2269	29.73%	9.2492	18.00%	-0.2228	-9.20%
	1982 Total	557	2.6466	35.2846	2.3782	557	2.1227	26.4694	2.4360	0.5239	19.79%	8.8152	24.98%	-0.0579	-2.43%
1983	LDGV	409	1.6597	17.9520	1.8725	409	1.3084	13.3131	1.8882	0.3513	21.17%	4.6389	25.84%	-0.0157	-0.84%
	LDGT1	370	3.3875	38.5361	2.4002	370	2.9412	31.8782	2.4252	0.4463	13.17%	6.6579	17.28%	-0.0250	-1.04%
	LDGT2	146	3.1347	42.6438	2.9135	146	2.6103	34.5404	2.7865	0.5244	16.73%	8.1034	19.00%	0.1270	4.36%
	1983 Total	925	2.5836	30.0829	2.2479	925	2.1670	24.0896	2.2448	0.4166	16.13%	5.9933	19.92%	0.0031	0.14%
1984	LDGV	570	1.5213	17.0142	1.8566	570	1.2542	12.1216	1.8497	0.2671	17.56%	4.8926	28.76%	0.0070	0.38%
	LDGT1	523	2.2212	31.4467	2.4374	523	1.9722	24.2848	2.4867	0.2490	11.21%	7.1619	22.77%	-0.0493	-2.02%
	LDGT2	178	3.1904	45.7471	2.9620	178	2.3274	26.9410	3.0337	0.8631	27.05%	18.8061	41.11%	-0.0718	-2.42%
	1984 Total	1271	2.0431	26.9770	2.2504	1271	1.6999	19.2020	2.2776	0.3431	16.80%	7.7750	28.82%	-0.0272	-1.21%
1985	LDGV	953	1.3303	15.0151	1.8938	953	1.0480	11.1521	1.8842	0.2823	21.22%	3.8630	25.73%	0.0096	0.50%
	LDGT1	859	2.1018	23.3126	2.6903	859	1.8184	18.4696	2.6802	0.2833	13.48%	4.8429	20.77%	0.0101	0.38%
	LDGT2	253	2.7741	32.1106	2.9555	253	1.9284	22.5053	2.9461	0.8457	30.49%	9.6053	29.91%	0.0094	0.32%
	1985 Total	2065	1.8281	20.5612	2.3552	2065	1.4763	15.5870	2.3454	0.3518	19.24%	4.9742	24.19%	0.0098	0.41%
1986	LDGV	1075	1.1324	11.2490	1.8066	1075	0.9110	7.9828	1.8024	0.2214	19.55%	3.2662	29.04%	0.0041	0.23%
	LDGT1	985	1.9170	21.0934	2.4584	985	1.6433	16.9198	2.4587	0.2737	14.28%	4.1736	19.79%	-0.0003	-0.01%
	LDGT2	252	2.3467	32.0626	2.9668	252	1.7564	19.2599	2.9673	0.5902	25.15%	12.8027	39.93%	-0.0005	-0.02%
	1986 Total	2312	1.5990	17.7117	2.2108	2312	1.3151	13.0195	2.2090	0.2839	17.75%	4.6922	26.49%	0.0018	0.08%
1987	LDGV	1541	0.9641	9.7377	1.8078	1541	0.8239	7.5325	1.7770	0.1402	14.54%	2.2052	22.65%	0.0308	1.70%
	LDGT1	1404	1.6160	18.1996	2.2713	1404	1.3942	14.5222	2.2581	0.2217	13.72%	3.6774	20.21%	0.0132	0.58%
	LDGT2	416	2.2938	22.1182	2.9072	416	1.7321	13.6380	2.8954	0.5617	24.49%	8.4803	38.34%	0.0118	0.41%
	1987 Total	3361	1.4010	14.8049	2.1375	3361	1.1746	11.2080	2.1164	0.2264	16.16%	3.5969	24.30%	0.0211	0.99%
1988	LDGV	1546	1.0044	10.9732	1.5996	1546	0.7685	8.0617	1.5500	0.2359	23.49%	2.9115	26.53%	0.0496	3.10%
	LDGT1	1518	1.4730	14.9245	2.1320	1518	1.2817	11.7428	2.0751	0.1913	12.99%	3.1817	21.32%	0.0569	2.67%
	LDGT2	524	1.7201	15.4781	2.6973	524	1.4483	12.3458	2.5595	0.2718	15.80%	3.1323	20.24%	0.1378	5.11%
	1988 Total	3588	1.3072	13.3028	1.9852	3588	1.0849	10.2447	1.9196	0.2223	17.00%	3.0581	22.99%	0.0656	3.30%
1989	LDGV	2543	0.8764	9.8083	1.5714	2543	0.7320	7.9178	1.5566	0.1444	16.48%	1.8904	19.27%	0.0148	0.94%
	LDGT1	2205	1.3412	15.3535	2.0304	2205	1.1383	12.2644	1.9684	0.2029	15.13%	3.0891	20.12%	0.0621	3.06%
	LDGT2	861	1.8451	15.3998	2.6925	861	1.4433	12.4054	2.6012	0.4018	21.78%	2.9943	19.44%	0.0914	3.39%
	1989 Total	5609	1.2078	12.8465	1.9240	5609	1.0009	10.3154	1.8788	0.2069	17.13%	2.5311	19.70%	0.0452	2.35%
1990	LDGV	3181	0.8092	9.7468	1.5807	3181	0.6749	7.5538	1.5439	0.1343	16.59%	2.1929	22.50%	0.0368	2.33%
	LDGT1	1906	1.3447	14.6070	2.1285	1906	1.1118	11.0203	2.0502	0.2330	17.32%	3.5868	24.55%	0.0783	3.68%
	LDGT2	810	1.7509	16.2976	2.7321	810	1.4641	13.5403	2.6071	0.2867	16.38%	2.7573	16.92%	0.1250	4.58%
	1990 Total	5897	1.1116	12.2175	1.9159	5897	0.9245	9.4965	1.8536	0.1871	16.83%	2.7210	22.27%	0.0623	3.25%
1991	LDGV	4788	0.6883	8.2323	1.4572	4788	0.5705	6.6206	1.4187	0.1178	17.11%	1.6117	19.58%	0.0385	2.64%
	LDGT1	3208	1.1039	12.6951	1.8160	3208	0.9275	10.4958	1.7531	0.1765	15.99%	2.1992	17.32%	0.0629	3.46%
	LDGT2	918	1.4907	16.8366	2.5341	918	1.2779	14.3797	2.4184	0.2128	14.28%	2.4569	14.59%	0.1156	4.56%
	1991 Total	8914	0.9205	10.7245	1.6972	8914	0.7718	8.8143	1.6420	0.1487	16.15%	1.9102	17.81%	0.0552	3.25%

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	4854	0.6723	7.8395	1.4161	4854	0.5381	6.0475	1.3843	0.1343	19.97%	1.7920	22.86%	0.0317	2.24%
	LDGT1	2721	1.0113	11.5495	1.7615	2721	0.9051	9.8496	1.7266	0.1062	10.50%	1.6999	14.72%	0.0349	1.98%
	LDGT2	1252	1.6945	17.1366	2.4740	1252	1.3450	13.5498	2.3452	0.3495	20.63%	3.5867	20.93%	0.1288	5.21%
1992 Total		8827	0.9218	10.3018	1.6726	8827	0.7657	8.2837	1.6261	0.1561	16.94%	2.0182	19.59%	0.0465	2.78%
1993	LDGV	6669	0.6175	7.1084	1.4510	6669	0.5220	5.6458	1.4143	0.0954	15.45%	1.4626	20.58%	0.0367	2.53%
	LDGT1	4816	0.9961	10.8781	1.9900	4816	0.8824	9.3311	1.9156	0.1136	11.41%	1.5470	14.22%	0.0744	3.74%
	LDGT2	1837	1.6778	16.2646	2.5465	1837	1.3802	13.8254	2.4060	0.2975	17.73%	2.4393	15.00%	0.1405	5.52%
1993 Total		13322	0.9006	9.7338	1.7969	13322	0.7707	8.1060	1.7323	0.1299	14.42%	1.6278	16.72%	0.0646	3.60%
1994	LDGV	7562	0.5026	6.1062	1.1650	7562	0.4123	4.9979	1.1219	0.0903	17.97%	1.1083	18.15%	0.0430	3.69%
	LDGT1	5649	0.8610	9.6487	1.8113	5649	0.7326	8.0788	1.6979	0.1285	14.92%	1.5699	16.27%	0.1134	6.26%
	LDGT2	2793	1.1977	12.9659	2.1965	2793	0.9341	10.1820	2.0083	0.2636	22.01%	2.7839	21.47%	0.1882	8.57%
1994 Total		16004	0.7504	8.5538	1.5731	16004	0.6164	6.9901	1.4799	0.1340	17.86%	1.5636	18.28%	0.0932	5.93%
1995	LDGV	11311	0.4627	5.5626	1.0245	11311	0.3799	4.6236	0.9816	0.0828	17.88%	0.9390	16.88%	0.0430	4.19%
	LDGT1	7104	0.7715	9.0953	1.7728	7104	0.6599	7.6114	1.6737	0.1115	14.45%	1.4839	16.32%	0.0991	5.59%
	LDGT2	4095	1.0931	12.1560	2.1262	4095	0.8804	10.1713	1.9631	0.2127	19.46%	1.9847	16.33%	0.1632	7.67%
1995 Total		22510	0.6748	7.8770	1.4611	22510	0.5593	6.5758	1.3785	0.1155	17.11%	1.3012	16.52%	0.0825	5.65%
1996	LDGV	11267	0.3376	4.4300	0.8414	11267	0.2980	3.8395	0.8020	0.0395	11.72%	0.5905	13.33%	0.0394	4.68%
	LDGT1	7184	0.4425	6.2013	1.4417	7184	0.3716	5.0900	1.3552	0.0709	16.03%	1.1114	17.92%	0.0865	6.00%
	LDGT2	3202	0.5652	7.1978	1.4081	3202	0.4774	5.9639	1.3157	0.0878	15.53%	1.2339	17.14%	0.0924	6.56%
1996 Total		21653	0.4061	5.4270	1.1244	21653	0.3490	4.5685	1.0615	0.0571	14.06%	0.8584	15.82%	0.0629	5.59%
1997	LDGV	16456	0.3241	4.4917	0.7680	16456	0.2827	3.7865	0.7313	0.0414	12.76%	0.7052	15.70%	0.0367	4.78%
	LDGT1	12269	0.3795	5.6581	1.2987	12269	0.3262	4.8889	1.2070	0.0533	14.05%	0.7692	13.59%	0.0917	7.06%
	LDGT2	4911	0.5036	6.6482	1.3888	4911	0.3968	5.4968	1.2673	0.1069	21.22%	1.1514	17.32%	0.1215	8.75%
1997 Total		33636	0.3705	5.2320	1.0522	33636	0.3152	4.4383	0.9831	0.0553	14.92%	0.7937	15.17%	0.0691	6.57%
1998	LDGV	16681	0.2747	4.2368	0.6682	16681	0.2310	3.4680	0.6253	0.0437	15.92%	0.7688	18.15%	0.0429	6.42%
	LDGT1	13352	0.3438	5.2313	1.1511	13352	0.2949	4.4299	1.0646	0.0489	14.23%	0.8014	15.32%	0.0864	7.51%
	LDGT2	4763	0.4289	6.1517	1.2887	4763	0.3299	4.7420	1.1510	0.0990	23.09%	1.4097	22.92%	0.1377	10.69%
1998 Total		34796	0.3224	4.8805	0.9384	34796	0.2691	4.0115	0.8658	0.0533	16.53%	0.8690	17.81%	0.0726	7.74%
1999	LDGV	22380	0.2251	3.5210	0.6074	22380	0.1935	3.0354	0.5645	0.0316	14.02%	0.4856	13.79%	0.0429	7.07%
	LDGT1	16805	0.2647	4.3144	0.8464	16805	0.2225	3.6468	0.7753	0.0422	15.93%	0.6675	15.47%	0.0711	8.40%
	LDGT2	8223	0.3357	4.2254	1.0005	8223	0.2570	3.2980	0.8764	0.0786	23.43%	0.9273	21.95%	0.1241	12.41%
1999 Total		47408	0.2583	3.9244	0.7603	47408	0.2148	3.2977	0.6933	0.0435	16.83%	0.6267	15.97%	0.0670	8.81%
2000	LDGV	23956	0.1808	3.0913	0.5014	23956	0.1495	2.6417	0.4497	0.0313	17.29%	0.4496	14.54%	0.0517	10.31%
	LDGT1	16928	0.2415	3.7936	0.7573	16928	0.2038	3.1270	0.6938	0.0377	15.61%	0.6666	17.57%	0.0636	8.39%
	LDGT2	6706	0.2834	4.2364	0.7757	6706	0.2102	3.1211	0.6988	0.0732	25.82%	1.1153	26.33%	0.0769	9.91%
2000 Total		47590	0.2169	3.5025	0.6311	47590	0.1774	2.8819	0.5716	0.0395	18.20%	0.6206	17.72%	0.0595	9.42%
2001	LDGV	28709	0.1298	2.5933	0.3489	28709	0.1041	2.2160	0.3142	0.0257	19.82%	0.3773	14.55%	0.0347	9.96%
	LDGT1	20686	0.1415	3.0612	0.4605	20686	0.1197	2.6683	0.4246	0.0218	15.37%	0.3928	12.83%	0.0359	7.79%
	LDGT2	8552	0.2209	3.1911	0.6286	8552	0.1912	2.7593	0.5774	0.0297	13.43%	0.4318	13.53%	0.0512	8.15%
2001 Total		57947	0.1474	2.8485	0.4300	57947	0.1225	2.4577	0.3924	0.0249	16.88%	0.3909	13.72%	0.0376	8.74%
2002	LDGV	26616	0.1189	2.8400	0.3146	26616	0.0926	2.5481	0.2731	0.0263	22.15%	0.2919	10.28%	0.0415	13.18%
	LDGT1	19699	0.1205	3.6129	0.4016	19699	0.1015	3.0875	0.3654	0.0190	15.76%	0.5254	14.54%	0.0362	9.01%
	LDGT2	6454	0.2035	3.0474	0.6505	6454	0.1626	2.4636	0.5976	0.0408	20.07%	0.5838	19.16%	0.0529	8.13%

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	52769	0.1298	3.1539	0.3881	52769	0.1045	2.7391	0.3472	0.0254	19.54%	0.4148	13.15%	0.0409	10.54%
2003	LDGV	31059	0.0778	1.6857	0.2468	31059	0.0634	1.5174	0.2189	0.0144	18.49%	0.1682	9.98%	0.0279	11.31%
	LDGT1	23188	0.0908	2.0916	0.3065	23188	0.0783	1.7755	0.2895	0.0125	13.81%	0.3162	15.12%	0.0170	5.55%
	LDGT2	9017	0.1473	2.3243	0.4225	9017	0.1215	1.8657	0.3850	0.0257	17.48%	0.4585	19.73%	0.0375	8.88%
2003	Total	63264	0.0925	1.9255	0.2937	63264	0.0771	1.6616	0.2685	0.0153	16.58%	0.2638	13.70%	0.0253	8.61%
2004	LDGV	23866	0.0708	1.5544	0.1868	23866	0.0560	1.3693	0.1601	0.0148	20.86%	0.1851	11.91%	0.0267	14.30%
	LDGT1	19979	0.0742	1.8775	0.2052	19979	0.0624	1.5880	0.1857	0.0118	15.94%	0.2895	15.42%	0.0195	9.51%
	LDGT2	8580	0.0935	1.8074	0.2255	8580	0.0770	1.5417	0.1999	0.0165	17.64%	0.2657	14.70%	0.0255	11.32%
2004	Total	52425	0.0758	1.7189	0.2002	52425	0.0619	1.4809	0.1764	0.0139	18.37%	0.2381	13.85%	0.0238	11.88%
2005	LDGV	4188	0.0826	1.8768	0.2049	4188	0.0574	1.3933	0.1596	0.0251	30.45%	0.4835	25.76%	0.0454	22.14%
	LDGT1	3787	0.0748	1.6635	0.1823	3787	0.0650	1.4105	0.1540	0.0098	13.06%	0.2530	15.21%	0.0284	15.55%
	LDGT2	1438	0.1407	2.4266	0.2826	1438	0.1041	1.9864	0.2325	0.0366	25.99%	0.4401	18.14%	0.0501	17.73%
2005	Total	9413	0.0883	1.8750	0.2077	9413	0.0676	1.4908	0.1685	0.0207	23.44%	0.3842	20.49%	0.0392	18.89%
2006	LDGV	3141	0.0883	2.0287	0.1863	3141	0.0530	1.4274	0.1235	0.0353	39.98%	0.6013	29.64%	0.0628	33.70%
	LDGT1	2457	0.0577	1.6232	0.1640	2457	0.0465	1.3399	0.1281	0.0112	19.47%	0.2832	17.45%	0.0360	21.93%
	LDGT2	1062	0.1335	2.3938	0.2374	1062	0.0824	1.5188	0.1745	0.0511	38.27%	0.8750	36.55%	0.0630	26.53%
2006	Total	6660	0.0842	1.9373	0.1862	6660	0.0553	1.4097	0.1333	0.0289	34.36%	0.5276	27.23%	0.0529	28.42%
2007	LDGV	3228	0.0568	1.3489	0.1296	3228	0.0429	1.2004	0.1000	0.0140	24.56%	0.1484	11.01%	0.0296	22.82%
	LDGT1	2315	0.0620	1.4721	0.1092	2315	0.0372	1.2502	0.0989	0.0248	40.03%	0.2219	15.07%	0.0103	9.44%
	LDGT2	1089	0.0832	1.5184	0.1394	1089	0.0556	1.0930	0.1050	0.0276	33.15%	0.4254	28.02%	0.0344	24.71%
2007	Total	6632	0.0630	1.4197	0.1241	6632	0.0430	1.2002	0.1004	0.0200	31.74%	0.2196	15.47%	0.0236	19.06%
2008	LDGV	1878	0.0757	1.7446	0.1555	1878	0.0485	1.3826	0.0938	0.0272	35.96%	0.3620	20.75%	0.0617	39.67%
	LDGT1	1268	0.0366	1.2808	0.1107	1268	0.0328	1.1298	0.0876	0.0038	10.37%	0.1510	11.79%	0.0231	20.86%
	LDGT2	753	0.0776	1.6107	0.1065	753	0.0557	1.4435	0.0865	0.0219	28.23%	0.1672	10.38%	0.0201	18.84%
2008	Total	3899	0.0633	1.5679	0.1315	3899	0.0448	1.3122	0.0904	0.0186	29.32%	0.2557	16.31%	0.0411	31.26%
2009	LDGV	598	0.0432	1.3375	0.1239	598	0.0329	1.1914	0.0821	0.0103	23.89%	0.1461	10.92%	0.0418	33.71%
	LDGT1	305	0.0335	1.3276	0.0852	305	0.0328	1.3187	0.0839	0.0007	1.98%	0.0089	0.67%	0.0012	1.47%
	LDGT2	198	0.0404	0.9283	0.0766	198	0.0402	0.9212	0.0768	0.0002	0.46%	0.0072	0.77%	-0.0002	-0.27%
2009	Total	1101	0.0400	1.2612	0.1047	1101	0.0342	1.1781	0.0817	0.0058	14.55%	0.0831	6.59%	0.0230	21.97%
2010	LDGV	372	0.0744	2.0057	0.1325	372	0.0440	1.4513	0.0802	0.0303	40.80%	0.5544	27.64%	0.0523	39.49%
	LDGT1	220	0.0283	1.2300	0.0752	220	0.0274	1.0826	0.0657	0.0009	3.33%	0.1474	11.98%	0.0095	12.64%
	LDGT2	136	0.0332	0.8578	0.0555	136	0.0342	0.8807	0.0597	-0.0011	-3.17%	-0.0228	-2.66%	-0.0042	-7.54%
2010	Total	728	0.0528	1.5568	0.1008	728	0.0372	1.2333	0.0720	0.0156	29.55%	0.3235	20.78%	0.0288	28.60%
2011	LDGV	290	0.0398	1.5733	0.0893	290	0.0348	1.4594	0.0823	0.0051	12.68%	0.1138	7.24%	0.0071	7.90%
	LDGT1	167	0.0239	0.9206	0.0537	167	0.0244	0.9524	0.0533	-0.0004	-1.82%	-0.0318	-3.46%	0.0004	0.81%
	LDGT2	84	0.0443	1.0088	0.0771	84	0.0440	1.0606	0.0800	0.0003	0.72%	-0.0518	-5.14%	-0.0029	-3.75%
2011	Total	541	0.0356	1.2841	0.0764	541	0.0330	1.2410	0.0730	0.0026	7.36%	0.0432	3.36%	0.0035	4.53%
2012	LDGV	225	0.0241	1.1371	0.0571	225	0.0241	1.1407	0.0593	0.0001	0.24%	-0.0036	-0.32%	-0.0022	-3.94%
	LDGT1	73	0.0468	1.0482	0.1160	73	0.0269	0.8488	0.0575	0.0200	42.60%	0.1994	19.02%	0.0584	50.39%
	LDGT2	35	0.0232	0.6144	0.0377	35	0.0232	0.6144	0.0377	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2012	Total	333	0.0290	1.0627	0.0680	333	0.0246	1.0214	0.0567	0.0044	15.22%	0.0413	3.88%	0.0113	16.61%
2013	LDGV	133	0.0282	0.9672	0.0748	133	0.0282	0.9614	0.0748	0.0001	0.30%	0.0057	0.59%	-0.0000	-0.04%
	LDGT1	24	0.0298	1.6401	0.0882	24	0.0293	1.1353	0.0734	0.0005	1.79%	0.5048	30.78%	0.0148	16.74%

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	19	0.0277	0.4827	0.0693	19	0.0277	0.4769	0.0703	0.0000	0.06%	0.0058	1.20%	-0.0010	-1.46%
2013 Total		176	0.0284	1.0066	0.0760	176	0.0282	0.9328	0.0742	0.0001	0.49%	0.0738	7.33%	0.0019	2.47%
2014	LDGV	32	0.0191	0.8627	0.0523	32	0.0191	0.8627	0.0523	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT1	6	0.0137	0.7262	0.0392	6	0.0137	0.7262	0.0392	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT2	10	0.0207	0.4257	0.0411	10	0.0207	0.4257	0.0411	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2014 Total		48	0.0188	0.7546	0.0484	48	0.0188	0.7546	0.0484	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2015	LDGV	12	0.0123	0.7968	0.0557	12	0.0123	0.7968	0.0557	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT1	5	0.0131	0.4624	0.0412	5	0.0131	0.4624	0.0412	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT2	4	0.0189	0.3197	0.0359	4	0.0189	0.3197	0.0359	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2015 Total		21	0.0137	0.6263	0.0485	21	0.0137	0.6263	0.0485	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2016	LDGV	1	0.0043	0.1998	0.0022	1	0.0043	0.1998	0.0022	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
	LDGT1	1	0.0129	0.4993	0.0403	1	0.0129	0.4993	0.0403	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
2016 Total		2	0.0086	0.3495	0.0212	2	0.0086	0.3495	0.0212	0.0000	0.00%	0.0000	0.00%	0.0000	0.00%
Grand Total		536204	0.3257	4.5627	0.7502	536204	0.2707	3.7719	0.7008	0.0550	16.88%	0.7908	17.33%	0.0494	6.59%

Summary by Vehicle Type (V1.01)

Overall Initial Exhaust Emissions				Overall Final Exhaust Emissions					Emission Reduction					
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	
262346	0.2559	3.7446	0.5946	262346	0.2118	3.1194	0.5569	0.0441	17.25%	0.6252	16.70%	0.0377	6.34%	
194224	0.3543	5.1121	0.8467	194224	0.3027	4.2640	0.7952	0.0516	14.57%	0.8480	16.59%	0.0516	6.09%	
79634	0.4855	5.9178	1.0276	79634	0.3867	4.7208	0.9450	0.0988	20.36%	1.1970	20.23%	0.0827	8.04%	
536204	0.3257	4.5627	0.7502	536204	0.2707	3.7719	0.7008	0.0550	16.88%	0.7908	17.33%	0.0494	6.59%	

Appendix S

Idle Initial Inspection Report

Date
Between 1/1/2015 and 12/31/2015

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	930	504.63	2.56	414.53	3.18	619	66.56%	291.86	1.34	281.27	2.53	311	33.44%	928.11	4.98	679.77	4.48
	LDGT	490	427.02	2.09	382.88	2.69	360	73.47%	280.45	1.05	299.40	2.22	130	26.53%	832.90	4.94	614.05	3.98
	HDGT	564	409.40	2.25	392.29	2.71	496	87.94%	296.28	1.87	312.45	2.53	68	12.06%	1234.47	4.98	974.70	4.07
1974 Total		1,984	458.39	2.35	400.39	2.93	1475	74.34%	290.56	1.45	296.18	2.45	509	25.66%	944.72	4.97	702.39	4.30
1975	LDGV	56	191.73	1.05	152.54	1.73	39	69.64%	155.89	0.55	121.96	1.35	17	30.36%	273.94	2.20	222.69	2.61
	LDGT	22	239.34	1.98	183.61	1.78	12	54.55%	158.34	0.73	213.73	1.28	10	45.45%	336.53	3.48	147.47	2.38
	HDGT	124	382.45	2.19	308.93	2.14	106	85.48%	260.57	1.63	207.64	1.81	18	14.52%	1100.17	5.45	905.41	4.12
1975 Total		202	313.99	1.85	251.92	1.99	157	77.72%	226.75	1.30	186.82	1.65	45	22.28%	618.34	3.78	479.06	3.16
1976	LDGV	310	285.44	1.57	242.16	2.23	192	61.94%	142.01	0.47	155.28	1.49	118	38.06%	518.82	3.36	383.53	3.42
	LDGT	178	363.31	1.33	290.28	2.06	105	58.99%	178.58	0.52	193.54	1.52	73	41.01%	629.03	2.49	429.42	2.83
	HDGT	578	364.04	2.20	299.43	2.58	482	83.39%	256.77	1.71	238.09	2.40	96	16.61%	902.63	4.66	607.40	3.52
1976 Total		1,066	341.06	1.87	281.25	2.39	779	73.08%	217.94	1.24	211.68	2.06	287	26.92%	675.23	3.57	470.09	3.31
1977	LDGV	329	237.78	1.19	163.74	1.37	218	66.26%	93.38	0.27	87.41	0.82	111	33.74%	521.39	3.00	313.65	2.47
	LDGT	135	264.99	1.18	209.77	1.64	83	61.48%	111.46	0.30	123.83	1.37	52	38.52%	510.06	2.58	346.93	2.05
	HDGT	772	408.53	2.19	355.20	2.30	641	83.03%	292.39	1.73	276.71	2.07	131	16.97%	976.82	4.41	739.25	3.38
1977 Total		1,236	347.40	1.81	288.35	1.98	942	76.21%	230.39	1.27	219.43	1.72	294	23.79%	722.32	3.55	509.17	2.80
1978	LDGV	452	214.68	1.02	203.59	1.55	320	70.80%	104.43	0.26	109.95	0.99	132	29.20%	481.93	2.88	430.60	2.93
	LDGT	219	235.48	1.11	204.57	1.75	131	59.82%	112.01	0.38	143.54	1.48	88	40.18%	419.29	2.19	295.42	2.13
	HDGT	938	372.79	1.96	292.63	2.10	813	86.67%	282.22	1.65	239.34	1.91	125	13.33%	961.85	3.98	639.23	3.39
1978 Total		1,609	309.68	1.58	255.63	1.90	1264	78.56%	219.57	1.17	196.65	1.63	345	21.44%	639.84	3.10	471.71	2.89
1979	LDGV	571	242.12	1.12	207.50	1.58	369	64.62%	106.98	0.28	121.06	1.01	202	35.38%	488.98	2.67	365.39	2.61
	LDGT	784	243.57	1.09	226.19	1.68	480	61.22%	116.67	0.29	129.40	1.16	304	38.78%	443.94	2.34	379.01	2.51
	HDGT	265	326.68	1.55	271.96	1.96	204	76.98%	212.35	0.99	179.30	1.53	61	23.02%	709.04	3.43	581.85	3.41
1979 Total		1,620	256.65	1.18	227.09	1.69	1053	65.00%	131.81	0.42	136.15	1.18	567	35.00%	488.51	2.58	395.98	2.64
1980	LDGV	354	179.53	0.67	193.05	1.36	278	78.53%	89.59	0.24	121.11	0.98	76	21.47%	508.50	2.22	456.20	2.75
	LDGT	405	215.23	0.85	183.44	1.33	278	68.64%	97.67	0.23	102.49	1.00	127	31.36%	472.58	2.22	360.62	2.07
	HDGT	119	308.47	1.05	220.32	1.36	93	78.15%	179.70	0.71	118.36	0.75	26	21.85%	769.09	2.28	585.02	3.56
1980 Total		878	213.47	0.81	192.31	1.35	649	73.92%	105.96	0.30	112.74	0.95	229	26.08%	518.17	2.23	417.82	2.46
1981	LDGV	307	121.28	0.48	121.06	0.94	197	64.17%	51.96	0.12	47.66	0.23	110	35.83%	245.43	1.13	252.49	2.21
	LDGT	416	169.28	0.63	159.83	1.01	226	54.33%	67.94	0.14	57.50	0.28	190	45.67%	289.82	1.21	281.54	1.88
	HDGT	183	226.06	1.12	164.71	1.24	152	83.06%	140.54	0.78	102.93	1.04	31	16.94%	645.36	2.79	467.61	2.25
1981 Total		906	164.48	0.68	147.68	1.03	575	63.47%	81.66	0.30	66.14	0.47	331	36.53%	308.36	1.33	289.31	2.02
1982	LDGV	10	267.21	2.00	208.50	2.02	5	50.00%	102.72	0.53	83.46	0.65	5	50.00%	431.70	3.46	333.54	3.39
	LDGT	9	280.53	1.18	287.29	1.34	2	22.22%	155.50	0.15	113.00	0.20	7	77.78%	316.26	1.48	337.09	1.67
	HDGT	131	219.63	1.07	162.91	1.29	107	81.68%	127.70	0.81	85.55	0.99	24	18.32%	629.46	2.25	507.79	2.62
1982 Total		150	226.45	1.14	173.41	1.34	114	76.00%	127.09	0.78	85.94	0.96	36	24.00%	541.09	2.27	450.40	2.54
1983	LDGV	10	561.63	2.46	534.75	2.45	4	40.00%	108.73	0.54	98.10	0.37	6	60.00%	863.57	3.74	825.85	3.83
	LDGT	2	116.55	0.46	122.40	3.62	1	50.00%	67.30	0.49	29.70	0.30	1	50.00%	165.80	0.43	215.10	6.93
	HDGT	181	261.92	1.33	179.99	1.25	154	85.08%	160.45	0.86	104.93	0.86	27	14.92%	840.72	4.02	608.08	3.53

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
1983 Total		193	275.95	1.38	197.77	1.34	159	82.38%	158.56	0.85	104.29	0.84	34	17.62%	824.90	3.86	634.95	3.68
1984	LDGV	8	66.86	0.20	151.03	0.36	6	75.00%	37.78	0.11	45.37	0.34	2	25.00%	154.10	0.49	468.00	0.41
	LDGT	11	331.35	1.34	456.86	2.38	3	27.27%	94.33	0.13	118.03	0.57	8	72.73%	420.23	1.80	583.93	3.05
	HDGT	291	255.79	1.04	167.94	0.94	233	80.07%	133.53	0.79	82.46	0.73	58	19.93%	746.95	2.05	511.33	1.81
1984 Total		310	253.60	1.03	177.76	0.98	242	78.06%	130.67	0.76	81.98	0.72	68	21.94%	691.08	1.97	518.60	1.92
1985	LDGV	17	232.28	0.56	287.46	1.20	9	52.94%	61.73	0.24	49.08	0.28	8	47.06%	424.15	0.92	555.65	2.24
	LDGT	9	315.74	3.15	207.14	2.00	1	11.11%	25.00	0.07	157.60	0.72	8	88.89%	352.09	3.54	213.34	2.16
	HDGT	359	243.54	1.09	144.70	1.01	292	81.34%	136.33	0.71	81.55	0.69	67	18.66%	710.81	2.76	419.90	2.41
1985 Total		385	244.73	1.12	152.46	1.04	302	78.44%	133.74	0.69	80.84	0.68	83	21.56%	648.60	2.66	413.07	2.37
1986	LDGV	19	78.11	0.41	61.58	0.46	15	78.95%	48.67	0.28	39.85	0.33	4	21.05%	188.48	0.92	143.10	0.96
	LDGT	13	209.36	0.81	254.94	0.99	7	53.85%	122.41	0.46	86.04	0.27	6	46.15%	310.80	1.22	451.98	1.83
	HDGT	302	253.54	1.08	182.60	1.16	203	67.22%	88.00	0.59	79.47	0.74	99	32.78%	592.98	2.08	394.05	2.03
1986 Total		334	241.84	1.03	178.53	1.11	225	67.37%	86.45	0.57	77.03	0.69	109	32.63%	562.60	1.99	388.03	1.98
1987	LDGV	27	112.30	0.74	91.79	0.61	22	81.48%	74.30	0.31	64.04	0.39	5	18.52%	279.52	2.66	213.88	1.60
	LDGT	38	184.59	0.32	222.73	0.58	23	60.53%	89.36	0.17	87.71	0.32	15	39.47%	330.61	0.55	429.77	0.98
	HDGT	318	182.45	0.67	135.29	0.64	245	77.04%	85.17	0.43	66.80	0.49	73	22.96%	508.96	1.49	365.13	1.17
1987 Total		383	177.72	0.64	140.90	0.64	290	75.72%	84.68	0.40	68.25	0.47	93	24.28%	467.86	1.40	367.42	1.17
1988	LDGV	14	144.24	0.80	121.31	1.23	10	71.43%	68.47	0.23	48.84	0.21	4	28.57%	333.65	2.24	302.50	3.78
	LDGT	54	176.57	0.39	148.45	0.50	37	68.52%	91.71	0.20	85.21	0.37	17	31.48%	361.26	0.80	286.08	0.79
	HDGT	372	135.07	0.60	121.78	0.69	318	85.48%	69.03	0.30	67.50	0.47	54	14.52%	523.96	2.34	441.39	1.96
1988 Total		440	140.45	0.58	125.04	0.68	365	82.95%	71.31	0.29	68.79	0.46	75	17.05%	476.94	1.99	398.78	1.79
1989	LDGV	48	70.78	0.35	71.05	0.34	38	79.17%	42.17	0.14	43.86	0.24	10	20.83%	179.50	1.16	174.37	0.71
	LDGT	70	177.09	0.62	137.05	0.73	46	65.71%	103.06	0.24	91.30	0.44	24	34.29%	318.98	1.35	224.74	1.30
	HDGT	723	124.40	0.50	106.10	0.57	634	87.69%	74.51	0.30	67.70	0.44	89	12.31%	479.80	1.94	379.61	1.49
1989 Total		841	125.73	0.50	106.67	0.57	718	85.37%	74.63	0.28	67.95	0.43	123	14.63%	424.00	1.76	332.71	1.39
1990	LDGV	57	96.04	0.28	102.21	0.51	41	71.93%	63.70	0.16	58.08	0.25	16	28.07%	178.91	0.57	215.31	1.18
	LDGT	81	204.38	0.56	146.63	0.66	53	65.43%	103.31	0.28	91.72	0.37	28	34.57%	395.69	1.10	250.59	1.20
	HDGT	554	110.96	0.59	81.70	0.56	474	85.56%	65.26	0.28	52.30	0.38	80	14.44%	381.71	2.42	255.92	1.61
1990 Total		692	120.67	0.56	90.99	0.57	568	82.08%	68.70	0.27	56.40	0.37	124	17.92%	358.70	1.88	249.47	1.46
1991	LDGV	69	149.54	0.45	135.28	0.55	50	72.46%	48.69	0.14	39.49	0.15	19	27.54%	414.91	1.27	387.35	1.59
	LDGT	73	117.93	0.33	84.73	0.49	60	82.19%	89.41	0.24	66.45	0.31	13	17.81%	249.56	0.78	169.12	1.29
	HDGT	628	104.00	0.50	79.54	0.58	563	89.65%	63.40	0.27	53.23	0.44	65	10.35%	455.68	2.49	307.44	1.75
1991 Total		770	109.40	0.48	85.03	0.57	673	87.40%	64.63	0.25	53.39	0.41	97	12.60%	420.07	2.02	304.55	1.66
1992	LDGV	71	94.34	0.40	102.79	0.62	55	77.46%	59.05	0.12	53.37	0.22	16	22.54%	215.63	1.34	272.66	1.99
	LDGT	83	114.65	0.31	96.29	0.34	73	87.95%	84.45	0.21	58.58	0.29	10	12.05%	335.06	1.03	371.54	0.72
	HDGT	714	100.04	0.51	83.34	0.64	634	88.80%	63.95	0.26	47.76	0.42	80	11.20%	385.98	2.50	365.29	2.43
1992 Total		868	100.97	0.49	86.17	0.61	762	87.79%	65.56	0.25	49.20	0.39	106	12.21%	355.46	2.19	351.90	2.20
1993	LDGV	47	112.06	0.43	113.97	0.76	30	63.83%	68.86	0.15	62.37	0.24	17	36.17%	188.29	0.94	205.03	1.67
	LDGT	36	97.12	0.22	73.34	0.37	27	75.00%	66.29	0.14	57.97	0.25	9	25.00%	189.63	0.48	119.46	0.72
	HDGT	908	87.08	0.43	70.28	0.56	837	92.18%	58.62	0.25	44.65	0.40	71	7.82%	422.47	2.56	372.41	2.48
1993 Total		991	88.63	0.42	72.46	0.56	894	90.21%	59.20	0.24	45.65	0.39	97	9.79%	359.83	2.08	319.60	2.18
1994	LDGV	75	83.13	0.21	86.15	0.31	62	82.67%	51.69	0.12	48.68	0.21	13	17.33%	233.04	0.61	264.83	0.75
	LDGT	80	154.49	0.49	112.14	0.59	66	82.50%	74.71	0.31	66.49	0.41	14	17.50%	530.57	1.32	327.37	1.46

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
	HDGT	1,087	84.99	0.52	60.34	0.59	978	89.97%	52.67	0.25	39.81	0.37	109	10.03%	374.98	2.86	244.48	2.57
1994 Total		1,242	89.35	0.50	65.23	0.57	1106	89.05%	53.93	0.25	41.90	0.36	136	10.95%	377.43	2.49	254.96	2.28
1995	LDGV	109	115.31	0.47	108.63	0.61	86	78.90%	37.96	0.08	41.28	0.16	23	21.10%	404.54	1.94	360.46	2.28
	LDGT	49	166.42	0.70	130.04	0.78	30	61.22%	61.97	0.22	39.42	0.26	19	38.78%	331.35	1.47	273.12	1.60
	HDGT	1,595	90.06	0.49	66.67	0.63	1439	90.22%	55.41	0.25	43.55	0.42	156	9.78%	409.69	2.74	279.92	2.54
1995 Total		1,753	93.76	0.50	71.05	0.63	1555	88.71%	54.57	0.24	43.34	0.40	198	11.29%	401.57	2.52	288.63	2.42
1996	LDGV	6	131.13	0.08	91.95	0.23	4	66.67%	6.52	0.00	6.05	0.04	2	33.33%	380.35	0.24	263.75	0.61
	LDGT	10	51.25	0.11	42.71	0.17	10	100.00%	51.25	0.11	42.71	0.17	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	1,323	71.50	0.30	47.77	0.35	1253	94.71%	49.77	0.18	34.89	0.27	70	5.29%	460.51	2.51	278.28	1.82
1996 Total		1,339	71.62	0.30	47.93	0.35	1267	94.62%	49.64	0.18	34.86	0.27	72	5.38%	458.28	2.44	277.88	1.78
1997	LDGV	10	77.78	0.15	90.31	0.20	8	80.00%	35.14	0.08	42.98	0.15	2	20.00%	248.35	0.43	279.65	0.41
	LDGT	19	34.72	0.08	34.67	0.11	19	100.00%	34.72	0.08	34.67	0.11	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	2,037	67.18	0.24	45.12	0.24	1962	96.32%	47.46	0.17	31.65	0.20	75	3.68%	583.20	2.05	397.56	1.40
1997 Total		2,066	66.93	0.23	45.24	0.24	1989	96.27%	47.28	0.17	31.72	0.20	77	3.73%	574.50	2.01	394.49	1.38
1998	LDGV	26	51.57	0.08	42.72	0.12	23	88.46%	34.48	0.07	30.56	0.10	3	11.54%	182.60	0.15	135.97	0.26
	LDGT	41	66.75	0.10	40.45	0.17	38	92.68%	50.39	0.09	38.14	0.14	3	7.32%	274.00	0.25	69.67	0.53
	HDGT	1,244	98.50	0.25	58.61	0.29	1153	92.68%	60.34	0.16	40.52	0.23	91	7.32%	581.92	1.34	287.83	1.04
1998 Total		1,311	96.57	0.24	57.73	0.28	1214	92.60%	59.54	0.16	40.25	0.22	97	7.40%	560.05	1.27	276.38	1.00
1999	LDGV	27	45.18	0.18	58.91	0.30	24	88.89%	24.96	0.06	29.37	0.08	3	11.11%	206.97	1.15	295.23	2.05
	LDGT	46	43.64	0.09	31.38	0.10	42	91.30%	28.18	0.08	22.52	0.10	4	8.70%	205.95	0.18	124.38	0.13
	HDGT	2,895	63.38	0.16	45.09	0.20	2790	96.37%	43.44	0.12	33.93	0.18	105	3.63%	593.15	1.31	341.73	0.91
1999 Total		2,968	62.90	0.16	45.00	0.20	2856	96.23%	43.06	0.12	33.72	0.18	112	3.77%	568.98	1.26	332.72	0.91
2000	LDGV	28	22.44	0.09	23.25	0.10	26	92.86%	15.29	0.02	18.62	0.05	2	7.14%	115.35	1.03	83.55	0.74
	LDGT	58	40.82	0.10	28.20	0.15	57	98.28%	40.78	0.10	27.87	0.15	1	1.72%	42.90	0.10	47.30	0.12
	HDGT	2,445	60.66	0.16	41.72	0.18	2367	96.81%	42.22	0.12	30.04	0.15	78	3.19%	620.08	1.61	396.05	1.34
2000 Total		2,531	59.78	0.16	41.21	0.18	2450	96.80%	41.90	0.11	29.87	0.14	81	3.20%	600.50	1.57	384.02	1.31
2001	LDGV	37	24.76	0.11	24.73	0.14	34	91.89%	18.85	0.06	18.29	0.09	3	8.11%	91.77	0.67	97.70	0.74
	LDGT	286	9.74	0.02	13.74	0.05	284	99.30%	9.31	0.02	13.24	0.04	2	0.70%	70.00	0.29	84.20	1.48
	HDGT	2,977	38.55	0.10	28.46	0.15	2946	98.96%	35.02	0.09	26.42	0.14	31	1.04%	374.21	0.81	222.62	1.00
2001 Total		3,300	35.90	0.09	27.14	0.14	3264	98.91%	32.61	0.08	25.19	0.13	36	1.09%	333.77	0.77	204.52	1.00
2002	LDGV	37	11.94	0.02	12.76	0.03	37	100.00%	11.94	0.02	12.76	0.03	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	71	20.47	0.05	21.23	0.16	65	91.55%	18.95	0.05	14.82	0.05	6	8.45%	37.00	0.06	90.65	1.34
	HDGT	1,948	44.94	0.12	35.38	0.20	1923	98.72%	38.15	0.10	30.28	0.17	25	1.28%	567.56	1.81	427.75	2.28
2002 Total		2,056	43.50	0.12	34.48	0.19	2025	98.49%	37.05	0.10	29.46	0.16	31	1.51%	464.87	1.47	362.51	2.10
2003	LDGV	75	6.29	0.01	14.46	0.03	74	98.67%	5.76	0.00	8.97	0.02	1	1.33%	44.80	0.06	420.20	1.22
	LDGT	89	14.56	0.04	16.21	0.05	86	96.63%	14.56	0.04	15.49	0.04	3	3.37%	14.73	0.03	36.90	0.48
	HDGT	2,705	29.53	0.10	22.28	0.12	2683	99.19%	26.94	0.08	20.88	0.11	22	0.81%	345.51	2.36	193.39	1.05
2003 Total		2,869	28.46	0.09	21.89	0.12	2843	99.09%	26.01	0.08	20.40	0.11	26	0.91%	295.78	2.00	184.05	0.99
2004	LDGV	56	11.12	0.03	7.77	0.01	55	98.21%	5.94	0.01	7.86	0.01	1	1.79%	296.00	1.15	3.00	0.01
	LDGT	46	20.58	0.05	19.33	0.09	45	97.83%	20.48	0.04	19.00	0.09	1	2.17%	25.30	0.09	34.00	0.19
	HDGT	1,873	22.36	0.06	19.61	0.11	1864	99.52%	20.23	0.05	16.99	0.10	9	0.48%	463.86	1.81	562.69	1.92
2004 Total		1,975	22.00	0.06	19.27	0.11	1964	99.44%	19.84	0.05	16.78	0.10	11	0.56%	408.73	1.59	463.75	1.59
2005	LDGV	71	8.30	0.05	8.54	0.05	70	98.59%	5.80	0.02	6.83	0.02	1	1.41%	183.50	2.45	128.00	1.78

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
	LDGT	55	24.95	0.11	51.92	0.15	53	96.36%	13.41	0.02	16.11	0.05	2	3.64%	330.95	2.66	1001.00	2.91
	HDGT	2,311	23.11	0.06	17.46	0.08	2300	99.52%	21.35	0.06	16.29	0.07	11	0.48%	389.95	0.77	261.73	0.97
2005 Total		2,437	22.72	0.06	17.98	0.08	2423	99.43%	20.73	0.05	16.01	0.07	14	0.57%	366.78	1.16	357.79	1.31
2006	LDGV	89	16.56	0.03	12.84	0.07	87	97.75%	7.23	0.01	7.10	0.01	2	2.25%	422.45	0.71	262.55	2.42
	LDGT	70	11.18	0.03	12.94	0.04	69	98.57%	10.88	0.03	12.63	0.04	1	1.43%	32.00	0.04	34.00	0.03
	HDGT	2,117	25.70	0.07	19.96	0.08	2099	99.15%	21.42	0.07	16.29	0.08	18	0.85%	524.01	0.92	447.58	0.42
2006 Total		2,276	24.89	0.07	19.47	0.08	2255	99.08%	20.55	0.06	15.83	0.07	21	0.92%	490.91	0.86	410.27	0.59
2007	LDGV	73	15.68	0.03	13.23	0.06	70	95.89%	6.48	0.02	9.14	0.03	3	4.11%	230.40	0.30	108.63	0.76
	LDGT	57	5.85	0.01	9.36	0.07	54	94.74%	5.68	0.01	7.78	0.03	3	5.26%	8.83	0.04	37.70	0.67
	HDGT	1,927	11.96	0.04	11.54	0.05	1920	99.64%	10.66	0.03	9.79	0.05	7	0.36%	369.23	1.51	491.60	1.99
2007 Total		2,057	11.93	0.04	11.54	0.05	2044	99.37%	10.39	0.03	9.72	0.04	13	0.63%	254.02	0.89	298.48	1.40
2008	LDGV	122	6.52	0.01	8.35	0.02	122	100.00%	6.52	0.01	8.35	0.02	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	111	6.10	0.01	8.72	0.02	111	100.00%	6.10	0.01	8.72	0.02	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	1,584	12.59	0.04	11.02	0.07	1580	99.75%	11.32	0.04	10.94	0.07	4	0.25%	513.75	0.45	46.00	0.43
2008 Total		1,817	11.79	0.04	10.70	0.06	1813	99.78%	10.68	0.03	10.63	0.06	4	0.22%	513.75	0.45	46.00	0.43
2009	LDGV	70	4.11	0.01	5.39	0.02	70	100.00%	4.11	0.01	5.39	0.02	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	24	2.62	0.01	3.74	0.02	24	100.00%	2.62	0.01	3.74	0.02	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	484	17.42	0.04	16.87	0.10	481	99.38%	15.19	0.04	14.75	0.10	3	0.62%	374.10	0.77	356.27	0.47
2009 Total		578	15.19	0.04	14.93	0.09	575	99.48%	13.32	0.04	13.15	0.08	3	0.52%	374.10	0.77	356.27	0.47
2010	LDGV	20	4.15	0.01	6.00	0.06	19	95.00%	3.95	0.01	5.68	0.06	1	5.00%	8.00	0.02	12.00	0.01
	LDGT	32	4.59	0.02	5.54	0.04	32	100.00%	4.59	0.02	5.54	0.04	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	272	12.10	0.03	13.01	0.08	271	99.63%	10.69	0.03	12.60	0.08	1	0.37%	393.00	0.00	124.00	0.00
2010 Total		324	10.86	0.03	11.84	0.07	322	99.38%	9.69	0.03	11.49	0.07	2	0.62%	200.50	0.01	68.00	0.01
2011	LDGV	11	1.95	0.00	4.33	0.00	11	100.00%	1.95	0.00	4.33	0.00	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	22	4.60	0.01	7.31	0.02	22	100.00%	4.60	0.01	7.31	0.02	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	530	14.01	0.04	12.94	0.08	527	99.43%	11.79	0.04	12.68	0.08	3	0.57%	403.43	1.10	59.33	0.20
2011 Total		563	13.41	0.04	12.55	0.08	560	99.47%	11.32	0.04	12.30	0.08	3	0.53%	403.43	1.10	59.33	0.20
2012	LDGV	3	301.70	0.12	423.17	0.52	2	66.67%	0.85	0.00	0.95	0.01	1	33.33%	903.40	0.35	1267.60	1.54
	LDGT	7	2.91	0.02	2.03	0.00	7	100.00%	2.91	0.02	2.03	0.00	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	208	12.83	0.02	11.38	0.06	208	100.00%	12.83	0.02	11.38	0.06	0	0.00%	0.00	0.00	0.00	0.00
2012 Total		218	16.48	0.02	16.75	0.06	217	99.54%	12.40	0.02	10.98	0.05	1	0.46%	903.40	0.35	1267.60	1.54
2013	LDGV	2	3.00	0.00	6.00	0.01	2	100.00%	3.00	0.00	6.00	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	1	1.30	0.00	1.10	0.00	1	100.00%	1.30	0.00	1.10	0.00	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	93	6.59	0.02	7.99	0.08	93	100.00%	6.59	0.02	7.99	0.08	0	0.00%	0.00	0.00	0.00	0.00
2013 Total		96	6.46	0.02	7.88	0.08	96	100.00%	6.46	0.02	7.88	0.08	0	0.00%	0.00	0.00	0.00	0.00
2014	LDGT	5	4.40	0.01	5.40	0.01	5	100.00%	4.40	0.01	5.40	0.01	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	107	8.70	0.01	7.51	0.05	107	100.00%	8.70	0.01	7.51	0.05	0	0.00%	0.00	0.00	0.00	0.00
2014 Total		112	8.51	0.01	7.42	0.05	112	100.00%	8.51	0.01	7.42	0.05	0	0.00%	0.00	0.00	0.00	0.00
2015	LDGV	3	0.67	0.00	1.00	0.01	3	100.00%	0.67	0.00	1.00	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	3	17.57	0.03	19.73	0.03	3	100.00%	17.57	0.03	19.73	0.03	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	57	16.35	0.02	11.05	0.03	57	100.00%	16.35	0.02	11.05	0.03	0	0.00%	0.00	0.00	0.00	0.00
2015 Total		63	15.66	0.02	10.99	0.03	63	100.00%	15.66	0.02	10.99	0.03	0	0.00%	0.00	0.00	0.00	0.00
2016	HDGT	6	7.15	0.11	6.77	0.13	6	100.00%	7.15	0.11	6.77	0.13	0	0.00%	0.00	0.00	0.00	0.00

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
2016 Total		6	7.15	0.11	6.77	0.13	6	100.00%	7.15	0.11	6.77	0.13	0	0.00%	0.00	0.00	0.00	0.00
Grand Total		49,815	108.95	0.48	88.12	0.60	45225	90.79%	63.18	0.26	54.78	0.41	4,590	9.21%	559.92	2.65	416.56	2.47

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	4,656	228.65	1.10	197.74	1.50	3406	73.15%	109.29	0.40	111.51	0.94	1250	26.85%	553.91	3.00	432.69	3.02
LDGT	4,310	193.27	0.82	171.02	1.18	3131	72.65%	94.81	0.28	99.00	0.76	1179	27.35%	454.75	2.24	362.26	2.28
HDGT	40,849	86.40	0.38	66.87	0.44	38688	94.71%	56.56	0.25	46.21	0.34	2161	5.29%	620.78	2.67	436.86	2.25
Overall Total	49,815	108.95	0.48	88.12	0.60	45225	90.79%	63.18	0.26	54.78	0.41	4590	9.21%	559.92	2.65	416.56	2.47

Appendix T

Idle Initial Failure Report

Date

Between 1/1/2015 and 12/31/2015

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	26	13.33%	1218.11	4.71	910.05	3.76	1	0.51%	294.20	4.10	527.90	1.54
	LDGT1	2	0.41%	1570.00	7.27	2402.00	9.62	126	25.71%	825.04	4.97	574.36	3.83	2	0.41%	591.15	0.98	1326.75	7.75
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	40	10.84%	1296.71	5.29	1049.69	4.39	1	0.27%	110.60	0.42	103.00	1.96
	LDGV	5	0.54%	1099.00	4.76	770.26	5.01	303	32.58%	933.01	5.02	679.23	4.50	3	0.32%	149.10	1.77	583.87	1.43
1974 Total		7	0.35%	1233.57	5.47	1236.47	6.32	495	24.95%	949.89	5.01	694.59	4.28	7	0.35%	290.63	1.68	719.43	3.33
1975	HDGV	0	0.00%	0.00	0.00	0.00	0.00	6	15.00%	1424.97	5.95	1409.95	4.04	0	0.00%	0.00	0.00	0.00	0.00
	LDGT1	3	13.64%	424.77	4.39	111.43	0.94	4	18.18%	350.55	4.81	129.48	2.90	3	13.64%	229.60	0.80	207.50	3.12
	LDGT2	2	2.38%	1514.35	5.51	1379.10	5.02	7	8.33%	923.31	6.65	583.79	4.21	3	3.57%	587.10	1.65	330.97	3.44
	LDGV	2	3.57%	796.65	3.87	440.05	2.15	8	14.29%	250.84	3.13	182.03	3.53	7	12.50%	150.99	0.66	207.07	1.69
1975 Total		7	3.47%	842.33	4.56	567.51	2.45	25	12.38%	736.88	5.06	580.81	3.74	13	6.44%	269.77	0.92	235.76	2.43
1976	HDGV	0	0.00%	0.00	0.00	0.00	0.00	18	11.92%	957.49	5.60	799.28	4.38	1	0.66%	149.10	0.27	146.90	1.88
	LDGT1	17	9.55%	978.59	3.98	748.83	4.37	33	18.54%	711.97	2.94	414.38	2.78	23	12.92%	251.65	0.74	214.93	1.78
	LDGT2	8	1.87%	798.28	5.20	569.48	4.48	58	13.58%	1045.56	5.01	644.66	3.55	11	2.58%	203.63	1.27	166.43	1.44
	LDGV	20	6.45%	447.60	4.41	409.49	4.48	81	26.13%	609.10	3.67	426.59	3.39	17	5.48%	172.41	0.61	147.84	2.35
1976 Total		45	4.22%	710.54	4.39	566.13	4.44	190	17.82%	793.21	4.14	526.34	3.43	52	4.88%	213.61	0.80	181.43	1.89
1977	HDGV	0	0.00%	0.00	0.00	0.00	0.00	30	15.71%	1322.17	5.03	1179.36	4.35	5	2.62%	300.02	2.09	387.34	1.98
	LDGT1	7	5.19%	881.74	5.55	562.07	2.15	34	25.19%	541.46	2.64	371.89	1.99	11	8.15%	176.49	0.52	132.91	2.19
	LDGT2	5	0.86%	1051.04	4.29	880.98	2.54	65	11.19%	1139.96	5.19	719.61	3.72	26	4.48%	286.38	2.19	320.93	1.83
	LDGV	17	5.17%	757.75	5.04	453.73	3.45	77	23.40%	557.82	3.13	323.59	2.46	17	5.17%	120.04	0.36	128.51	1.55
1977 Total		29	2.35%	838.24	5.04	553.54	2.98	206	16.67%	850.11	3.98	581.15	3.05	59	4.77%	219.12	1.34	236.06	1.83
1978	HDGV	0	0.00%	0.00	0.00	0.00	0.00	23	10.18%	1076.50	5.61	910.19	4.77	3	1.33%	119.00	1.05	105.50	1.55
	LDGT1	10	4.57%	634.23	3.21	429.47	3.36	59	26.94%	477.24	2.60	308.03	2.39	19	8.68%	126.21	0.37	185.68	0.69
	LDGT2	5	0.70%	1787.96	5.16	765.08	4.39	70	9.83%	1145.76	4.25	713.64	3.33	24	3.37%	248.82	1.76	203.01	2.25
	LDGV	13	2.88%	532.28	2.76	438.81	2.15	105	23.23%	517.62	3.22	451.57	3.15	14	3.10%	167.51	0.43	265.71	1.95
1978 Total		28	1.74%	792.92	3.35	493.74	2.98	257	15.97%	729.45	3.57	531.04	3.17	60	3.73%	184.53	0.97	207.28	1.65
1979	HDGV	6	2.26%	869.73	3.49	657.75	2.79	40	15.09%	833.40	4.09	698.73	4.04	15	5.66%	313.16	1.63	239.82	1.97
	LDGT1	23	8.24%	644.08	3.45	444.21	1.82	55	19.71%	548.01	2.65	403.98	2.76	23	8.24%	85.48	0.26	157.75	1.13
	LDGT2	54	10.69%	529.88	3.17	485.56	3.32	107	21.19%	514.25	2.76	433.76	2.63	42	8.32%	104.74	0.35	155.30	1.99
	LDGV	18	3.15%	560.16	2.99	341.74	2.92	151	26.44%	558.51	3.13	413.85	2.82	33	5.78%	132.03	0.38	156.59	1.46
1979 Total		101	6.23%	581.47	3.22	460.74	2.87	353	21.79%	574.60	3.05	450.63	2.89	113	6.98%	136.46	0.51	167.39	1.66
1980	HDGV	3	2.52%	770.87	3.57	335.67	4.26	14	11.76%	1168.56	2.49	921.05	3.74	9	7.56%	147.10	1.51	145.42	3.07
	LDGT1	9	3.93%	1049.63	4.06	898.61	2.04	38	16.59%	520.47	3.29	361.55	2.41	25	10.92%	89.06	0.41	110.15	1.53
	LDGT2	8	4.55%	748.91	3.42	548.95	3.63	37	21.02%	565.92	2.22	399.45	2.14	10	5.68%	163.67	0.13	204.78	0.62
	LDGV	13	3.67%	802.96	3.29	807.93	3.06	42	11.86%	619.64	2.87	483.72	3.38	21	5.93%	103.92	0.24	183.43	1.31
1980 Total		33	3.76%	854.22	3.56	726.95	3.03	131	14.92%	634.36	2.77	471.22	2.79	65	7.40%	113.38	0.47	153.27	1.53
1981	HDGV	6	3.28%	901.75	3.12	801.53	1.91	22	12.02%	632.21	2.87	413.38	2.12	3	1.64%	229.00	1.55	197.47	3.89
	LDGT1	28	10.29%	369.70	1.82	445.53	2.71	80	29.41%	294.11	1.36	248.60	2.19	20	7.35%	56.79	0.12	51.63	0.24
	LDGT2	12	8.33%	489.72	1.38	428.00	1.21	44	30.56%	312.12	1.14	333.47	1.90	6	4.17%	73.27	0.19	48.27	0.52
	LDGV	7	2.28%	242.21	1.91	239.44	3.03	85	27.69%	285.98	1.27	298.17	2.53	18	5.86%	55.16	0.16	41.86	0.38
1981 Total		53	5.85%	440.27	1.88	454.65	2.32	231	25.50%	326.75	1.43	298.70	2.25	47	5.19%	69.26	0.24	56.76	0.56
1982	HDGV	6	4.58%	628.62	3.50	393.67	3.35	11	8.40%	875.75	2.21	741.70	1.86	7	5.34%	243.17	1.23	238.04	3.18

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
	LDGT1	1	16.67%	143.40	0.77	137.60	3.12	4	66.67%	287.63	1.86	448.23	1.27	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	2	66.67%	459.95	1.07	214.55	1.75	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	1	10.00%	75.60	1.61	57.10	0.77	4	40.00%	520.73	3.92	402.65	4.04	0	0.00%	0.00	0.00	0.00	0.00
1982 Total		8	5.33%	498.84	2.93	319.59	3.00	21	14.00%	656.50	2.36	571.01	2.15	7	4.67%	243.17	1.23	238.04	3.18
1983	HDGV	6	3.31%	665.83	4.62	760.43	5.68	18	9.94%	989.74	4.32	609.15	3.13	3	1.66%	296.33	1.00	296.93	1.57
	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	100.00%	165.80	0.43	215.10	6.93	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	3	30.00%	868.63	3.00	738.80	2.60	3	30.00%	858.50	4.48	912.90	5.07	0	0.00%	0.00	0.00	0.00	0.00
1983 Total		9	4.66%	733.43	4.08	753.22	4.65	22	11.40%	934.40	4.17	632.66	3.57	3	1.55%	296.33	1.00	296.93	1.57
1984	HDGV	3	1.03%	1031.17	6.16	769.23	5.32	41	14.09%	904.27	2.16	593.83	1.75	14	4.81%	225.34	0.83	214.46	1.26
	LDGT1	2	28.57%	314.30	2.93	339.20	4.93	2	28.57%	329.15	3.93	317.70	4.13	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	1	25.00%	58.80	0.05	258.00	2.68	3	75.00%	672.03	0.20	1033.20	1.21	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	12.50%	122.90	0.03	784.40	0.09	1	12.50%	185.30	0.95	151.60	0.73
1984 Total		6	1.94%	630.15	4.07	540.68	4.75	47	15.16%	848.34	2.07	614.18	1.78	15	4.84%	222.67	0.84	210.27	1.22
1985	HDGV	8	2.23%	872.09	5.25	674.23	5.22	46	12.81%	836.81	2.86	472.30	2.23	13	3.62%	165.69	0.89	77.95	1.31
	LDGT1	1	14.29%	200.10	2.20	241.60	0.16	4	57.14%	451.75	4.77	261.15	3.98	1	14.29%	24.70	0.00	139.80	0.01
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	50.00%	695.10	7.02	119.30	0.50	1	50.00%	89.80	0.01	161.40	0.71
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	6	35.29%	536.82	1.20	714.98	2.92	2	11.76%	86.15	0.10	77.65	0.19
1985 Total		9	2.34%	797.42	4.91	626.16	4.66	57	14.81%	775.72	2.89	476.84	2.40	17	4.42%	143.58	0.69	86.46	1.06
1986	HDGV	7	2.32%	665.94	2.37	295.76	2.63	83	27.48%	641.08	2.21	430.39	2.10	9	2.98%	92.60	0.63	135.34	0.90
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	3	33.33%	251.90	2.27	745.53	3.46	1	11.11%	12.50	0.00	27.90	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	2	50.00%	548.30	0.25	223.70	0.30	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	1	5.26%	300.70	0.70	229.50	0.76	2	10.53%	221.70	1.48	165.10	1.53	1	5.26%	9.80	0.00	12.70	0.02
1986 Total		8	2.40%	620.29	2.16	287.48	2.40	90	26.95%	616.73	2.15	430.41	2.09	11	3.29%	77.79	0.52	114.43	0.74
1987	HDGV	4	1.26%	519.75	3.51	416.93	3.45	58	18.24%	576.21	1.49	400.56	0.99	11	3.46%	150.46	0.73	159.44	1.32
	LDGT1	2	6.06%	455.45	1.41	1416.65	1.61	10	30.30%	250.65	0.53	152.48	0.99	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	2	40.00%	739.95	0.03	1010.90	0.47	1	20.00%	61.80	0.10	66.60	0.56
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	4	14.81%	342.48	3.32	255.53	1.92	1	3.70%	27.70	0.02	47.30	0.33
1987 Total		6	1.57%	498.32	2.81	750.17	2.83	74	19.32%	524.00	1.42	375.69	1.03	13	3.39%	134.20	0.63	143.67	1.18
1988	HDGV	10	2.69%	461.29	2.28	381.53	1.72	38	10.22%	601.14	2.59	503.29	1.99	6	1.61%	139.65	0.91	149.12	2.21
	LDGT1	2	4.00%	314.00	0.75	118.00	0.53	11	22.00%	284.02	0.33	188.75	0.49	1	2.00%	7.70	0.00	21.00	0.13
	LDGT2	1	25.00%	290.30	1.57	158.10	0.36	2	50.00%	1045.65	3.48	1186.05	3.24	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	4	28.57%	333.65	2.24	302.50	3.78	0	0.00%	0.00	0.00	0.00	0.00
1988 Total		13	2.95%	425.48	1.99	323.80	1.43	55	12.50%	534.43	2.14	450.61	1.86	7	1.59%	120.80	0.78	130.81	1.91
1989	HDGV	5	0.69%	616.90	2.19	681.22	0.43	72	9.96%	537.54	2.20	402.82	1.77	12	1.66%	76.21	0.25	114.68	0.28
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	19	30.65%	299.24	1.10	230.25	1.41	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	1	12.50%	636.90	3.63	426.50	1.37	4	50.00%	333.23	1.96	148.13	0.75	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	2	4.17%	100.85	0.74	89.35	1.30	6	12.50%	254.07	1.69	254.23	0.72	2	4.17%	34.45	0.01	19.80	0.09
1989 Total		8	0.95%	490.39	2.01	501.41	0.76	101	12.01%	467.78	1.95	351.44	1.60	14	1.66%	70.24	0.22	101.12	0.25
1990	HDGV	3	0.54%	661.17	3.40	182.07	1.68	66	11.91%	409.49	2.65	289.56	1.78	11	1.99%	138.83	0.74	74.19	0.56
	LDGT1	1	1.35%	222.00	0.66	118.00	0.44	25	33.78%	425.51	1.16	270.35	1.28	2	2.70%	109.80	0.64	69.80	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	12	21.05%	226.31	0.74	273.14	1.54	4	7.02%	36.70	0.07	41.80	0.11
1990 Total		4	0.58%	551.38	2.72	166.05	1.37	103	14.88%	392.04	2.07	282.99	1.63	17	2.46%	111.38	0.57	66.05	0.46

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
1991	HDGV	6	0.96%	892.73	3.23	512.73	1.72	52	8.28%	450.88	2.65	315.03	1.89	7	1.11%	116.73	0.66	75.04	0.74
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	11	16.92%	270.25	0.89	180.95	1.36	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	2	25.00%	135.75	0.12	104.10	0.90	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	1	1.45%	157.00	0.25	334.80	1.10	13	18.84%	564.85	1.76	515.56	2.13	5	7.25%	76.64	0.18	64.50	0.29
1991 Total		7	0.91%	787.63	2.81	487.31	1.63	78	10.13%	436.33	2.19	324.13	1.83	12	1.56%	100.02	0.46	70.65	0.56
1992	HDGV	4	0.56%	322.33	2.71	658.50	4.93	63	8.82%	450.71	2.85	405.86	2.60	13	1.82%	91.85	0.73	78.47	0.81
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	6	7.79%	291.50	0.38	413.50	0.45	1	1.30%	73.00	0.06	41.00	0.07
	LDGT2	1	16.67%	225.70	2.20	118.90	2.76	2	33.33%	651.45	2.87	537.25	0.81	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	1	1.41%	158.80	3.31	145.10	2.68	10	14.08%	259.41	1.61	361.01	2.65	5	7.04%	139.44	0.41	121.48	0.54
1992 Total		6	0.69%	278.97	2.72	483.00	4.19	81	9.33%	420.26	2.52	404.13	2.40	19	2.19%	103.38	0.61	87.82	0.70
1993	HDGV	0	0.00%	0.00	0.00	0.00	0.00	55	6.06%	513.99	3.21	458.92	2.88	16	1.76%	107.88	0.33	75.02	1.13
	LDGT1	2	8.00%	97.00	0.25	215.50	1.88	3	12.00%	318.67	0.80	111.33	0.44	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	2	18.18%	266.15	0.71	140.20	0.66	2	18.18%	12.20	0.00	14.85	0.05
	LDGV	3	6.38%	205.30	0.96	255.43	2.37	12	25.53%	208.99	1.08	220.89	1.75	2	4.26%	38.55	0.07	34.25	0.13
1993 Total		5	0.50%	161.98	0.68	239.46	2.17	72	7.27%	448.13	2.69	395.91	2.53	20	2.02%	91.38	0.27	64.93	0.92
1994	HDGV	3	0.28%	375.23	2.66	184.00	2.08	88	8.10%	436.85	3.33	288.57	3.00	18	1.66%	72.44	0.62	39.06	0.55
	LDGT1	1	1.96%	3344.00	0.74	358.00	0.40	6	11.76%	189.67	1.78	323.17	2.41	0	0.00%	0.00	0.00	0.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	7	24.14%	420.86	1.01	326.60	0.80	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	2	2.67%	354.70	0.75	452.40	1.70	8	10.67%	278.75	0.80	305.15	0.72	3	4.00%	30.03	0.02	32.27	0.19
1994 Total		6	0.48%	863.18	1.70	302.47	1.67	109	8.78%	410.61	2.91	294.13	2.66	21	1.69%	66.39	0.54	38.09	0.50
1995	HDGV	4	0.25%	773.48	3.21	414.45	2.78	139	8.71%	429.74	2.92	297.39	2.72	13	0.82%	83.28	0.58	51.75	0.60
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	3	20.00%	701.70	1.67	784.17	1.76	1	6.67%	121.00	0.44	129.90	0.50
	LDGT2	1	2.94%	469.80	6.74	434.50	6.45	10	29.41%	313.05	1.42	201.17	1.64	4	11.76%	117.30	0.37	65.18	0.43
	LDGV	2	1.83%	285.50	1.80	197.65	1.00	18	16.51%	470.93	2.27	428.07	2.76	3	2.75%	85.57	0.07	63.33	0.24
1995 Total		7	0.40%	590.67	3.31	355.37	2.79	170	9.70%	432.04	2.74	314.16	2.64	21	1.20%	91.89	0.46	59.68	0.51
1996	HDGV	1	0.08%	1158.30	0.44	90.40	0.09	69	5.22%	450.40	2.54	281.01	1.84	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	2	33.33%	380.35	0.24	263.75	0.61	0	0.00%	0.00	0.00	0.00	0.00
1996 Total		1	0.07%	1158.30	0.44	90.40	0.09	71	5.30%	448.42	2.47	280.52	1.81	0	0.00%	0.00	0.00	0.00	0.00
1997	HDGV	0	0.00%	0.00	0.00	0.00	0.00	74	3.63%	590.82	2.08	402.61	1.42	1	0.05%	19.30	0.01	23.90	0.21
	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	2	20.00%	248.35	0.43	279.65	0.41	0	0.00%	0.00	0.00	0.00	0.00
1997 Total		0	0.00%	0.00	0.00	0.00	0.00	76	3.68%	581.81	2.04	399.37	1.39	1	0.05%	19.30	0.01	23.90	0.21
1998	HDGV	2	0.16%	469.05	1.79	149.45	2.30	87	6.99%	596.11	1.35	296.63	1.03	2	0.16%	77.50	0.36	43.15	0.38
	LDGT1	1	2.70%	272.00	0.32	70.00	0.65	2	5.41%	275.00	0.22	69.50	0.47	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	2	7.69%	270.40	0.23	198.95	0.36	1	3.85%	7.00	0.00	10.00	0.06
1998 Total		3	0.23%	403.37	1.30	122.97	1.75	91	6.94%	581.90	1.30	289.49	1.00	3	0.23%	54.00	0.24	32.10	0.27
1999	HDGV	2	0.07%	636.15	0.77	495.10	0.65	97	3.35%	625.62	1.39	353.78	0.96	6	0.21%	53.95	0.17	95.67	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	1	11.11%	23.60	0.00	26.30	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	2	5.41%	351.65	0.21	195.10	0.05	1	2.70%	96.90	0.31	81.00	0.42
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	3	11.11%	206.97	1.15	295.23	2.05	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
1999 Total		2	0.07%	636.15	0.77	495.10	0.65	102	3.44%	607.93	1.36	348.95	0.97	8	0.27%	55.53	0.16	85.16	0.18
2000	HDGV	0	0.00%	0.00	0.00	0.00	0.00	73	2.99%	660.21	1.71	421.76	1.42	5	0.20%	34.30	0.11	20.56	0.06
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	4.17%	42.90	0.10	47.30	0.12
	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	3.57%	221.70	2.05	148.10	1.35	1	3.57%	9.00	0.01	19.00	0.13
2000 Total		0	0.00%	0.00	0.00	0.00	0.00	74	2.92%	654.28	1.71	418.07	1.42	7	0.28%	31.91	0.10	24.16	0.08
2001	HDGV	0	0.00%	0.00	0.00	0.00	0.00	26	0.87%	441.97	0.96	246.11	1.15	5	0.17%	21.86	0.01	100.46	0.23
	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	3.45%	132.70	0.57	158.20	2.96	1	3.45%	7.30	0.00	10.20	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	2.70%	263.60	2.01	280.90	2.22	2	5.41%	5.85	0.01	6.10	0.01
2001 Total		0	0.00%	0.00	0.00	0.00	0.00	28	0.85%	424.55	0.98	244.21	1.25	8	0.24%	16.04	0.01	65.59	0.15
2002	HDGV	0	0.00%	0.00	0.00	0.00	0.00	22	1.13%	638.52	2.03	482.64	2.56	3	0.15%	47.13	0.19	25.27	0.23
	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	3	5.88%	60.00	0.08	171.80	2.64	3	5.88%	14.00	0.03	9.50	0.04
	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	25	1.22%	569.10	1.80	445.34	2.57	6	0.29%	30.57	0.11	17.38	0.13
2003	HDGV	0	0.00%	0.00	0.00	0.00	0.00	19	0.70%	396.32	2.73	219.61	1.21	3	0.11%	23.73	0.00	27.30	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	1	4.17%	14.50	0.03	83.40	1.37	2	8.33%	14.85	0.03	13.65	0.04
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	1.33%	44.80	0.06	420.20	1.22	0	0.00%	0.00	0.00	0.00	0.00
2003 Total		0	0.00%	0.00	0.00	0.00	0.00	21	0.73%	361.40	2.48	222.68	1.22	5	0.17%	20.18	0.01	21.84	0.02
2004	HDGV	0	0.00%	0.00	0.00	0.00	0.00	6	0.32%	676.55	2.69	832.48	2.81	3	0.16%	38.47	0.06	23.10	0.16
	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	3.85%	25.30	0.09	34.00	0.19
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	1.79%	296.00	1.15	3.00	0.01	0	0.00%	0.00	0.00	0.00	0.00
2004 Total		0	0.00%	0.00	0.00	0.00	0.00	7	0.35%	622.19	2.47	713.99	2.41	4	0.20%	35.18	0.07	25.83	0.17
2005	HDGV	0	0.00%	0.00	0.00	0.00	0.00	9	0.39%	458.30	0.88	311.12	1.13	2	0.09%	82.40	0.30	39.45	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	1	3.85%	1.00	0.00	2.00	0.00
	LDGT2	0	0.00%	0.00	0.00	0.00	0.00	1	3.45%	660.90	5.32	2000.00	5.82	0	0.00%	0.00	0.00	0.00	0.00
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	1	1.41%	183.50	2.45	128.00	1.78	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	0.45%	451.74	1.42	448.01	1.62	3	0.12%	55.27	0.20	26.97	0.16
2006	HDGV	0	0.00%	0.00	0.00	0.00	0.00	14	0.66%	656.00	1.15	559.26	0.49	4	0.19%	62.05	0.11	56.70	0.19
	LDGT1	0	0.00%	0.00	0.00	0.00	0.00	0	0.00%	0.00	0.00	0.00	0.00	1	3.33%	32.00	0.04	34.00	0.03
	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	1.12%	844.90	1.40	524.10	4.82	1	1.12%	0.00	0.01	1.00	0.01
2006 Total		0	0.00%	0.00	0.00	0.00	0.00	15	0.66%	668.59	1.17	556.92	0.77	6	0.26%	46.70	0.08	43.63	0.13
2007	HDGV	0	0.00%	0.00	0.00	0.00	0.00	5	0.26%	505.52	2.11	679.98	2.75	2	0.10%	28.50	0.01	20.65	0.08
	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	2.63%	18.70	0.11	105.80	1.99	2	5.26%	3.90	0.01	3.65	0.01
	LDGV	0	0.00%	0.00	0.00	0.00	0.00	2	2.74%	345.10	0.45	161.45	1.13	1	1.37%	1.00	0.02	3.00	0.02
2007 Total		0	0.00%	0.00	0.00	0.00	0.00	8	0.39%	404.56	1.45	478.58	2.25	5	0.24%	13.16	0.01	10.32	0.04
2008	HDGV	0	0.00%	0.00	0.00	0.00	0.00	1	0.06%	1884.10	1.06	54.20	0.57	3	0.19%	56.97	0.24	43.27	0.38
	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

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
2008 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.06%	1884.10	1.06	54.20	0.57	3	0.17%	56.97	0.24	43.27	0.38
2009	HDGV	0	0.00%	0.00	0.00	0.00	0.00	2	0.41%	473.60	1.16	506.80	0.71	1	0.21%	175.10	0.00	55.20	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	2	0.35%	473.60	1.16	506.80	0.71	1	0.17%	175.10	0.00	55.20	0.00
2010	HDGV	0	0.00%	0.00	0.00	0.00	0.00	1	0.37%	393.00	0.00	124.00	0.00	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	1	5.00%	8.00	0.02	12.00	0.01
2010 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.31%	393.00	0.00	124.00	0.00	1	0.31%	8.00	0.02	12.00	0.01
2011	HDGV	0	0.00%	0.00	0.00	0.00	0.00	2	0.38%	598.20	1.64	77.55	0.30	1	0.19%	13.90	0.02	22.90	0.02
	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	2	0.36%	598.20	1.64	77.55	0.30	1	0.18%	13.90	0.02	22.90	0.02
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
	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	1	33.33%	903.40	0.35	1267.60	1.54	0	0.00%	0.00	0.00	0.00	0.00
2012 Total		0	0.00%	0.00	0.00	0.00	0.00	1	0.46%	903.40	0.35	1267.60	1.54	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
	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
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	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
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	0.00	0.00
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
	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
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
Grand Total		411	0.83%	645.70	3.27	510.37	2.99	3,504	7.03%	631.47	2.96	457.98	2.64	675	1.36%	136.27	0.62	144.45	1.26

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	89	0.23%	690.27	3.27	507.80	2.95	1,516	3.92%	616.70	2.57	435.18	2.14	231	0.60%	133.06	0.73	117.97	1.09	
LDGT1	112	3.81%	667.14	3.11	553.40	2.71	538	18.32%	529.11	2.78	377.15	2.54	137	4.67%	130.54	0.40	154.98	1.27	
LDGT2	99	2.79%	664.37	3.33	532.20	3.20	477	13.45%	802.23	3.51	575.41	2.94	141	3.98%	176.31	0.98	182.34	1.60	
LDGV	111	2.38%	571.66	3.38	449.53	3.13	973	20.90%	627.36	3.41	480.64	3.31	166	3.57%	111.47	0.35	140.41	1.21	

Vehicle Type	Failure for Both Exhaust and Other						Failure for Exhaust Only						Failure for Other					
	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
Grand Total	411	0.83%	645.70	3.27	510.37	2.99	3,504	7.03%	631.47	2.96	457.98	2.64	675	1.36%	136.27	0.62	144.45	1.26

Appendix U

Idle Initial Exhaust Failure Report

Date
Between 1/1/2015 and 12/31/2015

Idle Initial Exhaust Failure Report (V1.01)

Vehicle		Overall Exhaust Failures							HC Failures						CO Failures					
Year	Type	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	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm	
1974	LDGV	308	99.04%	1078.22	5.42	759.22	4.81	136	44.16%	1533.21	4.68	1103.06	4.64	251	81.49%	831.69	5.83	572.92	4.90	
	LDGT	128	98.46%	963.16	5.34	678.46	4.15	46	35.94%	1576.30	4.23	1015.38	3.93	107	83.59%	699.57	5.82	533.61	4.24	
	HDGT	66	97.06%	1362.26	5.62	1037.50	4.54	45	68.18%	1551.50	3.88	1092.66	3.42	36	54.55%	1125.71	7.80	968.55	5.95	
1974 Total		502	98.62%	1086.92	5.43	775.62	4.61	227	45.22%	1545.57	4.43	1083.23	4.25	394	78.49%	822.68	6.00	598.39	4.82	
1975	LDGV	10	58.82%	386.36	3.52	227.05	3.13	2	20.00%	796.65	3.87	440.05	2.15	9	90.00%	295.19	3.45	179.72	3.35	
	LDGT	7	70.00%	486.06	4.68	142.91	2.30	2	28.57%	849.00	4.89	217.00	3.16	7	100.00%	382.36	4.63	121.74	2.06	
	HDGT	15	83.33%	1317.55	6.81	1183.83	4.75	10	66.67%	1526.09	5.69	1354.37	3.92	10	66.67%	1109.00	7.92	1013.29	5.59	
1975 Total		32	71.11%	874.39	5.43	686.51	3.75	14	43.75%	1325.16	5.32	1061.27	3.55	26	81.25%	631.66	5.48	484.72	3.86	
1976	LDGV	101	85.59%	703.58	4.21	508.19	3.94	37	36.63%	1096.92	4.19	759.71	4.05	90	89.11%	541.87	4.23	404.79	3.89	
	LDGT	50	68.49%	955.55	3.83	618.35	3.73	26	52.00%	1287.44	3.11	768.06	3.36	36	72.00%	715.85	4.36	510.22	4.00	
	HDGT	84	87.50%	1088.43	5.68	664.06	4.07	43	51.19%	1502.20	3.82	984.37	3.14	55	65.48%	764.93	7.14	413.63	4.80	
1976 Total		235	81.88%	889.42	4.63	585.21	3.94	106	45.11%	1308.06	3.77	852.89	3.51	181	77.02%	644.26	5.14	428.44	4.19	
1977	LDGV	94	84.68%	699.59	3.99	372.54	2.86	52	55.32%	908.31	3.80	487.13	2.69	78	82.98%	560.45	4.11	296.15	2.97	
	LDGT	41	78.85%	701.73	3.80	428.69	2.25	23	56.10%	911.83	3.19	620.23	2.02	29	70.73%	535.10	4.29	276.77	2.42	
	HDGT	100	76.34%	1283.62	5.74	899.89	4.11	62	62.00%	1598.29	4.13	1155.73	3.60	62	62.00%	968.94	7.35	644.06	4.63	
1977 Total		235	79.93%	936.62	4.67	595.78	3.26	137	58.30%	1221.16	3.85	812.05	2.99	169	71.91%	705.96	5.33	420.46	3.48	
1978	LDGV	118	89.39%	596.45	3.62	538.99	3.37	65	55.08%	774.75	3.27	668.50	3.16	93	78.81%	471.84	3.86	448.47	3.52	
	LDGT	69	78.41%	552.46	3.12	351.18	2.60	35	50.72%	791.98	2.43	447.28	1.91	49	71.01%	381.38	3.61	282.53	3.10	
	HDGT	98	78.40%	1251.20	5.09	779.23	4.05	59	60.20%	1575.15	3.12	1047.58	3.01	55	56.12%	903.70	7.20	491.37	5.17	
1978 Total		285	82.61%	795.74	3.97	571.61	3.41	159	55.79%	1075.55	3.03	760.47	2.83	197	69.12%	569.91	4.73	419.17	3.88	
1979	LDGV	169	83.66%	663.12	3.56	469.67	3.15	80	47.34%	943.61	3.04	648.01	2.84	132	78.11%	493.13	3.87	361.59	3.33	
	LDGT	239	78.62%	618.37	3.30	479.73	2.92	124	51.88%	843.27	2.62	645.00	2.69	178	74.48%	461.70	3.77	364.60	3.08	
	HDGT	46	75.41%	916.59	4.40	726.12	4.07	25	54.35%	1236.82	2.74	1008.98	3.12	29	63.04%	640.52	5.83	482.29	4.89	
1979 Total		454	80.07%	663.42	3.50	499.40	3.11	229	50.44%	921.29	2.78	685.79	2.79	339	74.67%	489.23	3.98	373.50	3.33	
1980	LDGV	55	72.37%	751.18	3.53	625.86	3.58	35	63.64%	921.92	2.88	774.46	3.12	38	69.09%	593.92	4.13	488.98	4.00	
	LDGT	92	72.44%	700.65	3.42	525.17	2.69	51	55.43%	941.60	2.66	679.99	2.35	66	71.74%	514.46	4.01	405.54	2.95	
	HDGT	17	65.38%	1113.00	3.27	817.48	4.15	13	76.47%	1306.65	2.09	975.12	3.47	7	41.18%	753.36	5.47	524.73	5.40	
1980 Total		164	71.62%	757.49	3.44	588.01	3.14	99	60.37%	982.58	2.66	752.14	2.77	111	67.68%	556.73	4.14	441.62	3.47	
1981	LDGV	92	83.64%	446.04	2.69	369.18	2.76	45	48.91%	477.84	2.05	400.29	2.36	28	30.43%	394.92	3.72	319.19	3.41	
	LDGT	164	86.32%	500.29	2.73	395.48	2.51	75	45.73%	582.45	2.05	483.97	2.18	51	31.10%	379.47	3.73	265.36	2.98	
	HDGT	28	90.32%	742.74	3.29	542.34	2.21	17	60.71%	976.95	2.13	729.08	1.77	15	53.57%	477.31	4.61	330.69	2.70	
1981 Total		284	85.80%	516.73	2.79	407.52	2.55	137	48.24%	597.04	2.06	486.90	2.19	94	33.10%	399.69	3.87	291.82	3.07	
1982	LDGV	5	100.00%	556.06	4.43	413.44	4.10	3	60.00%	662.07	4.67	504.03	4.84	4	80.00%	476.55	4.25	345.50	3.53	
	LDGT	7	100.00%	353.16	1.78	223.37	1.79	4	57.14%	450.63	1.34	280.08	1.38	3	42.86%	223.20	2.36	147.77	2.33	
	HDGT	17	70.83%	840.63	2.98	603.23	2.33	12	70.59%	1014.24	2.15	815.73	2.11	9	52.94%	609.14	4.08	319.90	2.63	
1982 Total		29	80.56%	686.22	3.03	489.30	2.58	19	65.52%	839.98	2.37	653.74	2.39	16	55.17%	503.63	3.80	294.03	2.80	
1983	LDGV	6	100.00%	1066.13	4.22	1003.30	4.38	4	66.67%	1200.58	3.92	1149.43	4.15	5	83.33%	958.58	4.46	886.40	4.57	
	LDGT	1	100.00%	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	
	HDGT	24	88.89%	1025.28	4.87	696.32	3.78	13	54.17%	1408.68	4.16	937.55	3.57	18	75.00%	748.38	5.38	522.09	3.92	
1983 Total		31	91.18%	1034.48	4.72	765.39	3.91	17	54.84%	1359.72	4.11	987.40	3.71	23	74.19%	794.08	5.18	601.29	4.06	
1984	LDGV	1	50.00%	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		Overall Exhaust Failures						HC Failures						CO Failures					
Year	Type	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	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
	LDGT	8	100.00%	463.94	3.04	561.60	3.49	6	75.00%	515.97	2.33	679.50	2.92	3	37.50%	359.90	4.45	325.80	4.62
	HDGT	44	75.86%	996.15	3.06	660.67	2.29	34	77.27%	1113.72	2.04	755.46	1.81	20	45.45%	796.29	4.78	499.51	3.11
1984 Total		53	77.94%	920.12	3.05	646.51	2.46	40	75.47%	1024.06	2.08	744.07	1.98	23	43.40%	739.37	4.74	476.85	3.30
1985	LDGV	6	75.00%	636.94	1.55	538.27	1.59	4	66.67%	736.80	1.35	712.88	1.52	3	50.00%	503.80	1.82	305.47	1.67
	LDGT	6	75.00%	582.13	6.23	219.73	3.38	3	50.00%	711.90	7.33	217.17	3.67	5	83.33%	504.26	5.57	221.26	3.21
	HDGT	54	80.60%	913.04	3.84	521.63	2.84	40	74.07%	1050.82	2.81	610.18	2.19	30	55.56%	729.32	5.20	403.57	3.71
1985 Total		66	79.52%	859.15	3.87	494.59	2.79	47	71.21%	1002.46	2.98	593.83	2.23	38	57.58%	681.91	4.98	371.84	3.48
1986	LDGV	3	75.00%	248.03	1.22	186.57	1.27	2	66.67%	290.15	0.80	192.15	0.84	1	33.33%	163.80	2.07	175.40	2.13
	LDGT	5	83.33%	438.96	2.17	914.64	3.26	3	60.00%	530.07	1.67	815.80	2.37	2	40.00%	302.30	2.92	1062.90	4.59
	HDGT	90	90.91%	704.32	2.89	434.75	2.50	73	81.11%	749.92	2.03	473.59	1.88	38	42.22%	616.73	4.54	360.14	3.71
1986 Total		98	89.91%	681.67	2.82	448.66	2.50	78	79.59%	729.67	1.99	479.54	1.87	41	41.84%	590.34	4.40	389.91	3.72
1987	LDGV	4	80.00%	441.63	5.15	205.65	2.03	1	25.00%	479.50	7.34	125.90	0.71	3	75.00%	429.00	4.42	232.23	2.47
	LDGT	14	93.33%	413.74	0.75	629.20	0.97	11	78.57%	414.92	0.58	529.28	0.86	3	21.43%	409.40	1.37	995.57	1.38
	HDGT	62	84.93%	598.56	2.07	389.59	1.50	54	87.10%	630.31	1.44	434.97	1.18	21	33.87%	516.94	3.70	272.90	2.31
1987 Total		80	86.02%	563.99	2.01	417.75	1.44	66	82.50%	592.12	1.39	446.00	1.12	27	33.75%	495.22	3.52	348.68	2.22
1988	LDGV	4	100.00%	485.60	4.38	414.70	4.81	3	75.00%	436.57	2.98	312.97	3.35	1	25.00%	632.70	8.57	719.90	9.19
	LDGT	16	94.12%	513.68	1.37	391.71	1.17	14	87.50%	423.46	0.96	293.52	0.89	2	12.50%	1145.15	4.23	1079.05	3.13
	HDGT	48	88.89%	633.49	3.07	523.17	2.24	34	70.83%	732.65	2.43	637.83	1.94	28	58.33%	513.08	3.86	383.94	2.61
1988 Total		68	90.67%	602.90	2.81	492.23	2.16	51	75.00%	630.36	2.06	524.20	1.73	31	45.59%	557.72	4.03	439.63	2.86
1989	LDGV	8	80.00%	285.14	2.19	260.93	0.44	4	50.00%	333.30	1.75	322.73	0.31	4	50.00%	236.98	2.64	199.13	0.58
	LDGT	24	100.00%	379.13	2.06	260.69	1.83	20	83.33%	361.41	1.52	230.45	1.40	7	29.17%	429.77	3.60	347.11	3.04
	HDGT	77	86.52%	590.99	2.61	452.91	1.99	57	74.03%	671.87	1.96	527.46	1.67	41	53.25%	478.54	3.51	349.27	2.43
1989 Total		109	88.62%	529.58	2.47	402.34	1.86	81	74.31%	578.49	1.84	444.01	1.54	52	47.71%	453.39	3.46	337.43	2.37
1990	LDGV	12	75.00%	379.81	1.38	401.37	1.34	5	41.67%	447.24	0.63	462.98	0.66	2	16.67%	211.25	3.25	247.35	3.05
	LDGT	26	92.86%	501.47	1.69	305.87	1.81	24	92.31%	437.78	1.20	249.49	1.28	3	11.54%	1010.93	5.62	756.93	6.03
	HDGT	69	86.25%	467.65	3.02	316.69	2.05	42	60.87%	573.60	2.52	403.52	2.02	50	72.46%	378.65	3.43	243.76	2.09
1990 Total		107	86.29%	470.02	2.64	319.08	1.96	71	66.36%	518.79	1.94	355.64	1.67	55	51.40%	407.05	3.55	271.88	2.34
1991	LDGV	14	73.68%	770.06	2.74	685.67	2.28	9	64.29%	784.47	2.32	678.93	1.90	6	42.86%	748.45	3.36	695.77	2.85
	LDGT	13	100.00%	280.02	1.13	175.95	1.25	10	76.92%	287.14	0.84	180.70	1.45	3	23.08%	256.27	2.10	160.13	0.57
	HDGT	58	89.23%	572.70	3.09	385.93	2.13	34	58.62%	694.58	2.43	496.66	1.89	38	65.52%	463.64	3.68	286.84	2.35
1991 Total		85	87.63%	564.25	2.78	403.59	2.04	53	62.35%	632.97	2.11	468.00	1.81	47	55.29%	486.77	3.54	330.96	2.30
1992	LDGV	11	68.75%	282.04	2.17	342.87	2.80	7	63.64%	327.41	1.91	345.93	2.27	7	63.64%	236.66	2.42	339.81	3.32
	LDGT	9	90.00%	420.46	1.49	435.37	1.01	8	88.89%	387.06	1.06	449.46	0.84	3	33.33%	509.53	2.65	397.80	1.46
	HDGT	67	83.75%	461.92	3.29	454.19	3.29	44	65.67%	579.36	2.58	555.66	3.01	43	64.18%	341.74	4.01	350.36	3.58
1992 Total		87	82.08%	435.36	2.97	438.43	3.01	59	67.82%	523.40	2.29	516.38	2.63	53	60.92%	337.36	3.72	351.65	3.42
1993	LDGV	15	88.24%	263.47	1.54	211.05	1.40	6	40.00%	298.00	0.93	224.50	1.04	4	26.67%	211.68	2.47	190.88	1.95
	LDGT	7	77.78%	297.66	0.76	122.88	0.53	5	71.43%	297.66	0.76	122.88	0.53	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	55	77.46%	563.26	3.76	501.22	3.28	36	65.45%	685.78	3.32	636.18	3.06	39	70.91%	450.16	4.16	376.64	3.48
1993 Total		77	79.38%	515.19	3.34	447.96	2.92	47	61.04%	594.99	2.74	529.02	2.54	43	55.84%	427.98	4.00	359.36	3.34
1994	LDGV	10	76.92%	368.14	1.12	287.92	1.02	7	70.00%	362.89	0.89	265.97	0.94	2	20.00%	386.55	1.91	364.75	1.31
	LDGT	14	100.00%	676.81	2.01	411.28	1.87	8	57.14%	825.85	1.60	412.24	1.55	5	35.71%	438.34	2.67	409.74	2.37
	HDGT	91	83.49%	505.51	3.68	327.57	3.31	51	56.04%	619.09	3.67	396.04	3.39	78	85.71%	431.24	3.69	282.80	3.26
1994 Total		115	84.56%	512.07	3.39	332.41	3.05	66	57.39%	616.98	3.12	384.21	2.91	85	73.91%	430.61	3.59	292.20	3.16
1995	LDGV	20	86.96%	609.08	3.43	561.52	3.50	16	80.00%	525.56	2.45	463.83	2.72	6	30.00%	831.78	6.02	822.03	5.60
	LDGT	14	73.68%	475.24	2.21	425.45	2.49	10	71.43%	490.89	1.96	422.46	2.31	9	64.29%	457.86	2.49	428.77	2.68

Vehicle		Overall Exhaust Failures						HC Failures						CO Failures					
Year	Type	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	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
	HDGT	143	91.67%	483.62	3.35	325.19	2.99	92	64.34%	569.20	2.84	377.08	2.66	96	67.13%	401.60	3.84	275.46	3.30
1995 Total		177	89.39%	494.98	3.26	356.21	2.99	118	66.67%	556.64	2.71	392.69	2.64	111	62.71%	429.42	3.84	317.43	3.37
1996	LDGV	2	100.00%	380.35	0.24	263.75	0.61	2	100.00%	380.35	0.24	263.75	0.61	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	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
	HDGT	70	100.00%	492.93	2.91	283.12	2.14	43	61.43%	616.00	2.20	347.97	1.83	41	58.57%	363.86	3.66	215.10	2.46
1996 Total		72	100.00%	490.31	2.85	282.67	2.10	45	62.50%	605.52	2.11	344.23	1.78	41	56.94%	363.86	3.66	215.10	2.46
1997	LDGV	2	100.00%	248.35	0.43	279.65	0.41	2	100.00%	248.35	0.43	279.65	0.41	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	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
	HDGT	74	98.67%	612.78	2.49	392.23	1.50	61	82.43%	676.42	1.85	459.24	1.22	32	43.24%	491.44	3.69	264.50	2.04
1997 Total		76	98.70%	605.10	2.44	389.86	1.48	63	82.89%	662.83	1.81	453.54	1.20	32	42.11%	491.44	3.69	264.50	2.04
1998	LDGV	2	66.67%	360.00	0.27	174.00	0.52	1	50.00%	360.00	0.27	174.00	0.52	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	3	100.00%	274.00	0.25	69.67	0.53	3	100.00%	274.00	0.25	69.67	0.53	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	89	97.80%	640.34	1.69	301.05	1.23	87	97.75%	602.32	1.34	295.15	1.01	19	21.35%	814.43	3.27	328.05	2.23
1998 Total		94	96.91%	627.80	1.64	293.59	1.21	91	96.81%	588.84	1.29	286.39	0.99	19	20.21%	814.43	3.27	328.05	2.23
1999	LDGV	3	100.00%	214.20	1.85	391.80	4.20	0	0.00%	0.00	0.00	0.00	0.00	1	33.33%	214.20	1.85	391.80	4.20
	LDGT	2	50.00%	351.65	0.21	195.10	0.05	2	100.00%	351.65	0.21	195.10	0.05	0	0.00%	0.00	0.00	0.00	0.00
	HDGT	99	94.29%	672.35	1.60	366.55	1.03	92	92.93%	659.15	1.25	370.95	0.80	21	21.21%	730.16	3.16	347.28	2.04
1999 Total		104	92.86%	662.87	1.58	363.81	1.04	94	90.38%	652.61	1.23	367.21	0.78	22	21.15%	706.71	3.10	349.30	2.14
2000	LDGV	1	50.00%	221.70	2.05	148.10	1.35	1	100.00%	221.70	2.05	148.10	1.35	1	100.00%	221.70	2.05	148.10	1.35
	LDGT	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
	HDGT	73	93.59%	690.49	2.16	428.63	1.67	69	94.52%	687.60	1.66	438.44	1.37	20	27.40%	700.49	3.88	394.79	2.74
2000 Total		74	91.36%	680.19	2.16	422.47	1.67	70	94.59%	680.94	1.67	434.30	1.37	21	28.38%	677.69	3.80	383.04	2.67
2001	LDGV	1	33.33%	263.60	2.01	280.90	2.22	1	100.00%	263.60	2.01	280.90	2.22	1	100.00%	263.60	2.01	280.90	2.22
	LDGT	1	50.00%	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
	HDGT	26	83.87%	437.04	1.01	247.42	1.34	24	92.31%	466.78	0.85	255.10	1.18	3	11.54%	199.07	2.34	185.97	2.64
2001 Total		28	77.78%	425.08	1.08	249.73	1.40	25	89.29%	458.66	0.89	256.13	1.22	4	14.29%	215.20	2.26	209.70	2.54
2002	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
	LDGT	3	50.00%	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
	HDGT	22	88.00%	746.16	2.56	587.66	3.00	19	86.36%	709.76	1.90	503.13	2.05	8	36.36%	832.60	4.11	788.43	5.27
2002 Total		25	80.65%	746.16	2.56	587.66	3.00	19	76.00%	709.76	1.90	503.13	2.05	8	32.00%	832.60	4.11	788.43	5.27
2003	LDGV	1	100.00%	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
	LDGT	1	33.33%	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
	HDGT	19	86.36%	443.88	3.13	240.41	1.35	11	57.89%	531.69	2.78	298.62	1.19	15	78.95%	379.48	3.38	197.73	1.46
2003 Total		21	80.77%	443.88	3.13	240.41	1.35	11	52.38%	531.69	2.78	298.62	1.19	15	71.43%	379.48	3.38	197.73	1.46
2004	LDGV	1	100.00%	296.00	1.15	3.00	0.01	1	100.00%	296.00	1.15	3.00	0.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	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
	HDGT	6	66.67%	736.98	3.16	912.49	3.30	6	100.00%	676.55	2.69	832.48	2.81	4	66.67%	827.63	3.87	1032.50	4.05
2004 Total		7	63.64%	696.89	2.98	829.81	3.00	7	100.00%	622.19	2.47	713.99	2.41	4	57.14%	827.63	3.87	1032.50	4.05
2005	LDGV	1	100.00%	183.50	2.45	128.00	1.78	0	0.00%	0.00	0.00	0.00	0.00	1	100.00%	183.50	2.45	128.00	1.78
	LDGT	1	50.00%	660.90	5.32	2000.00	5.82	1	100.00%	660.90	5.32	2000.00	5.82	1	100.00%	660.90	5.32	2000.00	5.82
	HDGT	9	81.82%	466.80	1.05	394.23	1.45	9	100.00%	458.30	0.88	311.12	1.13	1	11.11%	543.30	2.64	1142.20	4.34
2005 Total		11	78.57%	474.87	1.82	620.79	2.15	10	90.91%	478.56	1.32	480.01	1.60	3	27.27%	462.57	3.47	1090.07	3.98
2006	LDGV	1	50.00%	844.90	1.40	524.10	4.82	1	100.00%	844.90	1.40	524.10	4.82	1	100.00%	844.90	1.40	524.10	4.82
	LDGT	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
	HDGT	14	77.78%	647.80	1.21	523.62	0.47	11	78.57%	769.80	0.73	698.54	0.52	4	28.57%	312.30	2.55	42.60	0.32

Vehicle		Overall Exhaust Failures						HC Failures						CO Failures					
Year	Type	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	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
2006 Total		15	71.43%	670.99	1.23	523.68	0.98	12	80.00%	776.06	0.78	684.00	0.88	5	33.33%	418.82	2.32	138.90	1.22
2007	LDGV	2	66.67%	610.60	0.43	227.30	1.01	1	50.00%	610.60	0.43	227.30	1.01	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	1	33.33%	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
	HDGT	5	71.43%	546.95	2.53	780.84	3.33	5	100.00%	505.52	2.11	679.98	2.75	3	60.00%	616.00	3.21	948.93	4.28
2007 Total		8	61.54%	554.02	2.29	719.33	3.07	6	75.00%	523.03	1.83	604.53	2.46	3	37.50%	616.00	3.21	948.93	4.28
2008	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
	LDGT	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
	HDGT	1	25.00%	1884.10	1.06	54.20	0.57	1	100.00%	1884.10	1.06	54.20	0.57	0	0.00%	0.00	0.00	0.00	0.00
2008 Total		1	25.00%	1884.10	1.06	54.20	0.57	1	100.00%	1884.10	1.06	54.20	0.57	0	0.00%	0.00	0.00	0.00	0.00
2009	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
	LDGT	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
	HDGT	2	66.67%	416.50	1.48	356.67	0.56	2	100.00%	473.60	1.16	506.80	0.71	1	50.00%	302.30	2.12	56.40	0.25
2009 Total		2	66.67%	416.50	1.48	356.67	0.56	2	100.00%	473.60	1.16	506.80	0.71	1	50.00%	302.30	2.12	56.40	0.25
2010	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
	LDGT	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
	HDGT	1	100.00%	393.00	0.00	124.00	0.00	1	100.00%	393.00	0.00	124.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2010 Total		1	50.00%	393.00	0.00	124.00	0.00	1	100.00%	393.00	0.00	124.00	0.00	0	0.00%	0.00	0.00	0.00	0.00
2011	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
	LDGT	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
	HDGT	2	66.67%	686.40	1.87	67.27	0.25	2	100.00%	598.20	1.64	77.55	0.30	1	50.00%	862.80	2.32	46.70	0.15
2011 Total		2	66.67%	686.40	1.87	67.27	0.25	2	100.00%	598.20	1.64	77.55	0.30	1	50.00%	862.80	2.32	46.70	0.15
2012	LDGV	1	100.00%	903.40	0.35	1267.60	1.54	1	100.00%	903.40	0.35	1267.60	1.54	0	0.00%	0.00	0.00	0.00	0.00
	LDGT	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
	HDGT	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		1	100.00%	903.40	0.35	1267.60	1.54	1	100.00%	903.40	0.35	1267.60	1.54	0	0.00%	0.00	0.00	0.00	0.00
2013	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
	LDGT	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
	HDGT	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	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
	LDGT	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
	HDGT	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 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
2015	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
	LDGT	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
	HDGT	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	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
	LDGT	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
	HDGT	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
Grand Total		3,915	85.29%	727.29	3.57	513.46	2.98	2,381	60.82%	866.66	2.63	610.49	2.41	2,335	59.64%	585.17	4.53	414.52	3.56

Summary by Vehicle Type (V1.01)

Vehicle	Overall Exhaust Failures	HC Failures	CO Failures
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Type	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	Total	Total%	Avg HC Idle	Avg CO Idle	Avg HC 2500 rpm	Avg CO 2500 rpm
LDGV	1,084	86.72%	760.12	4.07	557.13	3.64	534	49.26%	973.91	3.38	714.68	3.24	772	71.22%	612.24	4.54	448.15	3.92
LDGT	966	81.93%	651.34	3.36	479.20	2.82	514	53.21%	798.94	2.42	569.94	2.32	572	59.21%	518.71	4.20	397.67	3.28
HDGT	1,865	86.30%	744.33	3.39	504.92	2.68	1,333	71.47%	849.80	2.41	584.38	2.11	991	53.14%	602.45	4.72	398.04	3.45
Grand Total	3,915	85.29%	727.29	3.57	513.46	2.98	2,381	60.82%	866.66	2.63	610.49	2.41	2,335	59.64%	585.17	4.53	414.52	3.56

Appendix V

Idle Initial Failure for Other Report

Date
Between 1/1/2015 and 12/31/2015

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 %	Pass	Pass %	Fail	Fail %		
1974	HDGV	195	194	99.49	1	6.25	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	0	0.00	194	99.49	1	0.51
	LDGT1	490	486	99.18	4	10.81	4	100.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	486	99.18	4	0.82		
	LDGT2	369	368	99.73	1	2.13	1	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	368	99.73	1	0.27		
	LDGV	930	922	99.14	8	9.20	2	100.00	0	0.00	9	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	922	99.14	8	0.86		
1974 Total		1,984	1970	99.29	14	7.49	7	100.00	0	0.00	16	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1970	99.29	14	0.71		
1975	HDGV	40	40	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	40	100.00	0	0.00	40	100.00	0	0.00		
	LDGT1	22	16	72.73	6	31.58	7	63.64	4	18.18	6	75.00	2	25.00	0	0.00	0	0.00	5	55.56	4	44.44	22	100.00	0	0.00	22	100.00	0	0.00		
	LDGT2	84	79	94.05	5	7.04	7	100.00	0	0.00	6	100.00	0	0.00	2	100.00	0	0.00	13	86.67	2	13.33	81	96.43	3	3.57	81	96.43	3	3.57		
	LDGV	56	47	83.93	9	18.00	34	87.18	5	8.93	24	96.00	1	4.00	0	0.00	0	0.00	37	90.24	4	9.76	55	98.21	1	1.79	55	98.21	1	1.79		
1975 Total		202	182	90.10	20	11.36	49	84.48	9	4.46	39	92.86	3	7.14	2	100.00	0	0.00	60	85.71	10	14.29	198	98.02	4	1.98	198	98.02	4	1.98		
1976	HDGV	151	150	99.34	1	0.68	7	100.00	0	0.00	8	100.00	0	0.00	0	0.00	0	0.00	27	96.43	1	3.57	151	100.00	0	0.00	151	100.00	0	0.00		
	LDGT1	178	138	77.53	40	25.16	71	84.52	13	7.30	62	83.78	12	16.22	4	80.00	1	20.00	91	80.53	22	19.47	178	100.00	0	0.00	178	100.00	0	0.00		
	LDGT2	427	408	95.55	19	4.96	13	92.86	1	0.23	18	90.00	2	10.00	2	100.00	0	0.00	65	81.25	15	18.75	425	99.53	2	0.47	425	99.53	2	0.47		
	LDGV	310	273	88.06	37	13.45	216	96.00	9	2.90	112	90.32	12	9.68	5	100.00	0	0.00	169	90.86	17	9.14	308	99.35	2	0.65	308	99.35	2	0.65		
1976 Total		1,066	969	90.90	97	10.07	307	93.03	23	2.16	200	88.50	26	11.50	11	91.67	1	8.33	352	86.49	55	13.51	1062	99.62	4	0.38	1062	99.62	4	0.38		
1977	HDGV	191	186	97.38	5	2.73	7	100.00	0	0.00	14	100.00	0	0.00	2	100.00	0	0.00	31	88.57	4	11.43	190	99.48	1	0.52	190	99.48	1	0.52		
	LDGT1	135	116	85.93	19	17.76	80	93.02	6	4.44	78	92.86	6	7.14	7	100.00	0	0.00	76	88.37	10	11.63	135	100.00	0	0.00	135	100.00	0	0.00		
	LDGT2	581	550	94.66	31	5.88	34	91.89	3	0.52	50	92.59	4	7.41	6	100.00	0	0.00	53	74.65	18	25.35	574	98.80	7	1.20	574	98.80	7	1.20		
	LDGV	329	295	89.67	34	11.68	263	95.99	11	3.34	153	94.44	9	5.56	8	100.00	0	0.00	197	90.78	20	9.22	329	100.00	0	0.00	329	100.00	0	0.00		
1977 Total		1,236	1147	92.80	89	8.03	384	95.05	20	1.62	295	93.95	19	6.05	23	100.00	0	0.00	357	87.29	52	12.71	1228	99.35	8	0.65	1228	99.35	8	0.65		
1978	HDGV	226	223	98.67	3	1.42	15	100.00	0	0.00	24	100.00	0	0.00	2	100.00	0	0.00	39	92.86	3	7.14	226	100.00	0	0.00	226	100.00	0	0.00		
	LDGT1	219	190	86.76	29	15.76	119	94.44	7	3.20	112	96.55	4	3.45	6	85.71	1	14.29	123	86.01	20	13.99	218	99.54	1	0.46	218	99.54	1	0.46		
	LDGT2	712	683	95.93	29	4.57	71	91.03	7	0.98	74	91.36	7	8.64	6	100.00	0	0.00	50	80.65	12	19.35	707	99.30	5	0.70	707	99.30	5	0.70		
	LDGV	452	423	93.58	29	7.51	384	96.97	12	2.65	232	96.67	8	3.33	16	100.00	0	0.00	270	94.08	17	5.92	452	100.00	0	0.00	452	100.00	0	0.00		
1978 Total		1,609	1519	94.41	90	6.35	589	95.77	26	1.62	442	95.88	19	4.12	30	96.77	1	3.23	482	90.26	52	9.74	1603	99.63	6	0.37	1603	99.63	6	0.37		
1979	HDGV	265	244	92.08	21	8.90	26	100.00	0	0.00	132	88.59	17	11.41	8	100.00	0	0.00	35	89.74	4	10.26	263	99.25	2	0.75	263	99.25	2	0.75		
	LDGT1	279	233	83.51	46	20.18	220	95.24	11	3.94	176	92.63	14	7.37	14	93.33	1	6.67	147	82.58	31	17.42	279	100.00	0	0.00	279	100.00	0	0.00		
	LDGT2	505	409	80.99	96	21.77	425	93.00	32	6.34	259	86.05	42	13.95	13	92.86	1	7.14	302	85.07	53	14.93	503	99.60	2	0.40	503	99.60	2	0.40		
	LDGV	571	519	90.89	52	10.46	498	97.46	13	2.28	290	94.46	17	5.54	19	100.00	0	0.00	352	92.15	30	7.85	570	99.82	1	0.18	570	99.82	1	0.18		
1979 Total		1,620	1405	86.73	215	15.34	1169	95.43	56	3.46	857	90.50	90	9.50	54	96.43	2	3.57	836	87.63	118	12.37	1615	99.69	5	0.31	1615	99.69	5	0.31		
1980	HDGV	119	107	89.92	12	10.71	10	90.91	1	0.84	78	89.66	9	10.34	1	100.00	0	0.00	25	92.59	2	7.41	119	100.00	0	0.00	119	100.00	0	0.00		
	LDGT1	229	194	84.72	35	17.59	182	95.79	8	3.49	159	92.98	12	7.02	21	100.00	0	0.00	145	85.29	25	14.71	229	100.00	0	0.00	229	100.00	0	0.00		
	LDGT2	176	158	89.77	18	12.00	150	96.77	5	2.84	138	97.18	4	2.82	5	100.00	0	0.00	105	88.98	13	11.02	175	99.43	1	0.57	175	99.43	1	0.57		
	LDGV	354	320	90.40	34	10.69	333	98.52	5	1.41	240	93.02	18	6.98	79	96.34	3	3.66	230	93.88	15	6.12	354	100.00	0	0.00	354	100.00	0	0.00		
1980 Total		878	779	88.72	99	12.71	675	97.26	19	2.16	615	93.47	43	6.53	106	97.25	3	2.75	505	90.18	55	9.82	877	99.89	1	0.11	877	99.89	1	0.11		
1981	HDGV	183	174	95.08	9	5.17	13	92.86	1	0.55	157	95.15	8	4.85	2	100.00	0	0.00	11	100.00	0	0.00	183	100.00	0	0.00	183	100.00	0	0.00		
	LDGT1	272	224	82.35	48	20.60	259	97.00	8	2.94	207	94.09	13	5.91	39	100.00	0	0.00	159	82.38	34	17.62	271	99.63	1	0.37	271	99.63	1	0.37		
	LDGT2	144	125	86.81	19	16.67	125	96.15	5	3.47	114	95.00	6	5.00	2	100.00	0	0.00	78	88.64	10	11.36	144	100.00	0	0.00	144	100.00	0	0.00		
	LDGV	307	282	91.86	25	9.33	299																									

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 %
	LDGT2	4	3	75.00	1	25.00	4	100.00	0	0.00	4	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	3	75.00	1	25.00
	LDGV	8	7	87.50	1	12.50	8	100.00	0	0.00	2	100.00	0	0.00	8	100.00	0	0.00	5	83.33	1	16.67	8	100.00	0	0.00
1984 Total		310	289	93.23	21	6.77	44	97.78	1	0.32	272	95.10	14	4.90	22	100.00	0	0.00	17	89.47	2	10.53	306	98.71	4	1.29
1985	HDBGV	359	338	94.15	21	5.85	18	90.00	2	0.56	334	95.43	16	4.57	14	100.00	0	0.00	3	75.00	1	25.00	356	99.16	3	0.84
	LDGT1	7	5	71.43	2	28.57	7	100.00	0	0.00	2	66.67	1	33.33	6	100.00	0	0.00	6	85.71	1	14.29	7	100.00	0	0.00
	LDGT2	2	1	50.00	1	50.00	2	100.00	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	1	50.00	1	50.00	2	100.00	0	0.00
	LDGV	17	15	88.24	2	11.76	16	100.00	0	0.00	9	90.00	1	10.00	14	93.33	1	6.67	13	92.86	1	7.14	17	100.00	0	0.00
1985 Total		385	359	93.25	26	6.75	43	95.56	2	0.52	347	95.07	18	4.93	34	97.14	1	2.86	23	85.19	4	14.81	382	99.22	3	0.78
1986	HDBGV	302	286	94.70	16	5.30	28	100.00	0	0.00	273	94.46	16	5.54	20	100.00	0	0.00	5	100.00	0	0.00	301	99.67	1	0.33
	LDGT1	9	8	88.89	1	11.11	9	100.00	0	0.00	1	50.00	1	50.00	7	100.00	0	0.00	5	100.00	0	0.00	9	100.00	0	0.00
	LDGT2	4	4	100.00	0	0.00	3	100.00	0	0.00	4	100.00	0	0.00	0	0.00	0	0.00	4	100.00	0	0.00	4	100.00	0	0.00
	LDGV	19	17	89.47	2	10.53	19	100.00	0	0.00	12	92.31	1	7.69	17	100.00	0	0.00	14	93.33	1	6.67	19	100.00	0	0.00
1986 Total		334	315	94.31	19	5.69	59	100.00	0	0.00	290	94.16	18	5.84	44	100.00	0	0.00	28	96.55	1	3.45	333	99.70	1	0.30
1987	HDBGV	318	303	95.28	15	4.78	126	97.67	3	0.94	286	95.65	13	4.35	98	98.99	1	1.01	7	100.00	0	0.00	318	100.00	0	0.00
	LDGT1	33	30	90.91	3	10.34	32	96.97	1	3.03	3	100.00	0	0.00	33	100.00	0	0.00	18	90.00	2	10.00	33	100.00	0	0.00
	LDGT2	5	4	80.00	1	20.00	5	100.00	0	0.00	5	100.00	0	0.00	3	100.00	0	0.00	4	80.00	1	20.00	5	100.00	0	0.00
	LDGV	27	26	96.30	1	3.70	26	100.00	0	0.00	14	100.00	0	0.00	21	100.00	0	0.00	16	94.12	1	5.88	27	100.00	0	0.00
1987 Total		383	363	94.78	20	5.33	189	97.93	4	1.04	308	95.95	13	4.05	155	99.36	1	0.64	45	91.84	4	8.16	383	100.00	0	0.00
1988	HDBGV	372	356	95.70	16	4.31	292	97.99	6	1.61	337	97.40	9	2.60	265	99.62	1	0.38	8	100.00	0	0.00	369	99.19	3	0.81
	LDGT1	50	44	88.00	6	15.00	50	100.00	0	0.00	5	100.00	0	0.00	50	100.00	0	0.00	23	79.31	6	20.69	50	100.00	0	0.00
	LDGT2	4	3	75.00	1	25.00	3	100.00	0	0.00	2	100.00	0	0.00	3	100.00	0	0.00	2	66.67	1	33.33	4	100.00	0	0.00
	LDGV	14	14	100.00	0	0.00	14	100.00	0	0.00	4	100.00	0	0.00	14	100.00	0	0.00	11	100.00	0	0.00	14	100.00	0	0.00
1988 Total		440	417	94.77	23	5.37	359	98.36	6	1.36	348	97.48	9	2.52	332	99.70	1	0.30	44	86.27	7	13.73	437	99.32	3	0.68
1989	HDBGV	723	706	97.65	17	2.35	635	98.91	7	0.97	540	98.00	11	2.00	588	99.83	1	0.17	3	60.00	2	40.00	722	99.86	1	0.14
	LDGT1	62	60	96.77	2	4.55	62	100.00	0	0.00	2	100.00	0	0.00	61	100.00	0	0.00	29	93.55	2	6.45	62	100.00	0	0.00
	LDGT2	8	7	87.50	1	12.50	8	100.00	0	0.00	1	100.00	0	0.00	6	85.71	1	14.29	6	100.00	0	0.00	7	87.50	1	12.50
	LDGV	48	44	91.67	4	8.89	47	100.00	0	0.00	11	84.62	2	15.38	45	97.83	1	2.17	35	97.22	1	2.78	48	100.00	0	0.00
1989 Total		841	817	97.15	24	2.93	752	99.08	7	0.83	554	97.71	13	2.29	700	99.57	3	0.43	73	93.59	5	6.41	839	99.76	2	0.24
1990	HDBGV	554	540	97.47	14	2.54	533	98.89	6	1.08	334	97.66	8	2.34	517	99.23	4	0.77	2	100.00	0	0.00	554	100.00	0	0.00
	LDGT1	74	68	91.89	6	10.17	74	100.00	0	0.00	4	100.00	0	0.00	73	100.00	0	0.00	27	81.82	6	18.18	74	100.00	0	0.00
	LDGT2	7	7	100.00	0	0.00	7	100.00	0	0.00	3	100.00	0	0.00	7	100.00	0	0.00	7	100.00	0	0.00	7	100.00	0	0.00
	LDGV	57	53	92.98	4	7.02	54	100.00	0	0.00	11	78.57	3	21.43	54	100.00	0	0.00	46	95.83	2	4.17	57	100.00	0	0.00
1990 Total		692	668	96.53	24	3.56	668	99.11	6	0.87	352	96.97	11	3.03	651	99.39	4	0.61	82	91.11	8	8.89	692	100.00	0	0.00
1991	HDBGV	628	615	97.93	13	2.07	617	99.04	6	0.96	340	99.42	2	0.58	620	99.52	3	0.48	2	66.67	1	33.33	627	99.84	1	0.16
	LDGT1	65	64	98.46	1	1.75	65	100.00	0	0.00	3	100.00	0	0.00	65	100.00	0	0.00	31	96.88	1	3.13	65	100.00	0	0.00
	LDGT2	8	8	100.00	0	0.00	8	100.00	0	0.00	5	100.00	0	0.00	8	100.00	0	0.00	7	100.00	0	0.00	8	100.00	0	0.00
	LDGV	69	63	91.30	6	8.70	69	100.00	0	0.00	17	100.00	0	0.00	69	100.00	0	0.00	51	91.07	5	8.93	68	98.55	1	1.45
1991 Total		770	750	97.40	20	2.62	759	99.22	6	0.78	365	99.46	2	0.54	762	99.61	3	0.39	91	92.86	7	7.14	768	99.74	2	0.26
1992	HDBGV	714	697	97.62	17	2.38	704	99.29	5	0.70	408	98.08	8	1.92	706	99.58	3	0.42	2	50.00	2	50.00	712	99.72	2	0.28
	LDGT1	77	74	96.10	3	4.17	77	100.00	0	0.00	3	100.00	0	0.00	77	100.00	0	0.00	52	94.55	3	5.45	77	100.00	0	0.00
	LDGT2	6	5	83.33	1	16.67	5	83.33	1	16.67	3	100.00	0	0.00	6	100.00	0	0.00	5	83.33	1	16.67	6	100.00	0	0.00
	LDGV	71	65	91.55	6	8.45	66	94.29	4	5.63	11	91.67	1	8.33	69	97.18	2	2.82	58	98.31	1	1.69	70	98.59	1	1.41
1992 Total		868	841	96.89	27	3.13	852	98.84	10	1.15	425	97.93	9	2.07	858	99.42	5	0.58	117	94.35	7	5.65	865	99.65	3	0.35
1993	HDBGV	908	892	98.24	16	1.76	888	99.11	8	0.88	485	98.38	8	1.62	901	99.89	1	0.11	2	66.67	1	33.33	908	100.00	0	0.00
	LDGT1	25	20	80.00	5	22.73	25	100.00	0	0.00	0	0.00	0	0.00	24	100.00	0	0.00	8	61.54	5	38.46	25	100.00	0	0.00
	LDGT2	11	9	81.82	2	18.18	11	100.00	0	0.00	4	80.00	1	20.00	10	90.91	1	9.09	10	90.91	1	9.09	11	100.00	0	0.00
	LDGV	47	42	89.36	5	10.64	45	95.74	2	4.26	13	92.86	1	7.14	47	100.00	0	0.00	37	92.50	3	7.50	47	100.00	0	0.00
1993 Total		991	963	97.17	28	2.83	969	98.98	10	1.01	502	98.05	10	1.95	982	99.80	2	0.20	57	85.07	10	14.93	991	100.00	0	0.00
1994	HDBGV	1,087	1066	98.07																						

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	109	104	95.41	5	4.59	108	99.08	1	0.92	33	100.00	0	0.00	108	99.08	1	0.92	87	95.60	4	4.40	109	100.00	0	0.00
1995 Total		1,753	1725	98.40	28	1.60	1676	99.41	10	0.57	869	99.66	3	0.34	1,740	99.60	7	0.40	133	91.10	13	8.90	1753	100.00	0	0.00
1996	HDGV	1,323	1322	99.92	1	0.08	15	100.00	0	0.00	1	100.00	0	0.00	15	100.00	0	0.00	0	0.00	1	100.00	1323	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	5	100.00	0	0.00	6	100.00	0	0.00
	LDGT2	4	3	75.00	1	33.33	3	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	1	50.00	1	50.00	4	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	4	100.00	0	0.00	6	100.00	0	0.00
1996 Total		1,339	1337	99.85	2	0.15	18	100.00	0	0.00	2	100.00	0	0.00	18	100.00	0	0.00	10	83.33	2	16.67	1339	100.00	0	0.00
1997	HDGV	2,037	2036	99.95	1	0.05	7	100.00	0	0.00	1	100.00	0	0.00	7	100.00	0	0.00	4	80.00	1	20.00	2037	100.00	0	0.00
	LDGT1	7	7	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	4	100.00	0	0.00	7	100.00	0	0.00
	LDGT2	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	9	100.00	0	0.00	12	100.00	0	0.00
	LDGV	10	10	100.00	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	8	100.00	0	0.00	10	100.00	0	0.00
1997 Total		2,066	2065	99.95	1	0.05	11	100.00	0	0.00	1	100.00	0	0.00	11	100.00	0	0.00	25	96.15	1	3.85	2066	100.00	0	0.00
1998	HDGV	1,244	1240	99.68	4	0.32	14	100.00	0	0.00	1	100.00	0	0.00	14	100.00	0	0.00	0	0.00	3	100.00	1243	99.92	1	0.08
	LDGT1	37	34	91.89	3	16.67	28	100.00	0	0.00	1	100.00	0	0.00	28	100.00	0	0.00	10	76.92	3	23.08	37	100.00	0	0.00
	LDGT2	4	4	100.00	0	0.00	3	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	1	100.00	0	0.00	4	100.00	0	0.00
	LDGV	26	24	92.31	2	12.50	16	100.00	0	0.00	2	100.00	0	0.00	16	100.00	0	0.00	10	83.33	2	16.67	26	100.00	0	0.00
1998 Total		1,311	1302	99.31	9	0.71	61	100.00	0	0.00	5	100.00	0	0.00	61	100.00	0	0.00	21	72.41	8	27.59	1310	99.92	1	0.08
1999	HDGV	2,895	2887	99.72	8	0.28	12	100.00	0	0.00	1	100.00	0	0.00	12	100.00	0	0.00	10	66.67	5	33.33	2892	99.90	3	0.10
	LDGT1	9	8	88.89	1	11.11	3	100.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	5	83.33	1	16.67	9	100.00	0	0.00
	LDGT2	37	36	97.30	1	3.23	7	100.00	0	0.00	0	0.00	0	0.00	7	100.00	0	0.00	27	96.43	1	3.57	37	100.00	0	0.00
	LDGV	27	27	100.00	0	0.00	8	100.00	0	0.00	3	100.00	0	0.00	8	100.00	0	0.00	15	100.00	0	0.00	27	100.00	0	0.00
1999 Total		2,968	2958	99.66	10	0.34	30	100.00	0	0.00	4	100.00	0	0.00	30	100.00	0	0.00	57	89.06	7	10.94	2965	99.90	3	0.10
2000	HDGV	2,445	2440	99.80	5	0.21	28	100.00	0	0.00	1	100.00	0	0.00	28	100.00	0	0.00	27	84.38	5	15.63	2445	100.00	0	0.00
	LDGT1	24	22	91.67	2	13.33	15	100.00	0	0.00	1	100.00	0	0.00	15	100.00	0	0.00	10	83.33	2	16.67	24	100.00	0	0.00
	LDGT2	34	34	100.00	0	0.00	5	100.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00	25	100.00	0	0.00	34	100.00	0	0.00
	LDGV	28	25	89.29	3	13.04	15	100.00	0	0.00	6	100.00	0	0.00	15	100.00	0	0.00	10	76.92	3	23.08	28	100.00	0	0.00
2000 Total		2,531	2521	99.60	10	0.40	63	100.00	0	0.00	8	100.00	0	0.00	63	100.00	0	0.00	72	87.80	10	12.20	2531	100.00	0	0.00
2001	HDGV	2,977	2972	99.83	5	0.17	53	100.00	0	0.00	4	100.00	0	0.00	53	100.00	0	0.00	30	90.91	3	9.09	2975	99.93	2	0.07
	LDGT1	257	219	85.21	38	23.60	244	100.00	0	0.00	5	100.00	0	0.00	246	100.00	0	0.00	26	40.63	38	59.38	257	100.00	0	0.00
	LDGT2	29	28	96.55	1	4.00	8	100.00	0	0.00	4	100.00	0	0.00	8	100.00	0	0.00	20	95.24	1	4.76	29	100.00	0	0.00
	LDGV	37	35	94.59	2	7.41	23	100.00	0	0.00	12	100.00	0	0.00	23	100.00	0	0.00	12	85.71	2	14.29	37	100.00	0	0.00
2001 Total		3,300	3254	98.61	46	1.45	328	100.00	0	0.00	25	100.00	0	0.00	330	100.00	0	0.00	88	66.67	44	33.33	3298	99.94	2	0.06
2002	HDGV	1,948	1945	99.85	3	0.15	24	100.00	0	0.00	2	100.00	0	0.00	24	100.00	0	0.00	29	90.63	3	9.38	1948	100.00	0	0.00
	LDGT1	20	20	100.00	0	0.00	11	100.00	0	0.00	1	100.00	0	0.00	11	100.00	0	0.00	12	100.00	0	0.00	20	100.00	0	0.00
	LDGT2	51	48	94.12	3	6.12	12	100.00	0	0.00	3	100.00	0	0.00	12	100.00	0	0.00	31	91.18	3	8.82	51	100.00	0	0.00
	LDGV	37	35	94.59	2	8.00	27	100.00	0	0.00	12	100.00	0	0.00	27	100.00	0	0.00	9	81.82	2	18.18	37	100.00	0	0.00
2002 Total		2,056	2048	99.61	8	0.39	74	100.00	0	0.00	18	100.00	0	0.00	74	100.00	0	0.00	81	91.01	8	8.99	2056	100.00	0	0.00
2003	HDGV	2,705	2702	99.89	3	0.11	59	100.00	0	0.00	5	100.00	0	0.00	59	100.00	0	0.00	54	94.74	3	5.26	2705	100.00	0	0.00
	LDGT1	65	64	98.46	1	3.03	48	100.00	0	0.00	0	0.00	0	0.00	48	100.00	0	0.00	21	95.45	1	4.55	65	100.00	0	0.00
	LDGT2	24	22	91.67	2	9.09	3	100.00	0	0.00	1	100.00	0	0.00	3	100.00	0	0.00	18	90.00	2	10.00	24	100.00	0	0.00
	LDGV	75	73	97.33	2	5.00	62	100.00	0	0.00	18	100.00	0	0.00	62	100.00	0	0.00	17	89.47	2	10.53	75	100.00	0	0.00
2003 Total		2,869	2861	99.72	8	0.29	172	100.00	0	0.00	24	100.00	0	0.00	172	100.00	0	0.00	110	93.22	8	6.78	2869	100.00	0	0.00
2004	HDGV	1,873	1870	99.84	3	0.16	34	100.00	0	0.00	0	0.00	0	0.00	34	100.00	0	0.00	35	92.11	3	7.89	1873	100.00	0	0.00
	LDGT1	20	20	100.00	0	0.00	11	100.00	0	0.00	1	100.00	0	0.00	11	100.00	0	0.00	9	100.00	0	0.00	20	100.00	0	0.00
	LDGT2	26	25	96.15	1</																					

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 %
2006 Total		2,276	2266	99.56	10	0.45	164	100.00	0	0.00	36	100.00	0	0.00	163	100.00	0	0.00	69	87.34	10	12.66	2276	100.00	0	0.00
2007	HDGV	1,927	1925	99.90	2	0.11	80	100.00	0	0.00	6	100.00	0	0.00	80	100.00	0	0.00	27	93.10	2	6.90	1927	100.00	0	0.00
	LDGT1	19	18	94.74	1	8.33	13	100.00	0	0.00	4	100.00	0	0.00	13	100.00	0	0.00	9	90.00	1	10.00	19	100.00	0	0.00
	LDGT2	38	36	94.74	2	8.70	26	100.00	0	0.00	5	100.00	0	0.00	26	100.00	0	0.00	9	81.82	2	18.18	38	100.00	0	0.00
	LDGV	73	71	97.26	2	4.44	62	100.00	0	0.00	20	100.00	0	0.00	62	100.00	0	0.00	9	81.82	2	18.18	73	100.00	0	0.00
2007 Total		2,057	2050	99.66	7	0.36	181	100.00	0	0.00	35	100.00	0	0.00	181	100.00	0	0.00	54	88.52	7	11.48	2057	100.00	0	0.00
2008	HDGV	1,584	1581	99.81	3	0.19	70	100.00	0	0.00	7	100.00	0	0.00	70	100.00	0	0.00	17	89.47	2	10.53	1583	99.94	1	0.06
	LDGT1	76	65	85.53	11	26.19	71	100.00	0	0.00	7	100.00	0	0.00	71	100.00	0	0.00	6	35.29	11	64.71	76	100.00	0	0.00
	LDGT2	35	35	100.00	0	0.00	23	100.00	0	0.00	8	100.00	0	0.00	23	100.00	0	0.00	13	100.00	0	0.00	35	100.00	0	0.00
	LDGV	122	121	99.18	1	1.27	117	100.00	0	0.00	43	100.00	0	0.00	117	100.00	0	0.00	5	83.33	1	16.67	122	100.00	0	0.00
2008 Total		1,817	1802	99.17	15	0.88	281	100.00	0	0.00	65	100.00	0	0.00	281	100.00	0	0.00	41	74.55	14	25.45	1816	99.94	1	0.06
2009	HDGV	484	483	99.79	1	0.22	63	100.00	0	0.00	2	100.00	0	0.00	63	100.00	0	0.00	4	80.00	1	20.00	484	100.00	0	0.00
	LDGT1	13	13	100.00	0	0.00	11	100.00	0	0.00	8	100.00	0	0.00	11	100.00	0	0.00	7	100.00	0	0.00	13	100.00	0	0.00
	LDGT2	11	10	90.91	1	14.29	11	100.00	0	0.00	0	0.00	0	0.00	11	100.00	0	0.00	3	75.00	1	25.00	11	100.00	0	0.00
	LDGV	70	69	98.57	1	1.64	65	100.00	0	0.00	34	100.00	0	0.00	65	100.00	0	0.00	11	91.67	1	8.33	70	100.00	0	0.00
2009 Total		578	575	99.48	3	0.57	150	100.00	0	0.00	44	100.00	0	0.00	150	100.00	0	0.00	25	89.29	3	10.71	578	100.00	0	0.00
2010	HDGV	272	272	100.00	0	0.00	31	100.00	0	0.00	1	100.00	0	0.00	31	100.00	0	0.00	0	0.00	0	0.00	272	100.00	0	0.00
	LDGT1	8	8	100.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	2	100.00	0	0.00	8	100.00	0	0.00
	LDGT2	24	24	100.00	0	0.00	22	100.00	0	0.00	1	100.00	0	0.00	22	100.00	0	0.00	7	100.00	0	0.00	24	100.00	0	0.00
	LDGV	20	19	95.00	1	7.14	20	100.00	0	0.00	4	100.00	0	0.00	20	100.00	0	0.00	3	75.00	1	25.00	20	100.00	0	0.00
2010 Total		324	323	99.69	1	0.33	79	100.00	0	0.00	6	100.00	0	0.00	79	100.00	0	0.00	12	92.31	1	7.69	324	100.00	0	0.00
2011	HDGV	530	529	99.81	1	0.20	43	100.00	0	0.00	1	100.00	0	0.00	43	100.00	0	0.00	87	98.86	1	1.14	530	100.00	0	0.00
	LDGT1	10	10	100.00	0	0.00	9	100.00	0	0.00	1	100.00	0	0.00	9	100.00	0	0.00	3	100.00	0	0.00	10	100.00	0	0.00
	LDGT2	12	12	100.00	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	6	100.00	0	0.00	7	100.00	0	0.00	12	100.00	0	0.00
	LDGV	11	11	100.00	0	0.00	10	100.00	0	0.00	2	100.00	0	0.00	10	100.00	0	0.00	4	100.00	0	0.00	11	100.00	0	0.00
2011 Total		563	562	99.82	1	0.19	68	100.00	0	0.00	4	100.00	0	0.00	68	100.00	0	0.00	101	99.02	1	0.98	563	100.00	0	0.00
2012	HDGV	208	208	100.00	0	0.00	32	100.00	0	0.00	0	0.00	0	0.00	32	100.00	0	0.00	46	100.00	0	0.00	208	100.00	0	0.00
	LDGT1	2	2	100.00	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00
	LDGT2	5	5	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	2	100.00	0	0.00	5	100.00	0	0.00
	LDGV	3	3	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	3	100.00	0	0.00
2012 Total		218	218	100.00	0	0.00	38	100.00	0	0.00	1	100.00	0	0.00	38	100.00	0	0.00	49	100.00	0	0.00	218	100.00	0	0.00
2013	HDGV	93	93	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	26	100.00	0	0.00	93	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	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	0	0.00	0	0.00	2	100.00	0	0.00
2013 Total		96	96	100.00	0	0.00	2	100.00	0	0.00	1	100.00	0	0.00	2	100.00	0	0.00	27	100.00	0	0.00	96	100.00	0	0.00
2014	HDGV	107	107	100.00	0	0.00	15	100.00	0	0.00	0	0.00	0	0.00	15	100.00	0	0.00	24	100.00	0	0.00	107	100.00	0	0.00
	LDGT2	5	5	100.00	0	0.00	5	100.00	0	0.00	3	100.00	0	0.00	5	100.00	0	0.00	0	0.00	0	0.00	5	100.00	0	0.00
2014 Total		112	112	100.00	0	0.00	20	100.00	0	0.00	3	100.00	0	0.00	20	100.00	0	0.00	24	100.00	0	0.00	112	100.00	0	0.00
2015	HDGV	57	57	100.00	0	0.00	18	100.00	0	0.00	0	0.00	0	0.00	18	100.00	0	0.00	6	100.00	0	0.00	57	100.00	0	0.00
	LDGT1	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	0	0.00	0	0.00	1	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	3	3	100.00	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00	3	100.00	0	0.00
2015 Total		63	63	100.00	0	0.00	22	100.00	0	0.00	1	100.00	0	0.00	22	100.00	0	0.00	11	100.00	0	0.00	63	100.00	0	0.00
2016	HDGV	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	0	0.00	0	0.00	6	100.00	0	0.00
2016 Total		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	0	0.00	0	0.00	6	100.00	0	0.00
Grand Total		49,815	48634	97.63	1181	2.56	13457	98.18	250	0.52	8984	95.93	381	4.07	9,977	99.53	47	0.47	4,933	89.04	607	10.96	49743	99.86	72	0.14

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	38,676	38356	99.17	320	0.84	719																				

Appendix W

Idle Retest Pass Reduction Report

Date
Between 1/1/2015 and 12/31/2015

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	304	939.85	4.64	633.37	4.04	182	59.87%	367.96	1.58	310.41	2.84	487.83	57.00%	3.03	65.75%	241.37	43.74%	1.11	28.07%	198.38
	LDGT	119	929.68	5.05	617.57	3.52	83	69.75%	341.07	1.26	330.31	2.58	459.45	57.39%	3.53	73.64%	178.91	35.13%	0.95	26.82%	0.00
	HDGT	73	1200.71	4.86	883.75	3.39	51	69.86%	450.52	2.51	356.69	2.50	644.67	58.86%	1.72	40.75%	391.62	52.33%	0.73	22.59%	280.00
1974 Total		496	975.80	4.77	666.43	3.82	316	63.71%	374.22	1.65	323.11	2.72	505.69	57.47%	2.95	64.19%	249.22	43.54%	1.00	26.99%	186.70
1975	LDGV	8	267.28	2.86	131.71	2.64	6	75.00%	164.03	0.81	108.70	1.48	84.07	33.88%	1.89	70.00%	13.07	10.73%	0.94	38.82%	0.00
	LDGT	11	635.89	4.45	268.33	4.00	6	54.55%	150.72	0.82	102.62	1.41	510.98	77.22%	3.63	81.54%	201.03	66.21%	2.64	65.20%	0.00
	HDGT	27	1065.21	4.60	815.13	3.17	15	55.56%	331.45	2.35	293.70	1.80	320.47	49.16%	1.43	37.80%	201.16	40.65%	0.81	31.04%	0.00
1975 Total		46	823.78	4.26	565.52	3.28	27	58.70%	254.08	1.67	210.13	1.64	310.27	54.98%	2.02	54.76%	159.33	43.13%	1.25	43.13%	0.00
1976	LDGV	141	702.83	3.61	490.53	3.49	85	60.28%	160.58	0.77	140.70	1.67	364.91	69.44%	2.44	76.10%	226.41	61.67%	1.52	47.64%	158.25
	LDGT	91	597.82	3.39	372.04	3.12	57	62.64%	209.89	0.70	144.66	1.75	338.95	61.76%	2.07	74.73%	181.93	55.71%	0.79	31.01%	5.00
	HDGT	133	1029.73	4.77	571.23	3.60	87	65.41%	377.11	2.01	374.65	2.53	538.02	58.79%	2.22	52.47%	203.22	35.17%	0.67	20.80%	149.00
1976 Total		365	795.77	3.98	490.40	3.44	229	62.74%	255.12	1.22	230.57	2.02	424.21	62.45%	2.26	64.94%	206.53	47.25%	1.01	33.41%	113.14
1977	LDGV	171	567.06	3.22	354.64	2.66	93	54.39%	134.87	0.44	136.98	1.35	328.68	70.91%	2.38	84.28%	140.22	50.58%	0.98	42.16%	116.00
	LDGT	65	512.52	2.57	303.81	2.31	38	58.46%	138.00	0.54	154.07	1.45	310.09	69.20%	1.64	75.40%	132.98	46.33%	0.52	26.16%	0.00
	HDGT	174	1076.63	4.87	629.52	3.50	111	63.79%	347.33	2.07	347.73	2.48	624.62	64.26%	2.47	54.45%	235.22	40.35%	0.58	18.90%	55.00
1977 Total		410	774.67	3.82	463.24	2.96	242	59.02%	232.81	1.20	236.33	1.89	461.50	66.47%	2.31	65.73%	182.66	43.60%	0.72	27.76%	75.33
1978	LDGV	177	534.19	3.07	406.55	3.11	98	55.37%	128.55	0.41	181.53	1.65	298.83	69.92%	2.31	84.89%	127.56	41.27%	1.06	39.04%	578.00
	LDGT	117	423.67	2.32	296.45	2.37	72	61.54%	128.64	0.46	162.56	1.15	244.87	65.56%	1.52	76.90%	91.84	36.10%	0.72	38.52%	72.67
	HDGT	173	968.25	4.52	606.16	3.49	116	67.05%	367.20	2.00	287.75	2.65	497.25	57.52%	2.19	52.26%	240.62	45.54%	0.52	16.37%	460.00
1978 Total		467	667.30	3.42	452.91	3.07	286	61.24%	225.37	1.07	219.84	1.93	365.72	61.87%	2.06	65.89%	164.42	42.79%	0.76	28.11%	344.25
1979	LDGV	255	541.25	3.19	350.55	2.68	156	61.18%	134.38	0.42	151.04	1.63	292.81	68.54%	2.28	84.32%	147.37	49.38%	0.83	33.72%	156.33
	LDGT	405	449.24	2.05	311.94	1.77	228	56.30%	120.03	0.36	160.46	1.39	251.50	67.69%	1.47	80.41%	126.19	44.02%	0.34	19.81%	21.75
	HDGT	74	627.14	3.69	465.87	3.24	55	74.32%	275.27	1.47	262.88	2.44	368.09	57.21%	2.02	57.86%	231.18	46.79%	0.71	22.65%	196.00
1979 Total		734	499.14	2.61	340.87	2.23	439	59.81%	144.58	0.52	169.94	1.61	280.79	66.01%	1.83	77.81%	146.87	46.36%	0.56	25.94%	94.00
1980	LDGV	127	692.63	3.03	557.11	3.20	66	51.97%	112.91	0.37	128.25	0.94	394.62	77.75%	1.74	82.44%	265.75	67.45%	1.53	61.98%	0.00
	LDGT	166	462.08	2.51	343.49	2.05	89	53.61%	115.78	0.36	116.33	1.30	244.33	67.85%	1.71	82.62%	163.16	58.38%	0.59	31.18%	85.00
	HDGT	40	744.78	2.45	506.78	2.77	28	70.00%	259.34	1.11	248.52	1.94	326.77	55.75%	0.85	43.45%	98.76	28.44%	0.50	20.40%	0.00
1980 Total		333	583.97	2.70	444.57	2.58	183	54.95%	136.71	0.48	140.86	1.27	311.15	69.47%	1.59	76.85%	190.30	57.47%	0.91	41.87%	42.50
1981	LDGV	196	296.62	1.19	259.55	2.16	100	51.02%	70.90	0.15	63.84	0.32	171.71	70.78%	0.94	86.19%	146.66	69.67%	1.56	82.93%	311.50
	LDGT	353	347.45	1.34	338.74	2.24	144	40.79%	64.07	0.14	62.88	0.31	219.60	77.41%	0.96	87.32%	177.06	73.79%	1.30	80.93%	443.67
	HDGT	49	601.71	2.69	472.57	2.20	33	67.35%	199.31	1.02	238.85	1.17	425.24	68.09%	1.83	64.22%	214.95	47.37%	1.02	46.48%	0.00
1981 Total		598	351.62	1.40	323.75	2.21	277	46.32%	82.65	0.25	84.19	0.41	226.81	73.29%	1.06	80.97%	170.60	66.96%	1.36	76.63%	368.14
1982	LDGV	8	453.53	4.28	276.99	4.36	3	37.50%	63.43	0.19	79.50	0.46	332.37	83.97%	4.63	95.99%	158.83	66.64%	4.12	89.96%	0.00
	LDGT	7	289.90	0.94	185.40	1.65	1	14.29%	33.90	0.61	14.50	0.22	636.70	94.94%	-0.13	-27.08%	179.30	92.52%	0.00	0.00%	0.00
	HDGT	42	891.23	3.32	561.00	2.58	23	54.76%	157.06	0.92	124.53	1.63	531.91	77.20%	2.44	72.71%	314.33	71.62%	1.31	44.68%	650.00
1982 Total		57	755.95	3.16	475.01	2.72	27	47.37%	142.10	0.82	115.46	1.44	513.62	78.33%	2.59	75.85%	292.05	71.67%	1.58	52.19%	650.00
1983	LDGV	9	910.10	3.73	846.67	3.93	5	55.56%	71.20	0.32	77.76	0.39	835.62	92.15%	3.12	90.75%	807.50	91.22%	3.34	89.50%	0.00
	LDGT	1	1559.30	2.75	769.80	1.28	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	28	900.07	3.11	473.12	2.21	17	60.71%	228.52	0.93	105.07	0.88	632.00	73.44%	3.04	76.53%	433.03	80.47%	2.02	69.52%	288.00

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	
1983 Total		38	919.79	3.25	569.40	2.60	22	57.89%	192.77	0.79	98.86	0.77	678.28	77.87%	3.06	79.41%	518.14	83.98%	2.32	75.01%	288.00
1984	LDGT	15	231.24	1.42	309.81	3.27	6	40.00%	87.42	0.08	73.37	0.23	87.13	49.92%	1.85	95.78%	137.28	65.17%	2.35	91.09%	150.00
	HDGT	81	858.11	2.42	508.76	1.92	45	55.56%	239.43	0.95	142.47	1.04	556.59	69.92%	1.26	57.03%	385.55	73.02%	0.72	41.00%	801.00
1984 Total		96	760.16	2.27	477.67	2.13	51	53.13%	221.54	0.85	134.34	0.95	501.36	69.35%	1.33	61.09%	356.35	72.62%	0.92	49.17%	475.50
1985	LDGV	7	505.31	0.48	364.91	0.48	3	42.86%	104.57	0.07	91.80	0.09	-39.30	-60.21%	0.02	21.43%	-40.03	-77.33%	0.03	24.32%	0.00
	LDGT	9	494.77	4.08	223.57	2.76	4	44.44%	80.88	0.06	131.60	0.20	286.33	77.98%	5.27	98.97%	79.80	37.75%	2.94	93.77%	0.00
	HDGT	83	805.98	3.14	427.39	2.36	46	55.42%	198.42	0.85	123.66	0.98	523.80	72.53%	2.11	71.26%	281.66	69.49%	1.21	55.34%	163.67
1985 Total		99	756.43	3.04	404.44	2.27	53	53.54%	184.24	0.75	122.46	0.87	474.00	72.01%	2.23	74.91%	248.22	66.96%	1.28	59.47%	163.67
1986	LDGV	8	82.01	0.69	64.79	0.65	2	25.00%	82.10	0.34	68.65	0.39	70.85	46.32%	0.22	39.64%	15.10	18.03%	0.09	18.09%	0.00
	LDGT	12	400.83	2.31	230.87	2.45	6	50.00%	66.67	0.05	66.93	0.60	119.30	64.15%	0.79	93.66%	69.73	51.02%	0.40	40.40%	0.00
	HDGT	159	655.92	2.99	414.21	2.38	75	47.17%	133.93	0.77	144.58	1.30	420.80	75.86%	1.49	65.89%	185.26	56.17%	0.67	34.19%	211.50
1986 Total		179	613.17	2.84	386.30	2.31	83	46.37%	127.81	0.71	137.14	1.23	390.57	75.34%	1.41	66.52%	172.80	55.75%	0.64	34.33%	211.50
1987	LDGV	3	271.63	2.05	206.03	2.34	2	66.67%	12.00	0.01	17.70	0.05	94.35	88.72%	0.82	98.80%	31.00	63.66%	0.15	74.36%	0.00
	LDGT	19	416.82	0.33	319.02	0.80	10	52.63%	51.02	0.16	64.13	0.27	84.85	62.45%	0.01	5.99%	11.48	15.18%	0.18	40.31%	71.75
	HDGT	96	544.96	1.72	329.34	1.04	53	55.21%	102.42	0.58	129.28	0.80	426.42	80.63%	0.89	60.66%	195.38	60.18%	0.18	18.28%	139.00
1987 Total		118	517.37	1.50	324.54	1.03	65	55.08%	91.73	0.50	115.82	0.69	363.65	79.86%	0.75	60.31%	162.03	58.31%	0.18	20.43%	109.11
1988	LDGV	4	386.85	3.22	302.50	3.78	2	50.00%	34.30	0.02	26.35	0.05	405.85	92.21%	4.72	99.68%	469.15	94.68%	7.09	99.37%	0.00
	LDGT	19	113.33	0.36	60.76	0.19	12	63.16%	64.83	0.19	63.10	0.24	2.93	4.32%	-0.11	-118.87%	-37.92	-150.56%	-0.15	-157.66%	0.00
	HDGT	81	448.23	2.61	325.28	2.27	44	54.32%	122.05	0.74	82.64	0.80	383.63	75.86%	1.62	68.51%	308.98	78.90%	0.95	54.07%	974.00
1988 Total		104	384.68	2.22	276.08	1.95	58	55.77%	107.19	0.61	76.66	0.66	305.63	74.03%	1.37	69.35%	242.73	76.00%	0.93	58.53%	243.50
1989	LDGV	10	225.27	1.16	194.50	0.65	6	60.00%	65.57	0.10	50.40	0.09	82.73	55.79%	0.62	85.81%	116.45	69.79%	0.66	87.97%	0.00
	LDGT	20	127.46	0.75	67.01	0.23	13	65.00%	101.14	0.25	111.55	0.52	-62.07	-158.87%	-0.10	-64.95%	-78.12	-233.69%	-0.35	-212.04%	21.80
	HDGT	133	544.77	2.15	403.92	1.59	66	49.62%	134.24	0.56	170.63	1.19	362.06	72.95%	1.11	66.31%	192.09	52.96%	0.08	6.54%	378.25
1989 Total		163	473.97	1.92	349.73	1.36	85	52.15%	124.33	0.48	153.11	1.01	277.47	69.06%	0.89	64.84%	145.42	48.71%	0.06	5.37%	180.22
1990	LDGV	18	167.89	0.70	148.33	1.10	13	72.22%	79.12	0.28	105.49	0.52	80.51	50.43%	0.51	64.98%	35.75	25.31%	0.71	57.74%	0.00
	LDGT	28	211.20	0.89	130.20	0.77	17	60.71%	81.93	0.28	84.73	0.43	93.29	53.24%	0.09	24.77%	0.56	0.66%	-0.10	-29.56%	0.00
	HDGT	126	497.68	3.25	273.05	1.95	61	48.41%	113.31	0.59	71.66	0.71	287.79	71.75%	2.20	78.75%	147.88	67.36%	1.10	60.77%	460.25
1990 Total		172	416.53	2.60	236.74	1.67	91	52.91%	102.57	0.49	78.94	0.63	221.85	68.38%	1.57	76.14%	104.34	56.93%	0.82	56.55%	184.10
1991	LDGV	27	298.60	1.00	487.63	2.33	15	55.56%	73.64	0.22	74.24	0.24	152.98	67.51%	0.45	66.93%	249.35	77.06%	1.16	82.86%	0.00
	LDGT	15	195.87	1.04	164.03	1.90	9	60.00%	104.68	0.32	100.23	0.31	20.10	16.11%	0.03	7.77%	21.32	17.54%	1.03	76.76%	0.00
	HDGT	104	514.97	2.88	290.18	1.73	53	50.96%	101.38	0.38	87.34	0.80	400.36	79.79%	2.32	85.93%	180.05	67.34%	0.93	53.75%	463.33
1991 Total		146	442.17	2.34	313.73	1.86	77	52.74%	96.36	0.34	86.29	0.63	307.72	76.15%	1.69	83.16%	175.00	66.97%	0.98	60.88%	231.67
1992	LDGV	19	175.18	0.94	153.07	1.23	11	57.89%	68.81	0.20	53.43	0.22	118.43	63.25%	0.92	81.85%	140.27	72.42%	1.41	86.37%	325.00
	LDGT	12	273.20	1.07	209.66	0.51	9	75.00%	67.46	0.11	51.30	0.28	115.50	63.13%	0.49	81.22%	95.64	65.09%	-0.08	-41.90%	220.00
	HDGT	114	527.05	3.30	424.12	2.76	73	64.04%	109.15	0.45	105.09	0.84	409.99	78.97%	2.64	85.45%	301.80	74.17%	1.78	67.80%	57.00
1992 Total		145	459.93	2.81	370.85	2.38	93	64.14%	100.34	0.39	93.78	0.72	347.00	77.57%	2.23	85.18%	262.75	73.70%	1.55	68.45%	205.50
1993	LDGV	16	232.36	1.32	184.56	1.51	8	50.00%	38.09	0.06	41.63	0.12	100.34	72.49%	0.74	92.92%	98.51	70.30%	0.95	88.93%	0.00
	LDGT	7	500.77	0.88	119.74	0.94	6	85.71%	112.08	0.37	72.65	0.32	323.42	74.26%	0.45	55.21%	49.70	40.62%	0.69	68.26%	200.00
	HDGT	96	516.82	3.07	350.58	2.57	67	69.79%	95.59	0.45	70.93	0.69	434.86	81.98%	2.44	84.49%	296.71	80.71%	1.85	72.70%	667.00
1993 Total		119	477.63	2.70	314.68	2.34	81	68.07%	91.13	0.40	68.16	0.61	393.57	81.20%	2.12	84.05%	258.84	79.16%	1.67	73.31%	433.50
1994	LDGV	15	253.85	0.40	228.90	0.60	10	66.67%	79.45	0.19	80.61	0.32	153.45	65.89%	0.25	56.91%	91.00	53.03%	0.37	53.58%	0.00
	LDGT	12	183.96	1.00	106.84	1.20	8	66.67%	114.18	0.44	78.93	0.62	40.65	26.26%	0.26	37.41%	-26.47	-50.48%	-0.12	-24.44%	0.00
	HDGT	200	598.29	3.36	277.34	2.73	95	47.50%	121.91	0.61	118.31	1.27	360.83	74.75%	2.11	77.59%	99.05	45.57%	1.02	44.46%	624.80

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	
1994 Total		227	553.63	3.04	265.12	2.51	113	49.78%	117.60	0.56	112.18	1.14	319.81	73.11%	1.81	76.42%	89.45	44.36%	0.88	43.52%	624.80
1995	LDGV	28	551.78	2.88	514.95	3.26	13	46.43%	60.62	0.13	71.47	0.28	230.19	79.16%	0.69	83.89%	89.45	55.59%	0.29	51.55%	0.00
	LDGT	21	422.09	2.18	188.28	2.07	14	66.67%	116.45	0.42	79.32	0.49	239.39	67.27%	1.50	78.23%	87.06	52.32%	1.23	71.40%	0.00
	HDGT	315	648.69	3.41	315.22	3.23	134	42.54%	114.68	0.56	108.61	1.07	421.82	78.62%	2.44	81.31%	119.94	52.48%	1.56	59.42%	440.75
1995 Total		364	628.17	3.30	323.26	3.16	161	44.23%	110.47	0.51	103.06	0.95	390.48	77.95%	2.22	81.18%	114.62	52.65%	1.43	60.02%	440.75
1996	LDGV	3	469.60	0.61	239.27	0.63	1	33.33%	9.70	0.00	9.90	0.00	359.50	97.37%	0.35	100.00%	327.30	97.06%	0.54	100.00%	0.00
	LDGT	1	336.90	0.71	112.50	0.63	1	100.00%	129.10	0.16	59.50	0.40	207.80	61.68%	0.55	77.46%	53.00	47.11%	0.23	36.51%	0.00
	HDGT	119	684.79	2.96	271.19	1.98	63	52.94%	114.88	0.56	88.42	1.08	547.73	82.66%	2.22	79.96%	194.91	68.79%	0.82	43.40%	386.20
1996 Total		123	676.72	2.89	269.12	1.94	65	52.85%	113.48	0.54	86.77	1.05	539.60	82.62%	2.17	79.99%	194.77	69.18%	0.81	43.62%	386.20
1997	LDGV	5	236.94	0.41	224.02	0.40	3	60.00%	39.10	0.05	48.10	0.15	157.67	80.13%	0.23	83.13%	138.33	74.20%	0.12	43.90%	0.00
	LDGT	1	1259.50	1.62	615.10	0.59	1	100.00%	180.00	0.74	113.60	0.59	1079.50	85.71%	0.88	54.32%	501.50	81.53%	0.00	0.00%	0.00
	HDGT	109	695.15	2.35	344.92	1.08	67	61.47%	102.55	0.41	70.68	0.47	565.40	84.65%	2.04	83.18%	253.60	78.20%	0.73	60.52%	642.50
1997 Total		115	680.13	2.26	342.01	1.05	71	61.74%	100.96	0.40	70.33	0.46	555.42	84.62%	1.95	82.90%	252.23	78.20%	0.69	59.92%	642.50
1998	LDGV	2	116.55	0.10	111.95	0.10	1	50.00%	16.00	0.02	16.00	0.15	-16.00	0.00%	-0.02	0.00%	-16.00	0.00%	-0.15	0.00%	10.00
	LDGT	3	90.67	0.11	23.33	0.22	3	100.00%	14.33	0.02	6.00	0.01	76.33	84.19%	0.08	78.13%	17.33	74.29%	0.21	96.92%	0.00
	HDGT	121	775.14	1.91	247.57	1.02	79	65.29%	134.45	0.34	70.91	0.43	639.86	82.64%	1.58	82.44%	161.86	69.54%	0.53	55.14%	1236.33
1998 Total		126	748.39	1.84	240.08	0.99	83	65.87%	128.68	0.32	67.90	0.42	611.59	82.62%	1.50	82.42%	154.49	69.47%	0.51	55.29%	929.75
1999	LDGV	3	337.97	2.96	339.93	3.26	2	66.67%	7.80	0.01	89.10	0.60	309.80	97.54%	2.58	99.81%	224.90	71.62%	2.20	78.67%	0.00
	LDGT	10	132.90	0.23	37.21	0.16	9	90.00%	99.12	0.32	67.21	0.33	-13.37	-15.59%	-0.15	-87.66%	-36.24	-117.04%	-0.19	-132.56%	0.00
	HDGT	140	753.01	1.80	344.84	0.99	87	62.14%	108.45	0.26	72.83	0.34	586.82	84.40%	1.53	85.24%	240.92	76.79%	0.64	65.65%	1134.00
1999 Total		153	704.35	1.72	324.64	0.98	98	64.05%	105.54	0.26	72.64	0.34	526.04	83.29%	1.40	84.06%	215.14	74.76%	0.60	63.66%	1134.00
2000	LDGV	4	166.28	1.54	111.08	1.01	2	50.00%	43.50	0.04	58.60	0.43	67.35	60.76%	0.99	96.59%	15.45	20.86%	0.25	37.04%	20.00
	LDGT	7	163.31	1.24	64.36	0.24	6	85.71%	63.50	0.30	47.72	0.19	65.00	50.58%	0.70	70.45%	11.28	19.12%	0.04	15.79%	645.00
	HDGT	102	823.32	2.06	436.41	1.31	61	59.80%	110.24	0.28	114.00	0.53	560.05	83.55%	1.52	84.29%	222.01	66.07%	0.58	52.22%	0.00
2000 Total		113	759.18	1.99	401.85	1.24	69	61.06%	104.24	0.28	106.63	0.50	502.72	82.83%	1.43	83.81%	197.70	64.96%	0.52	51.24%	332.50
2001	LDGV	4	68.58	0.50	73.53	0.56	3	75.00%	49.33	0.23	51.63	0.21	42.10	46.04%	0.44	65.17%	46.40	47.33%	0.53	71.17%	0.00
	LDGT	3	134.90	1.06	73.53	1.10	2	66.67%	11.10	0.01	9.70	0.01	85.00	88.45%	1.12	99.55%	21.50	68.91%	0.16	93.94%	0.00
	HDGT	47	540.84	1.23	264.64	0.96	31	65.96%	96.84	0.35	110.51	0.49	349.30	78.29%	0.93	72.46%	83.14	42.93%	0.46	48.44%	370.00
2001 Total		54	483.30	1.17	239.86	0.94	36	66.67%	88.12	0.32	100.00	0.44	309.02	77.81%	0.90	73.51%	76.65	43.39%	0.45	50.48%	370.00
2002	LDGV	1	0.00	0.00	0.00	0.00	1	100.00%	11.00	0.00	22.00	0.00	-11.00	0.00%	0.00	0.00%	-22.00	0.00%	0.00	0.00%	1013.00
	LDGT	7	173.81	1.49	76.11	1.54	4	57.14%	6.50	0.01	6.65	0.01	31.80	83.03%	0.23	95.83%	51.65	88.59%	1.21	98.98%	0.00
	HDGT	30	567.02	2.71	288.99	2.85	22	73.33%	103.73	0.40	66.92	0.45	473.59	82.03%	1.87	82.36%	253.72	79.13%	1.88	80.60%	79.00
2002 Total		38	479.67	2.42	242.17	2.53	27	71.05%	85.89	0.33	56.33	0.37	390.19	81.96%	1.56	82.62%	213.57	79.13%	1.71	82.20%	390.33
2003	LDGT	6	231.55	0.69	106.80	1.03	5	83.33%	29.74	0.13	32.12	0.13	160.42	84.36%	0.42	76.47%	47.32	59.57%	0.33	71.43%	0.00
	HDGT	25	453.80	2.45	156.61	1.07	20	80.00%	84.43	0.40	65.95	0.35	294.22	77.70%	2.02	83.60%	70.09	51.52%	0.80	69.40%	0.00
2003 Total		31	410.79	2.11	146.97	1.06	25	80.65%	73.49	0.34	59.18	0.31	267.46	78.45%	1.70	83.22%	65.54	52.55%	0.71	69.58%	0.00
2004	LDGV	1	33.20	0.05	128.60	4.09	1	100.00%	1.10	0.00	3.60	0.02	32.10	96.69%	0.05	100.00%	125.00	97.20%	4.07	99.51%	0.00
	LDGT	1	25.30	0.09	34.00	0.19	1	100.00%	33.60	0.01	17.30	0.16	-8.30	-32.81%	0.08	88.89%	16.70	49.12%	0.03	15.79%	0.00
	HDGT	6	531.55	1.03	326.67	0.96	5	83.33%	64.06	0.08	55.58	0.27	462.38	87.83%	1.15	93.18%	208.84	78.98%	0.88	76.79%	0.00
2004 Total		8	405.98	0.79	265.33	1.25	7	87.50%	50.71	0.06	42.69	0.22	333.67	86.81%	0.84	93.17%	169.41	79.87%	1.21	84.92%	0.00
2005	LDGV	2	98.05	1.66	64.00	0.89	2	100.00%	122.60	0.36	79.85	0.41	-24.55	-25.04%	1.30	78.25%	-15.85	-24.77%	0.49	54.49%	0.00
	LDGT	3	496.87	4.14	1334.00	3.88	2	66.67%	7.40	0.04	16.40	0.44	365.50	98.02%	3.07	98.87%	984.60	98.36%	2.47	84.88%	0.00
	HDGT	14	588.03	1.36	352.51	1.22	9	64.29%	72.03	0.19	52.80	0.26	531.23	88.06%	0.82	81.40%	200.42	79.15%	0.49	65.73%	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	
2005 Total		19	522.06	1.83	477.11	1.60	13	68.42%	69.87	0.19	51.36	0.31	420.23	85.74%	1.24	86.68%	287.79	84.86%	0.80	72.09%	0.00
2006	LDGV	2	65.75	0.93	67.25	0.89	1	50.00%	0.00	0.01	1.00	0.01	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
	LDGT	1	44.30	0.04	34.00	0.03	1	100.00%	12.80	0.03	14.80	0.05	31.50	71.11%	0.01	25.00%	19.20	56.47%	-0.02	-66.67%	0.00
	HDGT	25	692.24	1.43	432.44	0.64	18	72.00%	67.54	0.20	78.57	0.23	612.48	90.07%	1.00	83.02%	345.68	81.48%	0.50	68.64%	0.00
2006 Total		28	624.35	1.34	392.12	0.64	20	71.43%	61.43	0.19	71.50	0.21	552.81	90.00%	0.90	82.87%	312.07	81.36%	0.45	68.28%	0.00
2007	LDGV	4	477.85	0.44	194.38	1.07	2	50.00%	73.55	0.14	102.75	0.21	271.55	78.69%	0.31	68.54%	58.70	36.36%	0.92	81.33%	0.00
	LDGT	3	59.63	0.21	254.87	0.56	3	100.00%	70.93	0.12	27.03	0.15	-11.30	-18.95%	0.09	41.27%	227.83	89.39%	0.41	73.21%	0.00
	HDGT	7	501.49	1.02	522.91	1.12	5	71.43%	54.66	0.20	30.76	0.21	502.46	90.19%	1.16	85.55%	488.12	94.07%	1.18	84.60%	0.00
2007 Total		14	400.05	0.68	371.61	0.98	10	71.43%	63.32	0.16	44.04	0.19	302.15	82.67%	0.67	80.36%	324.15	88.04%	0.89	82.17%	0.00
2008	LDGV	2	0.00	0.00	0.00	0.00	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	4	560.88	1.14	46.00	0.43	4	100.00%	58.55	0.25	42.95	0.35	502.33	89.56%	0.89	77.97%	3.05	6.63%	0.08	18.71%	0.00
2008 Total		6	373.92	0.76	30.67	0.29	4	66.67%	58.55	0.25	42.95	0.35	502.33	89.56%	0.89	77.97%	3.05	6.63%	0.08	18.71%	0.00
2009	HDGT	2	181.60	1.49	55.80	0.13	2	100.00%	114.20	0.13	100.65	0.45	67.40	37.11%	1.36	91.58%	-44.85	-80.38%	-0.33	-260.00%	0.00
2009 Total		2	181.60	1.49	55.80	0.13	2	100.00%	114.20	0.13	100.65	0.45	67.40	37.11%	1.36	91.58%	-44.85	-80.38%	-0.33	-260.00%	0.00
2010	LDGV	2	4.00	0.01	6.00	0.01	2	100.00%	4.00	0.01	9.00	0.02	0.00	0.00%	0.00	0.00%	-3.00	-50.00%	-0.01	-200.00%	20.00
	LDGT	1	314.00	2.78	235.70	2.72	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
2010 Total		3	107.33	0.93	82.57	0.91	2	66.67%	4.00	0.01	9.00	0.02	0.00	0.00%	0.00	0.00%	-3.00	-50.00%	-0.01	-200.00%	20.00
2011	LDGT	1	862.80	2.32	46.70	0.15	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	3	438.00	1.38	59.33	0.20	3	100.00%	44.47	0.17	119.63	1.56	393.53	89.85%	1.21	87.89%	-60.30	-101.63%	-1.35	-665.57%	0.00
2011 Total		4	544.20	1.61	56.18	0.19	3	75.00%	44.47	0.17	119.63	1.56	393.53	89.85%	1.21	87.89%	-60.30	-101.63%	-1.35	-665.57%	0.00
Grand Total		6313	615.94	2.84	390.44	2.43	3594	56.93%	165.99	0.72	155.15	1.28	382.19	69.72%	1.87	72.26%	186.26	54.56%	0.89	41.05%	283.94

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	1586	584.91	3.01	420.94	2.92	900	56.75%	165.93	0.63	161.83	1.48	319.93	65.85%	2.09	76.94%	178.06	52.39%	1.15	43.74%	227.41
LDGT	1572	446.65	2.17	324.77	2.11	870	55.34%	131.86	0.43	138.48	1.14	248.01	65.29%	1.51	77.90%	130.06	48.43%	0.68	37.44%	91.76
HDGT	3155	715.89	3.10	407.82	2.34	1824	57.81%	182.30	0.90	159.81	1.25	476.90	72.35%	1.93	68.19%	217.11	57.60%	0.87	40.88%	435.03
Grand Total	6313	615.94	2.84	390.44	2.43	3594	56.93%	165.99	0.72	155.15	1.28	382.19	69.72%	1.87	72.26%	186.26	54.56%	0.89	41.05%	283.94

Appendix X

Idle Retest Frequency Report

Date
Between 1/1/2015 and 12/31/2015

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	304	1.4	208	68.42%	132	63.46%	60	19.74%	33	55.00%	23	7.57%	11	47.83%	8	2.63%	4	50.00%	5	2	2	40.00%
	LDGT	119	1.3	95	79.83%	69	72.63%	16	13.45%	10	62.50%	5	4.20%	2	40.00%	2	1.68%	1	50.00%	1	1	1	100.00%
	HDGT	73	1.2	57	78.08%	42	73.68%	11	15.07%	7	63.64%	3	4.11%	1	33.33%	2	2.74%	1	50.00%	0	0	0	0.00%
1974 Total		496	1.3	360	72.58%	243	67.50%	87	17.54%	50	57.47%	31	6.25%	14	45.16%	12	2.42%	6	50.00%	6	1	3	50.00%
1975	LDGV	8	1.0	8	100.00%	6	75.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	11	1.7	6	54.55%	3	50.00%	4	36.36%	2	50.00%	1	9.09%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	27	1.7	15	55.56%	11	73.33%	3	11.11%	1	33.33%	4	14.81%	1	25.00%	3	11.11%	0	0.00%	2	7	2	100.00%
1975 Total		46	1.6	29	63.04%	20	68.97%	7	15.22%	3	42.86%	5	10.87%	2	40.00%	3	6.52%	0	0.00%	2	4	2	100.00%
1976	LDGV	141	1.5	92	65.25%	61	66.30%	27	19.15%	13	48.15%	12	8.51%	7	58.33%	4	2.84%	1	25.00%	6	4	3	50.00%
	LDGT	91	1.4	64	70.33%	38	59.38%	21	23.08%	15	71.43%	4	4.40%	2	50.00%	2	2.20%	2	100.00%	0	0	0	0.00%
	HDGT	133	1.5	88	66.17%	61	69.32%	25	18.80%	18	72.00%	8	6.02%	2	25.00%	6	4.51%	2	33.33%	6	5	4	66.67%
1976 Total		365	1.5	244	66.85%	160	65.57%	73	20.00%	46	63.01%	24	6.58%	11	45.83%	12	3.29%	5	41.67%	12	3	7	58.33%
1977	LDGV	171	1.8	96	56.14%	61	63.54%	34	19.88%	15	44.12%	19	11.11%	9	47.37%	9	5.26%	4	44.44%	13	8	4	30.77%
	LDGT	65	1.8	37	56.92%	21	56.76%	17	26.15%	10	58.82%	7	10.77%	5	71.43%	2	3.08%	1	50.00%	2	3	1	50.00%
	HDGT	174	1.4	121	69.54%	86	71.07%	31	17.82%	16	51.61%	11	6.32%	5	45.45%	5	2.87%	0	0.00%	6	3	4	66.67%
1977 Total		410	1.6	254	61.95%	168	66.14%	82	20.00%	41	50.00%	37	9.02%	19	51.35%	16	3.90%	5	31.25%	21	5	9	42.86%
1978	LDGV	177	1.6	109	61.58%	63	57.80%	39	22.03%	20	51.28%	17	9.60%	11	64.71%	4	2.26%	0	0.00%	8	5	4	50.00%
	LDGT	117	1.5	79	67.52%	50	63.29%	24	20.51%	14	58.33%	9	7.69%	6	66.67%	3	2.56%	1	33.33%	2	2	1	50.00%
	HDGT	173	1.5	117	67.63%	81	69.23%	37	21.39%	24	64.86%	12	6.94%	5	41.67%	6	3.47%	5	83.33%	1	1	1	100.00%
1978 Total		467	1.5	305	65.31%	194	63.61%	100	21.41%	58	58.00%	38	8.14%	22	57.89%	13	2.78%	6	46.15%	11	2	6	54.55%
1979	LDGV	255	1.5	164	64.31%	110	67.07%	51	20.00%	26	50.98%	23	9.02%	12	52.17%	10	3.92%	6	60.00%	7	3	2	28.57%
	LDGT	405	1.6	257	63.46%	157	61.09%	80	19.75%	39	48.75%	37	9.14%	16	43.24%	17	4.20%	8	47.06%	14	3	8	57.14%
	HDGT	74	1.5	50	67.57%	38	76.00%	14	18.92%	9	64.29%	8	10.81%	6	75.00%	2	2.70%	2	100.00%	0	0	0	0.00%
1979 Total		734	1.6	471	64.17%	305	64.76%	145	19.75%	74	51.03%	68	9.26%	34	50.00%	29	3.95%	16	55.17%	21	3	10	47.62%
1980	LDGV	127	1.8	68	53.54%	44	64.71%	25	19.69%	10	40.00%	12	9.45%	6	50.00%	7	5.51%	2	28.57%	15	12	4	26.67%
	LDGT	166	1.5	106	63.86%	64	60.38%	33	19.88%	15	45.45%	11	6.63%	6	54.55%	5	3.01%	0	0.00%	11	7	4	36.36%
	HDGT	40	1.5	27	67.50%	18	66.67%	8	20.00%	8	100.00%	2	5.00%	1	50.00%	2	5.00%	1	50.00%	1	3	0	0.00%
1980 Total		333	1.6	201	60.36%	126	62.69%	66	19.82%	33	50.00%	25	7.51%	13	52.00%	14	4.20%	3	21.43%	27	8	8	29.63%
1981	LDGV	196	1.9	104	53.06%	61	58.65%	37	18.88%	12	32.43%	27	13.78%	13	48.15%	14	7.14%	8	57.14%	14	7	6	42.86%
	LDGT	353	2.1	163	46.18%	74	45.40%	78	22.10%	32	41.03%	44	12.46%	13	29.55%	30	8.50%	12	40.00%	38	11	13	34.21%
	HDGT	49	1.6	31	63.27%	21	67.74%	10	20.41%	5	50.00%	7	14.29%	6	85.71%	1	2.04%	1	100.00%	0	0	0	0.00%
1981 Total		598	2.0	298	49.83%	156	52.35%	125	20.90%	49	39.20%	78	13.04%	32	41.03%	45	7.53%	21	46.67%	52	9	19	36.54%
1982	LDGV	8	2.3	4	50.00%	1	25.00%	2	25.00%	0	0.00%	2	25.00%	2	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	7	1.0	4	57.14%	1	25.00%	1	14.29%	0	0.00%	1	14.29%	0	0.00%	0	0.00%	0	0.00%	1	14	0	0.00%
	HDGT	42	1.7	23	54.76%	12	52.17%	12	28.57%	8	66.67%	4	9.52%	2	50.00%	2	4.76%	1	50.00%	1	2	0	0.00%
1982 Total		57	1.7	31	54.39%	14	45.16%	15	26.32%	8	53.33%	7	12.28%	4	57.14%	2	3.51%	1	50.00%	2	4	0	0.00%
1983	LDGV	9	1.6	6	66.67%	2	33.33%	3	33.33%	3	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	1	0.0	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	0	0.00%
	HDGT	28	1.4	19	67.86%	14	73.68%	3	10.71%	2	66.67%	1	3.57%	0	0.00%	1	3.57%	0	0.00%	4	14	1	25.00%

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		38	1.5	26	68.42%	16	61.54%	6	15.79%	5	83.33%	1	2.63%	0	0.00%	1	2.63%	0	0.00%	4	11	1	25.00%
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	15	2.2	6	40.00%	2	33.33%	6	40.00%	2	33.33%	2	13.33%	1	50.00%	1	6.67%	1	100.00%	0	0	0	0.00%
	HDGT	81	1.7	49	60.49%	28	57.14%	17	20.99%	10	58.82%	8	9.88%	2	25.00%	4	4.94%	4	100.00%	3	4	1	33.33%
1984 Total		96	1.8	55	57.29%	30	54.55%	23	23.96%	12	52.17%	10	10.42%	3	30.00%	5	5.21%	5	100.00%	3	3	1	33.33%
1985	LDGV	7	2.0	4	57.14%	2	50.00%	1	14.29%	0	0.00%	1	14.29%	0	0.00%	1	14.29%	1	100.00%	0	0	0	0.00%
	LDGT	9	1.3	7	77.78%	3	42.86%	2	22.22%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	83	1.5	52	62.65%	31	59.62%	17	20.48%	7	41.18%	10	12.05%	6	60.00%	3	3.61%	2	66.67%	1	1	0	0.00%
1985 Total		99	1.5	63	63.64%	36	57.14%	20	20.20%	8	40.00%	11	11.11%	6	54.55%	4	4.04%	3	75.00%	1	1	0	0.00%
1986	LDGV	8	1.0	3	37.50%	2	66.67%	2	25.00%	0	0.00%	1	12.50%	0	0.00%	1	12.50%	0	0.00%	1	13	0	0.00%
	LDGT	12	1.8	5	41.67%	2	40.00%	6	50.00%	3	50.00%	1	8.33%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	159	1.8	79	49.69%	43	54.43%	38	23.90%	17	44.74%	20	12.58%	7	35.00%	10	6.29%	6	60.00%	12	8	2	16.67%
1986 Total		179	1.8	87	48.60%	47	54.02%	46	25.70%	20	43.48%	22	12.29%	8	36.36%	11	6.15%	6	54.55%	13	7	2	15.38%
1987	LDGV	3	1.0	3	100.00%	2	66.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	19	1.4	13	68.42%	8	61.54%	4	21.05%	1	25.00%	1	5.26%	0	0.00%	1	5.26%	1	100.00%	0	0	0	0.00%
	HDGT	96	1.6	60	62.50%	32	53.33%	24	25.00%	15	62.50%	6	6.25%	5	83.33%	3	3.13%	0	0.00%	3	3	1	33.33%
1987 Total		118	1.5	76	64.41%	42	55.26%	28	23.73%	16	57.14%	7	5.93%	5	71.43%	4	3.39%	1	25.00%	3	3	1	33.33%
1988	LDGV	4	1.0	4	100.00%	2	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%
	LDGT	19	1.4	13	68.42%	9	69.23%	3	15.79%	2	66.67%	2	10.53%	0	0.00%	1	5.26%	1	100.00%	0	0	0	0.00%
	HDGT	81	1.7	48	59.26%	27	56.25%	18	22.22%	10	55.56%	8	9.88%	3	37.50%	4	4.94%	2	50.00%	3	4	2	66.67%
1988 Total		104	1.6	65	62.50%	38	58.46%	21	20.19%	12	57.14%	10	9.62%	3	30.00%	5	4.81%	3	60.00%	3	3	2	66.67%
1989	LDGV	10	1.2	7	70.00%	5	71.43%	2	20.00%	1	50.00%	1	10.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	20	1.2	16	80.00%	11	68.75%	3	15.00%	1	33.33%	1	5.00%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	133	1.6	81	60.90%	39	48.15%	35	26.32%	16	45.71%	14	10.53%	9	64.29%	2	1.50%	1	50.00%	1	1	1	100.00%
1989 Total		163	1.5	104	63.80%	55	52.88%	40	24.54%	18	45.00%	16	9.82%	10	62.50%	2	1.23%	1	50.00%	1	1	1	100.00%
1990	LDGV	18	1.3	14	77.78%	9	64.29%	4	22.22%	4	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	28	1.4	21	75.00%	14	66.67%	3	10.71%	1	33.33%	2	7.14%	1	50.00%	1	3.57%	0	0.00%	1	4	1	100.00%
	HDGT	126	1.8	68	53.97%	39	57.35%	24	19.05%	9	37.50%	14	11.11%	8	57.14%	7	5.56%	2	28.57%	13	10	3	23.08%
1990 Total		172	1.7	103	59.88%	62	60.19%	31	18.02%	14	45.16%	16	9.30%	9	56.25%	8	4.65%	2	25.00%	14	8	4	28.57%
1991	LDGV	27	1.7	15	55.56%	10	66.67%	6	22.22%	2	33.33%	4	14.81%	1	25.00%	2	7.41%	2	100.00%	0	0	0	0.00%
	LDGT	15	1.3	10	66.67%	6	60.00%	5	33.33%	3	60.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	104	1.9	57	54.81%	32	56.14%	22	21.15%	9	40.91%	12	11.54%	7	58.33%	6	5.77%	1	16.67%	7	7	4	57.14%
1991 Total		146	1.8	82	56.16%	48	58.54%	33	22.60%	14	42.42%	16	10.96%	8	50.00%	8	5.48%	3	37.50%	7	5	4	57.14%
1992	LDGV	19	1.3	15	78.95%	8	53.33%	3	15.79%	3	100.00%	1	5.26%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	12	1.7	9	75.00%	6	66.67%	2	16.67%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	8	1	100.00%
	HDGT	114	1.3	77	67.54%	51	66.23%	26	22.81%	19	73.08%	6	5.26%	3	50.00%	2	1.75%	0	0.00%	3	3	0	0.00%
1992 Total		145	1.4	101	69.66%	65	64.36%	31	21.38%	24	77.42%	7	4.83%	3	42.86%	2	1.38%	0	0.00%	4	3	1	25.00%
1993	LDGV	16	1.0	13	81.25%	8	61.54%	2	12.50%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	6	0	0.00%
	LDGT	7	1.2	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	0	0.00%
	HDGT	96	1.4	67	69.79%	48	71.64%	19	19.79%	12	63.16%	7	7.29%	5	71.43%	1	1.04%	1	100.00%	2	2	1	50.00%
1993 Total		119	1.4	86	72.27%	61	70.93%	22	18.49%	13	59.09%	7	5.88%	5	71.43%	1	0.84%	1	100.00%	3	3	1	33.33%
1994	LDGV	15	1.3	12	80.00%	8	66.67%	2	13.33%	1	50.00%	1	6.67%	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%
	LDGT	12	1.1	10	83.33%	7	70.00%	2	16.67%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	200	1.8	108	54.00%	59	54.63%	46	23.00%	15	32.61%	26	13.00%	12	46.15%	11	5.50%	6	54.55%	9	5	3	33.33%
1994 Total		227	1.7	130	57.27%	74	56.92%	50	22.03%	17	34.00%	27	11.89%	13	48.15%	11	4.85%	6	54.55%	9	4	3	33.33%
1995	LDGV	28	1.3	15	53.57%	11	73.33%	4	14.29%	1	25.00%	4	14.29%	0	0.00%	3	10.71%	1	33.33%	2	7	0	0.00%
	LDGT	21	1.6	13	61.90%	8	61.54%	6	28.57%	5	83.33%	1	4.76%	0	0.00%	1	4.76%	1	100.00%	0	0	0	0.00%
	HDGT	315	2.0	155	49.21%	73	47.10%	73	23.17%	26	35.62%	44	13.97%	19	43.18%	21	6.67%	9	42.86%	22	7	7	31.82%
1995 Total		364	1.9	183	50.27%	92	50.27%	83	22.80%	32	38.55%	49	13.46%	19	38.78%	25	6.87%	11	44.00%	24	7	7	29.17%
1996	LDGV	3	1.0	2	66.67%	1	50.00%	1	33.33%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	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	0	0.00%
	HDGT	119	1.9	66	55.46%	35	53.03%	26	21.85%	14	53.85%	12	10.08%	8	66.67%	4	3.36%	2	50.00%	11	9	4	36.36%
1996 Total		123	1.9	69	56.10%	37	53.62%	27	21.95%	14	51.85%	12	9.76%	8	66.67%	4	3.25%	2	50.00%	11	9	4	36.36%
1997	LDGV	5	1.7	3	60.00%	2	66.67%	1	20.00%	0	0.00%	1	20.00%	1	100.00%	0	0.00%	0	0.00%	0	0	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	0	0.00%
	HDGT	109	1.7	69	63.30%	44	63.77%	21	19.27%	12	57.14%	10	9.17%	6	60.00%	4	3.67%	2	50.00%	5	5	3	60.00%
1997 Total		115	1.7	73	63.48%	47	64.38%	22	19.13%	12	54.55%	11	9.57%	7	63.64%	4	3.48%	2	50.00%	5	4	3	60.00%
1998	LDGV	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%
	LDGT	3	1.0	3	100.00%	3	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	121	1.5	81	66.94%	55	67.90%	25	20.66%	15	60.00%	9	7.44%	6	66.67%	4	3.31%	3	75.00%	2	2	0	0.00%
1998 Total		126	1.4	86	68.25%	59	68.60%	25	19.84%	15	60.00%	9	7.14%	6	66.67%	4	3.17%	3	75.00%	2	2	0	0.00%
1999	LDGV	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	0	0.00%
	LDGT	10	2.1	4	40.00%	4	100.00%	3	30.00%	2	66.67%	1	10.00%	1	100.00%	2	20.00%	2	100.00%	0	0	0	0.00%
	HDGT	140	1.4	97	69.29%	66	68.04%	23	16.43%	14	60.87%	11	7.86%	5	45.45%	3	2.14%	1	33.33%	6	4	1	16.67%
1999 Total		153	1.4	103	67.32%	71	68.93%	27	17.65%	17	62.96%	12	7.84%	6	50.00%	5	3.27%	3	60.00%	6	4	1	16.67%
2000	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	7	1.5	4	57.14%	4	100.00%	2	28.57%	1	50.00%	1	14.29%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	102	1.5	73	71.57%	45	61.64%	19	18.63%	9	47.37%	6	5.88%	5	83.33%	1	0.98%	0	0.00%	3	3	2	66.67%
2000 Total		113	1.5	79	69.91%	50	63.29%	22	19.47%	10	45.45%	8	7.08%	7	87.50%	1	0.88%	0	0.00%	3	3	2	66.67%
2001	LDGV	4	1.3	3	75.00%	2	66.67%	1	25.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	LDGT	3	1.0	3	100.00%	2	66.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	47	1.5	32	68.09%	22	68.75%	8	17.02%	5	62.50%	4	8.51%	3	75.00%	1	2.13%	0	0.00%	2	4	1	50.00%
2001 Total		54	1.5	38	70.37%	26	68.42%	9	16.67%	6	66.67%	4	7.41%	3	75.00%	1	1.85%	0	0.00%	2	4	1	50.00%
2002	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	7	1.0	6	85.71%	4	66.67%	0	0.00%	0	0.00%	1	14.29%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	30	1.4	21	70.00%	15	71.43%	7	23.33%	6	85.71%	1	3.33%	0	0.00%	1	3.33%	1	100.00%	0	0	0	0.00%
2002 Total		38	1.3	28	73.68%	20	71.43%	7	18.42%	6	85.71%	2	5.26%	0	0.00%	1	2.63%	1	100.00%	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	6	1.0	6	100.00%	5	83.33%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	25	1.4	19	76.00%	17	89.47%	2	8.00%	0	0.00%	3	12.00%	2	66.67%	1	4.00%	1	100.00%	0	0	0	0.00%
2003 Total		31	1.3	25	80.65%	22	88.00%	2	6.45%	0	0.00%	3	9.68%	2	66.67%	1	3.23%	1	100.00%	0	0	0	0.00%
2004	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	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%
	HDGT	6	1.0	6	100.00%	5	83.33%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	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		8	1.0	8	100.00%	7	87.50%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2005	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	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	0	0.00%
	HDGT	14	2.1	8	57.14%	4	50.00%	4	28.57%	3	75.00%	1	7.14%	1	100.00%	0	0.00%	0	0.00%	1	7	1	100.00%
2005 Total		19	1.8	12	63.16%	7	58.33%	5	26.32%	4	80.00%	1	5.26%	1	100.00%	0	0.00%	0	0.00%	1	5	1	100.00%
2006	LDGV	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%
	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	0	0.00%
	HDGT	25	1.2	19	76.00%	15	78.95%	4	16.00%	2	50.00%	2	8.00%	1	50.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2006 Total		28	1.2	22	78.57%	17	77.27%	4	14.29%	2	50.00%	2	7.14%	1	50.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2007	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	3	1.3	2	66.67%	2	100.00%	1	33.33%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
	HDGT	7	1.4	5	71.43%	4	80.00%	1	14.29%	0	0.00%	1	14.29%	1	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2007 Total		14	1.5	9	64.29%	7	77.78%	3	21.43%	1	33.33%	2	14.29%	2	100.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2008	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	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	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%
2008 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	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	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	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%
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	0	0.00%
2010	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	1	0.0	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2010 Total		3	1.0	2	66.67%	2	100.00%	1	33.33%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	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	0	0.00%
	LDGT	1	0.0	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	0	0.00%
	HDGT	3	1.3	2	66.67%	2	100.00%	1	33.33%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	0	0.00%
2011 Total		4	1.3	3	75.00%	2	66.67%	1	25.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	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	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%
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	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	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%
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	0	0.00%
Overall Total		6,313	1.6	3918	62.06%	2432	62.07%	1290	20.43%	655	50.78%	578	9.16%	286	49.48%	254	4.02%	117	46.06%	273	4	104	38.10%

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	1,586	1.6	989	62.36%	624	63.09%	311	19.61%	146	46.95%	151	9.52%	76	50.33%	63	3.97%	29	46.03%	72	5	25	34.72%	
LDGT	1,572	1.6	976	62.09%	587	60.14%	325	20.67%	165	50.77%	132	8.40%	57	43.18%	68	4.33%	31	45.59%	71	5	30	42.25%	
HDGT	3,155	1.6	1953	61.90%	1221	62.52%	654	20.73%	344	52.60%	295	9.35%	153	51.86%	123	3.90%	57	46.34%	130	4	49	37.69%	

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%
Overall Total	6,313	1.6	3918	62.06%	2432	62.07%	1290	20.43%	655	50.78%	578	9.16%	286	49.48%	254	4.02%	117	46.06%	273	4	104	38.10%

Appendix Y

I/M Eligible Vehicle Report

Evaluated Vehicles

Colorado

I/M Eligible Vehicle Report, Evaluated Vehicles

Wednesday, 09-March-2016

Report Start: **Jan, 2015**

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	31	0	16	0	0	15	Clean:	2	13.33%	0.1725	27.0500	431.3250	1.35	
			0.00%	51.61%	0.00%	0.00%	48.39%	Not Clean:	13	86.67%	1.2642	201.1692	1,030.6731	1.07	48.39%
	T	45	0	27	1	0	17	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			0.00%	60.00%	2.22%	0.00%	37.78%	Not Clean:	17	100.00%	2.1844	334.8441	1,619.6118	1.05	37.78%
	U	480	479	0	0	0	1	Clean:	1	100.00%	0.1150	73.0500	725.6500	2.20	
			99.79%	0.00%	0.00%	0.00%	0.21%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.21%
Total For 1982		556	479	43	1	0	33	Clean:	3	9.09%	0.1533	42.3833	529.4333	1.63	
			86.15%	7.73%	0.18%	0.00%	5.94%	Not Clean:	30	90.91%	1.7857	276.9183	1,364.4050	1.06	5.94%
1983															
	P	47	0	32	0	0	15	Clean:	3	20.00%	0.1217	74.3167	271.9500	2.38	
			0.00%	68.09%	0.00%	0.00%	31.91%	Not Clean:	12	80.00%	1.6342	184.8208	992.1667	1.18	31.91%
	T	75	0	44	0	0	31	Clean:	2	6.45%	0.0300	14.0750	256.5250	0.67	
			0.00%	58.67%	0.00%	0.00%	41.33%	Not Clean:	29	93.55%	2.1966	263.0397	1,324.7983	0.84	41.33%
	U	872	867	3	0	0	2	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.43%	0.34%	0.00%	0.00%	0.23%	Not Clean:	2	100.00%	0.8425	186.4500	1,002.8000	1.80	0.23%
Total For 1983		994	867	79	0	0	48	Clean:	5	10.42%	0.0850	50.2200	265.7800	1.70	
			87.22%	7.95%	0.00%	0.00%	4.83%	Not Clean:	43	89.58%	1.9766	237.6488	1,216.9942	0.98	4.83%
1984															
	P	75	0	40	0	0	35	Clean:	6	17.14%	0.1225	26.9250	552.8750	1.31	
			0.00%	53.33%	0.00%	0.00%	46.67%	Not Clean:	29	82.86%	1.3366	238.3276	1,147.5086	1.01	46.67%
	T	111	0	62	3	0	46	Clean:	4	8.70%	0.1012	45.2750	661.3500	-0.05	
			0.00%	55.86%	2.70%	0.00%	41.44%	Not Clean:	42	91.30%	2.8063	529.7714	1,324.0012	0.96	41.44%
	U	1,188	1,183	2	0	0	3	Clean:	1	33.33%	0.0400	51.2500	382.2500	1.35	
			99.58%	0.17%	0.00%	0.00%	0.25%	Not Clean:	2	66.67%	0.1925	165.8000	710.9250	0.60	0.25%
Total For 1984		1,374	1,183	104	3	0	84	Clean:	11	13.10%	0.1073	35.8091	576.8091	0.82	
			86.10%	7.57%	0.22%	0.00%	6.11%	Not Clean:	73	86.90%	2.1508	404.0205	1,237.0911	0.97	6.11%

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	119	119	0	73	0	0	46	Clean:	8	17.39%	0.1044	27.2375	312.0375	1.31	
			0.00%	61.34%	0.00%	0.00%	38.66%	Not Clean:	38	82.61%	1.4705	198.5934	1,498.7487	0.96	38.66%
T	194	194	0	113	1	0	80	Clean:	4	5.00%	0.1150	42.3125	368.4750	1.09	
			0.00%	58.25%	0.52%	0.00%	41.24%	Not Clean:	76	95.00%	2.2939	365.4691	1,479.6638	1.18	41.24%
U	1,950	1,949	1,949	0	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.95%	0.00%	0.00%	0.00%	0.05%	Not Clean:	1	100.00%	9.1400	237.3000	295.2500	1.70	0.05%
Total For 1985		2,263	1,949	186	1	0	127	Clean:	12	9.45%	0.1079	32.2625	330.8500	1.23	
			86.12%	8.22%	0.04%	0.00%	5.61%	Not Clean:	115	90.55%	2.0813	309.2130	1,475.6709	1.11	5.61%
1986															
P	195	195	0	90	0	7	98	Clean:	28	26.67%	0.0986	22.0446	237.1500	0.32	
			0.00%	46.15%	0.00%	3.59%	50.26%	Not Clean:	77	73.33%	0.9140	146.2318	1,225.3520	1.28	53.85%
T	231	231	0	130	1	0	100	Clean:	1	1.00%	0.0350	48.0000	0.0000	0.00	
			0.00%	56.28%	0.43%	0.00%	43.29%	Not Clean:	99	99.00%	1.5451	222.1652	1,648.1056	1.06	43.29%
U	1,842	1,839	1,839	2	0	0	1	Clean:	1	100.00%	0.0400	6.4000	96.1000	1.75	
			99.84%	0.11%	0.00%	0.00%	0.05%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.05%
Total For 1986		2,268	1,839	222	1	7	199	Clean:	30	14.56%	0.0945	22.3883	224.5433	0.35	
			81.08%	9.79%	0.04%	0.31%	8.77%	Not Clean:	176	85.44%	1.2690	188.9443	1,463.1509	1.15	9.08%
1987															
P	254	254	0	141	0	0	113	Clean:	18	15.93%	0.1381	48.8750	346.5778	0.70	
			0.00%	55.51%	0.00%	0.00%	44.49%	Not Clean:	95	84.07%	1.0160	192.4889	1,495.5637	1.38	44.49%
T	335	335	0	201	1	1	132	Clean:	10	7.52%	0.1080	30.3750	215.0450	0.39	
			0.00%	60.00%	0.30%	0.30%	39.40%	Not Clean:	123	92.48%	1.1667	161.7699	1,316.5508	1.14	39.70%
U	2,822	2,821	2,821	1	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.96%	0.04%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1987		3,411	2,821	343	1	1	245	Clean:	28	11.38%	0.1273	42.2679	299.6018	0.59	
			82.70%	10.06%	0.03%	0.03%	7.18%	Not Clean:	218	88.62%	1.1010	175.1567	1,394.5610	1.24	7.21%
1988															
P	281	281	0	136	0	3	142	Clean:	40	27.59%	0.1284	28.3125	283.9175	0.95	
			0.00%	48.40%	0.00%	1.07%	50.53%	Not Clean:	105	72.41%	1.0128	172.8829	1,223.7062	0.91	51.60%
T	431	431	0	219	1	0	211	Clean:	19	9.00%	0.1684	41.6921	397.5632	1.12	
			0.00%	50.81%	0.23%	0.00%	48.96%	Not Clean:	192	91.00%	1.1152	175.9370	1,313.0911	1.04	48.96%
U	2,482	2,481	2,481	1	0	0	0	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
			99.96%	0.04%	0.00%	0.00%	0.00%	Not Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	0.00%
Total For 1988		3,194	2,481	356	1	3	353	Clean:	59	16.57%	0.1413	32.6212	320.5153	1.00	
			77.68%	11.15%	0.03%	0.09%	11.05%	Not Clean:	297	83.43%	1.0790	174.8572	1,281.4904	0.99	11.15%

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	481	0	233	0	12	236	Clean:	66	26.61%	0.1012	25.1924	240.1333	0.74	
		0.00%	48.44%	0.00%	2.49%	49.06%	Not Clean:	182	73.39%	1.0757	163.7920	1,171.8066	1.15	51.56%
T	589	0	335	3	3	248	Clean:	46	18.33%	0.1250	33.7196	259.9891	0.84	
		0.00%	56.88%	0.51%	0.51%	42.11%	Not Clean:	205	81.67%	1.1030	227.7522	1,359.6444	1.02	42.61%
U	4,593	4,591	0	0	0	2	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
		99.96%	0.00%	0.00%	0.00%	0.04%	Not Clean:	2	100.00%	1.0675	934.6499	2,325.5499	0.07	0.04%
Total For 1989	5,663	4,591	568	3	15	486	Clean:	112	22.36%	0.1110	28.6946	248.2884	0.78	
		81.07%	10.03%	0.05%	0.26%	8.58%	Not Clean:	389	77.64%	1.0901	201.4618	1,276.7275	1.08	8.85%
1990														
P	676	0	296	0	28	352	Clean:	103	27.11%	0.1101	21.5976	246.9675	0.76	
		0.00%	43.79%	0.00%	4.14%	52.07%	Not Clean:	277	72.89%	0.9568	173.3063	1,220.9069	1.14	56.21%
T	569	0	249	4	9	307	Clean:	56	17.72%	0.1322	38.6705	295.6732	0.64	
		0.00%	43.76%	0.70%	1.58%	53.95%	Not Clean:	260	82.28%	1.0854	253.5288	1,338.1827	0.98	55.54%
U	3,899	3,897	1	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
		99.95%	0.03%	0.00%	0.00%	0.03%	Not Clean:	1	100.00%	0.5200	58.8000	901.2500	1.85	0.03%
Total For 1990	5,144	3,897	546	4	37	660	Clean:	159	22.81%	0.1179	27.6107	264.1217	0.72	
		75.76%	10.61%	0.08%	0.72%	12.83%	Not Clean:	538	77.19%	1.0182	211.8627	1,276.9888	1.06	13.55%
1991														
P	1,026	0	491	0	26	509	Clean:	178	33.27%	0.1060	29.8008	285.9379	0.74	
		0.00%	47.86%	0.00%	2.53%	49.61%	Not Clean:	357	66.73%	1.0339	193.2982	1,171.3101	1.21	52.14%
T	1,044	0	507	9	26	502	Clean:	112	21.21%	0.1067	25.6469	267.3420	0.80	
		0.00%	48.56%	0.86%	2.49%	48.08%	Not Clean:	416	78.79%	1.0399	162.4837	1,236.7296	1.07	50.57%
U	6,584	6,579	2	0	0	3	Clean:	1	33.33%	0.0500	23.0000	2.6000	0.80	
		99.92%	0.03%	0.00%	0.00%	0.05%	Not Clean:	2	66.67%	0.6575	156.6500	1,275.2500	0.35	0.05%
Total For 1991	8,654	6,579	1,000	9	52	1,014	Clean:	291	27.30%	0.1060	28.1787	277.8070	0.76	
		76.02%	11.56%	0.10%	0.60%	11.72%	Not Clean:	775	72.70%	1.0361	176.6632	1,206.6938	1.14	12.32%
1992														
P	1,080	0	568	0	4	508	Clean:	149	29.10%	0.1388	26.9292	343.7379	0.96	
		0.00%	52.59%	0.00%	0.37%	47.04%	Not Clean:	363	70.90%	0.8023	172.5347	1,243.9450	1.20	47.41%
T	961	0	432	4	19	506	Clean:	93	17.71%	0.1081	33.8801	286.9446	0.53	
		0.00%	44.95%	0.42%	1.98%	52.65%	Not Clean:	432	82.29%	1.0118	175.9094	1,152.8583	0.97	54.63%
U	5,609	5,608	0	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00	
		99.98%	0.00%	0.00%	0.00%	0.02%	Not Clean:	1	100.00%	0.6300	207.8500	1,133.4500	3.90	0.02%
Total For 1992	7,650	5,608	1,000	4	23	1,015	Clean:	242	23.31%	0.1270	29.6004	321.9124	0.79	
		73.31%	13.07%	0.05%	0.30%	13.27%	Not Clean:	796	76.69%	0.9158	174.4106	1,194.3722	1.08	13.57%

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	1,618	0	731	0	38	849	Clean:	298	33.60%	0.1146	27.3688	285.5295	0.92		
			0.00%	45.18%	0.00%	2.35%	52.47%	Not Clean:	589	66.40%	0.8552	140.6550	1,266.6098	1.16	54.82%
T	1,793	0	723	7	94	969	Clean:	270	25.40%	0.0932	25.4446	231.9481	0.59		
			0.00%	40.32%	0.39%	5.24%	54.04%	Not Clean:	793	74.60%	0.9080	173.3778	1,211.8298	1.04	59.29%
U	9,344	9,343	0	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.99%	0.00%	0.00%	0.00%	0.01%	Not Clean:	1	100.00%	0.6150	121.8000	1,211.3000	0.70	0.01%
Total For 1993		12,755	9,343	1,454	7	132	1,819	Clean:	568	29.11%	0.1045	26.4541	260.0595	0.76	
			73.25%	11.40%	0.05%	1.03%	14.26%	Not Clean:	1,383	70.89%	0.8853	159.4043	1,235.1594	1.09	15.30%
1994															
P	1,866	0	780	0	99	987	Clean:	462	42.54%	0.1048	21.5304	244.0685	0.82		
			0.00%	41.80%	0.00%	5.31%	52.89%	Not Clean:	624	57.46%	0.7751	149.8494	1,138.4829	1.13	58.20%
T	2,338	0	1089	10	49	1,190	Clean:	307	24.78%	0.1129	34.1379	307.3086	0.69		
			0.00%	46.58%	0.43%	2.10%	50.90%	Not Clean:	932	75.22%	0.8196	149.8312	1,194.4128	1.08	52.99%
U	9,929	9,924	3	0	0	2	Clean:	1	50.00%	0.3550	42.7500	627.8500	0.05		
			99.95%	0.03%	0.00%	0.00%	0.02%	Not Clean:	1	50.00%	0.1500	100.1000	839.7500	1.00	0.02%
Total For 1994		14,133	9,924	1,872	10	148	2,179	Clean:	770	33.09%	0.1083	26.5846	269.7808	0.77	
			70.22%	13.25%	0.07%	1.05%	15.42%	Not Clean:	1,557	66.91%	0.8014	149.8066	1,171.7699	1.10	16.47%
1995															
P	2,922	0	1198	0	203	1,521	Clean:	831	48.20%	0.0954	22.0709	210.6730	0.76		
			0.00%	41.00%	0.00%	6.95%	52.05%	Not Clean:	893	51.80%	0.8116	140.5102	924.4568	1.16	59.00%
T	3,461	0	1321	24	134	1,982	Clean:	572	27.03%	0.0934	25.9302	255.4523	0.72		
			0.00%	38.17%	0.69%	3.87%	57.27%	Not Clean:	1,544	72.97%	0.7787	146.0908	1,196.2716	1.08	61.14%
U	15,167	15,158	2	0	0	7	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.94%	0.01%	0.00%	0.00%	0.05%	Not Clean:	7	100.00%	0.9014	77.4143	1,157.4857	1.09	0.05%
Total For 1995		21,550	15,158	2,521	24	337	3,510	Clean:	1,403	36.47%	0.0945	23.6443	228.9294	0.74	
			70.34%	11.70%	0.11%	1.56%	16.29%	Not Clean:	2,444	63.53%	0.7910	143.8550	1,096.8436	1.11	17.85%
1996															
P	3,035	0	1175	0	229	1,631	Clean:	1,056	56.77%	0.0966	20.8951	207.3395	0.83		
			0.00%	38.71%	0.00%	7.55%	53.74%	Not Clean:	804	43.23%	0.7561	126.4111	817.6965	1.23	61.29%
T	3,415	0	1092	12	268	2,043	Clean:	1,089	47.12%	0.1006	21.6364	218.9619	0.71		
			0.00%	31.98%	0.35%	7.85%	59.82%	Not Clean:	1,222	52.88%	0.5914	127.3101	1,084.5809	1.06	67.67%
U	12,530	12,523	6	0	0	1	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.94%	0.05%	0.00%	0.00%	0.01%	Not Clean:	1	100.00%	3.3650	110.0000	85.9500	1.45	0.01%
Total For 1996		18,980	12,523	2,273	12	497	3,675	Clean:	2,145	51.41%	0.0986	21.2715	213.2401	0.77	
			65.98%	11.98%	0.06%	2.62%	19.36%	Not Clean:	2,027	48.59%	0.6581	126.9450	978.2297	1.13	21.98%

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	4,751	0	1499	0	670	2,582	Clean:	2,057	63.25%	0.0781	17.0852	152.5072	0.74		
			0.00%	31.55%	0.00%	14.10%	54.35%	Not Clean:	1,195	36.75%	0.8260	121.1952	789.2612	1.17	68.45%
T	6,145	0	2506	35	192	3,412	Clean:	1,800	49.94%	0.1156	24.2094	247.9295	0.92		
			0.00%	40.78%	0.57%	3.12%	55.52%	Not Clean:	1,804	50.06%	0.5425	101.2180	1,046.3034	1.05	58.65%
U	21,394	21,388	2	0	0	4	Clean:	2	50.00%	0.1375	9.1500	121.2000	1.65		
			99.97%	0.01%	0.00%	0.00%	0.02%	Not Clean:	2	50.00%	0.1350	177.4000	589.5250	0.40	0.02%
Total For 1997		32,290	21,388	4,007	35	862	5,998	Clean:	3,859	56.25%	0.0956	20.4041	196.9999	0.82	
			66.24%	12.41%	0.11%	2.67%	18.58%	Not Clean:	3,001	43.75%	0.6551	109.2237	943.6446	1.10	21.24%
1998															
P	4,967	0	1567	0	616	2,784	Clean:	2,239	65.85%	0.0842	17.5794	145.2031	0.76		
			0.00%	31.55%	0.00%	12.40%	56.05%	Not Clean:	1,161	34.15%	0.8642	118.4480	680.2024	1.15	68.45%
T	6,319	0	2316	30	295	3,678	Clean:	2,210	55.63%	0.1053	20.4348	225.5317	0.82		
			0.00%	36.65%	0.47%	4.67%	58.21%	Not Clean:	1,763	44.37%	0.5586	98.1152	980.1054	1.11	62.87%
U	18,274	18,271	1	0	0	2	Clean:	0	0.00%	0.0000	0.0000	0.0000	0.00		
			99.98%	0.01%	0.00%	0.00%	0.01%	Not Clean:	2	100.00%	0.0475	84.4500	712.6750	2.80	0.01%
Total For 1998		29,560	18,271	3,884	30	911	6,464	Clean:	4,449	60.33%	0.0947	18.9978	185.1056	0.79	
			61.81%	13.14%	0.10%	3.08%	21.87%	Not Clean:	2,926	39.67%	0.6795	106.1736	860.9248	1.13	24.95%
1999															
P	6,958	0	2000	0	1,139	3,819	Clean:	3,505	70.69%	0.0699	15.3103	128.4644	0.74		
			0.00%	28.74%	0.00%	16.37%	54.89%	Not Clean:	1,453	29.31%	0.7910	112.4740	704.4828	1.19	71.26%
T	10,920	0	3147	90	1,379	6,304	Clean:	5,449	70.92%	0.0741	16.1399	152.6120	0.73		
			0.00%	28.82%	0.82%	12.63%	57.73%	Not Clean:	2,234	29.08%	0.5518	86.0324	887.6422	1.03	70.36%
U	29,891	29,882	5	0	0	4	Clean:	2	50.00%	0.1225	19.2000	100.7250	0.93		
			99.97%	0.02%	0.00%	0.00%	0.01%	Not Clean:	2	50.00%	1.4100	61.6750	765.9250	1.80	0.01%
Total For 1999		47,769	29,882	5,152	90	2,518	10,127	Clean:	8,956	70.83%	0.0725	15.8159	143.1500	0.74	
			62.56%	10.79%	0.19%	5.27%	21.20%	Not Clean:	3,689	29.17%	0.6465	96.4338	815.4345	1.10	26.47%
2000															
P	7,275	0	1787	0	1,381	4,107	Clean:	4,150	75.62%	0.0652	14.1960	102.9937	0.74		
			0.00%	24.56%	0.00%	18.98%	56.45%	Not Clean:	1,338	24.38%	0.8019	95.8461	644.2834	1.24	75.44%
T	10,191	0	2220	55	1,679	6,237	Clean:	5,927	74.87%	0.0693	14.4912	130.3075	0.72		
			0.00%	21.78%	0.54%	16.48%	61.20%	Not Clean:	1,989	25.13%	0.5884	84.0692	833.9707	1.08	77.68%
U	25,191	25,178	7	0	0	6	Clean:	4	66.67%	0.1225	12.5375	350.2375	2.55		
			99.95%	0.03%	0.00%	0.00%	0.02%	Not Clean:	2	33.33%	0.2500	60.3500	2,115.3500	2.25	0.02%
Total For 2000		42,657	25,178	4,014	55	3,060	10,350	Clean:	10,081	75.18%	0.0676	14.3689	119.1506	0.73	
			59.02%	9.41%	0.13%	7.17%	24.26%	Not Clean:	3,329	24.82%	0.6740	88.7884	758.5009	1.14	31.44%

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	10,189	0	1734	0	2,820	5,635	Clean:	7,013	82.95%	0.0491	11.3776	65.1301	0.67		
			0.00%	17.02%	0.00%	27.68%	55.30%	Not Clean:	1,442	17.05%	0.7690	85.9101	622.1346	1.26	82.98%
T	15,330	0	2498	106	3,602	9,124	Clean:	10,564	83.01%	0.0591	12.8795	88.7505	0.70		
			0.00%	16.29%	0.69%	23.50%	59.52%	Not Clean:	2,162	16.99%	0.6493	97.0458	643.9756	1.10	83.01%
U	36,921	36,900	10	0	0	11	Clean:	6	54.55%	0.0717	17.4333	115.4250	0.54		
			99.94%	0.03%	0.00%	0.00%	0.03%	Not Clean:	5	45.45%	0.0810	29.1000	1,188.6500	0.85	0.03%
Total For 2001	62,440	36,900	4,242	106	6,422	14,770	Clean:	17,583	82.97%	0.0551	12.2820	79.3386	0.69		
			59.10%	6.79%	0.17%	10.29%	23.65%	Not Clean:	3,609	17.03%	0.6963	92.5023	636.0034	1.17	33.94%
2002															
P	8,668	0	1044	0	2,576	5,048	Clean:	6,350	83.29%	0.0493	10.9356	60.8349	0.67		
			0.00%	12.04%	0.00%	29.72%	58.24%	Not Clean:	1,274	16.71%	0.7079	107.5263	610.8232	1.28	87.96%
T	12,560	0	1743	47	3,018	7,752	Clean:	9,188	85.31%	0.0567	11.9284	86.1284	0.71		
			0.00%	13.88%	0.37%	24.03%	61.72%	Not Clean:	1,582	14.69%	0.6337	87.2869	621.7271	1.07	85.75%
U	27,021	27,014	2	0	0	5	Clean:	4	80.00%	0.0850	13.1250	158.2250	1.04		
			99.97%	0.01%	0.00%	0.00%	0.02%	Not Clean:	1	20.00%	0.0100	7.6000	1,786.1500	1.20	0.02%
Total For 2002	48,249	27,014	2,789	47	5,594	12,805	Clean:	15,542	84.47%	0.0537	11.5231	75.8128	0.69		
			55.99%	5.78%	0.10%	11.59%	26.54%	Not Clean:	2,857	15.53%	0.6666	96.2842	617.2723	1.17	38.13%
2003															
P	12,111	0	1218	0	3,990	6,903	Clean:	9,449	86.74%	0.0440	9.8512	50.9323	0.68		
			0.00%	10.06%	0.00%	32.95%	57.00%	Not Clean:	1,444	13.26%	0.6938	91.5403	531.1241	1.15	89.94%
T	19,433	0	1213	56	6,309	11,855	Clean:	16,232	89.36%	0.0490	10.4928	57.2147	0.67		
			0.00%	6.24%	0.29%	32.47%	61.00%	Not Clean:	1,932	10.64%	0.6633	90.2613	517.2436	1.07	93.47%
U	40,898	40,877	9	0	0	12	Clean:	9	75.00%	0.1011	31.3222	166.7444	1.26		
			99.95%	0.02%	0.00%	0.00%	0.03%	Not Clean:	3	25.00%	0.7033	32.4167	888.1500	1.48	0.03%
Total For 2003	72,442	40,877	2,440	56	10,299	18,770	Clean:	25,690	88.38%	0.0472	10.2641	54.9423	0.68		
			56.43%	3.37%	0.08%	14.22%	25.91%	Not Clean:	3,379	11.62%	0.6763	90.7565	523.5047	1.11	40.13%
2004															
P	8,428	0	759	0	2,764	4,905	Clean:	6,738	87.86%	0.0452	10.2486	45.7791	0.72		
			0.00%	9.01%	0.00%	32.80%	58.20%	Not Clean:	931	12.14%	0.7827	81.0688	520.1141	1.31	90.99%
T	14,529	0	886	74	4,324	9,245	Clean:	12,384	91.27%	0.0438	10.5449	44.6043	0.71		
			0.00%	6.10%	0.51%	29.76%	63.63%	Not Clean:	1,185	8.73%	0.7160	81.1245	503.3409	1.13	93.39%
U	25,064	25,043	15	0	0	6	Clean:	5	83.33%	0.0410	4.2300	104.7800	1.18		
			99.92%	0.06%	0.00%	0.00%	0.02%	Not Clean:	1	16.67%	0.5650	35.0000	347.5500	0.75	0.02%
Total For 2004	48,021	25,043	1,660	74	7,088	14,156	Clean:	19,127	90.03%	0.0443	10.4389	45.0339	0.71		
			52.15%	3.46%	0.15%	14.76%	29.48%	Not Clean:	2,117	9.97%	0.7453	81.0782	510.6437	1.21	44.24%

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	14,770	0	1293	0	4,873	8,604	Clean:	12,199	90.52%	0.0417	9.9793	38.0051	0.71		
			0.00%	8.75%	0.00%	32.99%	58.25%	Not Clean:	1,278	9.48%	0.6951	85.3870	456.7629	1.24	91.25%
T	24,738	0	1153	151	8,014	15,420	Clean:	21,852	93.25%	0.0403	9.9214	37.0264	0.70		
			0.00%	4.66%	0.61%	32.40%	62.33%	Not Clean:	1,582	6.75%	0.6207	77.5954	440.4277	1.07	94.73%
U	44,631	44,602	17	0	0	12	Clean:	11	91.67%	0.0632	16.2818	100.3545	0.76		
			99.94%	0.04%	0.00%	0.00%	0.03%	Not Clean:	1	8.33%	0.0050	30.8000	1,499.3000	1.45	0.03%
Total For 2005	84,139	44,602	2,463	151	12,887	24,036	Clean:	34,062	92.25%	0.0408	9.9442	37.3974	0.70		
			53.01%	2.93%	0.18%	15.32%	28.57%	Not Clean:	2,861	7.75%	0.6537	81.0595	448.0947	1.15	43.88%
2006															
P	10,181	0	1329	0	2,818	6,034	Clean:	8,063	91.09%	0.0451	11.2204	37.1807	0.78		
			0.00%	13.05%	0.00%	27.68%	59.27%	Not Clean:	789	8.91%	0.7398	82.2283	413.4114	1.30	86.95%
T	15,950	0	645	59	5,042	10,204	Clean:	14,265	93.57%	0.0393	10.2818	35.4341	0.73		
			0.00%	4.04%	0.37%	31.61%	63.97%	Not Clean:	981	6.43%	0.5403	105.2898	451.0983	0.91	95.59%
U	26,189	26,175	6	0	0	8	Clean:	6	75.00%	0.0717	9.7000	17.4500	1.88		
			99.95%	0.02%	0.00%	0.00%	0.03%	Not Clean:	2	25.00%	0.1150	85.7250	940.5000	0.78	0.03%
Total For 2006	52,320	26,175	1,980	59	7,860	16,246	Clean:	22,334	92.65%	0.0414	10.6205	36.0598	0.75		
			50.03%	3.78%	0.11%	15.02%	31.05%	Not Clean:	1,772	7.35%	0.6287	94.9994	434.8702	1.08	46.07%
2007															
P	16,204	0	2097	0	4,538	9,569	Clean:	13,103	92.88%	0.0435	10.5855	32.9604	0.80		
			0.00%	12.94%	0.00%	28.01%	59.05%	Not Clean:	1,004	7.12%	0.6535	79.0373	373.1826	1.32	87.06%
T	28,156	0	1434	131	8,594	17,997	Clean:	25,109	94.43%	0.0418	9.9965	31.3274	0.76		
			0.00%	5.09%	0.47%	30.52%	63.92%	Not Clean:	1,482	5.57%	0.6648	76.7496	307.3515	1.13	94.44%
U	44,440	44,414	12	0	0	14	Clean:	11	78.57%	0.0591	13.6227	77.3909	1.40		
			99.94%	0.03%	0.00%	0.00%	0.03%	Not Clean:	3	21.43%	0.4917	93.4833	1,152.6333	0.97	0.03%
Total For 2007	88,800	44,414	3,543	131	13,132	27,580	Clean:	38,223	93.89%	0.0424	10.1994	31.9004	0.77		
			50.02%	3.99%	0.15%	14.79%	31.06%	Not Clean:	2,489	6.11%	0.6600	77.6926	334.9250	1.20	45.85%
2008															
P	8,176	0	1900	0	1,354	4,922	Clean:	5,791	92.27%	0.0499	11.9332	37.2162	0.92		
			0.00%	23.24%	0.00%	16.56%	60.20%	Not Clean:	485	7.73%	0.6918	87.5547	291.9858	1.42	76.76%
T	12,170	0	1491	140	2,707	7,832	Clean:	9,833	93.30%	0.0506	10.3864	33.2352	0.84		
			0.00%	12.25%	1.15%	22.24%	64.35%	Not Clean:	706	6.70%	0.6369	68.4499	244.4386	1.13	86.60%
U	17,979	17,962	11	0	0	6	Clean:	4	66.67%	0.0462	12.6875	53.3625	-0.19		
			99.91%	0.06%	0.00%	0.00%	0.03%	Not Clean:	2	33.33%	0.6950	37.5500	5.2250	-0.17	0.03%
Total For 2008	38,325	17,962	3,402	140	4,061	12,760	Clean:	15,628	92.91%	0.0503	10.9602	34.7155	0.87		
			46.87%	8.88%	0.37%	10.60%	33.29%	Not Clean:	1,193	7.09%	0.6593	76.1649	263.3673	1.25	43.89%
Overall Total	755,601	436,948	52,143	1,055	75,946	189,509	Clean:	221,372	83.39%	0.0511	11.6881	63.9828	0.74		
			57.83%	6.90%	0.14%	10.05%	25.08%	Not Clean:	44,083	16.61%	0.7222	108.8660	761.1685	1.13	35.13%

