



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

July 27, 2016

Mr. Jeffrey Buss
Environmental Protection Specialist, Air Division
Environmental Protection Agency
75 Hawthorne Street (AIR-2)
San Francisco, California 94105

Dear Mr. Buss:

Enclosed is a compilation of data for 2015 prepared by the California Bureau of Automotive Repair (BAR) to comply with the requirements of the Code of Federal Regulations section 51.366 (a-d). This section requires BAR to annually submit summary statistics for the enforcement mechanism, the quality assurance system, the quality control program and testing elements of California's Smog Check Program.

Health and Safety Code section 44024.5, as amended by Assembly Bill 2289 (AB 2289), (Eng, Chapter 258, Statutes of 2010), requires BAR, in cooperation with the California Air Resources Board to perform various analyses of the Smog Check Program and report the results to the public on an annual basis. For your information, a copy of the 2015 Smog Check Performance Report is included with this submission.

If you have any questions or comments regarding this submittal, please contact Mr. John Urkov at (626) 575-6720 or via email at jurkov@arb.ca.gov.

Sincerely,

Alberto Ayala, Ph.D., M.S.E.
Deputy Executive Officer

Enclosures

cc: Pat Dorais, Chief
Bureau of Automotive Repair

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency



2016

USEPA Annual Report (I/M Rule Section 51.366)



7/31/2016

**I/M RULE SECTION 51.366 DATA ANALYSIS AND REPORTING
CALIFORNIA BUREAU OF AUTOMOTIVE REPAIR
CALENDAR YEAR 2015**

(a)	Test data report. The program shall submit to EPA by July of each year a report providing basic statistics on the testing program for January through December of the previous year, including:	Data	Clarification
(1)	The number of vehicles tested by model year and vehicle type;	Attachment A	
(2)	By model year and vehicle type, the number and percentage of vehicles:	Attachment A	
i	Failing initially, per test type;	Attachment A	
ii	Failing the first retest per test type;	Attachment A	
iii	Passing the first retest per test type;	Attachment A	
iv	Initially failed vehicles passing the second or subsequent retest per test type;	Attachment A	
v	Initially failed vehicles receiving a waiver; and	Attachment A	
vi	Vehicles with no known final Outcome (regardless of reason);	Attachment A	
xi	Passing the on-board diagnostic check;	Attachment A	
xii	Failing the on-board diagnostic check;	Attachment A	
xiii	Failing the on-board diagnostic check and passing the tailpipe test (if applicable);	Attachment A	Model years 1996-1999 receive both an OBD and tailpipe inspection. Beginning March 9, 2015, model years 2000 and newer vehicles receive an OBD-only test. More information is available on BAR's website (see page 2) http://www.bar.ca.gov/pdf/Smog_Check_Manual_ENG_2013.pdf
xiv	Failing the on-board diagnostic check and failing the tailpipe test (if applicable);	Attachment A	
xv	Passing the on-board diagnostic check and failing the I/M gas cap evaporative system test (if applicable);	Attachment A	Model years 1996-1999 receive both an OBD and fuel evaporative system inspection. Beginning March 9, 2015, model years 1996 and newer vehicles do not receive a functional fuel cap integrity pressure test. More information is available on BAR's website (see page 2) http://www.bar.ca.gov/pdf/Smog_Check_Manual_ENG_2013.pdf
xvi	Failing the on-board diagnostic check and passing the I/M gas cap evaporative system test (if applicable);	Attachment A	
xvii	Passing both the on-board diagnostic check and I/M gas cap evaporative system test (if applicable);	Attachment A	
xviii	Failing both the on-board diagnostic check and I/M gas cap evaporative system test (if applicable);	Attachment A	
xix	MIL is commanded on and no codes are stored;	Attachment A	
xx	MIL is not commanded on and codes are stored;	Attachment A	
xxi	MIL is commanded on and codes are stored;	Attachment A	
xxii	MIL is not commanded on and codes are not stored;	Attachment A	
xxiii	Readiness status indicates the evaluation not complete for any module supported by on-board diagnostic systems;	Attachment A	OBDII readiness monitor threshold changed May 4, 2015. The new standards are available on BAR's website (see page 2) http://www.bar.ca.gov/pdf/smogcheck_OBD_Reference_Guide.pdf
(3)	The initial test volume by model year and test station;	Attachment A	
(4)	The initial test failure rate by model year and test station; and	Attachment A	

**I/M RULE SECTION 51.366 DATA ANALYSIS AND REPORTING
CALIFORNIA BUREAU OF AUTOMOTIVE REPAIR
CALENDAR YEAR 2015**

(5)	The average increase or decrease in tailpipe emission levels for HC, CO, and NOX (if applicable) after repairs by model year and vehicle type for vehicles receiving a mass emissions test.	N/A	Mass emissions testing is not performed in California's Smog Check program.
(b)	Quality assurance report. The program shall submit to EPA by July of each year a report providing basic statistics on the quality assurance program for January through December of the previous year, including:		
(1)	The number of inspection stations and lanes:	Attachment B	
	i Operating throughout the year; and	Attachment B	
	ii Operating for only part of the year;	N/A	
(2)	The number of inspection stations and lanes operating throughout the year:		
	i Receiving overt performance audits in the year;	Attachment B	
	ii Not receiving overt performance audits in the year;	Attachment B	
	iii Receiving covert performance audits in the year;	Attachment B	
	iv Not receiving covert performance audits in the year; and	Attachment B	
	v That have been shut down as a result of overt performance audits;	Attachment B	
(3)	The number of covert audits:		
	i Conducted with the vehicle set to fail per test type;	Attachment B	
	ii Conducted with the vehicle set to fail any combination of two or more test types;	Attachment B	
	iii Resulting in a false pass per test type;	Attachment B	
	iv Resulting in a false pass for any combination of two or more test types;	Attachment B	
(4)	The number of inspectors and stations:		
	i That were suspended, fired, or otherwise prohibited from testing as a result of covert audits;	Attachment B	
	ii That were suspended, fired, or otherwise prohibited from testing for other causes; and	Attachment B	
	iii That received fines;	Attachment B	
(5)	The number of inspectors licensed or certified to conduct testing;	Attachment B	

**I/M RULE SECTION 51.366 DATA ANALYSIS AND REPORTING
CALIFORNIA BUREAU OF AUTOMOTIVE REPAIR
CALENDAR YEAR 2015**

(6)	The number of hearings:		
	i Held to consider adverse actions against inspectors and stations; and	Attachment B	
	ii Resulting in adverse actions against inspectors and stations;	Attachment B	
(7)	The total amount collected in fines from inspectors and stations by type of violation;	Attachment B	
(8)	The total number of covert vehicles available for undercover audits over the year; and	Attachment B	
(9)	The number of covert auditors available for undercover audits.	Attachment B	
(c)	Quality control report. The program shall submit to EPA by July of each year a report providing basic statistics on the quality control program for January through December of the previous year, including:		
(1)	The number of emission testing sites and lanes in use in the program;	Attachment B	
(2)	The number of equipment audits by station and lane;	Attachment B	
(3)	The number and percentage of stations that have failed equipment audits; and	Attachment B	
(4)	Number and percentage of stations and lanes shut down as a result of equipment audits.	Attachment B	
(d)	Enforcement report.		
(1)	All varieties of enforcement programs shall, at a minimum, submit to EPA by July of each year a report providing basic statistics on the enforcement program for January through December of the previous year, including:		
	i An estimate of the number of vehicles subject to the inspection program, including the results of an analysis of the registration data base;	24,098,725	This is ARB's estimate of the number of vehicles subject to the Smog Check program. The estimate includes all 1976 and newer gasoline powered vehicles, excluding motorcycles, along with all 1998 and newer diesel powered vehicles with GVWR less than 14,001 pounds.
	ii The percentage of motorist compliance based upon a comparison of the number of valid final tests with the number of subject vehicles;		
	iii The total number of compliance documents issued to inspection stations;	11,262,350	Total certificates purchased and issued to Smog Check stations. The count of certificates issued to stations is different from the count of certificates issued to consumers.
	iv The number of missing compliance documents;	N/A	Certificate sales are handled electronically by the contractor for the state's centralized database and electronic communication system. Certain rules apply pertaining to skipped certificate numbers, refunds, etc. to ensure certificate issuance compliance.
	v The number of time extensions and other exemptions granted to motorists; and	898 waivers 226 limited parts exemptions	A one-time waiver is issued if a vehicle fails the Smog Check test, has not been tampered and it is determined by a state contractor (Referee) that repairs would exceed the repair cost limit of \$650.

**I/M RULE SECTION 51.366 DATA ANALYSIS AND REPORTING
CALIFORNIA BUREAU OF AUTOMOTIVE REPAIR
CALENDAR YEAR 2015**

	The number of compliance surveys conducted, number of vehicles surveyed in each, and the compliance rates found.		N/A No compliance survey conducted in calendar year 2015.
(2)	Registration denial based enforcement programs shall provide the following additional information:		
	A report of the program's efforts and actions to prevent motorists from falsely registering vehicles out of the program area or falsely changing fuel type or weight class on the vehicle registration, and the results of special studies to investigate the frequency of such activity; and		
	The number of registration file audits, number of registrations reviewed, and compliance rates found in such audits.	BAR continually monitors program data and works with the Department of Motor Vehicles (DMV) on efforts to prevent motorists from falsely registering vehicles.	
(3)	Computer-matching based enforcement programs shall provide the following additional information:	N/A	
	The number and percentage of subject vehicles that were tested by the initial deadline, and by other milestones in the cycle;	N/A	
	A report on the program's efforts to detect and enforce against motorists falsely changing vehicle classifications to circumvent program requirements, and the frequency of this type of activity; and	N/A	
	The number of enforcement system audits, and the error rate found during those audits.	N/A	
(4)	Sticker-based enforcement systems shall provide the following additional information:	N/A	
	A report on the program's efforts to prevent, detect, and enforce against sticker theft and counterfeiting, and the frequency of this type of activity;	N/A	
	A report on the program's efforts to detect and enforce against motorists falsely changing vehicle classifications to circumvent program requirements, and the frequency of this type of activity; and	N/A	
	The number of parking lot sticker audits conducted, the number of vehicles surveyed in each, and the noncompliance rate found during those audits.	N/A	
(e)	Additional reporting requirements. In addition to the annual reports in paragraphs (a) through (d) of this section, programs shall submit to EPA by July of every other year, biennial reports addressing:		
(1)	Any changes made in program design, funding, personnel levels, procedures, regulations, and legal authority, with detailed discussion and evaluation of the impact on the program of all such changes; and		
(2)	Any weaknesses or problems identified in the program within the two-year reporting period, what steps have already been taken to correct those problems, the results of those steps, and any future efforts planned.	N/A	This section is completed every other year and will be addressed in the 2016 EPA report.

**I/M RULE SECTION 51.371 DATA ANALYSIS AND REPORTING
CALIFORNIA BUREAU OF AUTOMOTIVE REPAIR
CALENDAR YEAR 2015**

I/M Rule 51.371 Specifics		Data	Clarification
(a)	General Requirements		
(3)	The on-road testing program shall provide information about the performance of in-use vehicles, by measuring on-road emissions through the use of remote sensing devices or by assessing vehicle emission performance through roadside pullovers including tailpipe or evaporative emission testing or a check of the onboard diagnostic (OBD) system for vehicles so equipped. The program shall collect, analyze, and report on-road testing data.	9,726 Roadside Inspections	Roadside inspections with the 2-position setup. Position 1 collected OBD data and Position 2 collected tailpipe data (model years 1976-1999). OBD data was collected for model year 1996-2006 gasoline vehicles and for 1998 and newer diesel and hybrid vehicles.

TABLE OF CONTENTS

Vehicles Tested by Model Year and Vehicle Type	1
Initial Test Failures	2
First Re-Test Failures	4
First Re-Test Passes	6
Initially Failed Vehicles Passing Their Second or Subsequent Re-Test	8
Initially Failed Vehicles Receiving a Waiver	10
Vehicles with No Known Outcome	12
Vehicles Passing the On-board Diagnostic Check	14
Vehicles Failing the On-board Diagnostic Check	15
Comparison of On-board Diagnostic Checks and Tailpipe Tests - ASM Test - Passenger Cars	16
Comparison of On-board Diagnostic Checks and Tailpipe Tests - TSI Test - Passenger Cars	17
Comparison of On-board Diagnostic Checks and Tailpipe Tests - ASM Test - Light Duty Trucks	18
Comparison of On-board Diagnostic Checks and Tailpipe Tests - TSI Test - Light Duty Trucks	19
Comparison of On-board Diagnostic Checks and Tailpipe Tests - ASM Test - Medium Duty Vehicles	20
Comparison of On-board Diagnostic Checks and Tailpipe Tests - TSI Test - Medium Duty Vehicles	21
Comparison of On-board Diagnostic Checks and Tailpipe Tests - ASM Test - Heavy Duty Vehicles	22
Comparison of On-board Diagnostic Checks and Tailpipe Tests - TSI Test - Heavy Duty Vehicles	23
Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests - Passenger Cars	24
Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests - Light Duty Trucks	25
Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests - Medium Duty Vehicles	26
Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests - Heavy Duty Vehicles	27
Comparison of MIL Command Status and Stored DTCs - Passenger Cars	28
Comparison of MIL Command Status and Stored DTCs - Light Duty Trucks	29
Comparison of MIL Command Status and Stored DTCs - Medium Duty Vehicles	30
Comparison of MIL Command Status and Stored DTCs - Heavy Duty Vehicles	31
Readiness Status Incomplete for Any Supported OBD II Monitor	32
Initial Tests by Model Year and Station Type	33
Initial Test Failures by Model Year and Station Type	34

EPA REPORT 51.366 a.1

State of California - Bureau of Automotive Repair

Vehicles Tested by Model Year and Type (Initial Tests)

REPORT a.1 Year: 2015	ALL VEHICLES	PASSENGER CARS		LIGHT DUTY TRUCK		MEDIUM DUTY VEHICLE		HEAVY DUTY VEHICLE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF ALL VEHICLES	COUNT	PERCENT OF ALL VEHICLES	COUNT	PERCENT OF ALL VEHICLES	COUNT	PERCENT OF ALL VEHICLES
1976	7,717	3,491	45.24%	1,437	18.62%	1,978	25.63%	811	10.51%
1977	10,278	4,118	40.07%	1,818	17.69%	3,141	30.56%	1,201	11.69%
1978	11,881	5,099	42.92%	2,677	22.53%	2,533	21.32%	1,572	13.23%
1979	12,808	5,917	46.20%	2,926	22.85%	2,403	18.76%	1,562	12.20%
1980	7,500	3,433	45.77%	2,295	30.60%	822	10.96%	950	12.67%
1981	8,533	3,969	46.51%	2,813	32.97%	496	5.81%	1,255	14.71%
1982	9,424	4,193	44.49%	3,393	36.00%	543	5.76%	1,295	13.74%
1983	12,173	5,609	46.08%	4,249	34.91%	787	6.47%	1,528	12.55%
1984	21,680	9,386	43.29%	8,010	36.95%	1,398	6.45%	2,886	13.31%
1985	29,529	12,725	43.09%	11,528	39.04%	1,883	6.38%	3,392	11.49%
1986	40,918	16,043	39.21%	18,971	46.36%	2,333	5.70%	3,571	8.73%
1987	46,771	20,381	43.58%	19,822	42.38%	2,972	6.35%	3,596	7.69%
1988	55,942	23,999	42.90%	22,620	40.43%	4,530	8.10%	4,792	8.57%
1989	78,429	33,672	42.93%	30,865	39.35%	6,441	8.21%	7,451	9.50%
1990	95,921	50,645	52.80%	30,261	31.55%	7,655	7.98%	7,360	7.67%
1991	117,290	64,089	54.64%	39,862	33.99%	7,356	6.27%	5,983	5.10%
1992	120,203	66,489	55.31%	37,270	31.01%	10,062	8.37%	6,382	5.31%
1993	151,703	82,066	54.10%	50,495	33.29%	12,696	8.37%	6,445	4.25%
1994	188,709	100,913	53.48%	58,716	31.11%	21,004	11.13%	8,076	4.28%
1995	275,339	153,371	55.70%	78,732	28.59%	30,256	10.99%	12,979	4.71%
1996	230,574	129,361	56.10%	66,524	28.85%	24,601	10.67%	10,088	4.38%
1997	401,323	215,418	53.68%	126,036	31.41%	44,142	11.00%	15,727	3.92%
1998	382,335	205,774	53.82%	120,358	31.48%	44,717	11.70%	11,486	3.00%
1999	603,030	300,592	49.85%	169,611	28.13%	104,051	17.25%	28,775	4.77%
2000	523,549	271,341	51.83%	144,940	27.68%	98,593	18.83%	8,675	1.66%
2001	897,981	429,040	47.78%	250,229	27.87%	207,167	23.07%	11,545	1.29%
2002	545,682	272,789	49.99%	149,092	27.32%	116,156	21.29%	7,645	1.40%
2003	1,067,035	502,637	47.11%	287,752	26.97%	264,510	24.79%	12,136	1.14%
2004	549,768	256,030	46.57%	149,371	27.17%	135,165	24.59%	9,202	1.67%
2005	1,217,404	594,831	48.86%	366,459	30.10%	240,336	19.74%	15,778	1.30%
2006	555,670	282,132	50.77%	150,950	27.17%	108,455	19.52%	14,133	2.54%
2007	1,271,296	685,791	53.94%	334,430	26.31%	238,344	18.75%	12,731	1.00%
2008	383,935	204,536	53.27%	91,021	23.71%	78,383	20.42%	9,994	2.60%
2009	748,318	473,915	63.33%	178,688	23.88%	90,748	12.13%	4,967	0.66%
2010	173,175	107,787	62.24%	39,886	23.03%	24,062	13.89%	1,440	0.83%
2011	175,180	94,984	54.22%	41,285	23.57%	34,394	19.63%	4,517	2.58%
2012	132,110	83,497	63.20%	23,599	17.86%	21,265	16.10%	3,749	2.84%
2013	137,569	86,576	62.93%	25,123	18.26%	21,785	15.84%	4,085	2.97%
2014	112,786	64,093	56.83%	23,852	21.15%	22,599	20.04%	2,242	1.99%
2015	53,969	25,706	47.63%	13,586	25.17%	11,159	20.68%	3,518	6.52%
2016	3,454	1,197	34.66%	959	27.76%	638	18.47%	660	19.11%
TOTAL	11,468,891	5,957,635	51.95%	3,182,511	27.75%	2,052,559	17.90%	276,180	2.41%

EPA REPORT 51.366 a.2.i

State of California - Bureau of Automotive Repair

Initial Failures (Passenger Cars and Light Duty Trucks)

a.2.i Vehicle Types P & L	PASSENGER CARS									LIGHT DUTY TRUCKS								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	3,036	988	32.54%	455	106	23.30%	0	0	.	1,119	390	34.85%	318	66	20.75%	0	0	.
1977	3,678	1,261	34.28%	440	108	24.55%	0	0	.	1,487	493	33.15%	331	85	25.68%	0	0	.
1978	4,429	1,498	33.82%	670	150	22.39%	0	0	.	2,166	701	32.36%	511	109	21.33%	0	0	.
1979	5,181	1,722	33.24%	736	153	20.79%	0	0	.	2,296	726	31.62%	630	133	21.11%	0	0	.
1980	3,051	890	29.17%	382	53	13.87%	0	0	.	1,803	612	33.94%	492	131	26.63%	0	0	.
1981	3,506	1,185	33.80%	463	84	18.14%	0	0	.	2,230	840	37.67%	583	149	25.56%	0	0	.
1982	3,707	1,240	33.45%	486	99	20.37%	0	0	.	2,703	987	36.51%	690	180	26.09%	0	0	.
1983	4,888	1,632	33.39%	721	137	19.00%	0	0	.	3,343	1,232	36.85%	906	222	24.50%	0	0	.
1984	8,208	2,772	33.77%	1,178	249	21.14%	0	0	.	6,372	2,453	38.50%	1,638	425	25.95%	0	0	.
1985	10,985	3,671	33.42%	1,740	347	19.94%	0	0	.	9,243	3,331	36.04%	2,285	541	23.68%	0	0	.
1986	13,885	4,215	30.36%	2,158	372	17.24%	0	0	.	15,217	5,310	34.90%	3,754	882	23.49%	0	0	.
1987	17,714	5,906	33.34%	2,667	548	20.55%	0	0	.	16,041	5,436	33.89%	3,781	852	22.53%	0	0	.
1988	20,816	6,951	33.39%	3,183	589	18.50%	0	0	.	18,484	5,708	30.88%	4,136	900	21.76%	0	0	.
1989	29,252	9,130	31.21%	4,420	770	17.42%	0	0	.	25,424	7,552	29.70%	5,441	1,142	20.99%	0	0	.
1990	43,940	13,605	30.96%	6,705	1,198	17.87%	0	0	.	24,839	6,760	27.22%	5,421	957	17.65%	0	0	.
1991	54,613	17,044	31.21%	9,475	1,642	17.33%	0	0	.	32,851	8,407	25.59%	7,011	1,091	15.56%	0	0	.
1992	56,702	17,952	31.66%	9,786	1,721	17.59%	0	0	.	30,854	7,870	25.51%	6,416	957	14.92%	0	0	.
1993	69,849	23,371	33.46%	12,216	2,103	17.22%	0	0	.	40,990	12,103	29.53%	9,505	1,523	16.02%	0	0	.
1994	86,386	26,416	30.58%	14,527	2,214	15.24%	0	0	.	47,533	14,648	30.82%	11,183	1,805	16.14%	0	0	.
1995	131,156	34,918	26.62%	22,214	3,135	14.11%	0	0	.	64,758	17,963	27.74%	13,974	2,050	14.67%	0	0	.
1996	110,090	29,590	26.88%	18,555	3,259	17.56%	716	85	11.87%	53,439	13,896	26.00%	12,754	2,034	15.95%	331	43	12.99%
1997	179,944	40,921	22.74%	34,049	4,693	13.78%	1,425	155	10.88%	97,640	22,309	22.85%	27,570	3,838	13.92%	826	79	9.56%
1998	169,974	33,029	19.43%	33,688	4,504	13.37%	2,112	298	14.11%	94,669	20,548	21.71%	24,798	3,416	13.78%	891	93	10.44%
1999	242,221	36,844	15.21%	54,725	6,422	11.74%	3,646	383	10.50%	129,535	21,033	16.24%	38,343	3,707	9.67%	1,733	150	8.66%
2000	9,696	1,392	14.36%	1,729	181	10.47%	259,916	42,136	16.21%	5,077	729	14.36%	1,117	119	10.65%	138,746	20,564	14.82%
2001	10,764	1,493	13.87%	2,098	223	10.63%	416,178	56,075	13.47%	5,821	719	12.35%	1,433	162	11.30%	242,975	30,831	12.69%
2002	8,264	1,064	12.88%	1,671	167	9.99%	262,854	35,244	13.41%	3,692	439	11.89%	1,204	131	10.88%	144,196	17,840	12.37%
2003	11,075	1,070	9.66%	2,285	177	7.75%	489,277	47,625	9.73%	5,083	458	9.01%	1,762	121	6.87%	280,907	24,136	8.59%
2004	6,985	662	9.48%	1,451	125	8.61%	247,594	25,103	10.14%	2,858	239	8.36%	1,231	91	7.39%	145,282	12,139	8.36%
2005	11,478	734	6.39%	2,359	113	4.79%	580,994	39,464	6.79%	4,487	294	6.55%	1,975	98	4.96%	359,997	22,468	6.24%
2006	7,171	428	5.97%	1,753	99	5.65%	273,208	19,820	7.25%	2,416	148	6.13%	893	39	4.37%	147,641	9,274	6.28%
2007	11,188	383	3.42%	2,888	78	2.70%	671,715	29,131	4.34%	3,797	140	3.69%	1,814	38	2.09%	328,819	14,727	4.48%
2008	5,431	178	3.28%	1,384	56	4.05%	197,721	9,736	4.92%	1,438	58	4.03%	663	13	1.96%	88,920	3,698	4.16%
2009	6,238	160	2.56%	2,014	36	1.79%	465,663	14,862	3.19%	1,529	30	1.96%	697	13	1.87%	176,462	4,930	2.79%
2010	1,702	26	1.53%	636	14	2.20%	105,449	3,914	3.71%	365	7	1.92%	244	1	0.41%	39,277	1,423	3.62%
2011	2,083	35	1.68%	827	22	2.66%	92,074	4,135	4.49%	495	4	0.81%	240	5	2.08%	40,550	1,621	4.00%
2012	1,317	17	1.29%	438	7	1.60%	81,742	3,929	4.81%	202	3	1.49%	139	1	0.72%	23,258	960	4.13%
2013	1,257	26	2.07%	447	12	2.68%	84,872	3,559	4.19%	139	2	1.44%	132	1	0.76%	24,852	860	3.46%
2014	785	8	1.02%	362	5	1.38%	62,946	2,128	3.38%	144	0	0.00%	149	0	0.00%	23,559	701	2.98%
2015	128	4	3.13%	120	1	0.83%	25,458	1,005	3.95%	33	0	0.00%	64	0	0.00%	13,489	478	3.54%
2016	1	0	0.00%	0	0	.	1,196	107	8.95%	0	0	.	1	0	0.00%	958	36	3.76%
TOTAL	1,372,774	324,431	23.63%	258,101	35,972	13.94%	4,326,756	338,894	7.83%	762,612	184,578	24.20%	196,229	28,028	14.28%	2,223,669	167,051	7.51%

EPA REPORT 51.366 a.2.i

State of California - Bureau of Automotive Repair

Initial Test Failures (Medium and Heavy Duty Vehicles)

a.2.i Vehicle Types M & H	MEDIUM DUTY VEHICLES									HEAVY DUTY VEHICLES								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	1,444	381	26.39%	533	122	22.89%	0	0	0	49	8	16.33%	762	234	30.71%	0	0	0
1977	2,300	680	29.57%	841	183	21.76%	0	0	0	89	24	26.97%	1,112	320	28.78%	0	0	0
1978	1,909	484	25.35%	624	164	26.28%	0	0	0	183	47	25.68%	1,389	405	29.16%	0	0	0
1979	1,822	618	33.92%	581	151	25.99%	0	0	0	190	51	26.84%	1,372	365	26.60%	0	0	0
1980	631	220	34.87%	191	47	24.61%	0	0	0	218	68	31.19%	732	167	22.81%	0	0	0
1981	379	136	35.88%	117	23	19.66%	0	0	0	261	67	25.67%	994	232	23.34%	0	0	0
1982	429	154	35.90%	114	23	20.18%	0	0	0	248	50	20.16%	1,047	234	22.35%	0	0	0
1983	616	247	40.10%	171	41	23.98%	0	0	0	346	95	27.46%	1,182	279	23.60%	0	0	0
1984	1,082	451	41.68%	316	76	24.05%	0	0	0	565	161	28.50%	2,321	579	24.95%	0	0	0
1985	1,435	537	37.42%	448	109	24.33%	0	0	0	817	227	27.78%	2,575	634	24.62%	0	0	0
1986	1,737	643	37.02%	596	143	23.99%	0	0	0	999	271	27.13%	2,572	640	24.88%	0	0	0
1987	2,289	758	33.11%	683	140	20.50%	0	0	0	818	203	24.82%	2,778	683	24.59%	0	0	0
1988	3,461	1,092	31.55%	1,069	220	20.58%	0	0	0	1,202	288	23.96%	3,590	718	20.00%	0	0	0
1989	4,969	1,507	30.33%	1,472	261	17.73%	0	0	0	2,473	616	24.91%	4,977	860	17.28%	0	0	0
1990	5,967	1,660	27.82%	1,688	269	15.94%	0	0	0	2,527	569	22.52%	4,832	719	14.88%	0	0	0
1991	5,255	1,407	26.77%	2,101	355	16.90%	0	0	0	1,976	373	18.88%	4,007	620	15.47%	0	0	0
1992	7,511	2,045	27.23%	2,551	475	18.62%	0	0	0	2,224	405	18.21%	4,158	560	13.47%	0	0	0
1993	9,633	2,464	25.58%	3,063	561	18.32%	0	0	0	2,224	469	21.09%	4,221	476	11.28%	0	0	0
1994	15,995	3,813	23.84%	5,009	797	15.91%	0	0	0	2,760	619	22.43%	5,316	682	12.83%	0	0	0
1995	23,913	4,877	20.39%	6,343	958	15.10%	0	0	0	5,413	1,028	18.99%	7,566	886	11.71%	0	0	0
1996	18,920	3,262	17.24%	5,508	786	14.27%	173	10	5.78%	4,481	648	14.46%	5,601	717	12.80%	6	1	16.67%
1997	34,470	5,640	16.36%	9,316	1,244	13.35%	356	47	13.20%	6,957	927	13.32%	8,759	1,078	12.31%	11	0	0.00%
1998	33,029	5,663	17.15%	9,797	1,359	13.87%	1,891	271	14.33%	4,778	739	15.47%	5,636	758	13.45%	1,072	138	12.87%
1999	70,368	10,228	14.54%	25,663	3,030	11.81%	8,020	1,103	13.75%	12,101	1,448	11.97%	12,782	1,488	11.64%	3,892	521	13.39%
2000	2,331	248	10.64%	1,083	113	10.43%	95,179	14,696	15.44%	588	53	9.01%	3,872	398	10.28%	4,215	582	13.81%
2001	3,359	363	10.81%	1,441	159	11.03%	202,367	27,119	13.40%	870	74	8.51%	4,400	260	5.91%	6,275	785	12.51%
2002	2,582	252	9.76%	1,021	98	9.60%	112,553	13,682	12.16%	497	37	7.44%	2,965	178	6.00%	4,183	552	13.20%
2003	3,874	335	8.65%	1,418	98	6.91%	259,218	21,866	8.44%	817	55	6.73%	5,398	199	3.69%	5,921	812	13.71%
2004	2,686	200	7.45%	1,119	65	5.81%	131,360	11,724	8.93%	450	31	6.89%	3,430	117	3.41%	5,322	637	11.97%
2005	3,414	146	4.28%	1,327	50	3.77%	235,595	14,584	6.19%	499	23	4.61%	5,760	172	2.99%	9,519	948	9.96%
2006	1,878	69	3.67%	983	46	4.68%	105,594	7,285	6.90%	419	16	3.82%	3,991	105	2.63%	9,723	903	9.29%
2007	2,885	88	3.05%	1,653	38	2.30%	233,806	12,368	5.29%	448	9	2.01%	4,956	121	2.44%	7,327	407	5.55%
2008	1,324	45	3.40%	746	21	2.82%	76,313	3,996	5.24%	383	12	3.13%	2,379	53	2.23%	7,232	310	4.29%
2009	779	16	2.05%	539	6	1.11%	89,430	3,997	4.47%	250	7	2.80%	1,754	44	2.51%	2,963	155	5.23%
2010	255	5	1.96%	178	1	0.56%	23,629	1,176	4.98%	25	0	0.00%	253	5	1.98%	1,162	61	5.25%
2011	360	4	1.11%	301	10	3.32%	33,733	1,930	5.72%	22	0	0.00%	331	3	0.91%	4,164	337	8.09%
2012	134	1	0.75%	113	1	0.88%	21,018	1,079	5.13%	10	0	0.00%	218	3	1.38%	3,521	177	5.03%
2013	88	1	1.14%	91	0	0.00%	21,606	950	4.40%	10	0	0.00%	284	2	0.70%	3,791	204	5.38%
2014	249	3	1.20%	91	0	0.00%	22,259	1,039	4.67%	20	0	0.00%	501	1	0.20%	1,721	100	5.81%
2015	34	0	0.00%	64	0	0.00%	11,061	707	6.39%	2	0	0.00%	1,551	5	0.32%	1,965	146	7.43%
2016	0	0	0	0	0	0	638	59	9.25%	0	0	0	481	1	0.21%	179	23	12.85%
TOTAL	275,796	50,743	18.40%	90,963	12,243	13.46%	1,685,799	139,688	8.29%	59,209	9,718	16.41%	132,805	16,001	12.05%	84,164	7,799	9.27%

EPA REPORT 51.366 a.2.ii

State of California - Bureau of Automotive Repair

First Re-Test Failures (Passenger Cars and Light Duty Trucks)

a.2.ii Vehicle Types P & L	PASSENGER CARS									LIGHT DUTY TRUCKS								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	3,036	229	7.54%	455	17	3.74%	0	0	.	1,119	79	7.06%	318	11	3.46%	0	0	.
1977	3,678	289	7.86%	440	13	2.95%	0	0	.	1,487	103	6.93%	331	10	3.02%	0	0	.
1978	4,429	340	7.68%	670	25	3.73%	0	0	.	2,166	129	5.96%	511	13	2.54%	0	0	.
1979	5,181	374	7.22%	736	24	3.26%	0	0	.	2,296	154	6.71%	630	24	3.81%	0	0	.
1980	3,051	195	6.39%	382	10	2.62%	0	0	.	1,803	107	5.93%	492	18	3.66%	0	0	.
1981	3,506	261	7.44%	463	12	2.59%	0	0	.	2,230	196	8.79%	583	21	3.60%	0	0	.
1982	3,707	292	7.88%	486	5	1.03%	0	0	.	2,703	245	9.06%	690	23	3.33%	0	0	.
1983	4,888	365	7.47%	721	23	3.19%	0	0	.	3,343	306	9.15%	906	28	3.09%	0	0	.
1984	8,208	612	7.46%	1,178	40	3.40%	0	0	.	6,372	628	9.86%	1,638	75	4.58%	0	0	.
1985	10,985	853	7.77%	1,740	43	2.47%	0	0	.	9,243	820	8.87%	2,285	86	3.76%	0	0	.
1986	13,885	976	7.03%	2,158	50	2.32%	0	0	.	15,217	1,264	8.31%	3,754	131	3.49%	0	0	.
1987	17,714	1,448	8.17%	2,667	68	2.55%	0	0	.	16,041	1,222	7.62%	3,781	133	3.52%	0	0	.
1988	20,816	1,640	7.88%	3,183	78	2.45%	0	0	.	18,484	1,227	6.64%	4,136	112	2.71%	0	0	.
1989	29,252	2,001	6.84%	4,420	86	1.95%	0	0	.	25,424	1,484	5.84%	5,441	150	2.76%	0	0	.
1990	43,940	3,093	7.04%	6,705	147	2.19%	0	0	.	24,839	1,344	5.41%	5,421	104	1.92%	0	0	.
1991	54,613	3,821	7.00%	9,475	224	2.36%	0	0	.	32,851	1,606	4.89%	7,011	129	1.84%	0	0	.
1992	56,702	4,095	7.22%	9,786	213	2.18%	0	0	.	30,854	1,533	4.97%	6,416	104	1.62%	0	0	.
1993	69,849	5,640	8.07%	12,216	299	2.45%	0	0	.	40,990	2,832	6.91%	9,505	154	1.62%	0	0	.
1994	86,386	6,197	7.17%	14,527	285	1.96%	0	0	.	47,533	3,339	7.02%	11,183	210	1.88%	0	0	.
1995	131,156	8,016	6.11%	22,214	434	1.95%	0	0	.	64,758	4,158	6.42%	13,974	230	1.65%	0	0	.
1996	110,090	5,981	5.43%	18,555	403	2.17%	716	29	4.05%	53,439	2,559	4.79%	12,754	223	1.75%	331	21	6.34%
1997	179,944	7,630	4.24%	34,049	523	1.54%	1,425	43	3.02%	97,640	4,116	4.22%	27,570	410	1.49%	826	38	4.60%
1998	169,974	5,669	3.34%	33,688	486	1.44%	2,112	41	1.94%	94,669	3,590	3.79%	24,798	307	1.24%	891	22	2.47%
1999	242,221	5,726	2.36%	54,725	647	1.18%	3,646	82	2.25%	129,535	3,320	2.56%	38,343	356	0.93%	1,733	26	1.50%
2000	9,696	261	2.69%	1,729	25	1.45%	259,916	4,718	1.82%	5,077	107	2.11%	1,117	13	1.16%	138,746	2,150	1.55%
2001	10,764	251	2.33%	2,098	27	1.29%	416,178	6,134	1.47%	5,821	106	1.82%	1,433	9	0.63%	242,975	3,241	1.33%
2002	8,264	166	2.01%	1,671	18	1.08%	262,854	3,537	1.35%	3,692	68	1.84%	1,204	13	1.08%	144,196	1,584	1.10%
2003	11,075	165	1.49%	2,285	16	0.70%	489,277	4,539	0.93%	5,083	71	1.40%	1,762	13	0.74%	280,907	1,999	0.71%
2004	6,985	110	1.57%	1,451	11	0.76%	247,594	2,377	0.96%	2,858	31	1.08%	1,231	6	0.49%	145,282	980	0.67%
2005	11,478	97	0.85%	2,359	14	0.59%	580,994	3,363	0.58%	4,487	33	0.74%	1,975	6	0.30%	359,997	1,873	0.52%
2006	7,171	43	0.60%	1,753	20	1.14%	273,208	1,682	0.62%	2,416	13	0.54%	893	4	0.45%	147,641	682	0.46%
2007	11,188	37	0.33%	2,888	8	0.28%	671,715	2,249	0.33%	3,797	11	0.29%	1,814	3	0.17%	328,819	1,195	0.36%
2008	5,431	21	0.39%	1,384	5	0.36%	197,721	673	0.34%	1,438	5	0.35%	663	1	0.15%	88,920	223	0.25%
2009	6,238	9	0.14%	2,014	5	0.25%	465,663	1,221	0.26%	1,529	2	0.13%	697	1	0.14%	176,462	342	0.19%
2010	1,702	2	0.12%	636	2	0.31%	105,449	262	0.25%	365	1	0.27%	244	1	0.41%	39,277	111	0.28%
2011	2,083	4	0.19%	827	0	0.00%	92,074	302	0.33%	495	1	0.20%	240	0	0.00%	40,550	119	0.29%
2012	1,317	1	0.08%	438	3	0.68%	81,742	271	0.33%	202	0	0.00%	139	0	0.00%	23,258	55	0.24%
2013	1,257	1	0.08%	447	5	1.12%	84,872	301	0.35%	139	0	0.00%	132	0	0.00%	24,852	63	0.25%
2014	785	1	0.13%	362	0	0.00%	62,946	132	0.21%	144	0	0.00%	149	0	0.00%	23,559	40	0.17%
2015	128	1	0.78%	120	0	0.00%	25,458	75	0.29%	33	0	0.00%	64	0	0.00%	13,489	36	0.27%
2016	1	0	0.00%	0	0	.	1,196	14	1.17%	0	0	.	1	0	0.00%	958	3	0.31%
TOTAL	1,372,774	66,913	4.87%	258,101	4,314	1.67%	4,326,756	32,045	0.74%	762,612	36,810	4.83%	196,229	3,132	1.60%	2,223,669	14,803	0.67%

EPA REPORT 51.366 a.2.ii

State of California - Bureau of Automotive Repair

First Re-test Failures (Medium and Heavy Duty Vehicles)

a.2.ii Vehicle Types M & H	MEDIUM DUTY VEHICLES									HEAVY DUTY VEHICLES								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	1,444	71	4.92%	533	17	3.19%	0	0	.	49	1	2.04%	762	43	5.64%	0	0	.
1977	2,300	114	4.96%	841	23	2.73%	0	0	.	89	1	1.12%	1,112	61	5.49%	0	0	.
1978	1,909	83	4.35%	624	19	3.04%	0	0	.	183	5	2.73%	1,389	69	4.97%	0	0	.
1979	1,822	144	7.90%	581	20	3.44%	0	0	.	190	13	6.84%	1,372	51	3.72%	0	0	.
1980	631	53	8.40%	191	5	2.62%	0	0	.	218	11	5.05%	732	30	4.10%	0	0	.
1981	379	32	8.44%	117	2	1.71%	0	0	.	261	13	4.98%	994	29	2.92%	0	0	.
1982	429	33	7.69%	114	4	3.51%	0	0	.	248	12	4.84%	1,047	34	3.25%	0	0	.
1983	616	57	9.25%	171	5	2.92%	0	0	.	346	24	6.94%	1,182	37	3.13%	0	0	.
1984	1,082	129	11.92%	316	9	2.85%	0	0	.	565	31	5.49%	2,321	101	4.35%	0	0	.
1985	1,435	159	11.08%	448	14	3.13%	0	0	.	817	41	5.02%	2,575	115	4.47%	0	0	.
1986	1,737	162	9.33%	596	24	4.03%	0	0	.	999	47	4.70%	2,572	91	3.54%	0	0	.
1987	2,289	175	7.65%	683	17	2.49%	0	0	.	818	34	4.16%	2,778	110	3.96%	0	0	.
1988	3,461	243	7.02%	1,069	32	2.99%	0	0	.	1,202	54	4.49%	3,590	110	3.06%	0	0	.
1989	4,969	295	5.94%	1,472	34	2.31%	0	0	.	2,473	114	4.61%	4,977	124	2.49%	0	0	.
1990	5,967	330	5.53%	1,688	37	2.19%	0	0	.	2,527	107	4.23%	4,832	108	2.24%	0	0	.
1991	5,255	261	4.97%	2,101	43	2.05%	0	0	.	1,976	66	3.34%	4,007	89	2.22%	0	0	.
1992	7,511	417	5.55%	2,551	59	2.31%	0	0	.	2,224	69	3.10%	4,158	58	1.39%	0	0	.
1993	9,633	497	5.16%	3,063	80	2.61%	0	0	.	2,224	109	4.90%	4,221	52	1.23%	0	0	.
1994	15,995	793	4.96%	5,009	103	2.06%	0	0	.	2,760	122	4.42%	5,316	94	1.77%	0	0	.
1995	23,913	928	3.88%	6,343	116	1.83%	0	0	.	5,413	185	3.42%	7,566	115	1.52%	0	0	.
1996	18,920	420	2.22%	5,508	99	1.80%	173	4	2.31%	4,481	65	1.45%	5,601	72	1.29%	6	0	0.00%
1997	34,470	571	1.66%	9,316	111	1.19%	356	9	2.53%	6,957	95	1.37%	8,759	106	1.21%	11	0	0.00%
1998	33,029	561	1.70%	9,797	137	1.40%	1,891	44	2.33%	4,778	76	1.59%	5,636	98	1.74%	1,072	26	2.43%
1999	70,368	974	1.38%	25,663	254	0.99%	8,020	239	2.98%	12,101	119	0.98%	12,782	160	1.25%	3,892	99	2.54%
2000	2,331	40	1.72%	1,083	14	1.29%	95,179	1,688	1.77%	588	8	1.36%	3,872	65	1.68%	4,215	65	1.54%
2001	3,359	47	1.40%	1,441	15	1.04%	202,367	2,941	1.45%	870	11	1.26%	4,400	33	0.75%	6,275	103	1.64%
2002	2,582	22	0.85%	1,021	7	0.69%	112,553	1,339	1.19%	497	8	1.61%	2,965	21	0.71%	4,183	49	1.17%
2003	3,874	32	0.83%	1,418	9	0.63%	259,218	1,633	0.63%	817	8	0.98%	5,398	23	0.43%	5,921	104	1.76%
2004	2,686	22	0.82%	1,119	6	0.54%	131,360	1,018	0.77%	450	6	1.33%	3,430	14	0.41%	5,322	79	1.48%
2005	3,414	19	0.56%	1,327	6	0.45%	235,595	1,136	0.48%	499	4	0.80%	5,760	25	0.43%	9,519	103	1.08%
2006	1,878	9	0.48%	983	2	0.20%	105,594	599	0.57%	419	1	0.24%	3,991	8	0.20%	9,723	74	0.76%
2007	2,885	17	0.59%	1,653	2	0.12%	233,806	781	0.33%	448	1	0.22%	4,956	15	0.30%	7,327	25	0.34%
2008	1,324	1	0.08%	746	1	0.13%	76,313	245	0.32%	383	0	0.00%	2,379	6	0.25%	7,232	17	0.24%
2009	779	2	0.26%	539	0	0.00%	89,430	348	0.39%	250	0	0.00%	1,754	6	0.34%	2,963	11	0.37%
2010	255	0	0.00%	178	0	0.00%	23,629	80	0.34%	25	0	0.00%	253	1	0.40%	1,162	7	0.60%
2011	360	0	0.00%	301	0	0.00%	33,733	172	0.51%	22	0	0.00%	331	0	0.00%	4,164	35	0.84%
2012	134	0	0.00%	113	0	0.00%	21,018	91	0.43%	10	0	0.00%	218	0	0.00%	3,521	16	0.45%
2013	88	0	0.00%	91	0	0.00%	21,606	76	0.35%	10	0	0.00%	284	0	0.00%	3,791	26	0.69%
2014	249	0	0.00%	91	0	0.00%	22,259	103	0.46%	20	0	0.00%	501	0	0.00%	1,721	17	0.99%
2015	34	0	0.00%	64	0	0.00%	11,061	66	0.60%	2	0	0.00%	1,551	1	0.06%	1,965	19	0.97%
2016	0	0	.	0	0	.	638	4	0.63%	0	0	.	481	0	0.00%	179	6	3.35%
TOTAL	275,796	7,713	2.80%	90,963	1,326	1.46%	1,685,799	12,616	0.75%	59,209	1,461	2.47%	132,805	2,175	1.64%	84,164	881	1.05%

EPA REPORT 51.366 a.2.iii

State of California - Bureau of Automotive Repair

First Re-Test Passes (Passenger Cars and Light Duty Trucks)

a.2.iii Vehicle Types P & L	PASSENGER CARS									LIGHT DUTY TRUCKS								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	3,036	589	19.40%	455	70	15.38%	0	0		1,119	235	21.00%	318	39	12.26%	0	0	
1977	3,678	725	19.71%	440	60	13.64%	0	0		1,487	288	19.37%	331	52	15.71%	0	0	
1978	4,429	892	20.14%	670	84	12.54%	0	0		2,166	451	20.82%	511	66	12.92%	0	0	
1979	5,181	1,053	20.32%	736	98	13.32%	0	0		2,296	442	19.25%	630	75	11.90%	0	0	
1980	3,051	529	17.34%	382	27	7.07%	0	0		1,803	378	20.97%	492	71	14.43%	0	0	
1981	3,506	685	19.54%	463	53	11.45%	0	0		2,230	493	22.11%	583	88	15.09%	0	0	
1982	3,707	714	19.26%	486	65	13.37%	0	0		2,703	572	21.16%	690	117	16.96%	0	0	
1983	4,888	951	19.46%	721	72	9.99%	0	0		3,343	705	21.09%	906	131	14.46%	0	0	
1984	8,208	1,542	18.79%	1,178	149	12.65%	0	0		6,372	1,373	21.55%	1,638	228	13.92%	0	0	
1985	10,985	2,038	18.55%	1,740	198	11.38%	0	0		9,243	1,896	20.51%	2,285	338	14.79%	0	0	
1986	13,885	2,259	16.27%	2,158	227	10.52%	0	0		15,217	3,065	20.14%	3,754	563	15.00%	0	0	
1987	17,714	3,070	17.33%	2,667	323	12.11%	0	0		16,041	3,232	20.15%	3,781	516	13.65%	0	0	
1988	20,816	3,611	17.35%	3,183	330	10.37%	0	0		18,484	3,472	18.78%	4,136	584	14.12%	0	0	
1989	29,252	4,916	16.81%	4,420	470	10.63%	0	0		25,424	4,759	18.72%	5,441	750	13.78%	0	0	
1990	43,940	7,240	16.48%	6,705	666	9.93%	0	0		24,839	4,308	17.34%	5,421	649	11.97%	0	0	
1991	54,613	9,063	16.59%	9,475	930	9.82%	0	0		32,851	5,257	16.00%	7,011	750	10.70%	0	0	
1992	56,702	9,704	17.11%	9,786	994	10.16%	0	0		30,854	4,929	15.98%	6,416	661	10.30%	0	0	
1993	69,849	12,415	17.77%	12,216	1,225	10.03%	0	0		40,990	7,082	17.28%	9,505	1,056	11.11%	0	0	
1994	86,386	14,405	16.68%	14,527	1,312	9.03%	0	0		47,533	8,614	18.12%	11,183	1,234	11.03%	0	0	
1995	131,156	19,551	14.91%	22,214	1,876	8.45%	0	0		64,758	10,730	16.57%	13,974	1,472	10.53%	0	0	
1996	110,090	16,193	14.71%	18,555	1,858	10.01%	716	42	5.87%	53,439	8,138	15.23%	12,754	1,356	10.63%	331	19	5.74%
1997	179,944	24,201	13.45%	34,049	2,954	8.68%	1,425	64	4.49%	97,640	13,852	14.19%	27,570	2,563	9.30%	826	42	5.08%
1998	169,974	20,008	11.77%	33,688	2,871	8.52%	2,112	159	7.53%	94,669	13,035	13.77%	24,798	2,369	9.55%	891	42	4.71%
1999	242,221	23,565	9.73%	54,725	4,209	7.69%	3,646	183	5.02%	129,535	14,130	10.91%	38,343	2,683	7.00%	1,733	54	3.12%
2000	9,696	867	8.94%	1,729	122	7.06%	259,916	26,273	10.11%	5,077	443	8.73%	1,117	76	6.80%	138,746	13,889	10.01%
2001	10,764	974	9.05%	2,098	164	7.82%	416,178	38,236	9.19%	5,821	484	8.31%	1,433	81	5.65%	242,975	22,366	9.21%
2002	8,264	703	8.51%	1,671	107	6.40%	262,854	23,628	8.99%	3,692	289	7.83%	1,204	88	7.31%	144,196	13,056	9.05%
2003	11,075	753	6.80%	2,285	140	6.13%	489,277	34,798	7.11%	5,083	350	6.89%	1,762	90	5.11%	280,907	18,774	6.68%
2004	6,985	498	7.13%	1,451	96	6.62%	247,594	17,596	7.11%	2,858	166	5.81%	1,231	53	4.31%	145,282	9,117	6.28%
2005	11,478	570	4.97%	2,359	95	4.03%	580,994	30,225	5.20%	4,487	217	4.84%	1,975	80	4.05%	359,997	17,673	4.91%
2006	7,171	370	5.16%	1,753	70	3.99%	273,208	14,623	5.35%	2,416	135	5.59%	893	42	4.70%	147,641	7,088	4.80%
2007	11,188	359	3.21%	2,888	63	2.18%	671,715	23,138	3.44%	3,797	101	2.66%	1,814	32	1.76%	328,819	11,882	3.61%
2008	5,431	177	3.26%	1,384	45	3.25%	197,721	7,501	3.79%	1,438	46	3.20%	663	15	2.26%	88,920	2,975	3.35%
2009	6,238	148	2.37%	2,014	30	1.49%	465,663	12,112	2.60%	1,529	30	1.96%	697	14	2.01%	176,462	4,151	2.35%
2010	1,702	24	1.41%	636	10	1.57%	105,449	3,089	2.93%	365	7	1.92%	244	2	0.82%	39,277	1,142	2.91%
2011	2,083	44	2.11%	827	16	1.93%	92,074	3,510	3.81%	495	9	1.82%	240	5	2.08%	40,550	1,391	3.43%
2012	1,317	23	1.75%	438	5	1.14%	81,742	3,122	3.82%	202	3	1.49%	139	3	2.16%	23,258	802	3.45%
2013	1,257	21	1.67%	447	8	1.79%	84,872	2,851	3.36%	139	4	2.88%	132	1	0.76%	24,852	711	2.86%
2014	785	14	1.78%	362	5	1.38%	62,946	1,780	2.83%	144	1	0.69%	149	1	0.67%	23,559	612	2.60%
2015	128	6	4.69%	120	1	0.83%	25,458	787	3.09%	33	0	0.00%	64	0	0.00%	13,489	400	2.97%
2016	1	0	0.00%	0	0		1,196	78	6.52%	0	0		1	0	0.00%	958	29	3.03%
TOTAL	1,372,774	185,470	13.51%	258,101	22,098	8.56%	4,326,756	243,795	5.63%	762,612	113,721	14.91%	196,229	18,994	9.68%	2,223,669	126,215	5.68%

EPA REPORT 51.366 a.2.iii

State of California - Bureau of Automotive Repair

First Re-Test Passes (Medium and Heavy Duty Vehicles)

a.2.iii Vehicle Types M & H	MEDIUM DUTY VEHICLES									HEAVY DUTY VEHICLES								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	1,444	240	16.62%	533	73	13.70%	0	0	.	49	4	8.16%	762	139	18.24%	0	0	.
1977	2,300	460	20.00%	841	115	13.67%	0	0	.	89	17	19.10%	1,112	186	16.73%	0	0	.
1978	1,909	305	15.98%	624	98	15.71%	0	0	.	183	30	16.39%	1,389	237	17.06%	0	0	.
1979	1,822	361	19.81%	581	103	17.73%	0	0	.	190	24	12.63%	1,372	225	16.40%	0	0	.
1980	631	128	20.29%	191	28	14.66%	0	0	.	218	45	20.64%	732	103	14.07%	0	0	.
1981	379	80	21.11%	117	14	11.97%	0	0	.	261	36	13.79%	994	150	15.09%	0	0	.
1982	429	81	18.88%	114	9	7.89%	0	0	.	248	32	12.90%	1,047	149	14.23%	0	0	.
1983	616	120	19.48%	171	29	16.96%	0	0	.	346	56	16.18%	1,182	169	14.30%	0	0	.
1984	1,082	231	21.35%	316	41	12.97%	0	0	.	565	88	15.58%	2,321	349	15.04%	0	0	.
1985	1,435	264	18.40%	448	71	15.85%	0	0	.	817	139	17.01%	2,575	400	15.53%	0	0	.
1986	1,737	337	19.40%	596	88	14.77%	0	0	.	999	173	17.32%	2,572	412	16.02%	0	0	.
1987	2,289	425	18.57%	683	83	12.15%	0	0	.	818	130	15.89%	2,778	414	14.90%	0	0	.
1988	3,461	659	19.04%	1,069	139	13.00%	0	0	.	1,202	166	13.81%	3,590	463	12.90%	0	0	.
1989	4,969	909	18.29%	1,472	176	11.96%	0	0	.	2,473	388	15.69%	4,977	580	11.65%	0	0	.
1990	5,967	1,042	17.46%	1,688	177	10.49%	0	0	.	2,527	367	14.52%	4,832	495	10.24%	0	0	.
1991	5,255	901	17.15%	2,101	240	11.42%	0	0	.	1,976	258	13.06%	4,007	437	10.91%	0	0	.
1992	7,511	1,233	16.42%	2,551	323	12.66%	0	0	.	2,224	268	12.05%	4,158	409	9.84%	0	0	.
1993	9,633	1,534	15.92%	3,063	386	12.60%	0	0	.	2,224	306	13.76%	4,221	338	8.01%	0	0	.
1994	15,995	2,398	14.99%	5,009	560	11.18%	0	0	.	2,760	408	14.78%	5,316	473	8.90%	0	0	.
1995	23,913	3,184	13.31%	6,343	680	10.72%	0	0	.	5,413	701	12.95%	7,566	652	8.62%	0	0	.
1996	18,920	2,162	11.43%	5,508	521	9.46%	173	4	2.31%	4,481	458	10.22%	5,601	520	9.28%	6	0	0.00%
1997	34,470	3,868	11.22%	9,316	852	9.15%	356	25	7.02%	6,957	673	9.67%	8,759	790	9.02%	11	0	0.00%
1998	33,029	3,863	11.70%	9,797	888	9.06%	1,891	178	9.41%	4,778	530	11.09%	5,636	543	9.63%	1,072	93	8.68%
1999	70,368	7,264	10.32%	25,663	2,112	8.23%	8,020	660	8.23%	12,101	1,085	8.97%	12,782	1,086	8.50%	3,892	332	8.53%
2000	2,331	169	7.25%	1,083	73	6.74%	95,179	9,793	10.29%	588	131	22.28%	3,872	296	7.64%	4,215	398	9.44%
2001	3,359	266	7.92%	1,441	120	8.33%	202,367	19,534	9.65%	870	171	19.66%	4,400	234	5.32%	6,275	539	8.59%
2002	2,582	179	6.93%	1,021	81	7.93%	112,553	9,982	8.87%	497	61	12.27%	2,965	175	5.90%	4,183	378	9.04%
2003	3,874	246	6.35%	1,418	68	4.80%	259,218	17,269	6.66%	817	127	15.54%	5,398	224	4.15%	5,921	533	9.00%
2004	2,686	156	5.81%	1,119	54	4.83%	131,360	8,901	6.78%	450	55	12.22%	3,430	130	3.79%	5,322	439	8.25%
2005	3,414	105	3.08%	1,327	46	3.47%	235,595	11,663	4.95%	499	19	3.81%	5,760	137	2.38%	9,519	707	7.43%
2006	1,878	68	3.62%	983	39	3.97%	105,594	5,617	5.32%	419	7	1.67%	3,991	83	2.08%	9,723	680	6.99%
2007	2,885	89	3.08%	1,653	52	3.15%	233,806	10,165	4.35%	448	10	2.23%	4,956	88	1.78%	7,327	308	4.20%
2008	1,324	44	3.32%	746	27	3.62%	76,313	3,243	4.25%	383	13	3.39%	2,379	54	2.27%	7,232	217	3.00%
2009	779	16	2.05%	539	12	2.23%	89,430	3,269	3.66%	250	6	2.40%	1,754	36	2.05%	2,963	123	4.15%
2010	255	7	2.75%	178	4	2.25%	23,629	936	3.96%	25	0	0.00%	253	2	0.79%	1,162	40	3.44%
2011	360	7	1.94%	301	13	4.32%	33,733	1,554	4.61%	22	1	4.55%	331	5	1.51%	4,164	259	6.22%
2012	134	2	1.49%	113	5	4.42%	21,018	834	3.97%	10	0	0.00%	218	3	1.38%	3,521	131	3.72%
2013	88	1	1.14%	91	0	0.00%	21,606	748	3.46%	10	0	0.00%	284	3	1.06%	3,791	145	3.82%
2014	249	5	2.01%	91	3	3.30%	22,259	822	3.69%	20	1	5.00%	501	0	0.00%	1,721	59	3.43%
2015	34	0	0.00%	64	4	6.25%	11,061	563	5.09%	2	0	0.00%	1,551	5	0.32%	1,965	106	5.39%
2016	0	0	.	0	0	.	638	39	6.11%	0	0	.	481	1	0.21%	179	13	7.26%
TOTAL	275,796	33,409	12.11%	90,963	8,407	9.24%	1,685,799	105,799	6.28%	59,209	6,984	11.80%	132,805	11,195	8.43%	84,164	5,500	6.53%

EPA REPORT 51.366 a.2.iv

State of California - Bureau of Automotive Repair

Initially Failed Vehicles Passing Their Second or Subsequent Re-Test (Passenger Cars and Light Duty Trucks)

a.2.iv Vehicle Types P & L	PASSENGER CARS									LIGHT DUTY TRUCKS								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	988	191	19.33%	106	13	12.26%	0	0	.	390	63	16.15%	66	11	16.67%	0	0	.
1977	1,261	256	20.30%	108	15	13.89%	0	0	.	493	89	18.05%	85	8	9.41%	0	0	.
1978	1,498	294	19.63%	150	25	16.67%	0	0	.	701	113	16.12%	109	11	10.09%	0	0	.
1979	1,722	329	19.11%	153	24	15.69%	0	0	.	726	135	18.60%	133	18	13.53%	0	0	.
1980	890	174	19.55%	53	11	20.75%	0	0	.	612	88	14.38%	131	17	12.98%	0	0	.
1981	1,185	218	18.40%	84	14	16.67%	0	0	.	840	163	19.40%	149	18	12.08%	0	0	.
1982	1,240	235	18.95%	99	10	10.10%	0	0	.	987	210	21.28%	180	18	10.00%	0	0	.
1983	1,632	306	18.75%	137	18	13.14%	0	0	.	1,232	262	21.27%	222	25	11.26%	0	0	.
1984	2,772	511	18.43%	249	26	10.44%	0	0	.	2,453	547	22.30%	425	65	15.29%	0	0	.
1985	3,671	713	19.42%	347	33	9.51%	0	0	.	3,331	690	20.71%	541	69	12.75%	0	0	.
1986	4,215	792	18.79%	372	39	10.48%	0	0	.	5,310	1,081	20.36%	882	114	12.93%	0	0	.
1987	5,906	1,136	19.23%	548	56	10.22%	0	0	.	5,436	1,090	20.05%	852	110	12.91%	0	0	.
1988	6,951	1,320	18.99%	589	71	12.05%	0	0	.	5,708	1,034	18.11%	900	106	11.78%	0	0	.
1989	9,130	1,628	17.83%	770	65	8.44%	0	0	.	7,552	1,287	17.04%	1,142	142	12.43%	0	0	.
1990	13,605	2,563	18.84%	1,198	137	11.44%	0	0	.	6,760	1,126	16.66%	957	94	9.82%	0	0	.
1991	17,044	3,113	18.26%	1,642	196	11.94%	0	0	.	8,407	1,396	16.61%	1,091	111	10.17%	0	0	.
1992	17,952	3,348	18.65%	1,721	191	11.10%	0	0	.	7,870	1,350	17.15%	957	99	10.34%	0	0	.
1993	23,371	4,577	19.58%	2,103	296	14.08%	0	0	.	12,103	2,463	20.35%	1,523	136	8.93%	0	0	.
1994	26,416	5,036	19.06%	2,214	278	12.56%	0	0	.	14,648	2,871	19.60%	1,805	193	10.69%	0	0	.
1995	34,918	6,578	18.84%	3,135	378	12.06%	0	0	.	17,963	3,618	20.14%	2,050	202	9.85%	0	0	.
1996	29,590	4,778	16.15%	3,259	323	9.91%	85	6	7.06%	13,896	2,103	15.13%	2,034	169	8.31%	43	2	4.65%
1997	40,921	6,265	15.31%	4,693	419	8.93%	155	11	7.10%	22,309	3,473	15.57%	3,838	354	9.22%	79	7	8.86%
1998	33,029	4,639	14.05%	4,504	400	8.88%	298	20	6.71%	20,548	3,040	14.79%	3,416	278	8.14%	93	4	4.30%
1999	36,844	4,778	12.97%	6,422	536	8.35%	383	31	8.09%	21,033	2,896	13.77%	3,707	314	8.47%	150	3	2.00%
2000	1,392	266	19.11%	181	26	14.36%	42,136	3,361	7.98%	729	65	8.92%	119	9	7.56%	20,564	1,643	7.99%
2001	1,493	236	15.81%	223	22	9.87%	56,075	4,730	8.44%	719	73	10.15%	162	5	3.09%	30,831	2,616	8.48%
2002	1,064	121	11.37%	167	9	5.39%	35,244	2,770	7.86%	439	34	7.74%	131	9	6.87%	17,840	1,313	7.36%
2003	1,070	105	9.81%	177	14	7.91%	47,625	3,789	7.96%	458	62	13.54%	121	10	8.26%	24,136	1,658	6.87%
2004	662	91	13.75%	125	8	6.40%	25,103	1,875	7.47%	239	25	10.46%	91	6	6.59%	12,139	833	6.86%
2005	734	73	9.95%	113	8	7.08%	39,464	2,753	6.98%	294	24	8.16%	98	4	4.08%	22,468	1,602	7.13%
2006	428	37	8.64%	99	14	14.14%	19,820	1,425	7.19%	148	9	6.08%	39	2	5.13%	9,274	567	6.11%
2007	383	35	9.14%	78	15	19.23%	29,131	1,927	6.61%	140	12	8.57%	38	5	13.16%	14,727	1,030	6.99%
2008	178	16	8.99%	56	5	8.93%	9,736	565	5.80%	58	2	3.45%	13	3	23.08%	3,698	189	5.11%
2009	160	14	8.75%	36	4	11.11%	14,862	1,063	7.15%	30	2	6.67%	13	1	7.69%	4,930	301	6.11%
2010	26	1	3.85%	14	2	14.29%	3,914	235	6.00%	7	1	14.29%	1	0	0.00%	1,423	92	6.47%
2011	35	2	5.71%	22	4	18.18%	4,135	282	6.82%	4	1	25.00%	5	0	0.00%	1,621	113	6.97%
2012	17	0	0.00%	7	2	28.57%	3,929	237	6.03%	3	1	33.33%	1	1	100.00%	960	46	4.79%
2013	26	1	3.85%	12	4	33.33%	3,559	284	7.98%	2	0	0.00%	1	0	0.00%	860	57	6.63%
2014	8	1	12.50%	5	0	0.00%	2,128	130	6.11%	0	0	.	0	0	.	701	38	5.42%
2015	4	1	25.00%	1	0	0.00%	1,005	63	6.27%	0	0	.	0	0	.	478	34	7.11%
2016	0	0	.	0	0	.	107	13	12.15%	0	0	.	0	0	.	36	1	2.78%
TOTAL	324,431	54,778	16.88%	35,972	3,711	10.32%	338,894	25,570	7.55%	184,578	31,499	17.07%	28,028	2,737	9.77%	167,051	12,149	7.27%

EPA REPORT 51.366 a.2.iv

State of California - Bureau of Automotive Repair

Initially Failed Vehicles Passing Their Second or Subsequent Re-Test (Medium and Heavy Duty Vehicles)

a.2.iv Vehicle Types M & H	MEDIUM DUTY VEHICLES									HEAVY DUTY VEHICLES								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	381	64	16.80%	122	15	12.30%	0	0	.	8	2	25.00%	234	34	14.53%	0	0	.
1977	680	99	14.56%	183	24	13.11%	0	0	.	24	2	8.33%	320	48	15.00%	0	0	.
1978	484	68	14.05%	164	18	10.98%	0	0	.	47	6	12.77%	405	52	12.84%	0	0	.
1979	618	125	20.23%	151	22	14.57%	0	0	.	51	11	21.57%	365	41	11.23%	0	0	.
1980	220	42	19.09%	47	7	14.89%	0	0	.	68	12	17.65%	167	26	15.57%	0	0	.
1981	136	29	21.32%	23	3	13.04%	0	0	.	67	10	14.93%	232	26	11.21%	0	0	.
1982	154	27	17.53%	23	4	17.39%	0	0	.	50	12	24.00%	234	29	12.39%	0	0	.
1983	247	45	18.22%	41	7	17.07%	0	0	.	95	17	17.89%	279	35	12.54%	0	0	.
1984	451	107	23.73%	76	9	11.84%	0	0	.	161	26	16.15%	579	97	16.75%	0	0	.
1985	537	139	25.88%	109	14	12.84%	0	0	.	227	37	16.30%	634	107	16.88%	0	0	.
1986	643	126	19.60%	143	19	13.29%	0	0	.	271	47	17.34%	640	80	12.50%	0	0	.
1987	758	134	17.68%	140	15	10.71%	0	0	.	203	29	14.29%	683	92	13.47%	0	0	.
1988	1,092	217	19.87%	220	30	13.64%	0	0	.	288	45	15.63%	718	94	13.09%	0	0	.
1989	1,507	249	16.52%	261	33	12.64%	0	0	.	616	94	15.26%	860	115	13.37%	0	0	.
1990	1,660	285	17.17%	269	35	13.01%	0	0	.	569	82	14.41%	719	101	14.05%	0	0	.
1991	1,407	223	15.85%	355	37	10.42%	0	0	.	373	49	13.14%	620	85	13.71%	0	0	.
1992	2,045	362	17.70%	475	53	11.16%	0	0	.	405	68	16.79%	560	48	8.57%	0	0	.
1993	2,464	424	17.21%	561	73	13.01%	0	0	.	469	98	20.90%	476	52	10.92%	0	0	.
1994	3,813	685	17.96%	797	92	11.54%	0	0	.	619	111	17.93%	682	91	13.34%	0	0	.
1995	4,877	822	16.85%	958	98	10.23%	0	0	.	1,028	170	16.54%	886	98	11.06%	0	0	.
1996	3,262	350	10.73%	786	71	9.03%	10	1	10.00%	648	52	8.02%	717	73	10.18%	1	0	0.00%
1997	5,640	510	9.04%	1,244	91	7.32%	47	0	0.00%	927	82	8.85%	1,078	101	9.37%	0	0	.
1998	5,663	471	8.32%	1,359	108	7.95%	271	20	7.38%	739	67	9.07%	758	89	11.74%	138	15	10.87%
1999	10,228	816	7.98%	3,030	197	6.50%	1,103	173	15.68%	1,448	116	8.01%	1,488	139	9.34%	521	80	15.36%
2000	248	28	11.29%	113	6	5.31%	14,696	1,278	8.70%	53	29	54.72%	398	72	18.09%	582	51	8.76%
2001	363	35	9.64%	159	11	6.92%	27,119	2,349	8.66%	74	20	27.03%	260	43	16.54%	785	80	10.19%
2002	252	14	5.56%	98	6	6.12%	13,682	1,087	7.94%	37	19	51.35%	178	26	14.61%	552	39	7.07%
2003	335	23	6.87%	98	7	7.14%	21,866	1,384	6.33%	55	22	40.00%	199	26	13.07%	812	87	10.71%
2004	200	22	11.00%	65	5	7.69%	11,724	826	7.05%	31	15	48.39%	117	22	18.80%	637	55	8.63%
2005	146	10	6.85%	50	5	10.00%	14,584	956	6.56%	23	5	21.74%	172	27	15.70%	948	91	9.60%
2006	69	8	11.59%	46	3	6.52%	7,285	471	6.47%	16	0	0.00%	105	12	11.43%	903	70	7.75%
2007	88	14	15.91%	38	3	7.89%	12,368	698	5.64%	9	0	0.00%	121	16	13.22%	407	19	4.67%
2008	45	3	6.67%	21	1	4.76%	3,996	207	5.18%	12	0	0.00%	53	6	11.32%	310	14	4.52%
2009	16	2	12.50%	6	0	0.00%	3,997	300	7.51%	7	1	14.29%	44	7	15.91%	155	10	6.45%
2010	5	0	0.00%	1	0	0.00%	1,176	71	6.04%	0	0	.	5	1	20.00%	61	6	9.84%
2011	4	0	0.00%	10	0	0.00%	1,930	163	8.45%	0	0	.	3	1	33.33%	337	30	8.90%
2012	1	0	0.00%	1	0	0.00%	1,079	85	7.88%	0	0	.	3	0	0.00%	177	15	8.47%
2013	1	0	0.00%	0	0	.	950	73	7.68%	0	0	.	2	0	0.00%	204	23	11.27%
2014	3	0	0.00%	0	0	.	1,039	95	9.14%	0	0	.	1	0	0.00%	100	16	16.00%
2015	0	0	.	0	0	.	707	63	8.91%	0	0	.	5	1	20.00%	146	15	10.27%
2016	0	0	.	0	0	.	59	4	6.78%	0	0	.	1	0	0.00%	23	5	21.74%
TOTAL	50,743	6,578	12.96%	12,243	1,122	9.16%	139,688	10,304	7.38%	9,718	1,356	13.95%	16,001	2,013	12.58%	7,799	721	9.24%

EPA REPORT 51.366 a.2.v

State of California - Bureau of Automotive Repair

Initially Failed Vehicles Receiving a Waiver (Passenger Cars and Light Duty Trucks)

a.2.v Vehicle Types P & L	PASSENGER CARS									LIGHT DUTY TRUCKS								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1980	890	1	0.11%	53	0	0.00%	0	0	.	612	1	0.16%	131	0	0.00%	0	0	.
1981	1,185	1	0.08%	84	0	0.00%	0	0	.	840	1	0.12%	149	0	0.00%	0	0	.
1983	1,632	2	0.12%	137	0	0.00%	0	0	.	1,232	0	0.00%	222	0	0.00%	0	0	.
1985	3,671	4	0.11%	347	1	0.29%	0	0	.	3,331	1	0.03%	541	0	0.00%	0	0	.
1986	4,215	5	0.12%	372	0	0.00%	0	0	.	5,310	0	0.00%	882	0	0.00%	0	0	.
1987	5,906	2	0.03%	548	0	0.00%	0	0	.	5,436	1	0.02%	852	0	0.00%	0	0	.
1988	6,951	3	0.04%	589	0	0.00%	0	0	.	5,708	1	0.02%	900	0	0.00%	0	0	.
1989	9,130	6	0.07%	770	0	0.00%	0	0	.	7,552	1	0.01%	1,142	1	0.09%	0	0	.
1990	13,605	1	0.01%	1,198	0	0.00%	0	0	.	6,760	0	0.00%	957	0	0.00%	0	0	.
1991	17,044	2	0.01%	1,642	0	0.00%	0	0	.	8,407	1	0.01%	1,091	0	0.00%	0	0	.
1992	17,952	3	0.02%	1,721	0	0.00%	0	0	.	7,870	1	0.01%	957	0	0.00%	0	0	.
1993	23,371	3	0.01%	2,103	0	0.00%	0	0	.	12,103	4	0.03%	1,523	1	0.07%	0	0	.
1994	26,416	11	0.04%	2,214	1	0.05%	0	0	.	14,648	6	0.04%	1,805	0	0.00%	0	0	.
1995	34,918	16	0.05%	3,135	1	0.03%	0	0	.	17,963	4	0.02%	2,050	0	0.00%	0	0	.
1996	29,590	21	0.07%	3,259	3	0.09%	85	0	0.00%	13,896	6	0.04%	2,034	0	0.00%	43	0	0.00%
1997	40,921	18	0.04%	4,693	3	0.06%	155	0	0.00%	22,309	21	0.09%	3,838	2	0.05%	79	0	0.00%
1998	33,029	24	0.07%	4,504	0	0.00%	298	0	0.00%	20,548	22	0.11%	3,416	2	0.06%	93	0	0.00%
1999	36,844	20	0.05%	6,422	3	0.05%	383	0	0.00%	21,033	8	0.04%	3,707	3	0.08%	150	0	0.00%
2000	1,392	1	0.07%	181	0	0.00%	42,136	34	0.08%	729	0	0.00%	119	0	0.00%	20,564	20	0.10%
2001	1,493	1	0.07%	223	0	0.00%	56,075	66	0.12%	719	0	0.00%	162	0	0.00%	30,831	45	0.15%
2002	1,064	0	0.00%	167	1	0.60%	35,244	27	0.08%	439	0	0.00%	131	0	0.00%	17,840	12	0.07%
2003	1,070	0	0.00%	177	1	0.56%	47,625	55	0.12%	458	0	0.00%	121	0	0.00%	24,136	31	0.13%
2004	662	1	0.15%	125	0	0.00%	25,103	15	0.06%	239	0	0.00%	91	0	0.00%	12,139	11	0.09%
2005	734	0	0.00%	113	0	0.00%	39,464	32	0.08%	294	0	0.00%	98	0	0.00%	22,468	27	0.12%
2006	428	0	0.00%	99	0	0.00%	19,820	11	0.06%	148	0	0.00%	39	0	0.00%	9,274	6	0.06%
2007	383	0	0.00%	78	1	1.28%	29,131	22	0.08%	140	0	0.00%	38	0	0.00%	14,727	10	0.07%
2008	178	0	0.00%	56	0	0.00%	9,736	2	0.02%	58	0	0.00%	13	0	0.00%	3,698	2	0.05%
2009	160	0	0.00%	36	0	0.00%	14,862	0	0.00%	30	0	0.00%	13	0	0.00%	4,930	3	0.06%
TOTAL	314,834	146	0.05%	35,046	15	0.04%	320,117	264	0.08%	178,812	79	0.04%	27,022	9	0.03%	160,972	167	0.10%

EPA REPORT 51.366 a.2.v

State of California - Bureau of Automotive Repair

Initially Failed Vehicles Receiving a Waiver (Medium and Heavy Duty Vehicles)

a.2.v Vehicle Types M & H	MEDIUM DUTY VEHICLES									HEAVY DUTY VEHICLES								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT												
1980	220	0	0.00%	47	0	0.00%	0	0	.	68	0	0.00%	167	0	0.00%	0	0	.
1981	136	0	0.00%	23	0	0.00%	0	0	.	67	0	0.00%	232	0	0.00%	0	0	.
1983	247	1	0.40%	41	0	0.00%	0	0	.	95	1	1.05%	279	0	0.00%	0	0	.
1985	537	0	0.00%	109	0	0.00%	0	0	.	227	0	0.00%	634	0	0.00%	0	0	.
1986	643	0	0.00%	143	0	0.00%	0	0	.	271	0	0.00%	640	0	0.00%	0	0	.
1987	758	0	0.00%	140	0	0.00%	0	0	.	203	0	0.00%	683	0	0.00%	0	0	.
1988	1,092	0	0.00%	220	0	0.00%	0	0	.	288	0	0.00%	718	0	0.00%	0	0	.
1989	1,507	0	0.00%	261	0	0.00%	0	0	.	616	0	0.00%	860	0	0.00%	0	0	.
1990	1,660	1	0.06%	269	0	0.00%	0	0	.	569	0	0.00%	719	0	0.00%	0	0	.
1991	1,407	1	0.07%	355	0	0.00%	0	0	.	373	0	0.00%	620	0	0.00%	0	0	.
1992	2,045	0	0.00%	475	0	0.00%	0	0	.	405	0	0.00%	560	0	0.00%	0	0	.
1993	2,464	1	0.04%	561	0	0.00%	0	0	.	469	0	0.00%	476	0	0.00%	0	0	.
1994	3,813	2	0.05%	797	0	0.00%	0	0	.	619	0	0.00%	682	0	0.00%	0	0	.
1995	4,877	1	0.02%	958	1	0.10%	0	0	.	1,028	0	0.00%	886	0	0.00%	0	0	.
1996	3,262	3	0.09%	786	1	0.13%	10	0	0.00%	648	0	0.00%	717	1	0.14%	1	0	0.00%
1997	5,640	2	0.04%	1,244	1	0.08%	47	0	0.00%	927	0	0.00%	1,078	0	0.00%	0	0	.
1998	5,663	1	0.02%	1,359	0	0.00%	271	0	0.00%	739	0	0.00%	758	0	0.00%	138	1	0.72%
1999	10,228	4	0.04%	3,030	0	0.00%	1,103	1	0.09%	1,448	0	0.00%	1,488	2	0.13%	521	0	0.00%
2000	248	0	0.00%	113	0	0.00%	14,696	10	0.07%	53	0	0.00%	398	2	0.50%	582	0	0.00%
2001	363	1	0.28%	159	0	0.00%	27,119	21	0.08%	74	0	0.00%	260	0	0.00%	785	2	0.25%
2002	252	0	0.00%	98	0	0.00%	13,682	17	0.12%	37	0	0.00%	178	0	0.00%	552	2	0.36%
2003	335	0	0.00%	98	0	0.00%	21,866	13	0.06%	55	0	0.00%	199	0	0.00%	812	1	0.12%
2004	200	0	0.00%	65	0	0.00%	11,724	7	0.06%	31	0	0.00%	117	0	0.00%	637	3	0.47%
2005	146	0	0.00%	50	0	0.00%	14,584	12	0.08%	23	0	0.00%	172	0	0.00%	948	1	0.11%
2006	69	0	0.00%	46	0	0.00%	7,285	6	0.08%	16	0	0.00%	105	0	0.00%	903	0	0.00%
2007	88	0	0.00%	38	0	0.00%	12,368	5	0.04%	9	0	0.00%	121	0	0.00%	407	0	0.00%
2008	45	0	0.00%	21	0	0.00%	3,996	0	0.00%	12	0	0.00%	53	0	0.00%	310	0	0.00%
2009	16	0	0.00%	6	0	0.00%	3,997	5	0.13%	7	0	0.00%	44	0	0.00%	155	0	0.00%
TOTAL	47,961	18	0.04%	11,512	3	0.03%	132,748	97	0.07%	9,377	1	0.01%	13,844	5	0.04%	6,751	10	0.15%

EPA REPORT 51.366 a.2.vi

State of California - Bureau of Automotive Repair

Vehicles with No Known Outcome (Passenger Cars and Light Duty Trucks)

a.2.vi Vehicle Types P & L	PASSENGER CARS									LIGHT DUTY TRUCKS								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	3,363	240	7.14%	468	33	7.05%	0	0		1,235	64	5.18%	325	20	6.15%	0	0	
1977	3,944	246	6.24%	464	19	4.09%	0	0		1,686	87	5.16%	353	17	4.82%	0	0	
1978	4,822	300	6.22%	592	27	4.56%	0	0		2,258	136	6.02%	518	17	3.28%	0	0	
1979	5,624	336	5.97%	780	45	5.77%	0	0		2,627	171	6.51%	629	20	3.18%	0	0	
1980	3,370	229	6.80%	419	8	1.91%	0	0		2,003	139	6.94%	523	32	6.12%	0	0	
1981	3,849	284	7.38%	458	26	5.68%	0	0		2,563	184	7.18%	563	39	6.93%	0	0	
1982	4,245	329	7.75%	538	36	6.69%	0	0		3,038	208	6.85%	800	51	6.38%	0	0	
1983	5,609	408	7.27%	816	38	4.66%	0	0		3,804	292	7.68%	973	58	5.96%	0	0	
1984	9,536	788	8.26%	1,375	65	4.73%	0	0		7,203	564	7.83%	1,782	102	5.72%	0	0	
1985	12,937	1,089	8.42%	1,903	89	4.68%	0	0		10,399	750	7.21%	2,515	151	6.00%	0	0	
1986	16,680	1,277	7.66%	2,467	130	5.27%	0	0		17,598	1,162	6.60%	4,160	205	4.93%	0	0	
1987	20,800	1,833	8.81%	3,012	139	4.61%	0	0		18,310	1,169	6.38%	4,187	211	5.04%	0	0	
1988	25,132	2,139	8.51%	3,652	196	5.37%	0	0		20,794	1,309	6.30%	4,605	178	3.87%	0	0	
1989	36,269	2,771	7.64%	5,049	200	3.96%	0	0		28,310	1,458	5.15%	6,009	198	3.30%	0	0	
1990	54,275	4,054	7.47%	8,008	315	3.93%	0	0		27,874	1,256	4.51%	6,002	187	3.12%	0	0	
1991	67,771	4,938	7.29%	10,903	454	4.16%	0	0		37,196	1,603	4.31%	7,598	226	2.97%	0	0	
1992	69,745	5,087	7.29%	11,784	446	3.78%	0	0		34,964	1,546	4.42%	7,085	220	3.11%	0	0	
1993	85,168	6,421	7.54%	14,074	543	3.86%	0	0		46,101	2,472	5.36%	10,517	303	2.88%	0	0	
1994	112,940	6,700	5.93%	18,161	546	3.01%	0	0		59,841	2,936	4.91%	13,368	347	2.60%	0	0	
1995	129,802	7,577	5.84%	21,601	673	3.12%	0	0		59,847	3,132	5.23%	12,983	332	2.56%	0	0	
1996	161,229	7,012	4.35%	24,933	746	2.99%	6,274	161	2.57%	76,742	2,529	3.30%	17,371	335	1.93%	3,124	67	2.14%
1997	163,928	6,677	4.07%	31,034	702	2.26%	6,234	159	2.55%	83,779	2,929	3.50%	23,964	470	1.96%	3,276	66	2.01%
1998	238,978	6,231	2.61%	44,270	691	1.56%	11,002	168	1.53%	132,737	3,021	2.28%	32,989	434	1.32%	5,823	91	1.56%
1999	200,362	4,950	2.47%	45,228	801	1.77%	9,816	175	1.78%	102,022	2,035	1.99%	29,574	330	1.12%	4,930	66	1.34%
2000	286,979	3,647	1.27%	49,213	497	1.01%	132,076	2,201	1.67%	149,182	1,441	0.97%	35,424	264	0.75%	74,128	875	1.18%
2001	174,005	2,957	1.70%	34,468	459	1.33%	91,779	2,047	2.23%	75,359	936	1.24%	22,967	229	1.00%	44,952	794	1.77%
2002	301,128	2,466	0.82%	60,210	449	0.75%	153,165	2,013	1.31%	151,860	843	0.56%	53,594	250	0.47%	93,790	849	0.91%
2003	161,904	1,553	0.96%	35,877	278	0.77%	90,080	1,199	1.33%	62,517	448	0.72%	26,441	137	0.52%	45,278	452	1.00%
2004	333,824	1,337	0.40%	63,263	251	0.40%	155,299	1,203	0.77%	159,761	444	0.28%	70,717	135	0.19%	107,535	561	0.52%
2005	153,936	723	0.47%	32,954	135	0.41%	81,207	636	0.78%	57,466	218	0.38%	25,897	66	0.25%	45,224	289	0.64%
2006	391,133	637	0.16%	85,701	143	0.17%	194,564	860	0.44%	157,451	217	0.14%	61,916	84	0.14%	120,475	427	0.35%
2007	131,838	282	0.21%	33,978	80	0.24%	74,709	337	0.45%	40,091	96	0.24%	20,576	39	0.19%	35,109	123	0.35%
2008	341,297	308	0.09%	97,733	83	0.08%	178,071	436	0.24%	108,987	60	0.06%	51,584	24	0.05%	90,285	181	0.20%
2009	42,704	50	0.12%	13,616	19	0.14%	34,621	96	0.28%	8,439	9	0.11%	4,322	3	0.07%	11,296	40	0.35%
2010	50,490	36	0.07%	15,225	7	0.05%	25,338	110	0.43%	11,523	11	0.10%	6,508	5	0.08%	7,751	57	0.74%
2011	29,919	243	0.81%	11,355	65	0.57%	18,031	143	0.79%	6,836	92	1.35%	4,748	27	0.57%	6,781	55	0.81%
2012	32,382	314	0.97%	9,710	89	0.92%	23,313	243	1.04%	5,392	93	1.72%	4,334	50	1.15%	4,971	92	1.85%
2013	31,011	299	0.96%	10,306	96	0.93%	20,761	219	1.05%	5,216	62	1.19%	4,570	55	1.20%	5,652	78	1.38%
2014	8,161	91	1.12%	4,527	42	0.93%	10,056	142	1.41%	2,333	23	0.99%	2,514	14	0.56%	4,697	68	1.45%
2015	160	2	1.25%	331	1	0.30%	901	22	2.44%	31	0	0.00%	174	0	0.00%	655	4	0.61%
TOTAL	3,911,249	86,861	2.22%	810,456	9,662	1.19%	1,317,297	12,570	0.95%	1,785,375	36,145	2.02%	585,679	5,865	1.00%	715,732	5,235	0.73%

EPA REPORT 51.366 a.2.vi

State of California - Bureau of Automotive Repair

Vehicles with No Known Outcome (Medium and Heavy Duty Vehicles)

a.2.vi Vehicle Types M & H	MEDIUM DUTY VEHICLES									HEAVY DUTY VEHICLES								
	ASM TESTS			TSI TESTS			OBD TESTS			ASM TESTS			TSI TESTS			OBD TESTS		
	VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	1,595	90	5.64%	608	30	4.93%	0	0		75	5	6.67%	854	73	8.55%	0	0	
1977	2,545	133	5.23%	899	38	4.23%	0	0		97	3	3.09%	1,311	75	5.72%	0	0	
1978	2,184	111	5.08%	727	32	4.40%	0	0		192	5	2.60%	1,628	106	6.51%	0	0	
1979	2,029	143	7.05%	657	48	7.31%	0	0		215	13	6.05%	1,583	132	8.34%	0	0	
1980	679	50	7.36%	174	10	5.75%	0	0		225	7	3.11%	830	36	4.34%	0	0	
1981	446	34	7.62%	130	6	4.62%	0	0		326	8	2.45%	1,033	48	4.65%	0	0	
1982	501	40	7.98%	147	13	8.84%	0	0		316	10	3.16%	1,102	48	4.36%	0	0	
1983	708	59	8.33%	176	8	4.55%	0	0		421	21	4.99%	1,364	54	3.96%	0	0	
1984	1,261	129	10.23%	326	20	6.13%	0	0		629	46	7.31%	2,602	119	4.57%	0	0	
1985	1,699	151	8.89%	420	15	3.57%	0	0		974	58	5.95%	2,734	118	4.32%	0	0	
1986	2,113	175	8.28%	621	32	5.15%	0	0		1,190	76	6.39%	2,818	116	4.12%	0	0	
1987	2,676	185	6.91%	718	33	4.60%	0	0		1,116	48	4.30%	2,996	107	3.57%	0	0	
1988	4,046	244	6.03%	1,129	45	3.99%	0	0		1,293	45	3.48%	4,112	132	3.21%	0	0	
1989	5,498	317	5.77%	1,582	67	4.24%	0	0		2,793	122	4.37%	5,318	133	2.50%	0	0	
1990	6,774	343	5.06%	1,878	66	3.51%	0	0		2,871	111	3.87%	5,313	109	2.05%	0	0	
1991	6,102	261	4.28%	2,288	48	2.10%	0	0		2,304	59	2.56%	4,148	71	1.71%	0	0	
1992	8,604	398	4.63%	2,712	71	2.62%	0	0		2,583	78	3.02%	4,286	60	1.40%	0	0	
1993	10,881	390	3.58%	3,311	83	2.51%	0	0		2,453	89	3.63%	4,444	48	1.08%	0	0	
1994	19,426	634	3.26%	5,605	125	2.23%	0	0		3,282	117	3.56%	5,812	95	1.63%	0	0	
1995	21,107	660	3.13%	5,737	124	2.16%	0	0		4,763	120	2.52%	6,758	88	1.30%	0	0	
1996	26,035	465	1.79%	7,392	124	1.68%	1,432	19	1.33%	6,472	92	1.42%	6,859	83	1.21%	35	1	2.86%
1997	30,118	618	2.05%	8,045	127	1.58%	1,551	29	1.87%	5,749	92	1.60%	7,339	86	1.17%	42	0	0.00%
1998	44,879	668	1.49%	13,031	207	1.59%	2,739	45	1.64%	6,488	71	1.09%	7,057	82	1.16%	2,489	22	0.88%
1999	57,417	922	1.61%	19,973	253	1.27%	4,510	64	1.42%	9,144	104	1.14%	9,766	92	0.94%	9,485	59	0.62%
2000	64,906	377	0.58%	32,426	234	0.72%	50,119	511	1.02%	12,354	72	0.58%	12,775	96	0.75%	8,456	79	0.93%
2001	43,821	403	0.92%	22,893	239	1.04%	36,843	555	1.51%	8,041	64	0.80%	7,276	58	0.80%	11,293	65	0.58%
2002	91,803	342	0.37%	42,268	155	0.37%	70,979	554	0.78%	12,629	56	0.44%	11,364	50	0.44%	11,618	89	0.77%
2003	48,240	217	0.45%	22,085	129	0.58%	40,836	365	0.89%	7,467	53	0.71%	7,880	37	0.47%	13,721	90	0.66%
2004	123,952	215	0.17%	46,048	118	0.26%	92,819	440	0.47%	13,983	26	0.19%	14,049	45	0.32%	16,979	70	0.41%
2005	41,601	94	0.23%	18,240	48	0.26%	30,702	175	0.57%	5,683	16	0.28%	6,417	19	0.30%	17,625	91	0.52%
2006	96,372	87	0.09%	50,797	45	0.09%	81,625	251	0.31%	14,647	25	0.17%	14,525	20	0.14%	23,226	99	0.43%
2007	33,595	45	0.13%	20,731	33	0.16%	27,553	121	0.44%	4,286	10	0.23%	4,486	9	0.20%	12,076	43	0.36%
2008	72,671	44	0.06%	43,695	26	0.06%	68,268	165	0.24%	10,838	11	0.10%	11,050	19	0.17%	14,432	54	0.37%
2009	5,355	12	0.22%	3,998	3	0.08%	7,246	42	0.58%	754	1	0.13%	718	1	0.14%	3,491	14	0.40%
2010	7,825	7	0.09%	5,437	7	0.13%	6,827	60	0.88%	712	3	0.42%	626	1	0.16%	3,834	14	0.37%
2011	4,455	26	0.58%	4,164	16	0.38%	6,934	60	0.87%	328	1	0.30%	488	3	0.61%	5,021	10	0.20%
2012	3,976	36	0.91%	2,989	12	0.40%	8,171	64	0.78%	277	1	0.36%	426	2	0.47%	9,034	10	0.11%
2013	5,032	21	0.42%	3,060	25	0.82%	4,633	73	1.58%	986	0	0.00%	779	1	0.13%	1,774	7	0.39%
2014	2,483	12	0.48%	2,034	4	0.20%	4,457	50	1.12%	410	2	0.49%	1,861	0	0.00%	1,952	18	0.92%
2015	69	0	0.00%	181	0	0.00%	552	7	1.27%	36	0	0.00%	641	1	0.16%	338	21	6.21%
TOTAL	905,479	9,158	1.01%	399,332	2,719	0.68%	548,796	3,650	0.67%	149,402	1,741	1.17%	187,428	2,473	1.32%	166,921	856	0.51%

EPA REPORT 51.366 a.2.xi

State of California - Bureau of Automotive Repair

Vehicles Passing the On-board Diagnostic Check (Initial Tests)

REPORT a2xi	ALL VEHICLES			PASSENGER CARS			LIGHT DUTY TRUCKS			MEDIUM DUTY VEHICLES			HEAVY DUTY VEHICLES		
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1996	226,506	197,542	87.21%	128,402	112,057	87.27%	66,083	56,976	86.22%	24,423	21,694	88.83%	7,598	6,815	89.69%
1997	395,685	350,011	88.46%	214,336	190,659	88.95%	125,486	109,873	87.56%	43,953	38,756	88.18%	11,910	10,723	90.03%
1998	377,491	334,959	88.73%	204,751	183,160	89.45%	119,810	105,733	88.25%	44,311	38,529	86.95%	8,619	7,537	87.45%
1999	593,728	537,747	90.57%	299,086	272,293	91.04%	169,006	153,781	90.99%	103,410	91,876	88.85%	22,225	19,796	89.07%
2000	517,296	449,233	86.84%	270,155	233,741	86.52%	143,874	126,040	87.60%	98,150	84,979	86.58%	5,117	4,473	87.41%
2001	889,494	788,785	88.68%	427,543	379,058	88.66%	248,629	221,429	89.06%	205,942	181,738	88.25%	7,380	6,560	88.89%
2002	539,420	481,675	89.29%	271,804	241,335	88.79%	147,589	132,282	89.63%	115,217	103,796	90.09%	4,810	4,262	88.61%
2003	1,054,530	974,954	92.45%	500,613	459,968	91.88%	285,371	265,048	92.88%	261,762	243,950	93.20%	6,784	5,988	88.27%
2004	542,044	499,446	92.14%	254,373	232,681	91.47%	148,139	137,633	92.91%	133,945	124,135	92.68%	5,587	4,997	89.44%
2005	1,201,112	1,135,175	94.51%	590,666	556,844	94.27%	362,983	343,573	94.65%	237,518	225,672	95.01%	9,945	9,086	91.36%
2006	543,217	511,208	94.11%	277,456	260,312	93.82%	149,490	141,386	94.58%	106,761	100,783	94.40%	9,510	8,727	91.77%
2007	1,249,707	1,201,036	96.11%	676,445	651,529	96.32%	330,965	318,163	96.13%	234,981	224,398	95.50%	7,316	6,946	94.94%
2008	373,825	358,454	95.89%	200,106	191,631	95.76%	89,712	86,523	96.45%	77,006	73,573	95.54%	7,001	6,727	96.09%
2009	739,174	718,698	97.23%	468,986	456,269	97.29%	177,351	173,206	97.66%	89,831	86,365	96.14%	3,006	2,858	95.08%
2010	170,265	164,436	96.58%	106,069	102,613	96.74%	39,422	38,158	96.79%	23,693	22,637	95.54%	1,081	1,028	95.10%
2011	171,501	164,111	95.69%	92,936	89,130	95.90%	40,799	39,332	96.40%	33,865	32,067	94.69%	3,901	3,582	91.82%
2012	130,076	124,354	95.60%	82,316	78,649	95.55%	23,366	22,477	96.20%	21,065	20,070	95.28%	3,329	3,158	94.86%
2013	135,702	130,503	96.17%	85,478	82,144	96.10%	24,939	24,145	96.82%	21,624	20,743	95.93%	3,661	3,471	94.81%
2014	110,871	107,216	96.70%	63,251	61,286	96.89%	23,647	23,019	97.34%	22,349	21,382	95.67%	1,624	1,529	94.15%
2015	51,978	49,801	95.81%	25,520	24,600	96.39%	13,511	13,078	96.80%	11,071	10,386	93.81%	1,876	1,737	92.59%
2016	2,953	2,735	92.62%	1,195	1,090	91.21%	959	925	96.45%	638	581	91.07%	161	139	86.34%
TOTAL	10,016,575	9,282,079	92.67%	5,241,487	4,861,049	92.74%	2,731,131	2,532,780	92.74%	1,911,515	1,768,110	92.50%	132,441	120,139	90.71%

EPA REPORT 51.366 a.2.xii

State of California - Bureau of Automotive Repair

Vehicles Failing the On-board Diagnostic Check (Initial Tests)

REPORT a2xii	ALL TESTS			PASSENGER CARS			LIGHT DUTY TRUCKS			MEDIUM DUTY VEHICLES			HEAVY DUTY VEHICLES		
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1996	226,506	28,964	12.79%	128,402	16,345	12.73%	66,083	9,107	13.78%	24,423	2,729	11.17%	7,598	783	10.31%
1997	395,685	45,674	11.54%	214,336	23,677	11.05%	125,486	15,613	12.44%	43,953	5,197	11.82%	11,910	1,187	9.97%
1998	377,491	42,532	11.27%	204,751	21,591	10.55%	119,810	14,077	11.75%	44,311	5,782	13.05%	8,619	1,082	12.55%
1999	593,728	55,981	9.43%	299,086	26,793	8.96%	169,006	15,225	9.01%	103,410	11,534	11.15%	22,225	2,429	10.93%
2000	517,296	68,063	13.16%	270,155	36,414	13.48%	143,874	17,834	12.40%	98,150	13,171	13.42%	5,117	644	12.59%
2001	889,494	100,709	11.32%	427,543	48,485	11.34%	248,629	27,200	10.94%	205,942	24,204	11.75%	7,380	820	11.11%
2002	539,420	57,745	10.71%	271,804	30,469	11.21%	147,589	15,307	10.37%	115,217	11,421	9.91%	4,810	548	11.39%
2003	1,054,530	79,576	7.55%	500,613	40,645	8.12%	285,371	20,323	7.12%	261,762	17,812	6.80%	6,784	796	11.73%
2004	542,044	42,598	7.86%	254,373	21,692	8.53%	148,139	10,506	7.09%	133,945	9,810	7.32%	5,587	590	10.56%
2005	1,201,112	65,937	5.49%	590,666	33,822	5.73%	362,983	19,410	5.35%	237,518	11,846	4.99%	9,945	859	8.64%
2006	543,217	32,009	5.89%	277,456	17,144	6.18%	149,490	8,104	5.42%	106,761	5,978	5.60%	9,510	783	8.23%
2007	1,249,707	48,671	3.89%	676,445	24,916	3.68%	330,965	12,802	3.87%	234,981	10,583	4.50%	7,316	370	5.06%
2008	373,825	15,371	4.11%	200,106	8,475	4.24%	89,712	3,189	3.55%	77,006	3,433	4.46%	7,001	274	3.91%
2009	739,174	20,476	2.77%	468,986	12,717	2.71%	177,351	4,145	2.34%	89,831	3,466	3.86%	3,006	148	4.92%
2010	170,265	5,829	3.42%	106,069	3,456	3.26%	39,422	1,264	3.21%	23,693	1,056	4.46%	1,081	53	4.90%
2011	171,501	7,390	4.31%	92,936	3,806	4.10%	40,799	1,467	3.60%	33,865	1,798	5.31%	3,901	319	8.18%
2012	130,076	5,722	4.40%	82,316	3,667	4.45%	23,366	889	3.80%	21,065	995	4.72%	3,329	171	5.14%
2013	135,702	5,199	3.83%	85,478	3,334	3.90%	24,939	794	3.18%	21,624	881	4.07%	3,661	190	5.19%
2014	110,871	3,655	3.30%	63,251	1,965	3.11%	23,647	628	2.66%	22,349	967	4.33%	1,624	95	5.85%
2015	51,978	2,177	4.19%	25,520	920	3.61%	13,511	433	3.20%	11,071	685	6.19%	1,876	139	7.41%
2016	2,953	218	7.38%	1,195	105	8.79%	959	34	3.55%	638	57	8.93%	161	22	13.66%
TOTAL	10,016,575	734,496	7.33%	5,241,487	380,438	7.26%	2,731,131	198,351	7.26%	1,911,515	143,405	7.50%	132,441	12,302	9.29%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

PASSENGER CARS - ASM TEST									
REPORT a2xiii, a2xiv, PC_ASM	ON-BOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	109,337	83,330	76.21%	12,029	11.00%	9,506	8.69%	4,472	4.09%
1997	179,056	143,413	80.09%	15,453	8.63%	14,923	8.33%	5,267	2.94%
1998	169,182	141,199	83.46%	9,870	5.83%	13,886	8.21%	4,227	2.50%
1999	241,191	210,589	87.31%	8,601	3.57%	17,913	7.43%	4,088	1.69%
2000	9,598	8,443	87.97%	251	2.62%	690	7.19%	214	2.23%
2001	10,641	9,398	88.32%	211	1.98%	838	7.88%	194	1.82%
2002	8,166	7,280	89.15%	150	1.84%	593	7.26%	143	1.75%
2003	10,417	9,600	92.16%	122	1.17%	590	5.66%	105	1.01%
2004	6,206	5,736	92.43%	66	1.06%	358	5.77%	46	0.74%
2005	8,965	8,476	94.55%	52	0.58%	392	4.37%	45	0.50%
2006	3,843	3,618	94.15%	25	0.65%	185	4.81%	15	0.39%
2007	4,416	4,248	96.20%	11	0.25%	144	3.26%	13	0.29%
2008	1,999	1,920	96.05%	5	0.25%	68	3.40%	6	0.30%
2009	2,822	2,746	97.31%	5	0.18%	68	2.41%	3	0.11%
2010	539	529	98.14%	0	0.00%	10	1.86%	.	.
2011	696	672	96.55%	1	0.14%	23	3.30%	.	.
2012	528	518	98.11%	.	.	10	1.89%	.	.
2013	483	467	96.69%	.	.	16	3.31%	.	.
2014	273	268	98.17%	.	.	5	1.83%	.	.
2015	72	69	95.83%	.	.	3	4.17%	.	.
2016	1	1	100.00%	.	.	.	.	.	.
TOTAL	768,431	642,520	83.61%	46,852	6.10%	60,221	7.84%	18,838	2.45%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

PASSENGER CARS - TSI TEST									
REPORT a2xiii, a2xiv, PC_TSI	ON-BOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	18,359	15,527	84.57%	525	2.86%	2,067	11.26%	240	1.31%
1997	33,859	29,863	88.20%	622	1.84%	3,058	9.03%	316	0.93%
1998	33,465	29,669	88.66%	568	1.70%	2,901	8.67%	327	0.98%
1999	54,267	49,214	90.69%	567	1.04%	4,125	7.60%	361	0.67%
2000	1,678	1,525	90.88%	25	1.49%	117	6.97%	11	0.66%
2001	2,033	1,849	90.95%	12	0.59%	159	7.82%	13	0.64%
2002	1,623	1,475	90.88%	10	0.62%	119	7.33%	19	1.17%
2003	2,154	2,016	93.59%	11	0.51%	119	5.52%	8	0.37%
2004	1,289	1,199	93.02%	7	0.54%	78	6.05%	5	0.39%
2005	1,768	1,690	95.59%	4	0.23%	69	3.90%	5	0.28%
2006	1,027	969	94.35%	4	0.39%	53	5.16%	1	0.10%
2007	1,193	1,147	96.14%	2	0.17%	42	3.52%	2	0.17%
2008	656	621	94.66%	6	0.91%	28	4.27%	1	0.15%
2009	978	961	98.26%	2	0.20%	15	1.53%	0	0.00%
2010	236	226	95.76%	2	0.85%	8	3.39%	.	.
2011	365	349	95.62%	0	0.00%	16	4.38%	.	.
2012	193	188	97.41%	.	.	5	2.59%	.	.
2013	293	284	96.93%	.	.	9	3.07%	.	.
2014	173	169	97.69%	.	.	4	2.31%	.	.
2015	45	44	97.78%	.	.	1	2.22%	.	.
2016	0	0	.	.	.	.	.	.	.
TOTAL	155,654	138,985	89.29%	2,367	1.52%	12,993	8.35%	1,309	0.84%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

LIGHT DUTY TRUCKS - ASM TEST									
REPORT a2xiii, a2xiv, LDT_ASM	ON-BOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	53,102	41,033	77.27%	4,459	8.40%	5,543	10.44%	2,067	3.89%
1997	97,212	77,747	79.98%	6,772	6.97%	9,738	10.02%	2,955	3.04%
1998	94,245	76,432	81.10%	6,439	6.83%	8,833	9.37%	2,541	2.70%
1999	129,079	111,244	86.18%	5,441	4.22%	10,377	8.04%	2,017	1.56%
2000	5,029	4,424	87.97%	180	3.58%	328	6.52%	97	1.93%
2001	5,760	5,160	89.58%	72	1.25%	434	7.53%	94	1.63%
2002	3,657	3,300	90.24%	51	1.39%	264	7.22%	42	1.15%
2003	5,042	4,653	92.28%	36	0.71%	317	6.29%	36	0.71%
2004	2,633	2,434	92.44%	37	1.41%	140	5.32%	22	0.84%
2005	3,304	3,086	93.40%	17	0.51%	185	5.60%	16	0.48%
2006	1,614	1,509	93.49%	10	0.62%	89	5.51%	6	0.37%
2007	1,878	1,797	95.69%	2	0.11%	76	4.05%	3	0.16%
2008	591	560	94.75%	1	0.17%	30	5.08%	0	0.00%
2009	711	696	97.89%	0	0.00%	15	2.11%	0	0.00%
2010	127	120	94.49%	1	0.79%	6	4.72%	.	.
2011	184	182	98.91%	1	0.54%	1	0.54%	.	.
2012	75	73	97.33%	.	.	2	2.67%	.	.
2013	54	52	96.30%	.	.	2	3.70%	.	.
2014	57	57	100.00%	.	.	0	0.00%	.	.
2015	12	12	100.00%	.	.	0	0.00%	.	.
2016	0	0	.	.	.	.	.	.	.
TOTAL	404,366	334,571	82.74%	23,519	5.82%	36,380	9.00%	9,896	2.45%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

LIGHT DUTY TRUCKS - TSI TEST									
REPORT a2xiii, a2xiv, LDT_TSI	ON BOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON BOARD & PASS TAILPIPE		PASS ON BOARD & FAIL TAILPIPE		FAIL ON BOARD & PASS TAILPIPE		FAIL ON BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	12,655	10,978	86.75%	211	1.67%	1,312	10.37%	154	1.22%
1997	27,450	24,183	88.10%	410	1.49%	2,633	9.59%	224	0.82%
1998	24,677	21,759	88.18%	286	1.16%	2,452	9.94%	180	0.73%
1999	38,204	35,138	91.97%	351	0.92%	2,514	6.58%	201	0.53%
2000	1,090	986	90.46%	7	0.64%	90	8.26%	7	0.64%
2001	1,404	1,264	90.03%	4	0.28%	124	8.83%	12	0.85%
2002	1,171	1,060	90.52%	4	0.34%	100	8.54%	7	0.60%
2003	1,739	1,641	94.36%	3	0.17%	91	5.23%	4	0.23%
2004	1,111	1,032	92.89%	4	0.36%	75	6.75%	0	0.00%
2005	1,398	1,322	94.56%	1	0.07%	74	5.29%	1	0.07%
2006	588	563	95.75%	2	0.34%	22	3.74%	1	0.17%
2007	808	787	97.40%	0	0.00%	21	2.60%	0	0.00%
2008	314	304	96.82%	0	0.00%	10	3.18%	0	0.00%
2009	343	332	96.79%	0	0.00%	11	3.21%	0	0.00%
2010	61	60	98.36%	0	0.00%	1	1.64%	.	.
2011	100	96	96.00%	0	0.00%	4	4.00%	.	.
2012	50	49	98.00%	.	.	1	2.00%	.	.
2013	50	49	98.00%	.	.	1	2.00%	.	.
2014	55	55	100.00%	.	.	0	0.00%	.	.
2015	26	26	100.00%	.	.	0	0.00%	.	.
2016	1	1	100.00%	.	.	.	.	.	.
TOTAL	113,295	101,685	89.75%	1,283	1.13%	9,536	8.42%	791	0.70%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

MEDIUM DUTY VEHICLES - ASM TEST									
REPORT a2xiii, a2xiv, MDV_ASM	ONBOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	18,794	16,100	85.67%	513	2.73%	1,847	9.83%	334	1.78%
1997	34,322	29,507	85.97%	594	1.73%	3,726	10.86%	495	1.44%
1998	32,794	27,824	84.84%	478	1.46%	4,011	12.23%	481	1.47%
1999	69,930	61,182	87.49%	652	0.93%	7,512	10.74%	584	0.84%
2000	2,300	2,102	91.39%	7	0.30%	166	7.22%	25	1.09%
2001	3,332	3,039	91.21%	18	0.54%	256	7.68%	19	0.57%
2002	2,550	2,345	91.96%	5	0.20%	179	7.02%	21	0.82%
2003	3,830	3,553	92.77%	13	0.34%	240	6.27%	24	0.63%
2004	2,155	2,003	92.95%	7	0.32%	131	6.08%	14	0.65%
2005	2,056	1,969	95.77%	1	0.05%	80	3.89%	6	0.29%
2006	964	917	95.12%	0	0.00%	44	4.56%	3	0.31%
2007	1,107	1,065	96.21%	1	0.09%	41	3.70%	0	0.00%
2008	531	500	94.16%	0	0.00%	31	5.84%	0	0.00%
2009	319	307	96.24%	0	0.00%	12	3.76%	0	0.00%
2010	70	67	95.71%	0	0.00%	3	4.29%	.	.
2011	79	77	97.47%	0	0.00%	2	2.53%	.	.
2012	48	48	100.00%	.	.	0	0.00%	.	.
2013	27	26	96.30%	.	.	1	3.70%	.	.
2014	87	87	100.00%	.	.	0	0.00%	.	.
2015	10	10	100.00%	.	.	0	0.00%	.	.
2016	0	0	.	.	.	.	.	.	.
TOTAL	175,305	152,728	87.12%	2,289	1.31%	18,282	10.43%	2,006	1.14%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

MEDIUM DUTY VEHICLES - TSI TEST									
REPORT a2xiii, a2xiv, MDV_TSI	ONBOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	5,456	4,809	88.14%	108	1.98%	487	8.93%	52	0.95%
1997	9,276	8,214	88.55%	126	1.36%	850	9.16%	86	0.93%
1998	9,703	8,500	87.60%	87	0.90%	1,016	10.47%	100	1.03%
1999	25,520	22,884	89.67%	104	0.41%	2,391	9.37%	141	0.55%
2000	1,068	977	91.48%	3	0.28%	80	7.49%	8	0.75%
2001	1,422	1,284	90.30%	4	0.28%	125	8.79%	9	0.63%
2002	1,003	923	92.02%	3	0.30%	75	7.48%	2	0.20%
2003	1,387	1,311	94.52%	6	0.43%	68	4.90%	2	0.14%
2004	971	914	94.13%	4	0.41%	52	5.36%	1	0.10%
2005	795	757	95.22%	1	0.13%	37	4.65%	0	0.00%
2006	483	461	95.45%	1	0.21%	20	4.14%	1	0.21%
2007	534	521	97.57%	0	0.00%	13	2.43%	0	0.00%
2008	287	276	96.17%	0	0.00%	11	3.83%	0	0.00%
2009	243	241	99.18%	0	0.00%	2	0.82%	0	0.00%
2010	55	54	98.18%	0	0.00%	1	1.82%	.	.
2011	123	115	93.50%	0	0.00%	8	6.50%	.	.
2012	49	48	97.96%	.	.	1	2.04%	.	.
2013	34	34	100.00%	.	.	0	0.00%	.	.
2014	31	31	100.00%	.	.	0	0.00%	.	.
2015	16	16	100.00%	.	.	0	0.00%	.	.
2016	0	0	.	.	.	.	.	.	.
TOTAL	58,456	52,370	89.59%	447	0.76%	5,237	8.96%	402	0.69%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

HEAVY DUTY VEHICLES - ASM TEST									
REPORT a2xiii, a2xiv, HDV_ASM	ONBOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	4,297	3,804	88.53%	50	1.16%	424	9.87%	19	0.44%
1997	6,737	5,995	88.99%	79	1.17%	622	9.23%	41	0.61%
1998	4,432	3,787	85.45%	57	1.29%	550	12.41%	38	0.86%
1999	11,267	10,046	89.16%	88	0.78%	1,049	9.31%	84	0.75%
2000	417	380	91.13%	1	0.24%	31	7.43%	5	1.20%
2001	629	577	91.73%	2	0.32%	47	7.47%	3	0.48%
2002	389	357	91.77%	1	0.26%	30	7.71%	1	0.26%
2003	613	571	93.15%	0	0.00%	38	6.20%	4	0.65%
2004	365	343	93.97%	0	0.00%	21	5.75%	1	0.27%
2005	399	381	95.49%	1	0.25%	17	4.26%	0	0.00%
2006	294	288	97.96%	0	0.00%	6	2.04%	0	0.00%
2007	262	256	97.71%	0	0.00%	5	1.91%	1	0.38%
2008	199	193	96.98%	0	0.00%	6	3.02%	0	0.00%
2009	103	100	97.09%	0	0.00%	3	2.91%	0	0.00%
2010	5	5	100.00%	0	0.00%	0	0.00%	.	.
2011	4	4	100.00%	0	0.00%	0	0.00%	.	.
2012	3	3	100.00%	.	.	0	0.00%	.	.
2013	3	3	100.00%	.	.	0	0.00%	.	.
2014	5	5	100.00%	.	.	0	0.00%	.	.
2015	0	0	.	.	.	0	.	.	.
2016	0	0	.	.	.	.	.	.	.
TOTAL	30,423	27,098	89.07%	279	0.92%	2,849	9.36%	197	0.65%

EPA REPORT 51.366 a.2.xiii; a.2.xiv
 Comparison of On-board Diagnostic Checks and Tailpipe Tests

HEAVY DUTY VEHICLES - TSI TEST									
REPORT a2xiii, a2xiv, HDV_TSI	ON-BOARD DIAGNOSTIC CHECK WITH ASSOCIATED TAILPIPE TEST	PASS ON-BOARD & PASS TAILPIPE		PASS ON-BOARD & FAIL TAILPIPE		FAIL ON-BOARD & PASS TAILPIPE		FAIL ON-BOARD & FAIL TAILPIPE	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	3,295	2,876	87.28%	80	2.43%	308	9.35%	31	0.94%
1997	5,162	4,500	87.18%	138	2.67%	466	9.03%	58	1.12%
1998	3,231	2,730	84.49%	111	3.44%	349	10.80%	41	1.27%
1999	7,406	6,385	86.21%	148	2.00%	801	10.82%	72	0.97%
2000	689	554	80.41%	37	5.37%	84	12.19%	14	2.03%
2001	702	615	87.61%	9	1.28%	74	10.54%	4	0.57%
2002	394	349	88.58%	7	1.78%	38	9.64%	0	0.00%
2003	574	526	91.64%	4	0.70%	43	7.49%	1	0.17%
2004	361	323	89.47%	2	0.55%	34	9.42%	2	0.55%
2005	504	461	91.47%	5	0.99%	38	7.54%	0	0.00%
2006	294	272	92.52%	2	0.68%	20	6.80%	0	0.00%
2007	300	272	90.67%	1	0.33%	25	8.33%	2	0.67%
2008	184	171	92.93%	0	0.00%	13	7.07%	0	0.00%
2009	120	112	93.33%	0	0.00%	8	6.67%	0	0.00%
2010	9	7	77.78%	0	0.00%	2	22.22%	.	.
2011	11	10	90.91%	0	0.00%	1	9.09%	.	.
2012	13	11	84.62%	.	.	2	15.38%	.	.
2013	7	7	100.00%	.	.	0	0.00%	.	.
2014	20	20	100.00%	.	.	0	0.00%	.	.
2015	16	15	93.75%	.	.	1	6.25%	.	.
2016	2	2	100.00%	.	.	.	.	.	.
TOTAL	23,294	20,218	86.79%	544	2.34%	2,307	9.90%	225	0.97%

EPA REPORT 51.366 a.2.xv; a.2.xvi; a.2.xvii; a.2.xviii
 Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests

PASSENGER CARS									
REPORT a2xv - a2xviii PC	ON-BOARD DIAGNOSTIC CHECK WITH GAS CAP EVAPORATIVE TEST	PASS ON-BOARD & PASS GAS CAP		PASS ON-BOARD & FAIL GAS CAP		FAIL ON-BOARD & PASS GAS CAP		FAIL ON-BOARD & FAIL GAS CAP	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	84,260	73,335	87.03%	800	0.95%	9,184	10.90%	941	1.12%
1997	135,440	120,277	88.80%	1,151	0.85%	12,854	9.49%	1,158	0.85%
1998	129,633	115,753	89.29%	1,042	0.80%	11,598	8.95%	1,240	0.96%
1999	185,726	168,797	90.88%	1,147	0.62%	14,449	7.78%	1,333	0.72%
TOTAL	535,059	478,162	89.37%	4,140	0.77%	48,085	8.99%	4,672	0.87%

EPA REPORT 51.366 a.2.xv; a.2.xvi; a.2.xvii; a.2.xviii
 Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests

LIGHT DUTY TRUCKS									
REPORT a2xv - a2xviii LDT	ON-BOARD DIAGNOSTIC CHECK WITH GAS CAP EVAPORATIVE TEST	PASS ON-BOARD & PASS GAS CAP		PASS ON-BOARD & FAIL GAS CAP		FAIL ON-BOARD & PASS GAS CAP		FAIL ON-BOARD & FAIL GAS CAP	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	43,300	37,217	85.95%	428	0.99%	5,002	11.55%	653	1.51%
1997	80,029	69,900	87.34%	774	0.97%	8,316	10.39%	1,039	1.30%
1998	76,827	67,547	87.92%	700	0.91%	7,580	9.87%	1,000	1.30%
1999	105,857	96,089	90.77%	760	0.72%	8,171	7.72%	837	0.79%
TOTAL	306,013	270,753	88.48%	2,662	0.87%	29,069	9.50%	3,529	1.15%

EPA REPORT 51.366 a.2.xv; a.2.xvi; a.2.xvii; a.2.xviii
 Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests

MEDIUM DUTY VEHICLES									
REPORT a2xv - a2xviii MDV	ON-BOARD DIAGNOSTIC CHECK WITH GAS CAP EVAPORATIVE TEST	PASS -ONBOARD & PASS GAS CAP		PASS ON-BOARD & FAIL GAS CAP		FAIL ON-BOARD & PASS GAS CAP		FAIL ON-BOARD & FAIL GAS CAP	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	16,210	14,365	88.62%	115	0.71%	1,545	9.53%	185	1.14%
1997	28,031	24,723	88.20%	173	0.62%	2,845	10.15%	290	1.03%
1998	27,371	23,886	87.27%	148	0.54%	3,028	11.06%	309	1.13%
1999	59,986	53,514	89.21%	257	0.43%	5,802	9.67%	413	0.69%
TOTAL	131,598	116,488	88.52%	693	0.53%	13,220	10.05%	1,197	0.91%

EPA REPORT 51.366 a.2.xv; a.2.xvi; a.2.xvii; a.2.xviii
 Comparison of On-board Diagnostic Checks and Gas Cap Evaporative Tests

HEAVY DUTY VEHICLES									
REPORT a2xv - a2xviii HDV	ON-BOARD DIAGNOSTIC CHECK WITH GAS CAP EVAPORATIVE TEST	PASS ON-BOARD & PASS GAS CAP		PASS ON-BOARD & FAIL GAS CAP		FAIL ON-BOARD & PASS GAS CAP		FAIL ON-BOARD & FAIL GAS CAP	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED						
1996	5,039	4,537	90.04%	28	0.56%	430	8.53%	44	0.87%
1997	7,580	6,799	89.70%	44	0.58%	674	8.89%	63	0.83%
1998	4,913	4,295	87.42%	17	0.35%	558	11.36%	43	0.88%
1999	11,650	10,423	89.47%	63	0.54%	1,070	9.18%	94	0.81%
TOTAL	29,182	26,054	89.28%	152	0.52%	2,732	9.36%	244	0.84%

EPA REPORT 51.366 a.2.xix; a.2.xx; a.2.xxi; a.2.xxii
 Comparison of MIL Status and Stored Diagnostic Trouble Codes

PASSENGER CARS									
REPORT a2xix - a2xxii PC	ONBOARD DIAGNOSTIC CHECKS	MIL COMMANDED ON AND NO CODES STORED		MIL COMMANDED OFF AND CODES STORED		MIL COMMANDED ON AND CODES STORED		MIL COMMANDED OFF AND NO CODES STORED	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	128,402	192	0.15%	9,580	7.46%	7,346	5.72%	111,284	86.67%
1997	214,336	300	0.14%	16,334	7.62%	9,832	4.59%	187,870	87.65%
1998	204,751	316	0.15%	19,017	9.29%	9,606	4.69%	175,812	85.87%
1999	299,086	407	0.14%	25,709	8.60%	11,929	3.99%	261,041	87.28%
2000	270,155	84	0.03%	25,908	9.59%	13,801	5.11%	230,362	85.27%
2001	427,543	114	0.03%	46,274	10.82%	17,938	4.20%	363,217	84.95%
2002	271,804	63	0.02%	31,502	11.59%	11,185	4.12%	229,054	84.27%
2003	500,613	69	0.01%	44,307	8.85%	15,196	3.04%	441,041	88.10%
2004	254,373	19	0.01%	23,277	9.15%	7,580	2.98%	223,497	87.86%
2005	590,666	20	0.00%	41,370	7.00%	12,825	2.17%	536,451	90.82%
2006	277,456	13	0.00%	21,964	7.92%	5,842	2.11%	249,637	89.97%
2007	676,445	34	0.01%	35,149	5.20%	9,633	1.42%	631,629	93.37%
2008	200,106	23	0.01%	10,068	5.03%	2,581	1.29%	187,434	93.67%
2009	468,986	17	0.00%	13,220	2.82%	3,898	0.83%	451,851	96.35%
2010	106,069	6	0.01%	3,082	2.91%	507	0.48%	102,474	96.61%
2011	92,936	2	0.00%	2,552	2.75%	347	0.37%	90,035	96.88%
2012	82,316	6	0.01%	2,255	2.74%	182	0.22%	79,873	97.03%
2013	85,478	1	0.00%	2,052	2.40%	154	0.18%	83,271	97.42%
2014	63,251	.	.	1,060	1.68%	69	0.11%	62,122	98.22%
2015	25,520	.	.	417	1.63%	22	0.09%	25,081	98.28%
2016	1,195	.	.	12	1.00%	1	0.08%	1,182	98.91%
TOTAL	5,241,487	1,686	0.03%	375,109	7.16%	140,474	2.68%	4,724,218	90.13%

EPA REPORT 51.366 a.2.xix; a.2.xx; a.2.xxi; a.2.xxii
 Comparison of MIL Status and Stored Diagnostic Trouble Codes

LIGHT DUTY TRUCKS									
REPORT a2xix - a2xxii LDT	ONBOARD DIAGNOSTIC CHECKS	MIL COMMANDED ON AND NO CODES STORED		MIL NOT COMMANDED ON AND CODES STORED		MIL COMMANDED ON AND CODES STORED		MIL NOT COMMANDED ON AND NO CODES STORED	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	66,083	67	0.10%	7,369	11.15%	3,887	5.88%	54,760	82.87%
1997	125,486	97	0.08%	13,285	10.59%	5,994	4.78%	106,110	84.56%
1998	119,810	65	0.05%	12,022	10.03%	5,068	4.23%	102,655	85.68%
1999	169,006	81	0.05%	13,822	8.18%	5,784	3.42%	149,319	88.35%
2000	143,874	14	0.01%	17,967	12.49%	6,041	4.20%	119,852	83.30%
2001	248,629	43	0.02%	18,754	7.54%	9,846	3.96%	219,986	88.48%
2002	147,589	43	0.03%	15,769	10.68%	5,504	3.73%	126,273	85.56%
2003	285,371	25	0.01%	27,942	9.79%	8,063	2.83%	249,341	87.37%
2004	148,139	11	0.01%	15,501	10.46%	3,970	2.68%	128,657	86.85%
2005	362,983	6	0.00%	24,603	6.78%	7,305	2.01%	331,069	91.21%
2006	149,490	6	0.00%	10,863	7.27%	2,961	1.98%	135,660	90.75%
2007	330,965	7	0.00%	18,668	5.64%	4,496	1.36%	307,794	93.00%
2008	89,712	2	0.00%	4,059	4.52%	811	0.90%	84,840	94.57%
2009	177,351	4	0.00%	4,495	2.53%	1,394	0.79%	171,458	96.68%
2010	39,422	3	0.01%	946	2.40%	133	0.34%	38,340	97.26%
2011	40,799	1	0.00%	849	2.08%	75	0.18%	39,874	97.73%
2012	23,366	0	0.00%	446	1.91%	35	0.15%	22,885	97.94%
2013	24,939	1	0.00%	361	1.45%	45	0.18%	24,532	98.37%
2014	23,647	.	.	327	1.38%	40	0.17%	23,280	98.45%
2015	13,511	.	.	165	1.22%	28	0.21%	13,318	98.57%
2016	959	.	.	2	0.21%	1	0.10%	956	99.69%
TOTAL	2,731,131	476	0.02%	208,215	7.62%	71,481	2.62%	2,450,959	89.74%

EPA REPORT 51.366 a.2.xix; a.2.xx; a.2.xxi; a.2.xxii
 Comparison of MIL Status and Stored Diagnostic Trouble Codes

MEDIUM DUTY VEHICLES									
REPORT a2xix - a2xxii MDV	ONBOARD DIAGNOSTIC CHECKS	MIL COMMANDED ON AND NO CODES STORED		MIL NOT COMMANDED ON AND CODES STORED		MIL COMMANDED ON AND CODES STORED		MIL NOT COMMANDED ON AND NO CODES STORED	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	24,423	22	0.09%	2,666	10.92%	1,238	5.07%	20,497	83.92%
1997	43,953	30	0.07%	3,452	7.85%	2,144	4.88%	38,327	87.20%
1998	44,311	35	0.08%	4,603	10.39%	2,049	4.62%	37,624	84.91%
1999	103,410	80	0.08%	7,858	7.60%	3,761	3.64%	91,711	88.69%
2000	98,150	17	0.02%	7,973	8.12%	3,596	3.66%	86,564	88.20%
2001	205,942	37	0.02%	14,370	6.98%	6,683	3.25%	184,852	89.76%
2002	115,217	14	0.01%	9,919	8.61%	3,395	2.95%	101,889	88.43%
2003	261,762	664	0.25%	20,097	7.68%	6,437	2.46%	234,564	89.61%
2004	133,945	8	0.01%	9,429	7.04%	2,631	1.96%	121,877	90.99%
2005	237,518	19	0.01%	14,421	6.07%	3,705	1.56%	219,373	92.36%
2006	106,761	10	0.01%	8,129	7.61%	1,723	1.61%	96,899	90.76%
2007	234,981	9	0.00%	14,212	6.05%	4,563	1.94%	216,197	92.01%
2008	77,006	0	0.00%	4,537	5.89%	1,037	1.35%	71,432	92.76%
2009	89,831	1	0.00%	4,439	4.94%	915	1.02%	84,476	94.04%
2010	23,693	1	0.00%	1,010	4.26%	129	0.54%	22,553	95.19%
2011	33,865	0	0.00%	1,551	4.58%	194	0.57%	32,120	94.85%
2012	21,065	0	0.00%	862	4.09%	66	0.31%	20,137	95.59%
2013	21,624	0	0.00%	614	2.84%	80	0.37%	20,930	96.79%
2014	22,349	.	.	516	2.31%	47	0.21%	21,786	97.48%
2015	11,071	.	.	218	1.97%	12	0.11%	10,841	97.92%
2016	638	.	.	5	0.78%	2	0.31%	631	98.90%
TOTAL	1,911,515	947	0.05%	130,881	6.85%	44,407	2.32%	1,735,280	90.78%

EPA REPORT 51.366 a.2.xix; a.2.xx; a.2.xxi; a.2.xxii
 Comparison of MIL Status and Stored Diagnostic Trouble Codes

HEAVY DUTY VEHICLES									
REPORT a2xix - a2xxii HDV	ONBOARD DIAGNOSTIC CHECKS	MIL COMMANDED ON AND NO CODES STORED		MIL NOT COMMANDED ON AND CODES STORED		MIL COMMANDED ON AND CODES STORED		MIL NOT COMMANDED ON AND NO CODES STORED	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1996	7,598	8	0.11%	681	8.96%	348	4.58%	6,561	86.35%
1997	11,910	6	0.05%	850	7.14%	463	3.89%	10,591	88.93%
1998	8,619	4	0.05%	1,025	11.89%	364	4.22%	7,226	83.84%
1999	22,225	15	0.07%	1,867	8.40%	797	3.59%	19,546	87.95%
2000	5,117	1	0.02%	494	9.65%	176	3.44%	4,446	86.89%
2001	7,380	8	0.11%	740	10.03%	227	3.08%	6,405	86.79%
2002	4,810	3	0.06%	515	10.71%	123	2.56%	4,169	86.67%
2003	6,784	220	3.24%	739	10.89%	270	3.98%	5,555	81.88%
2004	5,587	3	0.05%	681	12.19%	137	2.45%	4,766	85.31%
2005	9,945	0	0.00%	981	9.86%	264	2.65%	8,700	87.48%
2006	9,510	1	0.01%	784	8.24%	227	2.39%	8,498	89.36%
2007	7,316	1	0.01%	728	9.95%	155	2.12%	6,432	87.92%
2008	7,001	0	0.00%	619	8.84%	98	1.40%	6,284	89.76%
2009	3,006	0	0.00%	222	7.39%	42	1.40%	2,742	91.22%
2010	1,081	0	0.00%	122	11.29%	12	1.11%	947	87.60%
2011	3,901	0	0.00%	436	11.18%	55	1.41%	3,410	87.41%
2012	3,329	0	0.00%	397	11.93%	26	0.78%	2,906	87.29%
2013	3,661	0	0.00%	238	6.50%	18	0.49%	3,405	93.01%
2014	1,624	.	.	103	6.34%	4	0.25%	1,517	93.41%
2015	1,876	.	.	111	5.92%	6	0.32%	1,759	93.76%
2016	161	.	.	10	6.21%	0	0.00%	151	93.79%
TOTAL	132,441	270	0.20%	12,343	9.32%	3,812	2.88%	116,016	87.60%

EPA REPORT 51.366 a.2.xxiii

State of California - Bureau of Automotive Repair

Readiness Status Incomplete for any Supported OBD II Monitor

REPORT a2xxiii	ALL VEHICLES			PASSENGER CARS			LIGHT DUTY TRUCKS			MEDIUM DUTY VEHICLES			HEAVY DUTY VEHICLES		
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1996	226,506	78,485	34.65%	128,402	44,364	34.55%	66,083	24,422	36.96%	24,423	7,831	32.06%	7,598	1,868	24.59%
1997	395,685	124,160	31.38%	214,336	61,445	28.67%	125,486	44,721	35.64%	43,953	14,964	34.05%	11,910	3,030	25.44%
1998	377,491	112,667	29.85%	204,751	54,343	26.54%	119,810	39,516	32.98%	44,311	15,936	35.96%	8,619	2,872	33.32%
1999	593,728	151,059	25.44%	299,086	63,272	21.16%	169,006	44,359	26.25%	103,410	36,077	34.89%	22,225	7,351	33.08%
2000	517,296	145,192	28.07%	270,155	70,777	26.20%	143,874	38,571	26.81%	98,150	34,133	34.78%	5,117	1,711	33.44%
2001	889,494	187,444	21.07%	427,543	81,115	18.97%	248,629	49,994	20.11%	205,942	54,267	26.35%	7,380	2,068	28.02%
2002	539,420	115,442	21.40%	271,804	54,748	20.14%	147,589	31,229	21.16%	115,217	28,199	24.47%	4,810	1,266	26.32%
2003	1,054,530	180,404	17.11%	500,613	70,938	14.17%	285,371	42,227	14.80%	261,762	65,053	24.85%	6,784	2,186	32.22%
2004	542,044	100,152	18.48%	254,373	42,106	16.55%	148,139	24,083	16.26%	133,945	32,269	24.09%	5,587	1,694	30.32%
2005	1,201,112	139,367	11.60%	590,666	61,969	10.49%	362,983	42,109	11.60%	237,518	32,871	13.84%	9,945	2,418	24.31%
2006	543,217	84,227	15.51%	277,456	39,045	14.07%	149,490	22,202	14.85%	106,761	21,235	19.89%	9,510	1,745	18.35%
2007	1,249,707	110,716	8.86%	676,445	50,826	7.51%	330,965	25,189	7.61%	234,981	33,268	14.16%	7,316	1,433	19.59%
2008	373,825	43,993	11.77%	200,106	22,062	11.03%	89,712	8,635	9.63%	77,006	12,173	15.81%	7,001	1,123	16.04%
2009	739,174	43,876	5.94%	468,986	26,582	5.67%	177,351	7,655	4.32%	89,831	9,059	10.08%	3,006	580	19.29%
2010	170,265	20,110	11.81%	106,069	12,146	11.45%	39,422	4,116	10.44%	23,693	3,621	15.28%	1,081	227	21.00%
2011	171,501	24,310	14.17%	92,936	12,340	13.28%	40,799	4,696	11.51%	33,865	6,158	18.18%	3,901	1,116	28.61%
2012	130,076	18,498	14.22%	82,316	11,082	13.46%	23,366	2,888	12.36%	21,065	3,829	18.18%	3,329	699	21.00%
2013	135,702	16,762	12.35%	85,478	9,506	11.12%	24,939	2,333	9.35%	21,624	3,991	18.46%	3,661	932	25.46%
2014	110,871	12,267	11.06%	63,251	5,874	9.29%	23,647	2,776	11.74%	22,349	3,135	14.03%	1,624	482	29.68%
2015	51,978	7,776	14.96%	25,520	2,801	10.98%	13,511	1,591	11.78%	11,071	2,529	22.84%	1,876	855	45.58%
2016	2,953	807	27.33%	1,195	297	24.85%	959	154	16.06%	638	274	42.95%	161	82	50.93%
TOTAL	10,016,575	1,717,714	17.15%	5,241,487	797,638	15.22%	2,731,131	463,466	16.97%	1,911,515	420,872	22.02%	132,441	35,738	26.98%

EPA REPORT 51.366 a.3

State of California - Bureau of Automotive Repair

Initial Tests by Model Year and Station Type

REPORT a.3	ALL VEHICLES	STAR		NON-STAR		REFEREE		GOVERNMENT FLEET		PERMANENT FLEET REGISTERED		BUSINESS FLEET	
VEHICLE MODEL YEAR	VEHICLES TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED	COUNT	PERCENT OF TESTED
1976	7,717	6,300	81.64%	1,367	17.71%	50	0.65%	0	0.00%	0	0.00%	0	0.00%
1977	10,278	8,453	82.24%	1,776	17.28%	48	0.47%	1	0.01%	0	0.00%	0	0.00%
1978	11,881	9,772	82.25%	2,060	17.34%	47	0.40%	2	0.02%	0	0.00%	0	0.00%
1979	12,808	10,520	82.14%	2,235	17.45%	42	0.33%	11	0.09%	0	0.00%	0	0.00%
1980	7,500	6,234	83.12%	1,223	16.31%	37	0.49%	6	0.08%	0	0.00%	0	0.00%
1981	8,533	7,089	83.08%	1,401	16.42%	34	0.40%	9	0.11%	0	0.00%	0	0.00%
1982	9,424	7,873	83.54%	1,516	16.09%	26	0.28%	9	0.10%	0	0.00%	0	0.00%
1983	12,173	10,214	83.91%	1,912	15.71%	36	0.30%	11	0.09%	0	0.00%	0	0.00%
1984	21,680	18,118	83.57%	3,499	16.14%	53	0.24%	10	0.05%	0	0.00%	0	0.00%
1985	29,529	24,691	83.62%	4,742	16.06%	78	0.26%	18	0.06%	0	0.00%	0	0.00%
1986	40,918	34,336	83.91%	6,476	15.83%	75	0.18%	30	0.07%	0	0.00%	1	0.00%
1987	46,771	39,116	83.63%	7,092	15.16%	69	0.15%	493	1.05%	0	0.00%	0	0.00%
1988	55,942	45,939	82.12%	8,576	15.33%	76	0.14%	1,351	2.42%	0	0.00%	0	0.00%
1989	78,429	65,382	83.36%	11,623	14.82%	111	0.14%	1,313	1.67%	0	0.00%	0	0.00%
1990	95,921	80,668	84.10%	13,908	14.50%	119	0.12%	1,226	1.28%	0	0.00%	0	0.00%
1991	117,290	98,788	84.23%	16,481	14.05%	118	0.10%	1,903	1.62%	0	0.00%	0	0.00%
1992	120,203	101,407	84.36%	17,003	14.15%	120	0.10%	1,673	1.39%	0	0.00%	0	0.00%
1993	151,703	129,518	85.38%	20,675	13.63%	144	0.09%	1,365	0.90%	0	0.00%	1	0.00%
1994	188,709	161,226	85.44%	26,221	13.89%	174	0.09%	1,087	0.58%	0	0.00%	0	0.00%
1995	275,339	239,583	87.01%	35,322	12.83%	205	0.07%	228	0.08%	0	0.00%	1	0.00%
1996	230,574	198,618	86.14%	31,496	13.66%	220	0.10%	240	0.10%	0	0.00%	0	0.00%
1997	401,323	351,296	87.53%	49,351	12.30%	284	0.07%	387	0.10%	3	0.00%	2	0.00%
1998	382,335	331,476	86.70%	49,891	13.05%	245	0.06%	722	0.19%	1	0.00%	0	0.00%
1999	603,030	528,088	87.57%	73,779	12.23%	256	0.04%	904	0.15%	2	0.00%	1	0.00%
2000	523,549	429,796	82.09%	91,787	17.53%	291	0.06%	1,675	0.32%	0	0.00%	0	0.00%
2001	897,981	765,014	85.19%	130,204	14.50%	361	0.04%	2,398	0.27%	1	0.00%	3	0.00%
2002	545,682	439,695	80.58%	104,077	19.07%	238	0.04%	1,672	0.31%	0	0.00%	0	0.00%
2003	1,067,035	878,012	82.29%	186,264	17.46%	297	0.03%	2,446	0.23%	2	0.00%	14	0.00%
2004	549,768	423,522	77.04%	124,494	22.64%	197	0.04%	1,547	0.28%	5	0.00%	3	0.00%
2005	1,217,404	963,673	79.16%	251,371	20.65%	252	0.02%	2,030	0.17%	66	0.00%	11	0.00%
2006	555,670	411,075	73.98%	142,344	25.62%	153	0.03%	2,076	0.37%	11	0.00%	11	0.00%
2007	1,271,296	973,293	76.56%	294,446	23.16%	197	0.02%	3,308	0.26%	36	0.00%	16	0.00%
2008	383,935	263,580	68.65%	116,083	30.24%	108	0.03%	4,149	1.08%	13	0.00%	2	0.00%
2009	748,318	568,260	75.94%	177,469	23.72%	108	0.01%	2,472	0.33%	4	0.00%	5	0.00%
2010	173,175	100,189	57.85%	72,744	42.01%	50	0.03%	192	0.11%	0	0.00%	0	0.00%
2011	175,180	86,525	49.39%	88,475	50.51%	55	0.03%	125	0.07%	0	0.00%	0	0.00%
2012	132,110	59,208	44.82%	72,793	55.10%	53	0.04%	56	0.04%	0	0.00%	0	0.00%
2013	137,569	65,090	47.31%	72,370	52.61%	86	0.06%	23	0.02%	0	0.00%	0	0.00%
2014	112,786	51,676	45.82%	60,993	54.08%	62	0.05%	55	0.05%	0	0.00%	0	0.00%
2015	53,969	28,193	52.24%	25,646	47.52%	57	0.11%	71	0.13%	2	0.00%	0	0.00%
2016	3,454	2,331	67.49%	1,119	32.40%	2	0.06%	0	0.00%	2	0.06%	0	0.00%
TOTAL	11,468,891	9,023,837	78.68%	2,402,304	20.95%	5,234	0.05%	37,294	0.33%	148	0.00%	71	0.00%

EPA REPORT 51.366 a.4

State of California - Bureau of Automotive Repair

Initial Test Failures by Model Year and Station Type

REPORT a.4	STAR			NON-STAR			REFEREE			GOVERNMENT FLEET			PERMANENT FLEET REGISTERED			BUSINESS FLEET		
	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED	VEHICLES TESTED	COUNT	PERCENT OF TESTED
1976	6,300	2,005	31.83%	1,367	251	18.36%	50	40	80.00%	0	0		0	0		0	0	
1977	8,453	2,738	32.39%	1,776	379	21.34%	48	37	77.08%	1	0	0.00%	0	0		0	0	
1978	9,772	3,134	32.07%	2,060	392	19.03%	47	32	68.09%	2	0	0.00%	0	0		0	0	
1979	10,520	3,406	32.38%	2,235	481	21.52%	42	30	71.43%	11	2	18.18%	0	0		0	0	
1980	6,234	1,917	30.75%	1,223	248	20.28%	37	23	62.16%	6	0	0.00%	0	0		0	0	
1981	7,089	2,407	33.95%	1,401	283	20.20%	34	23	67.65%	9	3	33.33%	0	0		0	0	
1982	7,873	2,616	33.23%	1,516	335	22.10%	26	16	61.54%	9	0	0.00%	0	0		0	0	
1983	10,214	3,477	34.04%	1,912	381	19.93%	36	26	72.22%	11	1	9.09%	0	0		0	0	
1984	18,118	6,393	35.29%	3,499	734	20.98%	53	35	66.04%	10	4	40.00%	0	0		0	0	
1985	24,691	8,357	33.85%	4,742	983	20.73%	78	54	69.23%	18	3	16.67%	0	0		0	0	
1986	34,336	11,129	32.41%	6,476	1,295	20.00%	75	46	61.33%	30	6	20.00%	0	0		1	0	0.00%
1987	39,116	12,839	32.82%	7,092	1,538	21.69%	69	39	56.52%	493	109	22.11%	0	0		0	0	
1988	45,939	14,517	31.60%	8,576	1,688	19.68%	76	44	57.89%	1,351	217	16.06%	0	0		0	0	
1989	65,382	19,363	29.62%	11,623	2,183	18.78%	111	69	62.16%	1,313	224	17.06%	0	0		0	0	
1990	80,668	23,079	28.61%	13,908	2,410	17.33%	119	67	56.30%	1,226	183	14.93%	0	0		0	0	
1991	98,788	27,809	28.15%	16,481	2,773	16.83%	118	83	70.34%	1,903	275	14.45%	0	0		0	0	
1992	101,407	28,798	28.40%	17,003	2,867	16.86%	120	68	56.67%	1,673	253	15.12%	0	0		0	0	
1993	129,518	38,812	29.97%	20,675	3,789	18.33%	144	85	59.03%	1,365	385	28.21%	0	0		1	0	0.00%
1994	161,226	46,027	28.55%	26,221	4,641	17.70%	174	97	55.75%	1,087	228	20.98%	0	0		0	0	
1995	239,583	60,063	25.07%	35,322	5,621	15.91%	205	107	52.20%	228	25	10.96%	0	0		1	0	0.00%
1996	198,618	48,854	24.60%	31,496	5,338	16.95%	220	110	50.00%	240	29	12.08%	0	0		0	0	
1997	351,296	73,499	20.92%	49,351	7,245	14.68%	284	148	52.11%	387	38	9.82%	3	1	33.33%	2	0	0.00%
1998	331,476	63,623	19.19%	49,891	7,001	14.03%	245	129	52.65%	722	63	8.73%	1	0	0.00%	0	0	
1999	528,088	77,894	14.75%	73,779	8,294	11.24%	256	113	44.14%	904	56	6.19%	2	0	0.00%	1	0	0.00%
2000	429,796	69,587	16.19%	91,787	11,347	12.36%	291	158	54.30%	1,675	119	7.10%	0	0		0	0	
2001	765,014	104,292	13.63%	130,204	13,642	10.48%	361	161	44.60%	2,398	168	7.01%	1	0	0.00%	3	0	0.00%
2002	439,695	59,056	13.43%	104,077	10,437	10.03%	238	98	41.18%	1,672	93	5.56%	0	0		0	0	
2003	878,012	83,313	9.49%	186,264	13,361	7.17%	297	108	36.36%	2,446	169	6.91%	2	0	0.00%	14	1	7.14%
2004	423,522	41,570	9.82%	124,494	9,402	7.55%	197	83	42.13%	1,547	78	5.04%	5	0	0.00%	3	0	0.00%
2005	963,673	65,472	6.79%	251,371	13,431	5.34%	252	87	34.52%	2,030	100	4.93%	66	4	6.06%	11	0	0.00%
2006	411,075	30,035	7.31%	142,344	8,056	5.66%	153	60	39.22%	2,076	80	3.85%	11	0	0.00%	11	1	9.09%
2007	973,293	45,359	4.66%	294,446	11,988	4.07%	197	62	31.47%	3,308	116	3.51%	36	3	8.33%	16	0	0.00%
2008	263,580	13,079	4.96%	116,083	4,920	4.24%	108	29	26.85%	4,149	149	3.59%	13	0	0.00%	2	0	0.00%
2009	568,260	18,355	3.23%	177,469	5,752	3.24%	108	28	25.93%	2,472	121	4.89%	4	0	0.00%	5	0	0.00%
2010	100,189	3,796	3.79%	72,744	2,819	3.88%	50	9	18.00%	192	9	4.69%	0	0		0	0	
2011	86,525	4,015	4.64%	88,475	4,069	4.60%	55	13	23.64%	125	9	7.20%	0	0		0	0	
2012	59,208	2,466	4.16%	72,793	3,695	5.08%	53	12	22.64%	56	5	8.93%	0	0		0	0	
2013	65,090	2,340	3.60%	72,370	3,256	4.50%	86	17	19.77%	23	4	17.39%	0	0		0	0	
2014	51,676	1,565	3.03%	60,993	2,402	3.94%	62	14	22.58%	55	4	7.27%	0	0		0	0	
2015	28,193	1,229	4.36%	25,646	1,081	4.22%	57	31	54.39%	71	5	7.04%	2	0	0.00%	0	0	
2016	2,331	151	6.48%	1,119	75	6.70%	2	0	0.00%	0	0		2	0	0.00%	0	0	
TOTAL	9,023,837	1,128,436	12.51%	2,402,304	180,883	7.53%	5,234	2,491	47.59%	37,294	3,333	8.94%	148	8	5.41%	71	2	2.82%



Calendar Year 2015

I/M Rule Section 51.366 Data Analysis and Reporting

(b) Quality assurance report

(c) Quality control report

Smog Check License Information

Smog Check Station Licenses Issued	976
Licensed Smog Check Stations as of 12/31/2015	7,483
Licensed Smog Check Technicians as of 12/31/2015	15,603

Inspections Overt

Initial Compliance Inspections	1,407
Quality Assurance (QA) Inspections	200
Consumer Assistance Program (CAP) Inspections	22
Equipment Audit Inspections	1,896
Other Inspections (used car lot inspections included in total)	2,578
Total Inspections	6,103

Undercover Run Data Covert

Undercover Runs Conducted	973
Positive Undercover Runs	303
Percentage of Positive Runs	31%
Smog Check Stations Receiving U/C Runs	850

Citations Issued

Station Citations	1,210
Station Citation Fines	\$891,250
Technician Citations	1,281
Technician Training Hours Required	3,924

Calendar Year 2015

I/M Rule Section 51.366 Data Analysis and Reporting

(b) Quality assurance report

(c) Quality control report

Administrative Disciplinary Filings

Hearings	33
Stipulation Settlement	189
Default Decision	64
Total Cases Adjudicated	286
Licenses Revoked	183
Interim Suspension Orders/Penal Code 23 Proceedings*	8
Probation Ordered	53
Probation/Suspension Ordered	56
Total Licenses Disciplined*	292

* ISO/PC 23 Orders are not included in total since they are counted in "Licenses Revoked" section.

Equipment Audit Inspections

Gas Audits

Gas Audit Inspections	1,725
Stations Audited	1,624
Stations Failing Gas Audit	474
Emissions Inspection Systems (EIS) Audited	1,710
Emissions Inspection Systems (EIS) Failed	483

Calendar Year 2015

I/M Rule Section 51.366 Data Analysis and Reporting

(b) Quality assurance report

(c) Quality control report

Equipment Tamper Audits

Total Tamper Audits	1,896
Total Failing Tamper Audit	179
Stations Audited	1,631
Stations Failing Tamper Audit	161
Emissions Inspection Systems (EIS) Audited	1,719
Emissions Inspection Systems (EIS) Failed	162

All Equipment Audits

Total Inspections	1,896
Total Lockouts*	234
Total Correction Notices*	638
Stations Locked Out	222
Stations given "correction notice" to correct	597
EIS Locked Out	226
EIS given "correction notice" to correct	613

*Note: Some stations may receive more than one inspection but only one lockout/notice is issued per visit.

Resources for Undercover Audits

Vehicles Available for Undercover Audits (I/M Related)	500
Auditors Available for Undercover Audits	214

**Calendar Year 2015*****I/M Rule Section 51.366 Data Analysis and Reporting***

(b) Quality assurance report

(c) Quality control report

Inspections (Overt):

Initial Compliance: Performed prior to issuing a new Smog Check station license to determine compliance with requirements for station equipment and technician competence. This includes Follow-Up inspections to verify compliance of any deficiencies.

Quality Assurance (QA): Performed to ensure stations meet equipment, manual and signage requirements, inspect invoice and inspection reports, and assess technician testing, diagnosis and repair skills. This includes inspections to verify compliance of any previously identified deficiencies.

Consumer Assistance Program (CAP): Performed to review repairs for compliance with the CAP Program regulations. Includes paperwork requirements, pricing and repair effectiveness. This includes inspections to verify compliance of any previously identified deficiencies.

Equipment Audits: BAR inspectors visit enhanced area Smog Check stations to audit the BAR 97 Emissions Inspection System (EIS) for compliance to standard specifications. Equipment audits include analyzer gas audits, analyzer tamper audits and dynamometer audits. The BAR 97 EIS tamper inspection focuses on identifying disabled or bypassed tamper detection systems and unauthorized modifications. The gas analyzer and dynamometer audits focus on verifying their in-use accuracies. A station may be selected either from a random list of active stations or selected for a re-visit based upon observed problems by BAR field staff during a prior visit.

Other: Inspections classified as “other” are performed when a station inspection is deemed necessary. This includes inspections to verify compliance of any previously identified deficiencies.

Undercover Runs (Covert Station Audits):

The Bureau of Automotive Repair performs periodic covert audits on every licensed Smog Check station. Additionally, BAR’s conducts undercover enforcement efforts on those stations suspected of performing improper inspections, as determined by a review of the Vehicle Information Database (VID) data, consumer complaints, and other enforcement data.

Citations:

Citations are issued against Smog Check stations with an order of abatement or a monetary penalty ranging from \$1,000 to \$5,000. Smog Check technicians are issued citations, which require completion of 8-hour or 68-hour training courses. Subsequent violations may lead to a monetary penalty for technicians. All fines and training hour values represent assessed penalties and are not necessarily collected or completed.

**Calendar Year 2015*****I/M Rule Section 51.366 Data Analysis and Reporting***

(b) Quality assurance report

(c) Quality control report

Administrative Disciplinary Filings:

Administrative disciplinary cases are filed with the Attorney General's Office. Each case filing often includes multiple licenses; i.e., Automotive Repair Dealer registration, Smog Check station license, brake or lamp station license, and Smog Check technician license. In some instances, a request for ISO (Interim Suspension Order) or request for suspension pursuant to California Penal Code Section 23 (CPC 23) are filed when violations are so egregious and/or damaging to public safety as to justify immediate suspension of the license and/or registrations.

Cases are adjudicated in hearings held before an Administrative Law Judge, through stipulated settlements, or by default decisions. Licenses can be revoked outright, or the revocation may be stayed with the license placed on probation (usually for a period of 1 to 5 years). The suspension of a license for a specific number of days or months can also be included with probation.

Resources for Undercover Runs (Covert Station Audits):

Available resources include the entire fleet of forensically documented vehicles that are used solely to perform covert audits on automotive repair stations, auto body shops, Smog Check stations, and any other facility regulated by the Bureau of Automotive Repair.

Field staff classified as Program Representatives are assigned to perform overt audits, covert audits, complaint mediation, and investigations, among other duties.