

# Executive Summary Report

## SMOG CHECK Statewide

### February 2016

#### 1. Testing Volume

	All Tests	Failed	Percent (%) Failed
Initial Test	992,956	117,785	11.86%
Total	1,116,533	144,037	12.90%

#### 2. Certification Volume

	Certificates Issued	Percent (%) Certificates Issued	No Certificates Issued	Percent (%) No Certificates Issued
Initial Test	866,907	87.31%	126,049	12.69%
Total	963,044	86.25%	153,489	13.75%

#### 3. Certification Volume by Station Type\*

Station Types	Certificates Issued on Initial Test	Percent (%) Certificates Issued	No Certificates Issued on Initial Test	Percent (%) No Certificates Issued
STAR Test Only	435,588	86.69%	66,868	13.31%
Non-STAR Test Only	21,909	90.25%	2,368	9.75%
STAR Test and Repair	251,407	86.91%	37,868	13.09%
Non-STAR Test and Repair	153,791	91.42%	14,430	8.58%
Total	862,695	87.65%	121,534	12.35%

\*Note: Excludes Basic area dealer, Fleets, and Referee stations

#### 4. Initial Test Failures by Failure Type

	OIS		BAR-97	
	Failed	Percent (%) Failed	Failed	Percent (%) Failed
All Emissions	NA	NA	34,389	15.20%
All Visual	11,195	1.46%	11,097	4.90%
All Functional	57,893	7.55%	30,403	13.40%
OBDII	56,598	7.38%	17,155	7.58%
Overall	65,267	8.51%	52,518	23.20%

#### 5. Initial Tests at All STAR Stations

Vehicles	Test and Repair Station Initial Tests	Test-Only Station Initial Tests	Test and Repair Station Certificates Issued	Test-Only Station Certificates Issued
Directed	45,354	103,632	34,643	80,131
Non-Directed	243,921	398,824	216,764	355,457
Total	289,275	502,456	251,407	435,588

#### 6. Initial Tests at All Non-STAR Stations

Vehicles	Test and Repair Station Initial Tests	Test-Only Station Initial Tests	Test and Repair Station Certificates Issued	Test-Only Station Certificates Issued
Directed	384	105	172	51
Non-Directed	167,837	24,172	153,619	21,858
Total	168,221	24,277	153,791	21,909

#### 7. Initial Test Failures by Program Area

Program Areas	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
Enhanced	665,979	57,094	8.57%	178,715	43,128	24.10%
Partial	34,589	3,033	8.77%	13,410	3,208	23.90%
Basic	59,715	4,580	7.67%	25,390	4,016	15.80%
Change of Ownership	6,418	560	8.73%	2,286	515	22.50%
No Program	0	0	0.00%	5	1	20.00%
Unknown	0	0	0.00%	6,449	1,650	25.60%
Total Program Area	766,701	65,267	8.51%	226,255	52,518	23.20%

#### 8. Initial Test Failures by Station Type

Station Types	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
STAR Test Only	373,749	34,635	9.27%	128,707	30,852	24.00%
STAR Test Only Suspended	0	0	0.00%	0	0	0.00%
Non-STAR Test Only	20,444	1,466	7.17%	3,833	732	19.10%
STAR Test and Repair	222,212	19,905	8.96%	67,063	16,529	24.60%
STAR Test and Repair Suspended	20	3	15.00%	4	2	50.00%
Non-STAR Test and Repair	143,955	8,883	6.17%	24,266	3,865	15.90%
Test and Repair/Dealer	3,749	200	5.33%	443	56	12.60%
Business Fleet	5	0	0.00%	0	0	0.00%
Permanent Fleet Registered	0	0	0.00%	2	0	0.00%
Referee	195	65	33.30%	365	198	54.20%
Govt Fleet	2,372	110	4.64%	1,572	284	18.10%
Total	766,701	65,267	8.51%	226,255	52,518	23.20%

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#### 9. Number of Licensed Stations by Type/Privilege and Program Area

Station Type	Basic	Change of Ownership	Enhanced	Partial	Total
STAR Regular Test and Repair CAP Enhanced	0	0	2,227	100	2,327
STAR Regular Test and Repair CAP Basic	154	0	0	0	154
STAR Regular Test and Repair CAP COO	0	66	0	0	66
STAR Test Only	15	1	1,912	27	1,955
Non-STAR Regular Test and Repair	477	36	2,239	243	2,995
Non-STAR Test Only	17	2	360	17	396
Repair Only	2	1	48	0	51
Basic Area Dealer	75	0	0	0	75
Business Fleet	0	0	3	0	3
Permanent Fleet Registered	4	0	28	1	33
Referee	5	0	27	0	32
Government Fleet	41	2	276	11	330
Unknown Type	0	0	2	0	2
<b>Total</b>	<b>790</b>	<b>108</b>	<b>7,122</b>	<b>399</b>	<b>8,419</b>

#### 10. Number of Stations Conducting Test by Equipment Type

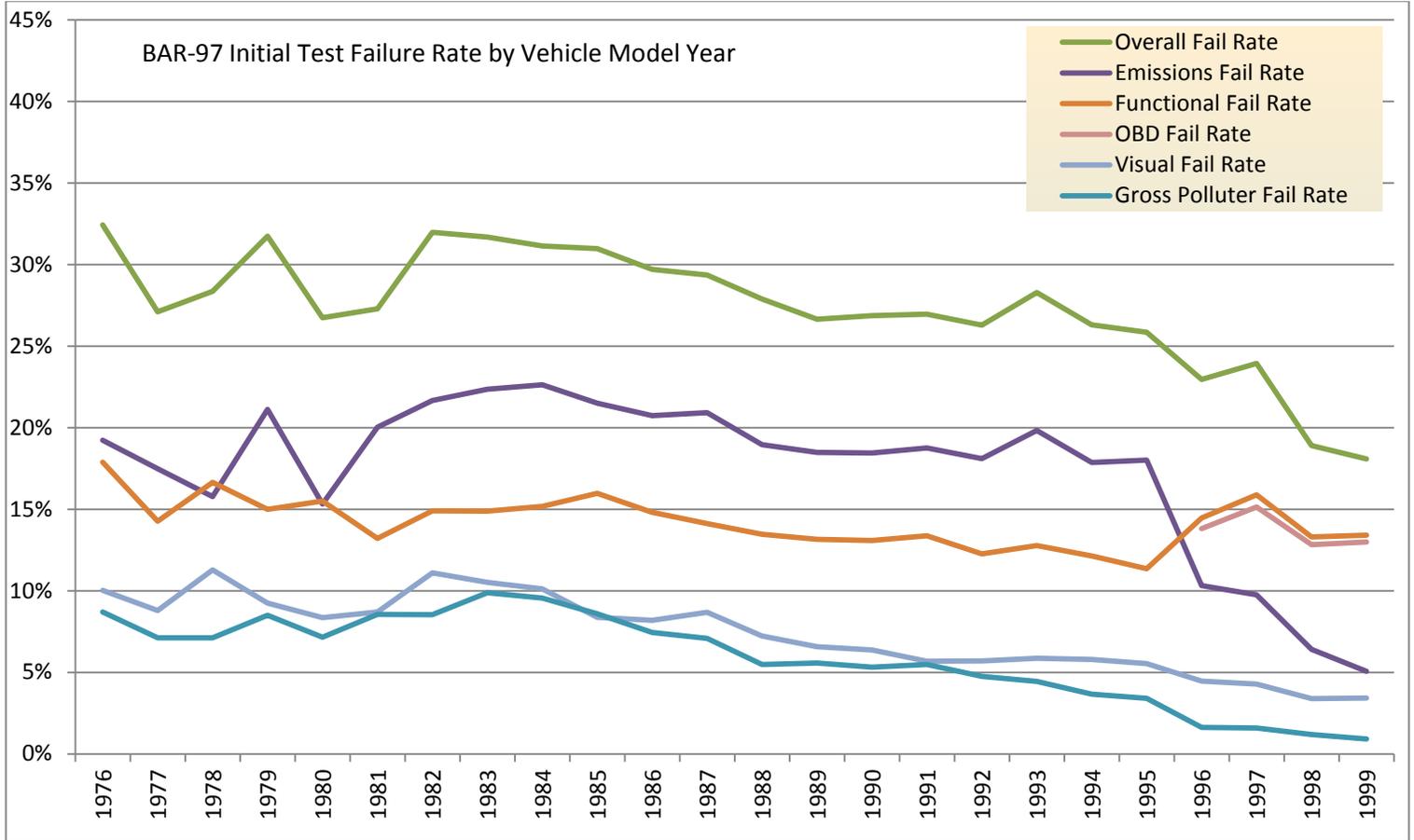
Station Type	Equipment Type		
	BAR-97 Only	OIS Only	BAR-97 & OIS
STAR Regular Test and Repair CAP Enhanced	4	136	2,143
STAR Regular Test and Repair CAP Basic	0	2	97
STAR Regular Test and Repair CAP COO	0	9	72
STAR Test Only	1	30	1,862
Non-STAR Regular Test and Repair	5	1,348	1,088
Non-STAR Test Only	1	58	145
Basic Area Dealer	0	22	51
Business Fleet	0	2	0
Permanent Fleet Registered	1	0	0
Referee	0	0	31
Government Fleet	30	82	48
Unknown Type	0	0	1
<b>Total</b>	<b>42</b>	<b>1,689</b>	<b>5,538</b>

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#### 11. BAR-97 Initial Test Failure Rate by Vehicle Model Year



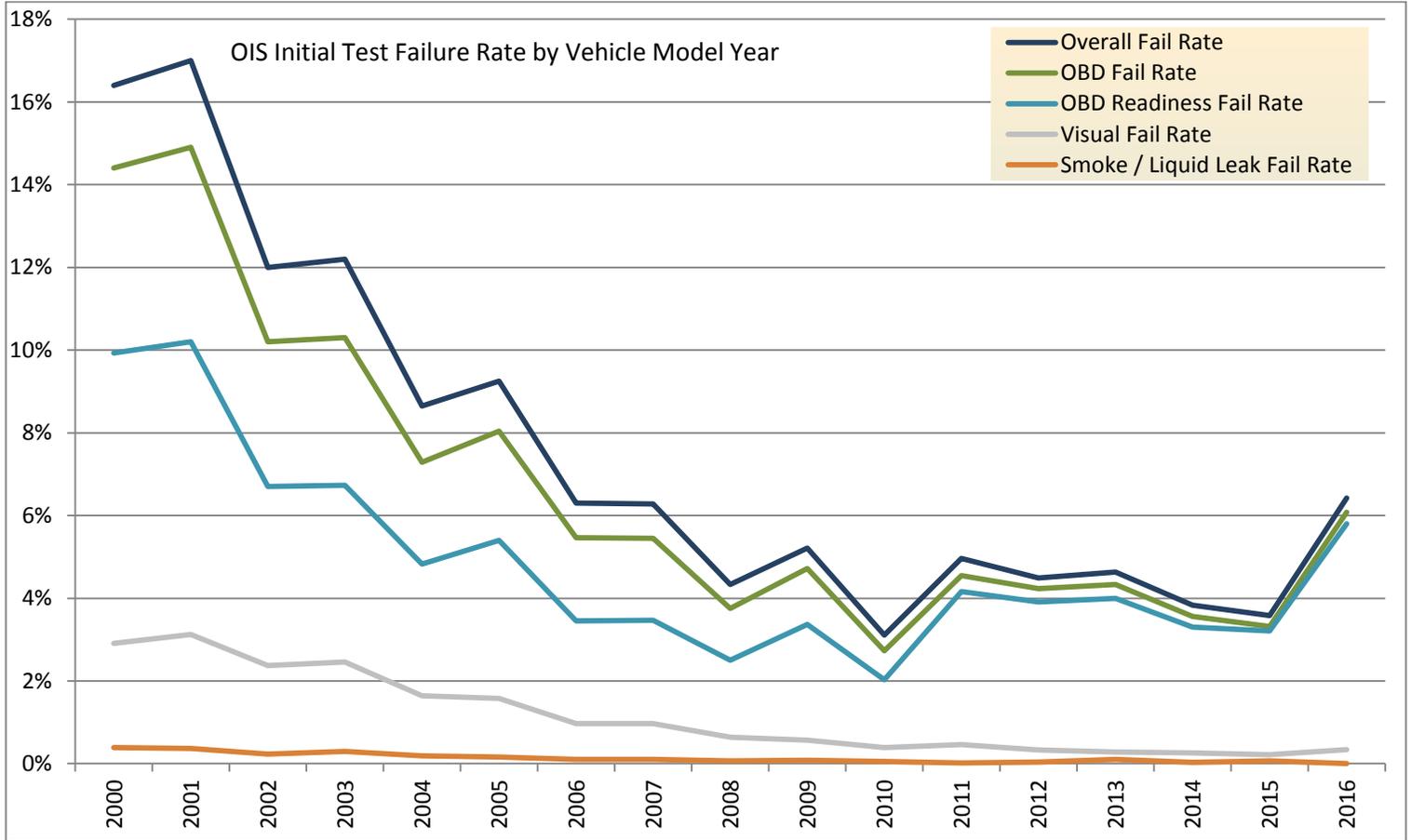
Note: Please see tabular data in Table 17 for BAR-97 tests conducted on other vehicle model years not shown in chart.

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#### 12. OIS Initial Test Failure Rate by Vehicle Model Year



Note: Please see tabular data in Table 18 for OIS tests conducted on other vehicle model years not shown in chart.

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#### 13. Referee Activity

	OIS Certificates Issued	BAR-97 Certificates Issued
Certificate of Compliance	268	310
Certificate of Non Compliance	0	0
Parts Cost	97	24
Hardship Extensions	0	0
Exempt Vehicle	0	21
Exempted by Directive	4	67
Parts Exemption	23	1
Unknown Outcome	0	0
Permanently Exempt Vehicle	0	0
Temporarily Exempt Vehicle	0	0
<b>Total</b>	<b>392</b>	<b>423</b>

#### 14. Active Technicians

License Type	Technician Count
EA (Inspect and Repair Enhanced)	1
EB (Inspect and Repair Basic)	1
EI (Repair Only)	1
EO (Inspect Only)	2,590
EO + EI (Inspect and Repair)	5,030
<b>Total</b>	<b>7,623</b>

#### 15. Inspection Costs by Station and Test Type

Station Type	BAR-97 Initial Test Count	Average BAR-97 Inspection Cost	OIS Initial Test Count	Average OIS Inspection Cost	Total Initial Test Count	Overall Average Inspection Cost
STAR Test and Repair	66,766	\$48.44	217,970	\$46.55	284,736	\$46.99
STAR Test Only	127,714	\$46.86	357,159	\$48.49	484,873	\$48.06
Non-STAR Test and Repair	24,100	\$44.45	134,587	\$52.96	158,687	\$51.66
Non-STAR Test Only	3,769	\$41.91	15,150	\$43.99	18,919	\$43.58
Test and Repair/Dealer	443	\$48.01	3,585	\$56.79	4,028	\$55.83
<b>Total</b>	<b>222,792</b>	<b>\$46.99</b>	<b>728,471</b>	<b>\$48.68</b>	<b>951,263</b>	<b>\$48.29</b>

#### 16. Inspection Costs by Station and Equipment Type

Station Type	BAR-97 Equipment Only		OIS Equipment Only		Both Equipment (BAR-97 + OIS)			
	BAR-97 Initial Test Count	Average BAR-97 Inspection Cost	OIS Initial Test Count	Average OIS Inspection Cost	BAR-97 Initial Test Count	Average BAR-97 Inspection Cost	OIS Initial Test Count	Average OIS Inspection Cost
STAR Test and Repair	39	\$33.09	5,781	\$47.84	66,727	\$48.45	212,189	\$46.52
STAR Test Only	28	\$15.89	3,189	\$39.13	127,686	\$46.87	353,970	\$48.57
Non-STAR Test and Repair	12	\$53.19	53,909	\$62.68	24,088	\$44.45	80,678	\$46.46
Non-STAR Test Only	1	\$19.75	3,203	\$45.44	3,768	\$41.92	11,947	\$43.60
Test and Repair/Dealer	0	\$0.00	1,024	\$61.10	443	\$48.01	2,561	\$55.07
<b>Total</b>	<b>80</b>	<b>\$29.92</b>	<b>67,106</b>	<b>\$59.44</b>	<b>222,712</b>	<b>\$47.00</b>	<b>661,365</b>	<b>\$47.59</b>

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#### 17. Tabular Data for BAR-97 Initial Tests by Vehicle Model Year

Model Year	Initial Tests	Failed Overall	Percent (%) Failed Overall	Percent (%) Failed Emissions	Percent (%) Failed Gross Polluters	Percent (%) Failed Functional	Percent (%) Failed Visual	Percent (%) Failed OBDII
1967	1	1	100.00%	100.00%	100.00%	100.00%	0.00%	NA
1976	598	194	32.44%	19.23%	8.70%	17.89%	10.03%	NA
1977	841	228	27.11%	17.48%	7.13%	14.27%	8.80%	NA
1978	913	259	28.37%	15.77%	7.12%	16.65%	11.28%	NA
1979	1,093	347	31.75%	21.13%	8.51%	15.00%	9.24%	NA
1980	587	157	26.75%	15.33%	7.16%	15.50%	8.35%	NA
1981	689	188	27.29%	20.03%	8.56%	13.21%	8.71%	NA
1982	738	236	31.98%	21.68%	8.54%	14.91%	11.11%	NA
1983	921	292	31.70%	22.37%	9.88%	14.88%	10.53%	NA
1984	1,727	538	31.15%	22.64%	9.55%	15.17%	10.13%	NA
1985	2,185	677	30.98%	21.51%	8.60%	15.97%	8.38%	NA
1986	3,103	922	29.71%	20.75%	7.44%	14.82%	8.19%	NA
1987	3,546	1,041	29.36%	20.92%	7.08%	14.13%	8.69%	NA
1988	4,231	1,180	27.89%	18.96%	5.48%	13.47%	7.23%	NA
1989	5,982	1,595	26.66%	18.49%	5.57%	13.16%	6.57%	NA
1990	7,503	2,016	26.87%	18.45%	5.32%	13.09%	6.37%	NA
1991	8,708	2,348	26.96%	18.76%	5.49%	13.38%	5.68%	NA
1992	9,520	2,503	26.29%	18.10%	4.75%	12.26%	5.71%	NA
1993	11,485	3,249	28.29%	19.83%	4.45%	12.77%	5.87%	NA
1994	15,322	4,031	26.31%	17.87%	3.67%	12.15%	5.80%	NA
1995	17,849	4,614	25.85%	18.02%	3.41%	11.36%	5.54%	NA
1996	23,070	5,297	22.96%	10.33%	1.62%	14.46%	4.46%	13.81%
1997	26,538	6,355	23.95%	9.76%	1.60%	15.88%	4.29%	15.15%
1998	37,051	7,008	18.91%	6.41%	1.20%	13.30%	3.39%	12.84%
1999	37,938	6,858	18.08%	5.06%	0.92%	13.41%	3.43%	13.00%
2000	677	132	19.50%	8.12%	4.58%	13.29%	2.95%	12.70%
2001	332	78	23.49%	8.43%	2.11%	19.58%	2.71%	19.58%
2002	437	51	11.67%	5.03%	1.83%	8.01%	2.52%	8.01%
2003	353	29	8.22%	3.97%	1.98%	5.67%	0.57%	5.38%
2004	513	24	4.68%	3.12%	0.78%	2.53%	0.58%	2.34%
2005	243	21	8.64%	4.94%	2.06%	5.76%	1.23%	5.76%
2006	539	17	3.15%	1.48%	0.56%	1.67%	0.74%	1.48%
2007	173	5	2.89%	0.58%	0.58%	2.89%	0.00%	2.89%
2008	338	9	2.66%	0.89%	0.30%	2.07%	0.89%	2.07%
2009	85	3	3.53%	3.53%	1.18%	1.18%	1.18%	1.18%
2010	98	4	4.08%	0.00%	0.00%	4.08%	0.00%	4.08%
2011	28	1	3.57%	0.00%	0.00%	3.57%	0.00%	3.57%
2012	40	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	25	1	4.00%	0.00%	0.00%	4.00%	0.00%	0.00%
2014	41	2	4.88%	2.44%	0.00%	0.00%	4.88%	0.00%
2015	106	5	4.72%	2.83%	0.00%	1.89%	2.83%	1.89%
2016	88	2	2.27%	1.14%	0.00%	1.14%	1.14%	1.14%
All Model Years	226,255	52,518	23.21%	12.28%	2.91%	13.44%	4.90%	7.58%

Note: Some model year 1975 and older vehicles required a Referee inspection (for example, engine changes). Vehicle model years 2000 and newer were tested on the BAR-97 because they may not be compatible with the OIS test (for example, a non-OBD-II certified vehicle).

See Table 19 for Smog Check requirements.

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#### 18. Tabular Data for OIS Initial Tests by Vehicle Model Year

Model Year	Initial Tests	Failed Overall	Percent (%) Failed Overall	Percent (%) Failed Functional	Percent (%) Failed Visual	Percent (%) Failed OBDII	Percent (%) Failed OBDII Readiness	Percent (%) Failed Smoke and/or Liquid Leak
1984	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1987	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1990	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1993	1	1	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%
1994	2	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1995	3	1	33.30%	33.30%	0.00%	33.30%	0.00%	0.00%
1996	11	2	18.20%	18.20%	0.00%	18.20%	9.09%	0.00%
1997	21	3	14.30%	9.52%	4.76%	9.52%	4.76%	0.00%
1998	331	59	17.80%	16.00%	3.63%	14.80%	9.37%	1.21%
1999	946	156	16.50%	15.00%	2.43%	14.70%	10.70%	0.32%
2000	64,266	10,520	16.40%	14.80%	2.91%	14.40%	9.93%	0.39%
2001	46,967	7,968	17.00%	15.30%	3.12%	14.90%	10.20%	0.37%
2002	74,395	8,919	12.00%	10.50%	2.37%	10.20%	6.70%	0.23%
2003	49,315	6,038	12.20%	10.60%	2.46%	10.30%	6.73%	0.30%
2004	87,477	7,571	8.65%	7.48%	1.64%	7.29%	4.83%	0.19%
2005	51,700	4,781	9.25%	8.20%	1.58%	8.04%	5.40%	0.16%
2006	100,179	6,313	6.30%	5.57%	0.97%	5.46%	3.45%	0.10%
2007	49,388	3,103	6.28%	5.56%	0.97%	5.45%	3.47%	0.10%
2008	82,446	3,572	4.33%	3.82%	0.64%	3.75%	2.50%	0.07%
2009	20,437	1,065	5.21%	4.80%	0.57%	4.72%	3.37%	0.08%
2010	70,774	2,202	3.11%	2.78%	0.39%	2.73%	2.03%	0.05%
2011	12,929	641	4.96%	4.57%	0.46%	4.55%	4.16%	0.02%
2012	18,666	838	4.49%	4.26%	0.33%	4.23%	3.91%	0.04%
2013	12,214	565	4.63%	4.43%	0.28%	4.33%	4.00%	0.10%
2014	12,473	478	3.83%	3.59%	0.26%	3.56%	3.30%	0.03%
2015	9,996	358	3.58%	3.39%	0.22%	3.32%	3.21%	0.07%
2016	1,760	113	6.42%	6.08%	0.34%	6.08%	5.80%	0.00%
2017	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	766,701	65,267	8.51%	7.55%	1.46%	7.38%	5.03%	0.17%

Note: Some model year 1999 and older vehicles required a Referee inspection, were tested at Beta stations, or were 1998/1999 model year diesels.

See Table 19 for Smog Check requirements.

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#### 19. Smog Check Requirements by Vehicle Type

SMOG CHECK REQUIREMENTS						
BY VEHICLE TYPE						
Fuel Type	Model-Year	GVWR <sup>1</sup>	OBD II Equipped?	Smog Check Required		
				None	OIS Test	BAR-97 Test
All <sup>2</sup> (except Diesel)	Four model-years and newer <sup>3</sup>	All	All	X		
	Fifth and sixth model-years <sup>4</sup>	All	All	X		
	1975 and earlier	All	All	X		
Gasoline & Flex Fuel (Methanol or Ethanol)	1976-1999	All	All			X
	2000 and newer	14,000 and less	Yes <sup>5</sup>		X	
		Over 14,000	All	No		
Hybrid	2000 and newer	14,000 and less	All		X	
Dedicated Propane and Natural Gas (CNG, LNG, or LPG)	1976-1999	14,000 and less	All			X
		Over 14,000	All	X		
	2000 and newer	14,000 and less	Yes		X	
		Over 14,000	All	No		
Diesel	1976-1997	All	All	X		
	1998 and newer	14,000 and less	All		X	
		Over 14,000	All	X <sup>6</sup>		
Full Electric Powered	All	All	All	X		
Motorcycle	All	All	All	X		
Other Vehicles: Two Cylinder Engine, Two-stroke Engine, Off-highway Registered	All	All	All	X		

<sup>1</sup> Gross vehicle weight rating

<sup>2</sup> Includes gasoline, flex fuel, hybrid, dedicated propane, and natural gas vehicles. A Smog Check is required for all out-of-state 1976 model-year and newer vehicles registering in California for the first time and other initial registration events determined by the Department of Motor Vehicles.

<sup>3</sup> Vehicles four model-years and newer are not subject to biennial (every other year) or change-of-ownership Smog Checks. Add four to the model-year of a vehicle to determine the first year a vehicle will be subject to a change-of-ownership Smog Check. For example, a 2010 model-year vehicle will be first subject a change-of-ownership Smog Check in 2014 (2010+4=2014).

<sup>4</sup> Fifth and sixth model-year vehicles are not subject to biennial Smog Checks. However, a change-of-ownership Smog Check is required. Add six to the model-year of a vehicle to determine the first year a vehicle will be subject to a biennial Smog Check. For example, a 2010 model-year vehicle will be first subject to a biennial Smog Check in 2016 (2010+6=2016).

<sup>5</sup> In the future, BAR may identify some vehicles that have GVWR of 14,000 and less or that have problematic OBD II systems that may require the BAR-97 test.

<sup>6</sup> Fleet vehicles are subject to the ARB Periodic Smoke Inspection Program (PSIP).