

# Executive Summary Report

## SMOG CHECK Statewide

### March 2016

#### 1. Testing Volume

	All Tests	Failed	Percent (%) Failed
Initial Test	1,073,933	124,122	11.56%
Total	1,209,019	153,486	12.70%

#### 2. Certification Volume

	Certificates Issued	Percent (%) Certificates Issued	No Certificates Issued	Percent (%) No Certificates Issued
Initial Test	941,054	87.63%	132,879	12.37%
Total	1,045,459	86.47%	163,560	13.53%

#### 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	470,399	87.09%	69,711	12.91%
Non-STAR Test Only	24,242	90.36%	2,586	9.64%
STAR Test and Repair	277,318	87.24%	40,551	12.76%
Non-STAR Test and Repair	164,575	91.60%	15,095	8.40%
Total	936,534	87.98%	127,943	12.02%

\*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	36,370	14.80%
All Visual	11,663	1.41%	11,873	4.82%
All Functional	60,727	7.34%	32,506	13.20%
OBDII	59,489	7.19%	18,183	7.38%
Overall	68,461	8.27%	55,661	22.60%

#### 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	50,470	111,704	38,716	87,266
Non-Directed	267,399	428,406	238,602	383,133
Total	317,869	540,110	277,318	470,399

#### 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	387	120	173	58
Non-Directed	179,283	26,708	164,402	24,184
Total	179,670	26,828	164,575	24,242

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

Program Areas	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
Enhanced	720,518	60,131	8.35%	194,735	45,652	23.40%
Partial	36,224	3,040	8.39%	14,379	3,403	23.70%
Basic	63,352	4,692	7.41%	27,874	4,335	15.60%
Change of Ownership	7,404	598	8.08%	2,520	565	22.40%
No Program	0	0	0.00%	5	0	0.00%
Unknown	0	0	0.00%	6,927	1,706	24.60%
Total Program Area	827,498	68,461	8.27%	246,435	55,661	22.60%

#### 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	401,020	36,324	9.06%	139,090	32,192	23.10%
STAR Test Only Suspended	0	0	0.00%	0	0	0.00%
Non-STAR Test Only	22,520	1,540	6.84%	4,308	857	19.90%
STAR Test and Repair	243,724	21,034	8.63%	74,145	17,988	24.30%
STAR Test and Repair Suspended	7	0	0.00%	2	1	50.00%
Non-STAR Test and Repair	153,244	9,129	5.96%	26,426	4,080	15.40%
Test and Repair/Dealer	4,033	195	4.84%	432	40	9.26%
Business Fleet	7	0	0.00%	0	0	0.00%
Permanent Fleet Registered	0	0	0.00%	0	0	0.00%
Referee	234	94	40.20%	426	236	55.40%
Govt Fleet	2,709	145	5.35%	1,606	267	16.60%
Total	827,498	68,461	8.27%	246,435	55,661	22.60%

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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	2,228	100	2,328
STAR Regular Test and Repair CAP Basic	155	0	0	0	155
STAR Regular Test and Repair CAP COO	0	66	0	0	66
STAR Test Only	15	1	1,894	27	1,937
Non-STAR Regular Test and Repair	477	36	2,253	245	3,011
Non-STAR Test Only	17	2	382	16	417
Repair Only	2	1	48	0	51
Basic Area Dealer	73	0	0	0	73
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	1	0	1
<b>Total</b>	<b>789</b>	<b>108</b>	<b>7,140</b>	<b>400</b>	<b>8,437</b>

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

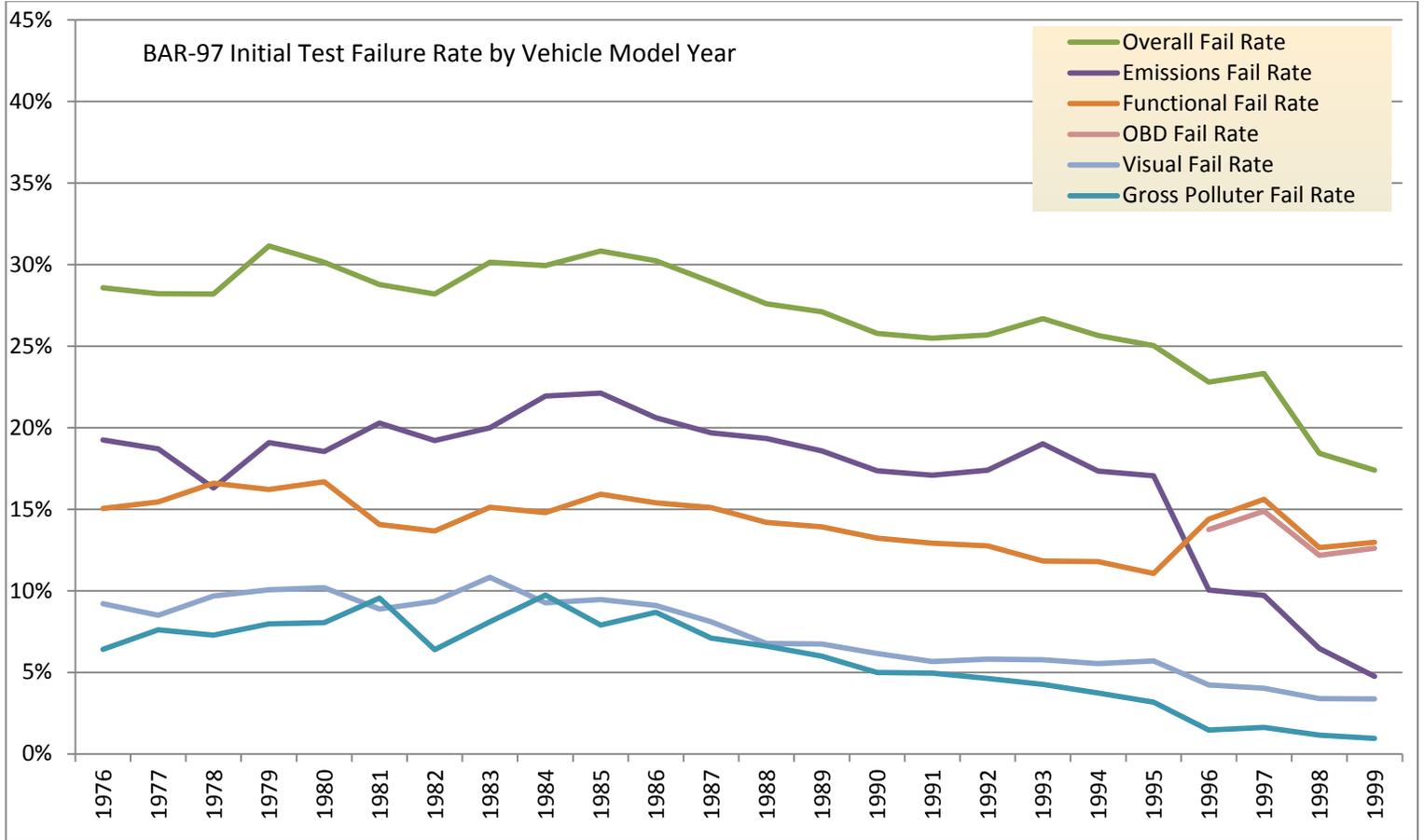
Station Type	Equipment Type		
	BAR-97 Only	OIS Only	BAR-97 & OIS
STAR Regular Test and Repair CAP Enhanced	2	142	2,181
STAR Regular Test and Repair CAP Basic	0	6	94
STAR Regular Test and Repair CAP COO	1	8	54
STAR Test Only	1	31	1,843
Non-STAR Regular Test and Repair	4	1,357	1,076
Non-STAR Test Only	1	57	171
Basic Area Dealer	0	25	46
Business Fleet	0	1	0
Permanent Fleet Registered	0	0	0
Referee	0	0	31
Government Fleet	22	84	55
Unknown Type	0	0	0
<b>Total</b>	<b>31</b>	<b>1,711</b>	<b>5,551</b>

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



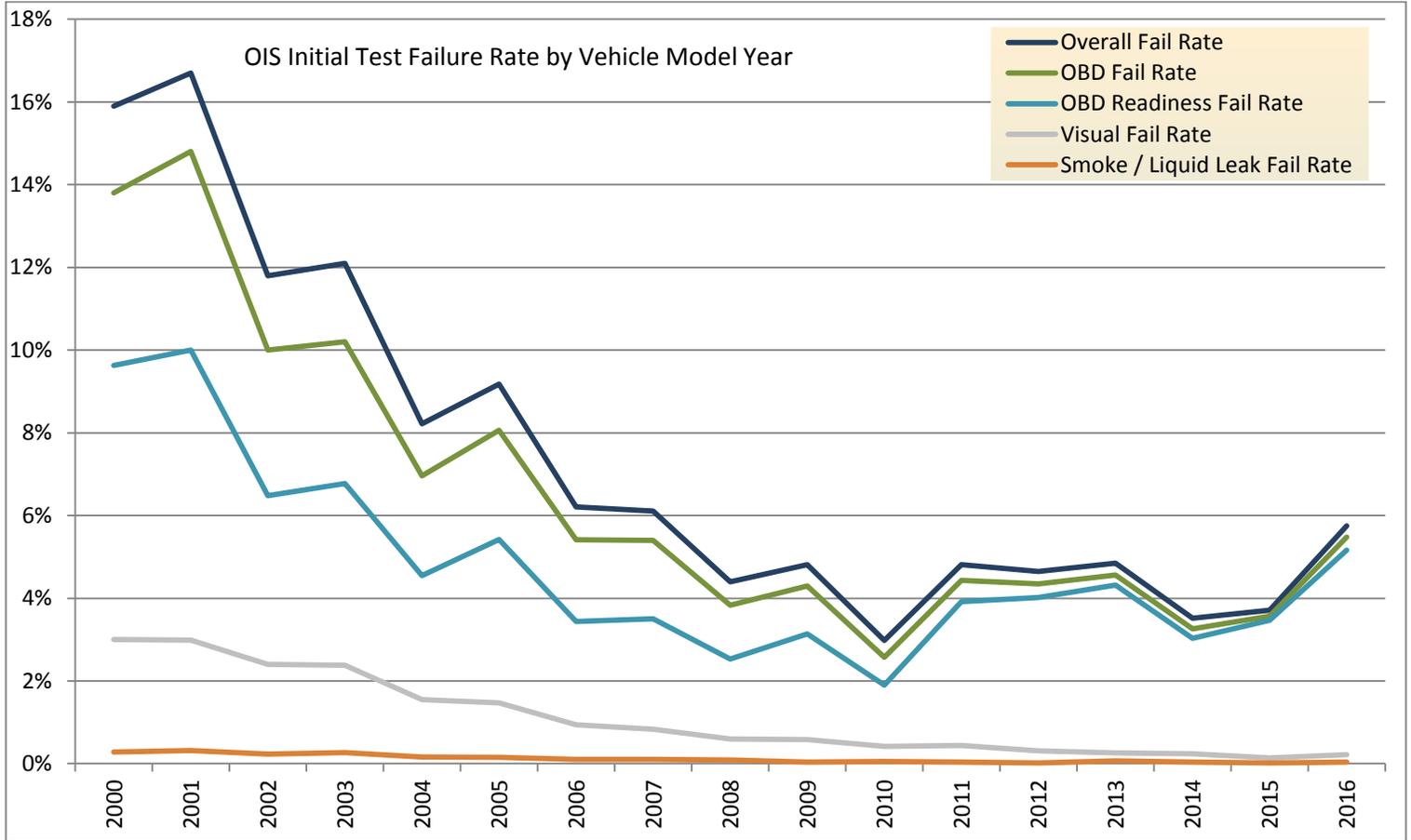
Note: Please see tabular data in Table 17 for BAR-97 tests conducted on other vehicle model years not shown in chart.

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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	233	323
Certificate of Non Compliance	0	0
Parts Cost	91	35
Hardship Extensions	0	0
Exempt Vehicle	0	24
Exempted by Directive	5	66
Parts Exemption	31	4
Unknown Outcome	0	0
Permanently Exempt Vehicle	0	0
Temporarily Exempt Vehicle	0	0
<b>Total</b>	<b>360</b>	<b>452</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)	2,651
EO + EI (Inspect and Repair)	5,023
<b>Total</b>	<b>7,677</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	73,806	\$48.34	237,669	\$46.61	311,475	\$47.02
STAR Test Only	137,947	\$46.94	382,505	\$48.39	520,452	\$48.00
Non-STAR Test and Repair	26,261	\$44.23	142,494	\$53.08	168,755	\$51.71
Non-STAR Test Only	4,206	\$41.13	15,233	\$43.24	19,439	\$42.79
Test and Repair/Dealer	431	\$50.96	3,849	\$56.50	4,280	\$55.94
<b>Total</b>	<b>242,651</b>	<b>\$46.98</b>	<b>781,757</b>	<b>\$48.64</b>	<b>1,024,408</b>	<b>\$48.25</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	34	\$42.76	6,138	\$50.41	73,772	\$48.34	231,531	\$46.51
STAR Test Only	2	\$30.00	3,952	\$41.08	137,945	\$46.94	378,553	\$48.47
Non-STAR Test and Repair	5	\$99.00	58,009	\$63.14	26,256	\$44.22	84,485	\$46.18
Non-STAR Test Only	5	\$50.00	3,028	\$48.09	4,201	\$41.12	12,205	\$42.04
Test and Repair/Dealer	0	\$0.00	1,177	\$63.42	431	\$50.96	2,672	\$53.45
<b>Total</b>	<b>46</b>	<b>\$49.10</b>	<b>72,304</b>	<b>\$60.23</b>	<b>242,605</b>	<b>\$46.98</b>	<b>709,453</b>	<b>\$47.46</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
1965	1	1	100.00%	100.00%	0.00%	0.00%	100.00%	NA
1971	1	1	100.00%	0.00%	0.00%	0.00%	100.00%	NA
1976	717	205	28.59%	19.25%	6.42%	15.06%	9.21%	NA
1977	893	252	28.22%	18.70%	7.61%	15.45%	8.51%	NA
1978	1,042	294	28.21%	16.31%	7.29%	16.60%	9.69%	NA
1979	1,153	359	31.14%	19.08%	7.98%	16.22%	10.06%	NA
1980	647	195	30.14%	18.55%	8.04%	16.69%	10.20%	NA
1981	754	217	28.78%	20.29%	9.55%	14.06%	8.89%	NA
1982	812	229	28.20%	19.21%	6.40%	13.67%	9.36%	NA
1983	1,025	309	30.15%	20.00%	8.10%	15.12%	10.83%	NA
1984	1,900	569	29.95%	21.95%	9.74%	14.79%	9.26%	NA
1985	2,481	765	30.83%	22.13%	7.90%	15.92%	9.47%	NA
1986	3,285	993	30.23%	20.61%	8.68%	15.40%	9.10%	NA
1987	3,925	1,136	28.94%	19.69%	7.11%	15.11%	8.10%	NA
1988	4,738	1,308	27.61%	19.35%	6.61%	14.20%	6.78%	NA
1989	6,566	1,780	27.11%	18.58%	5.99%	13.92%	6.73%	NA
1990	8,096	2,087	25.78%	17.37%	4.99%	13.24%	6.16%	NA
1991	9,561	2,437	25.49%	17.09%	4.95%	12.92%	5.67%	NA
1992	9,994	2,568	25.70%	17.40%	4.63%	12.76%	5.82%	NA
1993	12,414	3,313	26.69%	19.02%	4.26%	11.83%	5.78%	NA
1994	16,936	4,345	25.66%	17.34%	3.74%	11.80%	5.54%	NA
1995	19,075	4,775	25.03%	17.05%	3.18%	11.06%	5.71%	NA
1996	25,407	5,794	22.80%	10.05%	1.46%	14.40%	4.22%	13.76%
1997	28,239	6,586	23.32%	9.72%	1.62%	15.62%	4.03%	14.89%
1998	41,044	7,564	18.43%	6.47%	1.15%	12.65%	3.40%	12.18%
1999	40,986	7,133	17.40%	4.76%	0.95%	12.97%	3.37%	12.62%
2000	763	158	20.71%	8.39%	3.15%	14.29%	1.70%	13.89%
2001	391	75	19.18%	7.67%	2.30%	16.11%	2.30%	15.60%
2002	447	45	10.07%	4.47%	1.34%	7.61%	1.34%	6.71%
2003	370	34	9.19%	5.68%	1.89%	7.03%	0.54%	7.03%
2004	640	42	6.56%	2.50%	0.63%	4.84%	0.47%	4.38%
2005	291	31	10.65%	4.47%	1.03%	8.59%	1.37%	8.59%
2006	635	30	4.72%	2.68%	1.42%	2.52%	0.31%	2.52%
2007	230	5	2.17%	0.43%	0.43%	1.74%	0.00%	1.30%
2008	404	10	2.48%	0.99%	0.25%	1.24%	0.74%	0.99%
2009	70	3	4.29%	2.86%	0.00%	1.43%	0.00%	1.43%
2010	119	3	2.52%	2.52%	0.00%	0.84%	0.00%	0.84%
2011	33	3	9.09%	6.06%	6.06%	3.03%	0.00%	3.03%
2012	37	2	5.41%	5.41%	0.00%	5.41%	2.70%	5.41%
2013	27	2	7.41%	3.70%	0.00%	7.41%	0.00%	7.41%
2014	43	1	2.33%	2.33%	0.00%	2.33%	0.00%	2.33%
2015	84	2	2.38%	0.00%	0.00%	1.19%	1.19%	1.19%
2016	159	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	246,435	55,661	22.59%	11.89%	2.86%	13.19%	4.82%	7.38%

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
1989	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1991	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1993	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1994	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1995	3	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	7	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	18	1	5.56%	5.56%	0.00%	5.56%	0.00%	0.00%
1998	305	53	17.40%	15.40%	2.62%	14.10%	7.54%	1.31%
1999	1,162	199	17.10%	15.60%	2.24%	15.20%	10.40%	0.34%
2000	69,404	11,003	15.90%	14.10%	3.00%	13.80%	9.63%	0.28%
2001	49,170	8,227	16.70%	15.10%	2.99%	14.80%	10.00%	0.32%
2002	81,239	9,557	11.80%	10.20%	2.40%	10.00%	6.48%	0.23%
2003	50,545	6,101	12.10%	10.50%	2.38%	10.20%	6.77%	0.27%
2004	96,258	7,917	8.22%	7.12%	1.55%	6.96%	4.55%	0.16%
2005	53,715	4,930	9.18%	8.20%	1.47%	8.06%	5.42%	0.15%
2006	107,103	6,656	6.21%	5.51%	0.94%	5.41%	3.44%	0.10%
2007	51,780	3,164	6.11%	5.50%	0.83%	5.40%	3.50%	0.10%
2008	88,988	3,912	4.40%	3.91%	0.60%	3.83%	2.53%	0.09%
2009	20,841	1,003	4.81%	4.34%	0.58%	4.30%	3.14%	0.04%
2010	81,093	2,418	2.98%	2.62%	0.42%	2.57%	1.90%	0.05%
2011	13,835	665	4.81%	4.47%	0.44%	4.43%	3.92%	0.04%
2012	19,568	910	4.65%	4.37%	0.31%	4.35%	4.02%	0.02%
2013	13,320	646	4.85%	4.62%	0.26%	4.56%	4.32%	0.07%
2014	14,704	518	3.52%	3.31%	0.24%	3.26%	3.03%	0.04%
2015	12,200	453	3.71%	3.60%	0.14%	3.57%	3.47%	0.02%
2016	2,228	128	5.75%	5.52%	0.22%	5.48%	5.16%	0.04%
2017	8	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	827,498	68,461	8.27%	7.34%	1.41%	7.19%	4.90%	0.15%

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).