

# Executive Summary Report

## SMOG CHECK Statewide

### July 2016

#### 1. Testing Volume

	All Tests	Failed	Percent (%) Failed
Initial Test	998,239	107,290	10.75%
Total	1,111,745	131,203	11.80%

#### 2. Certification Volume

	Certificates Issued	Percent (%) Certificates Issued	No Certificates Issued	Percent (%) No Certificates Issued
Initial Test	884,161	88.57%	114,078	11.43%
Total	972,807	87.50%	138,938	12.50%

#### 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	443,846	88.04%	60,296	11.96%
Non-STAR Test Only	23,696	91.78%	2,121	8.22%
STAR Test and Repair	265,775	88.11%	35,849	11.89%
Non-STAR Test and Repair	146,207	92.03%	12,660	7.97%
Total	879,524	88.80%	110,926	11.20%

\*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	31,529	14.50%
All Visual	10,328	1.32%	9,757	4.49%
All Functional	53,123	6.80%	26,328	12.10%
OBDII	51,980	6.65%	14,704	6.77%
Overall	60,122	7.70%	47,168	21.70%

#### 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	47,704	103,386	37,015	81,874
Non-Directed	253,920	400,756	228,760	361,972
Total	301,624	504,142	265,775	443,846

#### 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	346	136	189	82
Non-Directed	158,521	25,681	146,018	23,614
Total	158,867	25,817	146,207	23,696

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

Program Areas	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
Enhanced	682,808	52,846	7.74%	173,436	39,127	22.60%
Partial	32,948	2,542	7.72%	12,148	2,884	23.70%
Basic	59,188	4,331	7.32%	24,418	3,477	14.20%
Change of Ownership	6,220	403	6.48%	1,951	376	19.30%
No Program	0	0	0.00%	3	1	33.30%
Unknown	0	0	0.00%	5,119	1,303	25.50%
Total Program Area	781,164	60,122	7.70%	217,075	47,168	21.70%

#### 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	381,121	31,839	8.35%	123,021	27,292	22.20%
STAR Test Only Suspended	796	65	8.17%	55	11	20.00%
Non-STAR Test Only	22,207	1,291	5.81%	3,610	728	20.20%
STAR Test and Repair	234,943	18,839	8.02%	66,681	15,539	23.30%
STAR Test and Repair Suspended	185	9	4.86%	6	2	33.30%
Non-STAR Test and Repair	136,654	7,690	5.63%	22,213	3,259	14.70%
Test and Repair/Dealer	3,341	196	5.87%	339	38	11.20%
Business Fleet	4	0	0.00%	1	0	0.00%
Permanent Fleet Registered	0	0	0.00%	4	0	0.00%
Referee	205	91	44.40%	336	159	47.30%
Govt Fleet	1,709	101	5.91%	814	140	17.20%
Total	781,164	60,122	7.70%	217,075	47,168	21.70%

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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	2,202	100	2,302
STAR Regular Test and Repair CAP Basic	148	0	0	0	148
STAR Regular Test and Repair CAP COO	0	67	0	0	67
STAR Test Only	14	0	1,888	27	1,929
Non-STAR Regular Test and Repair	479	41	2,296	244	3,060
Non-STAR Test Only	19	2	390	18	429
Repair Only	2	1	50	0	53
Basic Area Dealer	73	0	0	0	73
Business Fleet	0	0	3	0	3
Permanent Fleet Registered	2	0	13	0	15
Referee	5	0	27	0	32
Government Fleet	41	2	277	11	331
Unknown Type	0	0	8	0	8
<b>Total</b>	<b>783</b>	<b>113</b>	<b>7,154</b>	<b>400</b>	<b>8,450</b>

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

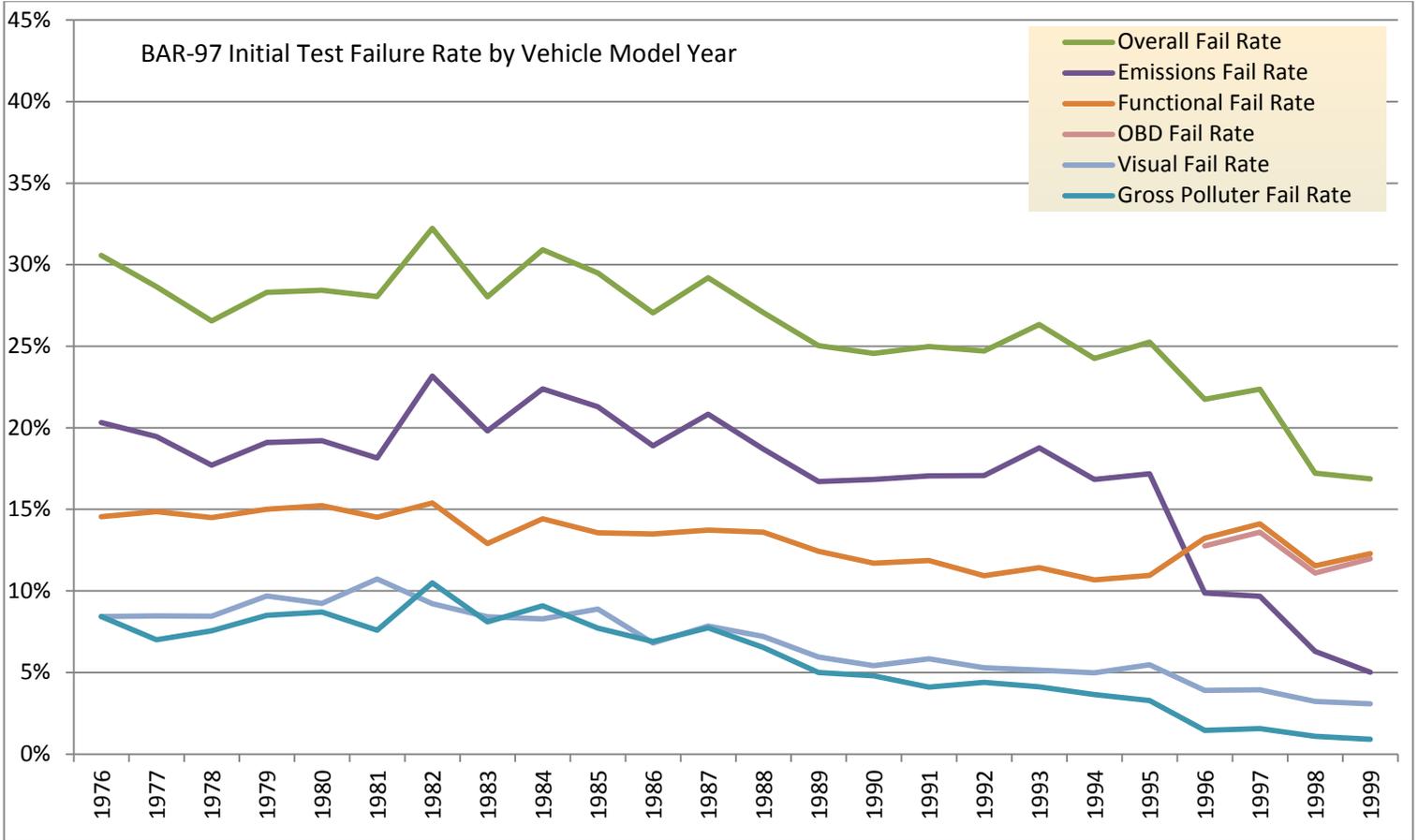
Station Type	Equipment Type		
	BAR-97 Only	OIS Only	BAR-97 & OIS
STAR Regular Test and Repair CAP Enhanced	5	154	2,126
STAR Regular Test and Repair CAP Basic	1	6	90
STAR Regular Test and Repair CAP COO	0	8	55
STAR Test Only	2	46	1,818
Non-STAR Regular Test and Repair	7	1,492	966
Non-STAR Test Only	4	75	136
Basic Area Dealer	0	29	39
Business Fleet	0	1	0
Permanent Fleet Registered	0	0	0
Referee	0	0	31
Government Fleet	15	84	65
Unknown Type	0	0	7
<b>Total</b>	<b>34</b>	<b>1,895</b>	<b>5,333</b>

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



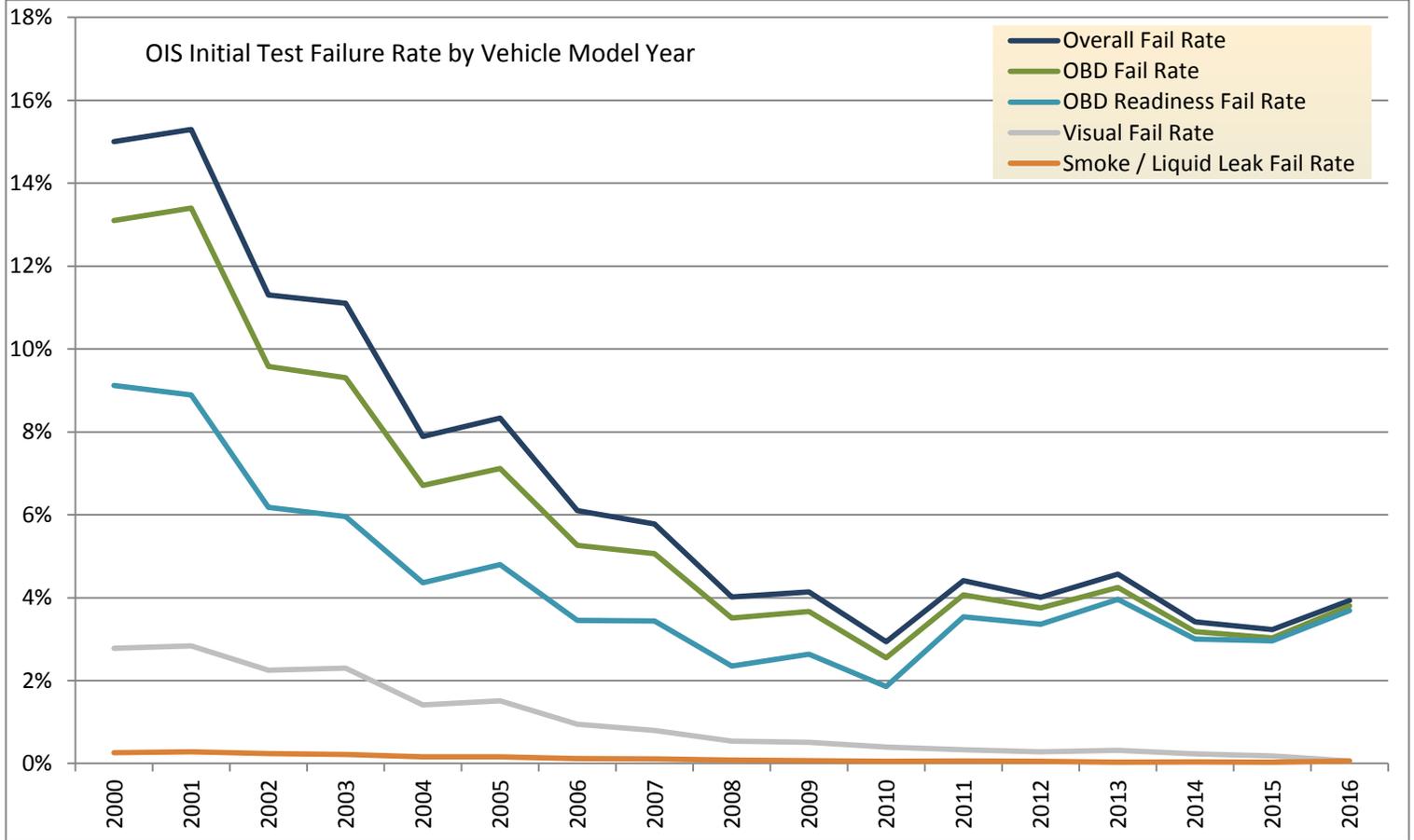
Note: Please see tabular data in Table 17 for BAR-97 tests conducted on other vehicle model years not shown in chart.

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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	201	285
Certificate of Non Compliance	0	0
Parts Cost	69	29
Hardship Extensions	0	0
Exempt Vehicle	1	27
Exempted by Directive	6	29
Parts Exemption	20	1
Unknown Outcome	0	0
Permanently Exempt Vehicle	0	0
Temporarily Exempt Vehicle	0	0
<b>Total</b>	<b>297</b>	<b>371</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)	2,717
EO + EI (Inspect and Repair)	4,656
<b>Total</b>	<b>7,376</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	66,399	\$48.98	225,571	\$46.53	291,970	\$47.09
STAR Test Only	122,039	\$47.60	352,395	\$48.96	474,434	\$48.61
Non-STAR Test and Repair	22,115	\$44.75	123,678	\$52.69	145,793	\$51.48
Non-STAR Test Only	3,520	\$41.30	13,017	\$42.54	16,537	\$42.27
Test and Repair/Dealer	339	\$50.98	3,195	\$57.39	3,534	\$56.78
<b>Total</b>	<b>214,412</b>	<b>\$47.63</b>	<b>718,837</b>	<b>\$48.77</b>	<b>933,249</b>	<b>\$48.51</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	20	\$57.46	6,342	\$49.04	66,379	\$48.98	219,229	\$46.46
STAR Test Only	174	\$21.86	3,454	\$40.24	121,865	\$47.63	348,941	\$49.05
Non-STAR Test and Repair	13	\$60.29	55,337	\$61.46	22,102	\$44.74	68,341	\$45.58
Non-STAR Test Only	10	\$29.53	3,398	\$43.92	3,510	\$41.34	9,619	\$42.05
Test and Repair/Dealer	0	\$0.00	1,157	\$63.68	339	\$50.98	2,038	\$53.83
<b>Total</b>	<b>217</b>	<b>\$27.80</b>	<b>69,688</b>	<b>\$58.46</b>	<b>214,195</b>	<b>\$47.65</b>	<b>649,149</b>	<b>\$47.73</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
1955	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	NA
1976	605	185	30.58%	20.33%	8.43%	14.55%	8.43%	NA
1977	827	237	28.66%	19.47%	7.01%	14.87%	8.46%	NA
1978	994	264	26.56%	17.71%	7.55%	14.49%	8.45%	NA
1979	1,000	283	28.30%	19.10%	8.50%	15.00%	9.70%	NA
1980	552	157	28.44%	19.20%	8.70%	15.22%	9.24%	NA
1981	606	170	28.05%	18.15%	7.59%	14.52%	10.73%	NA
1982	695	224	32.23%	23.17%	10.50%	15.40%	9.21%	NA
1983	999	280	28.03%	19.82%	8.11%	12.91%	8.41%	NA
1984	1,630	504	30.92%	22.39%	9.08%	14.42%	8.28%	NA
1985	2,306	680	29.49%	21.29%	7.72%	13.57%	8.89%	NA
1986	3,118	843	27.04%	18.89%	6.90%	13.50%	6.80%	NA
1987	3,389	990	29.21%	20.83%	7.73%	13.72%	7.85%	NA
1988	4,051	1,096	27.06%	18.69%	6.54%	13.60%	7.21%	NA
1989	5,702	1,427	25.03%	16.70%	5.00%	12.43%	5.95%	NA
1990	7,245	1,780	24.57%	16.83%	4.79%	11.70%	5.42%	NA
1991	8,611	2,152	24.99%	17.05%	4.11%	11.86%	5.83%	NA
1992	8,645	2,135	24.70%	17.07%	4.40%	10.93%	5.29%	NA
1993	10,908	2,873	26.34%	18.77%	4.12%	11.42%	5.14%	NA
1994	15,373	3,728	24.25%	16.83%	3.64%	10.67%	4.98%	NA
1995	16,477	4,161	25.25%	17.18%	3.28%	10.96%	5.47%	NA
1996	22,174	4,823	21.75%	9.87%	1.46%	13.24%	3.90%	12.76%
1997	24,427	5,465	22.37%	9.67%	1.56%	14.11%	3.94%	13.61%
1998	37,678	6,488	17.22%	6.29%	1.08%	11.53%	3.22%	11.09%
1999	34,830	5,877	16.87%	5.01%	0.90%	12.28%	3.07%	11.97%
2000	638	113	17.71%	8.31%	3.92%	11.76%	2.04%	11.13%
2001	297	47	15.82%	7.41%	3.03%	10.77%	0.67%	10.10%
2002	429	46	10.72%	5.59%	2.33%	5.83%	1.40%	5.83%
2003	315	19	6.03%	2.54%	1.27%	3.17%	2.22%	2.86%
2004	586	40	6.83%	3.24%	0.51%	3.75%	0.85%	3.58%
2005	264	17	6.44%	3.41%	1.52%	3.41%	2.27%	3.41%
2006	599	25	4.17%	1.34%	0.67%	2.34%	0.83%	2.17%
2007	212	10	4.72%	1.42%	0.00%	3.77%	0.00%	3.77%
2008	411	13	3.16%	1.70%	0.97%	1.22%	0.73%	1.22%
2009	54	2	3.70%	1.85%	1.85%	1.85%	0.00%	1.85%
2010	85	5	5.88%	1.18%	1.18%	5.88%	1.18%	5.88%
2011	41	2	4.88%	7.32%	0.00%	2.44%	2.44%	2.44%
2012	29	1	3.45%	0.00%	0.00%	3.45%	0.00%	3.45%
2013	32	1	3.13%	3.13%	0.00%	0.00%	3.13%	0.00%
2014	34	1	2.94%	0.00%	0.00%	2.94%	0.00%	2.94%
2015	44	1	2.27%	0.00%	0.00%	2.27%	2.27%	2.27%
2016	153	3	1.96%	0.65%	0.00%	1.31%	0.65%	1.31%
2017	9	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	217,075	47,168	21.73%	11.77%	2.76%	12.13%	4.49%	6.77%

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%
1994	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1995	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	3	2	66.70%	66.70%	0.00%	66.70%	33.30%	0.00%
1997	6	1	16.70%	16.70%	0.00%	16.70%	16.70%	0.00%
1998	268	47	17.50%	15.70%	4.10%	14.60%	7.09%	1.12%
1999	950	175	18.40%	17.30%	1.68%	16.90%	12.30%	0.32%
2000	65,364	9,800	15.00%	13.30%	2.78%	13.10%	9.12%	0.26%
2001	42,399	6,474	15.30%	13.60%	2.84%	13.40%	8.89%	0.28%
2002	80,954	9,149	11.30%	9.82%	2.25%	9.58%	6.18%	0.24%
2003	44,727	4,947	11.10%	9.54%	2.30%	9.31%	5.96%	0.22%
2004	94,554	7,460	7.89%	6.87%	1.41%	6.71%	4.36%	0.16%
2005	46,927	3,908	8.33%	7.28%	1.51%	7.12%	4.80%	0.16%
2006	100,988	6,159	6.10%	5.38%	0.95%	5.26%	3.45%	0.12%
2007	41,570	2,402	5.78%	5.17%	0.80%	5.06%	3.44%	0.11%
2008	87,201	3,503	4.02%	3.59%	0.54%	3.51%	2.35%	0.08%
2009	20,291	840	4.14%	3.75%	0.51%	3.67%	2.64%	0.07%
2010	86,261	2,533	2.94%	2.60%	0.40%	2.55%	1.86%	0.05%
2011	12,892	568	4.41%	4.13%	0.33%	4.07%	3.54%	0.06%
2012	16,473	661	4.01%	3.79%	0.28%	3.75%	3.36%	0.05%
2013	12,313	563	4.57%	4.28%	0.32%	4.25%	3.96%	0.03%
2014	11,421	391	3.42%	3.22%	0.23%	3.18%	3.00%	0.04%
2015	10,848	350	3.23%	3.06%	0.18%	3.03%	2.96%	0.03%
2016	4,659	183	3.93%	3.86%	0.06%	3.80%	3.69%	0.06%
2017	92	6	6.52%	6.52%	0.00%	6.52%	6.52%	0.00%
All Model Years	781,164	60,122	7.70%	6.80%	1.32%	6.65%	4.53%	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).