

# Executive Summary Report

## SMOG CHECK Statewide

### April 2016

#### 1. Testing Volume

	All Tests	Failed	Percent (%) Failed
Initial Test	996,046	109,326	10.98%
Total	1,111,662	133,126	11.98%

#### 2. Certification Volume

	Certificates Issued	Percent (%) Certificates Issued	No Certificates Issued	Percent (%) No Certificates Issued
Initial Test	878,978	88.25%	117,068	11.75%
Total	969,730	87.23%	141,932	12.77%

#### 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	437,581	87.69%	61,440	12.31%
Non-STAR Test Only	22,775	91.30%	2,170	8.70%
STAR Test and Repair	262,647	87.90%	36,150	12.10%
Non-STAR Test and Repair	151,722	92.01%	13,182	7.99%
Total	874,725	88.56%	112,942	11.44%

\*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	30,602	14.60%
All Visual	10,611	1.35%	9,711	4.62%
All Functional	55,761	7.10%	26,466	12.60%
OBDII	54,675	6.96%	14,883	7.08%
Overall	62,865	8.00%	46,461	22.10%

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

Program Areas	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
Enhanced	686,025	55,379	8.07%	166,379	38,272	23.00%
Partial	33,708	2,729	8.10%	12,380	2,837	22.90%
Basic	59,300	4,249	7.17%	23,604	3,522	14.90%
Change of Ownership	6,829	508	7.44%	2,018	424	21.00%
No Program	0	0	0.00%	2	2	100.00%
Unknown	0	0	0.00%	5,801	1,404	24.20%
Total Program Area	785,862	62,865	8.00%	210,184	46,461	22.10%

#### 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	381,053	33,388	8.76%	117,968	26,837	22.70%
STAR Test Only Suspended	0	0	0.00%	0	0	0.00%
Non-STAR Test Only	21,191	1,357	6.40%	3,754	680	18.10%
STAR Test and Repair	234,246	19,508	8.33%	64,551	15,164	23.50%
STAR Test and Repair Suspended	31	1	3.23%	1	0	0.00%
Non-STAR Test and Repair	143,026	8,266	5.78%	21,878	3,271	15.00%
Test and Repair/Dealer	3,750	151	4.03%	383	46	12.00%
Business Fleet	8	0	0.00%	0	0	0.00%
Permanent Fleet Registered	0	0	0.00%	0	0	0.00%
Referee	175	87	49.70%	334	226	67.70%
Govt Fleet	2,382	107	4.49%	1,315	237	18.00%
Total	785,862	62,865	8.00%	210,184	46,461	22.10%

#### 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	44,999	96,876	34,909	76,310
Non-Directed	253,798	402,145	227,738	361,271
Total	298,797	499,021	262,647	437,581

#### 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	363	110	185	65
Non-Directed	164,541	24,835	151,537	22,710
Total	164,904	24,945	151,722	22,775

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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	2,215	100	2,315
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	14	1	1,907	27	1,949
Non-STAR Regular Test and Repair	474	38	2,263	245	3,020
Non-STAR Test Only	18	3	382	15	418
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	2	0	2
<b>Total</b>	<b>785</b>	<b>111</b>	<b>7,151</b>	<b>399</b>	<b>8,446</b>

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

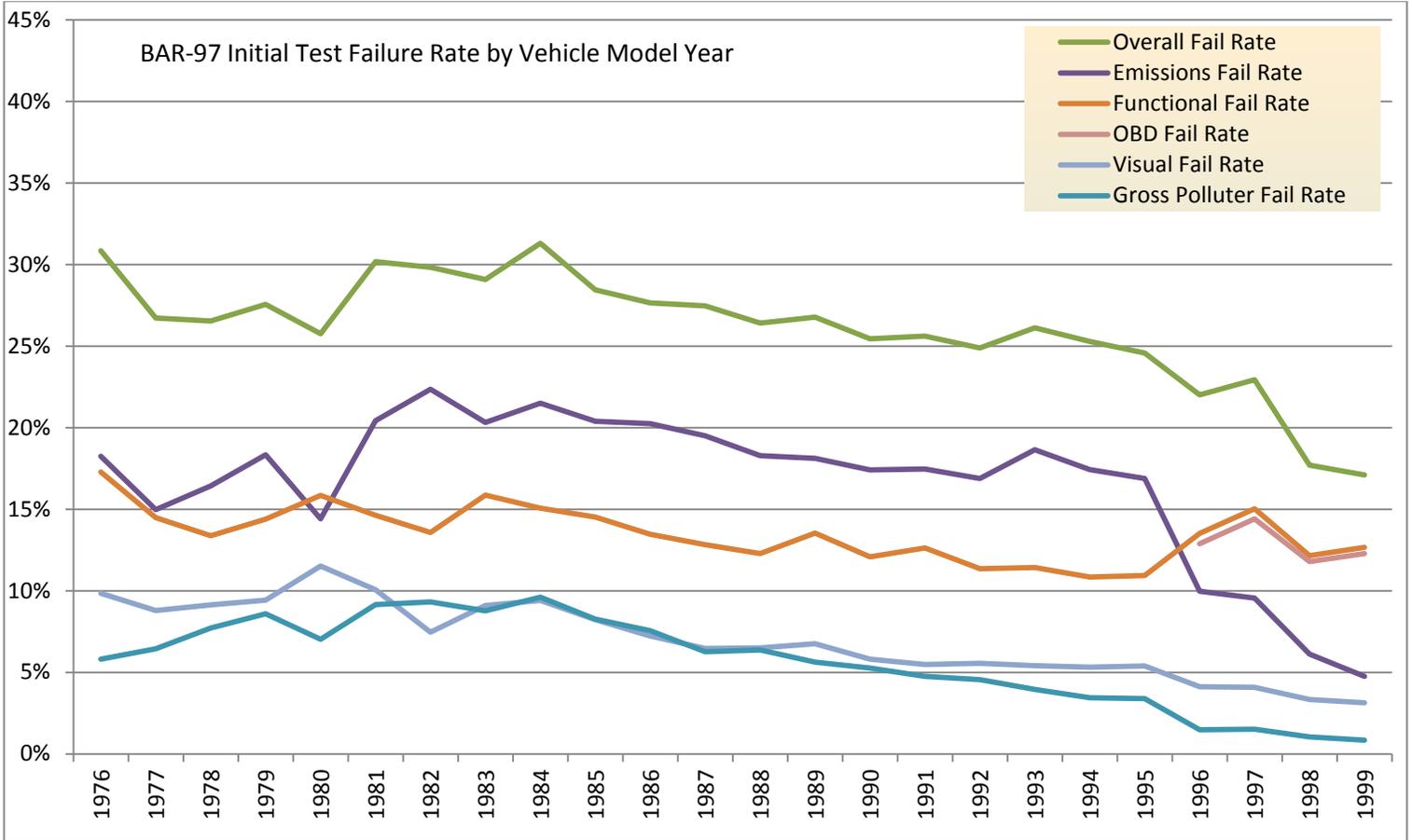
Station Type	Equipment Type		
	BAR-97 Only	OIS Only	BAR-97 & OIS
STAR Regular Test and Repair CAP Enhanced	5	144	2,164
STAR Regular Test and Repair CAP Basic	0	5	93
STAR Regular Test and Repair CAP COO	1	6	55
STAR Test Only	2	33	1,857
Non-STAR Regular Test and Repair	3	1,419	1,030
Non-STAR Test Only	2	67	135
Basic Area Dealer	0	26	45
Business Fleet	0	2	0
Permanent Fleet Registered	0	0	0
Referee	0	0	31
Government Fleet	15	82	67
Unknown Type	0	0	2
<b>Total</b>	<b>28</b>	<b>1,784</b>	<b>5,479</b>

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



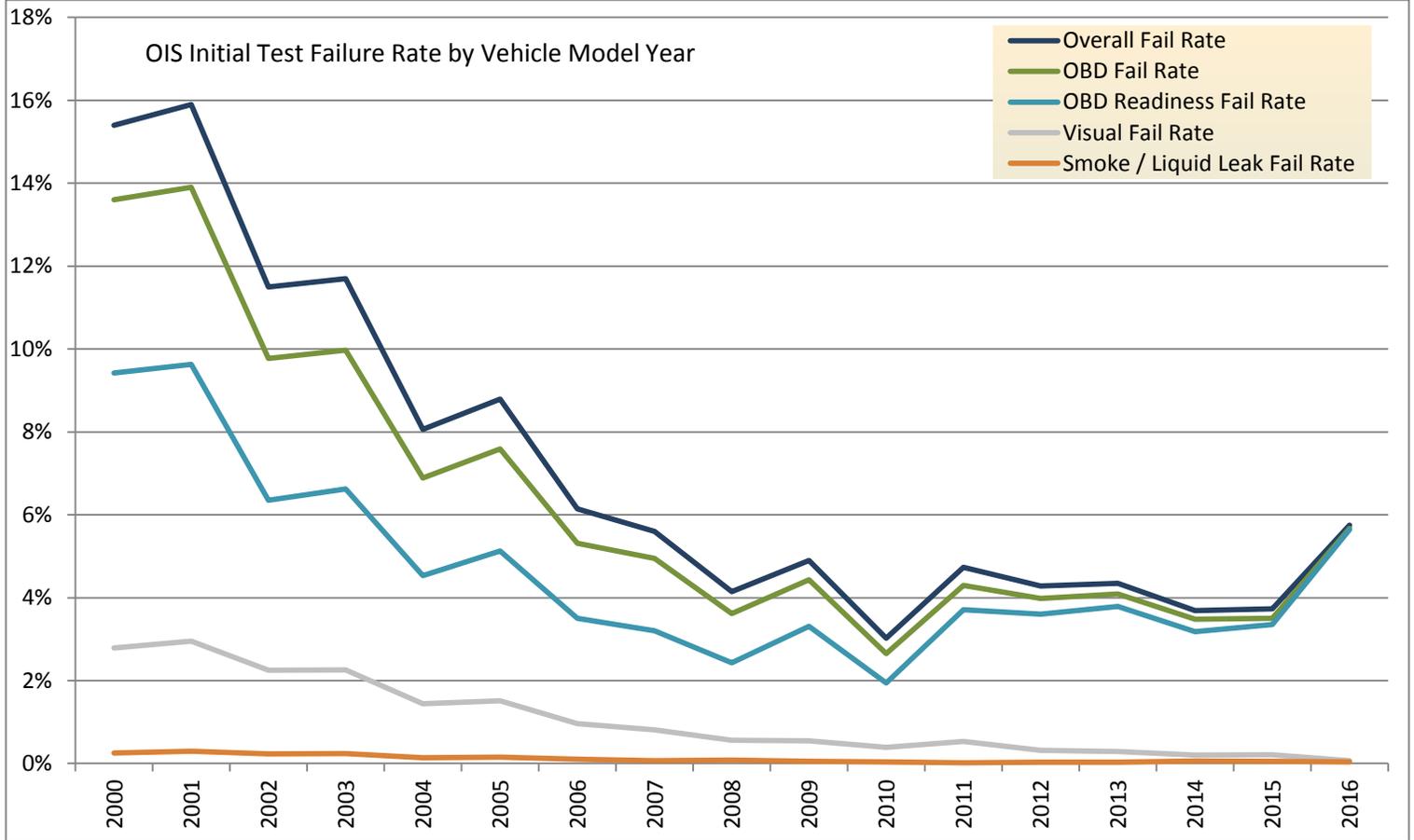
Note: Please see tabular data in Table 17 for BAR-97 tests conducted on other vehicle model years not shown in chart.

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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	212	191
Certificate of Non Compliance	0	0
Parts Cost	56	27
Hardship Extensions	0	0
Exempt Vehicle	0	19
Exempted by Directive	1	132
Parts Exemption	50	2
Unknown Outcome	0	0
Permanently Exempt Vehicle	0	0
Temporarily Exempt Vehicle	0	0
<b>Total</b>	<b>319</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)	2,644
EO + EI (Inspect and Repair)	4,905
<b>Total</b>	<b>7,552</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	72,083	\$48.56	227,426	\$46.61	299,509	\$47.08
STAR Test Only	132,215	\$47.13	362,113	\$48.53	494,328	\$48.16
Non-STAR Test and Repair	24,223	\$44.69	131,627	\$53.01	155,850	\$51.72
Non-STAR Test Only	4,156	\$41.56	13,932	\$43.34	18,088	\$42.93
Test and Repair/Dealer	422	\$49.62	3,537	\$56.75	3,959	\$55.99
<b>Total</b>	<b>233,099</b>	<b>\$47.22</b>	<b>738,666</b>	<b>\$48.68</b>	<b>971,765</b>	<b>\$48.33</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	55	\$42.60	5,685	\$51.74	72,016	\$48.56	221,741	\$46.48
STAR Test Only	259	\$29.71	2,728	\$40.42	131,954	\$47.16	359,385	\$48.59
Non-STAR Test and Repair	4	\$74.75	58,383	\$61.86	24,203	\$44.69	73,244	\$45.95
Non-STAR Test Only	117	\$50.23	3,053	\$46.38	4,036	\$41.30	10,879	\$42.49
Test and Repair/Dealer	0	\$0.00	1,293	\$62.18	422	\$49.62	2,244	\$53.63
<b>Total</b>	<b>435</b>	<b>\$37.27</b>	<b>71,142</b>	<b>\$59.57</b>	<b>232,631</b>	<b>\$47.24</b>	<b>667,524</b>	<b>\$47.52</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
1976	619	191	30.86%	18.26%	5.82%	17.29%	9.85%	NA
1977	808	216	26.73%	14.98%	6.44%	14.48%	8.79%	NA
1978	919	244	26.55%	16.43%	7.73%	13.38%	9.14%	NA
1979	965	266	27.56%	18.34%	8.60%	14.40%	9.43%	NA
1980	555	143	25.77%	14.41%	7.03%	15.86%	11.53%	NA
1981	656	198	30.18%	20.43%	9.15%	14.63%	10.06%	NA
1982	751	224	29.83%	22.37%	9.32%	13.58%	7.46%	NA
1983	945	275	29.10%	20.32%	8.78%	15.87%	9.10%	NA
1984	1,613	505	31.31%	21.51%	9.61%	15.07%	9.42%	NA
1985	2,285	650	28.45%	20.39%	8.27%	14.53%	8.23%	NA
1986	2,948	815	27.65%	20.25%	7.56%	13.47%	7.23%	NA
1987	3,475	955	27.48%	19.51%	6.27%	12.83%	6.47%	NA
1988	4,063	1,073	26.41%	18.29%	6.37%	12.28%	6.50%	NA
1989	5,645	1,512	26.78%	18.12%	5.63%	13.55%	6.75%	NA
1990	7,005	1,783	25.45%	17.42%	5.27%	12.09%	5.81%	NA
1991	8,384	2,147	25.61%	17.47%	4.75%	12.64%	5.49%	NA
1992	8,645	2,152	24.89%	16.89%	4.56%	11.35%	5.55%	NA
1993	10,546	2,756	26.13%	18.65%	3.95%	11.44%	5.41%	NA
1994	14,683	3,713	25.29%	17.44%	3.45%	10.85%	5.32%	NA
1995	15,892	3,908	24.59%	16.89%	3.40%	10.94%	5.39%	NA
1996	21,893	4,818	22.01%	9.97%	1.49%	13.52%	4.12%	12.88%
1997	23,807	5,461	22.94%	9.55%	1.52%	15.04%	4.08%	14.42%
1998	34,881	6,175	17.70%	6.12%	1.04%	12.16%	3.33%	11.79%
1999	33,954	5,811	17.11%	4.75%	0.85%	12.66%	3.14%	12.28%
2000	667	149	22.34%	8.25%	4.35%	17.39%	2.40%	16.94%
2001	379	130	34.30%	6.33%	2.11%	31.40%	1.85%	30.61%
2002	470	49	10.43%	5.32%	1.91%	6.81%	1.06%	6.60%
2003	288	27	9.38%	3.47%	1.39%	7.99%	1.04%	7.64%
2004	556	39	7.01%	3.60%	1.08%	4.50%	0.54%	4.50%
2005	234	16	6.84%	3.42%	0.85%	4.70%	1.28%	4.70%
2006	563	18	3.20%	1.42%	0.18%	1.42%	0.36%	1.24%
2007	186	3	1.61%	1.08%	0.54%	0.54%	0.00%	0.54%
2008	383	15	3.92%	2.09%	0.26%	2.61%	0.00%	2.61%
2009	71	5	7.04%	1.41%	0.00%	5.63%	0.00%	5.63%
2010	114	7	6.14%	0.88%	0.00%	3.51%	2.63%	3.51%
2011	47	3	6.38%	2.13%	0.00%	6.38%	2.13%	6.38%
2012	24	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	17	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	34	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	55	4	7.27%	3.64%	0.00%	0.00%	5.45%	0.00%
2016	159	5	3.14%	2.52%	0.63%	0.00%	2.52%	0.00%
All Model Years	210,184	46,461	22.10%	11.76%	2.80%	12.59%	4.62%	7.08%

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	1	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%
1990	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1992	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	3	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	20	6	30.00%	20.00%	15.00%	20.00%	10.00%	0.00%
1998	282	45	16.00%	13.50%	3.90%	11.30%	8.16%	2.13%
1999	1,037	173	16.70%	15.40%	2.12%	14.70%	10.10%	0.77%
2000	66,486	10,242	15.40%	13.80%	2.79%	13.60%	9.42%	0.25%
2001	45,146	7,181	15.90%	14.20%	2.95%	13.90%	9.63%	0.30%
2002	78,504	9,026	11.50%	10.00%	2.25%	9.77%	6.35%	0.23%
2003	46,279	5,402	11.70%	10.20%	2.26%	9.97%	6.62%	0.24%
2004	94,116	7,582	8.06%	7.03%	1.44%	6.89%	4.53%	0.14%
2005	49,367	4,338	8.79%	7.74%	1.51%	7.59%	5.13%	0.15%
2006	103,364	6,345	6.14%	5.41%	0.96%	5.31%	3.50%	0.10%
2007	48,088	2,693	5.60%	5.02%	0.81%	4.95%	3.20%	0.07%
2008	84,950	3,529	4.15%	3.70%	0.56%	3.62%	2.43%	0.08%
2009	18,901	927	4.90%	4.49%	0.55%	4.43%	3.31%	0.05%
2010	78,354	2,370	3.02%	2.69%	0.39%	2.65%	1.94%	0.04%
2011	13,079	619	4.73%	4.32%	0.53%	4.30%	3.71%	0.02%
2012	17,457	748	4.28%	4.01%	0.32%	3.98%	3.60%	0.03%
2013	12,549	546	4.35%	4.12%	0.29%	4.09%	3.79%	0.03%
2014	13,790	509	3.69%	3.54%	0.20%	3.48%	3.18%	0.06%
2015	11,291	421	3.73%	3.55%	0.21%	3.50%	3.35%	0.05%
2016	2,785	160	5.75%	5.71%	0.07%	5.67%	5.64%	0.04%
2017	10	2	20.00%	20.00%	0.00%	20.00%	20.00%	0.00%
All Model Years	785,862	62,865	8.00%	7.10%	1.35%	6.96%	4.77%	0.14%

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).