

Executive Summary Report

SMOG CHECK Statewide

August 2016

1. Testing Volume

	All Tests	Failed	Percent (%) Failed
Initial Test	1,081,949	116,359	10.75%
Total	1,208,286	143,792	11.90%

2. Certification Volume

	Certificates Issued	Percent (%) Certificates Issued	No Certificates Issued	Percent (%) No Certificates Issued
Initial Test	957,458	88.49%	124,491	11.51%
Total	1,055,221	87.33%	153,065	12.67%

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	482,053	88.01%	65,661	11.99%
Non-STAR Test Only	22,637	90.92%	2,260	9.08%
STAR Test and Repair	288,731	88.04%	39,238	11.96%
Non-STAR Test and Repair	158,763	91.98%	13,842	8.02%
Total	952,184	88.73%	121,001	11.27%

*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	33,928	14.50%
All Visual	11,445	1.35%	10,857	4.64%
All Functional	57,702	6.81%	28,536	12.20%
OBDII	56,429	6.66%	15,791	6.74%
Overall	65,370	7.71%	50,989	21.80%

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	50,767	110,061	39,419	87,007
Non-Directed	277,202	437,653	249,312	395,046
Total	327,969	547,714	288,731	482,053

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	421	145	198	91
Non-Directed	172,184	24,752	158,565	22,546
Total	172,605	24,897	158,763	22,637

7. Initial Test Failures by Program Area

Program Areas	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
Enhanced	737,698	57,190	7.75%	185,765	41,921	22.60%
Partial	36,793	2,946	8.01%	13,439	3,086	23.00%
Basic	66,213	4,752	7.18%	27,062	4,062	15.00%
Change of Ownership	7,037	482	6.85%	2,130	479	22.50%
No Program	0	0	0.00%	3	0	0.00%
Unknown	0	0	0.00%	5,809	1,441	24.80%
Total Program Area	847,741	65,370	7.71%	234,208	50,989	21.80%

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	415,632	34,740	8.36%	132,082	29,353	22.20%
STAR Test Only Suspended	858	49	5.71%	91	25	27.50%
Non-STAR Test Only	21,197	1,371	6.47%	3,700	747	20.20%
STAR Test and Repair	255,695	20,397	7.98%	72,274	16,846	23.30%
STAR Test and Repair Suspended	192	15	7.81%	5	1	20.00%
Non-STAR Test and Repair	148,183	8,380	5.66%	24,422	3,632	14.90%
Test and Repair/Dealer	3,812	210	5.51%	408	52	12.70%
Business Fleet	4	0	0.00%	1	0	0.00%
Permanent Fleet Registered	0	0	0.00%	4	0	0.00%
Referee	220	80	36.40%	385	181	47.00%
Govt Fleet	1,948	128	6.57%	840	152	18.10%
Total	847,741	65,370	7.71%	234,208	50,989	21.80%

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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	2,219	99	2,318
STAR Regular Test and Repair CAP Basic	149	0	0	0	149
STAR Regular Test and Repair CAP COO	0	66	0	0	66
STAR Test Only	15	0	1,891	25	1,931
Non-STAR Regular Test and Repair	483	42	2,275	246	3,046
Non-STAR Test Only	15	2	383	22	422
Repair Only	2	1	49	0	52
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	6	0	6
Total	785	113	7,143	403	8,444

10. Number of Stations Conducting Test by Equipment Type

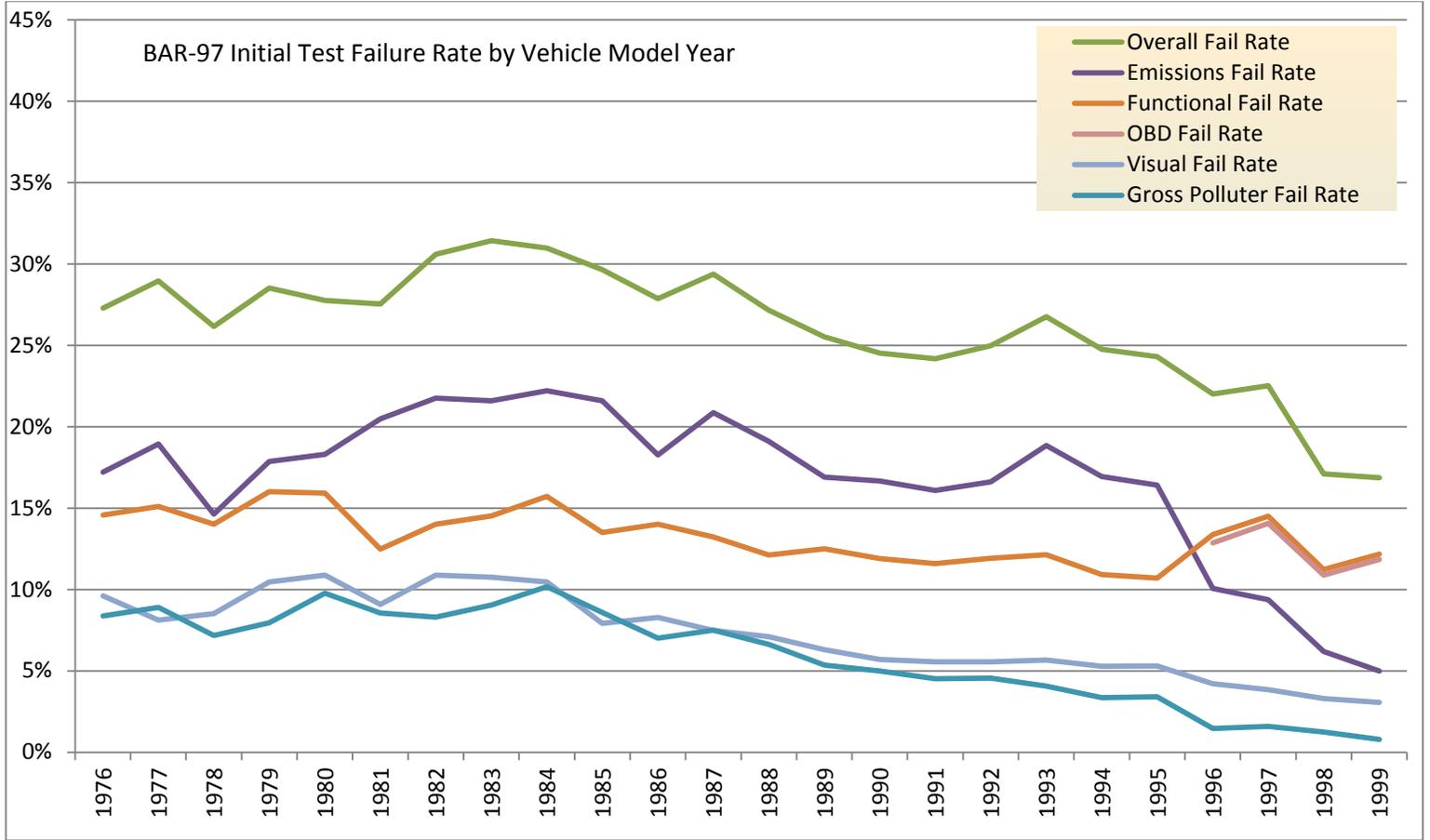
Station Type	Equipment Type		
	BAR-97 Only	OIS Only	BAR-97 & OIS
STAR Regular Test and Repair CAP Enhanced	3	163	2,131
STAR Regular Test and Repair CAP Basic	0	6	88
STAR Regular Test and Repair CAP COO	1	7	58
STAR Test Only	3	40	1,828
Non-STAR Regular Test and Repair	4	1,506	955
Non-STAR Test Only	2	77	129
Basic Area Dealer	0	27	42
Business Fleet	0	0	1
Permanent Fleet Registered	0	0	0
Referee	0	0	31
Government Fleet	15	89	61
Unknown Type	0	0	5
Total	28	1,915	5,329

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



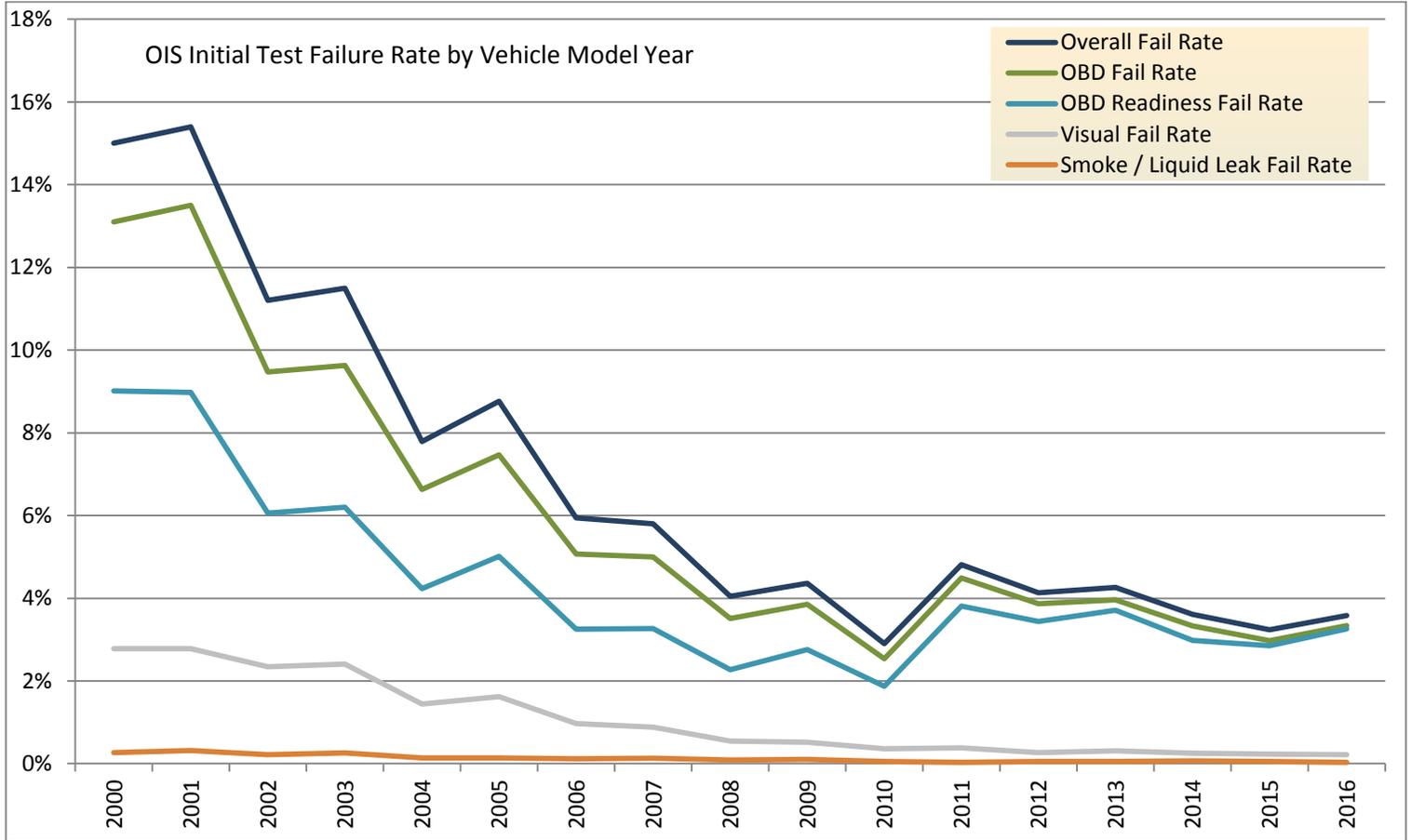
Note: Please see tabular data in Table 17 for BAR-97 tests conducted on other vehicle model years not shown in chart.

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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	321	341
Certificate of Non Compliance	0	1
Parts Cost	103	41
Hardship Extensions	0	1
Exempt Vehicle	0	25
Exempted by Directive	5	34
Parts Exemption	30	7
Unknown Outcome	0	0
Permanently Exempt Vehicle	0	0
Temporarily Exempt Vehicle	0	0
Total	459	450

14. Active Technicians

License Type	Technician Count
EA (Inspect and Repair Enhanced)	1
EB (Inspect and Repair Basic)	1
EI (Repair Only)	2
EO (Inspect Only)	2,782
EO + EI (Inspect and Repair)	4,647
Total	7,433

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	72,000	\$48.76	244,360	\$46.71	316,360	\$47.18
STAR Test Only	131,416	\$47.45	378,575	\$48.82	509,991	\$48.47
Non-STAR Test and Repair	24,270	\$45.36	133,033	\$52.72	157,303	\$51.58
Non-STAR Test Only	3,506	\$41.39	13,277	\$42.81	16,783	\$42.52
Test and Repair/Dealer	408	\$51.71	3,663	\$57.61	4,071	\$57.02
Total	231,600	\$47.55	773,958	\$48.76	1,005,558	\$48.49

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	12	\$37.42	7,158	\$47.93	71,988	\$48.76	237,202	\$46.67
STAR Test Only	212	\$23.20	3,341	\$40.10	131,204	\$47.48	375,234	\$48.90
Non-STAR Test and Repair	9	\$54.36	59,646	\$60.88	24,261	\$45.35	73,387	\$46.08
Non-STAR Test Only	4	\$34.63	3,653	\$45.64	3,502	\$41.40	9,624	\$41.74
Test and Repair/Dealer	0	\$0.00	1,294	\$62.55	408	\$51.71	2,369	\$54.91
Total	237	\$25.30	75,092	\$58.01	231,363	\$47.57	698,866	\$47.77

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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	645	176	27.29%	17.21%	8.37%	14.57%	9.61%	NA
1977	887	257	28.97%	18.94%	8.91%	15.11%	8.12%	NA
1978	963	252	26.17%	14.64%	7.17%	14.02%	8.52%	NA
1979	1,080	308	28.52%	17.87%	7.96%	16.02%	10.46%	NA
1980	634	176	27.76%	18.30%	9.78%	15.93%	10.88%	NA
1981	737	203	27.54%	20.49%	8.55%	12.48%	9.09%	NA
1982	735	225	30.61%	21.77%	8.30%	14.01%	10.88%	NA
1983	1,005	316	31.44%	21.59%	9.05%	14.53%	10.75%	NA
1984	1,710	530	30.99%	22.22%	10.18%	15.73%	10.47%	NA
1985	2,421	718	29.66%	21.60%	8.59%	13.51%	7.93%	NA
1986	3,634	1,013	27.88%	18.27%	7.02%	14.01%	8.28%	NA
1987	3,756	1,104	29.39%	20.87%	7.51%	13.23%	7.48%	NA
1988	4,689	1,274	27.17%	19.11%	6.63%	12.13%	7.10%	NA
1989	6,441	1,644	25.52%	16.91%	5.36%	12.51%	6.30%	NA
1990	7,822	1,919	24.53%	16.67%	4.99%	11.90%	5.70%	NA
1991	9,268	2,242	24.19%	16.09%	4.52%	11.60%	5.56%	NA
1992	9,465	2,364	24.98%	16.61%	4.55%	11.93%	5.56%	NA
1993	11,703	3,132	26.76%	18.86%	4.07%	12.15%	5.67%	NA
1994	16,530	4,093	24.76%	16.95%	3.36%	10.92%	5.28%	NA
1995	17,853	4,338	24.30%	16.41%	3.41%	10.70%	5.30%	NA
1996	23,517	5,178	22.02%	10.07%	1.46%	13.38%	4.21%	12.86%
1997	26,452	5,957	22.52%	9.37%	1.59%	14.50%	3.85%	14.06%
1998	41,056	7,025	17.11%	6.20%	1.24%	11.23%	3.31%	10.88%
1999	36,690	6,189	16.87%	5.00%	0.80%	12.18%	3.07%	11.85%
2000	654	112	17.13%	7.19%	2.91%	12.08%	1.68%	11.31%
2001	311	54	17.36%	7.07%	1.61%	12.54%	2.57%	12.54%
2002	493	59	11.97%	5.07%	1.22%	8.92%	1.62%	8.32%
2003	319	20	6.27%	4.08%	1.25%	4.39%	0.94%	4.39%
2004	565	33	5.84%	3.72%	1.59%	3.72%	1.06%	3.72%
2005	252	14	5.56%	2.38%	0.79%	3.97%	1.19%	3.97%
2006	580	26	4.48%	2.24%	0.86%	2.59%	0.86%	2.41%
2007	237	6	2.53%	1.69%	0.00%	0.84%	0.42%	0.42%
2008	476	13	2.73%	1.05%	0.42%	2.10%	0.21%	2.10%
2009	72	5	6.94%	1.39%	1.39%	5.56%	0.00%	5.56%
2010	118	5	4.24%	1.69%	0.00%	2.54%	0.00%	2.54%
2011	73	1	1.37%	0.00%	0.00%	1.37%	0.00%	1.37%
2012	44	1	2.27%	0.00%	0.00%	0.00%	2.27%	0.00%
2013	36	2	5.56%	0.00%	0.00%	5.56%	2.78%	5.56%
2014	33	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	52	4	7.69%	1.92%	0.00%	7.69%	0.00%	5.77%
2016	181	1	0.55%	0.00%	0.00%	0.55%	0.00%	0.55%
2017	19	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	234,208	50,989	21.77%	11.65%	2.84%	12.18%	4.64%	6.74%

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
0	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1985	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1986	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%
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	8	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	12	1	8.33%	8.33%	0.00%	8.33%	8.33%	0.00%
1998	280	56	20.00%	17.50%	4.64%	16.10%	7.86%	1.43%
1999	961	181	18.80%	17.10%	2.91%	16.10%	10.20%	0.94%
2000	71,371	10,706	15.00%	13.40%	2.78%	13.10%	9.01%	0.27%
2001	46,287	7,115	15.40%	13.80%	2.78%	13.50%	8.98%	0.32%
2002	87,835	9,844	11.20%	9.69%	2.34%	9.47%	6.06%	0.22%
2003	49,636	5,688	11.50%	9.89%	2.41%	9.63%	6.20%	0.26%
2004	101,406	7,898	7.79%	6.77%	1.44%	6.63%	4.23%	0.14%
2005	47,740	4,180	8.76%	7.62%	1.62%	7.47%	5.01%	0.14%
2006	108,148	6,426	5.94%	5.20%	0.97%	5.07%	3.25%	0.12%
2007	43,955	2,549	5.80%	5.12%	0.88%	5.00%	3.27%	0.13%
2008	96,745	3,918	4.05%	3.60%	0.55%	3.51%	2.27%	0.09%
2009	23,283	1,015	4.36%	3.95%	0.52%	3.85%	2.76%	0.10%
2010	92,095	2,668	2.90%	2.59%	0.36%	2.54%	1.87%	0.05%
2011	14,623	704	4.81%	4.52%	0.38%	4.49%	3.81%	0.03%
2012	17,691	730	4.13%	3.92%	0.27%	3.87%	3.44%	0.05%
2013	13,699	583	4.26%	4.01%	0.31%	3.96%	3.71%	0.05%
2014	12,424	449	3.61%	3.40%	0.25%	3.33%	2.98%	0.07%
2015	13,311	431	3.24%	3.02%	0.23%	2.97%	2.85%	0.05%
2016	6,013	215	3.58%	3.38%	0.22%	3.34%	3.26%	0.03%
2017	211	13	6.16%	6.16%	0.00%	6.16%	6.16%	0.00%
2018	1	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	847,741	65,370	7.71%	6.81%	1.35%	6.66%	4.48%	0.15%

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

Note:

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 ¹	OBD II Equipped?	Smog Check Required		
				None	OIS Test	BAR-97 Test
All ² (except Diesel)	Four model-years and newer ³	All	All	X		
	Fifth and sixth model-years ⁴	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 ⁵		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 ⁶		
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		

¹ Gross vehicle weight rating

² 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.

³ 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).

⁴ 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).

⁵ 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.

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