

Executive Summary Report

SMOG CHECK Statewide

September 2016

1. Testing Volume

	All Tests	Failed	Percent (%) Failed
Initial Test	973,036	104,254	10.71%
Total	1,085,769	128,277	11.81%

2. Certification Volume

	Certificates Issued	Percent (%) Certificates Issued	No Certificates Issued	Percent (%) No Certificates Issued
Initial Test	860,355	88.42%	112,681	11.58%
Total	948,016	87.31%	137,753	12.69%

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	430,858	87.95%	59,054	12.05%
Non-STAR Test Only	21,741	90.93%	2,169	9.07%
STAR Test and Repair	258,576	87.89%	35,622	12.11%
Non-STAR Test and Repair	145,210	91.90%	12,791	8.10%
Total	856,385	88.65%	109,636	11.35%

*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	29,124	14.10%
All Visual	10,257	1.34%	9,539	4.62%
All Functional	52,893	6.90%	25,216	12.20%
OBDII	51,701	6.74%	13,815	6.70%
Overall	59,876	7.81%	44,378	21.50%

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	44,064	96,004	34,435	76,119
Non-Directed	250,134	393,908	224,141	354,739
Total	294,198	489,912	258,576	430,858

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	335	109	190	76
Non-Directed	157,666	23,801	145,020	21,665
Total	158,001	23,910	145,210	21,741

7. Initial Test Failures by Program Area

Program Areas	OIS			BAR-97		
	Initial Tests	Failed	Percent (%) Failed	Initial Tests	Failed	Percent (%) Failed
Enhanced	667,153	52,442	7.86%	163,591	36,577	22.40%
Partial	33,125	2,699	8.15%	11,724	2,661	22.70%
Basic	60,087	4,297	7.15%	23,837	3,471	14.60%
Change of Ownership	6,385	438	6.86%	1,992	404	20.30%
No Program	0	0	0.00%	2	0	0.00%
Unknown	0	0	0.00%	5,141	1,265	24.60%
Total Program Area	766,750	59,876	7.81%	206,287	44,378	21.50%

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	373,358	31,674	8.48%	116,554	25,660	22.00%
STAR Test Only Suspended	230	14	6.09%	27	4	14.80%
Non-STAR Test Only	20,466	1,306	6.38%	3,444	686	19.90%
STAR Test and Repair	230,975	18,725	8.11%	63,223	14,624	23.10%
STAR Test and Repair Suspended	85	8	9.41%	0	0	0.00%
Non-STAR Test and Repair	136,268	7,772	5.70%	21,733	3,104	14.30%
Test and Repair/Dealer	3,324	169	5.08%	283	24	8.48%
Business Fleet	11	0	0.00%	0	0	0.00%
Permanent Fleet Registered	0	0	0.00%	8	0	0.00%
Referee	257	100	38.90%	356	174	48.90%
Govt Fleet	1,776	108	6.08%	659	102	15.50%
Total	766,750	59,876	7.81%	206,287	44,378	21.50%

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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	2,203	98	2,301
STAR Regular Test and Repair CAP Basic	144	0	0	0	144
STAR Regular Test and Repair CAP COO	0	67	0	0	67
STAR Test Only	15	0	1,861	24	1,900
Non-STAR Regular Test and Repair	492	40	2,290	244	3,066
Non-STAR Test Only	15	3	407	22	447
Repair Only	2	1	46	0	49
Basic Area Dealer	72	0	0	0	72
Business Fleet	0	0	3	0	3
Permanent Fleet Registered	2	0	26	1	29
Referee	5	0	27	0	32
Government Fleet	41	2	278	11	332
Unknown Type	0	0	4	0	4
Total	788	113	7,145	400	8,446

10. Number of Stations Conducting Test by Equipment Type

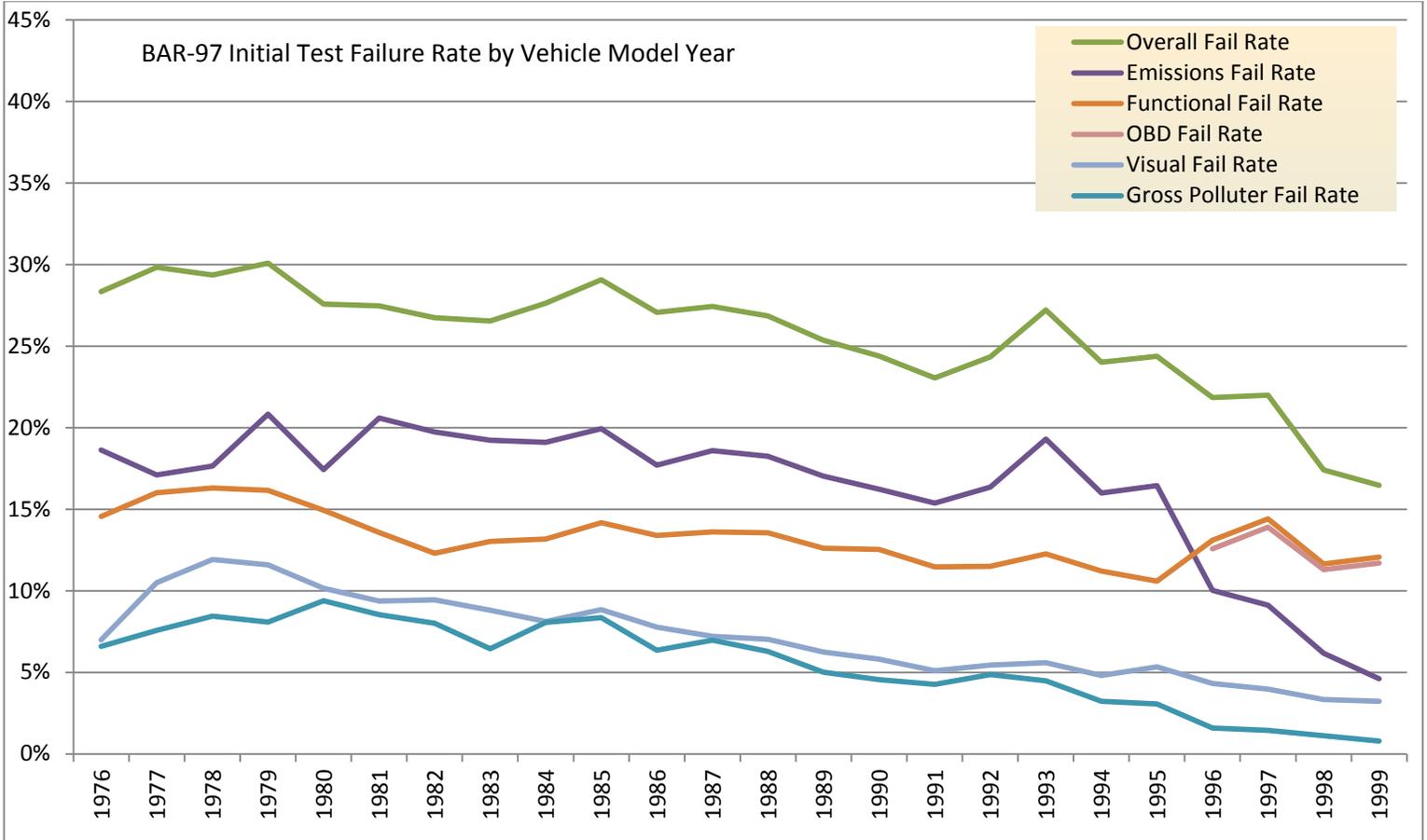
Station Type	Equipment Type		
	BAR-97 Only	OIS Only	BAR-97 & OIS
STAR Regular Test and Repair CAP Enhanced	2	167	2,125
STAR Regular Test and Repair CAP Basic	0	5	84
STAR Regular Test and Repair CAP COO	0	10	52
STAR Test Only	3	42	1,803
Non-STAR Regular Test and Repair	3	1,495	953
Non-STAR Test Only	1	87	143
Basic Area Dealer	0	31	37
Business Fleet	0	2	0
Permanent Fleet Registered	1	0	0
Referee	0	0	31
Government Fleet	16	85	69
Unknown Type	0	1	2
Total	26	1,925	5,299

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



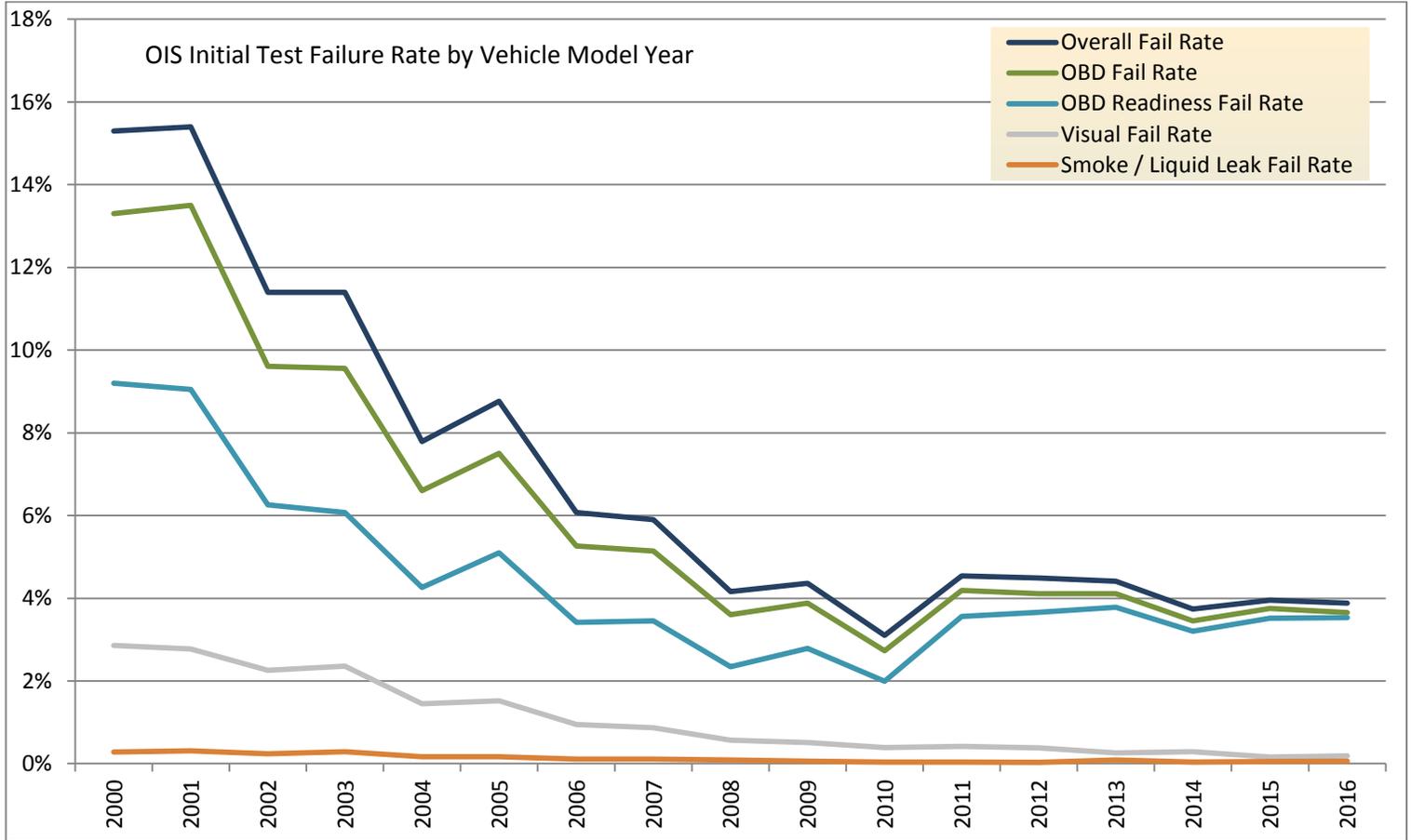
Note: Please see tabular data in Table 17 for BAR-97 tests conducted on other vehicle model years not shown in chart.

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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	259	302
Certificate of Non Compliance	0	0
Parts Cost	72	29
Hardship Extensions	0	0
Exempt Vehicle	3	23
Exempted by Directive	11	33
Parts Exemption	21	3
Unknown Outcome	0	0
Permanently Exempt Vehicle	0	0
Temporarily Exempt Vehicle	0	0
Total	366	390

14. Active Technicians

License Type	Technician Count
EA (Inspect and Repair Basic)	1
EA (Inspect and Repair Enhanced)	3
EI (Repair Only)	1
EO (Inspect Only)	2,782
EO + EI (Inspect and Repair)	4,529
Total	7,316

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	62,903	\$49.23	219,469	\$46.62	282,372	\$47.20
STAR Test Only	115,767	\$47.28	338,163	\$48.63	453,930	\$48.28
Non-STAR Test and Repair	21,607	\$45.61	121,150	\$53.09	142,757	\$51.96
Non-STAR Test Only	3,265	\$39.98	12,072	\$42.50	15,337	\$41.97
Test and Repair/Dealer	281	\$51.04	3,165	\$58.01	3,446	\$57.44
Total	203,823	\$47.59	694,334	\$48.72	898,157	\$48.46

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	\$28.25	7,518	\$46.30	62,883	\$49.24	211,951	\$46.63
STAR Test Only	394	\$40.01	3,240	\$42.54	115,373	\$47.30	334,923	\$48.69
Non-STAR Test and Repair	3	\$81.00	53,878	\$62.04	21,604	\$45.60	67,272	\$45.92
Non-STAR Test Only	42	\$15.00	3,461	\$45.28	3,223	\$40.31	8,611	\$41.39
Test and Repair/Dealer	0	\$0.00	1,325	\$59.76	281	\$51.04	1,840	\$56.75
Total	459	\$37.48	69,506	\$58.58	203,364	\$47.61	624,828	\$47.62

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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	515	146	28.35%	18.64%	6.60%	14.56%	6.99%	NA
1977	818	244	29.83%	17.11%	7.58%	16.01%	10.51%	NA
1978	889	261	29.36%	17.66%	8.44%	16.31%	11.92%	NA
1979	1,027	309	30.09%	20.84%	8.08%	16.16%	11.59%	NA
1980	522	144	27.59%	17.43%	9.39%	14.94%	10.15%	NA
1981	597	164	27.47%	20.60%	8.54%	13.57%	9.38%	NA
1982	699	187	26.75%	19.74%	8.01%	12.30%	9.44%	NA
1983	806	214	26.55%	19.23%	6.45%	13.03%	8.81%	NA
1984	1,502	415	27.63%	19.11%	8.06%	13.18%	8.12%	NA
1985	2,081	605	29.07%	19.94%	8.36%	14.18%	8.84%	NA
1986	3,316	898	27.08%	17.70%	6.36%	13.39%	7.78%	NA
1987	3,313	909	27.44%	18.59%	6.97%	13.61%	7.21%	NA
1988	3,968	1,066	26.86%	18.25%	6.28%	13.56%	7.03%	NA
1989	5,811	1,474	25.37%	17.04%	5.01%	12.61%	6.25%	NA
1990	6,661	1,625	24.40%	16.23%	4.55%	12.54%	5.82%	NA
1991	8,469	1,952	23.05%	15.37%	4.26%	11.47%	5.10%	NA
1992	8,352	2,033	24.34%	16.36%	4.86%	11.51%	5.44%	NA
1993	10,526	2,865	27.22%	19.30%	4.49%	12.26%	5.59%	NA
1994	14,307	3,436	24.02%	15.99%	3.22%	11.21%	4.82%	NA
1995	16,463	4,014	24.38%	16.46%	3.06%	10.59%	5.34%	NA
1996	20,097	4,392	21.85%	10.04%	1.60%	13.10%	4.32%	12.57%
1997	23,194	5,103	22.00%	9.13%	1.45%	14.41%	3.97%	13.91%
1998	36,416	6,342	17.42%	6.18%	1.11%	11.65%	3.33%	11.31%
1999	31,799	5,238	16.47%	4.62%	0.80%	12.06%	3.23%	11.70%
2000	630	99	15.71%	7.30%	2.54%	10.48%	2.38%	10.16%
2001	265	44	16.60%	6.79%	2.26%	12.45%	1.13%	12.45%
2002	439	51	11.62%	5.69%	1.82%	8.66%	1.37%	8.20%
2003	302	41	13.58%	5.63%	0.33%	9.93%	1.32%	9.27%
2004	495	35	7.07%	2.02%	0.81%	5.45%	0.61%	5.05%
2005	211	15	7.11%	3.32%	0.47%	2.84%	1.90%	2.84%
2006	507	24	4.73%	1.97%	0.39%	2.96%	0.79%	2.37%
2007	203	11	5.42%	5.42%	1.97%	2.46%	0.00%	2.46%
2008	395	8	2.03%	1.52%	0.25%	0.76%	0.25%	0.76%
2009	65	4	6.15%	3.08%	0.00%	6.15%	0.00%	6.15%
2010	121	2	1.65%	0.83%	0.83%	0.83%	0.00%	0.83%
2011	54	3	5.56%	3.70%	0.00%	3.70%	1.85%	3.70%
2012	34	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	29	2	6.90%	3.45%	0.00%	3.45%	3.45%	3.45%
2014	42	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	47	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	201	3	1.49%	0.50%	0.00%	1.00%	0.50%	1.00%
2017	99	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
All Model Years	206,287	44,378	21.51%	11.40%	2.72%	12.22%	4.62%	6.70%

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
1990	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	2	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	6	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	9	4	44.40%	33.30%	22.20%	33.30%	11.10%	0.00%
1998	276	52	18.80%	17.80%	3.26%	16.30%	7.25%	1.45%
1999	901	162	18.00%	16.60%	2.66%	15.90%	10.10%	0.78%
2000	63,868	9,772	15.30%	13.60%	2.86%	13.30%	9.20%	0.28%
2001	41,962	6,467	15.40%	13.90%	2.77%	13.50%	9.05%	0.31%
2002	78,013	8,865	11.40%	9.85%	2.26%	9.61%	6.26%	0.24%
2003	44,699	5,115	11.40%	9.85%	2.36%	9.56%	6.07%	0.29%
2004	92,356	7,190	7.79%	6.76%	1.45%	6.60%	4.26%	0.17%
2005	40,783	3,574	8.76%	7.67%	1.52%	7.50%	5.10%	0.17%
2006	101,614	6,173	6.07%	5.38%	0.95%	5.26%	3.42%	0.11%
2007	39,421	2,327	5.90%	5.26%	0.87%	5.14%	3.45%	0.11%
2008	89,529	3,726	4.16%	3.69%	0.57%	3.60%	2.34%	0.09%
2009	20,465	893	4.36%	3.94%	0.51%	3.88%	2.79%	0.06%
2010	80,572	2,499	3.10%	2.78%	0.39%	2.73%	1.99%	0.04%
2011	13,540	615	4.54%	4.23%	0.42%	4.19%	3.56%	0.04%
2012	15,872	712	4.49%	4.14%	0.38%	4.11%	3.66%	0.03%
2013	12,407	547	4.41%	4.20%	0.26%	4.11%	3.78%	0.09%
2014	10,889	407	3.74%	3.49%	0.29%	3.45%	3.20%	0.04%
2015	12,779	505	3.95%	3.80%	0.16%	3.75%	3.52%	0.05%
2016	6,437	250	3.88%	3.71%	0.19%	3.65%	3.53%	0.06%
2017	348	21	6.03%	5.46%	0.00%	5.46%	5.17%	0.00%
All Model Years	766,750	59,876	7.81%	6.90%	1.34%	6.74%	4.57%	0.16%

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 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).