



Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection

Attachment C: Detailed 2007 Emissions Test Data

Massachusetts Enhanced Inspection and Maintenance Program

Attachment C: Detailed 2007 Emissions Test Data
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Transient Emissions After Repair

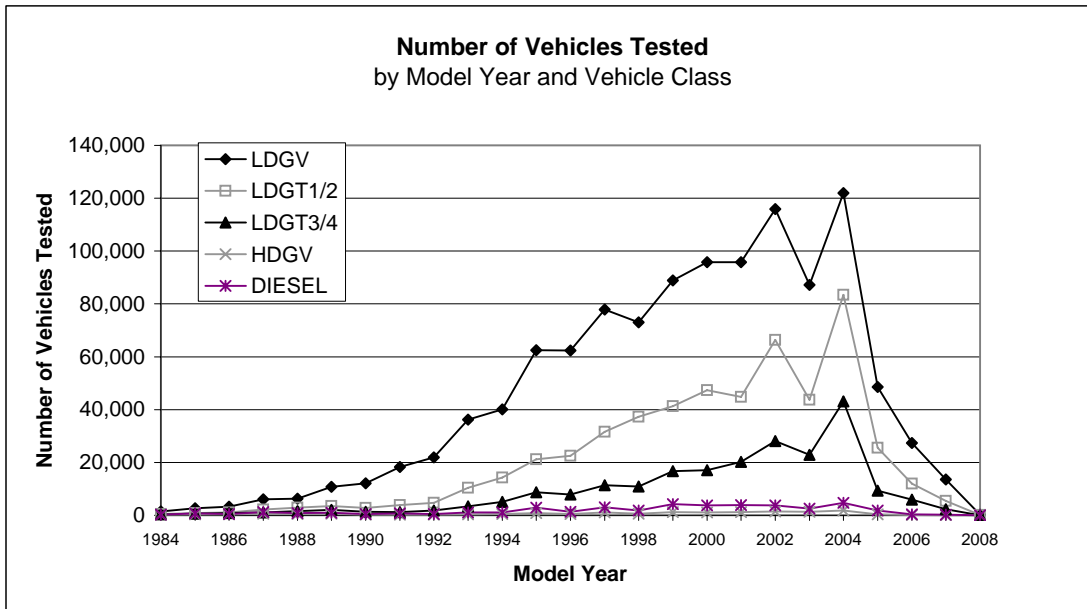
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2007 Massachusetts I&M Program Test Data

51.366 (a)(1) The number of vehicles tested by model year and vehicle type

This is a count of unique VINs receiving an emissions test in 2007

MODEL YEAR	GASOLINE					DIESEL	TOTAL
	LDGV	LDGT1/2	LDGT3/4	HDGV	TOTAL GAS		
1984	1,446	495	360	240	2,541	273	2,814
1985	2,701	843	574	345	4,463	715	5,178
1986	3,267	1,064	834	398	5,563	534	6,097
1987	6,073	2,131	1,128	589	9,921	1,229	11,150
1988	6,240	2,894	1,617	525	11,276	828	12,104
1989	10,825	3,523	2,035	545	16,928	988	17,916
1990	12,126	2,810	1,361	257	16,554	519	17,073
1991	18,247	3,930	1,230	195	23,602	714	24,316
1992	21,873	4,714	1,846	237	28,670	476	29,146
1993	36,202	10,376	3,363	352	50,293	1,116	51,409
1994	40,030	14,262	5,141	455	59,888	1,034	60,922
1995	62,437	21,189	8,769	835	93,230	2,896	96,126
1996	62,409	22,506	7,823	486	93,224	1,324	94,548
1997	77,875	31,645	11,347	1,110	121,977	3,037	125,014
1998	72,995	37,260	10,947	615	121,817	1,800	123,617
1999	88,911	41,319	16,661	1,171	148,062	4,261	152,323
2000	95,836	47,350	17,113	1,069	161,368	3,807	165,175
2001	95,767	44,825	20,216	1,263	162,071	3,845	165,916
2002	115,885	66,411	28,120	1,398	211,814	3,790	215,604
2003	87,240	43,731	22,873	1,334	155,178	2,562	157,740
2004	121,928	83,445	43,057	1,859	250,289	4,735	255,024
2005	48,565	25,505	9,371	403	83,844	1,875	85,719
2006	27,377	11,945	5,977	128	45,427	398	45,825
2007	13,541	5,438	2,306	22	21,307	226	21,533
2008	211	146	39	15	411	31	442
TOTAL	1,130,007	529,757	224,108	15,846	1,899,718	43,013	1,942,731



LDGV = Non-diesel fueled passenger cars <= 6,000 lbs. GVWR

LDGT1/2 = Non-diesel fueled trucks, motorhomes, and others <= 6,000 lbs. GVWR

LDGT3/4 = Non-diesel fueled trucks, motorhomes, and others > 6,000 and <= 10,000 lbs. GVWR

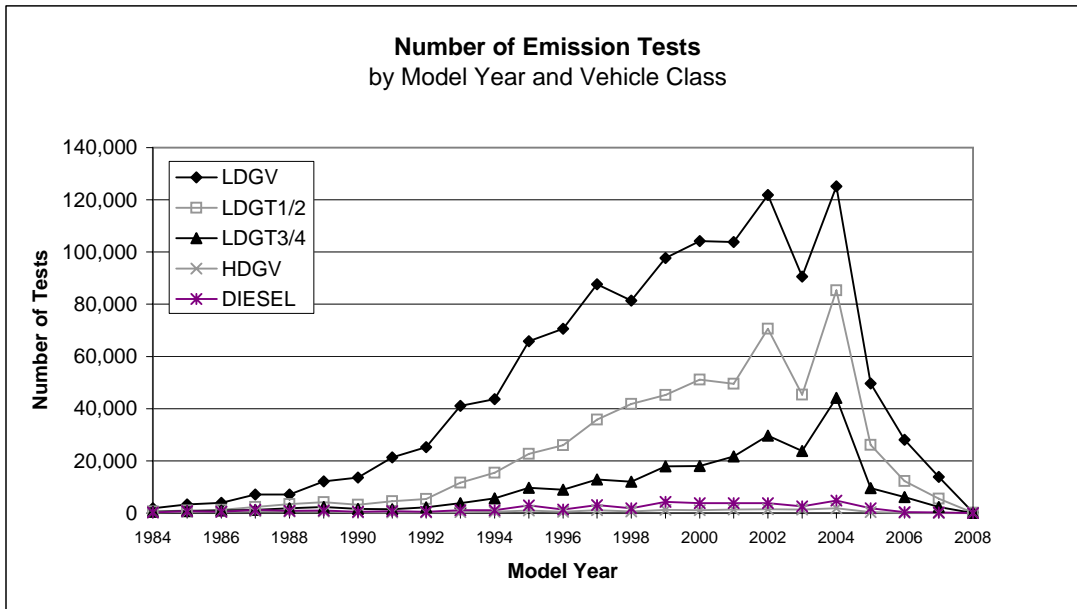
HDGV = Non-diesel fueled vehicles > 10,000 lbs. GVWR

DIESEL= Diesel fueled vehicles >10,000 lbs. GVWR

2007 Massachusetts I&M Program Test Data

51.366 (a)(1) The number of total emissions tests (initial and retest) performed by model year and vehicle type

MODEL YEAR	GASOLINE					DIESEL	TOTAL
	LDGV	LDGT1/2	LDGT3/4	HDTV	TOTAL GAS		
1984	1,790	609	440	294	3,133	288	3,421
1985	3,325	966	695	440	5,426	737	6,163
1986	3,879	1,221	1,022	498	6,620	545	7,165
1987	7,050	2,324	1,279	715	11,368	1,265	12,633
1988	7,147	3,415	1,820	623	13,005	865	13,870
1989	12,158	4,136	2,268	655	19,217	1,020	20,237
1990	13,615	3,227	1,543	290	18,675	537	19,212
1991	21,385	4,528	1,418	215	27,546	730	28,276
1992	25,295	5,415	2,155	266	33,131	487	33,618
1993	41,108	11,610	3,768	382	56,868	1,130	57,998
1994	43,610	15,492	5,659	512	65,273	1,057	66,330
1995	65,832	22,678	9,632	934	99,076	2,936	102,012
1996	70,582	25,964	8,981	537	106,064	1,331	107,395
1997	87,606	35,755	12,867	1,152	137,380	3,059	140,439
1998	81,390	41,785	12,001	645	135,821	1,811	137,632
1999	97,754	45,263	17,859	1,210	162,086	4,278	166,364
2000	104,258	51,143	18,079	1,100	174,580	3,819	178,399
2001	103,837	49,539	21,692	1,288	176,356	3,860	180,216
2002	121,826	70,639	29,653	1,412	223,530	3,809	227,339
2003	90,608	45,379	23,723	1,346	161,056	2,573	163,629
2004	125,136	85,292	44,135	1,866	256,429	4,749	261,178
2005	49,657	26,124	9,561	403	85,745	1,879	87,624
2006	28,071	12,213	6,109	128	46,521	398	46,919
2007	13,798	5,548	2,355	22	21,723	226	21,949
2008	218	151	40	15	424	31	455
TOTAL	1,220,935	570,416	238,754	16,948	2,047,053	43,420	2,090,473



LDGV = Non-diesel fueled passenger cars <= 6,000 lbs. GVWR

LDGT1/2 = Non-diesel fueled trucks, motorhomes, and others <= 6,000 lbs. GVWR

LDGT3/4 = Non-diesel fueled trucks, motorhomes, and others > 6,000 and <= 8,500 lbs. GVWR

HDGV = Non-diesel fueled vehicles > 8,500 lbs. GVWR

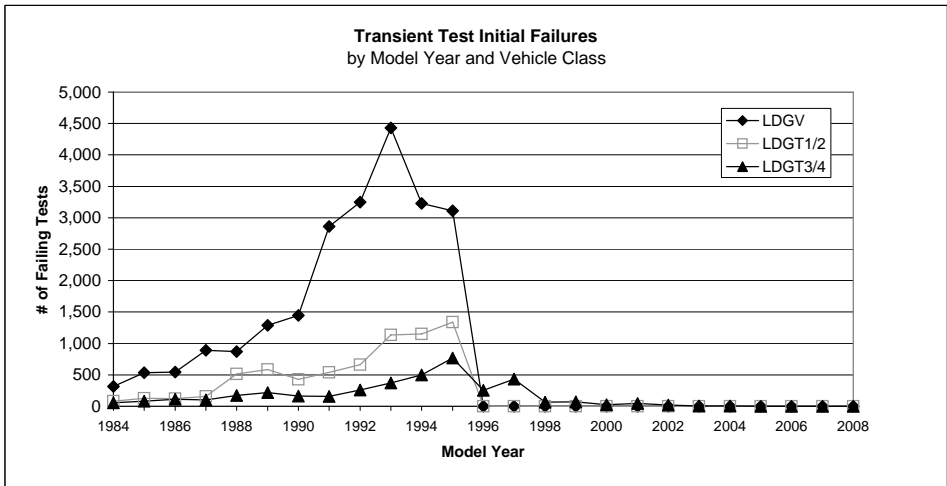
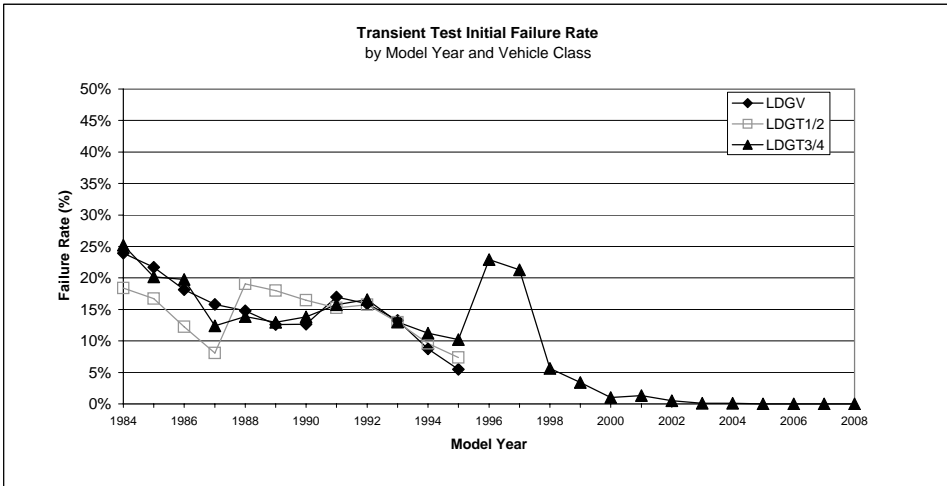
DIESEL= Diesel fueled vehicles >10,000 lbs. GVWR

2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(i) Initial Transient Tests Failing by model year and vehicle type

The transient test is for vehicles model year 1984 through 1995, <=10,000 lbs. GVWR, and capable of two-wheel drive operation. It is also the test used for vehicles model year 1996 and newer between 8,501 lbs. and 10,000 lbs. GVWR and for Kit Cars model years 1996 and newer and under 10,000 lbs. GVWR.

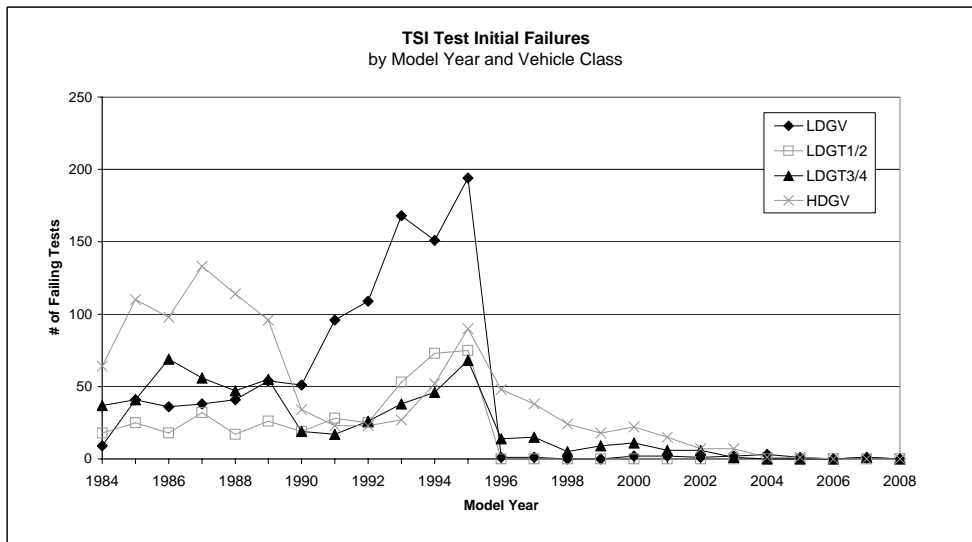
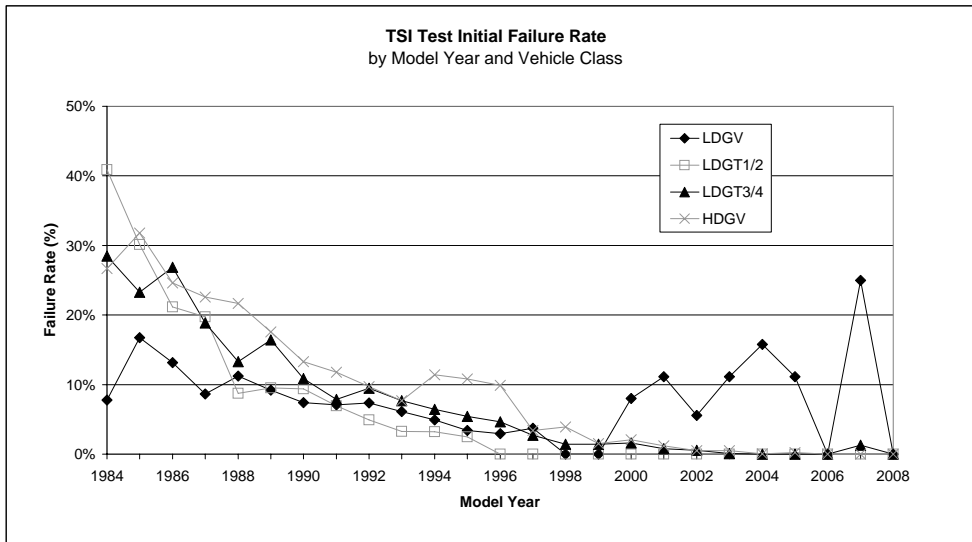
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	318	1,330	23.9%	83	451	18.4%	58	230	25.2%	459	2,011	22.8%
1985	533	2,457	21.7%	127	759	16.7%	80	397	20.2%	740	3,613	20.5%
1986	543	2,993	18.1%	120	980	12.2%	114	576	19.8%	777	4,549	17.1%
1987	891	5,633	15.8%	159	1,970	8.1%	103	830	12.4%	1,153	8,433	13.7%
1988	870	5,874	14.8%	514	2,699	19.0%	175	1,261	13.9%	1,559	9,834	15.9%
1989	1,289	10,239	12.6%	585	3,249	18.0%	220	1,701	12.9%	2,094	15,189	13.8%
1990	1,446	11,437	12.6%	429	2,608	16.4%	164	1,187	13.8%	2,039	15,232	13.4%
1991	2,864	16,896	17.0%	538	3,525	15.3%	160	1,016	15.7%	3,562	21,437	16.6%
1992	3,246	20,388	15.9%	664	4,209	15.8%	260	1,570	16.6%	4,170	26,167	15.9%
1993	4,432	33,462	13.2%	1,134	8,743	13.0%	373	2,870	13.0%	5,939	45,075	13.2%
1994	3,229	36,968	8.7%	1,151	11,984	9.6%	498	4,427	11.2%	4,878	53,379	9.1%
1995	3,111	56,745	5.5%	1,338	18,188	7.4%	768	7,519	10.2%	5,217	82,452	6.3%
1996	1	19	5.3%	1	1	100.0%	256	1,117	22.9%	258	1,137	22.7%
1997	1	17	5.9%	0	0	0.0%	433	2,032	21.3%	434	2,049	21.2%
1998	2	20	10.0%	0	0	NA	66	1,167	5.7%	68	1,187	5.7%
1999	0	25	0.0%	0	0	NA	70	2,053	3.4%	70	2,078	3.4%
2000	2	21	9.5%	0	0	NA	25	2,502	1.0%	27	2,523	1.1%
2001	0	17	0.0%	1	1	0.0%	45	3,390	1.3%	46	3,408	1.3%
2002	0	20	0.0%	0	0	0.0%	22	4,352	0.5%	22	4,372	0.5%
2003	0	9	0.0%	0	0	NA	4	3,159	0.1%	4	3,168	0.1%
2004	0	19	0.0%	0	0	0.0%	5	5,672	0.1%	5	5,691	0.1%
2005	0	4	0.0%	0	0	0.0%	0	911	0.0%	0	915	0.0%
2006	0	4	0.0%	0	0	0.0%	0	669	0.0%	0	673	0.0%
2007	0	7	0.0%	0	0	0.0%	0	167	0.0%	0	174	0.0%
2008	0	0	NA	0	0	0.0%	0	0	NA	0	0	0.0%
TOTAL	22,778	204,604	11.1%	6,844	59,367	11.5%	3,899	50,775	7.7%	33,521	314,746	10.7%



2007 Massachusetts I&M Program Test Data
51.366 (a)(2)(i) Initial TSI Tests Failing by model year and vehicle type

The two-speed idle (TSI) test is for vehicles model years 1984 and newer >10,000 lbs. GVWR and for vehicles <=10,000 lbs. GVWR that could not be tested on the dynamometer (all-wheel drive or non-disengagable 4-wheel drive vehicles) and did not receive an OBDII test.

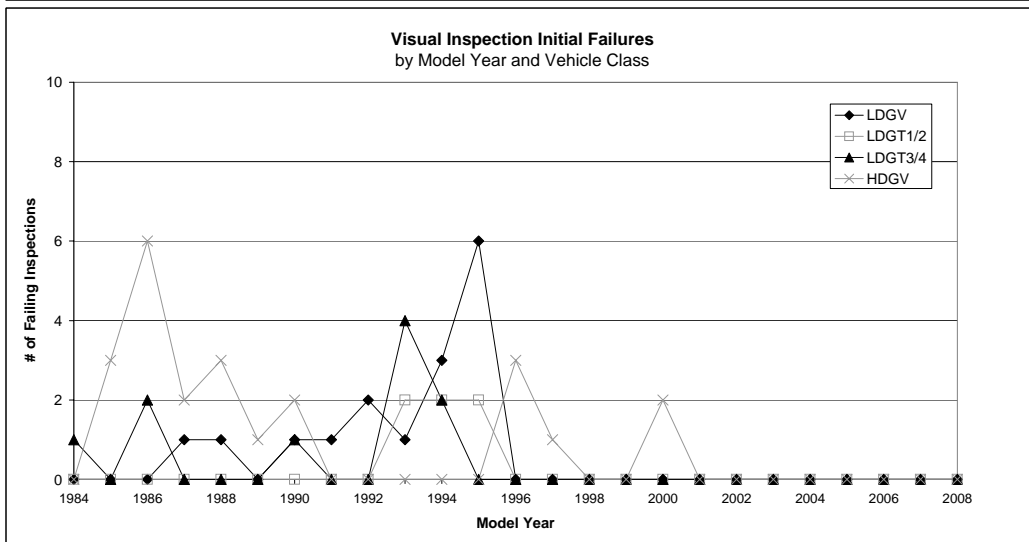
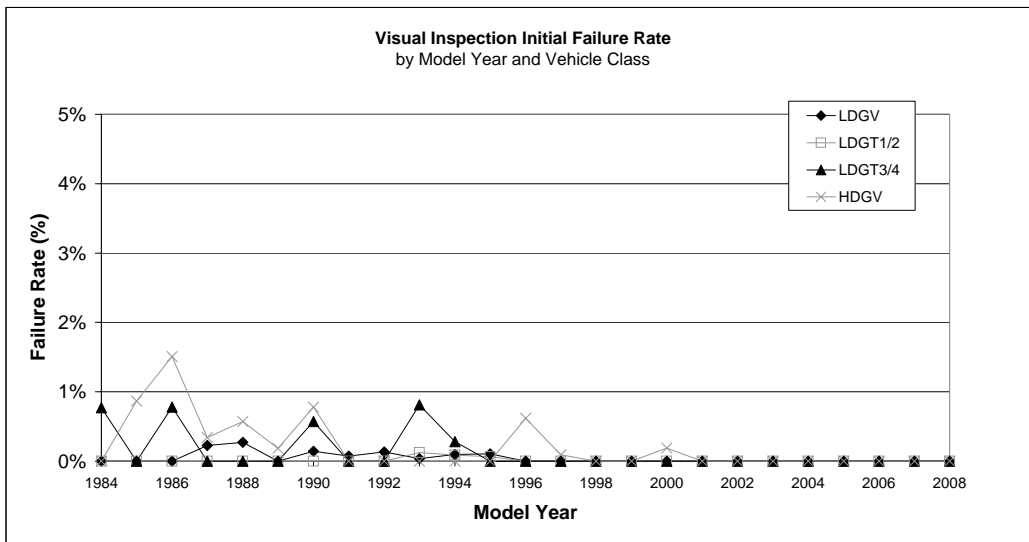
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	9	116	7.8%	18	44	40.9%	37	130	28.5%	64	240	26.7%	128	530	24.2%
1985	41	245	16.7%	25	83	30.1%	41	176	23.3%	110	346	31.8%	217	850	25.5%
1986	36	274	13.1%	18	85	21.2%	69	257	26.8%	98	398	24.6%	221	1,014	21.8%
1987	38	440	8.6%	32	162	19.8%	56	297	18.9%	133	589	22.6%	259	1,488	17.4%
1988	41	366	11.2%	17	195	8.7%	47	354	13.3%	114	526	21.7%	219	1,441	15.2%
1989	54	586	9.2%	26	273	9.5%	55	335	16.4%	96	546	17.6%	231	1,740	13.3%
1990	51	689	7.4%	19	202	9.4%	19	175	10.9%	34	256	13.3%	123	1,322	9.3%
1991	96	1,352	7.1%	28	402	7.0%	17	216	7.9%	23	195	11.8%	164	2,165	7.6%
1992	109	1,485	7.3%	25	507	4.9%	26	274	9.5%	23	237	9.7%	183	2,503	7.3%
1993	168	2,740	6.1%	53	1,632	3.2%	38	494	7.7%	27	352	7.7%	286	5,218	5.5%
1994	151	3,062	4.9%	73	2,279	3.2%	46	713	6.5%	52	455	11.4%	322	6,509	4.9%
1995	194	5,692	3.4%	75	3,002	2.5%	68	1,250	5.4%	90	834	10.8%	427	10,778	4.0%
1996	1	34	2.9%	0	0	NA	14	301	4.7%	48	485	9.9%	63	820	7.7%
1997	1	27	3.7%	0	0	NA	15	556	2.7%	38	1,110	3.4%	54	1,693	3.2%
1998	0	20	0.0%	0	0	NA	5	353	1.4%	24	615	3.9%	29	988	2.9%
1999	0	25	0.0%	0	0	NA	9	628	1.4%	18	1,171	1.5%	27	1,824	1.5%
2000	2	25	8.0%	0	0	NA	11	677	1.6%	22	1,069	2.1%	35	1,771	2.0%
2001	2	18	11.1%	0	0	NA	6	770	0.8%	15	1,263	1.2%	23	2,051	1.1%
2002	1	18	5.6%	0	0	NA	6	1,078	0.6%	7	1,398	0.5%	14	2,494	0.6%
2003	2	18	11.1%	0	0	NA	1	955	0.1%	7	1,334	0.5%	10	2,307	0.4%
2004	3	19	15.8%	0	0	NA	0	1,456	0.0%	1	1,859	0.1%	4	3,334	0.1%
2005	1	9	11.1%	0	0	NA	0	331	0.0%	1	403	0.2%	2	743	0.3%
2006	0	7	0.0%	0	0	NA	0	207	0.0%	0	128	0.0%	0	342	0.0%
2007	1	4	25.0%	0	0	NA	1	78	1.3%	0	21	0.0%	2	103	1.9%
2008	0	0	NA	0	0	NA	0	0	NA	0	11	0.0%	0	11	0.0%
TOTAL	1,002	17,271	5.8%	409	8,866	4.6%	587	12,061	4.9%	1,045	15,841	6.6%	3,043	54,039	5.6%



2007 Massachusetts I&M Program Test Data
 51.366 (a)(2)(i) Initial Visual Inspection Failing by model year and vehicle type

The Visual Inspection is performed on a vehicle any time there is a Two-Speed Idle (TSI) test. The Visual Inspections checks that critical emission control equipment is present and there are no signs of tampering. The Visual Inspection includes checks for catalyst, PCV valve, EGR system, and air pump or air injection systems.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	0	116	0.0%	0	44	0.0%	1	130	0.8%	0	240	0.0%	1	530	0.2%
1985	0	245	0.0%	0	83	0.0%	0	176	0.0%	3	346	0.9%	3	850	0.4%
1986	0	274	0.0%	0	85	0.0%	2	257	0.8%	6	398	1.5%	8	1,014	0.8%
1987	1	440	0.2%	0	162	0.0%	0	297	0.0%	2	589	0.3%	3	1,488	0.2%
1988	1	366	0.3%	0	195	0.0%	0	354	0.0%	3	526	0.6%	4	1,441	0.3%
1989	0	586	0.0%	0	273	0.0%	0	335	0.0%	1	546	0.2%	1	1,740	0.1%
1990	1	689	0.1%	0	202	0.0%	1	175	0.6%	2	256	0.8%	4	1,322	0.3%
1991	1	1,352	0.1%	0	402	0.0%	0	216	0.0%	0	195	0.0%	1	2,165	0.0%
1992	2	1,485	0.1%	0	507	0.0%	0	274	0.0%	0	237	0.0%	2	2,503	0.1%
1993	1	2,740	0.0%	2	1,632	0.1%	4	494	0.8%	0	352	0.0%	7	5,218	0.1%
1994	3	3,062	0.1%	2	2,279	0.1%	2	713	0.3%	0	455	0.0%	7	6,509	0.1%
1995	6	5,692	0.1%	2	3,003	0.1%	0	1,250	0.0%	0	834	0.0%	8	10,779	0.1%
1996	0	34	0.0%	0	0	NA	0	301	0.0%	3	485	0.6%	3	820	0.4%
1997	0	27	0.0%	0	0	NA	0	556	0.0%	1	1,110	0.1%	1	1,693	0.1%
1998	0	20	0.0%	0	0	NA	0	353	0.0%	0	615	0.0%	0	988	0.0%
1999	0	25	0.0%	0	0	NA	0	628	0.0%	0	1,171	0.0%	0	1,824	0.0%
2000	0	25	0.0%	0	0	NA	0	677	0.0%	2	1,069	0.2%	2	1,771	0.1%
2001	0	18	0.0%	0	0	NA	0	770	0.0%	0	1,263	0.0%	0	2,051	0.0%
2002	0	18	0.0%	0	0	NA	0	1,078	0.0%	0	1,398	0.0%	0	2,494	0.0%
2003	0	18	0.0%	0	0	NA	0	955	0.0%	0	1,334	0.0%	0	2,307	0.0%
2004	0	19	0.0%	0	0	NA	0	1,456	0.0%	0	1,859	0.0%	0	3,334	0.0%
2005	0	9	0.0%	0	0	NA	0	331	0.0%	0	403	0.0%	0	743	0.0%
2006	0	7	0.0%	0	0	NA	0	207	0.0%	0	128	0.0%	0	342	0.0%
2007	0	4	0.0%	0	0	NA	0	78	0.0%	0	21	0.0%	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	11	0.0%	0	0	NA
TOTAL	16	17,271	0.1%	6	8,867	0.1%	10	12,061	0.1%	23	15,841	0.1%	55	53,926	0.1%

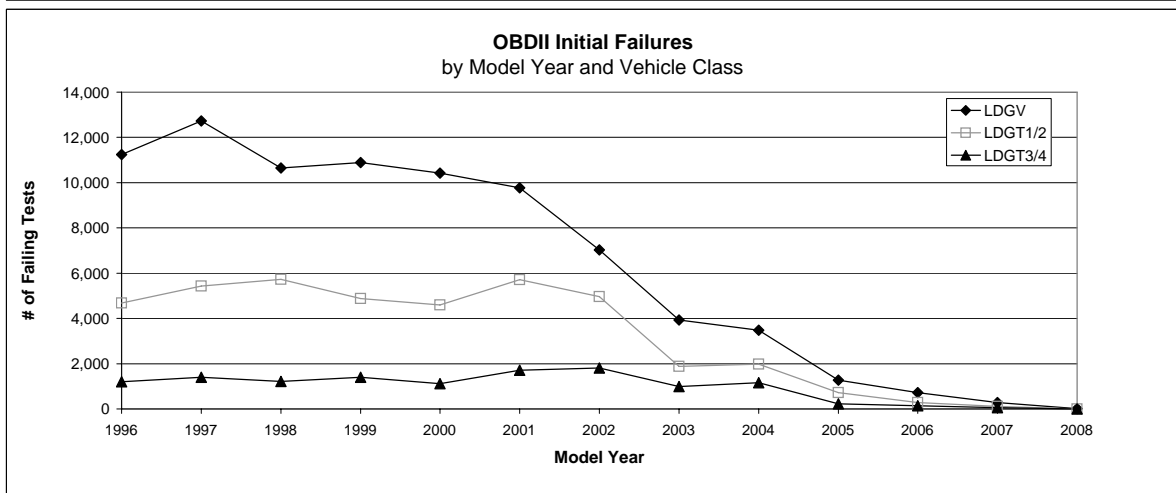
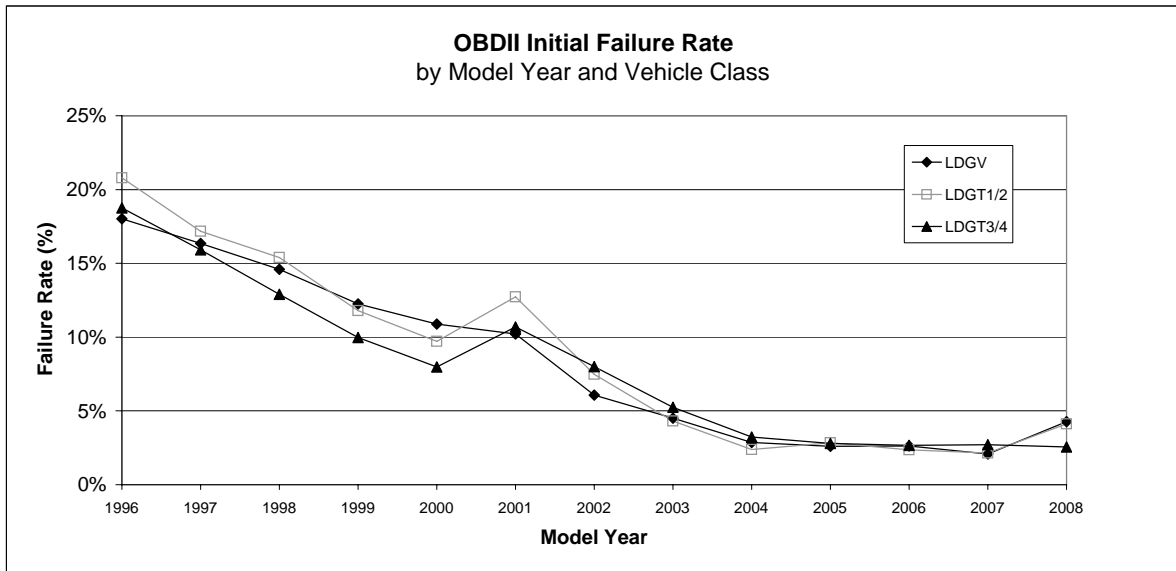


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(i) Initial OBDII Tests Failing by model year and vehicle type

A vehicle will fail the OBDII test for any of the following reasons: 1) Diagnostic link connector missing, damaged, or obstructed, 2) failure to communicate with the test equipment, 3) MIL commanded on and Diagnostic Trouble Code(s) present, or 4) more than two monitors NOT READY for model years 1996 through 2000 or more than 1 monitor NOT READY for model years 2001 and newer.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1996	11,236	62,359	18.0%	4,681	22,504	20.8%	1,201	6,407	18.7%	0	0	NA	17,118	91,270	18.8%
1997	12,732	77,827	16.4%	5,436	31,649	17.2%	1,394	8,757	15.9%	0	0	NA	19,562	118,233	16.5%
1998	10,642	72,952	14.6%	5,732	37,256	15.4%	1,216	9,432	12.9%	0	0	NA	17,590	119,640	14.7%
1999	10,885	88,864	12.2%	4,872	41,320	11.8%	1,393	13,977	10.0%	0	0	NA	17,150	144,161	11.9%
2000	10,424	95,791	10.9%	4,603	47,353	9.7%	1,111	13,930	8.0%	0	0	NA	16,138	157,074	10.3%
2001	9,771	95,729	10.2%	5,708	44,826	12.7%	1,171	16,059	10.7%	0	0	NA	17,196	156,614	11.0%
2002	7,035	115,848	6.1%	4,966	66,410	7.5%	1,814	22,690	8.0%	0	0	NA	13,815	204,948	6.7%
2003	3,926	87,212	4.5%	1,886	43,732	4.3%	983	18,759	5.2%	0	0	NA	6,795	149,703	4.5%
2004	3,479	121,891	2.9%	1,984	83,447	2.4%	1,163	35,927	3.2%	0	0	NA	6,626	241,265	2.7%
2005	1,266	48,552	2.6%	723	25,505	2.8%	227	8,129	2.8%	0	0	NA	2,216	82,186	2.7%
2006	716	27,366	2.6%	282	11,946	2.4%	136	5,100	2.7%	0	0	NA	1,134	44,412	2.6%
2007	281	13,530	2.1%	117	5,438	2.2%	56	2,061	2.7%	0	1	0.0%	454	21,030	2.2%
2008	9	211	4.3%	6	146	4.1%	1	39	2.6%	1	4	25.0%	17	400	4.3%
TOTAL	82,402	908,132	9.1%	40,996	461,532	8.9%	12,412	161,267	7.7%	1	5	20.0%	135,811	1,530,936	8.9%

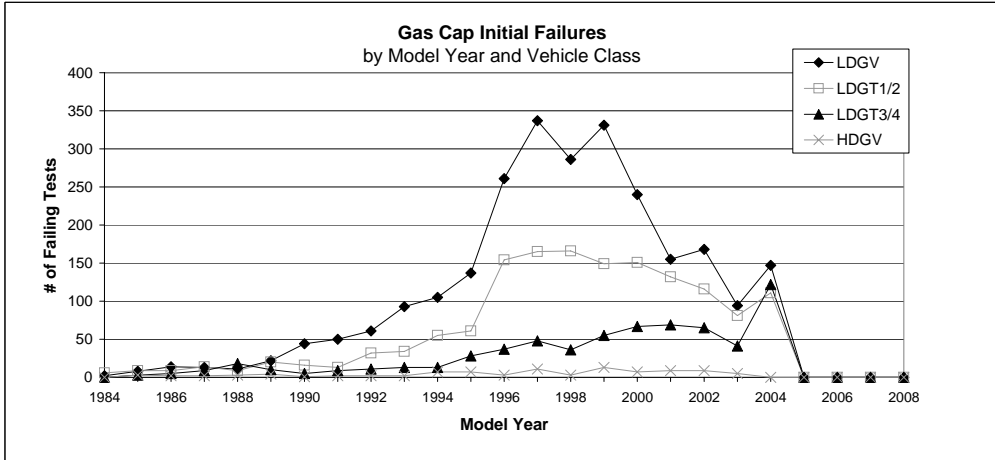
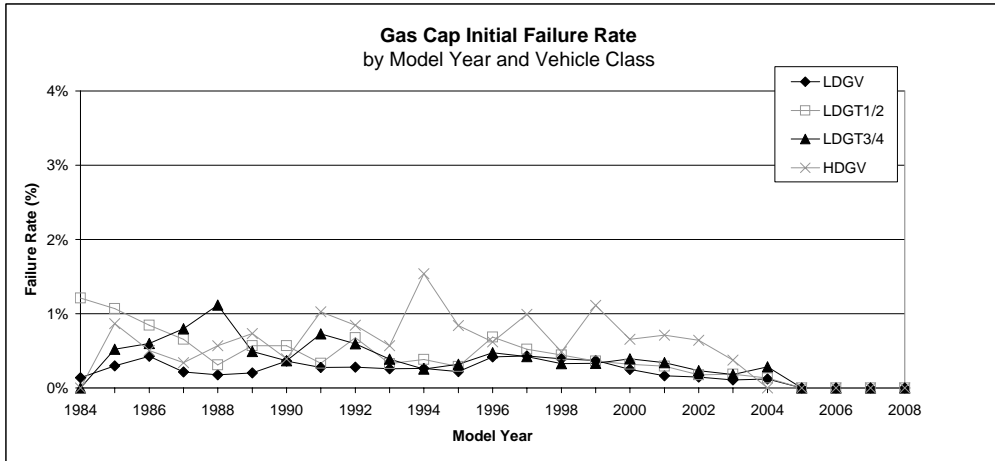


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(i) Initial Gas Cap Tests Failing by model year and vehicle type

The gas cap functional test is performed on all vehicles receiving an emissions test that have gas caps compatible with one of the 10 gas cap adaptors used in the I&M program. The gas cap fails if it leaks more than 60 cubic centimeters per minute (cc/min) at a pressure of 30 inches of water. The gas cap test is not performed on vehicles after model year 2004 receiving the OBDII test.

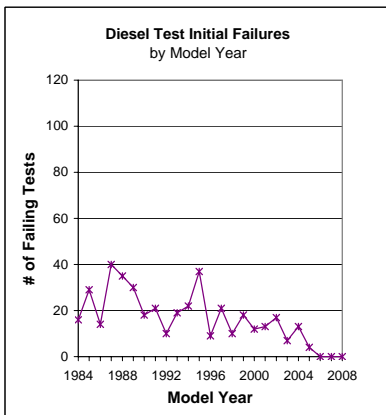
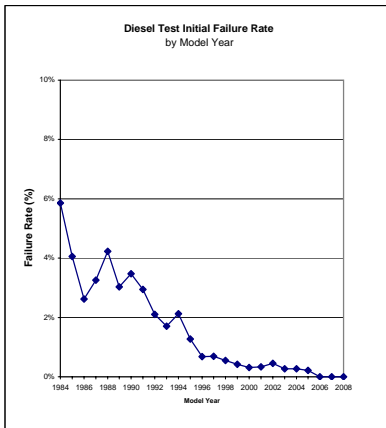
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	2	1,446	0.1%	6	495	1.2%	0	360	0.0%	0	240	0.0%	8	2,541	0.3%
1985	8	2,702	0.3%	9	842	1.1%	3	573	0.5%	3	346	0.9%	23	4,463	0.5%
1986	14	3,271	0.4%	9	1,065	0.8%	5	833	0.6%	2	398	0.5%	30	5,567	0.5%
1987	13	6,073	0.2%	14	2,132	0.7%	9	1,127	0.8%	2	589	0.3%	38	9,921	0.4%
1988	11	6,240	0.2%	9	2,894	0.3%	18	1,615	1.1%	3	526	0.6%	41	11,275	0.4%
1989	22	10,825	0.2%	20	3,522	0.6%	10	2,036	0.5%	4	546	0.7%	56	16,929	0.3%
1990	44	12,126	0.4%	16	2,810	0.6%	5	1,362	0.4%	1	256	0.4%	66	16,554	0.4%
1991	50	18,249	0.3%	13	3,927	0.3%	9	1,232	0.7%	2	195	1.0%	74	23,603	0.3%
1992	61	21,873	0.3%	32	4,716	0.7%	11	1,844	0.6%	2	237	0.8%	106	28,670	0.4%
1993	93	36,202	0.3%	34	10,375	0.3%	13	3,364	0.4%	2	352	0.6%	142	50,293	0.3%
1994	105	40,043	0.3%	55	14,263	0.4%	13	5,140	0.3%	7	455	1.5%	180	59,901	0.3%
1995	137	62,438	0.2%	61	21,191	0.3%	28	8,769	0.3%	7	834	0.8%	233	93,232	0.2%
1996	261	62,412	0.4%	154	22,504	0.7%	37	7,825	0.5%	3	485	0.6%	455	93,226	0.5%
1997	337	77,873	0.4%	165	31,649	0.5%	48	11,345	0.4%	11	1,110	1.0%	561	121,977	0.5%
1998	286	72,996	0.4%	166	37,258	0.4%	36	10,952	0.3%	3	615	0.5%	491	121,821	0.4%
1999	321	88,815	0.4%	149	41,320	0.4%	55	16,859	0.3%	13	1,171	1.1%	548	148,065	0.4%
2000	240	95,837	0.3%	151	47,353	0.3%	67	17,109	0.4%	7	1,069	0.7%	465	161,368	0.3%
2001	155	95,764	0.2%	132	44,826	0.3%	69	20,219	0.3%	9	1,263	0.7%	365	162,072	0.2%
2002	168	115,886	0.1%	116	66,411	0.2%	65	28,120	0.2%	9	1,398	0.6%	358	211,815	0.2%
2003	94	87,239	0.1%	81	43,732	0.2%	41	22,873	0.2%	5	1,334	0.4%	221	155,178	0.1%
2004	147	121,928	0.1%	111	83,447	0.1%	122	43,055	0.3%	0	1,859	0.0%	380	250,289	0.2%
2005	0	48,565	0.0%	0	25,505	0.0%	0	9,371	0.0%	0	403	0.0%	0	83,844	0.0%
2006	0	27,377	0.0%	0	11,946	0.0%	0	5,976	0.0%	0	128	0.0%	0	45,427	0.0%
2007	0	13,541	0.0%	0	5,438	0.0%	0	2,306	0.0%	0	22	0.0%	0	21,307	0.0%
2008	0	211	0.0%	0	146	0.0%	0	39	0.0%	0	15	0.0%	0	411	0.0%
TOTAL	2,579	1,130,032	0.2%	1,503	529,767	0.3%	664	224,104	0.3%	95	15,846	0.6%	4,841	1,899,749	0.3%



2007 Massachusetts I&M Program Test Data
51.366 (a)(2)(i) Initial Diesel Tests Failing by Model Year

The SAE J-1667 snap acceleration diesel test is for diesel fueled vehicles with model years >=1984 and >10,000 lbs. GVWR.

MODEL YEAR	TOTAL INITIAL DIESEL		
	Failed	Tested	Fail Rate
1984	16	273	5.9%
1985	29	715	4.1%
1986	14	534	2.6%
1987	40	1,229	3.3%
1988	35	828	4.2%
1989	30	988	3.0%
1990	18	519	3.5%
1991	21	714	2.9%
1992	10	476	2.1%
1993	19	1,116	1.7%
1994	22	1,034	2.1%
1995	37	2,896	1.3%
1996	9	1,324	0.7%
1997	21	3,037	0.7%
1998	10	1,800	0.6%
1999	18	4,261	0.4%
2000	12	3,807	0.3%
2001	13	3,845	0.3%
2002	17	3,790	0.4%
2003	7	2,562	0.3%
2004	13	4,735	0.3%
2005	4	1,875	0.2%
2006	0	398	0.0%
2007	0	226	0.0%
2008	0	31	0.0%
TOTAL	415	43,013	1.0%

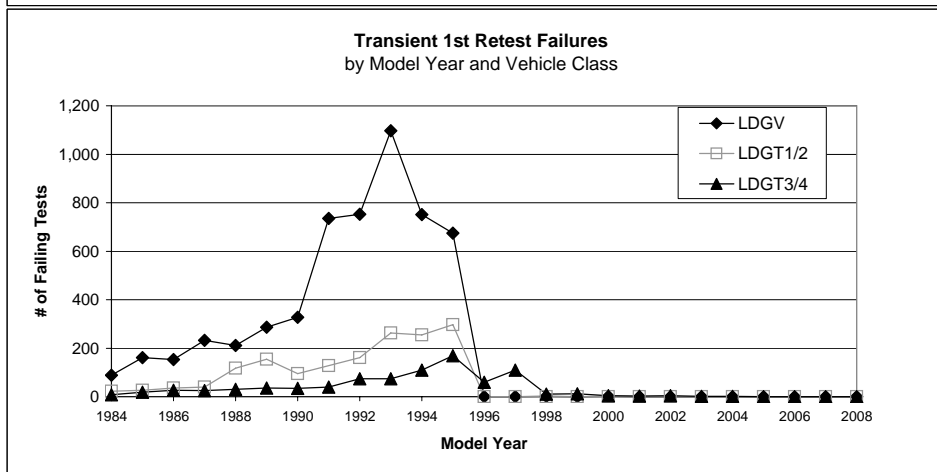
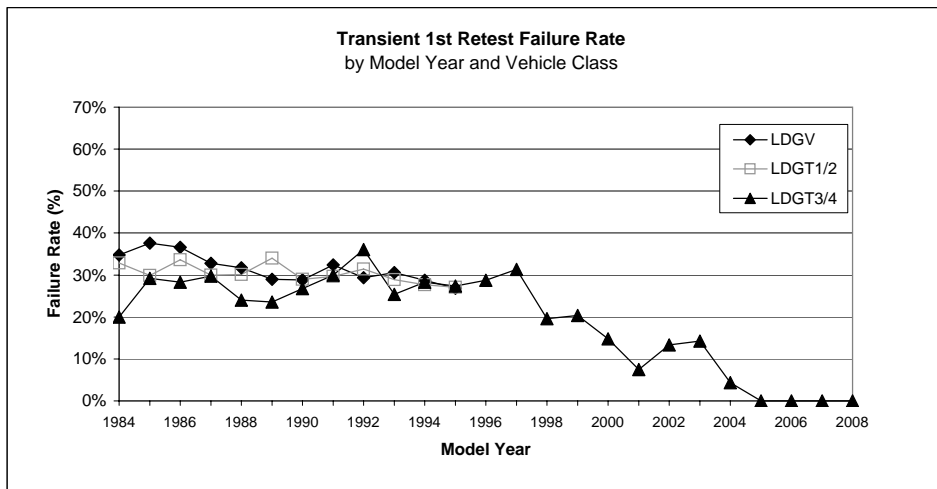


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(ii) Transient 1st Retests Failing by model year and vehicle type

Any vehicle receiving their second transient test after they failed their first emissions test in 2007 is counted as a 1st transient retest.

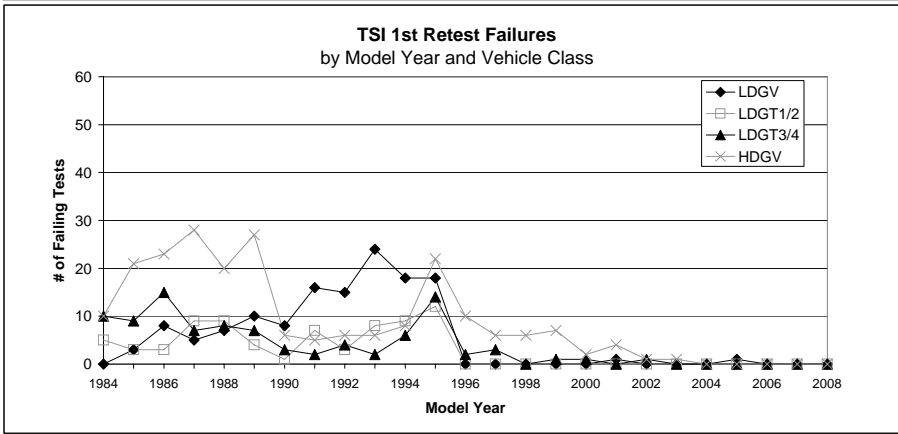
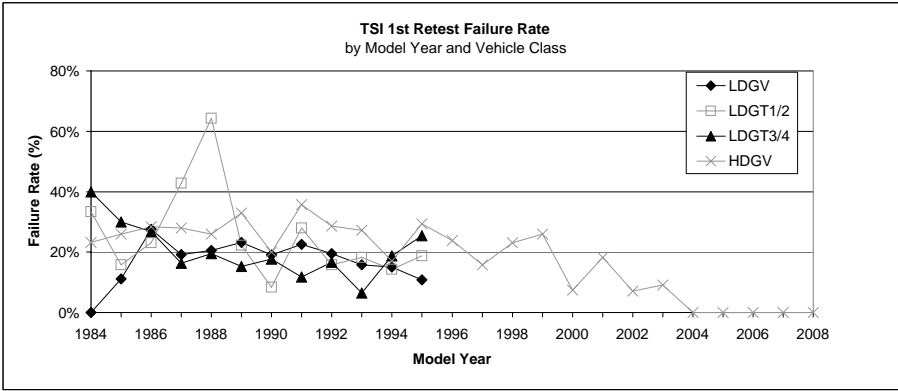
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	88	253	34.8%	22	67	32.8%	8	40	20.0%	118	360	32.8%
1985	161	428	37.6%	26	87	29.9%	19	65	29.2%	206	580	35.5%
1986	153	418	36.6%	36	107	33.6%	26	92	28.3%	215	617	34.8%
1987	233	710	32.8%	39	130	30.0%	25	84	29.8%	297	924	32.1%
1988	211	665	31.7%	117	388	30.2%	31	129	24.0%	359	1,182	30.4%
1989	286	987	29.0%	154	453	34.0%	36	153	23.5%	476	1,593	29.9%
1990	327	1,133	28.9%	95	328	29.0%	34	127	26.8%	456	1,588	28.7%
1991	735	2,266	32.4%	128	432	29.6%	39	130	30.0%	902	2,828	31.9%
1992	753	2,567	29.3%	161	513	31.4%	74	205	36.1%	988	3,285	30.1%
1993	1,097	3,587	30.6%	263	910	28.9%	74	291	25.4%	1,434	4,788	29.9%
1994	751	2,611	28.8%	255	921	27.7%	109	385	28.3%	1,115	3,917	28.5%
1995	674	2,510	26.9%	297	1,097	27.1%	169	618	27.3%	1,140	4,225	27.0%
1996	0	0	NA	0	0	NA	59	205	28.8%	59	205	28.8%
1997	0	1	0.0%	0	1	0.0%	109	348	31.3%	109	350	31.1%
1998	1	2	50.0%	0	0	NA	10	51	19.6%	11	53	20.8%
1999	0	0	NA	0	0	NA	12	59	20.3%	12	59	20.3%
2000	1	1	100.0%	0	0	NA	4	27	14.8%	5	28	17.9%
2001	0	0	NA	0	0	NA	3	40	7.5%	3	40	7.5%
2002	0	0	NA	0	0	NA	4	30	13.3%	4	30	13.3%
2003	0	0	NA	0	0	NA	1	7	14.3%	1	7	14.3%
2004	0	0	NA	0	0	NA	1	23	4.3%	1	23	4.3%
2005	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	5,471	18,139	30.2%	1,593	5,434	29.3%	847	3,109	27.2%	7,911	26,682	29.6%



2007 Massachusetts I&M Program Test Data
 51.366 (a)(2)(ii) TSI 1st Retests Failing by model year and vehicle type

Any vehicle receiving their second two-speed idle test after they failed their first emissions test in 2007 is counted as a 1st two-speed idle retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	0	4	0.0%	5	15	33.3%	10	25	40.0%	10	43	23.3%	25	87	28.7%
1985	3	27	11.1%	3	19	15.8%	9	30	30.0%	21	81	25.9%	36	157	22.9%
1986	8	29	27.6%	3	13	23.1%	15	56	26.8%	23	81	28.4%	49	179	27.4%
1987	5	26	19.2%	9	21	42.9%	7	43	16.3%	28	100	28.0%	49	190	25.8%
1988	7	34	20.6%	9	14	64.3%	8	41	19.5%	20	77	26.0%	44	166	26.5%
1989	10	43	23.3%	4	18	22.2%	7	46	15.2%	27	82	32.9%	48	189	25.4%
1990	8	42	19.0%	1	12	8.3%	3	17	17.6%	6	30	20.0%	18	101	17.8%
1991	16	71	22.5%	7	25	28.0%	2	17	11.8%	5	14	35.7%	30	127	23.6%
1992	15	77	19.5%	3	19	15.8%	4	24	16.7%	6	21	28.6%	28	141	19.9%
1993	24	152	15.8%	8	44	18.2%	2	31	6.5%	6	22	27.3%	40	249	16.1%
1994	18	120	15.0%	9	63	14.3%	6	32	18.8%	8	47	17.0%	41	262	15.6%
1995	18	167	10.8%	12	64	18.8%	14	55	25.5%	22	75	29.3%	66	361	18.3%
1996	0	1	0.0%	0	0	NA	2	10	20.0%	10	42	23.8%	12	53	22.6%
1997	0	0	NA	0	0	NA	3	12	25.0%	6	38	15.8%	9	50	18.0%
1998	0	0	NA	0	0	NA	0	4	0.0%	6	26	23.1%	6	30	20.0%
1999	0	0	NA	0	0	NA	1	11	9.1%	7	27	25.9%	8	38	21.1%
2000	0	3	0.0%	0	0	NA	1	9	11.1%	2	27	7.4%	3	39	7.7%
2001	1	2	50.0%	0	0	NA	0	5	0.0%	4	22	18.2%	5	29	17.2%
2002	0	0	NA	0	0	NA	1	4	25.0%	1	14	7.1%	2	18	11.1%
2003	0	1	0.0%	0	0	NA	0	5	0.0%	1	11	9.1%	1	17	5.9%
2004	0	2	0.0%	0	0	NA	0	3	0.0%	0	7	0.0%	0	12	0.0%
2005	1	1	100.0%	0	0	NA	0	0	NA	0	0	NA	1	1	100.0%
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	134	802	16.7%	73	327	22.3%	95	480	19.8%	219	887	24.7%	521	2,496	20.9%

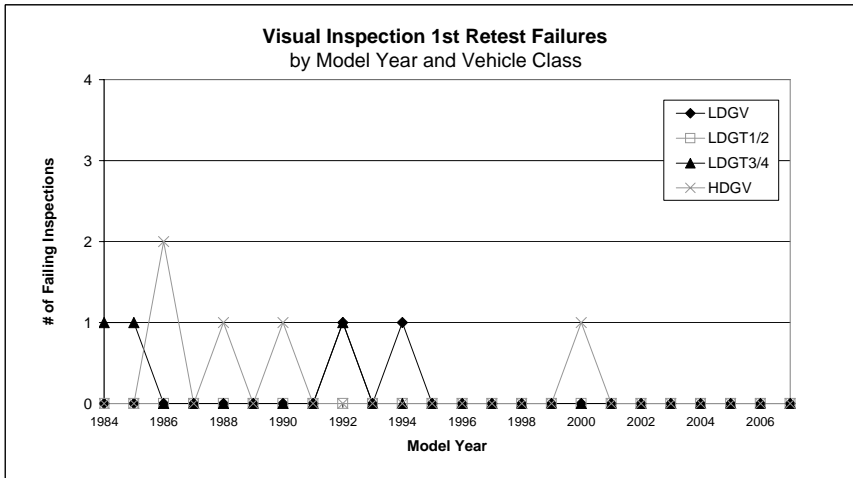
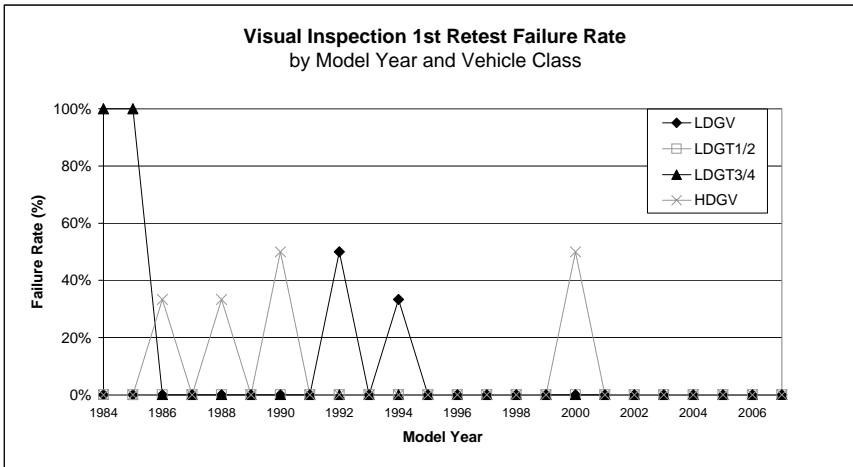


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(ii) Visual Inspection Retest Failing by model year and vehicle type

Any vehicle receiving their second visual inspection after they failed their first visual inspection in 2007 is counted as a visual inspection retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	0	0	NA	0	0	NA	1	1	100.0%	0	0	NA	1	1	100.0%
1985	0	0	NA	0	0	NA	1	1	100.0%	0	1	0.0%	1	2	50.0%
1986	0	0	NA	0	0	NA	0	2	0.0%	2	6	33.3%	2	8	25.0%
1987	0	0	NA	0	0	NA	0	0	NA	0	1	0.0%	0	1	0.0%
1988	0	1	0.0%	0	0	NA	0	0	NA	1	3	33.3%	1	4	25.0%
1989	0	0	NA	0	0	NA	0	0	NA	0	1	0.0%	0	1	0.0%
1990	0	1	0.0%	0	0	NA	0	1	0.0%	1	2	50.0%	1	4	25.0%
1991	0	1	0.0%	0	0	NA	0	0	NA	0	0	NA	0	1	0.0%
1992	1	2	50.0%	0	0	NA	1	0	NA	0	0	NA	2	2	100.0%
1993	0	1	0.0%	0	3	0.0%	0	3	0.0%	0	0	NA	0	7	0.0%
1994	1	3	33.3%	0	1	0.0%	0	2	0.0%	0	0	NA	1	6	16.7%
1995	0	5	0.0%	0	2	0.0%	0	0	NA	0	0	NA	0	7	0.0%
1996	0	0	NA	0	0	NA	0	0	NA	0	3	0.0%	0	3	0.0%
1997	0	0	NA	0	0	NA	0	0	NA	0	1	0.0%	0	1	0.0%
1998	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
1999	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2000	0	0	NA	0	0	NA	0	0	NA	1	2	50.0%	1	2	50.0%
2001	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2002	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2003	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2004	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2005	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	2	14	14.3%	0	6	0.0%	3	10	30.0%	5	20	25.0%	10	50	20.0%

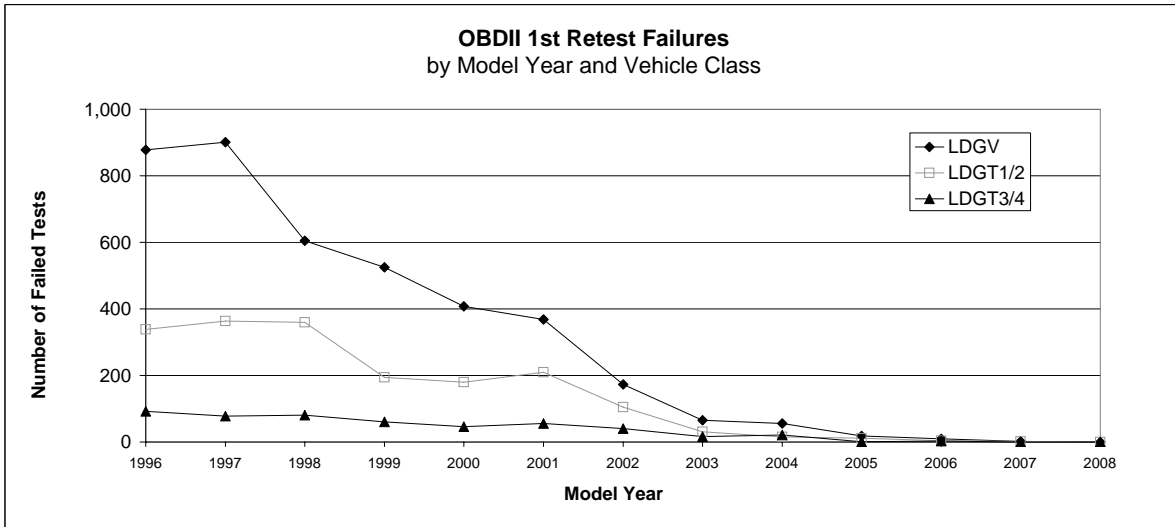
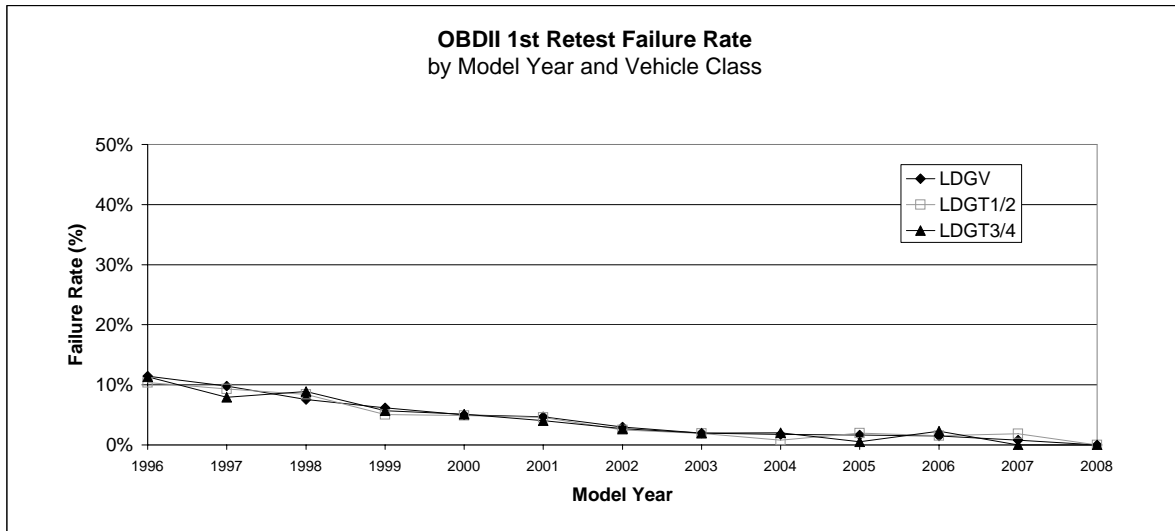


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(ii) OBDII 1st Retests Failing by model year and vehicle type

Any vehicle receiving an OBDII retest that failed the initial OBDII test in 2007 is counted as a OBDII 1st retest. Vehicles that are "Not Ready" for their retest but would otherwise pass OBD (i.e. MIL commanded off) are rejected from testing and don't count as receiving a retest.

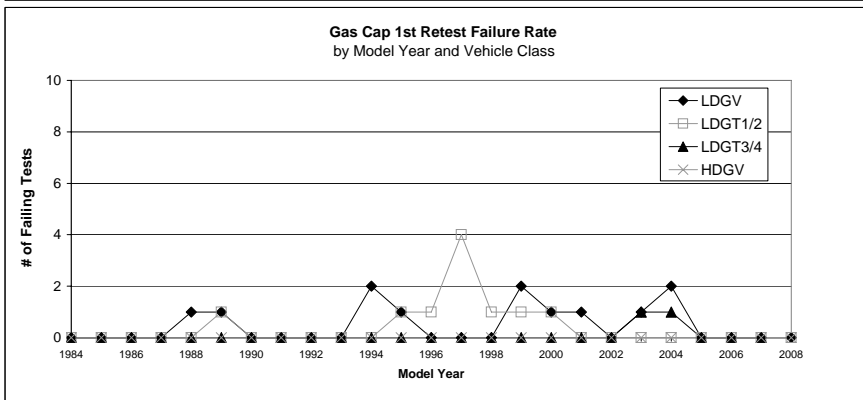
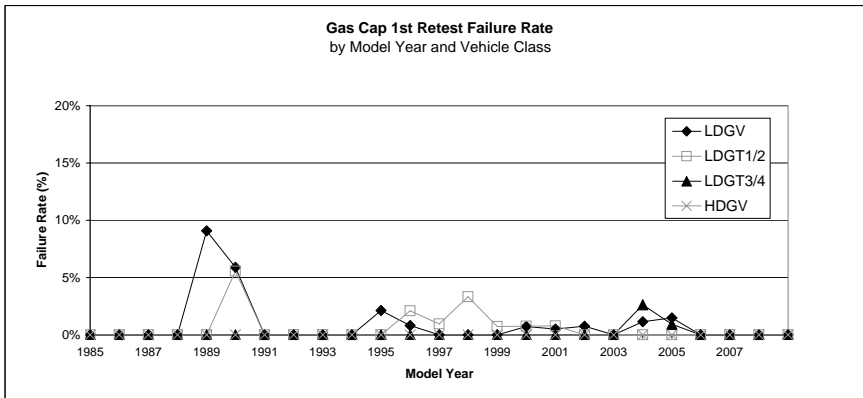
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1996	878	7,663	11.5%	338	3,251	10.4%	92	812	11.3%	0	1	0.0%	1,308	11,727	11.2%
1997	901	9,175	9.8%	363	3,903	9.3%	78	986	7.9%	0	0	NA	1,342	14,064	9.5%
1998	605	8,004	7.6%	360	4,292	8.4%	81	913	8.9%	0	0	NA	1,046	13,209	7.9%
1999	525	8,509	6.2%	194	3,816	5.1%	61	1,073	5.7%	0	0	NA	780	13,398	5.8%
2000	408	8,139	5.0%	180	3,688	4.9%	46	901	5.1%	0	0	NA	634	12,728	5.0%
2001	368	7,824	4.7%	210	4,564	4.6%	56	1,390	4.0%	0	0	NA	634	13,778	4.6%
2002	173	5,811	3.0%	105	4,152	2.5%	40	1,466	2.7%	0	0	NA	318	11,429	2.8%
2003	65	3,320	2.0%	31	1,628	1.9%	16	823	1.9%	0	0	NA	112	5,771	1.9%
2004	56	3,159	1.8%	15	1,834	0.8%	21	1,037	2.0%	0	0	NA	92	6,030	1.5%
2005	18	1,077	1.7%	12	611	2.0%	1	189	0.5%	0	0	NA	31	1,877	1.7%
2006	10	679	1.5%	4	263	1.5%	3	130	2.3%	0	0	NA	17	1,072	1.6%
2007	2	256	0.8%	2	108	1.9%	0	49	0.0%	0	0	NA	4	413	1.0%
2008	0	7	0.0%	0	5	0.0%	0	1	0.0%	0	0	NA	0	13	0.0%
TOTAL	4,009	63,623	6.3%	1,814	32,115	5.6%	495	9,770	5.1%	0	1	0.0%	6,318	105,509	6.0%



2007 Massachusetts I&M Program Test Data
51.366 (a)(2)(ii) Gas Cap 1st Retests Failing by model year and vehicle type

Any vehicle receiving their gas cap functional test after they failed their first gas cap test in 2007 is counted as a 1st gas cap retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate	Failed	Tested	Fail Rate
1984	0	2	0.0%	0	6	0.0%	0	0	NA	0	0	NA	0	8	0.0%
1985	0	6	0.0%	0	6	0.0%	0	2	0.0%	0	3	0.0%	0	17	0.0%
1986	0	11	0.0%	0	8	0.0%	0	5	0.0%	0	2	0.0%	0	26	0.0%
1987	0	11	0.0%	0	12	0.0%	0	8	0.0%	0	1	0.0%	0	32	0.0%
1988	1	11	9.1%	0	7	0.0%	0	15	0.0%	0	1	0.0%	1	34	2.9%
1989	1	17	5.9%	1	18	5.6%	0	8	0.0%	0	4	0.0%	2	47	4.3%
1990	0	39	0.0%	0	13	0.0%	0	5	0.0%	0	1	0.0%	0	58	0.0%
1991	0	42	0.0%	0	12	0.0%	0	7	0.0%	0	1	0.0%	0	62	0.0%
1992	0	52	0.0%	0	22	0.0%	0	9	0.0%	0	2	0.0%	0	85	0.0%
1993	0	81	0.0%	0	31	0.0%	0	12	0.0%	0	2	0.0%	0	126	0.0%
1994	2	94	2.1%	0	48	0.0%	0	13	0.0%	0	6	0.0%	2	161	1.2%
1995	1	122	0.8%	1	48	2.1%	0	24	0.0%	0	7	0.0%	2	201	1.0%
1996	0	193	0.0%	1	106	0.9%	0	30	0.0%	0	2	0.0%	1	331	0.3%
1997	0	274	0.0%	4	120	3.3%	0	35	0.0%	0	11	0.0%	4	440	0.9%
1998	0	232	0.0%	1	136	0.7%	0	29	0.0%	0	3	0.0%	1	400	0.3%
1999	2	271	0.7%	1	133	0.8%	0	42	0.0%	0	13	0.0%	3	459	0.7%
2000	1	199	0.5%	1	129	0.8%	0	59	0.0%	0	7	0.0%	2	394	0.5%
2001	1	135	0.7%	0	107	0.0%	0	58	0.0%	0	8	0.0%	1	308	0.3%
2002	0	152	0.0%	0	102	0.0%	0	58	0.0%	0	8	0.0%	0	320	0.0%
2003	1	87	1.1%	0	77	0.0%	1	38	2.6%	0	5	0.0%	2	207	1.0%
2004	2	136	1.5%	0	106	0.0%	1	110	0.9%	0	6	0.0%	3	358	0.8%
2005	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	12	2,167	0.6%	10	1,247	0.8%	2	567	0.4%	0	93	0.0%	24	4,074	0.6%

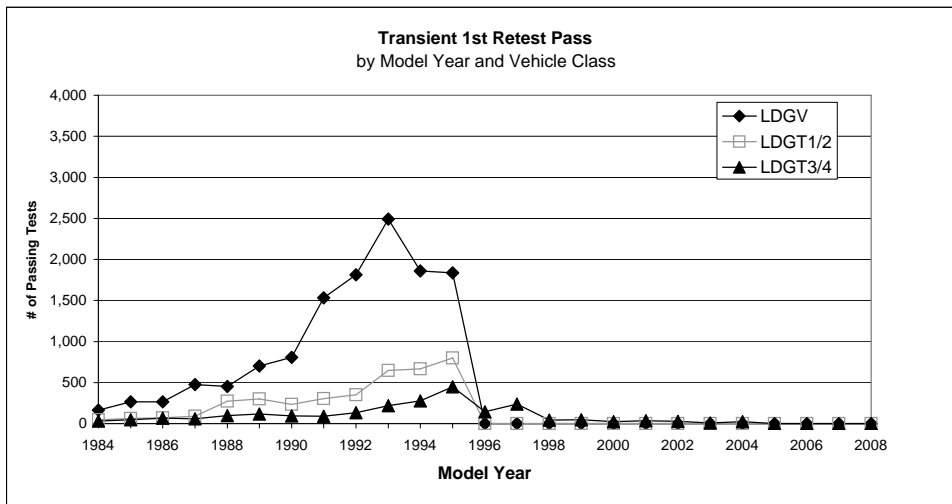
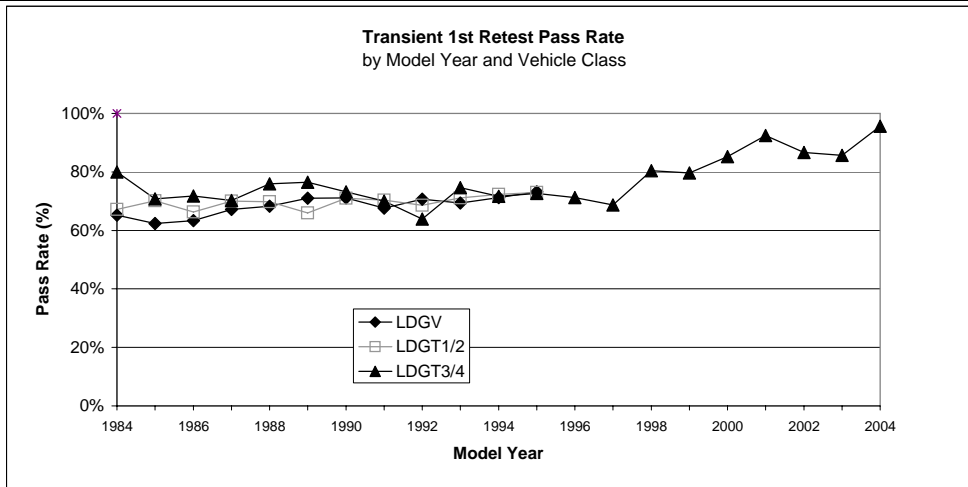


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(iii) Transient 1st Retests Passing by model year and vehicle type

Any vehicle receiving their second transient test after they failed their first emissions test in 2007 is counted as a 1st transient retest.

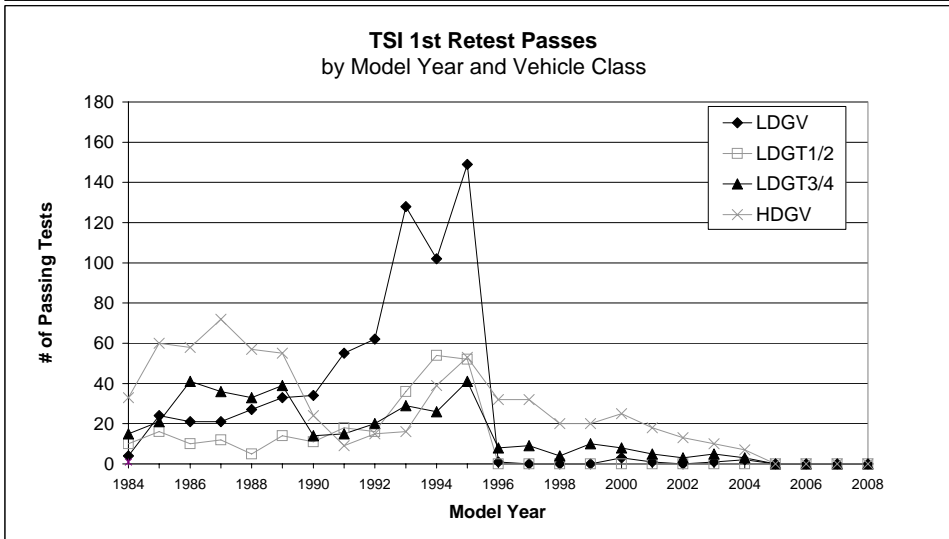
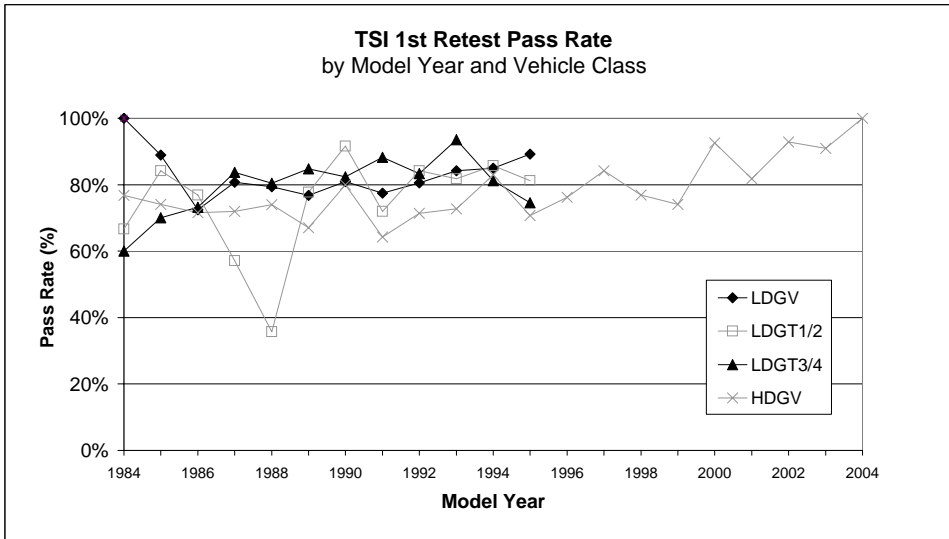
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			TOTAL		
	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate
1984	165	253	65.2%	45	67	67.2%	32	40	80.0%	242	360	67.2%
1985	267	428	62.4%	61	87	70.1%	46	65	70.8%	374	580	64.5%
1986	265	418	63.4%	71	107	66.4%	66	92	71.7%	402	617	65.2%
1987	477	710	67.2%	91	130	70.0%	59	84	70.2%	627	924	67.9%
1988	454	665	68.3%	271	388	69.8%	98	129	76.0%	823	1,182	69.6%
1989	701	987	71.0%	299	453	66.0%	117	153	76.5%	1,117	1,593	70.1%
1990	806	1,133	71.1%	233	328	71.0%	93	127	73.2%	1,132	1,588	71.3%
1991	1,531	2,266	67.6%	304	432	70.4%	91	130	70.0%	1,926	2,828	68.1%
1992	1,814	2,567	70.7%	352	513	68.6%	131	205	63.9%	2,297	3,285	69.9%
1993	2,490	3,587	69.4%	647	910	71.1%	217	291	74.6%	3,354	4,788	70.1%
1994	1,860	2,611	71.2%	666	921	72.3%	276	385	71.7%	2,802	3,917	71.5%
1995	1,836	2,510	73.1%	800	1,097	72.9%	449	618	72.7%	3,085	4,225	73.0%
1996	0	0	NA	0	0	NA	146	205	71.2%	146	205	71.2%
1997	1	1	100.0%	1	1	100.0%	239	348	68.7%	241	350	68.9%
1998	1	2	50.0%	0	0	NA	41	51	80.4%	42	53	79.2%
1999	0	0	NA	0	0	NA	47	59	79.7%	47	59	79.7%
2000	0	1	0.0%	0	0	NA	23	27	85.2%	23	28	82.1%
2001	0	0	NA	0	0	NA	37	40	92.5%	37	40	92.5%
2002	0	0	NA	0	0	NA	26	30	86.7%	26	30	86.7%
2003	0	0	NA	0	0	NA	6	7	85.7%	6	7	85.7%
2004	0	0	NA	0	0	NA	22	23	95.7%	22	23	95.7%
2005	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	12,668	18,139	69.8%	3,841	5,434	70.7%	2,262	3,109	72.8%	18,771	26,682	70.4%



2007 Massachusetts I&M Program Test Data
 51.366 (a)(2)(iii) TSI 1st Retests Passing by model year and vehicle type

Any vehicle receiving their second two-speed idle test after they failed their first emissions test in 2007 is counted as a 1st two-speed idle retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate
1984	4	4	100.0%	10	15	66.7%	15	25	60.0%	33	43	76.7%	62	87	71.3%
1985	24	27	88.9%	16	19	84.2%	21	30	70.0%	60	81	74.1%	121	157	77.1%
1986	21	29	72.4%	10	13	76.9%	41	56	73.2%	58	81	71.6%	130	179	72.6%
1987	21	26	80.8%	12	21	57.1%	36	43	83.7%	72	100	72.0%	141	190	74.2%
1988	27	34	79.4%	5	14	35.7%	33	41	80.5%	57	77	74.0%	122	166	73.5%
1989	33	43	76.7%	14	18	77.8%	39	46	84.8%	55	82	67.1%	141	189	74.6%
1990	34	42	81.0%	11	12	91.7%	14	17	82.4%	24	30	80.0%	83	101	82.2%
1991	55	71	77.5%	18	25	72.0%	15	17	88.2%	9	14	64.3%	97	127	76.4%
1992	62	77	80.5%	16	19	84.2%	20	24	83.3%	15	21	71.4%	113	141	80.1%
1993	128	152	84.2%	36	44	81.8%	29	31	93.5%	16	22	72.7%	209	249	83.9%
1994	102	120	85.0%	54	63	85.7%	26	32	81.3%	39	47	83.0%	221	262	84.4%
1995	149	167	89.2%	52	64	81.3%	41	55	74.5%	53	75	70.7%	295	361	81.7%
1996	1	1	100.0%	0	0	NA	8	10	80.0%	32	42	76.2%	41	53	77.4%
1997	0	0	NA	0	0	NA	9	12	75.0%	32	38	84.2%	41	50	82.0%
1998	0	0	NA	0	0	NA	4	4	100.0%	20	26	76.9%	24	30	80.0%
1999	0	0	NA	0	0	NA	10	11	90.9%	20	27	74.1%	30	38	78.9%
2000	3	3	100.0%	0	0	NA	8	9	88.9%	25	27	92.6%	36	39	92.3%
2001	1	2	50.0%	0	0	NA	5	5	100.0%	18	22	81.8%	24	29	82.8%
2002	0	0	NA	0	0	NA	3	4	75.0%	13	14	92.9%	16	18	88.9%
2003	1	1	100.0%	0	0	NA	5	5	100.0%	10	11	90.9%	16	17	94.1%
2004	2	2	100.0%	0	0	NA	3	3	100.0%	7	7	100.0%	12	12	100.0%
2005	0	1	0.0%	0	0	NA	0	0	NA	0	0	NA	0	1	0.0%
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	668	802	83.3%	254	327	77.7%	385	480	80.2%	668	887	75.3%	1,975	2,496	79.1%

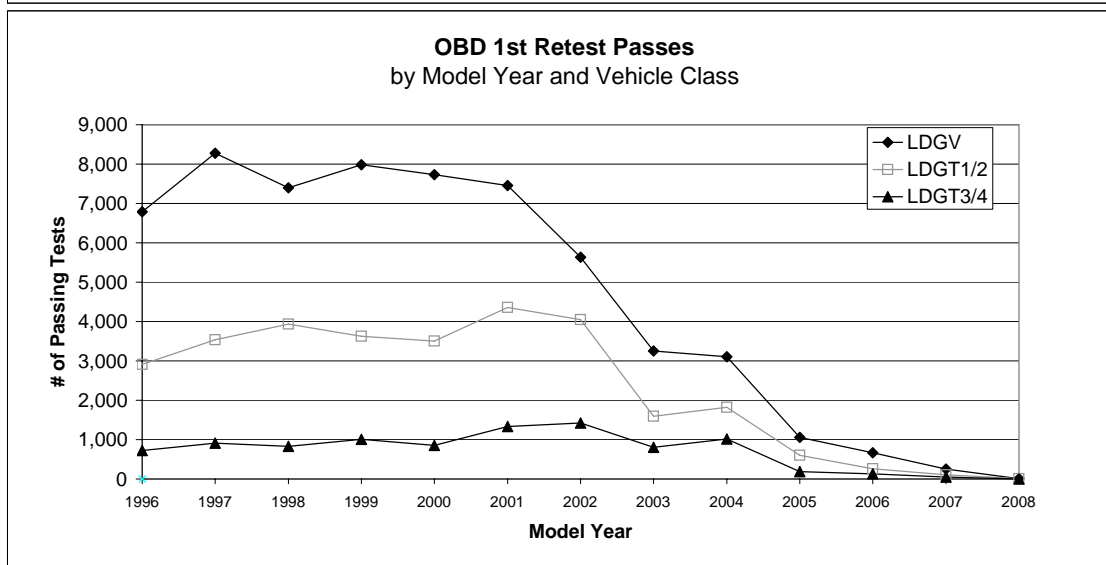
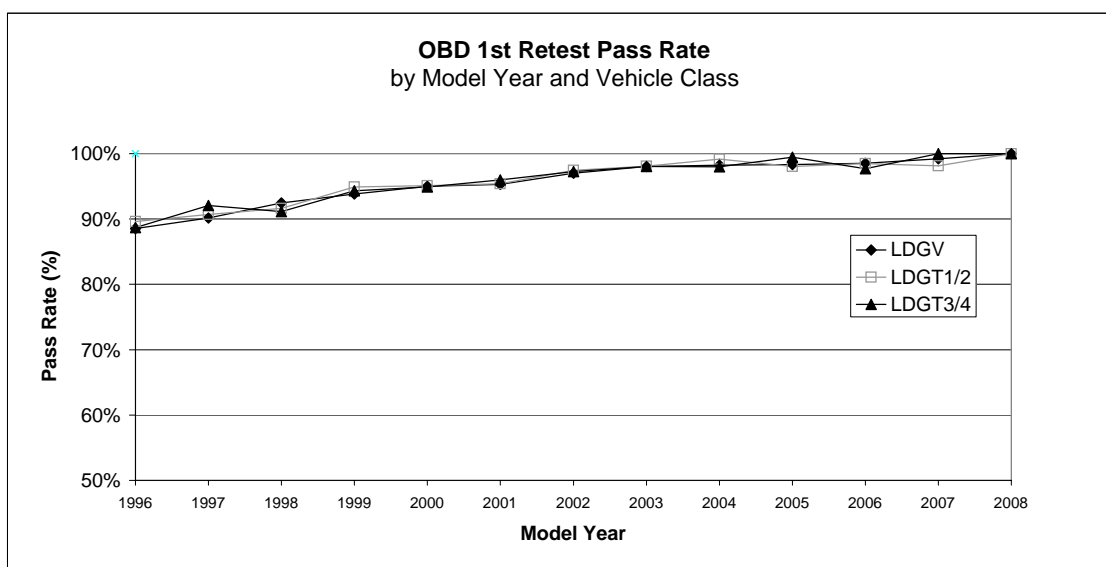


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(iii) OBD 1st Retests Passing by model year and vehicle type

Any vehicle receiving an OBDII retest that failed the initial OBDII test in 2007 is counted as a OBDII 1st retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate
1996	6,785	7,663	88.5%	2,913	3,251	89.6%	720	812	88.7%	1	1	100.0%	10,419	11,727	88.8%
1997	8,274	9,175	90.2%	3,540	3,903	90.7%	908	986	92.1%	0	0	NA	12,722	14,064	90.5%
1998	7,399	8,004	92.4%	3,932	4,292	91.6%	832	913	91.1%	0	0	NA	12,163	13,209	92.1%
1999	7,984	8,509	93.8%	3,622	3,816	94.9%	1,012	1,073	94.3%	0	0	NA	12,618	13,398	94.2%
2000	7,731	8,139	95.0%	3,508	3,688	95.1%	855	901	94.9%	0	0	NA	12,094	12,728	95.0%
2001	7,456	7,824	95.3%	4,354	4,564	95.4%	1,334	1,390	96.0%	0	0	NA	13,144	13,778	95.4%
2002	5,638	5,811	97.0%	4,047	4,152	97.5%	1,426	1,466	97.3%	0	0	NA	11,111	11,429	97.2%
2003	3,255	3,320	98.0%	1,597	1,628	98.1%	807	823	98.1%	0	0	NA	5,659	5,771	98.1%
2004	3,103	3,159	98.2%	1,819	1,834	99.2%	1,016	1,037	98.0%	0	0	NA	5,938	6,030	98.5%
2005	1,059	1,077	98.3%	599	611	98.0%	188	189	99.5%	0	0	NA	1,846	1,877	98.3%
2006	669	679	98.5%	259	263	98.5%	127	130	97.7%	0	0	NA	1,055	1,072	98.4%
2007	254	256	99.2%	106	108	98.1%	49	49	100.0%	0	0	NA	409	413	99.0%
2008	7	7	100.0%	5	5	100.0%	1	1	100.0%	0	0	NA	13	13	100.0%
TOTAL	59,614	63,623	93.7%	30,301	32,115	94.4%	9,275	9,770	94.9%	1	1	100.0%	99,191	105,509	94.0%

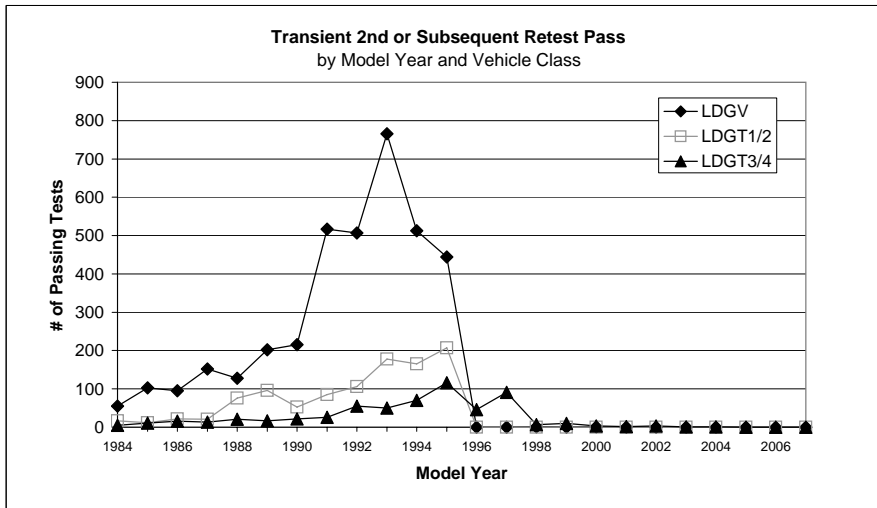
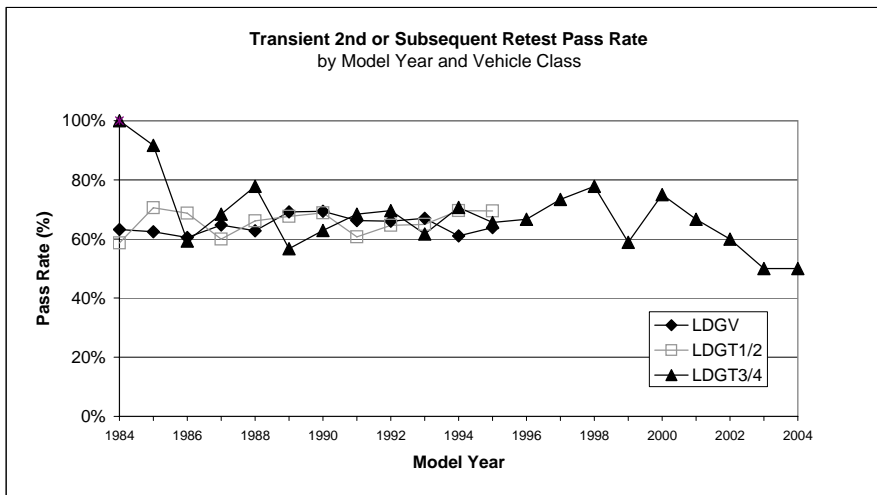


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(iv) Transient 2nd and Subsequent Retests Passing by model year and vehicle type

Any vehicle receiving a subsequent transient retest after they failed their second emissions test in 2007 is counted as a 2nd and subsequent transient retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			TOTAL		
	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate
1984	55	87	63.2%	17	29	58.6%	5	5	100.0%	77	121	63.6%
1985	103	165	62.4%	12	17	70.6%	11	12	91.7%	126	194	64.9%
1986	95	157	60.5%	22	32	68.8%	16	27	59.3%	133	216	61.6%
1987	152	235	64.7%	21	35	60.0%	13	19	68.4%	186	289	64.4%
1988	128	204	62.7%	76	115	66.1%	21	27	77.8%	225	346	65.0%
1989	202	292	69.2%	96	142	67.6%	17	30	56.7%	315	464	67.9%
1990	215	310	69.4%	53	77	68.8%	22	35	62.9%	290	422	68.7%
1991	517	781	66.2%	85	140	60.7%	26	38	68.4%	628	959	65.5%
1992	507	768	66.0%	106	164	64.6%	55	79	69.6%	668	1,011	66.1%
1993	766	1,144	67.0%	178	274	65.0%	50	81	61.7%	994	1,499	66.3%
1994	513	840	61.1%	165	237	69.6%	70	99	70.7%	748	1,176	63.6%
1995	444	695	63.9%	207	298	69.5%	116	177	65.5%	767	1,170	65.6%
1996	0	0	NA	0	0	NA	46	69	66.7%	46	69	66.7%
1997	0	0	NA	0	0	NA	91	124	73.4%	91	124	73.4%
1998	1	1	100.0%	0	0	NA	7	9	77.8%	8	10	80.0%
1999	0	0	NA	0	0	NA	10	17	58.8%	10	17	58.8%
2000	1	4	25.0%	0	0	NA	3	4	75.0%	4	8	50.0%
2001	0	0	NA	0	0	NA	2	3	66.7%	2	3	66.7%
2002	0	0	NA	0	0	NA	3	5	60.0%	3	5	60.0%
2003	0	0	NA	0	0	NA	1	2	50.0%	1	2	50.0%
2004	0	0	NA	0	0	NA	1	2	50.0%	1	2	50.0%
2005	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	3,699	5,683	65.1%	1,038	1,560	66.5%	586	864	67.8%	5,323	8,107	65.7%

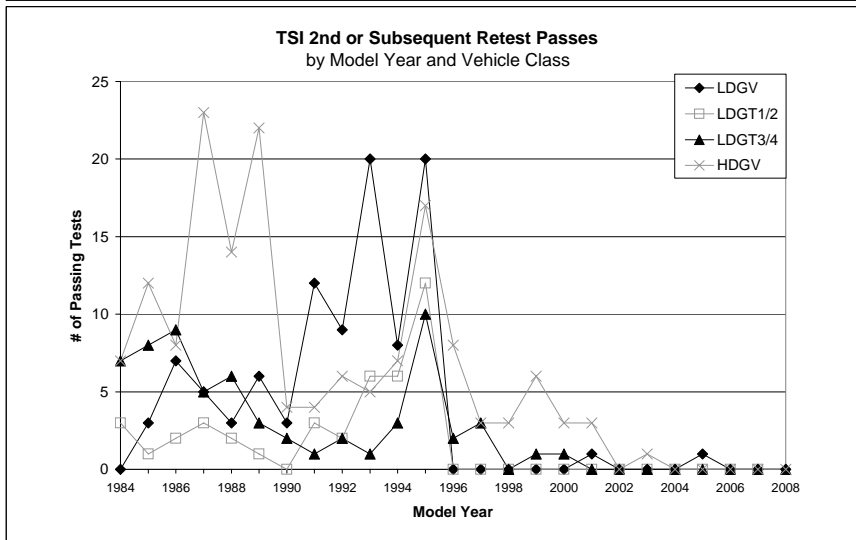
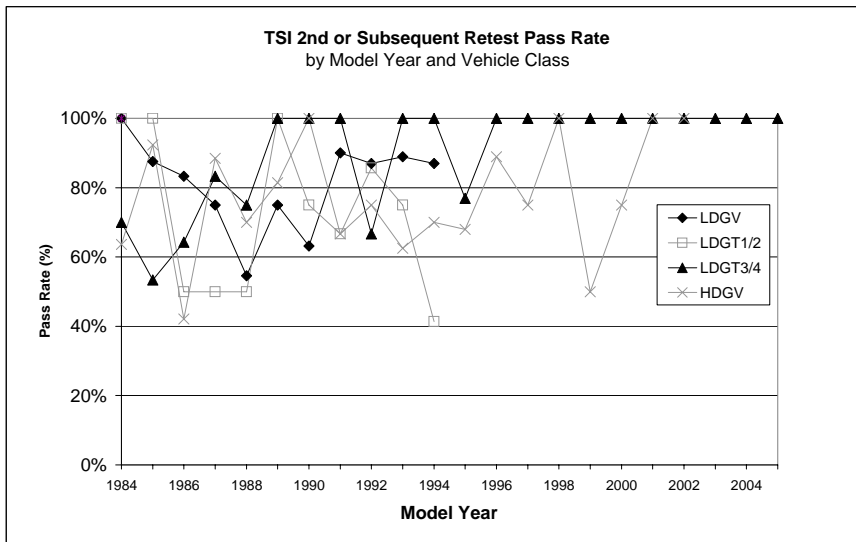


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(iv) TSI 2nd and Subsequent Retests Passing by model year and vehicle type

Any vehicle receiving a subsequent TSI retest after they failed their second emissions test in 2007 is counted as a 2nd and subsequent TSI retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate
1984	0	0	NA	3	3	100.0%	7	10	70.0%	7	11	63.6%	17	24	70.8%
1985	3	3	100.0%	1	1	100.0%	8	15	53.3%	12	13	92.3%	24	32	75.0%
1986	7	8	87.5%	2	4	50.0%	9	14	64.3%	8	19	42.1%	26	45	57.8%
1987	5	6	83.3%	3	6	50.0%	5	6	83.3%	23	26	88.5%	36	44	81.8%
1988	3	4	75.0%	2	4	50.0%	6	8	75.0%	14	20	70.0%	25	36	69.4%
1989	6	11	54.5%	1	1	100.0%	3	3	100.0%	22	27	81.5%	32	42	76.2%
1990	3	4	75.0%	0	0	NA	2	2	100.0%	4	4	100.0%	9	10	90.0%
1991	12	19	63.2%	3	4	75.0%	1	1	100.0%	4	6	66.7%	20	30	66.7%
1992	9	10	90.0%	2	3	66.7%	2	3	66.7%	6	8	75.0%	19	24	79.2%
1993	20	23	87.0%	6	7	85.7%	1	1	100.0%	5	8	62.5%	32	39	82.1%
1994	8	9	88.9%	6	8	75.0%	3	3	100.0%	7	10	70.0%	24	30	80.0%
1995	20	23	87.0%	12	29	41.4%	10	13	76.9%	17	25	68.0%	59	90	65.6%
1996	0	0	NA	0	0	NA	2	2	100.0%	8	9	88.9%	10	11	90.9%
1997	0	0	NA	0	0	NA	3	3	100.0%	3	4	75.0%	6	7	85.7%
1998	0	0	NA	0	0	NA	0	0	NA	3	3	100.0%	3	3	100.0%
1999	0	0	NA	0	0	NA	1	1	100.0%	6	12	50.0%	7	13	53.8%
2000	0	0	NA	0	0	NA	1	1	100.0%	3	4	75.0%	4	5	80.0%
2001	1	1	100.0%	0	0	NA	0	0	NA	3	3	100.0%	4	4	100.0%
2002	0	0	NA	0	0	NA	0	1	0.0%	0	0	NA	0	1	0.0%
2003	0	0	NA	0	0	NA	0	0	NA	1	1	100.0%	1	1	100.0%
2004	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2005	1	1	100.0%	0	0	NA	0	0	NA	0	0	NA	1	1	100.0%
2006	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2007	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	98	122	80.3%	41	70	58.6%	64	87	73.6%	156	213	73.2%	359	492	73.0%

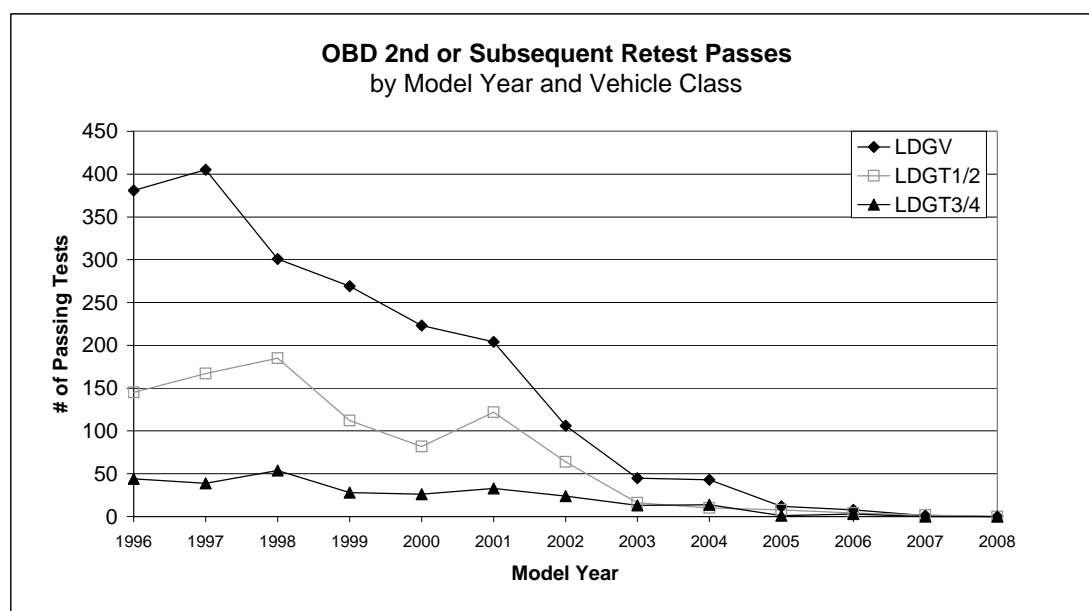
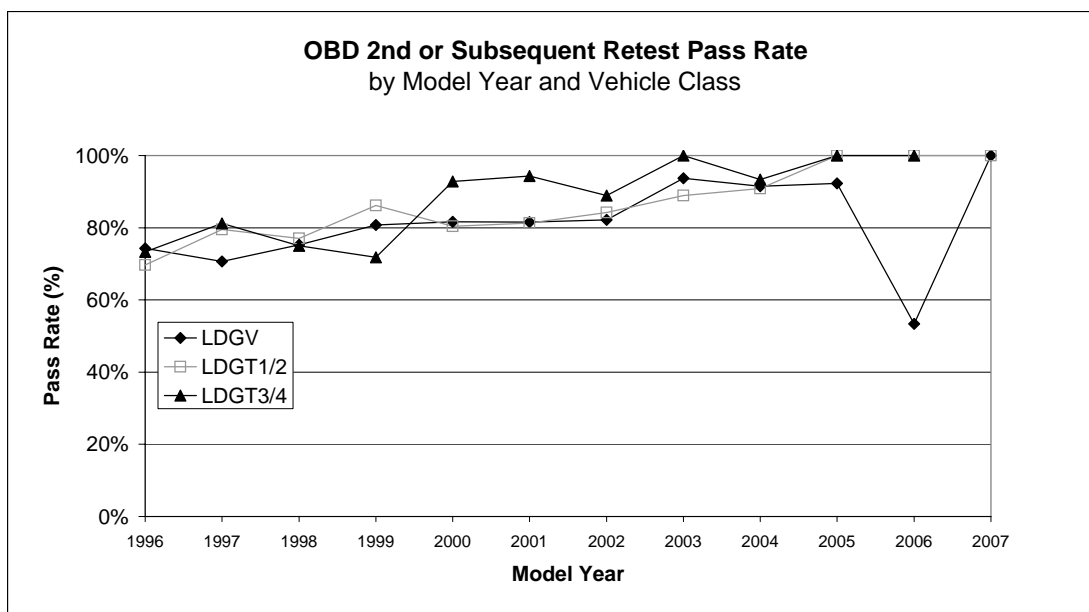


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(iv) OBDII 2nd and Subsequent Retests Passing by model year and vehicle type

Any vehicle receiving a subsequent OBDII retest after they failed their second or later OBDII test in 2007 is counted as a 2nd and subsequent OBDII retest. Vehicles that are "Not Ready" for their retest but would otherwise pass OBD (i.e. MIL commanded off) are rejected from testing and don't count as receiving a retest.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate	Passed	Tested	Pass Rate
1996	381	513	74.3%	145	208	69.7%	44	60	73.3%	0	0	NA	570	781	73.0%
1997	405	573	70.7%	167	210	79.5%	39	48	81.3%	0	0	NA	611	831	73.5%
1998	301	400	75.3%	185	240	77.1%	54	72	75.0%	1	1	100.0%	541	713	75.9%
1999	269	333	80.8%	112	130	86.2%	28	39	71.8%	0	0	NA	409	502	81.5%
2000	223	273	81.7%	82	102	80.4%	26	28	92.9%	0	0	NA	331	403	82.1%
2001	204	250	81.6%	122	150	81.3%	33	35	94.3%	0	0	NA	359	435	82.5%
2002	106	129	82.2%	64	76	84.2%	24	27	88.9%	0	0	NA	194	232	83.6%
2003	45	48	93.8%	16	18	88.9%	13	13	100.0%	0	0	NA	74	79	93.7%
2004	43	47	91.5%	10	11	90.9%	14	15	93.3%	0	0	NA	67	73	91.8%
2005	12	13	92.3%	8	8	100.0%	1	1	100.0%	0	0	NA	21	22	95.5%
2006	8	15	53.3%	4	4	100.0%	3	3	100.0%	0	0	NA	15	22	68.2%
2007	1	1	100.0%	2	2	100.0%	0	0	NA	0	0	NA	3	3	100.0%
2008	0	0	NA	0	0	NA	0	0	NA	0	0	NA	0	0	NA
TOTAL	1,998	2,595	77.0%	917	1,159	79.1%	279	341	81.8%	1	1	100.0%	3,195	4,096	78.0%

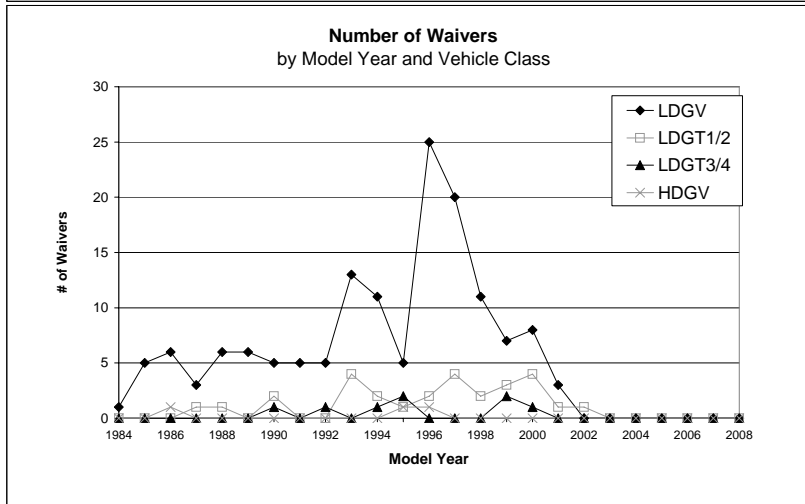
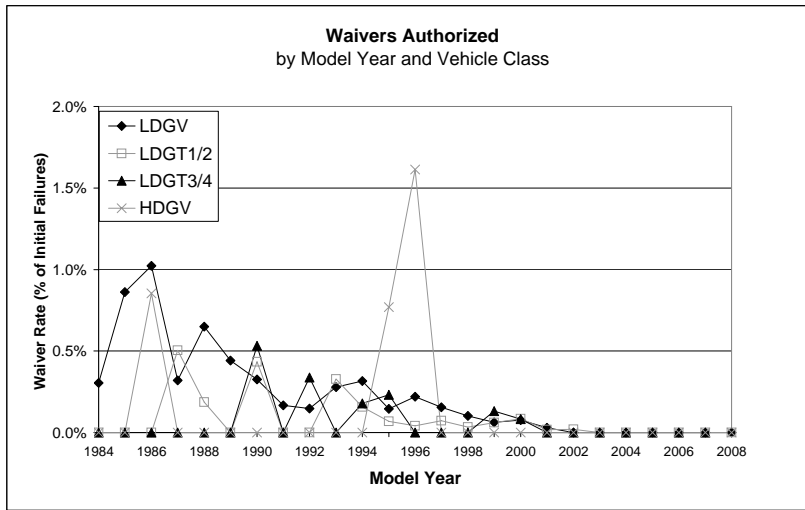


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(v) Initial Failing Emissions Tests Receiving a Waiver by model year and vehicle type

Motorists can receive an emissions waiver for their vehicle if they cannot pass an emissions retest following repairs. To be eligible for a waiver, a motorist must spend a minimum of \$200 to \$400 (depending on vehicle age) on emission related repairs at a registered repair shop, the emissions-control system must be intact with no evidence of tampering, there must be some improvement to the vehicle's emissions, and emission levels must be less than three times the standard for all pollutants tested, as applicable. If the vehicle failed an OBDII test, then the vehicle must NOT have any misfire or catalyst related DTCs present and must be READY for testing in order to qualify for a waiver. The waiver is valid until the vehicle is due for its next emissions test. The waiver rate is calculated as a percentage of unique vehicles that failed their initial emissions test in 2007.

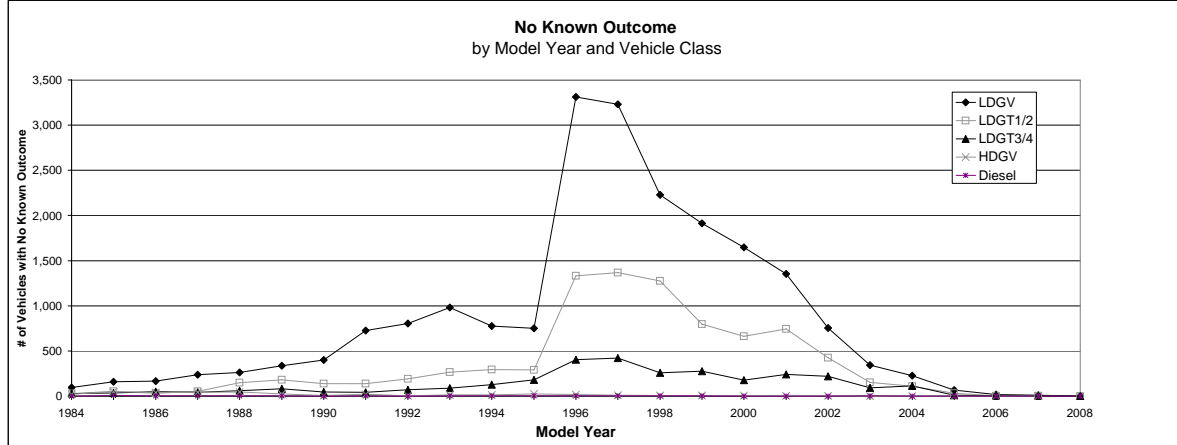
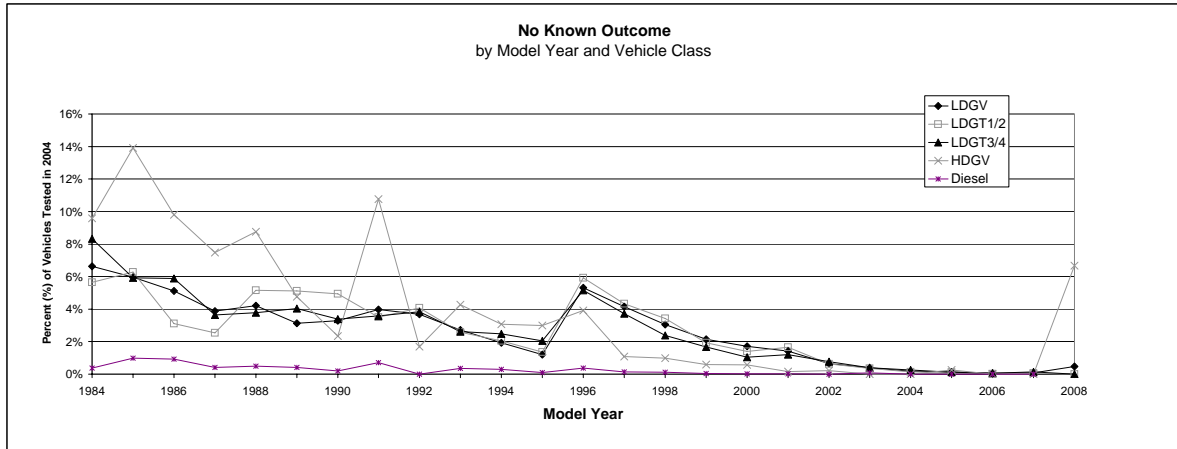
MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Waiver Granted	Initial Failed	Waiver Rate	Waiver Granted	Initial Failed	Waiver Rate	Waiver Granted	Initial Failed	Waiver Rate	Waiver Granted	Initial Failed	Waiver Rate	Waiver Granted	Initial Failed	Waiver Rate
1984	1	329	0.3%	0	105	0.0%	0	95	0.0%	0	80	0.0%	1	609	0.2%
1985	5	580	0.9%	0	157	0.0%	0	124	0.0%	0	144	0.0%	5	1,005	0.5%
1986	6	587	1.0%	0	146	0.0%	0	188	0.0%	1	117	0.9%	7	1,038	0.7%
1987	3	940	0.3%	1	198	0.5%	0	166	0.0%	0	174	0.0%	4	1,478	0.3%
1988	6	923	0.7%	1	537	0.2%	0	235	0.0%	0	152	0.0%	7	1,847	0.4%
1989	6	1,359	0.4%	0	625	0.0%	0	281	0.0%	0	130	0.0%	6	2,395	0.3%
1990	5	1,538	0.3%	2	461	0.4%	1	188	0.5%	0	52	0.0%	8	2,239	0.4%
1991	5	3,000	0.2%	0	578	0.0%	0	186	0.0%	0	45	0.0%	5	3,809	0.1%
1992	5	3,404	0.1%	0	713	0.0%	1	296	0.3%	0	34	0.0%	6	4,447	0.1%
1993	13	4,676	0.3%	4	1,219	0.3%	0	427	0.0%	0	47	0.0%	17	6,369	0.3%
1994	11	3,476	0.3%	2	1,270	0.2%	1	557	0.2%	0	79	0.0%	14	5,382	0.3%
1995	5	3,437	0.1%	1	1,468	0.1%	2	860	0.2%	1	130	0.8%	9	5,895	0.2%
1996	25	11,384	0.2%	2	4,758	0.0%	0	1,493	0.0%	1	62	1.6%	28	17,697	0.2%
1997	20	12,935	0.2%	4	5,539	0.1%	0	1,877	0.0%	0	68	0.0%	24	20,419	0.1%
1998	11	10,807	0.1%	2	5,842	0.0%	0	1,312	0.0%	0	37	0.0%	13	17,998	0.1%
1999	7	11,091	0.1%	3	4,976	0.1%	2	1,512	0.1%	0	47	0.0%	12	17,626	0.1%
2000	8	10,574	0.1%	4	4,705	0.1%	1	1,203	0.1%	0	43	0.0%	13	16,525	0.1%
2001	3	9,885	0.0%	1	5,791	0.0%	0	1,812	0.0%	0	36	0.0%	4	17,524	0.0%
2002	0	7,169	0.0%	1	5,035	0.0%	0	1,891	0.0%	0	33	0.0%	1	14,128	0.0%
2003	0	4,009	0.0%	0	1,951	0.0%	0	1,021	0.0%	0	19	0.0%	0	7,000	0.0%
2004	0	3,613	0.0%	0	2,080	0.0%	0	1,275	0.0%	0	20	0.0%	0	6,988	0.0%
2005	0	1,267	0.0%	0	723	0.0%	0	227	0.0%	0	5	0.0%	0	2,222	0.0%
2006	0	716	0.0%	0	282	0.0%	0	136	0.0%	0	0	NA	0	1,134	0.0%
2007	0	282	0.0%	0	117	0.0%	0	57	0.0%	0	0	NA	0	456	0.0%
2008	0	9	0.0%	0	6	0.0%	0	1	0.0%	0	1	0.0%	0	17	0.0%
TOTAL	145	107,990	0.13%	28	49,282	0.06%	8	17,420	0.05%	3	1,555	0.19%	184	176,247	0.10%



2007 Massachusetts I&M Program Test Data
 51.366 (a)(2)(vi) Vehicles with no known final outcome (regardless of reason)

Vehicles with no known outcome are vehicles that failed the emissions test and show no record of passing the retest. The following methodology was used for this analysis: Track the vehicles VINs through its emission test sequence and if the sequence was not completed (i.e. there was not a passing result for the emissions test through 3/31/08), then the vehicle was counted as having no known outcome. Vehicles were not checked against the registration database, so some of these may have their registrations expired, were junked, or sold out of state.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			All Gas Vehicles			All Diesel Vehicles			TOTAL		
	No Known Outcome	Vehicles Tested	Rate of Occurrence	No Known Outcome	Vehicles Tested	Rate of Occurrence	No Known Outcome	Vehicles Tested	Rate of Occurrence	No Known Outcome	Vehicles Tested	Rate of Occurrence	No Known Outcome	Vehicles Tested	Rate of Occurrence	No Known Outcome	Vehicles Tested	Rate of Occurrence	No Known Outcome	Vehicles Tested	Rate of Occurrence
1984	36	1,446	6.8%	25	495	5.7%	30	360	8.3%	23	240	9.6%	177	2,541	7.0%	1	273	0.4%	178	2,314	8.3%
1985	161	2,701	6.0%	53	843	6.3%	34	574	5.9%	48	345	13.9%	296	4,463	6.6%	7	715	1.0%	303	5,178	5.9%
1986	167	3,267	5.1%	33	1,064	3.1%	49	834	5.9%	39	398	9.8%	288	5,563	5.2%	5	535	0.9%	293	6,098	4.8%
1987	236	6,073	3.9%	54	2,131	2.5%	41	1,128	3.6%	44	589	7.5%	375	9,921	3.8%	5	1,229	0.4%	380	11,150	3.4%
1988	263	6,240	4.2%	149	2,894	5.1%	61	1,617	3.8%	46	525	8.8%	519	11,276	4.6%	4	828	0.5%	523	12,104	4.3%
1989	338	10,825	3.1%	180	3,523	5.1%	82	2,035	4.0%	26	545	4.8%	628	16,928	3.7%	4	988	0.4%	630	17,916	3.5%
1990	399	12,126	3.3%	139	2,810	4.9%	46	1,361	3.4%	6	257	2.3%	590	16,554	3.6%	1	518	0.2%	591	17,072	3.5%
1991	726	18,247	4.0%	138	3,930	3.5%	44	1,230	3.6%	21	195	10.8%	929	23,602	3.9%	5	714	0.7%	934	24,316	3.8%
1992	804	21,873	3.7%	192	4,714	4.1%	71	1,846	3.8%	4	237	1.7%	1,071	28,670	3.7%	0	476	0.0%	1,071	29,146	3.7%
1993	980	36,202	2.7%	267	10,376	2.6%	88	3,363	2.6%	15	352	4.3%	1,350	50,293	2.7%	4	1,116	0.4%	1,354	51,409	2.6%
1994	775	40,030	1.9%	293	14,262	2.1%	127	5,141	2.5%	14	455	3.1%	1,209	59,888	2.0%	3	1,034	0.3%	1,212	60,922	2.0%
1995	750	62,437	1.2%	289	21,189	1.4%	180	8,769	2.1%	25	835	3.0%	1,244	93,230	1.3%	3	2,898	0.1%	1,247	96,126	1.3%
1996	3,311	62,409	5.3%	1,332	22,506	5.9%	404	7,823	5.2%	19	486	3.9%	5,066	93,224	5.4%	5	1,325	0.4%	5,071	94,549	5.4%
1997	3,232	77,875	4.2%	1,368	31,645	4.3%	421	11,347	3.7%	12	1,110	1.1%	5,033	121,977	4.1%	4	3,037	0.1%	5,037	125,014	4.0%
1998	2,227	72,995	3.1%	1,276	37,260	3.4%	260	10,947	2.4%	6	615	1.0%	3,769	121,817	3.1%	2	1,802	0.1%	3,771	123,619	3.1%
1999	1,813	88,911	2.2%	798	41,319	1.9%	278	16,661	1.7%	7	1,171	0.6%	2,996	148,062	2.0%	2	4,261	0.0%	2,998	152,323	2.0%
2000	1,649	95,936	1.7%	661	47,350	1.4%	178	17,113	1.0%	6	1,069	0.6%	2,494	161,368	1.5%	1	3,807	0.0%	2,495	165,175	1.5%
2001	1,353	95,787	1.4%	745	44,825	1.7%	242	20,216	1.2%	2	1,263	0.2%	2,342	162,071	1.4%	1	3,846	0.0%	2,343	165,917	1.4%
2002	756	115,885	0.7%	424	66,411	0.6%	218	28,120	0.8%	3	1,398	0.2%	1,401	211,814	0.7%	0	3,791	0.0%	1,401	215,605	0.6%
2003	343	87,240	0.4%	153	43,731	0.3%	92	22,873	0.4%	0	1,334	0.0%	588	155,178	0.4%	2	2,564	0.1%	590	157,742	0.4%
2004	227	121,928	0.2%	110	83,445	0.1%	113	43,057	0.3%	0	1,859	0.0%	450	250,289	0.2%	0	4,735	0.0%	450	255,024	0.2%
2005	66	48,585	0.1%	32	25,505	0.1%	11	9,371	0.1%	1	403	0.2%	110	83,844	0.1%	0	1,875	0.0%	110	85,719	0.1%
2006	16	27,377	0.1%	3	11,945	0.0%	3	5,977	0.1%	0	128	0.0%	22	45,427	0.0%	0	399	0.0%	22	45,825	0.0%
2007	11	13,541	0.1%	3	5,438	0.1%	3	2,306	0.1%	0	22	0.0%	17	21,307	0.1%	0	226	0.0%	17	21,533	0.1%
2008	1	211	0.5%	0	146	0.0%	0	39	0.0%	1	15	6.7%	2	411	0.5%	0	31	0.0%	2	442	0.5%
TOTAL	20,800	1,130,007	1.8%	8,720	529,757	1.6%	3,076	224,108	1.4%	368	15,846	2.3%	32,964	1,899,718	1.7%	59	43,020	0.1%	33,023	1,942,738	1.7%

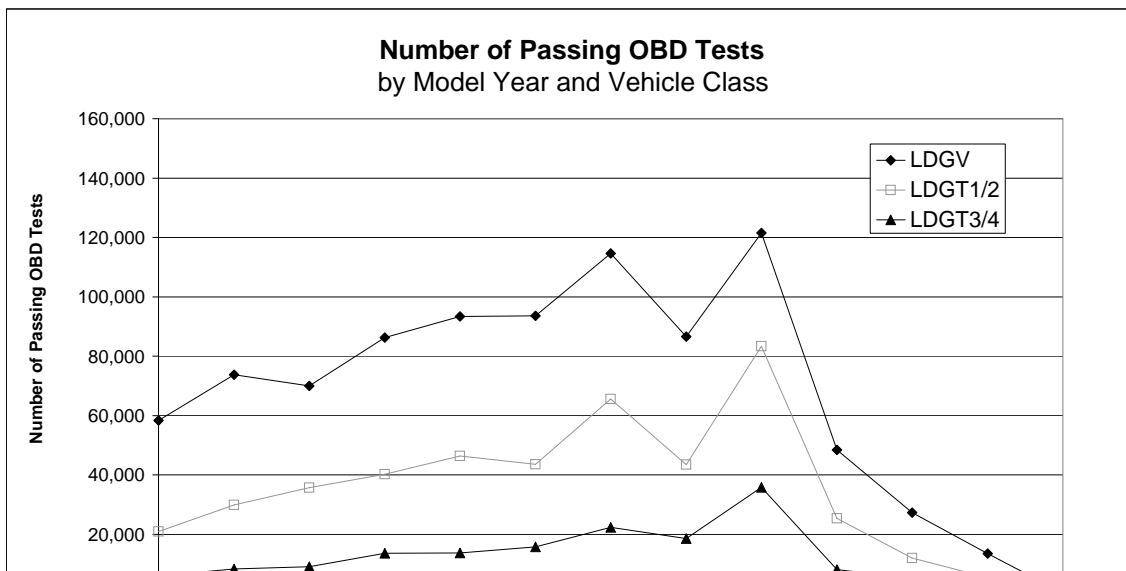
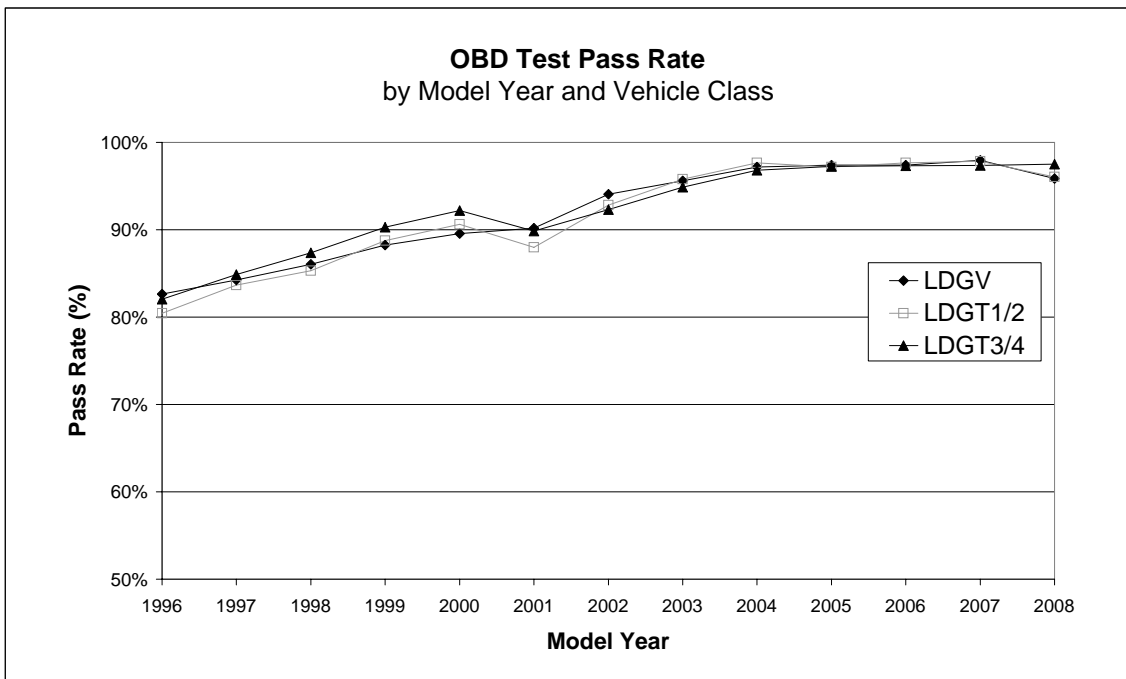


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xi) Passing OBDII Tests by model year and vehicle type

All passing OBDII tests, regardless of Test sequence. The pass rate is calculated as a percentage of all OBDII tests performed. Note: tests include retests for vehicles whose test sequence began prior to 2007 and are not accounted for in the other OBD test data analyses.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Pass	Tested	Pass Rate	Pass	Tested	Pass Rate	Pass	Tested	Pass Rate	Pass	Tested	Pass Rate	Pass	Tested	Pass Rate
1996	58,287	70,529	82.6%	20,882	25,964	80.4%	5,970	7,277	82.0%	1	1	100.0%	85,140	103,771	82.0%
1997	73,768	87,561	84.2%	29,916	35,754	83.7%	8,311	9,792	84.9%	0	0	NA	111,995	133,107	84.1%
1998	70,006	81,350	86.1%	35,640	41,785	85.3%	9,102	10,417	87.4%	1	1	100.0%	114,749	133,553	85.9%
1999	86,232	97,705	88.3%	40,181	45,263	88.8%	13,624	15,090	90.3%	0	0	NA	140,037	158,058	88.6%
2000	93,323	104,204	89.6%	46,340	51,143	90.6%	13,700	14,859	92.2%	0	0	NA	153,363	170,206	90.1%
2001	93,619	103,799	90.2%	43,594	49,539	88.0%	15,709	17,485	89.8%	0	0	NA	152,922	170,823	89.5%
2002	114,558	121,789	94.1%	65,556	70,639	92.8%	22,326	24,183	92.3%	0	0	NA	202,440	216,611	93.5%
2003	86,586	90,580	95.6%	43,460	45,379	95.8%	18,596	19,598	94.9%	0	0	NA	148,642	155,557	95.6%
2004	121,558	125,097	97.2%	83,292	85,292	97.7%	35,794	36,979	96.8%	0	0	NA	240,644	247,368	97.3%
2005	48,357	49,642	97.4%	25,389	26,124	97.2%	8,091	8,319	97.3%	0	0	NA	81,837	84,085	97.3%
2006	27,327	28,060	97.4%	11,927	12,213	97.7%	5,094	5,233	97.3%	0	0	NA	44,348	45,506	97.5%
2007	13,504	13,787	97.9%	5,429	5,548	97.9%	2,054	2,110	97.3%	1	1	100.0%	20,988	21,446	97.9%
2008	209	218	95.9%	145	151	96.0%	39	40	97.5%	3	4	75.0%	396	413	95.9%
TOTAL	887,334	974,321	91.1%	451,751	494,794	91.3%	158,410	171,382	92.4%	6	7	85.7%	1,497,501	1,640,504	91.3%

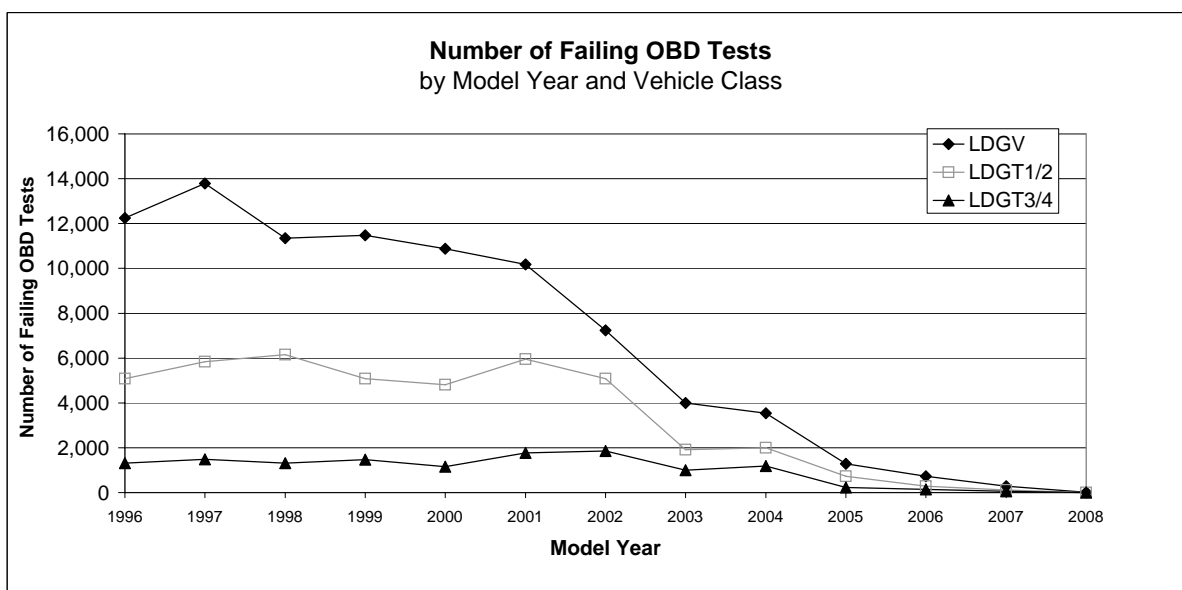
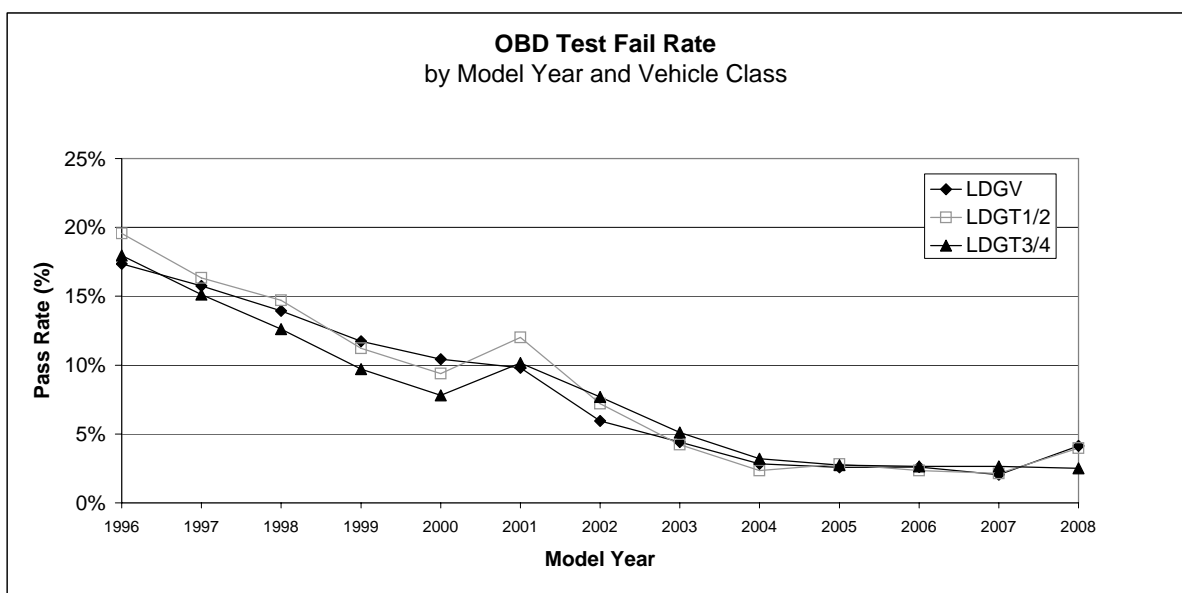


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xii) Failing OBDII Tests by model year and vehicle type

All failing OBDII tests, regardless of Test sequence. The fail rate is calculated as a percentage of all OBDII tests performed. Note: tests include retests for vehicles whose test sequence began prior to 2007 and are not accounted for in the other OBD test data analyses.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Fail	Tested	Fail Rate	Fail	Tested	Fail Rate	Fail	Tested	Fail Rate	Fail	Tested	Fail Rate	Fail	Tested	Fail Rate
1996	12,242	70,529	17.4%	5,082	25,964	19.6%	1,307	7,277	18.0%	0	1	0.0%	18,631	103,771	18.0%
1997	13,793	87,561	15.8%	5,838	35,754	16.3%	1,481	9,792	15.1%	0	0	NA	21,112	133,107	15.9%
1998	11,344	81,350	13.9%	6,145	41,785	14.7%	1,315	10,417	12.6%	0	1	0.0%	18,804	133,553	14.1%
1999	11,473	97,705	11.7%	5,082	45,263	11.2%	1,466	15,090	9.7%	0	0	NA	18,021	158,058	11.4%
2000	10,881	104,204	10.4%	4,803	51,143	9.4%	1,159	14,859	7.8%	0	0	NA	16,843	170,206	9.9%
2001	10,180	103,799	9.8%	5,945	49,539	12.0%	1,776	17,485	10.2%	0	0	NA	17,901	170,823	10.5%
2002	7,231	121,789	5.9%	5,083	70,639	7.2%	1,857	24,183	7.7%	0	0	NA	14,171	216,611	6.5%
2003	3,994	90,580	4.4%	1,919	45,379	4.2%	1,002	19,598	5.1%	0	0	NA	6,915	155,557	4.4%
2004	3,539	125,097	2.8%	2,000	85,292	2.3%	1,185	36,979	3.2%	0	0	NA	6,724	247,368	2.7%
2005	1,285	49,642	2.6%	735	26,124	2.8%	228	8,319	2.7%	0	0	NA	2,248	84,085	2.7%
2006	733	28,060	2.6%	286	12,213	2.3%	139	5,233	2.7%	0	0	NA	1,158	45,506	2.5%
2007	283	13,787	2.1%	119	5,548	2.1%	56	2,110	2.7%	0	1	0.0%	458	21,446	2.1%
2008	9	218	4.1%	6	151	4.0%	1	40	2.5%	1	4	25.0%	17	413	4.1%
TOTAL	86,987	974,321	8.9%	43,043	494,794	8.7%	12,972	171,382	7.6%	1	7	14.3%	143,003	1,640,504	8.7%

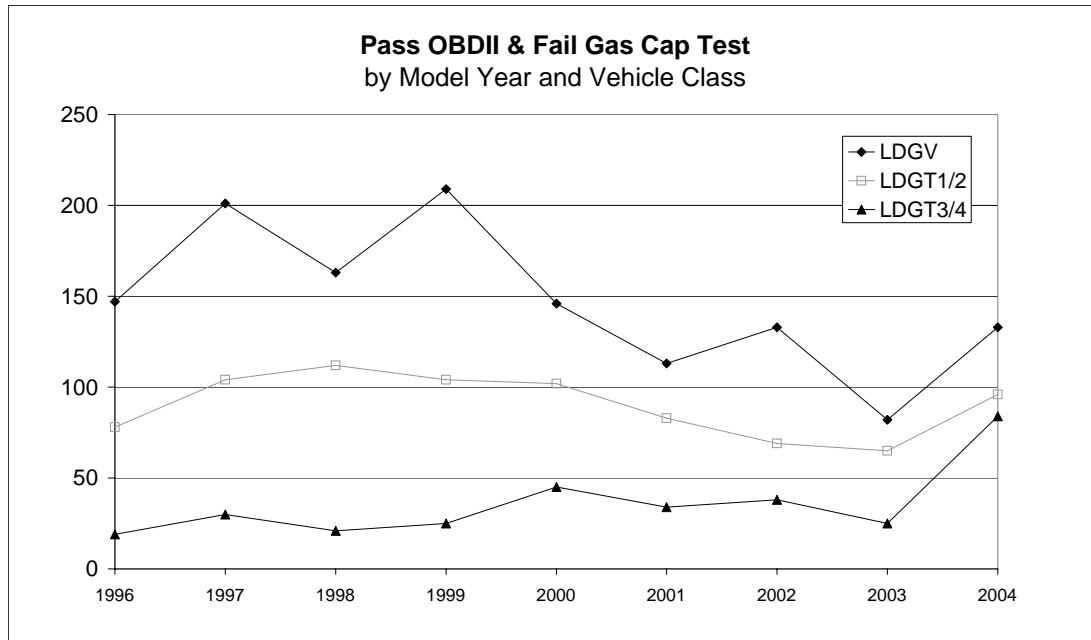
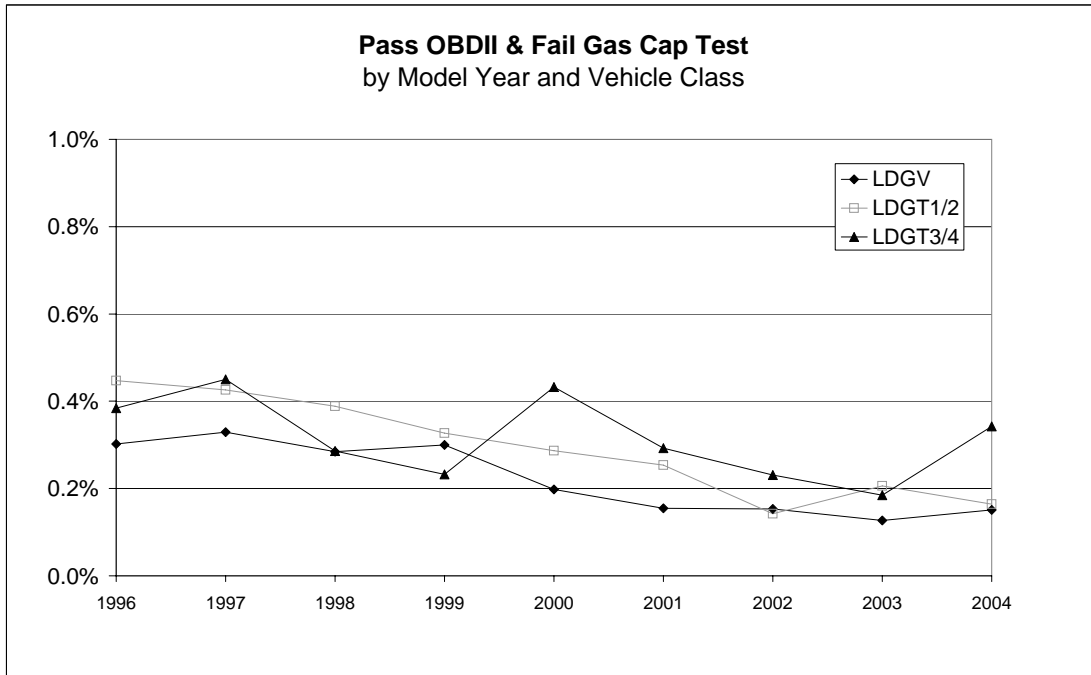


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xv) Passing OBDII and Failing Gas Cap Tests by model year and vehicle type

All tests where the vehicle passed the OBDII test and failed the Gas Cap (GC) test. The last year for gas cap testing is model year 2004. The rate of occurrence is calculated as a percentage of all passing OBDII tests that also received a gas cap test.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Pass OBD & Fail GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Fail GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Fail GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Fail GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Fail GC	Total OBD Pass with GC test	Rate of Occurrence
1996	147	48,703	0.3%	78	17,434	0.4%	19	4,942	0.4%	0	1	0.0%	244	71,080	0.3%
1997	201	61,086	0.3%	104	24,395	0.4%	30	6,661	0.5%	0	0	NA	335	92,142	0.4%
1998	163	57,249	0.3%	112	28,805	0.4%	21	7,352	0.3%	0	1	0.0%	296	93,407	0.3%
1999	209	69,753	0.3%	104	31,782	0.3%	25	10,765	0.2%	0	0	NA	338	112,300	0.3%
2000	146	73,783	0.2%	102	35,575	0.3%	45	10,408	0.4%	0	0	NA	293	119,766	0.2%
2001	113	72,941	0.2%	83	32,705	0.3%	34	11,623	0.3%	0	0	NA	230	117,269	0.2%
2002	133	86,784	0.2%	69	48,450	0.1%	38	16,439	0.2%	0	0	NA	240	151,673	0.2%
2003	82	64,496	0.1%	65	31,531	0.2%	25	13,514	0.2%	0	0	NA	172	109,541	0.2%
2004	133	88,113	0.2%	96	58,404	0.2%	84	24,558	0.3%	0	0	NA	313	171,075	0.2%
TOTAL	1,327	622,908	0.21%	813	309,081	0.26%	321	106,262	0.30%	0	2	0.00%	2,461	1,038,253	0.24%

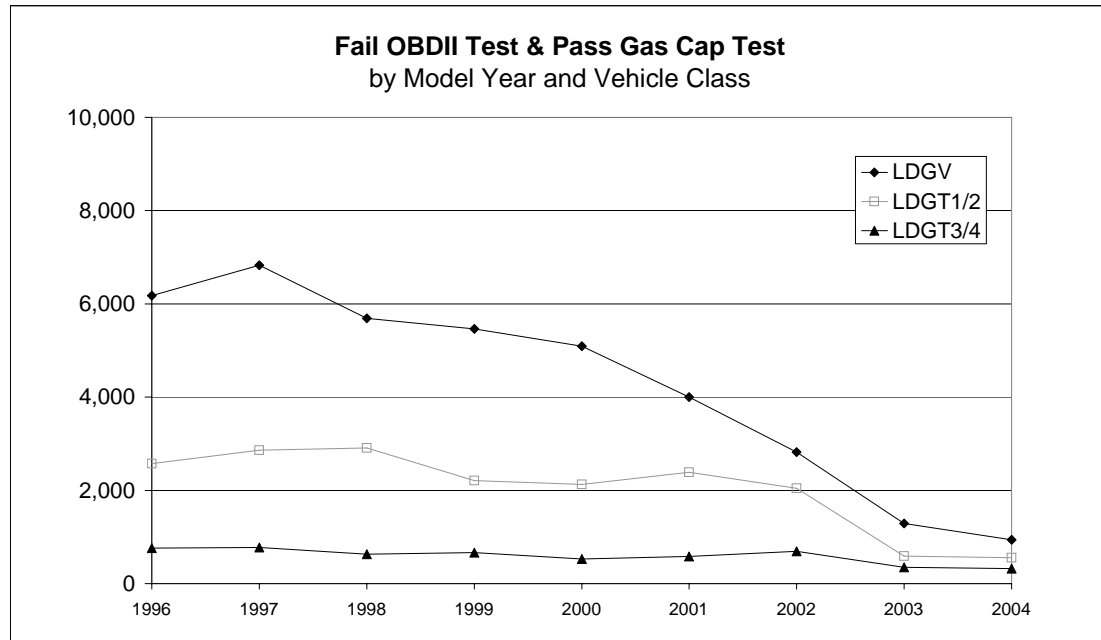
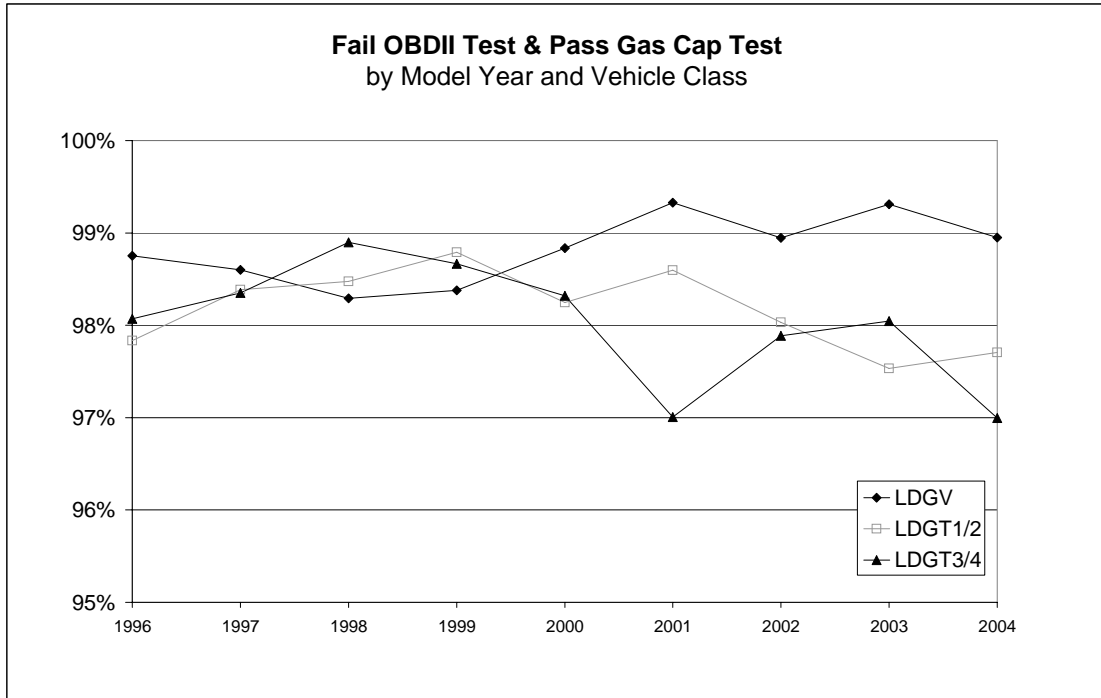


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xvi) Failing OBDII and Passing Gas Cap Test by model year and vehicle type

All tests where the vehicle failed the OBDII Pass/Fail test and passed the Gas Cap (GC) test. The last year for gas cap testing is model year 2004. The rate of occurrence is calculated as a percentage of all failing OBDII tests that also received a gas cap test.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Fail OBD & Pass GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Pass GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Pass GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Pass GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Pass GC	Total OBD Fail with GC test	Rate of Occurrence
1996	6,179	6,257	98.8%	2,574	2,631	97.8%	762	777	98.1%	0	0	NA	9,515	9,665	98.4%
1997	6,831	6,928	98.6%	2,861	2,908	98.4%	776	789	98.4%	0	0	NA	10,468	10,625	98.5%
1998	5,692	5,791	98.3%	2,908	2,953	98.5%	629	636	98.9%	0	0	NA	9,229	9,380	98.4%
1999	5,461	5,551	98.4%	2,207	2,234	98.8%	666	675	98.7%	0	0	NA	8,334	8,460	98.5%
2000	5,096	5,156	98.8%	2,128	2,166	98.2%	527	536	98.3%	0	0	NA	7,751	7,858	98.6%
2001	3,998	4,025	99.3%	2,386	2,420	98.6%	583	601	97.0%	0	0	NA	6,967	7,046	98.9%
2002	2,822	2,852	98.9%	2,042	2,083	98.0%	695	710	97.9%	0	0	NA	5,559	5,645	98.5%
2003	1,293	1,302	99.3%	593	608	97.5%	351	358	98.0%	0	0	NA	2,237	2,268	98.6%
2004	941	951	98.9%	554	567	97.7%	323	333	97.0%	0	0	NA	1,818	1,851	98.2%
TOTAL	38,313	38,813	98.7%	18,253	18,570	98.3%	5,312	5,415	98.1%	0	0	NA	61,878	62,798	98.5%

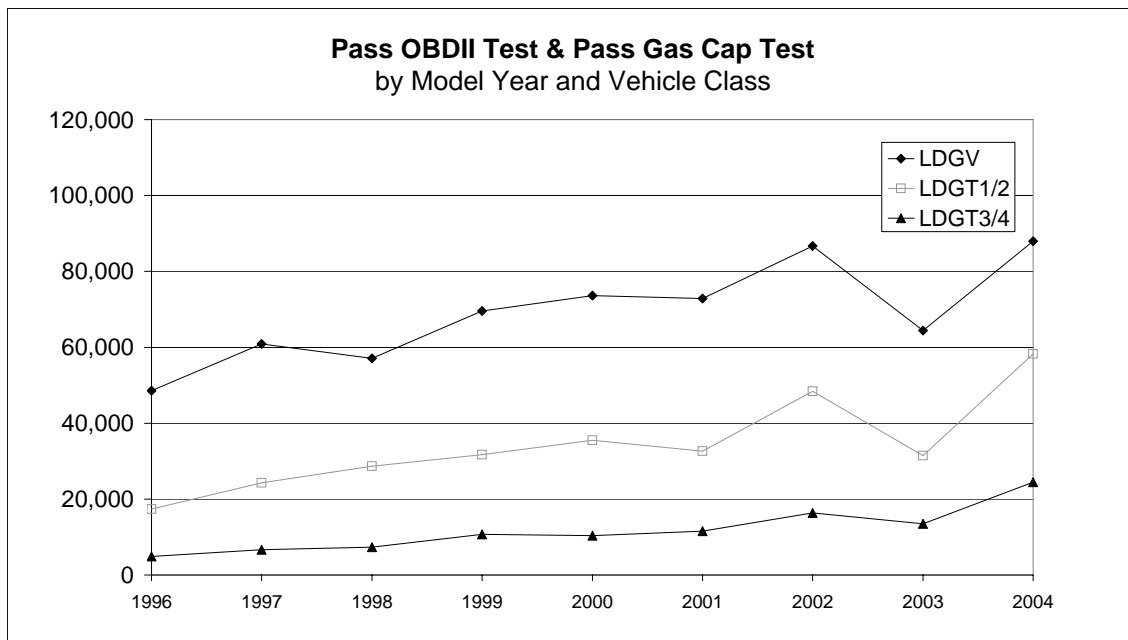
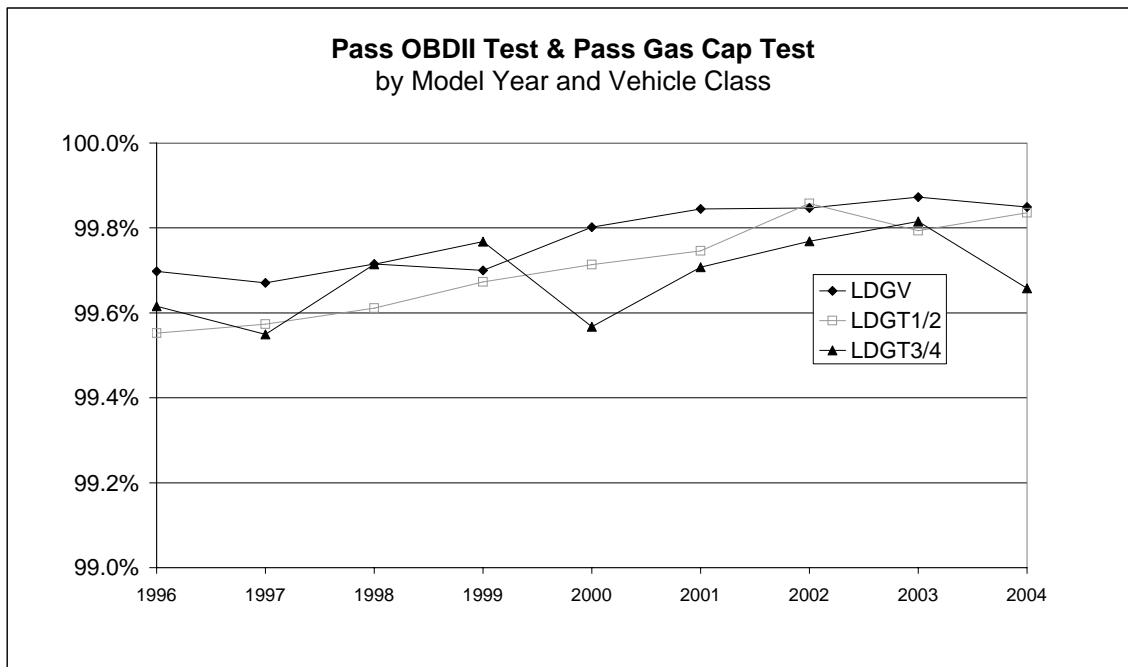


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xvii) Passing OBDII and Passing Gas Cap Tests by model year and vehicle type

All tests where the vehicle passed the OBDII test and passed the Gas Cap (GC) test. The last model year for gas cap testing is 2004. The rate of occurrence is calculated as a percentage of all passing OBDII tests that also received a gas cap test.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Pass OBD & Pass GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Pass GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Pass GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Pass GC	Total OBD Pass with GC test	Rate of Occurrence	Pass OBD & Pass GC	Total OBD Pass with GC test	Rate of Occurrence
1996	48,556	48,703	99.7%	17,356	17,434	99.6%	4,923	4,942	99.6%	1	1	100.0%	70,836	71,080	99.7%
1997	60,885	61,086	99.7%	24,291	24,395	99.6%	6,631	6,661	99.5%	0	0	NA	91,807	92,142	99.6%
1998	57,086	57,249	99.7%	28,693	28,805	99.6%	7,331	7,352	99.7%	1	1	100.0%	93,111	93,407	99.7%
1999	69,544	69,753	99.7%	31,678	31,782	99.7%	10,740	10,765	99.8%	0	0	NA	111,962	112,300	99.7%
2000	73,637	73,783	99.8%	35,473	35,575	99.7%	10,363	10,408	99.6%	0	0	NA	119,473	119,766	99.8%
2001	72,828	72,941	99.8%	32,622	32,705	99.7%	11,589	11,623	99.7%	0	0	NA	117,039	117,269	99.8%
2002	86,651	86,784	99.8%	48,381	48,450	99.9%	16,401	16,439	99.8%	0	0	NA	151,433	151,673	99.8%
2003	64,414	64,496	99.9%	31,466	31,531	99.8%	13,489	13,514	99.8%	0	0	NA	109,369	109,541	99.8%
2004	87,980	88,113	99.8%	58,308	58,404	99.8%	24,474	24,558	99.7%	0	0	NA	170,762	171,075	99.8%
TOTAL	621,581	622,908	99.8%	308,268	309,081	99.7%	105,941	106,262	99.7%	2	2	100.0%	1,035,792	1,038,253	99.8%

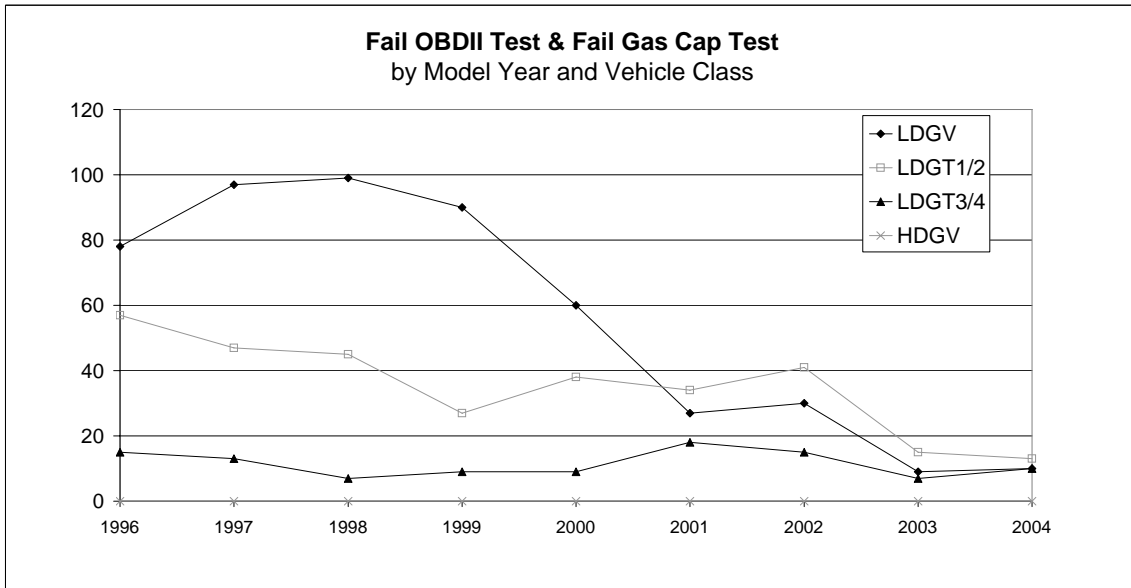
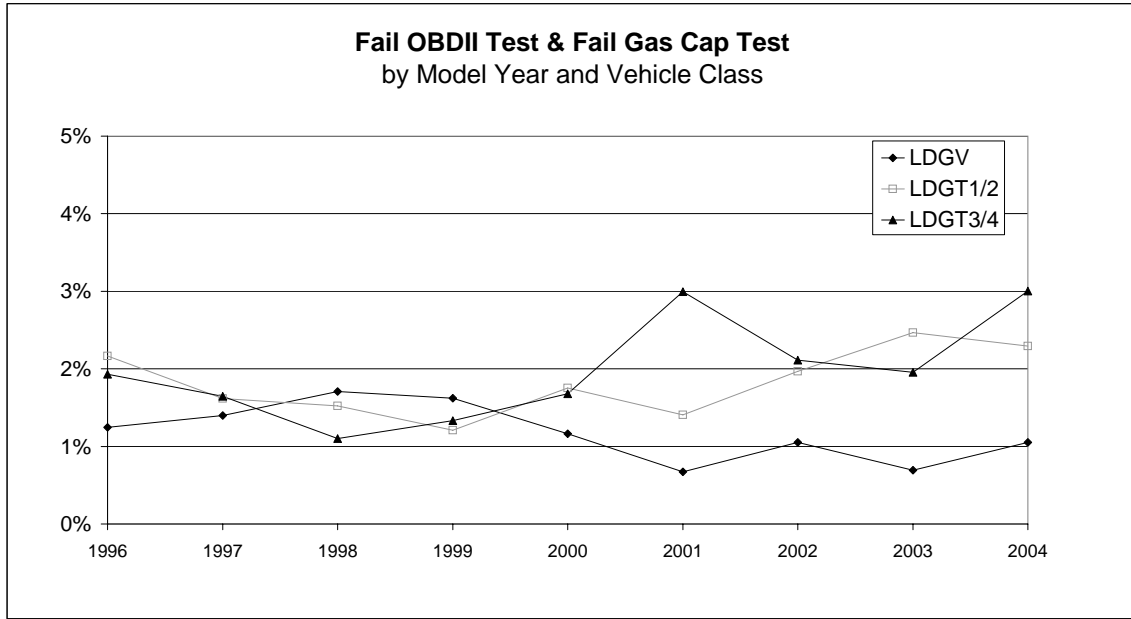


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(viii) Failing OBDII and Failing Gas Cap Test by model year and vehicle type

All tests where the vehicle failed the OBDII test and failed the Gas Cap (GC) test. The last model year for gas cap testing is 2004. The rate of occurrence is calculated as a percentage of all failing OBDII tests that also received a gas cap test.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Fail OBD & Fail GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Fail GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Fail GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Fail GC	Total OBD Fail with GC test	Rate of Occurrence	Fail OBD & Fail GC	Total OBD Fail with GC test	Rate of Occurrence
1996	78	6,257	1.2%	57	2,631	2.2%	15	777	1.9%	0	0	NA	150	9,665	1.6%
1997	97	6,928	1.4%	47	2,908	1.6%	13	789	1.6%	0	0	NA	157	10,625	1.5%
1998	99	5,791	1.7%	45	2,953	1.5%	7	636	1.1%	0	0	NA	151	9,380	1.6%
1999	90	5,551	1.6%	27	2,234	1.2%	9	675	1.3%	0	0	NA	126	8,460	1.5%
2000	60	5,156	1.2%	38	2,166	1.8%	9	536	1.7%	0	0	NA	107	7,858	1.4%
2001	27	4,025	0.7%	34	2,420	1.4%	18	601	3.0%	0	0	NA	79	7,046	1.1%
2002	30	2,852	1.1%	41	2,083	2.0%	15	710	2.1%	0	0	NA	86	5,645	1.5%
2003	9	1,302	0.7%	15	608	2.5%	7	358	2.0%	0	0	NA	31	2,268	1.4%
2004	10	951	1.1%	13	567	2.3%	10	333	3.0%	0	0	NA	33	1,851	1.8%
TOTAL	500	38,813	1.3%	317	18,570	1.7%	103	5,415	1.9%	0	0	#DIV/0!	920	62,798	1.5%

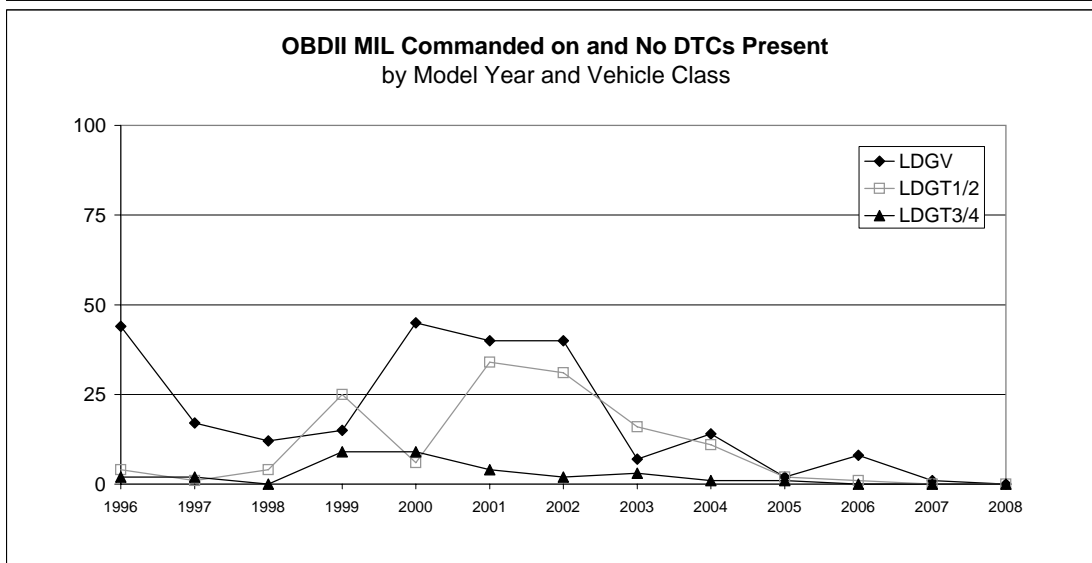
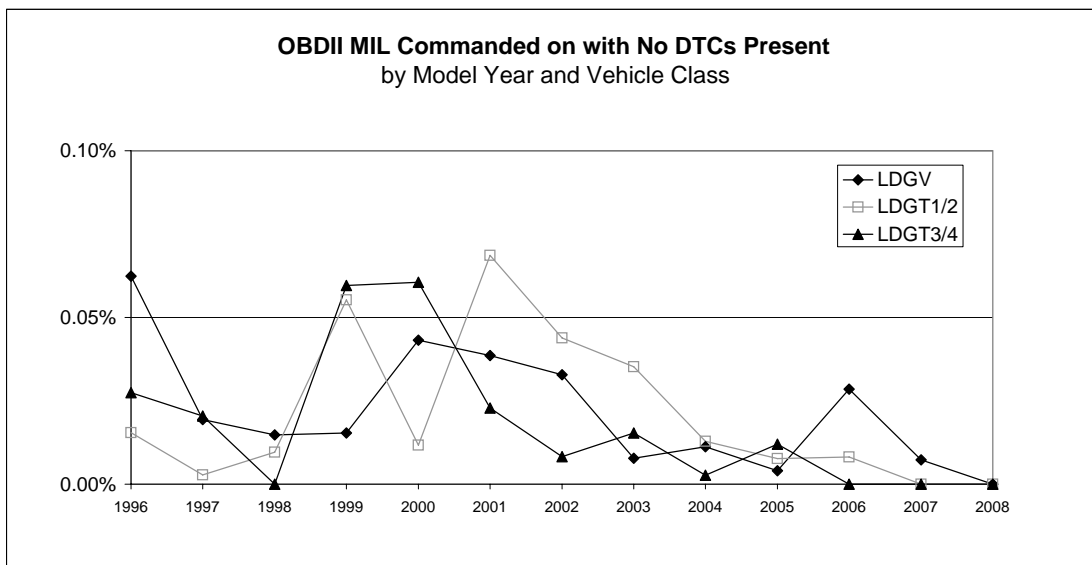


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xix) OBDII tests where the MIL is commanded on and no codes (DTCs) are stored by model year and vehicle type

All OBDII tests where the OBDII MIL was commanded on and no diagnostic trouble codes (DTCs) were present. The rate of occurrence is calculated as a percentage of total OBD Tests performed. Vehicles with damaged, missing, or obstructed DLCs and vehicles that could not communicate with the test equipment were included in the OBD test totals but did not have any MIL or DTC data to report. For this reason, the MIL/DTC combinations in (2)(xix) through (2)(xxii) do not add up to the total OBD tested.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	MIL on w/ no DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ no DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ no DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ no DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ no DTCs	Total OBD Tested	Rate of Occurrence
1996	44	70,529	0.1%	4	25,964	0.0%	2	7,277	0.0%	0	1	0.0%	50	103,771	0.0%
1997	17	87,561	0.0%	1	35,754	0.0%	2	9,792	0.0%	0	0	NA	20	133,107	0.0%
1998	12	81,350	0.0%	4	41,785	0.0%	0	10,417	0.0%	0	1	0.0%	16	133,553	0.0%
1999	15	97,705	0.0%	25	45,263	0.1%	9	15,090	0.1%	0	0	NA	49	158,058	0.0%
2000	45	104,204	0.0%	6	51,143	0.0%	9	14,859	0.1%	0	0	NA	60	170,206	0.0%
2001	40	103,799	0.0%	34	49,539	0.1%	4	17,485	0.0%	0	0	NA	78	170,823	0.0%
2002	40	121,789	0.0%	31	70,639	0.0%	2	24,183	0.0%	0	0	NA	73	216,611	0.0%
2003	7	90,580	0.0%	16	45,379	0.0%	3	19,598	0.0%	0	0	NA	26	155,557	0.0%
2004	14	125,097	0.0%	11	85,292	0.0%	1	36,979	0.0%	0	0	NA	26	247,368	0.0%
2005	2	49,642	0.0%	2	26,124	0.0%	1	8,319	0.0%	0	0	NA	5	84,085	0.0%
2006	8	28,060	0.0%	1	12,213	0.0%	0	5,233	0.0%	0	0	NA	9	45,506	0.0%
2007	1	13,787	0.0%	0	5,548	0.0%	0	2,110	0.0%	0	1	0.0%	1	21,446	0.0%
2008	0	218	0.0%	0	151	0.0%	0	40	0.0%	0	4	0.0%	0	413	0.0%
TOTAL	245	974,321	0.0%	135	494,794	0.0%	33	171,382	0.0%	0	7	0.0%	413	1,640,504	0.03%

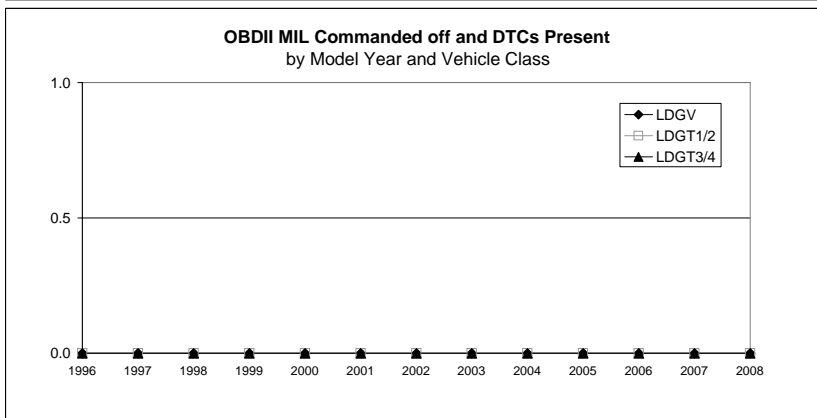
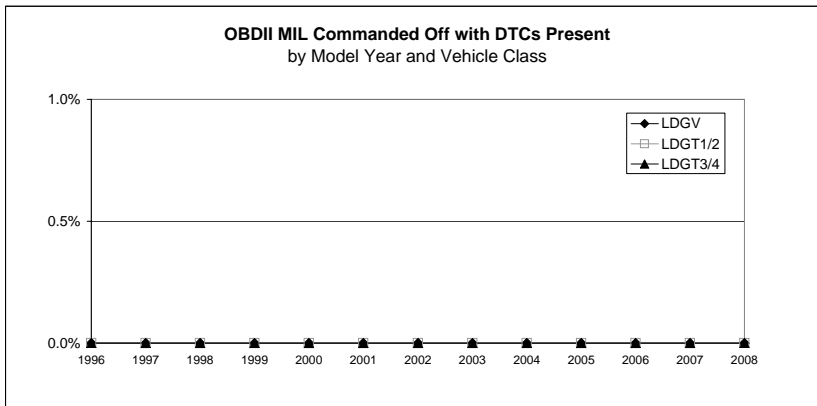


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xx) OBDII tests where the MIL is NOT commanded on but codes (DTCs) are stored by model year and vehicle type

All tests where the OBDII MIL was not commanded on and there were diagnostic trouble codes (DTCs) present. The workstation software had been modified to ignore pending DTCs if the MIL is not commanded on. The rate of occurrence is calculated as a percentage of total OBDII tests performed. MassDEP believes these are pending codes that are being recorded. The presence of DTCs without the MIL commanded on will not cause the vehicle to fail the OBDII test.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	DTCs present w/ MIL off	Total OBD Tested	Rate of Occurrence	DTCs present w/ MIL off	Total OBD Tested	Rate of Occurrence	DTCs present w/ MIL off	Total OBD Tested	Rate of Occurrence	DTCs present w/ MIL off	Total OBD Tested	Rate of Occurrence	DTCs present w/ MIL off	Total OBD Tested	Rate of Occurrence
1996	0	70,529	0.0%	0	25,964	0.0%	0	7,277	0.0%	0	1	0.0%	0	103,771	0.0%
1997	0	87,561	0.0%	0	35,754	0.0%	0	9,792	0.0%	0	0	NA	0	133,107	0.0%
1998	0	81,350	0.0%	0	41,785	0.0%	0	10,417	0.0%	0	1	0.0%	0	133,553	0.0%
1999	0	97,705	0.0%	0	45,263	0.0%	0	15,090	0.0%	0	0	NA	0	158,058	0.0%
2000	0	104,204	0.0%	0	51,143	0.0%	0	14,859	0.0%	0	0	NA	0	170,206	0.0%
2001	0	103,799	0.0%	0	49,539	0.0%	0	17,485	0.0%	0	0	NA	0	170,823	0.0%
2002	0	121,789	0.0%	0	70,639	0.0%	0	24,183	0.0%	0	0	NA	0	216,611	0.0%
2003	0	90,580	0.0%	0	45,379	0.0%	0	19,598	0.0%	0	0	NA	0	155,557	0.0%
2004	0	125,097	0.0%	0	85,292	0.0%	0	36,979	0.0%	0	0	NA	0	247,368	0.0%
2005	0	49,642	0.0%	0	26,124	0.0%	0	8,319	0.0%	0	0	NA	0	84,085	0.0%
2006	0	28,060	0.0%	0	12,213	0.0%	0	5,233	0.0%	0	0	NA	0	45,506	0.0%
2007	0	13,787	0.0%	0	5,548	0.0%	0	2,110	0.0%	0	1	0.0%	0	21,446	0.0%
2008	0	218	0.0%	0	151	0.0%	0	40	0.0%	0	4	0.0%	0	413	0.0%
TOTAL	0	974,321	0.00%	0	494,794	0.00%	0	171,382	0.00%	0	7	0.00%	0	1,640,504	0.00%

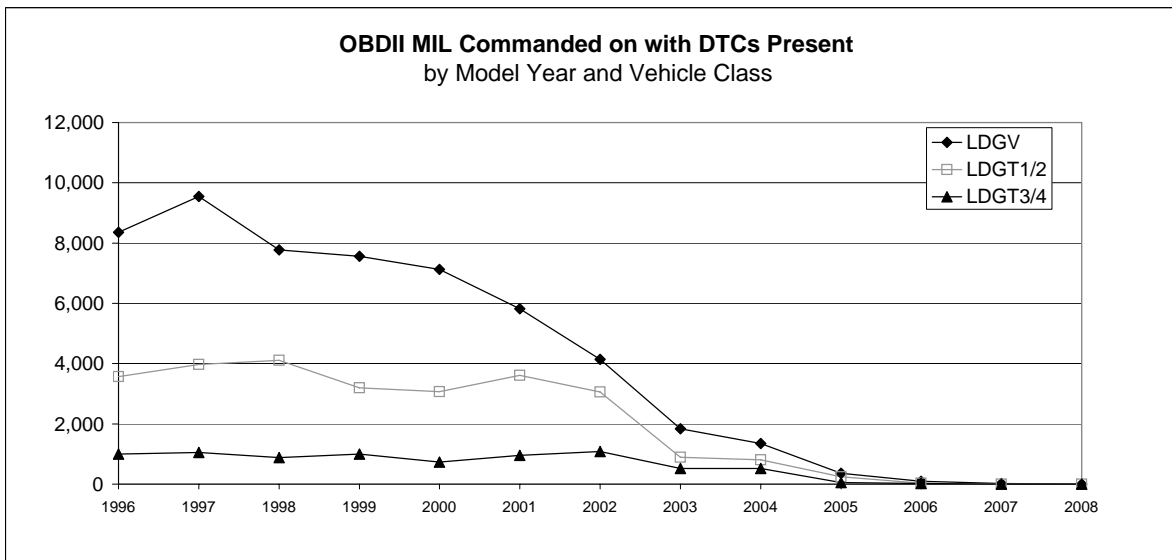
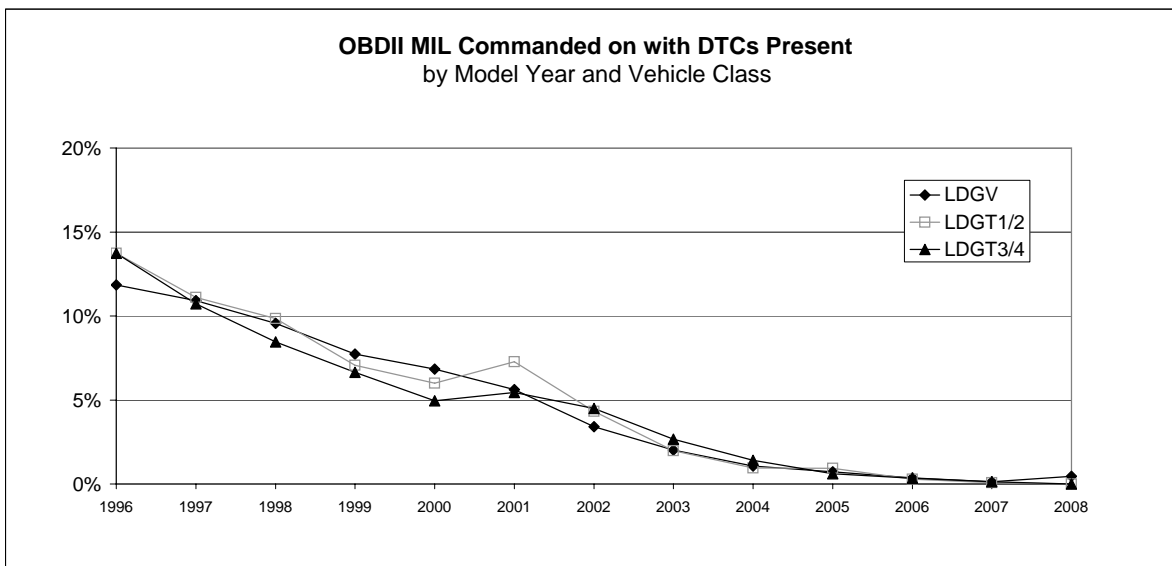


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xxi) OBDII tests where the MIL is commanded and codes (DTCs) are stored by model year and vehicle type.

All OBDII tests where the MIL was commanded on and there were diagnostic trouble codes (DTCs) present. The rate of occurrence is calculated as a percentage of total OBDII tests performed.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	MIL on w/ DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ DTCs	Total OBD Tested	Rate of Occurrence	MIL on w/ DTCs	Total OBD Tested	Rate of Occurrence
1996	8,361	70,529	11.9%	3,568	25,964	13.7%	999	7,277	13.7%	0	1	0.0%	12,928	103,771	12.5%
1997	9,552	87,561	10.9%	3,972	35,754	11.1%	1,051	9,792	10.7%	0	0	NA	14,575	133,107	10.9%
1998	7,776	81,350	9.6%	4,113	41,785	9.8%	880	10,417	8.4%	0	1	0.0%	12,769	133,553	9.6%
1999	7,558	97,705	7.7%	3,201	45,263	7.1%	1,003	15,090	6.6%	0	0	NA	11,762	158,058	7.4%
2000	7,122	104,204	6.8%	3,072	51,143	6.0%	735	14,859	4.9%	0	0	NA	10,929	170,206	6.4%
2001	5,823	103,799	5.6%	3,608	49,539	7.3%	953	17,485	5.5%	0	0	NA	10,384	170,823	6.1%
2002	4,142	121,789	3.4%	3,060	70,639	4.3%	1,086	24,183	4.5%	0	0	NA	8,288	216,611	3.8%
2003	1,833	90,580	2.0%	895	45,379	2.0%	523	19,598	2.7%	0	0	NA	3,251	155,557	2.1%
2004	1,345	125,097	1.1%	812	85,292	1.0%	522	36,979	1.4%	0	0	NA	2,679	247,368	1.1%
2005	364	49,642	0.7%	243	26,124	0.9%	50	8,319	0.6%	0	0	NA	657	84,085	0.8%
2006	99	28,060	0.4%	35	12,213	0.3%	18	5,233	0.3%	0	0	NA	152	45,506	0.3%
2007	19	13,787	0.1%	4	5,548	0.1%	3	2,110	0.1%	0	1	0.0%	26	21,446	0.1%
2008	1	218	0.5%	0	151	0.0%	0	40	0.0%	1	4	25.0%	2	413	0.5%
TOTAL	53,995	974,321	5.5%	26,583	494,794	5.4%	7,823	171,382	4.6%	1	7	14.3%	88,402	1,640,504	5.4%

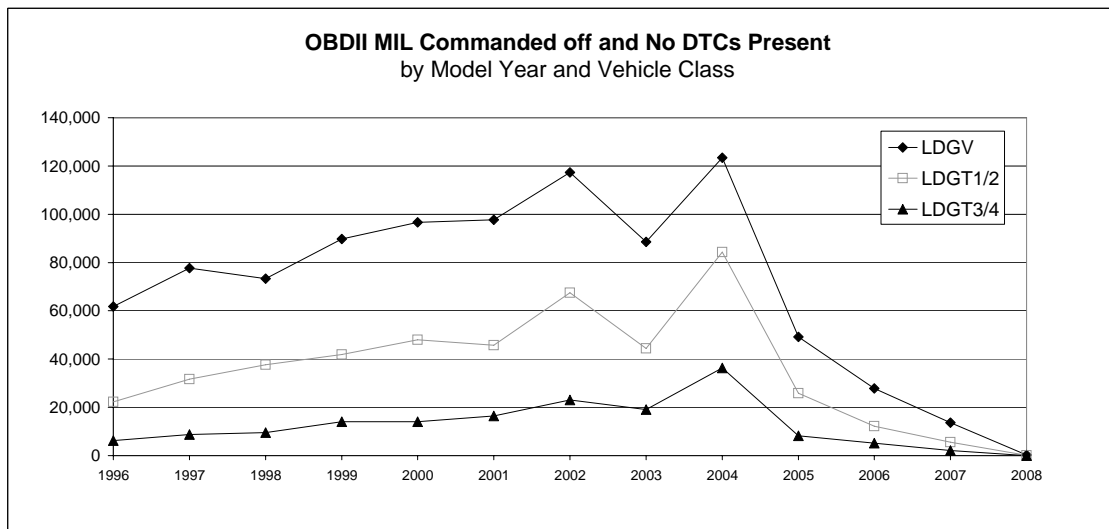
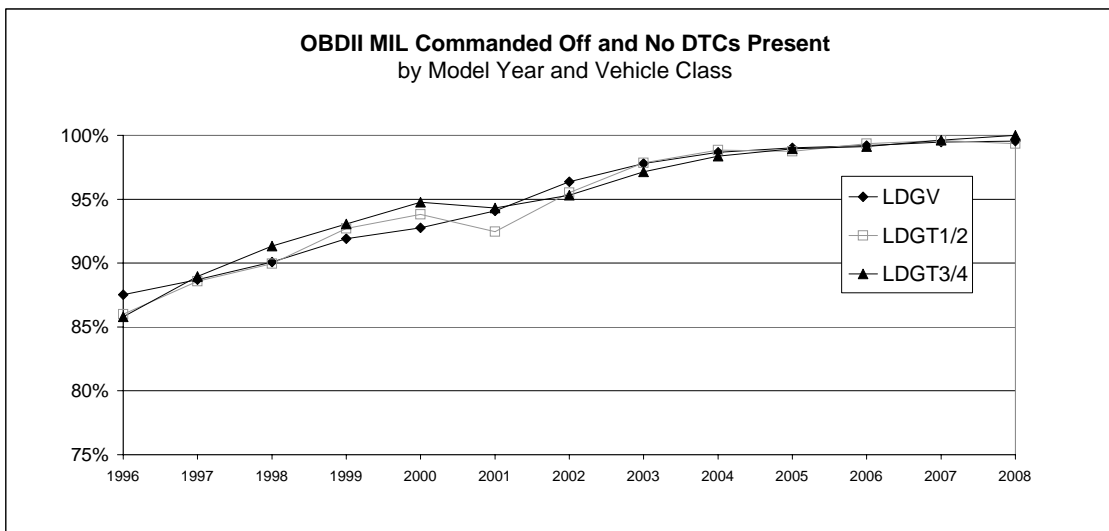


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xxii) OBDII tests where the MIL is not commanded on and no codes (DTCs) are stored by model year and vehicle type

All OBDII tests where the MIL was NOT commanded on and there were no diagnostic trouble codes (DTCs) present. The rate of occurrence is calculated as a percentage of total OBDII tests performed.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	MIL off & no DTCs	Total OBD Tested	Rate of Occurrence	MIL off & no DTCs	Total OBD Tested	Rate of Occurrence	MIL off & no DTCs	Total OBD Tested	Rate of Occurrence	MIL off & no DTCs	Total OBD Tested	Rate of Occurrence	MIL off & no DTCs	Total OBD Tested	Rate of Occurrence
1996	61,726	70,529	87.5%	22,327	25,964	86.0%	6,243	7,277	85.8%	1	1	100.0%	90,297	103,771	87.0%
1997	77,679	87,561	88.7%	31,673	35,754	88.6%	8,710	9,792	89.0%	0	0	NA	118,062	133,107	88.7%
1998	73,279	81,350	90.1%	37,590	41,785	90.0%	9,514	10,417	91.3%	1	1	100.0%	120,384	133,553	90.1%
1999	89,796	97,705	91.9%	41,960	45,263	92.7%	14,042	15,090	93.1%	0	0	NA	145,798	158,058	92.2%
2000	96,648	104,204	92.7%	47,975	51,143	93.8%	14,080	14,859	94.8%	0	0	NA	158,703	170,206	93.2%
2001	97,659	103,799	94.1%	45,802	49,539	92.5%	16,491	17,485	94.3%	0	0	NA	159,952	170,823	93.6%
2002	117,353	121,789	96.4%	67,468	70,639	95.5%	23,052	24,183	95.3%	0	0	NA	207,873	216,611	96.0%
2003	88,575	90,580	97.8%	44,407	45,379	97.9%	19,036	19,588	97.1%	0	0	NA	152,018	155,557	97.7%
2004	123,432	125,097	98.7%	84,299	85,292	98.8%	36,376	36,979	98.4%	0	0	NA	244,107	247,368	98.7%
2005	49,158	49,642	99.0%	25,798	26,124	98.8%	8,232	8,319	99.0%	0	0	NA	83,189	84,085	98.9%
2006	27,836	28,060	99.2%	12,132	12,213	99.3%	5,187	5,233	99.1%	0	0	NA	45,155	45,506	99.2%
2007	13,715	13,787	99.5%	5,526	5,548	99.6%	2,102	2,110	99.6%	1	1	100.0%	21,344	21,446	99.5%
2008	217	218	99.5%	150	151	99.3%	40	40	100.0%	3	4	75.0%	410	413	99.3%
TOTAL	917,073	974,321	94.1%	467,108	494,794	94.4%	163,105	171,382	95.2%	6	7	85.7%	1,547,292	1,640,504	94.3%

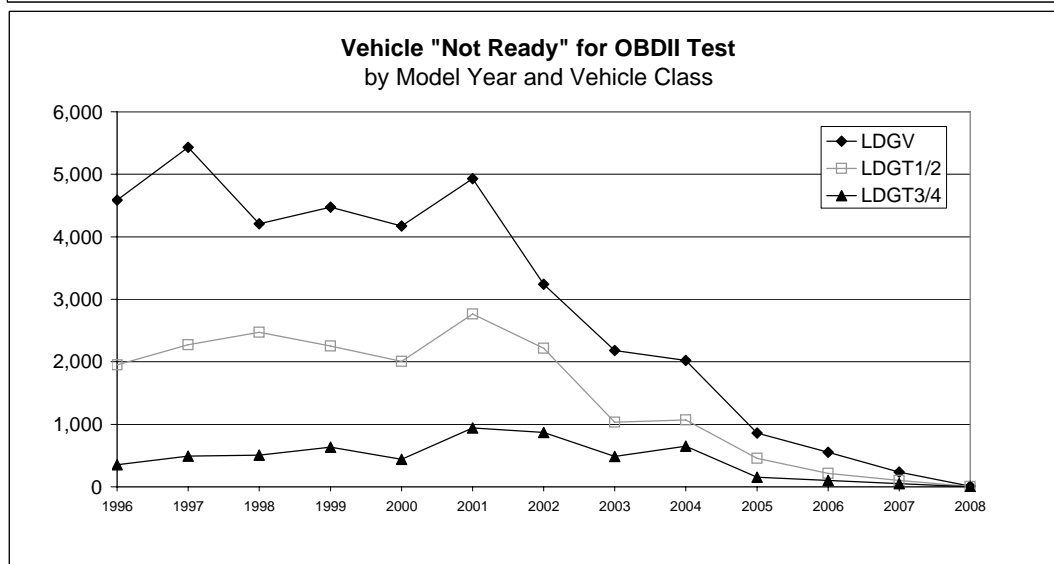
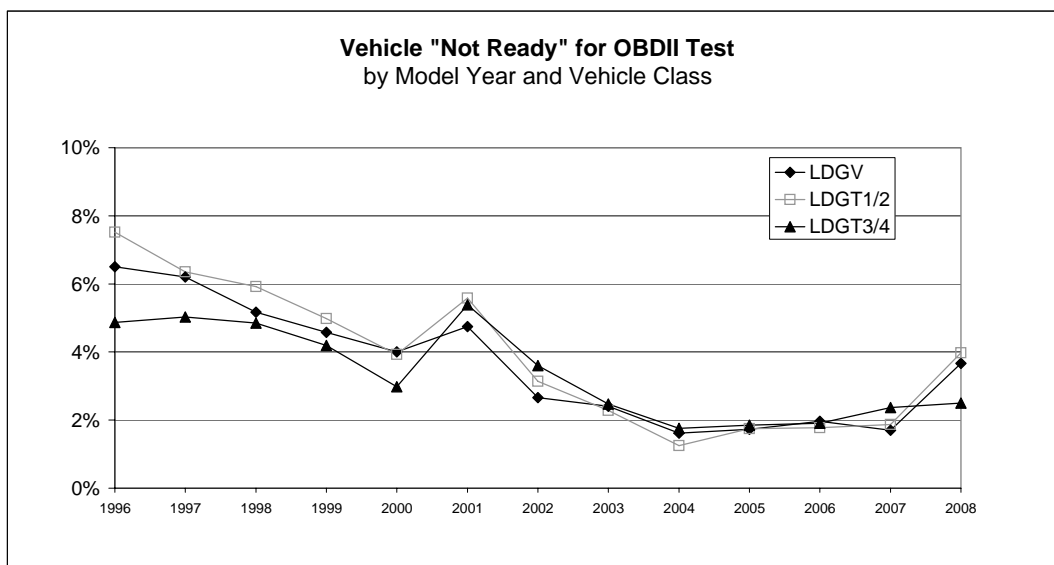


2007 Massachusetts I&M Program Test Data

51.366 (a)(2)(xxiii) Readiness status indicates that the evaluation is not complete for any module supported by on-board diagnostic systems

For OBDII testing, vehicles are considered "Not Ready" when 2 or more supported monitors are "Not Ready" for vehicles model years 2000 and older. Vehicles model years 2001 and newer are considered "Not Ready" when 1 or more supported monitors are "Not Ready". The rate of occurrence is calculated as a percentage of total OBDII tests performed.

MODEL YEAR	LDGV			LDGT1/2			LDGT3/4			HDGV			TOTAL		
	Vehicles Not Ready	Total OBD Tested	Rate of Occurrence	Vehicles Not Ready	Total OBD Tested	Rate of Occurrence	Vehicles Not Ready	Total OBD Tested	Rate of Occurrence	Vehicles Not Ready	Total OBD Tested	Rate of Occurrence	Vehicles Not Ready	Total OBD Tested	Rate of Occurrence
1996	4,588	70,529	6.5%	1,952	25,964	7.5%	354	7,277	4.9%	0	1	0.0%	6,894	103,771	6.6%
1997	5,430	87,561	6.2%	2,271	35,754	6.4%	492	9,792	5.0%	0	0	NA	8,193	133,107	6.2%
1998	4,208	81,350	5.2%	2,474	41,785	5.9%	505	10,417	4.8%	0	1	0.0%	7,187	133,553	5.4%
1999	4,475	97,705	4.6%	2,255	45,263	5.0%	633	15,090	4.2%	0	0	NA	7,363	158,058	4.7%
2000	4,174	104,204	4.0%	2,008	51,143	3.9%	442	14,859	3.0%	0	0	NA	6,624	170,206	3.9%
2001	4,928	103,799	4.7%	2,767	49,539	5.6%	941	17,485	5.4%	0	0	NA	8,636	170,823	5.1%
2002	3,242	121,789	2.7%	2,218	70,639	3.1%	871	24,183	3.6%	0	0	NA	6,331	216,611	2.9%
2003	2,182	90,580	2.4%	1,035	45,379	2.3%	484	19,598	2.5%	0	0	NA	3,701	155,557	2.4%
2004	2,020	125,097	1.6%	1,070	85,292	1.3%	649	36,979	1.8%	0	0	NA	3,739	247,368	1.5%
2005	860	49,642	1.7%	457	26,124	1.7%	154	8,319	1.9%	0	0	NA	1,471	84,085	1.7%
2006	552	28,060	2.0%	217	12,213	1.8%	100	5,233	1.9%	0	0	NA	869	45,506	1.9%
2007	235	13,787	1.7%	104	5,548	1.9%	50	2,110	2.4%	0	1	0.0%	389	21,446	1.8%
2008	8	218	3.7%	6	151	4.0%	1	40	2.5%	0	4	0.0%	15	413	3.6%
TOTAL	36,902	974,321	3.8%	18,834	494,794	3.8%	5,676	171,382	3.3%	0	7	0.0%	61,412	1,640,504	3.7%



2007 Massachusetts I&M Program Test Data

51.366 (5) Average change in Transient Test Emissions after repairs by model year and vehicle type

Average change in emissions due to repair was determined using the following method: calculate the average emissions for vehicles that failed the initial transient test, calculate the average emissions for initially failing vehicles that passed the transient retest, and calculate the percent difference between the two averages. The overall averages by vehicle class and model year were determined by taking the sum of the weighted averages ([avg emissions] * # of vehicles tested) for each model year or vehicle class and dividing by the total number of vehicles tested for the model year or vehicle class. For post-repair tests, the vehicles and their emissions that were considered were the group of vehicles that received an initial retest after a previous transient failure.

AVG. HYDROCARBONS (g/mi)

MODEL YEAR	LDGV					LDGT1/2					LDGT3/4					OVERALL				
	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions
1984	318	2.88	220	0.60	-79.2%	83	5.64	62	0.94	-83.4%	58	4.69	37	1.07	-77.2%	459	3.61	319	0.72	-80.1%
1985	533	2.27	370	0.57	-74.8%	127	4.59	73	1.09	-76.3%	80	5.42	57	1.02	-81.1%	740	3.01	500	0.70	-76.8%
1986	543	2.22	360	0.57	-74.2%	120	4.57	93	1.08	-76.5%	114	5.28	82	1.27	-75.9%	777	3.03	535	0.77	-74.7%
1987	891	1.93	629	0.60	-69.0%	159	3.95	112	1.11	-71.9%	103	4.52	72	1.35	-70.0%	1,153	2.44	813	0.74	-69.8%
1988	870	2.06	582	0.61	-70.3%	514	2.75	347	0.93	-66.4%	175	3.85	119	1.03	-73.4%	1,559	2.49	1,048	0.76	-69.4%
1989	1,289	2.05	903	0.56	-72.6%	585	3.04	395	0.84	-72.3%	220	4.44	134	1.22	-72.5%	2,094	2.58	1,432	0.70	-72.8%
1990	1,446	1.89	1,021	0.48	-74.5%	429	2.64	286	0.87	-67.3%	164	4.15	101	1.01	-75.5%	2,039	2.23	1,422	0.60	-73.0%
1991	2,864	1.41	2,048	0.37	-73.9%	538	2.38	389	0.64	-72.9%	160	3.52	117	0.93	-73.6%	3,562	1.65	2,554	0.44	-73.6%
1992	3,246	1.22	2,321	0.35	-70.9%	664	2.04	458	0.65	-68.4%	260	3.35	186	0.95	-71.7%	4,170	1.48	2,965	0.44	-70.5%
1993	4,432	1.23	3,256	0.35	-71.6%	1,134	1.78	825	0.61	-66.1%	373	2.74	267	0.91	-66.9%	5,939	1.43	4,348	0.43	-69.8%
1994	3,229	1.33	2,373	0.36	-73.4%	1,151	2.33	831	0.52	-77.5%	498	2.70	346	0.80	-70.2%	4,878	1.71	3,550	0.44	-74.3%
1995	3,111	1.48	2,280	0.35	-76.3%	1,338	1.88	1,007	0.48	-74.3%	768	2.47	565	0.72	-70.8%	5,218	1.73	3,852	0.44	-74.5%
1996	1	1.39	0	0.00	-100.0%	0	0.00	0	0.00	NA	257	1.82	192	0.60	-67.0%	258	1.82	192	0.60	-66.9%
1997	1	0.39	1	0.15	-61.5%	0	0.00	1	0.13	NA	433	1.39	330	0.52	-62.4%	434	1.39	332	0.52	-62.5%
1998	2	0.98	2	0.15	-85.1%	0	0.00	0	0.00	NA	66	2.94	48	0.39	-86.8%	68	2.89	50	0.38	-86.8%
1999	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	70	2.05	57	0.39	-80.9%	70	2.05	57	0.39	-80.9%
2000	2	1.00	1	0.11	-88.9%	0	0.00	0	0.00	NA	25	2.57	26	0.31	-87.9%	27	2.45	27	0.30	-87.8%
2001	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	45	2.37	39	0.36	-84.8%	45	2.37	39	0.36	-84.8%
2002	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	22	4.69	29	0.30	-93.7%	22	4.69	29	0.30	-93.7%
2003	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	4	2.15	7	0.03	-98.7%	4	2.15	7	0.03	-98.7%
2004	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	5	2.68	23	0.05	-98.1%	5	2.68	23	0.05	-98.1%
2005	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
2006	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
2007	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
2008	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
Overall	22,778	1.52	16,367	0.41	-73.3%	6,842	2.40	4,879	0.66	-72.4%	3,900	2.95	2,848	0.80	-72.9%	33,521	1.86	24,094	0.50	-73.0%

AVG. CARBON MONOXIDE (g/mi)

MODEL YEAR	LDGV					LDGT1/2					LDGT3/4					OVERALL				
	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions
1984	318	42.66	220	6.71	-84.3%	83	68.88	62	14.22	-79.4%	58	67.29	37	18.15	-73.0%	459	50.51	319	9.50	-81.2%
1985	533	37.13	370	5.76	-84.5%	127	64.48	73	17.45	-72.9%	80	56.60	57	17.50	-69.1%	740	43.93	500	8.81	-80.0%
1986	543	31.82	360	5.28	-83.4%	120	58.96	93	15.67	-73.4%	114	56.77	82	21.25	-63.8%	777	39.96	535	9.53	-76.2%
1987	891	28.66	629	5.31	-81.4%	159	65.65	112	11.22	-72.2%	103	40.31	72	14.97	-62.9%	1,153	33.88	813	7.71	-77.2%
1988	870	27.73	582	5.28	-81.0%	514	33.80	347	11.35	-66.4%	175	36.24	119	9.63	-73.4%	1,559	30.69	1,048	7.79	-74.6%
1989	1,289	31.03	903	5.29	-83.0%	585	36.10	395	10.84	-70.0%	220	44.41	134	10.37	-76.6%	2,094	33.85	1,432	7.29	-78.4%
1990	1,446	29.21	1,021	4.68	-84.0%	429	32.12	286	11.26	-64.9%	164	46.99	115	11.42	-75.7%	2,039	31.26	1,422	6.55	-79.1%
1991	2,864	21.12	2,048	3.57	-83.1%	538	28.56	389	7.09	-75.2%	160	55.49	117	8.48	-84.7%	3,562	23.78	2,554	4.33	-81.8%
1992	3,246	22.30	2,321	3.50	-84.7%	664	30.00	458	7.18	-76.1%	260	41.49	186	8.50	-78.6%	4,170	25.19	2,965	4.40	-82.5%
1993	4,432	19.92	3,256	3.60	-81.9%	1,134	25.01	825	6.67	-73.3%	373	36.52	267	8.50	-76.7%	5,939	21.93	4,348	4.48	-79.6%
1994	3,229	21.17	2,373	3.69	-82.6%	1,151	27.01	831	5.54	-79.5%	498	33.50	346	8.81	-73.7%	4,878	23.81	3,550	4.62	-80.6%
1995	3,111	19.91	2,280	3.44	-82.7%	1,338	23.15	1,007	4.88	-78.9%	768	27.44	565	8.20	-70.1%	5,218	21.85	3,852	4.52	-79.3%
1996	1	17.64	0	0.00	-100.0%	0	0.00	0	0.00	NA	257	33.63	192	9.52	-71.7%	258	33.57	192	9.52	-71.7%
1997	1	9.10	1	10.52	15.6%	0	0.00	1	2.08	NA	433	29.10	330	9.62	-66.9%	434	29.05	332	9.60	-66.9%
1998	2	14.74	2	2.15	-85.4%	0	0.00	0	0.00	NA	66	28.18	48	5.22	-81.5%	68	27.78	50	5.10	-81.6%
1999	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	70	17.15	57	5.28	-69.2%	70	17.15	57	5.28	-69.2%
2000	2	18.17	1	0.29	-98.4%	0	0.00	0	0.00	NA	25	14.64	26	3.17	-78.4%	27	14.90	27	3.06	-79.5%
2001	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	45	15.88	39	4.29	-73.0%	45	15.88	39	4.29	-73.0%
2002	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	22	12.63	29	3.32	-73.7%	22	12.63	29	3.32	-73.7%
2003	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	4	28.08	7	0.14	-99.5%	4	28.08	7	0.14	-99.5%
2004	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	5	49.36	23	0.63	-98.7%	5	49.36	23	0.63	-98.7%
2005	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
2006	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
2007	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
2008	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	0.00	0	0.00	NA	0	NA	0	NA	NA
Overall	22,778	23.53	16,367	3.99	-83.1%	6,842	30.46	4,879	7.79	-74.4%	3,900	35.94	2,848	9.43	-73.8%	33,521	26.39	24,094	5.40	-79.5%

AVG. OXIDES OF NITROGEN (g/mi)

MODEL YEAR	LDGV					LDGT1/2					LDGT3/4					OVERALL				
	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions	Pre-Repair # of vehicles	Pre-Repair avg. emissions	Post-repair # of vehicles	Post-Repair avg. emissions	% change in emissions
1984	318	2.99	220	1.30	-56.4%	83	3.84	62	2.21	-42.4%	58	4.14	37	2.25	-45.5%	459	3.29	319	1.59	-51.6%
1985	533	3.23	370	1.29	-60.1%	127	3.81	73	2.14	-43.8%	80	4.35	57	2.18	-49.8%	740	3.45	500	1.51	-56.1%
1986	543	3.22	360	1.30	-59.7%	120	4.32	93	2.13	-50.7%	114	4.47	82	2.67	-40.2%	777	3.57	535	1.65	-53.8%
1987	891	3.27	629	1.37	-58.2%	159	3.56	112	1.95	-45.2%	103	5.05	72	2.67	-47.1%	1,153	3.47	813	1.56	-55.0%
1988	870	3.20	582	1.36	-57.5%	514	4.26	347	1.60	-62.3%	175	5.08	119	2.18	-57.2%	1,559	3.76	1,048	1.53	-59.2%
1989	1,289	3.08	903	1.36	-55.9%	585	4.20	395	1.55	-61.0%	220	4.56	134	2.38	-47.9%	2,094	3.55	1,432	1.51	-57.5%
1990	1,446	3.26	1,021	1.30	-60.2%	429	4.10	286	1.58	-61.5%	164	4.67	115	2.32	-50.4%	2,039	3.55	1,422	1.44	-59.5%
1991	2,864	2.95	2,048	1.09	-62.9%	538	3.57	389	1.31	-63.2%	160	4.47	117	2.15	-51.9%	3,562	3.11	2,554	1.18	-62.2%
1992	3,246	2																		