

Wisconsin
Vehicle Inspection Program
Annual Report
2010



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Background

The Wisconsin Department of Transportation (WisDOT) implemented the Wisconsin Vehicle Inspection Program (WVIP) in April 1984 in response to the federal Clean Air Act requirements. A major focus of the Clean Air Act is to reduce emissions that form ground-level ozone. Motor vehicles, industries, and smaller area sources such as lawn mowers, power boats, paints, solvents and other consumer products emit these ozone precursors. Areas exceeding federal air quality standards – established under the Clean Air Act – are designated as non-attainment and are required by federal law to reduce emissions.

The WVIP is one of the primary components of the strategy to reduce air pollution in southeastern Wisconsin area. Each year, over 600,000 cars and light duty trucks in a seven county region of southeastern Wisconsin's ozone non-attainment area are tested for emissions. The program covers more than 2,500 square miles over seven counties: Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha. Vehicles are inspected in 9 stations located in Kenosha, Milwaukee, Racine, Sheboygan, Waukesha, West Bend, and West Allis.

The emissions tests are free to the motorist, but cost WisDOT about \$5.25 each. The state Transportation and Petroleum Environmental Cleanup Fund Act (PECFA) funds pay for the program.

Program Overview

Geographical Area:	Seven southeastern Wisconsin counties: Sheboygan, Washington, Ozaukee, Waukesha, Milwaukee, Racine and Kenosha. Testing region covers 2,500 square miles.
Test Procedure:	OBDII testing, in which a vehicle's on-board computer is checked for emissions-related problems, is the standard test for all 1996 and newer gasoline-fueled vehicles equipped with OBDII technology and all 2007 and newer diesel-fueled vehicles equipped with OBDII technology.
Network Size:	9 Stations, 21 Contractual Lanes, 2 Technical Assistance Centers
Model Years (MY) Tested	<i>Registration Renewal Testing:</i> Odd Model Years 1996 through 2007 <ul style="list-style-type: none">• Model year 1996-2006 gasoline-fueled vehicles up to 8,500 lbs. gross vehicle weight rating• Model year 2007 and newer gasoline-fueled and diesel-fueled vehicles between 8,500 and 14,000 lbs, gross vehicle weight rating <i>Change of Ownership:</i> Model year 2005 and older in CY 2010

Program Rationale

Southeastern Wisconsin is one of more than 120 metropolitan areas with ground-level ozone levels that exceed federal air quality standards. Excessive air pollution is a public health hazard. Geographically, as part of the south Lake Michigan air basin, southeastern Wisconsin is one of the worst areas in the country for ozone pollution.

Motor Vehicle Emission Reductions & Air Quality Improvement

Reducing motor vehicle emissions plays a large role in improving regional air quality. Along with reformulated gasoline use, the Wisconsin Vehicle Inspection Program (WVIP) is Wisconsin's most significant vehicle emission reduction program, and one that contributes to improved air quality in the entire upper Midwest.

The Wisconsin Department of Natural Resources (DNR) estimates that the program achieved the following reductions in on-road motor vehicle emissions during 2010:

- Volatile organic compounds (VOC) emissions reduced by 3.94 tons per summer weekday, or 12.7%.
- Oxides of nitrogen (NOx) emissions reduced by 5.65 tons per summer weekday, or 8.7%.
- Carbon monoxide (CO) emissions reduced by 68.28 tons per summer weekday, or 16.6%.

Hot Summer Weekday Emissions (tons)

		Volatile Organic Compounds (VOC)					
		2005	2006	2007	2008	2009	2010
No I/M Program	6 SE Counties	40.636	38.364	35.698	33.192	30.942	28.893
No I/M Program	Sheboygan Co.	3.305	2.972	2.752	2.534	2.240	2.047
No I/M Program	All 7 Counties	43.941	41.336	38.450	35.726	33.182	30.940
I/M Program	6 SE Counties	35.995	33.718	31.115	28.652	26.956	25.213
I/M Program	Sheboygan Co.	2.927	2.601	2.390	2.182	1.948	1.784
I/M Program	All 7 Counties	38.922	36.319	33.505	30.834	28.904	26.997
I/M Program Reductions (tons)		5.019	5.017	4.945	4.892	4.278	3.943
I/M Program Reductions (%)		11.4%	12.1%	12.9%	13.7%	12.9%	12.7%

		Oxides of Nitrogen (NOx)					
		2005	2006	2007	2008	2009	2010
No I/M Program	6 SE Counties	92.428	85.431	78.066	71.572	66.406	60.988
No I/M Program	Sheboygan Co.	6.759	6.045	5.545	5.020	4.394	3.936
No I/M Program	All 7 Counties	99.187	91.476	83.611	76.592	70.800	64.924
I/M Program	6 SE Counties	86.207	79.313	72.123	65.610	60.908	55.656
I/M Program	Sheboygan Co.	6.347	5.652	5.165	4.647	4.066	3.622
I/M Program	All 7 Counties	92.554	84.965	77.288	70.257	64.974	59.278
I/M Program Reductions (tons)		6.633	6.511	6.323	6.335	5.826	5.646
I/M Program Reductions (%)		6.7%	7.1%	7.6%	8.3%	8.2%	8.7%

Carbon Monoxide (CO)

		2005	2006	2007	2008	2009	2010
No I/M Program	6 SE Counties	509.819	473.751	438.466	416.660	397.798	383.900
No I/M Program	Sheboygan Co.	41.421	35.560	33.616	31.716	28.825	27.254
No I/M Program	All 7 Counties	551.240	509.311	472.082	448.376	426.623	411.154
I/M Program	6 SE Counties	435.989	399.124	363.704	342.212	330.604	320.246
I/M Program	Sheboygan Co.	35.432	29.464	27.678	26.030	23.897	22.629
I/M Program	All 7 Counties	471.421	428.588	391.382	368.242	354.501	342.875
I/M Program Reductions (tons)		79.819	80.723	80.700	80.134	72.122	68.279
I/M Program Reductions (%)		14.5%	15.8%	17.1%	17.9%	16.9%	16.6%

NOTE: Emissions and I/M program reductions calculated using U.S. EPA's MOBILE6.2 model

Over time, the WVIP has contributed to the following air quality advances in Wisconsin:

Ozone: Ground-level ozone concentrations in southeastern Wisconsin have dropped significantly over the past 20 years. During 1990, the 1-hour ozone "design value" (a calculated measurement used to evaluate compliance with the 1-hour ozone standard) for southeastern Wisconsin was 0.19 parts per million (ppm). This value was high enough that six southeastern Wisconsin counties were classified as a severe ozone nonattainment area under the 1990 Clean Air Act (CAA) amendments. Other eastern Wisconsin counties were assigned less severe nonattainment designations.

By 2001, the 1-hour design value for southeastern Wisconsin had dropped to 0.12 ppm, meeting the 1-hour ozone standard. All Wisconsin counties are now monitoring ozone concentrations below this level.

More recently, the U.S. EPA has been implementing more stringent ozone standards, using an 8-hour averaging period. This "8-hour ozone standard" was originally set at 0.084 ppm in 1997. It was revised in 2008 to 0.075 ppm, based on updated information on the health effects of ozone. (The U.S. EPA is planning to revise this standard again in 2011 to a value in the 0.060 to 0.070 ppm range to more accurately reflect updated health effects information.) As shown in the following graph, ozone concentrations have continued to decline over the past decade. The state has already attained the 1997 8-hour standard of 0.084 ppm. The WVIP will play an important, ongoing role in the state's efforts to comply with the revised more stringent 8-hour standards.

Carbon Monoxide: Between 1977 and 1984, southeastern Wisconsin exceeded the federal carbon monoxide standard 35 times. Since the program's implementation in 1984, southeastern Wisconsin has not exceeded this standard even once.

Credit for these air quality improvements goes to various state and federal ozone control measures implemented both in Wisconsin and other states. Aside from Wisconsin's and neighboring states' vehicle inspection and maintenance programs, these include reformulated gasoline, national emission standards for new motor vehicles, utility and industrial source controls, and gasoline vapor recovery controls.

TEST DATA REPORT

OPERATING STATISTICS

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

The tests represented in the table below include test records for initial tests, retests and waivers. It contains all test results, including pass, fail, waivers, aborts, rejects and voids. All tables in this section do not include test records that were performed in the course of the state audits.

Model Year	Total	HDGT1	HDGT2	LDGT1	LDGT2	LDGV
1996	14,696			3,833	1,437	9,426
1997	62,689			17,096	7,544	38,049
1998	18,406			5,240	2,123	11,043
1999	84,592			22,540	12,993	49,059
2000	20,528			5,594	2,423	12,511
2001	98,374			29,997	12,348	56,029
2002	19,885			6,364	2,255	11,266
2003	98,615			32,089	13,880	52,646
2004	16,319			5,117	2,587	8,615
2005	97,910			36,569	13,457	47,884
2006	5,630			1,848	788	2,994
2007	81,869	2,007	395	20,470	8,763	50,234
2008	2,306	49	5	623	289	1,340
2009	4			2		2
2010	20			3		17
2011	5			1		4
Grand Total	621,848	2,056	400	187,386	80,887	351,119

HDGT1: Heavy Duty Gas Truck 1 (gvwr 8501-10,000 lbs)

HDGT2: Heavy Duty Gas Truck 2 (gvwr 1001 – 14,000 lbs)

LDGT1: Light Duty Gas Truck 1 (gvwr 4000 – 6000 lbs)

LDGT2: Light Duty Gas Truck 2 (gvwr 6001 – 8500lbs)

LDGV: Light Duty Gas Vehicles (automobiles)

40 CFR Part 51.366 (a)(2) (i) The number of vehicles tested by model year and vehicle type failing by test type.

Vehicle Year	Type	Total Initial Tests	Initial Fails	Initial Pass	Fail Rate
1996	LDGT1	2,727	576	2,151	21.12%
1996	LDGT2	1,109	194	915	17.49%
1996	LDGV	6,800	1,301	5,499	19.13%
1997	LDGT1	13,796	1,868	11,928	13.54%
1997	LDGT2	6,524	761	5,763	11.66%
1997	LDGV	31,713	4,087	27,626	12.89%
1998	LDGT1	3,992	621	3,371	15.56%
1998	LDGT2	1,645	261	1,384	15.87%
1998	LDGV	8,413	1,328	7,085	15.79%
1999	LDGT1	19,869	1,657	18,212	8.34%
1999	LDGT2	11,391	1,000	10,391	8.78%
1999	LDGV	42,404	4,217	38,187	9.94%
2000	LDGT1	4,696	421	4,275	8.97%
2000	LDGT2	2,040	184	1,856	9.02%
2000	LDGV	10,191	1,178	9,013	11.56%
2001	LDGT1	24,726	2,465	22,261	9.97%
2001	LDGT2	10,550	711	9,839	6.74%
2001	LDGV	47,238	4,362	42,876	9.23%
2002	LDGT1	5,317	398	4,919	7.49%
2002	LDGT2	1,914	131	1,783	6.84%
2002	LDGV	9,241	757	8,484	8.19%
2003	LDGT1	29,507	1,336	28,171	4.53%
2003	LDGT2	12,826	614	12,212	4.79%
2003	LDGV	47,951	2,413	45,538	5.03%
2004	LDGT1	4,640	182	4,458	3.92%
2004	LDGT2	2,360	72	2,288	3.05%
2004	LDGV	7,674	381	7,293	4.96%
2005	LDGT1	34,708	994	33,714	2.86%
2005	LDGT2	12,772	352	12,420	2.76%
2005	LDGV	45,670	1,130	44,540	2.47%
2006	LDGT1	1,714	50	1,664	2.92%
2006	LDGT2	734	23	711	3.13%
2006	LDGV	2,700	109	2,591	4.04%
2007	HDGT1	1,931	41	1,890	2.12%

2007	HDGT2	365	14	351	3.84%
2007	LDGT1	20,064	165	19,899	0.82%
2007	LDGT2	8,557	96	8,461	1.12%
2007	LDGV	48,990	518	48,472	1.06%
2008	HDGT1	49	1	48	2.04%
2008	HDGT2	5		5	0.00%
2008	LDGT1	621	3	618	0.48%
2008	LDGT2	288	2	286	0.69%
2008	LDGV	1,324	7	1,317	0.53%
2009	LDGT1	2		2	0.00%
2009	LDGV	2		2	0.00%
2010	LDGT1	3		3	0.00%
2010	LDGV	13		13	0.00%
2011	LDGT1	1		1	0.00%
2011	LDGV	2		2	0.00%
Total		551,769	36,981	514,788	6.70%

40 CFR Part 51.366 (a)(2) (ii) – (iii) The number of vehicles tested by model year and vehicle type passing or failing the first retest.

Vehicle Year	Type	Total 1st Retests Pass and Fail	1st Retest Fails	1st Retest Pass	Fail Rate
1996	LDGT1	492	116	376	23.58%
1996	LDGT2	174	37	137	21.26%
1996	LDGV	1,023	239	784	23.36%
1997	LDGT1	1,408	230	1,178	16.34%
1997	LDGT2	540	63	477	11.67%
1997	LDGV	2,969	489	2,480	16.47%
1998	LDGT1	555	106	449	19.10%
1998	LDGT2	231	52	179	22.51%
1998	LDGV	1,112	187	925	16.82%
1999	LDGT1	1,297	153	1,144	11.80%
1999	LDGT2	769	107	662	13.91%
1999	LDGV	3,193	400	2,793	12.53%
2000	LDGT1	443	58	385	13.09%
2000	LDGT2	198	32	166	16.16%
2000	LDGV	1,054	181	873	17.17%
2001	LDGT1	1,982	236	1,746	11.91%
2001	LDGT2	554	56	498	10.11%
2001	LDGV	3,396	441	2,955	12.99%
2002	LDGT1	442	53	389	11.99%
2002	LDGT2	156	9	147	5.77%
2002	LDGV	769	113	656	14.69%
2003	LDGT1	1,127	83	1,044	7.36%
2003	LDGT2	533	29	504	5.44%
2003	LDGV	1,964	176	1,788	8.96%
2004	LDGT1	209	15	194	7.18%
2004	LDGT2	84	8	76	9.52%
2004	LDGV	411	52	359	12.65%
2005	LDGT1	852	39	813	4.58%
2005	LDGT2	291	9	282	3.09%
2005	LDGV	916	71	845	7.75%
2006	LDGT1	66	2	64	3.03%
2006	LDGT2	27	2	25	7.41%
2006	LDGV	135	10	125	7.41%
2007	HDGT1	34	2	32	5.88%

2007	HDGT2	6		6	0.00%
2007	LDGT1	145	6	139	4.14%
2007	LDGT2	89	3	86	3.37%
2007	LDGV	413	21	392	5.08%
2008	LDGT1	1		1	0.00%
2008	LDGV	1		1	0.00%
Total		30,061	3,886	26,175	12.93%

40 CFR Part 51.366 (a)(2) (iv) The number of vehicles tested by model year and vehicle type that initially failed and passed the second or subsequent retest.

Vehicle Year	Type	Initial Fails	Pass 2nd or Subsequent Retest	Percentage
1996	LDGT1	576	71	12.33%
1996	LDGT2	194	32	16.49%
1996	LDGV	1,301	136	10.45%
1997	LDGT1	1,868	140	7.49%
1997	LDGT2	761	35	4.60%
1997	LDGV	4,087	280	6.85%
1998	LDGT1	621	63	10.14%
1998	LDGT2	261	35	13.41%
1998	LDGV	1,328	130	9.79%
1999	LDGT1	1,657	97	5.85%
1999	LDGT2	1,000	66	6.60%
1999	LDGV	4,217	268	6.36%
2000	LDGT1	421	43	10.21%
2000	LDGT2	184	20	10.87%
2000	LDGV	1,178	141	11.97%
2001	LDGT1	2,465	153	6.21%
2001	LDGT2	711	38	5.34%
2001	LDGV	4,362	284	6.51%
2002	LDGT1	398	44	11.06%
2002	LDGT2	131	13	9.92%
2002	LDGV	757	102	13.47%
2003	LDGT1	1,336	58	4.34%
2003	LDGT2	614	23	3.75%
2003	LDGV	2,413	114	4.72%
2004	LDGT1	182	11	6.04%
2004	LDGT2	72	4	5.56%
2004	LDGV	381	46	12.07%
2005	LDGT1	994	32	3.22%
2005	LDGT2	352	6	1.70%
2005	LDGV	1,130	48	4.25%
2006	LDGT1	50	2	4.00%
2006	LDGT2	23		0.00%
2006	LDGV	109	8	7.34%
2007	HDGT1	41	1	2.44%
2007	HDGT2	14		0.00%
2007	LDGT1	165	5	3.03%
2007	LDGT2	96	2	2.08%
2007	LDGV	518	16	3.09%

2008	HDGT1	1	0	0.00%
2008	HDGT2	-	0	0.00%
2008	LDGT1	3	0	0.00%
2008	LDGT2	2	0	0.00%
2008	LDGV	7	0	0.00%
2009	LDGT1	-	0	0.00%
2009	LDGV	-	0	0.00%
2010	LDGT1	-	0	0.00%
2010	LDGV	-	0	0.00%
2011	LDGT1	-	0	0.00%
2011	LDGV	-	0	0.00%
Total		36,981	2567	6.94%

Vehicle Waivers

A motorist may request a waiver from further inspection requirements for the current inspection cycle if the vehicle fails a second retest after repairs. In general, a waiver may be granted if the motorist exceeds the cost limit on emission-related repairs and adjustments at a recognized repair facility. The waiver repair cost limit excludes emission system warranty repairs and the repair/replacement of tampered emission control devices identified during the equipment check.

Vehicle owners can also apply for a waiver if their vehicles continue to fail the emissions test. A vehicle is eligible for a waiver when the following conditions are met:

1. The vehicle has failed an emissions inspection and following repair and reinspection, it still does not meet test requirements. Repairs made over 180 days prior to the expiration of the license plate cannot be applied to the waiver repair cost limit.
2. The vehicle has passed a waiver emission equipment inspection to determine if emission control equipment is missing, modified or disconnected.
3. The Vehicle Inspection Reports (VIR) has been presented to the Waiver Investigator at the time a waiver is requested. The REPAIR DATA section of these reports has been completed in accordance with instructions provided on the report form. Motorists must bring their vehicle and itemized receipts for parts and labor to verify the emission related repairs.
4. For all vehicles which exceed the terms of the manufacturer's emission performance or defect warranty coverage at the time of the scheduled emission inspection, the owner must have emission related repairs performed on the vehicle at a recognized repair facility.
5. The actual costs of emission related repairs and adjustments exceed the repair cost limit for that vehicle's county of domicile. Only repairs that are related to the vehicle's cause of failure can be used to apply for a cost waiver. Costs covered by any warranty or costs to repair/replace emission control equipment that has been removed, modified or disconnected are excluded.
6. For vehicles registered and kept in Washington, Ozaukee, Waukesha, Milwaukee, Racine and Kenosha Counties, the repair cost limit for all model year vehicles subject to testing is \$788, effective for calendar year 2010. This figure is adjusted annually by the DNR per NR 485.045. For vehicles registered in Sheboygan County, the repair cost limit was \$200 for calendar year 2010, but starting in 2011, the repair cost limit in Sheboygan County was modified to be the same limit as in the other six counties within the WVIP testing area.

The following chart illustrates the cost waivers granted in 2010 by model year. Since odd model year vehicles were tested in 2010, they account for the majority of the waivers.

40 CFR Part 51.366 (a)(2) (v) The number of vehicles tested by model year and vehicle type receiving a waiver.

Vehicle Year	Type	Initial Fails	Waivers	Waiver Rate
1996	LDGT1	576	2	0.35%
1996	LDGT2	194	1	0.52%
1996	LDGV	1,301	18	1.38%
1997	LDGT1	1,868	5	0.27%
1997	LDGT2	761	9	1.18%
1997	LDGV	4,087	34	0.83%
1998	LDGT1	621	2	0.32%
1998	LDGT2	261	9	3.45%
1998	LDGV	1,328	15	1.13%
1999	LDGT1	1,657	7	0.42%
1999	LDGT2	1,000	9	0.90%
1999	LDGV	4,217	24	0.57%
2000	LDGT1	421	0	0.00%
2000	LDGT2	184	7	3.80%
2000	LDGV	1,178	13	1.10%
2001	LDGT1	2,465	11	0.45%
2001	LDGT2	711	17	2.39%
2001	LDGV	4,362	53	1.22%
2002	LDGT1	398	4	1.01%
2002	LDGT2	131	4	3.05%
2002	LDGV	757	7	0.92%
2003	LDGT1	1,336	2	0.15%
2003	LDGT2	614	0	0.00%
2003	LDGV	2,413	27	1.12%
2004	LDGT1	182	0	0.00%
2004	LDGT2	72	2	2.78%
2004	LDGV	381	4	1.05%
2005	LDGT1	994	2	0.20%
2005	LDGT2	352	6	1.70%
2005	LDGV	1,130	2	0.18%
2006	LDGT1	50	0	0.00%
2006	LDGT2	23	1	4.35%
2006	LDGV	109	0	0.00%
2007	HDGT1	41	0	0.00%
2007	HDGT2	14	0	0.00%

2007	LDGT1	165	0	0.00%
2007	LDGT2	96	1	1.04%
2007	LDGV	518	0	0.00%
2008	HDGT1	1	0	0.00%
2008	HDGT2	-	0	0.00%
2008	LDGT1	3	0	0.00%
2008	LDGT2	2	0	0.00%
2008	LDGV	7	0	0.00%
Total		36,981	298	0.81%

40 CFR Part 51.366 (a)(2)(vi) The number of vehicles tested by model year and vehicle type with no final outcome (regardless of reason).

The vehicles included in the table below did not have a final outcome of either a pass or waiver test result during the reporting period.

Vehicle Year	HDGT1	HDGT2	LDGT1	LDGT2	LDGV	Grand Total
1996			355	110	874	1,339
1997			739	316	1,743	2,798
1998			369	145	762	1,276
1999			579	401	1,495	2,475
2000			194	91	649	934
2001			855	277	1,580	2,712
2002			175	55	369	599
2003			304	102	709	1,115
2004			83	39	162	284
2005			205	87	297	589
2006			17	10	53	80
2007	14	13	36	22	138	223
2008	1		4	2	7	14
2010					4	4
2011					2	2
Grand Total	15	13	3,915	1,657	8,844	14,444

40 CFR Part 51.366 (a)(2)(xi) (xii) The number of vehicles tested by model year and vehicle type passing or failing the on-board diagnostic check.

Vehicle Year	Type	Total	Fail	Pass	Percentage Fail
1996	LDGT1	3,312	714	2,598	21.56%
1996	LDGT2	1,333	249	1,084	18.68%
1996	LDGV	8,011	1,592	6,419	19.87%
1997	LDGT1	15,390	2,144	13,246	13.93%
1997	LDGT2	7,109	834	6,275	11.73%
1997	LDGV	35,044	4,658	30,386	13.29%
1998	LDGT1	4,635	752	3,883	16.22%
1998	LDGT2	1,925	327	1,598	16.99%
1998	LDGV	9,696	1,556	8,140	16.05%
1999	LDGT1	21,281	1,828	19,453	8.59%
1999	LDGT2	12,241	1,122	11,119	9.17%
1999	LDGV	45,902	4,654	41,248	10.14%
2000	LDGT1	5,191	488	4,703	9.40%
2000	LDGT2	2,265	223	2,042	9.85%
2000	LDGV	11,416	1,389	10,027	12.17%
2001	LDGT1	26,882	2,722	24,160	10.13%
2001	LDGT2	11,151	776	10,375	6.96%
2001	LDGV	50,983	4,868	46,115	9.55%
2002	LDGT1	5,811	459	5,352	7.90%
2002	LDGT2	2,084	141	1,943	6.77%
2002	LDGV	10,130	888	9,242	8.77%
2003	LDGT1	30,701	1,428	29,273	4.65%
2003	LDGT2	13,386	647	12,739	4.83%
2003	LDGV	50,046	2,606	47,440	5.21%
2004	LDGT1	4,862	199	4,663	4.09%
2004	LDGT2	2,448	80	2,368	3.27%
2004	LDGV	8,141	443	7,698	5.44%
2005	LDGT1	35,601	1,042	34,559	2.93%
2005	LDGT2	13,069	361	12,708	2.76%
2005	LDGV	46,641	1,208	45,433	2.59%
2006	LDGT1	1,783	53	1,730	2.97%
2006	LDGT2	761	25	736	3.29%
2006	LDGV	2,843	119	2,724	4.19%
2007	HDGT1	1,966	43	1,923	2.19%

2007	HDGT2	371	14	357	3.77%
2007	LDGT1	20,214	171	20,043	0.85%
2007	LDGT2	8,648	99	8,549	1.14%
2007	LDGV	49,419	539	48,880	1.09%
2008	HDGT1	49	1	48	2.04%
2008	HDGT2	5		5	0.00%
2008	LDGT1	622	3	619	0.48%
2008	LDGT2	288	2	286	0.69%
2008	LDGV	1,325	7	1,318	0.53%
2009	LDGT1	2		2	0.00%
2009	LDGV	2		2	0.00%
2010	LDGT1	3		3	0.00%
2010	LDGV	13		13	0.00%
2011	LDGT1	1		1	0.00%
2011	LDGV	2		2	0.00%
		585,004	41,474	543,530	7.09%

40 CFR Part 51.366 (a)(2)(xiii) –(xviii)

There is no data for comparing on-board diagnostic tests with other test types because Wisconsin only conducts on-board diagnostic tests.

Check Engine Light Commanded On:

A small population of vehicles in southeastern Wisconsin produces most of the vehicle exhaust pollution – these are the so-called gross polluters. As vehicles are driven, problems can develop because of defective parts, improper maintenance or simply from deterioration due to age and usage. This helps explain why a vehicle can be relatively clean one year and become a gross polluter at the time of its next inspection. Since hydrocarbon, carbon monoxide and nitrogen oxides are invisible, a vehicle inspection is an effective method to ensure that a vehicle is not polluting excessively.

In most cases, if the vehicle's check engine light is commanded on due to an emission component malfunction, then the Diagnostic Trouble Codes (DTC) are recorded and provided to the motorist. The vehicle will fail this portion of the inspection if the check engine light is commanded on. However, there are also some instances where the check engine light is on but no DTCs are stored. In either case, the vehicle will need to be repaired and brought back for a re-inspection.

40 CFR Part 51.366 (a)(2)(xix)

The number of vehicles tested by model year and vehicle type where the MIL is commanded on and no codes are stored.

Vehicle Year	Total	HDGT1	HDGT2	LDGT1	LDGT2	LDGV
1996	2,375			658	222	1,495
1997	7,098			1,958	769	4,371
1998	2,498			720	305	1,473
1999	7,173			1,743	1,037	4,393
2000	2,035			468	221	1,346
2001	8,098			2,626	753	4,719
2002	1,443			450	134	859
2003	4,592			1,408	637	2,547
2004	705			194	78	433
2005	2,507			1,000	346	1,161
2006	188			53	24	111
2007	824	42	13	164	90	515
2008	13	1		3	2	7
Total	39,549	43	13	11,445	4,618	23,430

Another condition that can occur is when the vehicle's check engine light is NOT commanded on but a Diagnostic Trouble Codes (DTC) is stored within the vehicle's computer. The most likely reason for this condition is a pending code indicating a problem within the vehicle that has not yet met the threshold for activating the check engine light, or a condition that has since resolved itself. Since the MIL is not commanded on, the vehicle will pass this portion of the inspection.

40 CFR Part 51.366 (a)(2)(xx)

The number of vehicles tested by model year and vehicle type where the MIL is not commanded on and codes are stored.

Vehicle Year	Total	HDGT1	HDGT2	LDGT1	LDGT2	LDGV
1996	1,634			470	192	972
1997	6,026			1,782	644	3,600
1998	1,830			548	236	1,046
1999	6,683			1,644	1,197	3,842
2000	1,852			497	219	1,136
2001	6,827			1,700	740	4,387
2002	1,624			499	129	996
2003	5,357			2,038	656	2,663
2004	922			343	117	462
2005	3,706			1,535	490	1,681
2006	246			92	35	119
2007	1,594	53	24	454	164	899
2008	21	1		6	3	11
Total	38,322	54	24	11,608	4,822	21,814

40 CFR Part 51.366 (a)(2)(xxi)

The number of vehicles tested by model year and vehicle type where the MIL is commanded on and codes are stored.

Vehicle Year	Total	HDGT1	HDGT2	LDGT1	LDGT2	LDGV
1996	2,368			657	222	1,489
1997	7,094			1,958	768	4,368
1998	2,492			720	305	1,467
1999	7,147			1,727	1,029	4,391
2000	2,031			464	221	1,346
2001	8,086			2,623	748	4,715
2002	1,439			449	134	856
2003	4,578			1,396	637	2,545
2004	704			193	78	433
2005	2,499			995	345	1,159
2006	187			52	24	111
2007	822	42	13	162	90	515
2008	13	1		3	2	7
Total	39,460	43	13	11,399	4,603	23,402

40 CFR Part 51.366 (a)(2)(xxii)

The number of vehicles tested by model year and vehicle type where the MIL is not commanded on and codes are not stored.

Vehicle Year	Total	HDGT1	HDGT2	LDGT1	LDGT2	LDGV
1996	8,619			2,186	915	5,518
1997	44,234			11,605	5,680	26,949
1998	11,890			3,366	1,379	7,145
1999	65,371			17,874	9,983	37,514
2000	14,972			4,222	1,826	8,924
2001	74,021			22,535	9,659	41,827
2002	14,964			4,869	1,820	8,275
2003	84,206			27,274	12,100	44,832
2004	13,827			4,324	2,255	7,248
2005	89,117			33,057	12,237	43,823
2006	4,952			1,640	701	2,611
2007	78,245	1,873	335	19,607	8,393	48,037
2008	2,258	47	5	613	284	1,309
2009	4			2		2
2010	17			3		14
2011	3			1		2
Total	506,700	1,920	340	153,178	67,232	284,030

Readiness Monitors:

A vehicle’s OBD system continually tracks and stores information about the emission control devices and other engine related components. Readiness monitors indicate if components have been fully evaluated and whether system components have experienced any driving conditions that prevent the vehicle from operating as designed by the manufacturer. The test equipment reads the readiness monitor statuses as part of the vehicle emissions inspection.

Vehicles “Not Ready” for OBD testing receive a reject test result. For 1996 - 2000 model year vehicles, a vehicle can have up to 2 readiness monitors unset; for 2001 and newer vehicles, only 1 readiness monitor can be unset. If the unset readiness monitors exceed the requirements, the vehicle will be rejected from further testing until this condition is corrected.

40 CFR Part 51.366 (a)(2)(xxiii)

The number of vehicles tested by model year and vehicle type where the readiness status indicates that the evaluation is not complete for any module supported by on-board diagnostic systems.

Vehicle Year	Total	HDGT1	HDGT2	LDGT1	LDGT2	LDGV
1996	1,889			473	94	1,322
1997	4,784			1,601	405	2,778
1998	1,976			568	188	1,220
1999	4,562			1,197	696	2,669
2000	1,435			382	153	900
2001	8,707			2,940	1,147	4,620
2002	1,728			493	167	1,068
2003	3,790			1,093	412	2,285
2004	737			211	124	402
2005	1,938			719	291	928
2006	170			46	26	98
2007	691	33	16	129	93	420
2008	6			1		5
2010	3					3
2011	2					2
Total	32,418	33	16	9,853	3,796	18,720

40 CFR Part 51.366 (a)(3)

The initial test volume by model year and test station.

Vehicle Year	WB	WAUK	MILWS	MILN	MILC	WA	RAC	KEN	SHE	TAC-S	TAC-N	DMV E
1996	795	1,141	1,405	1,864	2,548	1,175	1,079	1,341	693	11	20	9
1997	4,709	7,180	7,062	7,282	8,204	7,148	4,861	5,562	3,830	24	15	58
1998	1,031	1,703	1,865	2,284	3,011	1,590	1,428	1,690	877	5	19	10
1999	6,902	11,194	9,917	10,090	10,224	10,386	6,236	7,313	5,450	21	16	77
2000	1,344	2,246	2,148	2,820	3,365	1,994	1,451	1,770	988	6	6	15
2001	8,175	13,726	11,206	11,284	10,845	12,733	7,032	8,313	5,983	31	22	59
2002	1,357	2,412	2,112	2,624	2,838	2,200	1,421	1,777	1,038	8	3	17
2003	9,006	15,892	11,949	11,744	9,945	13,785	6,787	8,572	6,082	21	25	58
2004	1,313	2,385	1,797	2,206	2,098	1,937	1,113	1,530	918	1	2	12
2005	9,601	16,777	11,704	11,576	9,063	14,346	6,923	8,965	6,333	4	3	63
2006	447	916	580	863	644	789	325	468	288	1	1	8
2007	8,012	15,117	9,468	10,184	7,415	12,280	5,832	7,592	5,131	7	9	39
2008	258	493	269	228	162	341	191	215	150			
2009			2			1			1			
2010			5			4		1			12	
2011	1					1					3	
	52,951	91,182	71,489	75,049	70,362	80,710	44,679	55,109	37,762	140	156	425

40 CFR Part 51.366 (a)(3)

The initial test failure rate by model year and test station.

VEH YEAR	WB	WUK	MILS	MILN	MILC	WA	RAC	KEN	SHE	TACS	TACN	DMVE	Total
1996	742	1,044	1,241	1,660	2,163	1,031	924	1,159	641	9	18	4	10,636
F	89	139	209	401	565	152	169	241	103	1	1	1	2,071
P	653	905	1,032	1,259	1,598	879	755	918	538	8	17	3	8,565
Fail Rate	12.0%	13.3%	16.8%	24.2%	26.1%	14.7%	18.3%	20.8%	16.1%	11.1%	5.6%	25.0%	19.5%
1997	4,464	6,789	6,565	6,755	7,338	6,788	4,518	5,129	3,605	18	14	50	52,033
F	391	646	754	1,075	1,413	671	656	742	356	2	2	8	6,716
P	4,073	6,143	5,811	5,680	5,925	6,117	3,862	4,387	3,249	16	12	42	45,317
Fail Rate	8.8%	9.5%	11.5%	15.9%	19.3%	9.9%	14.5%	14.5%	9.9%	11.1%	14.3%	16.0%	12.9%
1998	942	1,581	1,712	2,100	2,633	1,468	1,285	1,519	784	5	14	7	14,050
F	103	173	234	443	583	150	188	240	96				2,210
P	839	1,408	1,478	1,657	2,050	1,318	1,097	1,279	688	5	14	7	11,840
Fail Rate	10.9%	10.9%	13.7%	21.1%	22.1%	10.2%	14.6%	15.8%	12.2%	0.0%	0.0%	0.0%	15.7%
1999	6,612	10,732	9,397	9,563	9,345	9,972	5,878	6,893	5,179	15	15	63	73,664
F	465	826	825	1,078	1,292	734	537	737	364	4	1	11	6,874
P	6,147	9,906	8,572	8,485	8,053	9,238	5,341	6,156	4,815	11	14	52	66,790
Fail Rate	7.0%	7.7%	8.8%	11.3%	13.8%	7.4%	9.1%	10.7%	7.0%	26.7%	6.7%	17.5%	9.3%
2000	1,261	2,108	2,019	2,646	3,055	1,896	1,345	1,632	943	5	5	12	16,927
F	85	166	204	352	447	148	133	177	67	2		2	1,783
P	1,176	1,942	1,815	2,294	2,608	1,748	1,212	1,455	876	3	5	10	15,144
Fail Rate	6.7%	7.9%	10.1%	13.3%	14.6%	7.8%	9.9%	10.8%	7.1%	40.0%	0.0%	16.7%	10.5%
2001	7,641	12,887	10,337	10,404	9,600	11,928	6,410	7,650	5,565	28	21	43	82,514
F	507	1,000	889	1,134	1,285	875	641	789	402	8	2	6	7,538
P	7,134	11,887	9,448	9,270	8,315	11,053	5,769	6,861	5,163	20	19	37	74,976
Fail Rate	6.6%	7.8%	8.6%	10.9%	13.4%	7.3%	10.0%	10.3%	7.2%	28.6%	9.5%	14.0%	9.1%
2002	1,291	2,274	1,933	2,421	2,572	2,065	1,302	1,621	969	8	2	14	16,472
F	71	158	154	229	248	133	103	133	52	2	1	2	1,286
P	1,220	2,116	1,779	2,192	2,324	1,932	1,199	1,488	917	6	1	12	15,186
Fail Rate	5.5%	6.9%	8.0%	9.5%	9.6%	6.4%	7.9%	8.2%	5.4%	25.0%	50.0%	14.3%	7.8%
2003	8,724	15,403	11,519	11,242	9,461	13,353	6,513	8,178	5,802	17	18	54	90,284
F	352	662	515	643	611	528	305	483	258	1	1	4	4,363
P	8,372	14,741	11,004	10,599	8,850	12,825	6,208	7,695	5,544	16	17	50	85,921
Fail Rate	4.0%	4.3%	4.5%	5.7%	6.5%	4.0%	4.7%	5.9%	4.4%	5.9%	5.6%	7.4%	4.8%
2004	1,271	2,311	1,712	2,099	2,006	1,888	1,061	1,445	866	1	2	12	14,674
F	42	51	57	132	133	65	56	74	23			2	635
P	1,229	2,260	1,655	1,967	1,873	1,823	1,005	1,371	843	1	2	10	14,039
Fail Rate	3.3%	2.2%	3.3%	6.3%	6.6%	3.4%	5.3%	5.1%	2.7%	0.0%	0.0%	16.7%	4.3%
2005	9,413	16,469	11,474	11,281	8,767	14,087	6,756	8,696	6,151	3	3	50	93,150
F	204	384	303	362	316	290	181	288	145			3	2,476
P	9,209	16,085	11,171	10,919	8,451	13,797	6,575	8,408	6,006	3	3	47	90,674
Fail Rate	2.2%	2.3%	2.6%	3.2%	3.6%	2.1%	2.7%	3.3%	2.4%	0.0%	0.0%	6.0%	2.7%
2006	436	886	554	838	625	768	309	440	283	1	1	7	5,148
F	10	30	23	43	36	15	8	16	1				182

P	426	856	531	795	589	753	301	424	282	1	1	7	4,966
Fail Rate	2.3%	3.4%	4.2%	5.1%	5.8%	2.0%	2.6%	3.6%	0.4%	0.0%	0.0%	0.0%	3.5%
2007	7,933	14,878	9,352	10,019	7,311	12,088	5,763	7,463	5,053	5	5	37	79,907
F	65	127	82	158	113	90	71	91	37				834
P	7,868	14,751	9,270	9,861	7,198	11,998	5,692	7,372	5,016	5	5	37	79,073
Fail Rate	0.8%	0.9%	0.9%	1.6%	1.5%	0.7%	1.2%	1.2%	0.7%	0.0%	0.0%	0.0%	1.0%
2008	255	490	268	228	159	338	188	214	147				2,287
F	1	2	1	1	2	1	2	2	1				13
P	254	488	267	227	157	337	186	212	146				2,274
Fail Rate	0.4%	0.4%	0.4%	0.4%	1.3%	0.3%	1.1%	0.9%	0.7%	0.0%	0.0%	0.0%	0.6%
2009			2			1			1				4
P			2			1			1				4
2010			5			3		1			7		16
P			5			3		1			7		16
2011	1					1					1		3
P	1					1					1		3
Total	50,986	87,852	68,090	71,256	65,035	77,675	42,252	52,040	35,989	115	126	353	551,769
Fail Rate	4.7%	5.0%	6.2%	8.5%	10.8%	5.0%	7.2%	7.7%	5.3%	17.4%	6.3%	11.0%	6.7%

40 CFR Part 51.366 (a)(5)

The average increase or decrease in tailpipe emission levels for HC, CO and NOX (if applicable) after repairs by model year and vehicle type for vehicles receiving a mass emissions test.

Not Applicable – On-Board Diagnostic Testing Only