

## New Seminars Scheduled for 2009!

The Wisconsin Vehicle Inspection Program has teamed up with Al Santini to provide Wisconsin repair technicians with several opportunities in 2009 for free emission related training. These 4 hour seminars will provide detailed information on a variety of topics. The instructor, Al. Santini, has been involved in the repair of vehicles or the training of technicians for 40 years. He retired from the College of Du Page in Glen Ellyn, IL, where he taught automotive electronics for over 20 years. He is also the author of 6 automotive text books.

Over 100 technicians have attended the first two seminars and the feedback has been very good. Some of the comments received from those who have attended include: "I've paid money for classes that weren't 1/2 as good," "Things I can use right away," "Great subject matter," "The teacher was great."

The next series of seminars will cover:

**The Use and Abuse of the DSO.** A 4 hour seminar that starts on the basics of the DSO and ends with emission applications. Case studies of vehicles that were repaired and monitors set by using the information from a DSO are highlighted and discussed. A comprehensive handout which has the various patterns displayed is provided to each participant. No specific brand of DSO is required for participation. The class can be tailored to include hands on testing of O2S, fuel pumps, ignition systems, compression testing and fuel injection. The class is a PowerPoint presentation.

**Using Mode 5/6 As A Diagnostic Aide for OBD-II Difficulties.** This 4 hour seminar will emphasize determining why some monitors will not run and using the OBD-II modes 5/6 for diagnosis purposes. We will look at the most common reasons for emission rejection (lack of monitors run) and the use of the scanner modes which can be helpful. The seminar includes a comprehensive handout which has all screen materials shown. The class can be tailored to include some hands on application of mode 5/6. The class is a PowerPoint presentation.

The four hour seminars (6 pm—10 pm) are being held either at the:

MATC-North Campus, Lecture Hall, Room 289 located at 5555 W Highland Rd., Mequon, or CATI (CATI - Center for Advanced Technology and Innovation, Auditorium, Room 104, 2320 Renaissance Blvd, Sturtevant.

Save the dates—August 4 (MATC), August 5 (CATI), September 2 (CATI) and September 3 (MATC).

To register for one of these free seminars, call 800-678-7277 x6117.

### ***New Hours For Inspection Stations***

***Effective July 1, 2009***

#### **All Stations Except Cedarburg and Burlington**

**Monday—Friday: 8:30 a.m.—5:30 p.m.**

**Saturday: 8:00 a.m.—1:00 p.m.**

#### **Cedarburg & Burlington ONLY**

**Mon., Tues., Thurs., Fri.: 8:30 a.m.—5:30 p.m.**

**\*\*\*\*\*CLOSED WEDNESDAYS\*\*\*\*\***

**Saturday: 9:00 a.m.—1:00 p.m.**

## A Look At OBDII Test Data Since OBDII Only Testing Began July 1, 2008

Since July 1, 2008, the testing program dropped all tailpipe and gas cap testing in lieu of the OBD inspection. Today's vehicles have OBD computers that monitor the vehicle's engine and emission control system. When the computer detects a malfunction, a light on the dashboard is illuminated and a code identifying the malfunction is stored in the computer for access by a repair technician. By identifying specific malfunctions, OBD enhances the repair industry's ability to diagnose and repair vehicles.

The following pages contain program data on the various components of the OBDII testing since July 1st.

### **Check Engine Light Bulb Test:**

The inspector performs a test to ensure that the vehicle's check engine light is functioning properly. This is accomplished by turning the ignition key to the on position without starting engine. The vehicle would fail this portion of the inspection if the check engine light does not illuminate.

### **Bulb Check Inspection Results – All Tests July 1, 2008 – December 31, 2008**

Vehicle Model Year	Bulb Check Fail	Bulb Check Pass	Total Checks	Failure Rate
1996	147	7,604	7,751	1.9%
1997	350	35,670	36,020	1.0%
1998	88	9,430	9,518	0.9%
1999	151	45,435	45,586	0.3%
2000	31	9,609	9,640	0.3%
2001	115	49,499	49,614	0.2%
2002	24	11,631	11,655	0.2%
2003	37	47,693	47,730	0.1%
2004	2	2,506	2,508	0.1%
2005	21	40,796	40,817	0.1%
2006		1,964	1,964	0.0%
All	966	261,853	262,819	0.4%

## Vehicles Rejected For OBDII Inspections

### **Communications:**

The inspector will connect the testing equipment to the vehicle's onboard computer port (Data Link Connector). If the vehicle cannot communicate with the testing equipment, the vehicle will be rejected from further testing until this condition is corrected. Prior to July 1, 2008, vehicles with communication problems defaulted to the IM240 inspection.

There are several factors that can cause non-communication. Some of the most common causes are:

- ◆ *Damaged Data Link Connector (DLC):* The data link connector is damaged or as been tampered with and the connection to the on-board diagnostic (OBD) computer is not possible. For example, the DLC may be broken or melted, the DLC is used to power up an accessory, or something is plugged into the DLC.
- ◆ *Blown Fuse:* If the vehicle fails to communicate, the cause may be a burned out cigarette lighter fuse. On most vehicle makes and models, the system on the vehicle that communicates with the test equipment also gets its power from the same circuit as the cigarette lighter.
- ◆ *Improperly Installed Aftermarket Systems:* Some installers of aftermarket systems, such as radios, security systems, navigation systems, etc, are tapping into the wiring harness of the DLC, or OBD port to power the radio or other aftermarket devices. This prevents the vehicle's OBDII system from communicating with a scan tool.

The following chart breaks down initial test communication rejects by model year:

**Initial Tests – Non-Communication Rejects  
July 1, 2008 – December 31, 2008**

Vehicle Model Year	Non-Com	Total Pass, Fail & Non-Com Rejects	% Non-Com Rejects
1996	48	5,997	0.80%
1997	195	30,197	0.65%
1998	48	7,736	0.62%
1999	311	40,368	0.77%
2000	56	8,590	0.65%
2001	295	42,934	0.69%
2002	70	10,124	0.69%
2003	318	44,910	0.71%
2004	20	2,409	0.83%
2005	262	39,644	0.66%
2006	20	1,931	1.04%
All	1,643	234,840	0.70%

***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 OBD readiness monitor statuses as part of the vehicle emissions inspection.

If the vehicle OBD system is in the process of resetting itself, one or more readiness monitors will be unset and the vehicle may be considered "not ready" for testing. 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.

Some of the most common reasons for a vehicle to be not ready include:

- ◆ Recent vehicle repairs or maintenance in which diagnostic trouble codes have been cleared with an OBD scan tool.
- ◆ A recently disconnected or replaced battery
- ◆ The vehicle's computer requires an update.
- ◆ There is a pending problem that has not yet illuminated the "check engine" light.

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Until July 1, 2008, vehicles which exceeded the readiness monitor criteria on their initial inspection would have defaulted to a tailpipe inspection at the time of their initial inspection. The following chart indicates the number of vehicles that were rejected due to readiness monitor issues at the time of their initial inspection, beginning July 1, 2008.

**Initial Tests – Unset Readiness Monitor Rejects  
July 1, 2008 – December 31, 2008**

Vehicle Model Year	Monitor Rejects	Total Pass, Fail & Monitor Rejects	% Monitor Rejects
1996	619	6,568	9.42%
1997	1,693	31,695	5.34%
1998	472	8,160	5.78%
1999	1,475	41,532	3.55%
2000	319	8,853	3.60%
2001	2,214	44,853	4.94%
2002	922	10,976	8.40%
2003	872	45,464	1.92%
2004	37	2,426	1.53%
2005	306	39,688	0.77%
2006	16	1,927	0.83%
All	8,945	242,142	3.69%

***Check Engine Light Commanded On:***

If the vehicle's check engine light is commanded on due to an emission component that is not functioning properly, 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. The vehicle will need to be repaired and brought back for a retest.

The overall OBDII failure rate was 7% in 2007 and 2008.

**All Tests – OBD II Failure Rate  
January 1, 2008 – December 31, 2008**

Model Year	2007	2008	Model Year	2007	2008
1996	13.7%	20.2%	2002	4.8%	11.0%
1997	14.9%	12.2%	2003	4.5%	3.8%
1998	9.4%	15.6%	2004	3.2%	4.4%
1999	9.7%	8.2%	2005	2.2%	2.1%
2000	7.0%	9.3%	2006	-	1.1%
2001	7.6%	7.5%	All	7.5%	7.4%

In the next issue of this newsletter, we will look at some of the more common Diagnostic Trouble Codes that have been identified as commanding the MIL on, resulting in a Failed emissions test.

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## Helpful Hints to Reset Readiness Monitors

The following was developed by the diagnostic technicians of the Wisconsin Vehicle Inspection Program's Technical Assistance Centers. If you are having difficulties setting readiness monitors, following this sequence should improve your success rate. If you have any questions regarding this process, you may contact either Technical Assistance Center for additional information.

### 1. Talk to Your Customer

- A. Ask your customer what type of fuel they are using. Studies have shown that some flex-fuel vehicles will disable certain monitors when ethanol blends over 10% are used (also additives)
- B. Ask your customer what kind of driving habits they have. Lead footing, frequent braking, and inconsistent speeds will cause issues. Sometimes switching drivers helps.

### 2. Review Information Sources

- A. Check for TSBs and Recalls (ie reflashes). Some good sources include:
  - International Automotive Technician Network (iATN)  
<http://www.iatn.net/>
  - National Highway and Traffic Safety Administration (NHTSA)  
<http://www.nhtsa.dot.gov/cars/problems/tsb/>
- B. Check enabling criteria. Some vehicles require specific enabling criteria like accessories, idling times, temperatures and speeds. The TACs have resources to assist you in determining what enabling criteria might be applicable.
- C. Some vehicles may need 2 warm-up cycles and/or cold starts for certain monitors. (See enabling criteria)
- D. Some vehicles will not run evaporative monitors in cold weather (usually temps less than 40°). Most EVAP monitors run on cold start-up.

### 3. Scan The Vehicle

- A. Use a temp gun to make sure coolant temperature is correct (not too low or high) and matches scan data. This is a common issue for Saturns with unset readiness monitors.
- B. Shifted fuel trims have been known to cause issues with monitors and may not necessarily illuminate MIL.
- C. Make sure gas gauge works and fuel is between 15-85%
- D. Even when MIL is not illuminated, a pending code can stop monitors from setting. If possible, check MODE 6 data PIDs. They may indicate 1 trip failures.

### 4. Drive The Vehicle

- A. Unless dyne is available, two people are recommended. Use enabling criteria along with specific drive cycle if available. TACs also have this info.

### We'd Like To Hear From You!

If you have any questions regarding these hints, or have other techniques that have been successful, please contact either Wisconsin Vehicle Inspection Program Technical Assistance Center: 1-800-335-5088 or 1-414-768-9135

## RUNNING OUT OF TIME?



Occasionally, you will encounter a situation where the repairs to a vehicle will take longer than the registration expiration deadline that the customer is facing. There are several options open to the motorist in these cases.

### LICENSE PLATE EXPIRATION DEADLINES AND TEMPORARY PLATES

If they qualify, motorists may obtain a temporary operating permit (also known as a temporary plate), valid for not more than 30 days, to allow time for inspection and necessary repairs and adjustments of any vehicle subject to inspection under s. 110.20. No temporary operating permit shall be issued for a vehicle with registration expired for more than 90 days. Motorists may apply for temporary plates at any inspection station in the office area (\$3.00 plus \$5 service fee), DMV Customer Service Center (\$3.00 plus \$5.00 service fee), or mail in the form (\$3.00 fee plus postage). Form MV2505 is available at any emission test station or DMV Customer Service Center. A temporary operating permit shall be valid for 30 days after issuance. The motorist may apply for a second or third temporary operating permit provided that application is made within 90 days of the vehicle's registration expiration date.

### ONE-TIME 30 DAY EXTENSION FOR RECENTLY PURCHASED VEHICLES

If a vehicle is completing the testing process because it was recently purchased, there is a one-time 30 day extension. This is issued over the telephone by calling 414-266-1080 or 1-800-242-7510. There is no fee for this one-time 30 day extension.



## PROGRAM CHANGES BEGINNING JANUARY 1, 2010

**Beginning with model year 2007, two new categories of vehicles will require testing:**

- ◆ **OBDII-complaint diesel fueled vehicles (Model year 2007 and newer)**
- ◆ **OBDII-compliant vehicles up to 14,000 pounds gvwr (Model year 2007 and newer)**

**The first test cycle for these vehicles, which starts next January 1, will apply to vehicles with registrations expiring in 2010. Vehicle owners will be notified of the testing requirement with their registration renewal notices or at the time they change ownership. Look to the next issue of the WVIP Analyzer for detailed information concerning the new testing requirement for these vehicles.**

# IS IT WORTH THE RISK?

The advent of OBDII technology has enabled repair technicians to effectively diagnose and repair newer vehicles. When used properly, your repair facility's scan tool is an important part of the diagnostic process. However, when used for purposes to mask a vehicle failure, it can lead to fines.

## REGULATIONS AND FINES ASSOCIATED WITH TAMPERING

The regulatory language makes it clear that the act of wiping monitor codes prior to arrival at an inspection and maintenance station can be considered tampering, and can be subject of a fine of up to \$3,750 per violation.

There are four specific regulatory quotes which support this consideration:

Section 86.090-25, paragraph (b)(6)(ii)(C) of the Code of Federal Regulations states:

*"A clearly displayed visible signal system approved by the Administrator is installed to alert the vehicle driver that maintenance is due. A signal bearing the message "maintenance needed" or "check engine", or a similar message approved by the administrator, shall be actuated at the appropriate mileage point or by component failure. This signal must be continuous while the engine is in operation, and not be easily eliminated without performance of the required maintenance. Resetting the signal shall be a required step in the maintenance operation. The method for resetting the signal system shall be approved by the Administrator..."*

Section 86.090-25, paragraph (b)(6)(iii) of the Code of Federal Regulations states:

*"Visible signal systems used under paragraph (b)(6)(ii)(C) of this section are considered an element of design of the emissions control system. Therefore, disabling, resetting, or otherwise rendering such signals inoperative without also performing the indicated maintenance procedure is a prohibited act under section 203(a)(3) of the Clean Air Act, as amended in August 1977 (42 U.S.C. 7522(a)(3))."*

Section 203, paragraph (a)(3)(A) of the Clean Air Act (CAA) (titled: "Prohibited Acts") states:

*"The following acts and the causing thereof are prohibited- ... for any person to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this title prior to its sale and delivery to the ultimate purchaser, or for any such person knowingly to remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser; ..."*

Furthermore, section 205, paragraph (a) of the CAA states:

*The regulatory language makes it clear that the act of wiping monitor codes prior to arrival at an inspection and maintenance station can be considered tampering, and can be subject of a fine of up to \$3,750 per violation.*

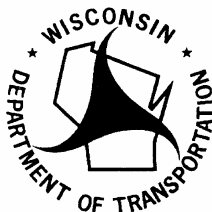
## **BOTTOM LINE: DON'T TAKE THE RISK**

If you have any questions regarding these regulations, please call Joe Paulick, Wisconsin Department of Transportation, 414-266-1095.

## USEPA HAS INCREASED FINES FOR TAMPERING

EPA has increased most civil penalty amounts in accord with the provisions of the Debt Collection Improvement Act of 1996 (DCIA). The agency is required to review the civil monetary penalties under the statutes it administers every four years and to adjust the penalties as necessary for inflation according to a formula specified in the DCIA. Civil penalties were last adjusted in 2004. In a Federal Register notice, EPA states, "[T]he purpose of these adjustments is to maintain the deterrent effect of civil penalties and to further the policy goals of the underlying statutes." Table 1 in the notice includes all past civil penalty amounts, statute by statute, and the pending adjusted amounts that can be imposed on violators. The maximum daily amount that can be recovered under section 113 (b) of the Clean Air Act has now increased from \$25,000 to \$37,500. [For further information: <http://www.epa.gov/fedrgstr/EPA-GENERAL/2008/December/Day-11/g29380.pdf>]

This final rule also applies to section 203(a)(3)(A) and (B) of the Clean Air Act. Manufacturer/new car dealer penalties for installing aftermarket components that in any way bypass or compromises the vehicle manufacturer's emissions control system is \$37,500. The penalty for anyone else installing aftermarket components that in any way bypasses or compromises the vehicle manufacturer's emissions control system is \$3,750. These penalties also apply to improper aftermarket catalytic converter replacements.



Department of Transportation  
Division of Motor Vehicles  
MOTOR VEHICLE EMISSION  
INSPECTION SECTION  
1150 North Alois Street  
Milwaukee, WI 53208

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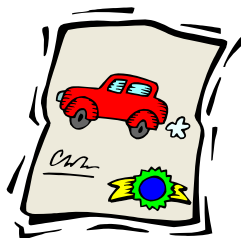
## Training Classes

As an ongoing service to the repair industry, The WIVIP Analyzer will publish a list of private and public training centers that offer courses in automotive repair technology.

The following is just a sampling of training courses available to you.

### The WIVIP Analyzer

is not recommending any specific course and would encourage you to contact us at 414-358-3905 if you are aware of other training opportunities.



## WISETECH PROVIDERS

Margie Stewart  
Milwaukee Area Technical College  
5555 West Highland Road  
Mequon, WI 53092  
262/238-2449

Ken Dotzler  
Gateway Technical College  
Racine Campus  
1001 South Main Street  
262/770-1713

Steve Hirshfeld  
WisDOT  
608-266-2267

Other Training

Tim Houghtaling  
Automotive Seminars Inc.  
800/450-0402

Wells Technical Services  
Wells Manufacturing Corporation  
920/929-6258  
Technician Hotline (Free)  
1-800-558-9770 Press 3

## **AUTOMOTIVE RELATED WEB SITES**

WWW.CCAR-GREENLINK.ORG  
WWW.I-ATN.COM  
WWW.AUTO-TALK.COM  
WWW.SAE.ORG/ABOUT/PROGRAM  
OFFICES/STPO.HTM  
WWW.ASTTRAINING.COM

## **Wisconsin Technical Assistance Hotline**

**414-358-3905  
800-335-5088**

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Fitzpatrick, Steve Collelo, Dan White,  
ESC; Steve Hirshfeld, Chuck Rhodes,  
WisDOT.

The WIVIP Analyzer is published  
by the Wisconsin Department of  
Transportation, Division of Motor  
Vehicles, Bureau of Vehicle Services,  
Inspection/Maintenance Section.  
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