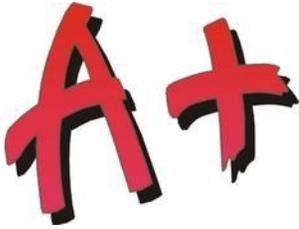


# The Analyzer



## Effective Repairs Will Promote Your Business

A new feature has been added to the wisconsinvip.org website that can become a benefit for your business. Once registered with the vehicle inspection program, you are able to record emission related repairs on vehicles that had failed an emission inspection. The result of the next vehicle inspection for that vehicle will be credited to your repair facility. Your facility's overall score is listed as a percentage of vehicles passing the retest after repairs in the column labeled "REI". This score will be updated regularly. This "grade" for your facility is then recorded on the program website and motorists become aware of your ability to perform effective emission related repairs. This can be used as an effective advertising tool for your facility.

*Repair Grade: 100%*

**Sample listing:**

Facility Name	Address	City	Phone	Zip Code	REI	Web Site
YOUR GARAGE NAME	123 MAIN ST	ANYTOWN	(XXX) XXX-XXXX	53XXX	100.0	url hyperlink

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## Registration Is Easy

The easiest way to see if your business is registered with the testing program is to check the program website at [www.wisconsinvip.org](http://www.wisconsinvip.org). Your facility will be listed either in the Inspection, Recognized Repair or Non-Recognized Facility listing.

If you haven't already registered, complete an Emission Repair Facility application and send it to the program. This form can be found on the last page of this newsletter. Along with the application, submit any certifications that your technicians have for emission related training.

Figure 1: Check to see if your business is already registered.



Check to see if your repair facility is registered with the program

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# The Analyzer

## EFFECTIVE REPAIRS ARE GOOD FOR BUSINESS THROUGH REI (CONT FROM PAGE 1)

Program representatives will review the certifications and recognize facilities that have advanced emission training or certification, such as ASE L1 or ASE L2 certifications. Even without technicians with advanced technician training, your facility will be featured on the website with information on your success rate on repairing vehicles to pass the test.

## Technician Registration

After your business is registered, each technician performing emission related repairs can register to use the web-based repair data entry. The information data form is featured below:

	<b>Wisconsin Repair Book</b>	
WISCONSIN VEHICLE INSPECTION PROGRAM	Friday, Jan 16, 2015	Sign In

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First Name	<input type="text"/>	Middle Name	<input type="text"/>	Last Name	<input type="text"/>
Job Title	<input type="text"/>	Email	<input type="text"/>	Verify Email	<input type="text"/>
User ID	<input type="text"/>	Password	<input type="text"/>	Re-enter Password	<input type="text"/>
		<small>Password must be between 8 and 10 characters</small>		<small>Password must be between 8 and 10 characters</small>	
Do you own an ASE L1 (or Higher) or WISETECH certification? <input type="checkbox"/>					
<input type="button" value="Register"/>					

## Data Entry Process For Emission Related Repairs

After repairs are completed, enter the emission-related repairs that you performed on the vehicle. Follow these easy steps:

1. Complete the information requested.
2. Indicate that this is NOT an owner repair.
3. Enter parts and labor costs. (Example: For three dollars and thirty cents, enter 3.30. For three hundred and thirty dollars, enter 330.)
4. If not the owner, complete the section requesting more information on repairs.

Certified Repair Info			
Owner Repair?	Yes <input type="radio"/> No <input type="radio"/>	Total Parts Cost	<input type="text"/>
		Total Labor Cost	<input type="text"/>
<small>For three dollars and thirty cents enter 3.30. For three hundred and thirty dollars enter 330</small>			
The following should be completed only if NOT repaired by owner.			
Work Order #	<input type="text"/>	Facility of Person Performing Repair	<input type="text"/>
		Apply to REI?	<input type="checkbox"/>
Phone#	<input type="text"/>		
City	<input type="text"/>	State	<input type="text"/>
		Zip	<input type="text"/>
Repair Date	<input type="text"/>		

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5. Indicate whether you want the repair record applied to your Repair Book (REI) Score.
6. Select the repairs performed on the vehicle.

Vehicle Repair Data									
For reinspection or waiver qualification, the person performing the repairs must complete this form. Please place one "X" per item in the box to indicate which component has been (A) repaired, (B) replaced, or (C) repairs were recommended but not performed.									
1. Air Filter Element	A <input type="radio"/>	B <input type="radio"/>	C <input type="radio"/>	None <input type="radio"/>	15. Air Injection System	A <input type="radio"/>	B <input type="radio"/>	C <input type="radio"/>	None <input type="radio"/>
2. Thermostatic Air Cleaner System	A <input type="radio"/>	B <input type="radio"/>	C <input type="radio"/>	None <input type="radio"/>	16. Positive Crankcase Ventilation System	A <input type="radio"/>	B <input type="radio"/>	C <input type="radio"/>	None <input type="radio"/>

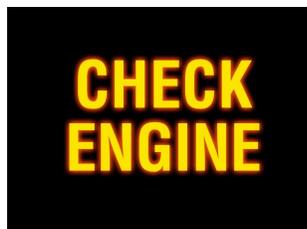
7. Once the data is entered, select continue.
8. If you see the screen indicating "Congratulations! The repair data has been saved", you have successfully entered the data.

## Set Your Facility Apart From the Competition With Your Repair Record

Your facility will be listed with your Repair Grade on the official Wisconsin Vehicle Inspection Program website under the facility locator section. Additionally, if you have a repair technician with advanced emission related training, such as ASE L1 or WISETECH certifications, your facility information will be given to motorists at the time their vehicle fails at nearby inspection facilities.

If you want your facility to be listed in the WIVIP public information materials, begin by completing the Emission Repair Facility Profile, located on page 7 of this newsletter. Next, complete the separate registration for each individual technician through the Repair Book portal on our website.

Once you begin to make the routine of logging your repair work into the Repair Book portal, you'll begin to see the results of your efforts on program information materials.



### Important Reminder:

A faulty check engine light would prevent a vehicle from receiving a cost waiver. A properly working check engine light is a cost waiver requirement.

## Why Vehicles Fail to Communicate and Strategies for Repair

One of the most frustrating things to diagnose is a complaint that cannot be verified when a vehicle is brought into your shop. You have an emissions test report before you and all you see wrong is that the vehicle failed for communication. With some relatively simple steps and an understanding of what is required during testing, you should be able to inspect, evaluate and repair this problem confidently.

### The Testing Process

At the WIVIP inspection facilities, the OBDII emission test is performed by connecting to the required GENERIC DLC connector, usually located inside the vehicle under the dash. After the completion of the Key On Engine Off and Key On Engine Running MIL tests, the test equipment is connected to the vehicle while the vehicle is running.

Figure 1 shows how communication is established through the allocated PINS according to the SAE communications protocols; be sure you are aware of the which protocol the failing vehicle uses and have your scan tool set to read that protocol. The WIVIP requires ground to be present in PIN 5 and correct battery voltage at PIN 16.

Once communication is established, the WIVIP test equipment queries the appropriate ECUs. Monitor readiness, MIL status, active codes (if MIL is commanded "on") and VIN are among the data requested and examined during the test. The test equipment then completes the test and is disconnected from the DLC.

If the WIVIP emission analyzer cannot communicate with the vehicle's PCM after three attempts, the inspector verifies that the equipment is operating properly and reattempts to communicate with the vehicle. If communications cannot be established after the test equipment has passed the QA check, the vehicle's test result is "Reject".

### Diagnosis and Repair

When the customer brings you the vehicle for repair, you will most likely attach some form of scan tool capable of accessing and viewing information and data from the vehicle. Under most circumstances a tool only capable of reading codes will not suffice in diagnosing a communications failure. These code readers only query any active codes and do not use all the PINS necessary for emission testing.

Possible starting points for diagnosing communication failures include checking for:

- Loose PINS in DLC
- No power or Ground in DLC
- Warped/Stiff DLC
- Corrosion/debris in DLC
- Flashes out of date
- Other ECUs/Controllers Failing
- Aftermarket accessories installed on vehicle (radio, CD player, alarm, remote start, etc)

SAE J1850 PWM

Pin 2: Bus -  
Pin 10: Bus +

SAE J1850 VPW

Pin 2: Bus +

ISO 9141-2

Pin 7: K-line  
Pin 15: L-line

ISO 14230 KWP2000

(Keyword Protocol 2000)

Pin 7: K-line  
Pin 15: L-line

ISO 15765 CAN

Pin 6: CAN High  
Pin 14: CAN Low



Figure 1. DLC Pin Locations

### Testing Procedure for Non-Communication Vehicles

- 1) Perform the initial inspection, in which there are three separate attempts to communicate with the vehicle.
- 2) After the 3rd attempt fails to communicate with the vehicle, complete the test sequence.
- 3) Perform a protocol check on the analyzer. This verifies that there are no problems with the test equipment.
- 4) After the analyzer passes the protocol check, perform another vehicle inspection. If it rejects during this inspection, give the motorist the Vehicle Inspection Report and Non-Communication Information

# The Analyzer

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*Continued From Page 4*

## Retesting after Repair

When returning the vehicle to a customer, ensure that you inform the owner/driver that they will most likely need to drive the vehicle for approximately one week so that all monitors are completed and ready for emissions testing. If you have the capability of running all unset monitors, do so. That way, the vehicle will be immediately ready for testing.

## Conclusion

Remember, the state OBD emissions test is performed on a generic level as required by the USEPA. The WVVIP uses the standard J1962 connector located somewhere inside the vehicle's driver or passenger area – NOT manufacturer specific protocols or connectors. The vehicle is tested when it is running so that all monitors and necessary ECUs are running and reporting. If a vehicle fails for communication, it is usually due to one or more of the reasons previously listed.

(Editors Note: Information from the State Of Maryland VEIP was used to help develop this article)

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## Registration Renewal Processing Tips—Customer Addresses

### License Plate Renewals For Leased Vehicles

When processing a license plate renewal on a leased vehicle, be extremely cautious about changing the customer's address. DMV recently became aware that some of the electronic processing systems display the lessor's address in the renewal transaction screen. For example, if your customer is leasing the vehicle from Honda Lease Trust, when you renew your customer's license plate, you may see Honda Lease Trust's address on the screen. If you change the address to where your customer lives, DMV will mail dozens of Honda Lease Trust's titles to your customer's home address until it is corrected. Please be very cautious when processing address changes.



### Changing addresses for the co-owner

DMV mails ownership and registration documents to the primary owner, which is the name listed first on the title. Sometimes, co-owners live at separate addresses – for example, when a vehicle is co-owned by a person and their parent. If you update the primary owner's address, please only update the co-owner's address when you are sure that the owners share a residence. DMV receives calls every week about a co-owners' address being changed. This affects all of their records and can create all kinds of havoc if their license plate renewal notices and other items are mailed to the wrong place.

## Protect Your Customer's Privacy – DMV Records

In the normal course of daily business, you have access to customer information that contains personally identifiable information, some of which you collect for title, registration and emission related purposes. Additionally, as you partner with the WIVIP program, you have access to the DMV database for processing registration renewals. The DMV database access comes with responsibilities to assure personal information remains secure. This can be accomplished by monitoring who has access, how access is used and by developing best practices to maintain security. Customers have an expectation and a right that their information will be kept secure.

Compromises to personal data can have serious consequences to customers by way of identity theft and to a business or government agency in costs to notify compromised customers. In Wisconsin, personal information is protected by Wisconsin Statute 134.98 where notification is required to the customers if data is compromised. The notification can be embarrassing for a business and can result in civil forfeiture. Additionally, the federal Driver's Privacy Protection Act (DPPA) protects personal information of private citizens from being released. Violations are severe, including the right to sue for actual damages and a \$2,500 fine per record. Releasing 500 records could make you liable for fines totaling \$1,250,000. We want to remind you to review your data practices and make necessary adjustments to assure compliance with all personal data access. The DMV is increasing its focus on monitoring and enforcing privacy protection from improper use of DMV vehicle inquiry.

Some guidelines to follow:

- Only certified inspectors are allowed access to the DMV database
- DMV database should **only** be used in the course of issuing a vehicle registration renewal or temporary plate.
- Registration renewal documents left behind by customers should not be kept in view of the public (ie on the analyzer) and destroyed properly.

Remind your employees to treat DMV obtained customer information carefully and protect it following the DMV rules and regulations.



PERSONAL  
INFORMATION IS  
PROTECTED BY  
WISCONSIN  
STATUTE 134.98  
AND THE FEDERAL  
DRIVER'S PRIVACY  
PROTECTION ACT..

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## Emission Inspection Reminders

- Always test a vehicle regardless of whether the check engine light is on or off.
- Be sure to only test vehicles in the approved area of your facility. The approved testing area was defined at the time of set-up by Opus and WisDOT. All tests must be on camera.
- Be careful when you answer the KOEO and KOER questions. If you see a warning screen after this portion of the test that indicates you should recheck the MIL status, verify the MIL status prior to proceeding with the next step of the inspection.
- Never team test. The inspector that logs in to begin the test should perform the entire test. This includes attaching and removing the OBD cord from the vehicle.
- Make sure you turn off the vehicle to correctly perform the Key On, Engine Off inspection.

