

# The Analyzer



THE WISCONSIN VEHICLE INSPECTION PROGRAM

WIVIP HELP LINE  
(866)623-8378

## Technical Tip—REJECT Results:

Volume 1, Issue 23  
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STATE OF WISCONSIN

VEHICLE INSPECTION REPORT

Version: 20.05.02

FINAL RESULT	<b>REJECTED</b>	 <small>33333333333333333333</small>
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ANALYZER ID	INSPECTOR NAME	INSPECTOR ID	STATION NUMBER	TEST FEE
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Monitors that are “not ready” are the primary cause of emissions inspection REJECT results. Since 1996, all vehicles monitor emissions control devices. Specific conditions must be met before the emissions control devices can be monitored. Because of this, a monitor in the vehicle may not be ready. In general, to receive a PASS result, only one monitor can be “not ready” for vehicles manufactured after 2000. Up to two monitors can be “not ready” for vehicles manufactured between 1996 and 2000. The top reasons monitors are “not ready” include the following:

- Drive cycle not completed. Refer to the owner’s manual or manufacturer’s website for information on completing drive cycles.
- The gas cap may be loose, missing, or leaking requiring it to be checked or replaced.
- A “pending” issue may lead to a monitor not setting, even when the Malfunction Indicator Light (MIL) is not illuminated.
- EVAP monitor only — the vehicle’s fuel level should be between ¼ and ¾ full when performing the drive cycle. Also, the ambient temperature has to be between 40 and 90 degrees F.
- Clearing the MIL and erasing stored codes with a scan tool will also reset all monitors to not ready.
- If the vehicle’s battery was replaced or disconnected, possibly during storage, all monitors will clear and a drive cycle will need to be completed to put them in the ready mode.
  - Recent vehicle maintenance may have required the battery to be disconnected.

Manufacturers are always looking for ways to improve their vehicles and reprogramming of the vehicle’s electronic control module with an update from the original equipment manufacturer may be required. If a manufacturer identifies an issue with original equipment emissions hardware or software, they will release an update. In some cases, the updated computer program is required for monitors to be set, especially if hardware has been replaced. Check the vehicle manufacturer for more details. Emissions related recalls can also be found at: [www.epa.gov/recalls/emissions-related-recalls-light-duty-cars-and-trucks](http://www.epa.gov/recalls/emissions-related-recalls-light-duty-cars-and-trucks)

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## Waiver Repair Cost Limit To Increase July 1st

The **repair cost limit** for all model year vehicles subject to emissions testing will increase from \$935 to **\$949, effective July 1, 2021**. This figure is adjusted annually by the DNR per NR 485.045.

Vehicles subject to emissions testing that continue to fail may be eligible for a cost waiver if actual costs of emission related repairs exceed the repair cost limit. 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.

The owner must have emission related repairs on the vehicle done at a recognized repair facility to qualify for waiver consideration. A list of recognized repair facilities can be found on the program website: [www.wisconsinvip.org](http://www.wisconsinvip.org). Trans 131.02(39) includes franchised NEW car dealerships as recognized repair facilities.





## Inspection Tips

### REMINDERS:

#### Supply Needs:

*Do not wait until the last minute to call for supplies, especially during the busy Spring and Summer inspection months. If you are beginning to run low on stickers, paper, or toner, call the Opus office at 1-866-OBD-TEST and we will replenish your supplies.*

#### WIVIP Equipment Movement:

*The inspection analyzer and cameras are positioned in accordance with the Wisconsin Department of Transportation requirements. Do not move any equipment without the consent of or support from Opus Inspection.*

### **SATISFY YOUR CUSTOMER'S NEEDS:**

**DON'T FORGET TO ASK EMISSION INSPECTION AND CORE BUSINESS CUSTOMERS IF THEY WOULD LIKE THEIR REGISTRATION RENEWED.**

### ***The substitute renewal notice/ non-operation statement can be used in multiple scenarios (MV2016):***

- If a customer shows up to an emission testing location without the renewal reminder letter, they can use the substitute renewal form as a renewal form and present this form to the inspector to complete the emission test.
- If a customer wants to renew their license plates but the vehicle has not been driven for more than a year, they can complete the bottom of the non-operation statement and submit it to the DMV. The DMV will decide if the time frame that the vehicle was not on the road can be prorated for the renewal fee.
- If the customer wants to mail their payment in with a check or money order, this form can be used.
- You will also find the different registration fees on this form.

**The MV2016 form can be printed from your analyzer**

### ***If you don't have time to do it right how will you have time to do it over?***

### ***Efficiency: Inspection Procedure Reminders***

The approved emissions inspection procedure must be followed at all times. Not doing so could result in a motorist receiving incorrect test results, or even causing the inspector to receive a violation. Any of these will contribute to inefficiency and create other negative business impact. Below are some common procedural items to remember when conducting an emissions test:

- All vehicles arriving for a test must be given a test unless there is a safety issue.
- If a vehicle does not have a license plate use "NOPLATE" where plate is entered. (use a Zero (0) not the letter O).
- Motorists are not required to provide personal information for their emission test. You must test any vehicle presented provided it has no safety issues.
- Always conduct the KOEO / KOER (bulb) test prior to connecting to the DLC.
  - Turn the key to the ON position (with engine off) and verify that the MIL light illuminates.
  - Turn the key to start the engine and verify that the MIL turns off.
- Ensure the key is in the engine running position prior to connecting the OBD cable to the vehicle's DLC.
- Verify data accuracy.
- Verify the entire VIN, not only with OBD or motorist paperwork, but also visually check the VIN plate near the bottom of driver's side windshield or on the doorjamb / frame of vehicle.
- If a vehicle rejects for non-communication, always conduct a protocol check, and test the vehicle again (TEST, PROTOCOL CHECK, RETEST)
- At the end of the test, remember to ask if the motorist would like to renew their registration. If they do not wish to renew, remember to select "NO" to complete and close out the inspection process.

## New PIFs

***The Wisconsin Vehicle Inspection Program is proud to announce the recent addition of the following PIFs to our network:***

- Valvoline Oil Change (Pewaukee)
- Valet Services (Glendale)
- Great American Tire and Auto Repair (Kenosha)
- Auto Time Services (Sheboygan)

Contact Opus if you are interested in becoming a Private Inspection Facility (PIF). Provide more services to your existing customers and attract potential customers to your shop. You will not have to send your customers to another shop.

Tell us if you are interested in registering with the program as either a Recognized Repair Facility (RRF) or Non-Recognized Repair Facility.

Registered Repair Facilities are listed on the program website, [www.wisconsinvip.org](http://www.wisconsinvip.org)

For inquiry on either scenario call [1-866-0BD-TEST](tel:1-866-0BD-TEST) or email [wisconsin@OpusInspection.com](mailto:wisconsin@OpusInspection.com)

## Equipment Health

### ***Shutting Down the Analyzer:***

Analyzers should always remain powered on to maintain communication with the Vehicle Inspection Database (VID) and receive all data and software updates.

In general, you should not shut down the analyzer.

If it does become necessary to power down the analyzer, there are two (2) ways to properly shut down or restart the analyzer. Do this from the Main Menu by using the “[Shutdown Functions](#)” or “[Nightly Shutdown](#)”

**Shutdown Functions** – Typically used to troubleshoot issues at the inspector level.

- Start from the Main Menu
  - Select “Shutdown Functions”
  - Select “Restart Analyzer”
  - The analyzer will ask “Perform a System Restart?”
  - Select “OK”
  - Analyzer will restart

**Nightly Shutdown** – Typically used to apply software/PC updates and shutdown emission testing for the day. Best practice is to perform this step each evening.

- Start from the Main Menu
  - Select “Nightly Shutdown”
  - The analyzer will ask “Perform a Shutdown/restart?”
  - Select “OK”
  - Analyzer will restart

**If you do need to have the analyzer shut down fully, call Opus Inspection first!**

### ***Tip: Motor Home Renewals:***



If a motor home is registered in one of the seven southeastern counties that require emissions testing and has a gross weight of 14,000 lbs. or less, it does require an emissions test to renew the registration.

Opus does not register these vehicles because of the different decal stickers they require.

We have several emission inspection locations that test outside. These can accommodate motor homes and large vehicles.

You can contact our office for assistance finding these locations.

## Technical Tip

### INSPECTION TIP:

ALWAYS ASK YOUR CUSTOMERS IF ANY EMISSIONS RELATED REPAIRS WERE DONE PRIOR TO THEIR REINSPECTION. ENTERING THIS INFORMATION INTO THE ANALYZER WILL IMPROVE THE INFORMATION THAT MOTORISTS ARE PROVIDED ABOUT THE REPAIR FACILITIES IN WISCONSIN.

A REPAIR EFFECTIVENESS INDEX (REI) SCORE TRACKS THE PERCENTAGE OF VEHICLES PASSING THE RETEST AFTER REPAIRS. SEE [WWW.WISCONSINVIP.ORG](http://WWW.WISCONSINVIP.ORG) IN THE **RECOGNIZED REPAIR FACILITY LISTING** OR **NON-RECOGNIZED REPAIR FACILITY LISTING** FOR MORE DETAILS.

### **Diagnostic Trouble Codes (DTCs):**

Did you ever wonder what the term DTC means? It is short for a diagnostic trouble code (DTC). DTCs are used by a vehicle's control system to communicate the type of trouble it senses.

The first character of a DTC will be a letter, either P,C,B or U.

**P (powertrain)** refers to the engine, transmission, fuel system, and associated accessories.

**C (chassis)** refers to mechanical systems generally outside the passenger compartment such as steering, suspension, and braking.

**B (body)** refers to parts mainly found in the passenger compartment area.

**U (network)** refers to the vehicle's onboard computers and related systems.

The second character is a digit, normally 0 or 1.

**0** indicates that the code is a generic, standardized SAE (Society of Automotive Engineers) code. Generic codes are adopted by all vehicles that follow the OBD-II standard.

**1** indicates that the code is vehicle manufacturer specific. These codes are unique to a specific make or model and are typically less common.

**2 or 3** are rare and their meanings are dependent on the preceding letter of the code. Most of the time, 2 or 3 indicates that a code is manufacturer-specific, with only a few exceptions.

The third character is also a digit, ranging from 1 to 8. This reveals the subsystem at fault.

**1** refers to the fuel or air metering system

**2** refers to the fuel or air metering injection system

**3** refers to the ignition system

**4** refers to the emissions system

**5** refers to the vehicle speed controls and idle control system

**6** refers to the computer output circuit

**7 and 8** indicate that the issue is transmission-related

The fourth and fifth characters are read together as a two-digit number between 0 and 99 known as the specific fault index. These characters identify the exact issue with the vehicle.

If you are unsure about what a DTC means, check with the manufacturer or the vehicle manual for explanations.

What are some of the more common DTCs?

**P0420:** B1 Catalyst System Efficiency Below Threshold

**P0300:** Random/Multiple Cylinder Misfire Detected

**P0171:** System Too Lean Bank 1

**P0455:** Evaporative Emission System Leak Detected (large leak)

**P0442:** Evaporative Emission System Leak Detected (small leak)

**P0128:** Coolant Thermostat (Coolant Temp Below Regulating Temperature)