

The Analyzer

THE WISCONSIN VEHICLE INSPECTION PROGRAM

WIVIP HELP LINE
(866) 623-8378

Top Story

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Emissions waiver repair cost limit increases

Emissions waiver repair cost limit now \$1,110

The repair cost limit for all model year vehicles subject to emissions testing increased to \$1,110, effective July 1, 2024. 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 emissions 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 emissions control equipment that has been removed, modified, or disconnected are excluded.

The owner must have emissions related repairs performed on the vehicle at a recognized repair facility to qualify for waiver consideration. A list of recognized repair facilities may be found at www.wisconsinvip2.org/RecognizedRepairCenters.

The application form to apply for Recognized Repair Shop status may also be found at the above link under Forms and Downloads. TRANS 131.02(39) includes franchised NEW car dealerships as recognized repair facilities.

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MATC's Jeff Gahan (pictured below) hosts two seminars at program HQ (page 2). We also have two *Inspector's Bay* stories with useful information about diagnostic trouble codes and rejected emissions tests as a result of monitors that are "not ready."



Photo credit: Mike Daury, Opus



The Technician's Bench

Attendees gain valuable insights at recent seminars

MATC instructor Jeff Gahan demonstrated effective tools and provided valuable insights

Technicians from all over the Wisconsin Vehicle Inspection Program (WIVIP) network gathered at the Opus Brookfield office to attend seminars conducted by Milwaukee Area Technical College (MATC) instructor Jeff Gahan.

Jeff has conducted two recent seminars. On April 24th, Jeff introduced and offered a hands-on demonstration of the **PicoScope** automotive oscilloscope for active diagnostics. Though the presentation was detailed and informative, attendees still had time to enjoy some pizza before heading into the training room, then out to gain hands-on experience using the tool.

Jeff's seminar on June 26th focused on the automotive evaporative emissions system. Stay tuned for more seminar announcements!



*Photo credits: April seminar (bottom) – Bryon Gerick, WisDOT IM Supervisor;
June seminar (top) – Mike Daury, Opus*



The Inspector's Bay—Useful Reminders

SATISFY YOUR CUSTOMER'S NEEDS:

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

REMINDER:

Verify License Plates:

If an incorrect license plate is entered the vehicle inspection report will not properly link to the customer's vehicle.

You will not be able to renew their license plate and they may end up getting another inspection.

This could negatively affect the experience the motorist has while at your shop.

We recommend that you carefully enter the license plate number and verify your input prior to moving to the next step.

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)



The Inspector's Bay—Useful Reminders

Monitors that are “not ready” are the primary cause of emissions inspection REJECT results

		STATE OF WISCONSIN VEHICLE INSPECTION REPORT			
FINAL RESULT		REJECTED			
		 <small>3333333333333333</small>			
		ANALYZER ID	INSPECTOR NAME	INSPECTOR ID	STATION NUMBER
					TEST FEE

Emissions components have been monitored through OBD-II since 1996. 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 the cap 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 $\frac{1}{4}$ and $\frac{3}{4}$ 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 with 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.

Interested in joining the WIVIP team as a PIF?

It’s easy! Contact Bob Patzer

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