

## Technicians Attend Seminar on Evaporative Systems

Over 30 repair technicians attended a seminar on Tuesday, February 28<sup>th</sup> that discussed successful diagnostic and readiness monitor strategies for evaporative control systems.

Problems within vehicles' evaporative systems are one of the more common emission inspection failures. In fact, three EVAP Diagnostic Trouble Codes (DTCs) are in the "Top 10" DTCs present in vehicles that fail (P0440, P0442, P0455). Additionally, the EVAP readiness monitor is one of the more difficult monitors to reset. This seminar was part of the ongoing repair technician outreach efforts of the Wisconsin Vehicle Inspection Program.

The seminar was presented by Linda Reinke, an instructor in the Automotive Technology Program (Ford Asset) at MATC-Mequon. Linda also worked for 13 years at WCTC in the Automotive Technology Program (GM ASEP) and has dealership experience.



Linda Reinke gave a presentation on Diagnostic Strategies for Evaporative Repairs and Readiness Monitors to repair technicians at a WIVIP sponsored seminar.

## It's Springtime and Vehicles Are Coming Out of Storage

*In Spring, the program help line gets many calls from motorists who are bringing their vehicles out of storage. Here are a few considerations for these vehicles if they need to meet the emission testing requirement.*

**Was the Battery Recently Disconnected?** - If the vehicle's battery had been disconnected during storage, or if the vehicle recently needed a jump start, we recommend holding off on getting the emission inspection for at least one week while the vehicle owner drives the vehicle regularly. Chances are while the vehicle's computer lost power, its internal self test monitors were erased. Without these important and required emission monitors your vehicle can not pass the emission test. Typically the vehicle's readiness monitors reset to over the course of a week of city and highway driving. This period of driving is referred to as a "Drive Cycle".

**Test Before Placing Vehicle In Storage** Vehicles subject to emissions inspection may fulfill the inspection requirement up to 180 days prior to their license plate renewal date. You can determine whether your vehicle is due for inspection within the next 180 days by entering your license plate on WisDOT's [plate inquiry page](#). If the inquiry result page includes the statement "IM test is needed," your vehicle's plate renewal date falls within the next 180 days. You can download a [substitute renewal notice](#) or bring in other documentation with the vehicle information, such as plate, VIN, make, model and model year.

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### TECH TIPS

#### **Mystery Solved—Vacuum vs. Pressure**

*The Evaporative Emission seminar recently held discussed the operation of vehicles' evaporative systems and the differences between vacuum and pressure. The following case study first appeared in the October 2006 Issue of Air Repair, the Illinois Vehicle Inspection program newsletter.*

By Art Castillo, Imperial Automotive

We recently had a 2005 Kia Sportage come in to our shop with the following codes: P0440 "Evap System Malfunction" and P0442 "Evaporative Emission Control System Leak Detected (small leak). It had been to the dealer several times with a recurring MIL. After many parts and no fix, the customer had resigned himself to just driving the car with the light on. With his license suspension looming, he showed up at our door.



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Initial inspection revealed some missing EVAP hose clamps and other signs of prior "repairs". During testing with our smoke machine, no leaks were observed and the system was able to hold pressure for 20 minutes. Sensor voltages were normal as was solenoid operation. I replaced the missing clamps and retested the system and everything looked good. The next step was to run the fairly arduous drive cycle. Disappointingly, the P0442 reset.

Changing strategy, I put the system into vacuum and discovered it would not hold vacuum. By isolating parts of the system, we were able to narrow it down to the fuel tank. As it turns out, the cap was able to hold pressure, but would not hold vacuum. Typical cap testers use pressure, so no fault was found with a conventional test. Looking at the list of changed parts from the dealer showed no new gas cap.

With a new gas cap installed, we reran the monitor and there were no codes. The vehicle passed the test and we had one happy customer. We now have a new way of thinking about evap leaks. Pressure testing alone does not always find the problem. It is necessary to think about how the vehicle tests the system. Is it done with pressure or vacuum?

## Pending DTCs and Readiness Monitors

Pending DTCs are something we see quite often preventing readiness monitors from running. Remember, a two trip monitor and a pending DTC will be set the first time the ECM sees the fault, the next time the fault is seen an active DTC is set. During the time between the pending DTC and the active DTC, the ECM may suspend monitoring the other systems. Pending DTCs don't jump right out at you, you must go looking for them. Use your scan tool to search for pending DTCs. If you find any pending DTCs, perform diagnostics and if needed, make repairs on that system first.

Source: "Tech Tip VE0065", Utah County Technical Bulletin, April 2014-2

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## Opus Service Technician Tips:

**Printer Jams?** If you experience printer jams, please perform the following steps to address the problem. 1) Remove the paper tray from the printer and locate the gray feed roller that is above the front edge of the paper (in the printer) 2) Clean the feed roller with alcohol or a mild general purpose cleaner only. Do not use brake fluid or a solvent. Always spray the cleaner on the rag and not directly into the printer. 3) Verify If the problem persists, call Opus (see below) and place a service call 4) If you are unable to print, discontinue testing until the issue is resolved.

**Poor Print Quality?** If the printed page has streaks, press the button to open printer lid. On the bottom of the lid, you will see a white ribbon. Just above the white ribbon is a black bar. Take a clean rag and wipe off the black bar and close the lid. NEVER use compressed air or canned air to clean the printer.

**Whom Should I Call?** If you have a **service issue or need supplies**, call the Opus Help Line number, 866.623.8378. If you have **registration renewal questions**, call the New Berlin Opus Office at 262.641.5217 (M-F: 8 a.m. – 5:00 p.m.) If your **customer has emission related questions**, refer them to the Opus Help Line at 866.623.8378 or the program website at [www.wisconsinvip.org](http://www.wisconsinvip.org).

### ***Vehicle's MIL On? Test Before Repairs!***

***It is in the motorist's best interest to test their vehicle before repairs are performed. Without a "fail" or "reject" emission result on record, motorists are ineligible for time extension options. Additionally, only recognized emission repair facility repairs for DTCs listed on the Vehicle Inspection Report can be accepted to meet the cost waiver requirements.***



# Introducing the Repair Book

*Fast, Easy and Good For Business*

*It is now easier for your facility to receive credit for repair activity of vehicles that failed their emissions inspection. Once registered, repair technicians can access the Repair Book reporting website and log emission-related repairs. Your success rate in repairing vehicles will be posted on the [www.wisconsinvip.org](http://www.wisconsinvip.org) website. It is a great way to inform past, current and future customers about your success in performing emission-related repairs.*

## STEP 1: IS YOUR BUSINESS ALREADY REGISTERED WITH THE WISCONSIN VEHICLE INSPECTION PROGRAM?

- a) Verify if your business is already registered with the program. The easiest way to check is to look at the Inspection Facility, Recognized Repair Facility or Non-Recognized Repair Facility listings on the program website at [www.wisconsinvip.org](http://www.wisconsinvip.org).
- b) If your facility is already registered, go to step 2.
- c) If your facility has not registered with the program, complete the profile form found on the program website in the "Recognized Repair Facilities" section.
- d) Once registered, your facility's repair activity can be reported on [www.wisconsinvip.org](http://www.wisconsinvip.org), which is the official program website. The more effective you are at repairing vehicles that had failed the emission test, the better your repair score!

**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

## STEP 2: TECHNICIAN REGISTRATION FOR THE REPAIR BOOK?

- a) At the sign-in screen, select register.
- b) Choose the station you are currently employed and select continue.

**NOTE: If you change locations, please complete an updated Emission Repair Facility profile and submit it to Opus.**

- c) Complete the registration information.



Wisconsin Repair Book

Tuesday, Dec 30, 2014

Sign In



First Name  Middle Name  Last Name   
 Job Title  Email  Verify Email   
 User ID  Password  Re-enter Password   
Password must be between 6 and 10 characters

Do you own an ASE L1 (or Higher) or WISETECH certification?

Register

# Introducing the Repair Book

## STEP 3: DATA ENTRY PROCESS FOR EMISSION RELATED REPAIRS

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

- Complete the information requested.
- Select whether it is an owner repair.
- Enter parts and labor cost. (Example: For three dollars and thirty cents, enter 3.30. For three hundred and thirty dollars, enter 330.)
- If not the owner, complete the section requesting more information on repairs.
- Indicate whether you want the repair record applied to your Repair Book (REI) Score.
- Select the repairs performed on the vehicle.

Vehicle Repair Data							
<b>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.</b>							
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"/>
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"/>				C <input type="radio"/>	None <input type="radio"/>

- Once the data is entered, select continue.
- If you see the screen below, you have successfully entered the data.

<b>Success</b>
Congratulations! The repair data has been saved! This data may be used in the determination of your facilities REI. <span style="float: right; border: 1px solid black; padding: 2px;">Continue</span>

**QUESTIONS? 262-641-5217**

