

## FEDERAL REGULATIONS FOR HEAVY DUTY DIESEL VEHICLES WILL IMPROVE AIR QUALITY

While the Wisconsin Vehicle Inspection Program does not currently test diesel fueled vehicles, we are often asked what is being done to reduce emissions from heavy duty trucks and buses. A new Federal initiative is being taken to reduce diesel powered vehicle emissions.



In 2000, EPA moved forward on schedule with its rule to make heavy-duty trucks and buses run cleaner, and the Highway Diesel Rule was finalized in January 2001. Beginning with the 2007 model year, the major pollution from heavy-duty highway vehicles will be reduced by more than 90 percent.

Sulfur in diesel fuel must be lowered to enable modern pollution-control technology to be effective on these trucks and buses. EPA will require a 97 percent reduction in the sulfur content of highway diesel fuel from its current level of 500 parts per million (low sulfur diesel, or LSD) to 15 parts per million (ultra-low sulfur diesel, or ULSD). Refiners will start producing the cleaner-burning ULSD, for use in highway vehicles beginning June 1, 2006.

ULSD enables advanced pollution control technology for cars, trucks, and buses so that engine

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## WHERE'S THERE'S SMOKE . . . THERE'S LEAKS!

The recent addition of smoke machines in the Technical Assistance Center's diagnostic arsenals has expanded their diagnostic capabilities for a variety of tailpipe and OBD emission failures. Leaks are a common problem linked to emission test failures. In fact, in looking at the most common repairs in 2005, miscellaneous hoses were 3% of the volume on repairs. One of most frequent OBDII failures involves leaks within the vehicle's evaporative system. In many cases, the leaks are so small that they are difficult to find without the assistance of a tool like the smoke machine. Smoke machines are becoming increasingly effective at finding even the minutest leak in a vehicle's evaporative system.

Enclosed with this newsletter is the insert from the July 2003 issue of MOTOR magazine regarding smoke machines. The article, "Smoke Signals", written by Dan Marinucci, provides a comprehensive overview of the diagnostic capabilities of smoke machines. The Wisconsin Vehicle Inspection Program would like to thank Motor Magazine for providing us with this valuable and informative insert.

## TRANSMISSION CODES

by Michael Hills, Engineer, Technical Services;  
Division of Mobile Source Programs, Illinois EPA

# PO7\*\*

If the Malfunction Indicator Light (MIL) is commanded on for a transmission code, it is emissions related. OBDII is required to monitor all powertrain components that effect emissions, or provide diagnostic input, or receive commands from the PCM. The transmission controls the amount of power going from the engine to the wheels. If the transmission is not working properly, the efficiency of the power transfer will be degraded. Simply stated, the engine of a vehicle with a malfunctioning transmission will have to work harder to provide the same amount of vehicle speed. A harder working engine will require more fuel which will result in higher emissions. If the sensors that monitor the transmission are not functioning properly, the Power Control Module (PCM) cannot determine if the transmission is working properly, resulting in a "Command On" status, illuminating the MIL. The decision to include these sensors is made by the manufacturers. Transmission codes can also indicate problems with engine misfire. Most vehicles detect misfire using a crankshaft position sensor to detect even a minute fluctuation in crankshaft acceleration and rotation. Shifting on rough roads can cause false readings. Therefore, some manufacturers unlock the torque converter clutch when strong road vibration is detected. If the transmission is not functioning properly, the unlocking of the torque-converter might be triggered prematurely, resulting in an engine misfire that could go undetected.

## MILWAUKEE CENTRAL TEST STATION REMAINS OPEN DURING THE MARQUETTE INTERCHANGE PROJECT



The Milwaukee Central Testing Station, located at 2401 West St. Paul Avenue, is open throughout the construction period of the Marquette Interchange. Access routes to the test station can vary due to changing conditions so it is recommended that you check on the construction website for the most current conditions. That web site address is: <http://www.mchange.org/>.

Alternate testing stations would be the following:

Milwaukee North—7929 West Clinton Avenue

Milwaukee South—1101 Boden Court

West Allis—423 South Curtis Road

Maps, current waiting conditions, operating hours and additional program information is also available on the Wisconsin Vehicle Inspection Program's web site: <http://www.wivip.com>.

## DNR TEAMS WITH NATIONAL WEATHER SERVICE TO DISTRIBUTE MESSAGES

MADISON – A revised system for notifying the public on days when air quality in Wisconsin might become or is unhealthy is now in place, Department of Natural Resources officials announced.

The revised system uses “Air Quality Watches” and “Air Quality Advisories” to announce through the National Weather Service network and other communication channels when people should take steps to protect their health and air quality. Watches and advisories will be issued for ground-level ozone and particle pollution, the main air pollutants that occasionally reach unhealthy levels in Wisconsin.

The DNR will issue an Air Quality Watch when agency meteorologists forecast that air quality is expected to become unhealthy for sensitive groups on the following day. Sensitive groups include people with heart or lung disease, asthma, older adults and children. Watches will be issued by noon the day before air quality is expected to decline. Watches also will trigger voluntary, local programs that encourage people to protect their health and air quality.

An Air Quality Advisory will be issued when air has already reached the unhealthy stage based on DNR air quality monitoring data. An advisory recommends that people in sensitive groups safeguard their health by rescheduling or cutting back on strenuous activities. People with lung and heart diseases should pay attention to cardiac and respiratory symptoms, and consult with their physician if they have concerns or are experiencing symptoms.

“Wisconsin’s air quality generally is good, but occasionally weather conditions lead to air pollution levels that are unhealthy for sensitive groups to breathe,” says Kevin Kessler, acting director of the DNR air management program. “The revised system simplifies and improves distribution of the messages to the public.”

The improved program is the result of a cooperative effort over the last year involving the National Weather Service, public, community organiza-

tions, the media, Wisconsin Department of Health and Family Services, and other state and federal agencies.

The DNR will issue watches and advisories to the media and public using the National Weather Service network, DNR advisory e-mail list, air quality telephone hotline and a DNR Internet site home page message. Watches and advisories also will be distributed over the Wisconsin Department of Health and Family Services Health Alert Network (HAN).

Both watches and advisories note the pollutant of concern – ground level ozone, particle pollution or both – the geographic area covered, the length of the watch or advisory period, health messages and actions the public can take.

The messages also will note how air quality corresponds to the national, color-coded Air Quality Index that runs from 0 to 500, with higher values corresponding to a greater level of air pollution and health concern. An AQI value of 50, which is green on the AQI color chart, represents good air quality, with 50 to 100, or yellow, indicating moderate air quality. The DNR will issue watches and advisories when air pollutant levels reach the orange stage -- a value of 100 or more -- on the AQI, meaning air that is unhealthy for sensitive groups.

Air Quality Watches and Advisories will be posted on the main DNR Web site ([www.dnr.wisconsin.gov](http://www.dnr.wisconsin.gov)) as soon as they are issued. The Air Quality Hotline is 1-866-DAILY AIR (1-866-324-5924), and will be updated when watches or advisories are issued.

To receive watches or advisories by e-mail from the DNR, go to the Seasonal section of the DNR Web page (<http://www.dnr.wisconsin.gov/org/aw/air/health/AQwatch.html>) and click on “[Watch/Advisory Listserv](#).” Additional information is available on [current conditions from DNR’s statewide air quality monitoring](#) Web page and nationwide air quality conditions and forecasts are available at the federal interagency air quality website <<http://airnow.gov>>



## 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.

## USED PARTS, WAIVERS AND WARRANTIES

Recently a repair technician installed a used part in the course of repairing a vehicle and its cost was excluded from the waiver cost criteria. This policy is in accordance with State Statute 285.30(6):

### **(6) TAMPERING WITH POLLUTION CONTROL SYSTEM OR MECHANISM.**

(a) *Definitions.* As used in this subsection:

1. "Air pollution control equipment" means any equipment or feature which constitutes an operational element of the air pollution control system or mechanism of a motor vehicle.
2. 3. "Tamper" means to dismantle, to remove without replacing with an identical or comparable tested replacement device or to cause to be inoperative any air pollution control equipment.

The supplier of used parts cannot guarantee that these are identical to the OEM part. Unless they have been tested by a certified laboratory these parts are not allowed because they are not a "comparable tested replacement device". If the vehicle is within the performance warranty coverage period, and used replacement parts are used then the manufacturer may deny the motorists claim for warranty coverage also.

If you have questions regarding the use of a replacement part in the course of repairing a vehicle that failed an emission test, please feel to contact the Technical Assistance Center at 414-358-3905 or 1-800-335-5088.

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manufacturers can meet the 2007 emission standards. Engine manufacturers have the flexibility to meet the new standards through a phase-in approach between 2007 and 2010. The program also includes various flexible approaches, including additional time for some refiners and special provisions for small refiners.

Once this action is fully implemented nationwide:

- 2.6 million tons of smog-causing nitrogen oxide emissions will be reduced each year.
- Soot or particulate matter will be reduced by 110,000 tons a year.
- An estimated 8,300 premature deaths, 5,500 cases of chronic bronchitis and 17,600 cases of acute bronchitis in children will be prevented annually.
- An estimated 360,000 asthma attacks and 386,000 cases of respiratory symptoms in asthmatic children will be avoided every year.
- 1.5 million lost work days, 7,100 hospital visits and 2,400 emergency room visits for asthma will be prevented.

Engines within the existing fleet will not be subject to the new regulations, yet may remain in operation for another 25-30 years. Therefore, EPA and states are working to:

1. Retrofit existing diesel vehicles with pollution controls.
2. Implement emission testing programs for diesel vehicles.
3. Create and implement anti-idling programs
4. Promote cleaner fuels like ultra-low sulfur diesels and compressed natural gases.

## EPA STANDARDS FOR NEW TRUCKS AND BUSES

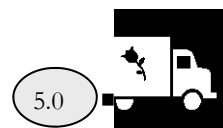
### Nitrogen Oxides

Emissions\*

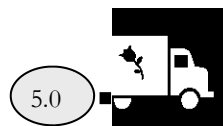
1984



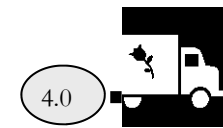
1991



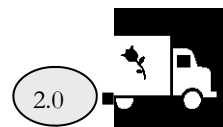
1994



1998



2004



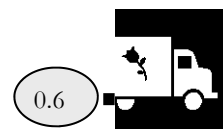
2007



### Particulate Matter

Emissions\*

1984



1991



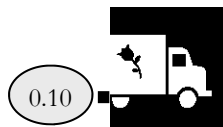
1994



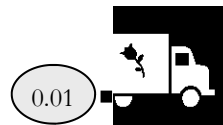
1998



2004



2007



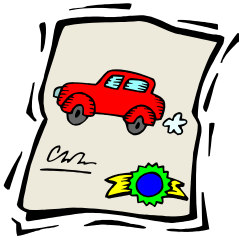
\*EPA's emission standards for trucks and buses are based on the amount of pollution emitted per unit of energy (expressed in grams per brake horsepower hour).

Source: USEPA

<http://www.epa.gov/otaq/highway-diesel/regs/>

## 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 414-266-1080 if you are aware of other training opportunities.**



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.STS.SAE.ORG  
WWW.ASTTRAINING.COM

## WISETECH PROVIDERS

Margie Zamorski  
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

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(1-414-266-1080) or  
joseph.paulick@dot.state.wi.us

[www.wivip.com](http://www.wivip.com)

*The information contained in this publication is for information purposes only.*

## WISETECH Provider Information



### Gateway Technical College (Racine Campus)

WISETECH (course# 404-421-3R11) or Auto Advanced Emissions (course# 602-160-3RIA), which is functionally identical to WISETECH but is an Associate Degree level course (still two credits) are offered when there is an adequate demand for the courses.

Contact Chuck Wasik for further info or to register.

Office Phone: (262) 619-6674 E-mail: [wasikc@gtc.edu](mailto:wasikc@gtc.edu)

### Milwaukee Area Technical College (Mequon Campus)

WISETECH is also offered with there is adequate demand and classes are planned for the fall semester.

To get more information on the class or place your name on a waiting list, please contact:

Dorothy Ceretto for further information or to register.

Office Phone: (262) 238-2224 E-mail: [cerettod@matc.edu](mailto:cerettod@matc.edu)