



# Exhaust Notes

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## Lesson #1: Ask questions

The following anecdote from a long-time Ecology Emission Check Program expert reveals an important lesson for technicians:

The code always tells you what to do. Right?

A customer contacted me to request a waiver for her 2001 Ford. The car had a P0440 Evap code. Her repair technician had “diagnosed” the vehicle using the test report. He determined that he needed to repair the evaporative system for about \$600.00. She did not want to spend that much money because the vehicle also had other issues.

One of these issues was a non-working fuel gauge. For about a year she tracked her mileage by pen and paper.

The tech wanted to replace her

fuel pump/sender and possibly the fuel gauge as well for about \$1,500.00. The cost of these repairs would far exceed the present value of the vehicle.

Is the technician correct? Is this a proper diagnosis? The evaporative system cannot complete the self-test if the fuel level is not known. So in this case the failure could be a symptom of a different system failure such as the fuel level indicator.

Another issue could be the Flex Fuel module (FFM). The FFM tells the computer the alcohol content of the fuel based on oxygen levels detected by the Flex Fuel Sensor in the fuel line. This is a \$60.00 part located next to the fuel gauge and is frequently overlooked. When this part fails the fuel gauge does not work.



However, none of these diagnoses may apply.

I asked her if she had ever seen rodent droppings in the vehicle. She said yes, about the same time her fuel gauge quit. Could this car be repaired with a simple wire splice?

## Diesel repair technicians wanted



Interested in becoming a diesel emission specialist? Maybe you would like your shop to be authorized to repair diesel vehicles. Or perhaps you maintain a fleet with a number of

diesels vehicles. If you are interested in becoming an authorized diesel emission specialist, here’s how to get started.

You must complete an Ecology approved diesel course of study. You may choose from the following options:

- ASE A9 and/or L2
- Factory courses that include engine diagnostics, fuel system, and emissions system repair
- Community college or trade school courses that

include engine diagnostics, fuels system, and emissions system repair

- Ecology approved classes given by one of our instructors

Once you have taken an approved course, you will need to pass an open-book competency test given by your Ecology representative. Ask your Ecology representative for more information about instructors and approved courses.

See contact information on page 4 of this newsletter.



## Emission testing by the numbers

### Important Notice

Where did the list of trainers go? You can find this and upcoming scheduled trainings at: [www.emissiontestwa.com](http://www.emissiontestwa.com).

## Quarterly testing totals

### Totals for December, January, and February

Have you ever wondered how many vehicles get emission tested in Washington? What about the number of waivers issued? You can now find this information here in *Exhaust Notes*.

These totals are derived from the testing procedures performed in Washington State and are the On Board Diagnostic (OBDII), Two Speed Idle (TSI) and Diesel tests.

The number of waivers issued in the last quarter is 258,862, or 3.39 % of all vehicles tested.

The following tables show how many vehicles were tested in December 2015 and January and February 2016. Washington State's contractor, Applus Technologies, Inc. runs the Centralized Facilities.

Centralized Facilities	Tests	Waivers
Marysville	10,723	368
Everett	15,876	602
Lynnwood	16,002	646
North Seattle	19,880	767
South Seattle	16,895	669
Redmond	11,762	308
Bellevue	14,531	406
Renton	25,013	1071
Auburn	17,667	762
Fife	15,381	592
Puyallup	11,299	399
Lakewood	18,826	861
West Vancouver	10,127	207
East Vancouver	20,045	466
West Spokane	17,611	493
East Spokane	8228	165
Total	249,866	3,270

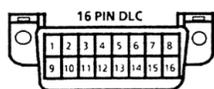
The following table shows the numbers of vehicles tested at Authorized Test Facilities. The total number of vehicles tested at ATFs is 5915, or approximately 2.31%. Note that only Centralized Facilities issue waivers.

Authorized Test Facilities	Tests
Precision Tune-Gig Harbor	859
Precision Tune-University Place	676
Precision Tune-Tacoma	241
Precision Tune-Lakewood	134
Auto Repair and Emission-Burien	1060
Lee Johnson Auto-Kirkland	92
Juanita Firs-Juanita	1785
JP Automotive-Burien	58
Great Car Center-Gig Harbor	486
Midas Car Care-Des Moines	0
Hans VW Repair-Seattle	100
Meineke Car Care-Des Moines	84
CarMax-Spokane	48
Lloyd's Automotive-Burien	93
Glen's Auto Repair-Burien	114
Moose's Auto Tech-Tillicum	85
Total	5915

## What to do about “No Communication” failures

An OBDII test is performed by connecting a scan tool to the Data Link Connector (DLC). The scanner is connected to the vehicle with the ignition turned off. Once the engine is started the test is performed to determine if codes are present. If the scan tool cannot connect to the computer system the vehicle will fail for “No Communication.”

The DLC is a standard J1962 16 pin connector. The OBDII test is performed at the generic level and does not use manufacture specific protocols or connectors. The equipment at the test station uses additional power and ground loopback capability to verify connection issues.



TERMINAL IDENTIFICATION

2	SERIAL DATA (CLASS 2)	6	OUTPUT/FIELD SERVICE ENABLE
4	GROUND	9	SERIAL DATA
5	GROUND	16	B+

If the vehicle has a communication error, check for;

- Loose Pins in the DLC
- No power at the power outlet fuse.
- No power at the cigar lighter fuse.
- No power at the accessory fuse.
- Corrosion or blockages in the DLC.

- Other controllers that may have failed.
- The vehicle may need to have the computer re-flashed. Check for Technical Service Bulletins.
- Check for aftermarket accessories that may have been installed. Radios, Alarms, Remote starters, and others can compromise the DLC.

After you have completed repairs, the vehicle will most likely need to complete a Drive Cycle



Information For Repair Facilities

Check out [emissionstestwa.com](http://emissionstestwa.com) for answers to AES technicians' most frequently asked questions.

## Help is just a click away!

You probably know [www.emissionstestwa.com](http://www.emissionstestwa.com) as the place to look up test records. Perhaps you've even referred your customers to this site for information about emission testing.

If you have visited the site recently, you may have noticed that the home page has a new

look. If you think the scenic view of Mount Rainier is the only change, you might be surprised when you take a closer look. You will find brand new content just for AES technicians.

This website can be your one-stop shop for training information, technical assistance,

and even the *Exhaust Notes* newsletter.

AES content is in the right hand column on the home page—next to the wrench icon. If you have suggestions for additional content, please email Melanie Forster at: [melanie.forster@ecy.wa.gov](mailto:melanie.forster@ecy.wa.gov).



Information For Motorists

[Frequently Asked Questions](#)

[Do You Own A Diesel Vehicle?](#)

[Applus Station Information](#)

[Authorized Test Facility Locations](#)

[Can't Renew Your Tabs?](#)



Information For Repair Facilities

[Frequently Asked Questions](#)

[Ecology Newsletter](#)

[Want To Become An Authorized Test Facility?](#)

[Authorized Emission Specialist Training Information](#)





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To request ADA accommodation including materials in a format for the visually impaired, call Melanie Forster at Ecology, 360-407-6330. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

To conserve resources, we provide this newsletter in an electronic-only format. Please consider the environment when printing this newsletter.

# Emission Check

You're on the Road to Cleaner Air.

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