



Exhaust Notes

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What we have here is a failure to communicate

Emission test stations and authorized test facilities have recently installed new OBD test equipment. This new equipment will likely identify more vehicles that fail due to “no communication” with the vehicle’s OBD system.

Unlike the old equipment, the new test equipment is able to run a series of self-checks when it is unable to establish communication with the vehicle’s OBD system. If the self-check doesn’t identify problems, the fault lies with the vehicle’s OBD system. This means “no communication” is a valid failure.

This new equipment will identify more vehicles that have been modified, so fewer tampered vehicles, as well as vehicles with legitimate problems with the

OBD system, will pass inspection unnoticed.

The old equipment sometimes failed to establish communication. However, the old equipment could not distinguish between a problem with the vehicle or the testing equipment itself. This meant that the procedure for “no communication” was to conduct a two-speed-idle (TSI) test.

If a vehicle fails due to “no communication” the technician must address the problems with the OBD system itself. Since “no communication” failures have been relatively uncommon, some technicians may be unfamiliar with emission repairs that don’t involve specific codes. Chapter 10 of Ecology’s AES handbook has some helpful suggestions on how to approach

these repairs.

Over the years, the Emission Check Program has identified OBD vehicles that consistently fail to communicate with testing equipment. These vehicles will still require TSI tests:

- 1996 Subaru
- 1996-1998 Mitsubishi
- 1996-1998 Saab
- 1996 Nissan
- 1997 Nissan with a 2.0 L engine
- 1996 Infiniti
- 1996-1998 Volvo
- Lamborghini, all model years

This list may not include all vehicles that need TSI tests. We may identify other makes and models in the future.

EPA to strengthen ozone standards

As AES technicians, you have an important role in reducing ground-level ozone pollution, or smog, as it is more commonly known.

Ozone is a gas that forms when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) react with heat and sunlight. NO_x and VOCs come from sources such as industry, power plants, and motor vehicles. Some even occur naturally.

In Washington motor vehicles are the biggest source of NO_x and VOCs. Vehicles with poorly functioning emission controls emit higher levels of these pollutants.

NO_x and VOCs are harmful

pollutants on their own. But the ozone they form is especially harmful to our lungs. Ozone pollution can trigger asthma attacks and worsen asthma symptoms.

Wind can carry ozone-forming pollutants far away from their sources to create high levels of ozone where we least expect air pollution—in rural areas and even national parks.

Scientists who study air pollution have found that ozone can cause harm at lower levels than previously thought. This is why the EPA is proposing a stricter ozone standard. The current standard is .075 parts per million (ppm) by volume. The EPA is proposing a standard of .06 to .07

ppm. See [EPA’s factsheet](#) for more information on the proposed standard.

All of Washington meets the current ozone standard. Some areas of the state may not meet a more stringent standard. The work you do helping customers properly maintain their vehicles is key to reducing ozone pollution in your communities and Washington State.

Ozone pollution levels are highest in the summertime. We can all do our part to reduce ozone pollution by driving less, keeping our cars maintained, and using electric, instead of gas, lawn mowers and other yard care equipment.



Ozone contributes to visible smog on hot summer days. To learn more about ozone, go to: <http://www.epa.gov/airquality/ozonepollution/>



Training Spotlight

Keep your authorization current

Interested in becoming an Authorized Emission Specialist? Is it time to update your AES training? If so, these instructors offer Ecology-authorized training. Contact instructors for class availability and cost.

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Remember, you must take an Ecology-authorized training every two years to stay in the AES program. If you have questions about training, please contact emission check staff listed for your county on page 4.

Keep those diesels running cleaner

It's no secret that diesel emissions are harmful. The [first issue](#) of Exhaust Notes describes some of the health problems diesel exhaust can cause or worsen.

It's also no secret that diesel engines are fuel efficient, long-lasting, and powerful. Their fuel economy and torque make them indispensable in transit, freight, construction, and emergency vehicles.

Fortunately, advances in vehicle technology, fuel, and retrofit equipment like diesel particulate filters reduce toxic emissions to a fraction of what they were in the past.

Diesel engines are sturdy and can run for decades. This makes maintaining them all the more important. 2007 and newer vehicles already meet the highest diesel emission standards. However, replacing all of the older diesel vehicles in

a fleet could be unaffordable.

Retrofits can make more financial sense. These include diesel particulate filters (DPFs), diesel oxidation catalysts (DOCs) and crankcase ventilation systems—which all reduce fine particles. Retrofits that reduce nitrogen oxides (NO_x) emissions include exhaust gas recirculation (EGR), selective catalytic reduction (SCR), and lean NO_x catalysts (LNC.)

Retrofit technology can reduce dangerous fine particle emissions up to 90 percent. NO_x reducing retrofits can achieve up to 40 percent reductions. These reductions improve air quality for everyone, especially vehicle operators and others who work closely around vehicles.

Installing this equipment is the first step in reducing emissions. Like any complex equipment,

wear and tear will eventually diminish effectiveness. Maintenance is critical to making sure diesel retrofit equipment continues work as it should. For example, DPFs need regular cleaning to work properly.

Engine maintenance is also critical. Poor engine performance can lead to buildup in a DPF, rendering the equipment ineffective. Furthermore, a plugged DPF negatively affects vehicle performance.

Maintenance requirements vary by manufacturer and type of equipment. Always follow the equipment manufacturer's instructions. This will help your diesel vehicles run as cleanly as possible and ensure you don't void any warranties.



Diesel opacity cut points

Diesel vehicles that exceed the following readings fail an emission test

Model year	Opacity %
1991 and older	50
1992-1996	40
1997 and newer	30

Legal requirements for repair shops

Automotive shops must comply with certain requirements to do business in Washington.

The following requirements apply to all repairs, not just emission related repairs.

- Provide estimates for charges that exceed \$100 to the customer in writing—unless someone other than the owner (such as a tow truck driver) has brought the car to you. In that case, oral approval is fine.
- Do not charge the customer more than 110 percent (excluding sales

- tax) of the estimate you provided.
- Provide itemized charges for parts and labor
 - Provide or show replaced parts to the customer upon request.
 - The following practices are against the law:
 1. False advertising
 2. Materially understating or overstating an estimate.
 3. Charging customers for parts or labor not delivered
 4. Retaining duplicate payment from a customer and warranty provider

These provisions of Chapter 46.71 RCW seem like common

sense, and the vast majority of auto repair shops do abide by them. But the best way to legally protect your business and professional reputation is to document your compliance. If you receive approval by phone, be sure to document the time and summarize your conversation with the vehicle owner in writing.

In addition, state law requires that each auto repair facility post a sign listing the customer rights provided in Chapter 46.71 RCW. If you need a sign for your shop, call the Department of Revenue at: 1-800-647-7706.





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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.

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Emission Check

You're on the Road to Cleaner Air.

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