

- clogged, worn or mismatched injectors or nozzles
- misadjusted injection timing
- restricted air filters

Q: What easy repairs can reduce excess smoke?

A: You can:

- adjust or replace puff limiter or aneroid valve
- adjust fuel rack to manufacturer's specifications
- clean or replace injectors or nozzles
- adjust injector timing to manufacturer's specifications

Q: How can I estimate my vehicle's peak smoke opacity?

A: Hold the chart on the next page at arm's length while someone performs a snap idle acceleration test on your vehicle's engine.

Compare your vehicle's exhaust smoke with the chart. The closest match will give you some idea of your vehicle's peak smoke opacity.

This chart only estimates smoke opacity. It is not a substitute for the actual opacity test.

Reminder: A vehicle that passes the opacity test is still subject to the visual test.

Opacity



**For more information about Ontario's Drive Clean Program, visit: www.driveclean.com
Or call 1-888-758-2999**

Ontario's Smog Patrol

An on-road campaign targeting grossly polluting vehicles



Information for owners and operators of heavy-duty trucks and buses

Ministry of the Environment

Q: What is Ontario's Smog Patrol?

A: Ontario's Smog Patrol is an on-road campaign that targets grossly polluting vehicles. It is one of the Ontario government's initiatives for cleaner air.

The Smog Patrol was launched in July 1998. It started the Drive Clean program by introducing enhanced enforcement of Ontario's vehicle emission regulation (Regulation 361/98).

Q: How does Smog Patrol affect trucks and buses?

A: Any truck or bus suspected of exceeding provincial emissions standards may receive a Smog Patrol inspection. The vehicle will be escorted by local enforcement agencies to an on-road inspection site. There, provincial officers will inspect and/or test the vehicle's exhaust and compare the results with provincial standards. If the vehicle fails the test, a ticket may be issued to the owner or driver of the vehicle.

Q: How are heavy-duty trucks and buses tested?

A: Heavy-duty vehicles are tested in two ways:

1) The visual test

Provincial officers may issue a ticket to the owner or driver of a vehicle if there are visible emissions of smoke coming from

the vehicle's exhaust for 15 seconds in any five-minute period. This applies whether the vehicle is idling or moving.

2) The smoke opacity test

Heavy-duty vehicles may also be tested using the Society of Automotive Engineers J1667 snap idle acceleration test. This test measures the opacity of smoke coming from the exhaust pipe. It involves placing a sensor in the exhaust stack and revving the engine from idle to the maximum governed speed three times. An averaged peak opacity from this test is compared with the standards in Regulation 361/98.

Note: Opacity is the degree to which a visible emission obstructs the passage of light. For example, 0% per cent opacity means the exhaust has no visible smoke and does not block any light. 100% opacity means the exhaust is so dark it completely blocks out light, and 50% opacity means the exhaust blocks half the light.

Q: What are the provincial opacity emissions standards for heavy-duty diesel powered vehicles?

A: If a vehicle's peak smoke opacity measures higher than the percentages below, it has failed the opacity test.

MODEL YEAR	OPACITY
1990 or earlier	less than 55%
1991 or later	less than 40%

Reminder: A vehicle must also pass the visual test. A vehicle fails if it has visual smoke emissions for 15 seconds in any five-minute time period.

Q: What are the penalties if a vehicle fails a visual and/or opacity test?

A: The owner or the driver of a vehicle failing the on-road inspection may be issued a ticket. Tickets for heavy-duty vehicles are \$425 for the first offense. Repeat offenders may be issued additional tickets. If they do not pay these fines, they could face court summons, seizure of number plate and/or impoundment of vehicle. If successfully prosecuted under Part III of the Provincial Offences Act, owners could face fines up to \$50,000 and/or imprisonment for up to a year. A company could be fined up to \$200,000.

Q: What causes excessive smoke?

A: Smoke is really unburned fuel. This means a smoking vehicle is both bad for the environment and costly to operate. Excessive smoke comes from poorly maintained engines or air/fuel controls that have been tampered with.

Some common examples are:

- defective or tampered with puff limiter or aneroid valve
- maladjusted fuel rack