Vehicle and Engine Tampering
Description and Examples of Acceptable Practices

Purpose

In 2012, the Canadian Council of Ministers of the Environment (CCME) agreed to further protect the health of Canadians and the environment through a comprehensive new Air Quality Management System (AQMS). AQMS recognizes the impact of mobile sources on air quality in many parts of Canada.

As part of its work to address air emissions from mobile sources CCME developed a description of tampering and a summary of examples of practices to minimize the risk of tampering with in-use vehicles or engines. The description and examples will assist jurisdictions to raise awareness and increase understanding of environmental and health concerns related to tampering with vehicle or engine emission controls. Tampering can occur with on-road light-duty vehicles (i.e., cars and light trucks), heavy-duty trucks, and off-road vehicles and engines (e.g., recreational vehicles or off-road equipment).

Introduction

The operation of on-road and off-road vehicles and engines is a major source of air pollution that contributes to urban smog and has been linked to negative health effects such as respiratory illnesses and heart disease. Emission control systems or devices are standard design requirements for new vehicles and engines to be able to meet stringent national emission standards. **Tampering with emission control systems or devices circumvents the objectives of federal regulations** aimed at reducing emissions from these vehicle and engine emission sources **and compromises the associated environmental and health benefits**. Tampering-related activities such as conducting tampering, advertising tampering services, and selling or operating a tampered vehicle or engine are not condoned.

Tampering Description

As the sophistication of emission controls required to conform to federal emission standards has increased, the types of tampering have become increasingly complex. Tampering with vehicle or engine emission controls includes:

- **removing**, **bypassing**, **defeating** or **rendering inoperative any emission control system or device** installed in or on a vehicle or engine, **including software** designed to monitor or control vehicle or engine emissions, or

- **modifying** the vehicle or engine in any way **that results in increased emissions** from the level to which it was originally designed/certified by the manufacturer or importer of the vehicle or engine.

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Examples of Acceptable Practices

Tampering-related legislation exists in multiple jurisdictions and varies across Canada, therefore any specific provincial/territorial requirements in a given jurisdiction should be consulted. As general guidance, some examples of acceptable practices to minimize the risk of tampering with in-use vehicles or engines include:

1. Emission control system or device related maintenance and repair should only be undertaken by qualified technicians. This does not preclude service or maintenance work performed at an independent repair shop. Vehicle warranties usually cover emission control systems and devices for a specified period; however, if the emission control system or device is tampered with during the warranty period, a manufacturer may not honour the warranty.

2. **An emission control system or device may be removed at any time if it is being replaced with one that is (a) designed for that vehicle and (b) at least equally effective in reducing emissions** (e.g., meets applicable provincial/territorial requirements where they exist, or if none, a U.S. Environmental Protection Agency standard if one exists). As one example, a damaged or failed catalytic converter can be replaced with either an original equipment manufacturer's replacement for that vehicle or an aftermarket catalytic converter that meets the emission standards for that vehicle. All aftermarket parts should be approved to meet requirements where required by law.

3. When replacing the engine in a vehicle, the replacement engine should meet or exceed emission standards of the same vehicle classification and model year as the vehicle chassis and all the associated emission control systems and devices should be connected. **Engine replacement should not result in an older or different configuration designed to a less stringent emission standard.**

4. Only fuel that is appropriate for the engine design should be used. The installation of alternative fuel conversion equipment is not considered tampering if the converted vehicle or engine will continue to function properly and its emissions will not increase as a result of the conversion.

5. An older vehicle or engine may be retrofitted with verified emission control equipment or be otherwise modified to **decrease** emissions from the level to which it was originally designed/certified. This would **not** be considered tampering.

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