

B.3.2.3 Canada - New Vehicles

In Canada new light-duty vehicles are currently subject to an emission standard for NO_x of 3.1 grams per mile (gpm). Many of the vehicles, however, meet the U.S. standard of 2 gpm for the late '70's models and, from 1981 on, 1 gpm. Thus the weighted average design emission level would be about 5 gpm until 1973, 2.8 gpm to 1980 and 2.3 gpm thereafter. The current 3.1 gpm standard is under review and the decision on the emission standard for 1985 and later models is expected within 18 months.

B.3.2.4 Canada - In-Use Vehicles

The actual NO_x emissions from vehicles in consumers' hands are affected by a large variety of factors including ambient temperature, individual driving style, state-of-tune of the vehicle, mode of operation, and, recently discovered to be of major importance, direct tampering with NO_x emission controls.

Investigations into tampering with EGR valves have indicated that the tampering rate may well be as high as 30% rather than the 5 to 10% previously estimated. Thus, we are no longer satisfied that our emissions model is accurate. With that caveat our current estimate is that the average (whole fleet) emissions were in the neighborhood of 4.5 gpm until 1975, about 3.5 from then until 1980 and, in the absence of further investigation/control on the tampering rate, about 3 gpm thereafter.

A national guideline (I/M) for the control of excess emissions and fuel consumption by in-use vehicles will soon be promulgated. It advocates a "phase-in" approach, starting with new vehicles and using very stringent standards that would be equivalent to a 75% failure rate on the U.S. program discussed in B.3.2.2.1. As a result a mature program is expected to reduce CO emissions by 40 to 50%, HC emissions by 20% and fuel consumption by 3 to 5% on the subject fleet. The dollar value of the gasoline savings will exceed the total societal cost of the program.