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In-Use Emissions With Today's Closed-Loop Systems

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ABSTRACT:

Closed-loop emission control systems were adopted by most motor vehicle manufacturers on a wide-spread basis in model year 1981, in order to meet the 1981 and later Federal exhaust emission standards. General Motors and the Environmental Protection Agency have conducted test programs to quantify the in-use performance of these closed-loop systems. Over 4000 vehicles (passenger cars and light duty trucks) have been evaluated, covering the 1983 through 1988 model years, at both low and high altitude locations.

For model year 1986 and later, average emission levels, adjusted to the 50,000 mile point, are below the applicable EPA standards. The GM and EPA data indicate average emission levels have decreased during the 1980's and reflect the increased penetration of fuel injection, improvements in catalytic converter performance, and improved system and component reliability.

Maintenance of the in-use fleet appears to offer the best opportunity for further reducing the mobile source contributions to atmospheric inventory and resulting pollution.