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Evaporative Emissions Under Real-Time Conditions

Harold M. Haskew

William R. Cadman

Powertrain Control Center

Current Product Engineering

General Motors Corporation

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ABSTRACT:

The Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) are currently examining various proposals to modify the test procedures used to measure and regulate hydrocarbon evaporative emissions. The purpose of the proposed modifications would be to approximate the ambient conditions that vehicles can encounter on high temperature days, when many exceedances of the ozone air quality standard can occur. EPA has also developed an evaporative emissions model to support its evaluation of the proposed test procedure changes.

GM has conducted tests to assess the performance of evaporative emissions control systems using the elevated temperature conditions under consideration by EPA. GM's tests used a real-time temperature cycle that extended over 24 hour time periods. The data from GM's tests indicate that on a real-time basis, evaporative emissions control systems perform better than predicted by the EPA model.