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Future gasoline engine technology and the effect on thermal management and real world fuel consumption

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ABSTRACT

Emissions legislation, fleet CO₂ targets and customer demands are driving the requirements for reducing fuel consumption. This is being achieved in the gasoline market in the near term through the adoption of engine downsizing.

In order to reduce fuel consumption further and in the wider real world operating region complimentary technologies are being investigated and applied to an extreme downsized engine.

In this paper future gasoline engine technologies are applied and assessed in terms of fuel consumption improvement and effects on the loading of the thermal management system, both over legislative drive cycles and using real world drive data.