

**Powertrain Systems for Net-zero Transportation:
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MAHLE

Powertrain

MAHLE Modular Hybrid Powertrain for Large Passenger Cars and Light Commercial Vehicles

For large passenger cars and light commercial vehicles, meeting all the customer requirements with a pure electric vehicle is challenging. Building on work previously presented on the MAHLE modular hybrid powertrain concept, this study examines potential hybrid powertrain configurations for these vehicle applications, based on life-cycle CO₂ assessments.

The latest testing results from our 3-cylinder 1.5 litre high-efficiency demonstrator engine are presented, running on both conventional 95 RON gasoline and alternative sustainable low carbon fuels. These results are then used to evaluate the potential weighted CO₂ emissions of the proposed plug-in hybrid concept across representative drive cycles for these applications.