Press release

Spain, July 6th, 2026

Seamless Summer Travel: MAHLE Boosts EV Range, Comfort, and Reliability

- MAHLE technologies support the growing adoption of electric vehicles on long-distance trips
- MAHLE bionic battery cooling plate increases cooling capacity by 10%
- MAHLE electric motor technology eliminates mechanical wear while maintaining high performance
- The range extender system eliminates EV-related driving range anxiety
- The HeatX Range+ improves cabin comfort while reducing energy consumption
- As sponsor of the MAHLE Eco Rallye Comunitat Valenciana since 2018, MAHLE promotes sustainable mobility beyond technological development

Against the backdrop of Spain's annual summer traffic operation—expected to generate above 100 million long distance journeys — technologies that enhance electric vehicle range, comfort and reliability are among the factors that most influence the driving experience of an electric vehicle. For this reason, MAHLE is committed to developing technologies that optimize vehicle performance based on user needs. These include bionic battery cooling plate delivering up to a 10% improvement in cooling performance, a wear-free electric motor technology ensuring consistently high performance, and a range extender system enabling driving ranges of up to 1,350 kilometers. The HeatX Range+ thermal management system further improves efficiency by lowering energy demand by up to 20% in cooler environments. "At MAHLE, innovation is not just about pushing technology forward—it's about creating meaningful improvements for drivers, manufacturers, and the environment," said William Fabre, Director Operations Motor & Drive Systems, Electronics, Compressors, Pumps (Europe). This commitment is also reflected in initiatives such as the MAHLE Eco Rallye Comunitat Valenciana, Spain's first carbon-neutral motorsport event.

Bionic intelligence: a nature-inspired cooling system

The bionic cooling plate is a technology engineered to enhance the thermal management of lithium-ion batteries—one of the most sensitive components in electric vehicles. Keeping batteries within a stable temperature range is essential to prevent premature degradation, enable fast charging, and ensure long-term performance. Inspired by coral formations, MAHLE has designed flow channels that guide the coolant in an optimized way. This approach increases cooling capacity by approximately 10% and reduces pressure loss by up to 20%, improving overall system efficiency and helping to maintain a more uniform temperature, which contributes to a longer system life.

Proprietary technology for a more efficient and durable electric motor

MAHLE is also focused on enhancing the heart of the electric vehicle: the motor itself. In this area, the company has developed its technology kit for electric engines, which combines two proprietary MAHLE technologies to optimize propulsion system performance. On one hand, the SCT (Superior Continuous Torque) technology enables the motor to deliver continuously high performance without degradation caused by thermal limitations—especially needed for demanding driving conditions or heavy vehicles. On the other hand, the MCT (MAHLE Contactless Transmitter) system transfers energy to the rotor without physical contact, eliminating mechanical wear and improving overall durability of externally excited synchronous motors. This motor technology also does not rely on rare earth materials, a key advantage both for sustainability and for ensuring greater stability in the materials supply chain.

Extended range for long-distance travel

One of the most well-known challenges of electric vehicles remains the driving range, particularly on long trips. To address this issue, MAHLE has developed a range extender system that generates electricity onboard through a high-voltage generator whenever the battery requires it.

This solution ensures that the vehicle is not solely dependent on stored battery energy and eliminates EV related driving range anxiety. It also enables the design of vehicles equipped with more compact and efficient batteries. Under certain configurations, the system could help achieve driving ranges of up to 1,350 kilometers under the WLTP cycle, the international protocol that measures vehicle consumption and emissions in realistic operating conditions.

Comfort and efficiency, even below freezing

In electric vehicles, climate control can have a significant impact on driving range, especially in low temperature environments. To mitigate this effect, MAHLE has developed the HeatX Range+ system, which recovers heat from the cabin’s exhaust air to warm the vehicle’s interior during winter conditions.

This system reduces climate-control energy demand by up to 20%, translating it into additional kilometers per charge. In tests conducted by the company, the system delivered nearly 10 extra kilometers of range at outside temperatures of –7 °C.

Sustainable mobility in electric motorsport championship

MAHLE also promotes sustainable mobility beyond technological development through its participation in initiatives such as the MAHLE Eco Rallye Comunitat Valenciana. The company has been the event's title sponsor since 2018. In 2025, it was officially recognized as Spain's first carbon neutral motorsport rallye and has since become a benchmark for sustainability within motorsports. Through initiatives like this, MAHLE reinforces its commitment to advancing more sustainable mobility and accelerating the transition toward low-emission transportation.

MAHLE Spain: A key player in the future of mobility in Europe

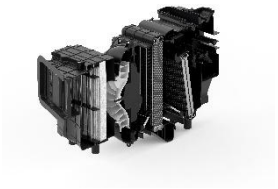
MAHLE has been present in Spain since the 1970s, where it has become a strategic market in Europe. The company employs around 2,000 people and operates seven production facilities nationwide. MAHLE teams produce components for electric mobility, clean combustion solutions, and e-bike technologies, contributing to the transition toward more sustainable mobility. MAHLE also operates a key European R&D center in Valencia, with more than 100 engineers focused on electric mobility. This facility plays a central role in developing innovative transportation technologies. MAHLE SmartBike Systems, the division dedicated to e-bike drive systems, is headquartered in Palencia and is a recognized European leader in solutions for road and gravel segments.

Note for editors: This press release and the accompanying photo material can be found at https://newsroom.mahle.com/press/en/

Image copyright: MAHLE GmbH

The bionic battery cooling plate keeps lithium-ion battery in the optimal temperature window. The channels pattern reduces pressure loss by up to 20% and increases cooling power by 10%

The range extender system from MAHLE consists of a highly efficient high-voltage generator driven by a small internal combustion engine



The innovative MAHLE HeatX Range+ system with the heat recovery function in air conditioning extends electric vehicle range

The technology kit for electric motors combines the advantages of the benchmark SCT and MCT electric motors

MAHLE racing team, led by professional driver Bietske Visser, during the MAHLE EcoRallye Comunitat Valenciana 2026 in Castellón, Spain

William Fabre, Director Operations Motor & Drive Systems, Electronics, Compressors, Pumps

Contact persons for MAHLE communications:

Cristina Moya Carraffa
Press spokesperson
Phone: +34 618 07 36 04
E-mail: cristina.josefa.moya@mahle.com

Kerstin Cynthia Lau
Head of Media Relations
Phone: +49 173 6180 956
E-mail: kerstin.cynthia.lau@mahle.com

About MAHLE

MAHLE is a leading international development partner and supplier to the automotive industry with customers in both passenger car and commercial vehicle sectors. Founded in 1920, the technology group is working on the climate-neutral mobility of tomorrow, with a focus on the strategic areas of electrification and thermal management as well as further technologies to reduce carbon emissions, such as fuel cells or highly efficient, clean combustion engines that also run on synthetic fuels, renewable fuels or hydrogen.

MAHLE generated sales of €11.3 billion in 2025. Employing some 64,000 people at 127 production locations and 11 technology centers, the company is represented in 28 countries. (as at: 12/31/2025))

#weshapefuturemobility