PRESS RELEASE

“E-fuel ready” with MAHLE components

- MAHLE tests its engine components and filters for compatibility with e-fuels
- MAHLE is thus paving the way for CO_2 savings with the use of regenerative fuels

Stuttgart/Germany, September 12, 2019 – Alternative fuels from regenerative sources offer substantial potential for reducing transportation-related CO_2 emissions. MAHLE is therefore concertedly investigating the compatibility of its engine components and filters with the use of various e-fuels. The results show that many of the MAHLE materials and components that have been tested so far are “e-fuel ready.”

MAHLE is examining the resistance of components and materials when using fuel blends with e-fuels that can be admixed under current fuel standards as well as alternatives such as oxymethylene ether (OME) for heavy-duty commercial vehicles, dimethyl carbonate (DMC) for passenger cars, or methane (CH_4) as a gaseous alternative.

Admixtures within the current fuel standards are especially promising due to their backward compatibility, as they include the existing global car population in CO_2 reduction. The resulting lever is greater by a factor of about 20, given sufficient availability of regenerative fuel in Europe, than for measures that apply only to new vehicles. This potential should be considered as a supplement to electric mobility in the drive mix of the future.

“The admixture of e-fuels can immediately produce great savings potential. If allowed, this could mean a decisive step toward achieving the 37.5 percent CO_2 savings mandated at EU level relative to 2021,” explains Dr. Otmar Scharrer, Head of Research and Advanced Engineering at MAHLE. “Our tests indicate that

many of the MAHLE engine components and filters tested to date are ready for the admixture of e-fuels. We are providing our customers with the means to tap this potential."

As part of the series of test runs, MAHLE is also investigating what proportion of a fuel that is outside of the current standards can be used in operation without changes to hardware or software. The tests have demonstrated that engine performance comparable to the use of purely fossil fuels is possible with the admixture of certain e-fuels as well, while maintaining series production data sets and injection systems. No measurable difference in the combustion process was found for the tested e-fuels. Emissions behavior was actually even better than for purely fossil fuels in large areas of the operating map. From a thermodynamic perspective, MAHLE therefore assumes that these e-fuels will be technically backward compatible for the admixture of up to 20 percent. This is a very promising approach, but its implementation requires legislative support in terms of expanded fuel standards.

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About MAHLE

MAHLE is a leading international development partner and supplier to the automotive industry as well as a pioneer for the mobility of the future. The MAHLE Group is committed to making transportation more efficient, more environmentally friendly, and more comfortable by continuously optimizing the combustion engine, driving forward the use of alternative fuels, and laying the foundation for the worldwide introduction of e-mobility. The group's product portfolio addresses all the crucial issues relating to the powertrain and air conditioning technology—both for drives with combustion engines and for e-mobility. MAHLE products are fitted in at least every second vehicle worldwide. Components and systems from MAHLE are also used off the road—in stationary applications, for mobile machinery, rail transport, as well as marine applications.

In 2018, the group generated sales of approximately EUR 12.6 billion with more than 79,000 employees and is represented in more than 30 countries with 160 production locations. At 16 major research and development centers in Germany, Great Britain, Luxembourg, Spain, Slovenia, the USA, Brazil, Japan, China, and India, more than 6,100 development engineers and technicians are working on innovative solutions for the mobility of the future.

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