

Press Release

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MAHLE wins series order for hydrogen engines

- MAHLE supplies the engine manufacturer DEUTZ with components
- First series use in stationary engines from the end of 2024
- Further applications in the off-highway sector, for example, agricultural and construction machinery, are planned
- Hydrogen offers the opportunity to operate engines in a climate-neutral way
- MAHLE contributes expertise for engine systems and alternative fuels
- MAHLE CEO Arnd Franz: "A milestone to achieve climate-neutrality with technology openness and innovation."

MAHLE has received a series order from engine manufacturer DEUTZ for the development and supply of components for hydrogen engines. These are so-called power cell units, i.e. units consisting of the piston, the piston ring pack and the piston pin, which DEUTZ plans to use in stationary hydrogen engines for the first time from the end of 2024. Further applications in the off-highway sector, such as agricultural and construction machinery, are planned. These new engines can be operated in a climate-neutral manner using hydrogen produced from renewable sources since no CO₂ is produced when the hydrogen is burned. MAHLE has already been working for years on engine systems for hydrogen and other climate-neutral fuels. The Stuttgart-based technology group is contributing this expertise to the DEUTZ project.



MAHLE has already been testing its components in hydrogen engines on the test bench for several years. Recently, the technology group received a series order from DEUTZ.

"We see hydrogen as an important building block for sustainable mobility, especially in the commercial vehicle sector. This project with DEUTZ is a milestone with a lighthouse effect because it shows that there are other technological levers besides electrification to achieve climate-neutrality," said Arnd Franz, Chairman of the MAHLE Management Board and CEO.

“To keep the world moving, we need different technology options. What a climate-neutral excavator or combine harvester will look like remains to be seen. For engines that are constantly in use and move large loads, several options are possible. One of them is the hydrogen engine. Our successful pilot projects demonstrate the potential in the commercial vehicle sector. With MAHLE, we now have a strong partner to help us enter series production of our hydrogen engines at the end of 2024,” said Dr. Sebastian C. Schulte, Chairman of the Management Board of DEUTZ.

For use in the hydrogen engine, MAHLE has adapted and further developed the aluminum piston and piston ring pack from classical diesel technology. In hydrogen combustion, a key challenge is to find the optimum between the gas mixture that is forced into the crankcase during the combustion process and the oil consumption. MAHLE has already verified the reliability of the hydrogen components in a wide variety of engine classes.

“To achieve the climate protection goals, we must exploit the potential of all available powertrain technologies,” said Franz. MAHLE is therefore committed to technological diversity as part of its corporate strategy: In addition to e-mobility, including fuel cells and the associated thermal management, MAHLE considers the climate-neutral green combustion engine, which runs on non-fossil fuels such as hydrogen, to be one of the future technologies for a sustainable powertrain mix.

As early as March 2021, the technology group opened a new test center for hydrogen applications on 1,400 square meters of space at its Stuttgart location.

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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 e-mobility and thermal management as well as further technology fields to reduce CO₂ emissions, such as fuel cells or highly efficient, clean combustion engines that also run on synthetic fuels or hydrogen. Today, one in every two vehicles globally is equipped with MAHLE components.

MAHLE generated sales of more than EUR 12 billion in 2022. The company is represented with around 72,000 employees at 152 production locations and 12 major research and development centers in 30 countries. (Last revised: 12/31/2022)

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