

Press Release

Own Mobility Test Center

Bertrandt tests the performance of a racing car powered by renewable fuels

Ehningen/Munich, May 8, 2024 – The engineering service provider Bertrandt has supported the DeCarTrans initiative in testing a BMW M4 GT4 with renewable fuels. The car was put through various tests at the company's own Mobility Test Center in order to gain new insights into climate-neutral driving in motor racing. One of the most important findings was that alternative fuels can be used directly and without technical modifications (drop-in capability). In addition, the number of particles emitted and the particle mass were reduced by around half compared to conventional fuel.

In motorsport, electrically powered racing cars are not a viable option, especially in long-distance competitions, as their performance in this competitive environment is impaired by the relatively long stops to recharge the battery. However, the use of vehicles powered by alternative fuels is becoming increasingly important in motor racing, as these can help to make motorsport more climate-friendly as a whole. In addition, proving these technologies in racing conditions will confirm their suitability for everyday use in production vehicles. The use of renewable fuels enables conventional internal combustion engines to be operated in an almost climate-neutral manner. Renewable fuels – so-called “eFuels” – are synthetically produced types of fuels from CO₂ sources that are used in conventional combustion engines. Funded by the German Federal Ministry of Digital Affairs and Transport and managed by the development service provider FEV, the DeCarTrans initiative is aimed at the promotion of measures for the development of renewable fuels.

In the presence of the DeCarTrans project partners FEV and the oil company NORDOEL as well as representatives of the racing team, Bertrandt tested a BMW M4 GT4 (G82 series) from the racing team Hofor Racing by Bonk Motorsport at its Mobility Test Center in Munich. This BMW will also be taking part in the 24-hour race at the Nürburgring at the beginning of June 2024.

The engineering service provider Bertrandt is able to simulate the tough conditions of this race with a high level of realism at its Mobility Test Center. “We were able to recreate the typical environmental conditions for the racing car by using a special driving cycle, enabling us to simulate the situation under realistic conditions on the chassis dynamometer in a total of three test cycles,” said Oliver Conrady, Vice President Operations at Bertrandt. To begin with, the car was run using conventional fuel. In the following cycle, the tank was filled with “Racing eFuel 98” renewable fuel and was tested again under the same conditions. Due to the precise repeatability under laboratory conditions, 100% comparability of the results was guaranteed.

The results speak for themselves: it was proven that the racing car also works reliably with the alternative fuel. What is more, drop-in capability was confirmed. In addition to the finding that the car's performance data is comparable to that with conventional fuel, particle emissions were even reduced by around a half.

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KEY FACTS



The use of vehicles with alternative fuels is becoming increasingly important in motor racing.



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This day at the Mobility Test Center marked the beginning of a series of further tests. As a follow-up, the measured data will now be viewed and analyzed in order to provide the partners involved with further information about the performance of synthetic fuels in motor racing. The focus is on the lower emissions and increased performance of the fuel.

At its two Mobility Test Centers in Munich and Wolfsburg, Bertrandt is able to simulate not only the validation of future powertrain concepts, but also emissions measurements and type testing, standardized or challenging test routines, and special tests – all with state-of-the-art measuring technology. In its modern testing cells and conditioning areas, Bertrandt also has innovative charging systems at its disposal. In addition, it has facilities to carry out altitude tests at up to 5,000 meters. And climate tests are no problem either. From Alaska to the desert in a few minutes – with a temperature range from -40 °C to +45 °C, the Mobility Test Centers offers the whole world under one roof. The benefit for the customer: there is no need to make long journeys and cost efficiency is significantly improved.

Find out more at: <https://www.bertrandt.com/>

About Bertrandt

Through our development performance, we accelerate technological progress and make a relevant contribution to a sustainable future. We are an independent and international development service provider with many years of automotive expertise. With cross-industry know-how and a holistic understanding of systems and products, we create technological solutions along the entire value chain. We deal with a focus on trend topics such as digitalization, e-mobility and autonomous systems, mainly for the automotive, aviation and mechanical engineering sectors, and consistently facilitate the development of tailored solutions in these areas. We work on this every day – with around 14,000 employees at over 50 sites worldwide.