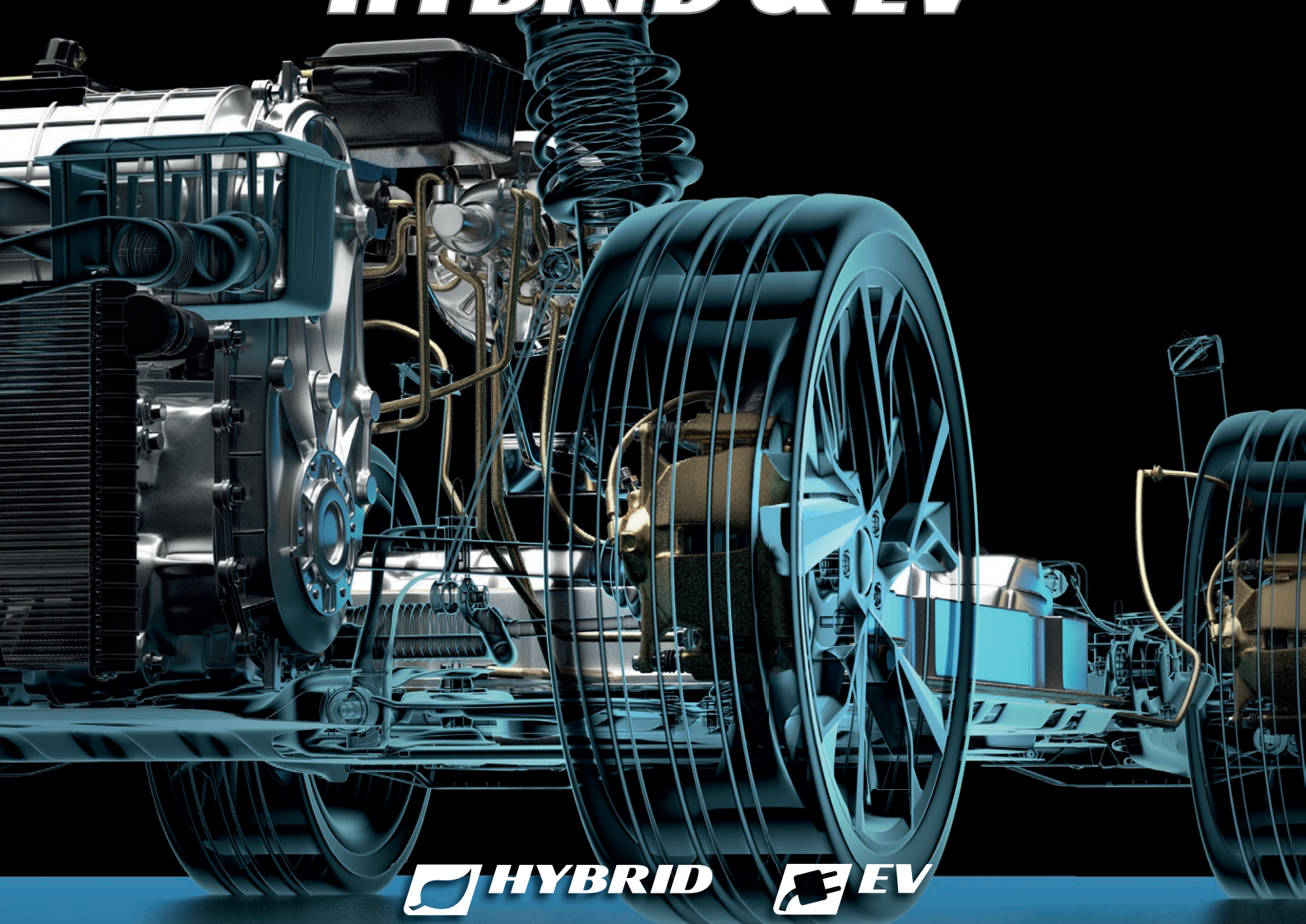




LUBRICANTS FOR HYBRID & EV



 **HYBRID**  **EV**

Moving things forward...

OEM QUALITY
MADE IN HOLLAND

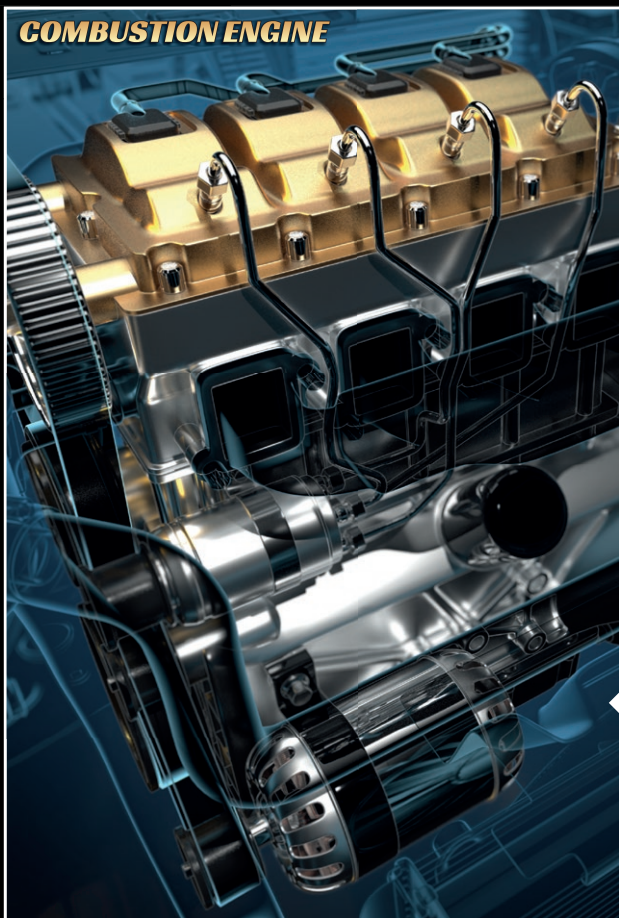


Moving smoothly in the world of hybrid and EV

The development of hybrid and EV technology by car manufacturers has skyrocketed in the last decade. Innovation has led to major improvements in terms of quality, energy efficiency and performance. Consequently, engines and drivetrains have become increasingly complex. This places very specific demands on the oil and fluids to allow these hybrid and electric cars to perform optimally.

Fluids perform various functions in hybrid/electric vehicles, such as cooling the battery and other electronic components, damping noise and vibrations, and controlling components.

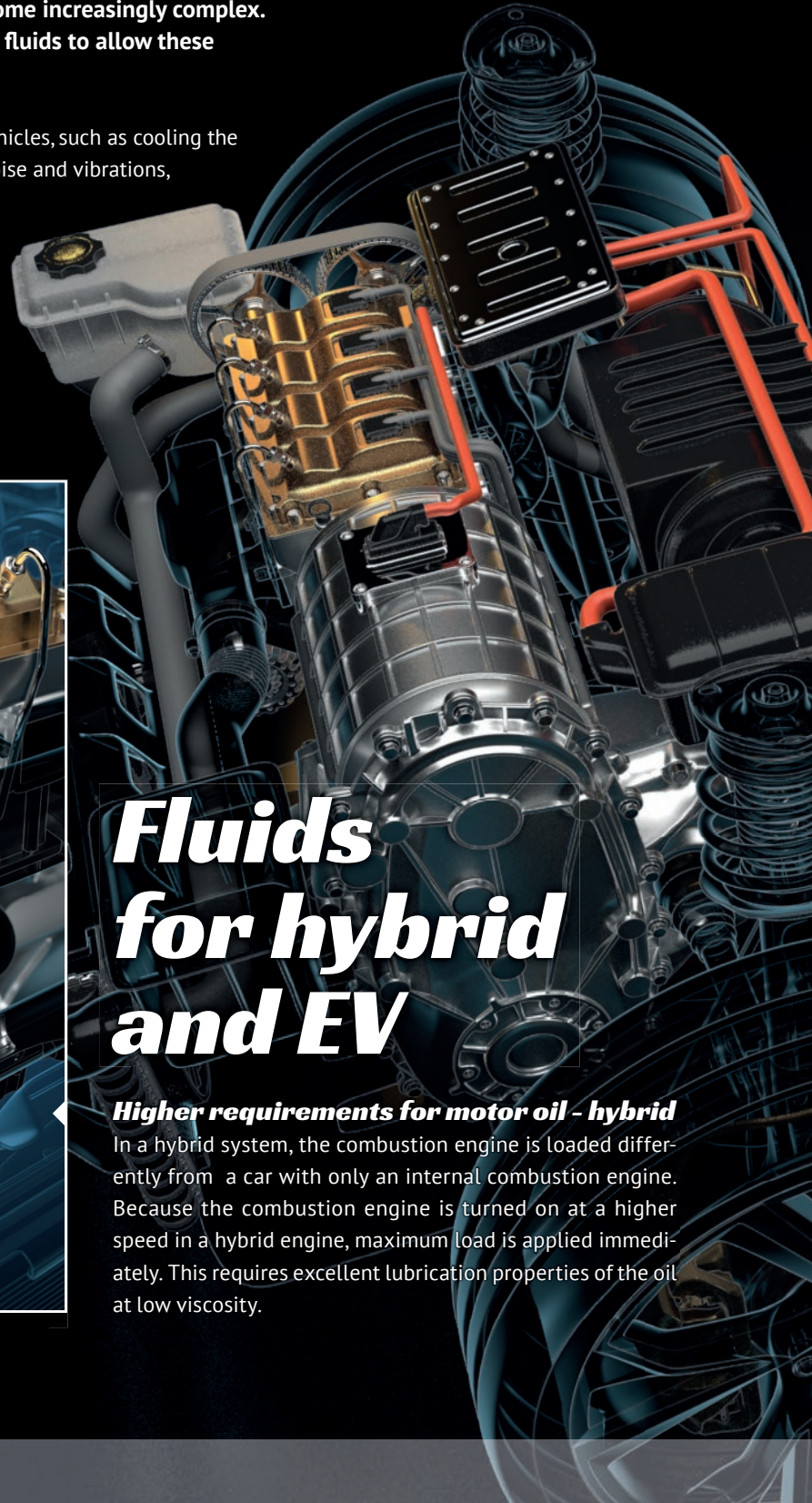
The use of the right oils and fluids is essential to enable this. MPM International Oil Company has you covered with a complete range of car manufacturer prescribed fluids with 99% coverage, including hybrid and EV!

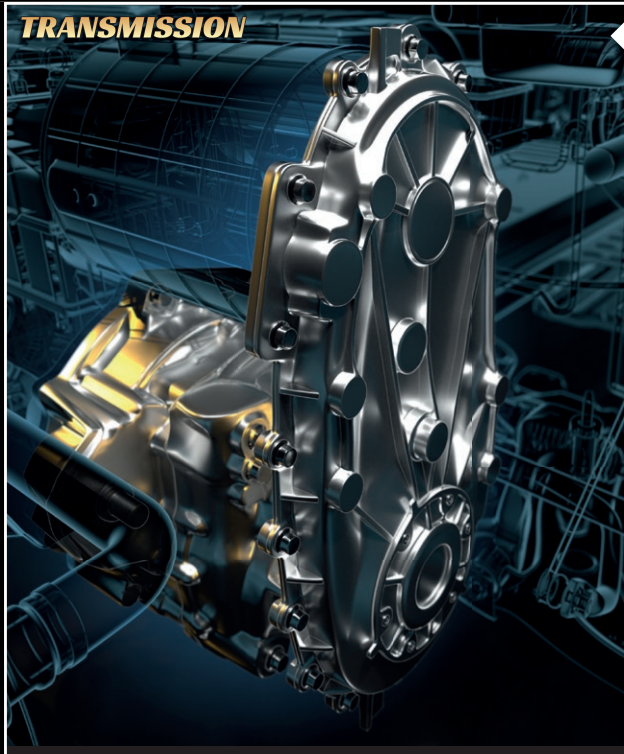


Fluids for hybrid and EV

Higher requirements for motor oil - hybrid

In a hybrid system, the combustion engine is loaded differently from a car with only an internal combustion engine. Because the combustion engine is turned on at a higher speed in a hybrid engine, maximum load is applied immediately. This requires excellent lubrication properties of the oil at low viscosity.

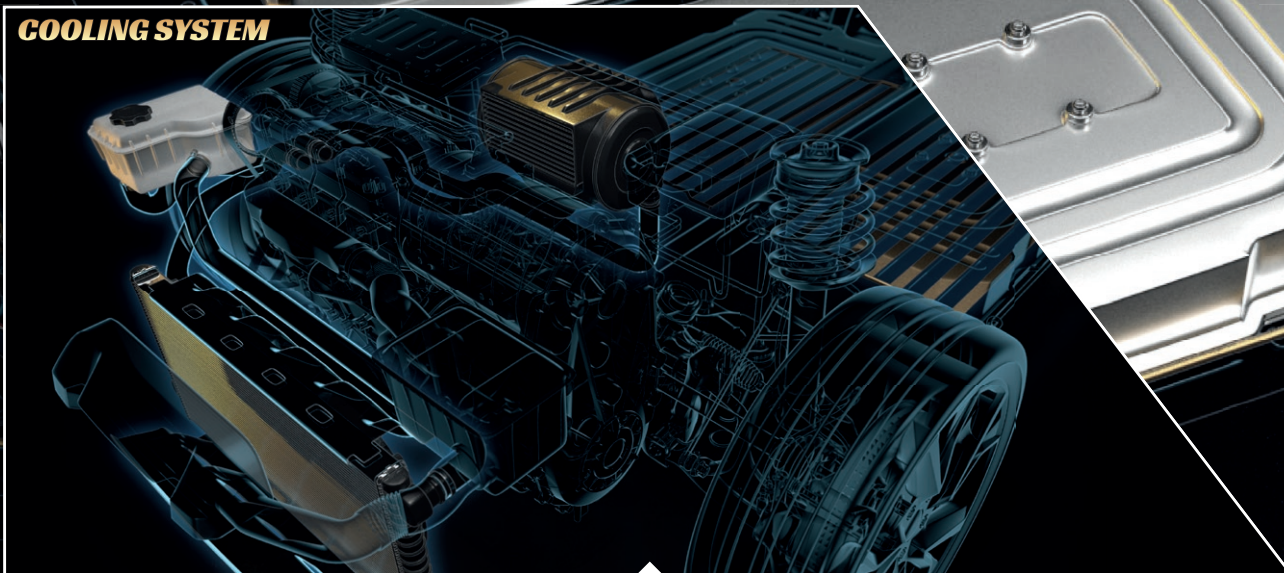




TRANSMISSION

Transmission load - hybrid/EV

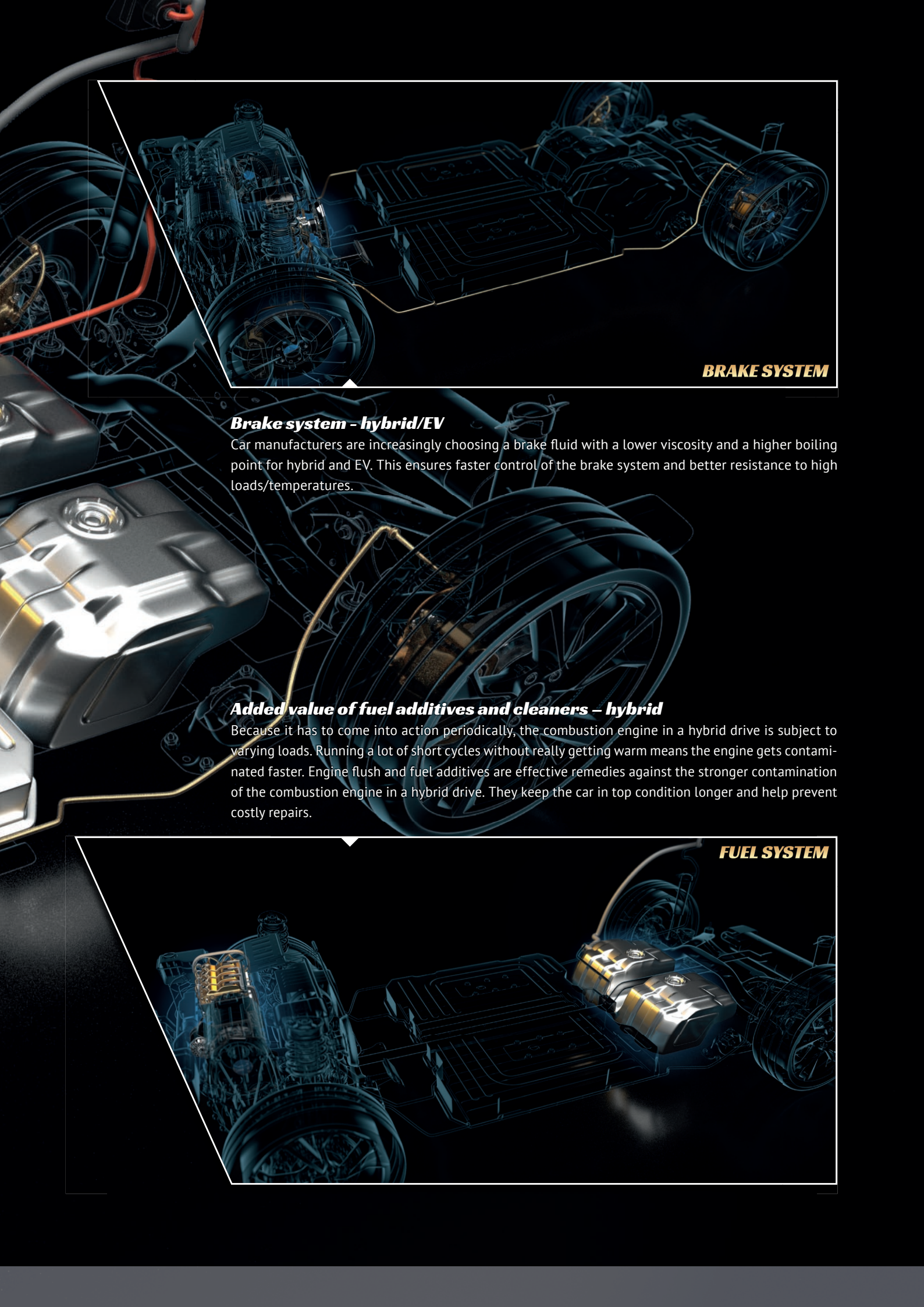
EVs often operate with a one-speed transmission rather than a multi-gear transmission. However, there are manufacturers such as Porsche and Audi that work with a two-speed transmission. Almost all hybrid models have a (semi) automatic transmission. Like motor oil, transmission oil has a change interval. The service interval for EV and hybrid transmissions is usually between 60,000 and 90,000 km. This is of great importance because the transmission is more heavily loaded by the high torque of the electric motor.



COOLING SYSTEM

Importance of proper coolants even greater - hybrid/EV

Particularly hybrid and electric vehicles must be properly cooled to remove heat and ensure that the engine operates at the optimal temperature. To optimally cool the various systems, there are often multiple coolant reservoirs. In this case, specific products are developed to fit the right type of cooling system. Due to large temperature changes, coolant additives wear off and the coolant has to be changed. Consequently, hybrid and electric car manufacturers are opting for shorter change intervals. In addition, coolants with very low conductivity are often chosen to prevent failures and for safety reasons. Car manufacturers currently prescribe more than 10 different types of coolants as mandatory.



BRAKE SYSTEM

Brake system - hybrid/EV

Car manufacturers are increasingly choosing a brake fluid with a lower viscosity and a higher boiling point for hybrid and EV. This ensures faster control of the brake system and better resistance to high loads/temperatures.

Added value of fuel additives and cleaners – hybrid

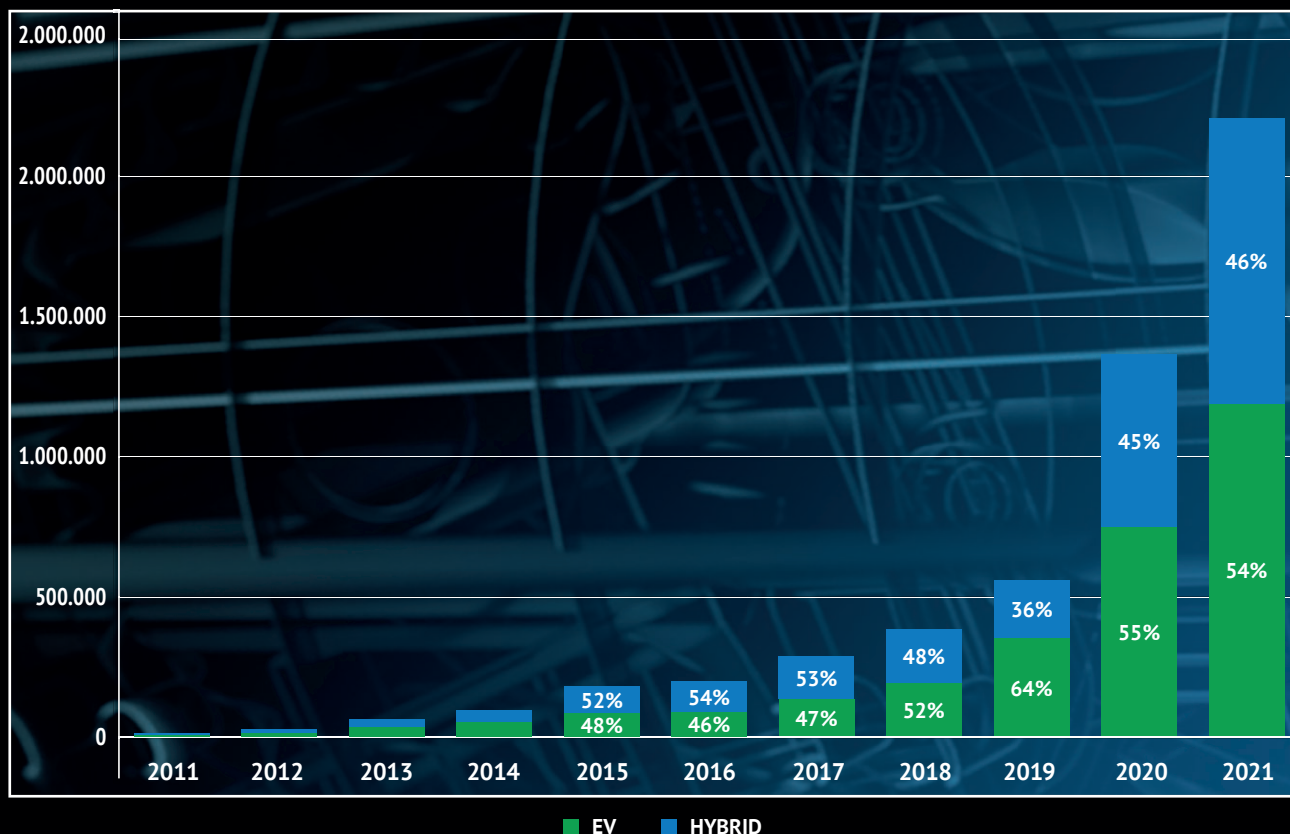
Because it has to come into action periodically, the combustion engine in a hybrid drive is subject to varying loads. Running a lot of short cycles without really getting warm means the engine gets contaminated faster. Engine flush and fuel additives are effective remedies against the stronger contamination of the combustion engine in a hybrid drive. They keep the car in top condition longer and help prevent costly repairs.

FUEL SYSTEM

Moving smoothly in the world of hybrid and EV

Hybrid and EV now represent only 2.5% of the European vehicle fleet, but that share will grow rapidly. Car manufacturers are introducing more specific hybrid and EV models every year, each with their own prescribed fluids. MPM has you covered with a complete range of car manufacturer prescribed oils and fluids, including hybrid and EV.

Annual registrations of hybrid/EV in Europe



Consult our website WWW.MPMOIL.COM for comprehensive online oil advice

Best-selling EV/hybrid in Europe:

HYBRID

Toyota Yaris 1.5 Hybrid >2012

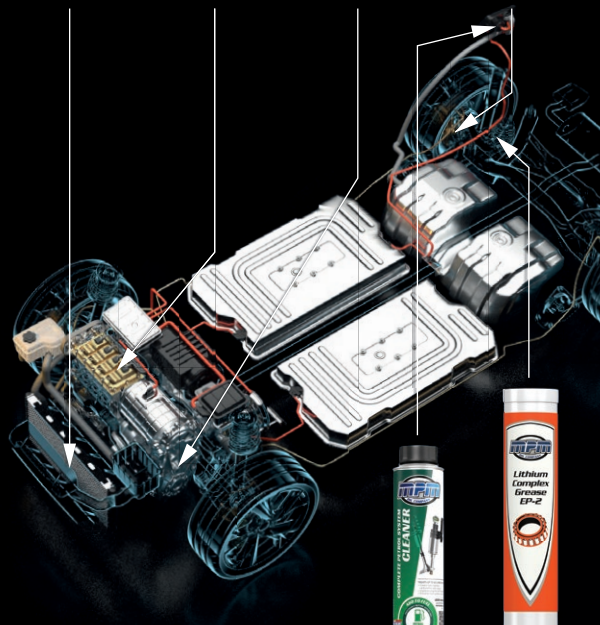


86000CLP

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EV

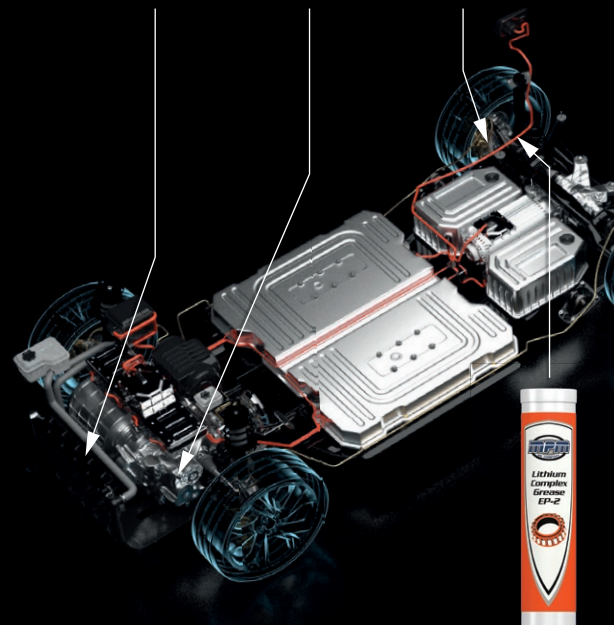
Renault Zoe >2012



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18000MTF

20000LV



65000B

MPM offers:

- Full-coverage oil and fluids package, including hybrid and EV.
- Products exactly according to car manufacturer's instructions
- 24/7 advice on the correct fluids and intervals for hybrid and EV at: **WWW.MPMOIL.COM**



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