



ZircoFlex® heatshield improves transmission and gear shift reliability together with lowering cockpit temperatures in long distance races

Zircotec's ceramic heatshields enable JMW Motorsport to achieve a flexible, lightweight thermal management solution ideal for endurance racing.

OXFORD – European Le Mans Series front runners and team champion, JMW Motorsport, is using ZircoFlex® heatshields on the gearbox and bulkhead of the team's Ferrari 458, to reflect heat away from the transmission's regulator and regulate cockpit temperatures. The team will continue to use Zircotec's flexible heatshield material to achieve performance and reliability improvements throughout the European Le Mans Series.

Situated in a high temperature environment, the gearbox is often considered to be the Achilles Heel of sports car racing, as it must endure under bonnet heat and strain from drivers making rapid shifts during long stints at race pace. Regulating the transmission's air pressure is crucial to ensuring optimal gear shifts are sustained throughout lengthy races.

"It is important to maintain the transmission's air pressure at 10 Bar," says JMW Motorsport race engineer Davey Nicholas. "If the unit heats up, it can cause the pressure to rise, risking damaging to the seals that can affect shifting. With engines and transmissions being the most costly items to service, we want to do all we can to control this."

Driver concentration is also critical to achieving success in endurance racing. Heat can sap energy and erode levels of alertness resulting in miss-shifts or engine damage. To solve such issues, ZircoFlex® can be used on bodywork and bulkheads to shield the cabin from the engine bay heat. Such thermal management can also bypass the need to use performance-draining air conditioning systems. Furthermore, the lightweight and easy-to-fit application of ZircoFlex® combined with the ability to reduce temperatures by 85 percent, enables engineers to delete bulky heatshields, reducing a car's overall weight for gains in performance.

Nicholas is keen to achieve such weight savings with JMW's 458, "We hope that the effectiveness of ZircoFlex® will enable us to remove the bulky glass fibre shield previously fitted – that would reduce weight and improve under bonnet airflow."

As tight packaging becomes more prevalent in motorsport and automotive manufacturing, ZircoFlex® offers engineers the option to place temperature sensitive components close to heat sources without impinging on performance and reliability. The flexibility to easily fit ZircoFlex® with high temperature adhesive or metal fasteners, presents both race teams and OEMs with a heatshield material that can be applied during manufacturing, or at later retrofitting and aftermarket modification stages.

About Zircotec

Zircotec www.zircotec.com offers a wide range of plasma sprayed ceramic and metallic coatings that protect components against the effects of heat, wear, abrasion and corrosion. Lightweight and easily packaged, Zircotec's technologies can be applied to a broad range of different materials including metals and composites. Proven in F1 and the nuclear industry, the technology is now trusted by car manufacturers, industrial users, car enthusiasts and an increasing range of other applications to effectively manage heat and wear, enhancing performance and reliability. ZircoFlex® offers for the first time, a truly flexible ceramic heat shield material.

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