

Press Release



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NEW NGK SPARK PLUGS FOR THE BMW M5 WILL ALSO ACT AS SENSORS

NGK Spark Plugs, the leading spark plug manufacturer, has announced the introduction of a new LKR8AP spark plug to be installed exclusively in BMW's 5-litre V10 engine for the new M5 which has also been designed to act as a sensor.

This extremely high output (507PS) BMW engine runs at high speed (maximum power is achieved at 7,750rpm, and maximum engine speed is 8,250rpm) and with high compression ratio (12:1) and would in any case require spark plugs with an extremely high level of performance. However, in this case the spark plugs have also been designed to act as sensors for a highly sophisticated system which monitors combustion quality and reacts accordingly.

The spark plug electrode is electrically isolated from the cylinder head and linked to a small independent control unit, the 'ionic current satellite', which measures the ionic current between the electrodes. This current depends on the degree of ionisation within the combustion chamber, which in turn - with the aid of suitable analysis - provides an accurate picture of the quality of combustion. The system can detect the initial stages of both misfiring and detonation, enabling the engine management system to adjust its settings on a cylinder-by-cylinder basis. Incipient detonation for example is countered by momentarily retarding the ignition.

Physically, the LKR8AP spark plug uses a two-ground electrode, while the centre electrode has a platinum ring and is laser welded. It is a long-reach (26.5mm) plug with a 12mm thread and 16mm hexagon. The design life is 60,000km. NGK is the exclusive spark plug supplier for the BMW V10 engine.



The World's No.1 Spark Plug. Fact.

