

Gasoline and Diesel engine oil Synthese-Technology

TYPE OF USE

High performance Synthese-Technologie lubricant featuring Full SAPS (Sulfated Ash, Phosphorous, Sulfur) technology, specifically designed for powerful and recent cars fitted with large displacement engines, Gasoline or Diesel, direct or indirect injection, with or without turbo.

Multipurpose product featuring numerous car maker approvals, especially recommended for vehicles still under warranty. Suitable for all type of fuels: Gasoline, Diesel, LPG, CNG and Biofuels.

Compatible for catalytic converters.

If in doubt, before use, refer to the owner manual or handbook of the vehicle.

PERFORMANCES

The API SP standard is fully backward compatible over API SN standard and all former API standards.

API SP lubricants provide outstanding oxidation resistance, better anti-deposits protection, better engine cleanliness, antiwear protection and enhanced performance at cold temperature for Fuel Economy savings during the whole oil life span. Besides being backward compatible, compare to API SN and API SN Plus, the API SP standard provides higher performance and especially adds protection against LSPI for downsized direct injection turbocharged gasoline engines.

The BMW Long Life-01 specification imposes severe constraints to the lubricant particularly due to the Valvetronic system. It covers all BMW engines from 2001 to 2004 and also all the previous BMW specifications such as BMW LL-98. MOTUL 8100 X-max 0W-40 fulfills all the specifications of BMW Long Life-01 standard of the BMW Group for BMW, MINI and ROLLS-ROYCE vehicles with no exception.

The MERCEDES MB 229.5 standard is more stringent than 229.3 in terms of oil ageing and oil film resistance (extended drain interval: on-board computer), detergent/dispersant power (ACEA B4) and requests fuel economy performance: 1.7% fuel economy improvement versus a 15W-40 reference. The specification MB 229.5 applies to all MERCEDES Gasoline engines, including AMG and except SLR, and to all MERCEDES Diesel without DPF engines.

The VW 502 00 and 505 00 standards are specially designed for vehicles of the VAG group (VOLKSWAGEN, AUDI, SKODA and SEAT) running on fixed oil drain intervals (15,000 km in Europe), fitted with Diesel engines, without Unit Pump Injector (Volkswagen PD), without Diesel Particulate Filter (DPF), or Gasoline engines.



Gasoline and Diesel engine oil Synthese-Technology

The FORD WSS-M2C937-A specification requires an extra high oil film resistance for the lubricant to guarantee the viscosity capability over the whole oil drain interval even in severe and extreme conditions (sustained and sport driving,...). This specification applies to all FORD Focus RS 2.5L Turbo Duratec vehicles from MY2008.

The FIAT 9.55535-M2, N2 and Z2 performance levels impose the engine oil to combine both ACEA A3/B4 standard and 0W-40 viscosity grade in order to perfectly lubricate most of the Gasoline and Diesel engines of FIAT, ALFA-ROMEO, and LANCIA produced before July 2007, especially Twin Turbo Diesel engines (FIAT 9.55535-Z2).

The MS-12991 performance level mirrors these FIAT specifications for CHRYSLER vehicles.

MOTUL 8100 X-max 0W-40 meets all these very demanding requirements of performance and durability set by OEMs, as well as the latest level of international standard API.

The API SN standard requires from the lubricant performance an outstanding detergent/dispersant power, a better viscosity increase resistance against deposits, and high lubricating properties such as wear protection and high temperature resistance for better controlled oil consumption and perfect engine protection over the oil drain interval.

The viscosity grade SAE 0W-40 minimizes oil hydrodynamic friction, allowing fuel economy especially when oil is cold. Improves oil flow at start up, faster oil pressure build up, faster rev raisings and faster operating temperature reach.

Environment friendly, this type of oil allows fuel consumption reduction and therefore minimizes greenhouse gases (CO2) emissions.

Numerous OEMs such as NISSAN, JAGUAR, LAND-ROVER, etc... recommend using a lubricant with 0W-40 viscosity grade and at least API SM for most of their sporty vehicles like for example the NISSAN GT-R, 370Z, 350Z,...

MOTUL 8100 X-max 0W-40 formulation is the perfect balance between fuel economy linked to its viscosity grade and outstanding lubrication performance (high HTHS > 3.5 mPa.s).



Gasoline and Diesel engine oil Synthese-Technology

RECOMMENDATIONS

Drain interval: refer to manufacturers' recommendations and tune to your own use.

MOTUL 8100 X-max 0W-40 can be mixed with synthetic or mineral oils.

Before use always refer to the owner manual or handbook of the vehicle.

PROPERTIES

<u> </u>		
Viscosity grade	SAE J 300	0W-40
Density at 20°C (68°F)	ASTM D1298	0.841
Viscosity at 40°C (104°F)	ASTM D445	81.0 mm ² /s
Viscosity at 100°C (212°F)	ASTM D445	13.9 mm²/s
HTHS viscosity at 150°C (302°F)	ASTM D4741	3.6 mPa.s
Viscosity Index	ASTM D2270	178.0
Pour point	ASTM D97	-48.0 °C / -54.0 °F
Sulfated Ash	ASTM D874	% weight 1.06
TBN	ASTM D2896	12.3 mg KOH/g
Flash point	ASTM D92	226.0 °C / 439.0 °F



Gasoline and Diesel engine oil Synthese-Technology

STANDARDS	DARDS	
ACEA	A3/B4	
API	SERVICE SP	
BMW	LL-01	
FORD	WSS-M2C937-A	
MERCEDES-BENZ	MB-Approval 229.5	
VW	502 00 505 00	
OE PERFORMANCES		
CHRYSLER	MS 12991	
FIAT	9.55535-M2, 9.55535-N2, 9.55535-Z2	
RENAULT	RN0710	