



# 8100 X-max 0W-40

**Gasoline and Diesel engine oil**

**100% Synthetic – Full SAPS**

## TYPE OF USE

High performance 100% Synthetic lubricant featuring Full SAPS (Sulfated Ash, Phosphorous, Sulfur) technology, specifically designed for powerful and recent cars fitted with large displacement engines, Gasoline and 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

STANDARDS	ACEA A3 / B4 API SERVICES SN / CF
APPROVALS	BMW LL-01 FORD WSS M2C 937 A MB-Approval 229.5 Porsche A40 VW 502 00 – 505 00

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. From 2004, BMW vehicles require an approved BMW LL-04 product such as MOTUL Specific LL-04 5W-40, MOTUL 8100 X-clean 5W-40, MOTUL 8100 X-clean 5W-30, or MOTUL 8100 X-clean+ 5W-30.

BMW LL-01 standard must also be used on all Gasoline engines running outside European Union countries, Switzerland, Norway and Liechtenstein. Refer to BMW recommendations when in doubt.

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 Porsche A40 standard requires extreme high shear resistance from the lubricant. This specification applies to all PORSCHE engines, except Cayenne V6 and Diesel versions (for these specific engines, use an approved Porsche C30 lubricant such as MOTUL 8100 X-clean+ 5W-30).

The FORD WSS M2C 937 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.

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 (CO<sub>2</sub>) 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).

### **RECOMMENDATION**

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**

Viscosity grade	SAE J 300	<b>0W-40</b>
Density at 20°C (68°F)	ASTM D1298	0.841
Viscosity at 40°C (104°F)	ASTM D445	76.2 mm <sup>2</sup> /s
Viscosity at 100°C (212°F)	ASTM D445	13.5 mm <sup>2</sup> /s
HTHS viscosity at 150°C (302°F)	ASTM D4741	3.6 mPa.s
Viscosity Index	ASTM D2270	184
Pour point	ASTM D97	-45°C / -49°F
Flash point	ASTM D92	228°C / 442.4°F
Sulfated ash	ASTM D874	1.1% weight
TBN	ASTM D2896	10.1 mg KOH/g