

**Gasoline and Diesel Engine Oil  
Synthetic Technology****TYPE OF USE**

High performance synthetic technology lubricant specifically designed for powerful and recent cars fitted with large displacement engines, Gasoline and Diesel, naturally aspirated or turbocharged, indirect or direct injection. Multipurpose product featuring numerous car maker approvals, especially recommended for vehicles still under warranty. Suitable for all type of fuels: leaded or unleaded Gasoline, Ethanol, LPG, Diesel and biofuels. Compatible for catalytic converters.

**PERFORMANCES**

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

API SQ lubricants provide outstanding oxidation resistance, better anti-deposits protection, better engine cleanliness, anti-wear protection and enhanced performance at cold temperature for Fuel Economy savings during the whole oil life span.

Besides being backward compatible, compare to API SP, API SN and API SN Plus, the API SQ 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.

From 2004, BMW vehicles require a BMW LL-04 lubricant such as MOTUL 8100 X-clean gen2 5W-40, MOTUL 8100 X-clean EFE 5W-30, MOTUL 8100 X-clean+ 5W-30 or MOTUL Specific LL-04 5W-40.

The BMW LL-01 standard covers also all Gasoline engines running only outside European Union countries, Switzerland, Norway and Liechtenstein. Refer to BMW recommendations when in doubt.

MOTUL 8100 X-cess gen2 5W-40 fulfills all the specifications of BMW Long Life-01 standard of the BMW Group for BMW, MINI and ROLLS-ROYCE vehicles with no exceptions i.e. for models before 2019 and after 2019. For models up to 2019, MOTUL 8100 X-cess 5W-40 can also be used.

The MERCEDES MB 229.5 standard is more stringent than 229.3 in terms of 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 (in 5W-40 viscosity grade) except SLR, and to all MERCEDES Diesel without DPF engines.

The specification MB 226.5 is similar to 229.5 and applies to MERCEDES Gasoline engines sourced from the MERCEDES/RENAULT-NISSAN partnership.

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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, and those requiring the use of an approved Porsche A40, C20 or C30 lubricant.

RENAULT has developed RN0700 and RN0710 standards for oils able to endure the most severe thermal constraints along with modern after treatment systems compatibility.

The Renault RN0700 standard applies to all Naturally Aspirated Gasoline engines (except Renault Sport) of RENAULT Group (Renault, Dacia, Samsung).

The RN0700 specification applies also to all RENAULT Diesel cars fitted with 1.5L dCi engines without DPF (Diesel Particulate Filter) having less than 100 hp output and 20 000 km or 1 year oil drain interval.

The Renault RN0710 standard applies to all turbocharged Gasoline, Renault Sport and Diesel without DPF engines of RENAULT Group (Renault, Dacia, Samsung).

The RN0710 specification does not apply to RENAULT Diesel cars fitted with 1.5L dCi engines without DPF having less than 100 hp output and 20 000 km or 1 year oil drain interval which specifically require a RN0700 lubricant. For the 2.2L dCi with DPF, use only an approved RN0710 lubricant, not a RN0720.

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.

The FIAT 9.55535-H2, M2, N2 and Z2 performance levels impose the engine oil to combine both ACEA A3/B4 standard and 5W-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.

GM-OPEL Diesel LL B-025 standard requires two main properties from the lubricant: high HTHS and very low volatility to drastically decrease oil consumption. MOTUL 8100 X-cess 5W-40 is especially recommended for OPEL Diesel engines such as the 2.0L and 2.2L DTI engines (extended drain interval : on-board computer).

PSA has developed B71 2296 standard in order for the oils to provide high thermal stability and insures an outstanding resistance at high temperatures to avoid black sludge and viscosity increase that soot, coming from combustion residues, may create.

PSA B71 2296 specification is suitable for some PSA Gasoline and Diesel engines requiring this standard: Always refer to the recommendation of your service booklet.

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## MOTUL 8100 X-CCESS GEN2 5W-40

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### RECOMMENDATIONS

Drain interval: refer to manufacturers' recommendations and tune to your own use.  
MOTUL 8100 X-cess gen2 5W-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	5W-40
Density at 20°C (68°F)	ASTM D1298	0.849
	ASTM D445	85.2 mm <sup>2</sup> /s
Viscosity at 40°C (104°F)		
	ASTM D445	13.5 mm <sup>2</sup> /s
Viscosity at 100°C (212°F)		
HTHS viscosity at 150°C (302°F)	ASTM D4741	3.8 mPa.s
	ASTM D2270	169.0
Viscosity Index		
	ASTM D97	-42.0 °C / -44.0 °F
Pour point		
Sulfated Ash	ASTM D874	% weight
		1.07
TBN	ASTM D2896	12.5 mg KOH/g
Flash point	ASTM D92	228.0 °C / 442.0 °F

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## MOTUL 8100 X-CESS GEN2 5W-40

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STANDARDS	
ACEA	A3/B4
API	SERVICE SQ
BMW	LL-01
MERCEDES-BENZ	MB-Approval 226.5, MB-Approval 229.5
PORSCHE	A40
RENAULT	RN0710 - RN0700 (under n° RN0710-19-60 - n° RN0700-19-73)
VW	502 00 505 00
OEM PERFORMANCES	
CHRYSLER	MS 12991
FIAT	9.55535-H2, 9.55535-M2, 9.55535-N2, 9.55535-Z2
GENERAL MOTORS	GM LL-B-025 (Diesel)
PRODUCTS	
PSA Groupe	PSA B71 2296

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