

### MOTUL 8100 X-CLEAN+ EFE 0W-30

# DPF SCR

Gasoline & Diesel lubricant Synthetic Technology

#### TYPE OF USE

Synthetic technology high performance engine oil specially developed for the latest generation of diesel and gasoline engines that comply with Euro 4, 5 or 6 emission regulations and require an engine oil with high HTHS viscosity (> 3.5 mPa.s) and "Mid SAPS" with reduced content of sulfated ash ( $\leq 0.8\%$ ), phosphorus (0.07%  $\leq x \leq 0.09\%$ ) and sulfur ( $\leq 0.3\%$ ). Compatible with catalytic converters (CAT), diesel particulate filters (DPF) and SCR (Selective Catalyst Reduction). Approved and recommended engine oil for the latest generation of BMW, CHRYSLER, FIAT, MERCEDES, PORSCHE and VAG (VW, Audi, Seat, Skoda) vehicles due to its EFE (Extra Fuel Economy) properties.

Suitable also for all diesel and gasoline engines that require an engine oil category ACEA C3 in 0W-30.

Before use, always consult the operating instructions or the manual of the vehicle.

#### PERFORMANCES

STANDARDS ACEA C3

APPROVALS	BMW LL-04
	MERCEDES-BENZ MB-Approval 229.52
	PORSCHE C30
	VW 504 00 507 00

PERFORMANCES FIAT 9.55535-S3, CHRYSLER MS 11106

Engines compliant with Euro 4, 5 and 6 emission regulation are fitted with sensitive exhaust gas after treatment systems. Indeed, Sulfur and Phosphorus inhibit catalytic converters operation leading to inefficient exhaust gas treatment; and Sulfated Ashes clog DPFs leading to shorten regenerating cycle, quick oil aging, higher fuel consumption and engine power loss. The ACEA C3 standard requires from the lubricant significant oil film resistance and low emission performance during use in powerful engines.

MOTUL 8100 X-CLEAN+ EFE 0W-30 features advanced synthetic base stocks coupled with specific friction modifier molecules and dedicated SAPS levels that generate outstanding oil film resistance, reduce friction in the engine and provide after treatment device compatibility. MOTUL 8100 X-CLEAN+ EFE 0W-30 brings high lubricating properties such as wear protection and high temperature resistance for better controlled oil consumption. ACEA C3 lubricants achieve extended drain intervals as managed by the vehicle on-board computer.

Numerous Asian OEMs such as HONDA, KIA / HYUNDAI, MITSUBISHI, NISSAN, SUBARU, SUZUKI, SSANGYONG,

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TOYOTA... also recommend ACEA C3 lubricant to guarantee the maximum performance and durability for most of their recent vehicles (since 2006), especially Diesels with DPF.

The BMW Long Life-04 specification imposes severe constraints to the lubricant particularly due to Valvetronic and after treatment systems compatibility. It covers all BMW engines from 2004 and also all BMW engines before 2004. BMW LL-04 covers all the previous BMW specifications such as BMW LL-98 and BMW LL-01. ATTENTION: BMW LL-04 product can be used for gasoline engines only in European Union countries, Switzerland, Norway and Liechtenstein. Outside those countries, a BMW LL-01 lubricant such as MOTUL 8100 X-cess gen2 5W-40 is required. Refer to BMW recommendations when in doubt.

MOTUL 8100 X-clean+ EFE 0W-30 fulfils all the specifications of BMW Long Life-04 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, i.e. until end of 2018 only, MOTUL 8100 X-clean 5W-40 can also be used.

MERCEDES has developed MB 229.52 standard for all "BlueTEC" Diesel engines fitted with SCR (Selective Catalyst Reduction) allowing NOx treatment through the use of AdBlue<sup>®</sup> additive or so-called "Diesel Exhaust Fluid".

MB 229.52 specification is fully backward compatible with MB 229.51 and MB 229.31 specifications for all Mercedes Diesel engines with or without DPF and some Gasoline engines. MB 229.52 standard also requires improved cold flow properties to reduce hydrodynamic friction of the oil, in order to obtain fuel economy especially when the oil is cold. This extra requirement for cold flow properties allows excellent oil flow at start up, faster oil pressure build up, faster revs raisings and faster operating temperature reach.

PORSCHE has introduced its C30 norm to guarantee the perfect lubrication of all their Diesel engines and V6 Gasoline engines (Porsche Cayenne). Approved "PORSCHE C30" lubricant such as MOTUL 8100 X-clean+ EFE 0W-30 fulfills all these highly demanding requests especially regarding oil film resistance.

VOLKSWAGEN for their VW 504 00 and VW 507 00 standards requires from the lubricant to be fully compatible with their after treatment systems such as catalytic converters and DPFs to ensure the highest durability of most Gasoline and Diesel engines of VW, AUDI, SEAT and SKODA vehicles.

The FIAT 9.55535-S3 performance level requires the engine oil to combine both ACEA C3 and 0W-30 in order to lubricate the Diesel 2.2L, 2.8L and 3.0L Multijet and CRD engines of FIAT, ALFA-ROMEO, LANCIA and JEEP produced from 2011. The CHRYSLER MS-11106 specification for Diesel engines with DPF is both the mirror of this FIAT 9.55535-S3 specification and MB 229.51 specification at CHRYSLER.

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MOTUL 8100 X-clean+ EFE 0W-30 fully answers all those various requests that BMW, CHRYSLER, FIAT, MERCEDES, PORSCHE and VW have developed for their lubricant standards through engine oils with high HTHS (> 3.5 mPa.s) and reduced Sulfated Ash, Phosphorus and Sulfur content (Mid SAPS), suitable for use with modern exhaust gas after treatment systems.

The viscosity grade SAE 0W-30 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.

#### RECOMMENDATIONS

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

Can be mixed with synthetic and mineral oils.

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

### PROPERTIES

Viscosity grade	SAE J 300	0W-30	
Density at 20°C (68°F)		0.842	
	ASTM D445	63.7 mm²/s	
Viscosity at 40°C (104°F)			
	ASTM D445	12.3 mm²/s	
Viscosity at 100°C (212°F)			
HTHS viscosity at 150°C (302°F)	ASTM D4741	3.5	
	ASTM D2270	190.0	
Viscosity Index			
	ASTM D97	-50.0 °C / -58.0 °F	
Pour point			

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MOTUL	MOTUL 8100 X-CLEA	MOTUL 8100 X-CLEAN+ EFE 0W-30	
DPF SCR	Gasoline & Diesel lubricant Synthetic Technology		
Sulfated Ash	ASTM D874	% weight 0.77	
TBN Flash point	ASTM D2896 ASTM D92	8.1 mg KOH/g 227.0 °C / 440.0 °F	

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