



# 8100 X-clean FE

## 5W-30



**Gasoline & Diesel lubricant - EURO 4, 5 and 6**

**100% Synthetic**

### TYPE OF USE

Advanced 100% Synthetic lubricant that provides at the same time **High Protection** and **Fuel Economy**. Approved by GM (General Motors), Mercedes Benz, PSA (Peugeot Citroën) and VAG (Volkswagen, Audi, Skoda and Seat).

Specially designed for the latest generation cars, powered by Gasoline and Diesel engines, naturally aspirated or turbocharged, direct or indirect injection.

For vehicles that are EURO 4, EURO 5 or EURO 6 emission regulation compliant and require an ACEA C3 engine oil i.e. high HTHS ( $> 3.5$  mPa.s) viscosity and "Mid SAPS" with reduced content of Sulfated Ash ( $\leq 0.8\%$ ), Phosphorus ( $0.07 \leq x \leq 0.09\%$ ) and Sulfur ( $\leq 0.3\%$ ), or an ACEA C2 engine oil i.e. a low friction, low HTHS ( $\geq 2.9$  mPa.s) viscosity and "Mid SAPS" oil with reduced content of Sulfated Ash ( $\leq 0.8\%$ ), Phosphorus ( $\leq 0.09\%$ ) and Sulphur ( $\leq 0.3\%$ ).

Suitable when a "Fuel Economy" lubricant is required: ACEA C2 standard. This lubricant is approved according to **PSA B71 2290 standard by PEUGEOT CITROËN AUTOMOBILE**.

Compatible with catalytic converters (CAT) and Diesel Particulate Filters (DPF).

May be unsuitable for use in some engines. Always refer to the owner's manual if in doubt.

### PERFORMANCES

#### STANDARDS

ACEA **C2 / C3**  
API SERVICES **SN / CF**

#### APPROVALS

GM-OPEL **dexos2**<sup>®</sup> (replaces GM-LL-A-025 & B-025) under n° GB2F0511011  
MB-Approval **229.51**  
PSA **B71 2290**  
VW **502 00 – 505 01**

#### PERFORMANCES

FIAT 9.55535-**S1 / S3**

#### RECOMMENDATIONS

HONDA, KIA / HYUNDAI, MITSUBISHI, NISSAN, SUBARU, SUZUKI, SSANGYONG, TOYOTA,...

Engines compliant with EURO 4, EURO 5 and EURO 6 emission regulations are fitted with sensitive exhaust gas after treatment systems. Indeed, Sulfur and Phosphorus inhibit catalytic converter operation leading to inefficient exhaust gas treatment. Also, Sulfated Ashes clog DPFs leading to shorten regenerating cycles, 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. The ACEA C2 standard requires significant reduction of friction to ensure gains in energy savings, and therefore fuel economy benefits.

MOTUL 8100 X-clean FE 5W-30 has 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 FE 5W-30 brings high lubricating properties such as wear protection and high temperature resistance for better controlled oil consumption. ACEA C2 and C3 lubricants achieve extended drain intervals as managed by the vehicle on-board computer.

Numerous OEMs such as HONDA, KIA / HYUNDAI, MITSUBISHI, NISSAN, SUBARU, SUZUKI, SSANGYONG, TOYOTA,... recommend an ACEA C3 lubricant for most of their vehicles, especially Diesels with DPF.

In countries with relevant Diesel passenger car market shares e.g. Europe, the GM-OPEL dexos2<sup>®</sup> standard is suitable for the whole range of GM-OPEL Diesel engines (including DPF versions) and Gasoline engines from Model Year 2010. Also, GM-OPEL dexos2<sup>®</sup> fully supersedes and replaces the previous GM specifications: GM-LL-A-025 (Gasoline) and GM-LL-B-025 (Diesel).

The MB 229.51 requires among many other severe constraints from the lubricant a reduced content of Sulfated Ash, Phosphorus and Sulphur in order to be compatible with MERCEDES exhaust gas after treatment systems. The specification MB 229.51 applies to some MERCEDES Gasoline engines, and to all MERCEDES Diesel engines, with or without DPF (except BlueTEC engines with SCR. In this case use a MB 229.52 lubricant such as MOTUL SPECIFIC 229.52 5W-30).

PSA for its B71 2290 norm requires oil to be able to endure the most severe thermal constraints and be compatible with modern PSA after treatment systems. PSA B71 2290 standard is suitable for most PSA Gasoline engines and most Diesel (including DPF versions) engines, except for Diesel "BlueHDi" engines which requires PSA B71 2312 approved lubricant such as MOTUL SPECIFIC 2312 0W-30.

Specifications VW 502 00 and VW 505 01 require outstanding detergent/dispersant power, high oil film resistance and better viscosity increase resistance (due to soot) in order to cover many Gasoline engines and most of Direct Injection Diesel engines (unit injector system, fixed oil drain interval, check owner's manual). Attention, do not use MOTUL 8100 X-clean FE 5W-30 when a VW 504 00 or VW 507 00 lubricant is required, in that case use MOTUL SPECIFIC 504 00 507 00 5W-30 or MOTUL 8100 X-clean+ 5W-30.

The FIAT 9.55535-S1 performance level requires the engine oil to combine both ACEA C2 and 5W-30 in order to perfectly lubricate the Diesel 1.3L, 1.6L and 2.0L Multijet engines of FIAT, ALFA-ROMEIO, and LANCIA produced from 2007.

Some Asian OEMs require for their most recent Diesel engines (since 2006) an ACEA C2 lubricant to guarantee the maximum performance and durability. Examples of OEMs uses for MOTUL 8100 X-clean FE 5W-30: TOYOTA 2.0L and 2.2L D4D ; HONDA 2.2L CDTI and DTEC ; and SUBARU 2.0L D.

MOTUL 8100 X-clean FE 5W-30 meets all these very demanding requirements for performance and durability set by OEMs, including in particular the full compatibility to use bio fuels (when using biodiesel at a mix ratio of up to 10% (Biodiesel – B10) for the PSA B71 2290 standard, or when using E85 (unleaded Gasoline containing 85% Ethanol) for dexos2<sup>®</sup> standard).

## **RECOMENDATIONS**

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

Do not mix with lubricants not ACEA C3 or ACEA C2 compliant.

Before using, always refer to the owner's manual or handbook of the vehicle.

## **PROPERTIES**

Viscosity grade	SAE J 300	<b>5W-30</b>
Density at 20°C (68°F)	ASTM D1298	0.853
Viscosity at 40°C (104°F)	ASTM D445	72.9 mm <sup>2</sup> /s
Viscosity at 100°C (212°F)	ASTM D445	12.1 mm <sup>2</sup> /s
Viscosity HTHS at 150°C (302°F)	ASTM D4741	3.5 mPa.s
Viscosity index	ASTM D2270	163
Pour point	ASTM D97	-33°C / -27°F
Flash point	ASTM D92	226°C / 439°F
Sulfated ash	ASTM D874	0.77% weight
TBN	ASTM D2896	7.1 mg KOH/g