

# **MOTUL NGEN HYBRID 0W-16**



Fuel Economy Gasoline engine lubricant Synthetic – Organic base

### TYPE OF USE

**Synthetic bio-sourced "Fuel economy" engine oil** specially designed for Hybrid Electric Vehicles (H.E.V) and Plug-in Hybrid Electric Vehicles (P.H.E.V) fitted with recent gasoline engines, turbocharged or naturally aspirated, direct or indirect injection, designed to use SAE 0W-16 oil with low friction and low HTHS (High Temperature High Shear) viscosity (≥ 2.3 mPa.s).

MOTUL NGEN HYBRID 0W-16 is especially formulated for the technical challenges imposed by Gasoline Hybrid cars, such as fuel dilution, water emulsion, high numbers of stop/start events and lower oil temperature conditions. This state-of-the-art formulation is part of a whole new Motul sustainable concept as it contains 25% of Organic base (100% renewable plant-based synthetic base stocks) and is filled in a 50% recycled and 100% recyclable Motul plastic can. This Organic base using non-fossil renewable materials is limiting the environmental impact and allows Motul to lower its carbon footprint by 25% during manufacturing process.

MOTUL NGEN is the common naming to qualify the sustainable ranges at Motul using different technologies into the formulations and packaging to reduce its carbon footprint.

This dedicated formula can also be used for gasoline engines requiring a viscosity grade SAE 0W-16 lubricant or a "Fuel Economy" lubricant in viscosity grade 16, with API SP-RC, API SP and/or ILSAC GF-6B standards.

MOTUL NGEN HYBRID 0W-16 is also suitable for battery electric vehicles (B.E.V) fitted with thermal gasoline engine used as Range Extender.

Compatible with catalytic converters and particulate filters.

This type of oil may be unsuitable for use in some engines. Refer to the owner manual if in doubt.

### PERFORMANCES

STANDARDS API SERVICE SP-RC

ILSAC GF-6B

USDA BioPreferred Program

RECOMMENDATIONS HONDA, SUZUKI, TOYOTA

The API SP standard is fully backward compatible over API SN requirements and all former API standards. The API SP-RC specification is even more demanding on the energy saving requirements.

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.

We retain the right to modify the general characteristics of our products in order to offer to our customers the latest technical development.

Product specifications are definitive from the order which is subject to our general conditions of sale and warranty.



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Besides being backward compatible, compare to API SN and API SN Plus, the API SP standard provides higher performance and adds more protection against LSPI phenomenon for downsized direct injection turbocharged gasoline engines. Based on the API SP specification, the ILSAC GF-6B standard for viscosity grade 16 lubricants is even more severe compare to ILSAC GF-5 especially on the Fuel Economy benefits performance. The requirements on the low viscosity "Fuel Economy" side of the lubricant, but also extended drain intervals, pistons/rings cleanliness, seals compatibility and reduced content of Phosphorus for enhancing after treatment systems compatibility. The ILSAC GF-6B specification also ensures perfect engine protection when gasoline containing up to 85% Ethanol is used (E85).

Viscosity grade SAE 0W-16 minimizes seriously lubricant hydrodynamic friction, allows significant fuel economy benefits especially when the oil is cold.

This low viscosity grade also improves oil flow at start up, delivers faster oil pressure build up, faster rev raisings and allows to reach operating temperature faster, regardless of engine operating mode.

MOTUL NGEN HYBRID 0W-16 is specially formulated to meet the specific challenges of hybrid electric vehicles, such as HEV, PHEV and BEV with Range Extender, on which numerous and multiples unexpected stops and starts of the Gasoline engine are involved during the different operating phases of the hybrid vehicle. This particular mode of operation of the internal combustion engine on a hybrid vehicle generates very specific constraints for the lubricant such as fuel dilution, water emulsion, high numbers of stop/start events and working at lower oil temperature conditions which generate increased oxidation, and for that purpose, MOTUL NGEN HYBRID 0W-16 fully meets all these demanding requirements.

Environment friendly, this type of oil allows fuel consumption reduction and therefore minimizes greenhouse gases (CO<sub>2</sub>) emissions.

## ORGANIC BASE

The **Organic base** using non-fossil renewable materials is limiting the environmental impact and allows Motul to lower its carbon footprint by 25% during manufacturing process.

NGEN HYBRID 0W-16 is approved by the USDA – US Department of Agriculture as part of its BioPreferred Program for certified environmental supporting sustainable oils.

The specific Organic base of NGEN HYBRID 0W-16 enhances all conventional API criteria requirements while bringing better engine cold start and reduced fuel consumption, and improves oil consumption control.

MOTUL NGEN HYBRID 0W-16 demonstrates all these qualities on all key criteria and requirements when compared to API SP and ILSAC GF-6B standards:



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# **RECOMMENDATIONS**

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

MOTUL NGEN HYBRID 0W-16 can be mixed with synthetic or mineral oils.

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

# **PROPERTIES**

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Viscosity grade	SAE J 300	0W-16
Density at 20°C (68°F)	ASTM D1298	0.841
Viscosity at 40°C (104°F)	ASTM D445	38.5 mm²/s
Viscosity at 100°C (212°F)	ASTM D445	7.5 mm²/s
HTHS viscosity at 150°C (302°F)	ASTM D4741	2.4 mPa.s
Viscosity Index	ASTM D2270	166.0
Pour point	ASTM D97	-42.0 °C / -44.0 °F
Sulfated Ash	ASTM D874	% weight 0.72
TBN	ASTM D2896	7.2 mg KOH/g
Flash point	ASTM D92	228.0 °C / 442.0 °F