

# GEAR GRAND DX GL-5

## Fuel saving gear oil for vehicles

Environmental concerns such as energy saving and the reduction of carbon dioxide emission are increasing. The current market demands fuel saving oil for the large size diesel engine. The transportation industry is carrying out various actions such as adoption of digital tachograph, an eco-tire and a fuel saving diesel engine oil.

**GEAR GRAND DX GL-5** is a gear oil that is a first kind in the market to purpose fuel saving without changing the viscosity of the product for large vehicles such as trucks and buses. Conventional gear oil aims fuel saving by reduction of viscosity. However, **GEAR GRAND DX GL-5** achieves fuel saving by reduction of frictional loss at the metal sites of gears and bearings without reduction of viscosity. This is done by the use of polar high-viscosity base material and our original additive technology. As a result, it improves fuel saving without compromising the reliability of gears and bearings.

### ● Special Features

#### 1. Excellent Fuel Saving Effect

**GEAR GRAND DX GL-5** is the fuel saving gear oil developed with use of polar high-viscosity base material and our original additive technology. **GEAR GRAND DX GL-5** reduces the friction loss due to the lack of oil film in the metal site of gears and bearings, etc. at the time of low speed, rapid acceleration and deceleration of the car.

#### 2. Improved Reliability of Gear

Because the contact pressure between gears is high in the hypoid gear of the differential gear, the gear oil is exposed to very severe lubrication conditions. Excellent thermal and oxidation stability and high extreme pressure property of gear oil are required to operate gears smoothly.

**GEAR GRAND DX GL-5** meets these performance requirements and suppresses the excessive heating of the metal sites by reducing the friction loss of gears and bearings efficiently. Therefore, it contributes to the durability and improved reliability of gears.

#### 3. Longer-life Characteristics

**GEAR GRAND DX GL-5** exhibits excellent oxidation stability and thermal stability due to an optimal formulation of base oils and the extreme-pressure agents and other additives. It can be used for long periods of time even at high speed

driving which tends to increase the oil temperature.

#### 4. 80W-90 gear oil is available for both transmission and differential gears

Required performance for gear oil differs between the transmission part and the differential part.

**GEAR GRAND DX GL-5 80W-90** is a transmission / differential gear oil that satisfies both requirements at a high level and demonstrates fuel saving performance.

### ● Applications

**SAE 90, SAE140:** Differential gears for passenger cars, trucks, buses and construction machinery.

**SAE 80W-90 :** Transmission gears and differential gears for passenger cars, trucks and buses and construction machinery (applicable to resin type synchronizer ring as well as brass)

### ● Containers

200-liter drum, 20-liter can

**• Typical Properties of GEAR GRAND DX GL-5**

API Service Grade		GL-5		
SAE Viscosity Grade		80W-90	90	140
Color	(ASTM)	L1.5	L1.5	L2.0
Density	(15°C) g/cm <sup>3</sup>	0.897	0.900	0.906
Viscosity	(40°C) mm <sup>2</sup> /s	163	191	381
	(100°C) mm <sup>2</sup> /s	18.0	17.9	28.2
Viscosity Index		122	102	101
Flash Point	(COC) °C	220	224	222
Pour Point	°C	-30.0	-22.5	-15.0
Acid Number	mgKOH/g	0.87	1.04	1.07
Copper strip corrosion (100°C, 3h)		1	1	1

Note: The typical properties may be changed without notice. (February 2019)



## Handling Precautions

▼ Follow these precautions when handling this product.

<b>Composition :</b>	Base Oil(s), Additives
<b>Hazard pictograms:</b>	
<b>Signal word:</b>	Warning
<b>Hazard Statement:</b>	May cause an allergic skin reaction.
<b>Precautionary Statements:</b>	<ul style="list-style-type: none"> <li>• Do not handle until all safety precautions have been read and understood.</li> <li>• Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>• Do not allow the eyes to become exposed to the product. Do not swallow the product.</li> <li>• Contaminated work clothing should not be allowed out of the workplace.</li> <li>• Avoid breathing dust/fume/gas/mist/vapours/spray.</li> <li>• Wash hands thoroughly after handling.</li> <li>• Do not eat, drink or smoke when using this product.</li> </ul>
<b>Response</b>	<ul style="list-style-type: none"> <li>• IF SWALLOWED: Immediately call a POISON CENTER/doctor.</li> <li>• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.</li> <li>• IF ON SKIN: Wash with plenty of soap and water.</li> <li>• If skin irritation or a rash occurs: Get medical advice/attention.</li> <li>• Take off contaminated clothing and wash it before reuse.</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>• The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.</li> <li>• Containers that have been opened must be tightly sealed.</li> </ul>
<b>Disposal</b>	<ul style="list-style-type: none"> <li>• Dispose of contents/container in accordance with local/regional/national/international regulations.</li> <li>• If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.</li> </ul>