

DIESEL MACHINERY

High Performance Longer Life Diesel Engine Oil (DH-1/CF-4)

In Japan, the engines and oils used in diesel vehicles are being modified in order to reduce emissions. In response to increasingly strict exhaust restrictions, more and more large diesel vehicles are being equipped with exhaust gas recirculation (EGR) systems, which expose the engine oils to increasingly severe environments. Economic pressures and the wider variety of truck transportation methods have also created a demand for longer-life oils.

Today, diesel engine oils need to provide not only good resistance to heat and wear but also low oil consumption (to reduce the amount of particulate matter), longer life (to reduce the amount of discarded used oil), and improved mileage (to increase the usage efficiency of fuels and reduce carbon dioxide emissions). **DIESEL MACHINERY** is a DH-1/CF-4 grade diesel engine oil that was specially developed to meet all of these requirements.

● Special Features

1. Compatible with Engines Equipped with EGR (for Reduced NOx)

DIESEL MACHINERY inhibits the viscosity increases that can be caused by soot accumulating in the oil when exhaust gas recirculation (EGR) systems are used. And since **DIESEL MACHINERY** is blended with high-viscosity-index base oils that have very low evaporation loss, the exhaust contains less soluble organic fraction (SOF), which originates in the engine oil and is one component of particulate matter.

2. Longer Oil Life

The high viscosity index (VI) of **DIESEL MACHINERY**'s base oils and its optimized additive blend combine to provide significantly improved thermal stability, oxidative stability, and soot dispersion. The result leads to much longer oil life.

3. Reduced Oil Consumption

DIESEL MACHINERY's high-VI base oils have very low evaporation loss, so there is little oil consumption even under high-temperature conditions. As a result, less oil needs to be added as make-up.

4. Longer Engine Life

DIESEL MACHINERY's optimal additive blend provides outstanding antiwear and detergent-dispersant performance, so it prevents wear and carbon sludge accumulation on the engine parts and lengthens the engine life.

● Applications

Diesel engines for large trucks, buses, construction machinery, etc.

● Containers

200-liter drums and 20-liter cans.

● Typical Properties of DIESEL MACHINERY

JASO		DH-1	DH-1
API		CF-4	CF-4
SAE Grade		class	class
		10W-30	15W-40
Color (ASTM)		L5.5	L5.5
Density	g/cm ³	0.867	0.876
Viscosity (40°C)	mm ² /s	68.6	103.0
Viscosity (100°C)	mm ² /s	10.6	14.1
Viscosity Index		142	139
Flash Point	°C	242	244
Pour Point	°C	-32.5	-32.5
Evaporation Loss (250°C, 1h)	mass%	8.3	6.5
Acid Number	mgKOH/g	2.49	2.48
Base Number (ASTM D664)	mgKOH/g	10.2	10.1
Sulfated Ash	mass%	1.7	1.7

Note: The typical properties may be changed without notice. (June 2011)



Handling Precautions

▼ Follow these precautions when handling this product.

Composition :	Base Oil, Additives
Precautionary pictograms:	
Signal word:	Warning
Hazard Statement:	Causes serious eye irritation
Precautionary Statements:	
Prevention	<ul style="list-style-type: none">• Do not handle until all safety precautions have been read and understood.• Wear protective gloves/protective clothing/eye protection/face protection.• Do not allow the eyes to become exposed to the product. Do not swallow the product.• Obtain special instructions before use.• Wash hands thoroughly after handling.• Do not eat, drink or smoke when using this product.
Response	<ul style="list-style-type: none">• IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.• IF ON SKIN: Wash with plenty of soap and water.• IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Storage	<ul style="list-style-type: none">• The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.• Containers that have been opened must be tightly sealed.
Disposal	<ul style="list-style-type: none">• Dispose of contents/container in accordance with local/regional/national/international regulations.• If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.