



# Bio-Fleet™ HD HP Motor Oils

## SAE 40, 30, 20, 10W

Bio-Fleet HD HP Motor Oils (Low Ash) are heavy duty high performance formulations that contain the most advanced chemical technology available for heavy duty naturally aspirated turbocharged and supercharged diesel and gasoline engines. **Motor Oils 30, and 40 wts** are recommended for API Service CF, CF-2, CE, CD-II and CD (Series III). **SAE 10W** and **SAE 20** meet API CD. All viscosity grades meet API SM. They meet the requirements for EPA 2007 compliant diesel engines equipped with after treatment devices such as diesel oxidation catalysts and particulate filters that require low ash formulations.

Bio-Fleet HD HP Motor Oils can be used for road or off-road equipment in heavy duty engines, locomotive and marine engines, hydrostatic transmissions, manual transmissions, final drives, and hydraulic systems where detergent-type motor oils are recommended. Because of the higher viscosity index of the biobased oils, each product provides a higher viscosity index (VI) and higher temperature shear stability performance without the use of viscosity index improvers (polymers). They also provide the higher mechanical shear stability required for conventional straight weight viscosity formulas, but with improved cold temperature pumpability. In addition, the products provide improved performance over conventional formulations for use in smaller cubic inch diesel and gas engines for power generators, personal watercraft, lawn mowers, snow blowers, and motorcycles. **(Meets USDA BioPreferred<sup>SM</sup>)**

**(Always consult owner's manual for proper viscosity and performance recommendations).**

<u>TYPICAL PROPERTIES</u>	<u>10W</u>	<u>20</u>	<u>30</u>	<u>40</u>
<u>VISCOSITY</u>				
c <sub>T</sub> @ 40°C	34.1	49.0	81.0	112
c <sub>T</sub> @ 100°C	6.0	7.8	11.5	14.8
Viscosity Index	122	127	133	136
Pour Point, °C,	-39	-37	-35	-35
Sulfated Ash Weight %	1.0	1.0	1.0	1.0
Total Base Number (TBN) D-2896	8	10.3	10.3	10.3
<u>PERFORMANCE</u>				
API CF, CF2, CE, CD, SM	M	M	M	M
Allison C-4, C-3	M	----	M	----
Caterpillar CD/TO-2	M	---	M	M
<b>Product Number</b>	<b>8560-</b>	<b>8561-</b>	<b>8562-</b>	<b>8563-</b>

M = Meet or exceed the requirements

These Heavy Duty Lubricants are formulated using the most advanced API SM/CF approved additives. While no formal engine oil license performance is implied or guaranteed in these formulations, (unlicensed formulas) the key physical properties have been met as defined by SAE J300, and the formulas passed the tests required for API base oil interchange. These biobased formulations are inherently biodegradable and designed to reduce emissions over conventional formulas.

STABILIZED by Renewable Lubricants \* is RLI's trademark on their proprietary and patented anti-oxidant, anti-wear, and cold flow technology. High Oleic Base Stocks (HOBS) are agricultural biobased oils. This Stabilized technology allows the HOBS to perform as a high performance formula in high and low temperature applications, reducing oil thickening and deposits. US Patents: 5,990,055, 6,383,992, 6,534,454, Canada Patents: 2,498,812 with additional pending and Foreign Patents.

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**Availability F.O.B.: Hartville, Ohio, USA Quart 1 Gallon 5 Gallon Pail Drum Totes Bulk**

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