



Renewable Lubricants, Inc.

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Bio-SynXtra™ SHP Motor Oil **SAE 0W20 PCMO**

STABILIZED™
by Renewable Lubricants

"Biobased Lubricants that Perform Like Synthetics"

Bio-SynXtra™ Super High Performance Motor Oil SAE 0W20 is a patented biobased motor oil. It is designed with additional enhancement chemistry to provide optimum performance in naturally aspirated engines, and newer high output turbocharged and supercharged gasoline engines in passenger cars, vans, sport utility vehicles, and light duty trucks requiring ILSAC GF-5, API SN and SM (**Lubricity Enhanced Energy Conserving Formula Meeting Newest Catalytic Converter Requirements**).

HIGH PERFORMANCE BENEFITS OF STABILIZED HOBS FORMULATIONS:

- Super High Viscosity Index
- Improved fuel economy
- Superior viscosity stability
- Excellent oxidation stability
- Meets **USDA BioPreferredSM**
- Superior antiwear & extreme pressure performance
- Superior low volatility reduces emissions
- Excellent low temperature pumpability
- Superior low foam tendency
- Improved biodegradability

Stabilized HOBS produces a super high Viscosity Index (VI) that is higher than mineral and synthetic base oils (HOBS avg. 220 VI compared to mineral oil and synthetic at avg. 100 to 140VI), providing an exceptionally higher VI with less mechanical and thermal shear, reducing viscosity breakdown. In addition, HOBS provide superior friction reducing properties and have virtually no volatility comparing to mineral and synthetic base oils. Incorporating these high performance benefits provide a more energy conserving formulation that increases fuel economy and reduces emissions.

Since 1993, RLI's unique, first of their kind, Bio-Super High Performance Motor Oils have proven exceptional performance in the racing world, and they are the lubricants of choice for top performing world and national champions. These high performance racing oils have exceeded the performance of conventional petroleum based products and have shown performance equal to and better than synthetic formulas. Excellent performance has also been experienced from the heavy loads (3000 HP @ >9000 RPM) of IHRA Seven Time World Champion alcohol fueled dragster to the high-temperature, long-term endurance, championship, road racing. These specially formulated racing oils have been designed and tested to run in extreme conditions that would be expected with the motor sport, high performance engines.

This High Performance Lubricant is formulated using the most advanced and newest API SN, API Resource Conserving, ILSAC GF-5, and GM dexos 1 approved additives. While no formal engine oil license performance is implied or guaranteed in this formulation, (unlicensed formula) the key physical properties have been met as defined by SAE J300, and the formula passed the tests required for API and ILSAC base oil interchange. This biobased formulation is inherently biodegradable and is 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 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 Patent: 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	Drums	Totes	Bulk
RLI Item #		85091	85093	85094	85096	85097	85099

Bio-SynXtra™ SHP Motor Oil SAE 0W20 PCMO

Proven Performance In Old And New Vehicles:

This patented biobased lubricant is formulated to meet and exceed the Original Equipment Manufactures (OEM) requirements and has proven to improve performance in new vehicles. In addition to newer vehicles, older vehicles with higher mileage and equipment with higher hours using conventional motor oils can also need a different lubricant that improves performance in these out of warranty machines. As the engine wears the lubrication film needs to be improved and the additive technology should also be increased to prevent additional wear and condition the seals for longer life. Unlike conventional motor oils, this patented biobased formula has special booster additives and superior viscosity stability that help improve engine life in new and old vehicles. The super high viscosity index is key to reduced fuel dilution, reduced wear, and improved fuel economy.

TYPICAL SPECIFICATIONS	METHOD	<u>SAE 0W20</u>
Viscosity @ 100°C	ASTM D-445	8.6
Viscosity @ 40°C	ASTM D-445	44
Viscosity Index	ASTM D-2270	178
Flash Point (COC)	ASTM D-92	240°C
Pour Point	ASTM D-97	-48
CCS @ -35°C, cp	ASTM-D-5293	Max – 6,200
MRV-TP1 @ -40°C, cP	ASTM-D-4684	14,000
Yield Stress, Pa		None
HTHS @ 150° C, Apparent Viscosity, cP	ASTM-D-4683	>2.9
NOACK Volatility %		9.0
Energy Conserving		YES

Following are some of the organizations and companies who are using RLI's Bio-Engine Oils successfully:

Many USDA Facilities
U.S. Coast Guard
U.S. Army
National Aeronautics and Space Administration (NASA)
Pictured Rocks National Lakeshore
Sleepy Hollow State Park
Point Reyes National Seashore
Wells State Park
Cape Cod National Seashore
Atkinson Contractors
Mark Thomas Racing
Volunteer Chevy
NOAA and the Great Lakes Region
Portage Area Regional Transit Authority (PARTA)