Renewable Lubricants, Inc.
476 Griggy Rd., P.O. Box 474
Hartville, Ohio 44632-0474
Voice: 330.877.9982 Fax 330.877.2266
Web: www.renewablelube.com

Bio-SynXtra™ PowerLift Hydraulic Fluid

(Snow Plows, Utility Lifts, Booms, Lift Gates, Stands & Wheel Chair Lifts)

"Biobased Lubricants that Perform Like Synthetics"

Bio-SynXtra™ PowerLift Hydraulic Fluid is an ultimately biodegradable[1] biobased formula designed specifically to replace mineral oil based hydraulic fluids for environmentally sensitive areas. It provides excellent performance in very cold temperatures and can replace obsolete specification MIL-PRF-5606 for ground support equipment. Bio-SynXtra™ PowerLift Hydraulic Fluid is formulated to perform in hydraulic systems that require anti-wear, anti-foam, anti-rust, anti-oxidation, and demulsibility properties. It is highly inhibited against moisture and rusting in both fresh and sea water and pass both A and B Sequences of the ASTM D-665 Turbine Oil Rust Test and it provides excellent water separation as shown in ASTM D-1401 Demulsibility Test. Incorporating the super high viscosity index of the Stabilized* High Oleic Base Stocks (HOBS) into the formula, gives multi-grade synthetic base oil performance by boosting the viscosity index to synthetic levels. This super high viscosity index of the HOBS naturally improves the thermal shear stability of the formula and increases high pressure load capacity. The HOBS's extremely low volatility increases the flash and fire safety features in the formula. A zinc-free additive system has also been developed that is environmentally friendly and exceeds the load stage 10 in the FZG (DIN51354) requirements for low viscosity hydraulic and turbine oils. It may be used in reduction gears for cold temperature applications, where the OEM recommends a lighter viscosity or SAE 0W for proper channeling.

Bio-SynXtra™ PowerLift Hydraulic Fluid meets the Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) guidelines for Environmentally Acceptable Lubricants (EALs), and should be used in hydraulic systems where **LOW TOXICITY**, **BIODEGRADABILITY** and **NON-BIOACCUMULATION** properties are required. This product exceeds the acute toxicity (LC-50 / EC-50 >1000 ppm) criteria adopted by the US Fish and Wildlife Service and the US EPA. Because it meets the environmental requirements it can also be used where ISO 15380 (HEES/HETG) Hydraulic Fluids are specified. Bio-SynXtra™ PowerLift Hydraulic Fluid is an **ENVIRONMENTALLY ACCEPTED LUBRICANT (EAL)** that is formulated from renewable biobased resources. We believe Earth's environmental future rests in the use of renewable materials

[1]Ultimate/Readily Biodegradation Pw1 >60% within 28 days in ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants

Typical Specifications

ISO Grade	**15-22**
VISCOSITIES (ASTM D-445):	
@ 100^{O} C., cSt.	4.7
@ 40^{O} C., cSt.	17.19
@ -40^{O} C., cSt.	1900
Viscosity Index (ASTM D2270)	214
Low Temperature Stability (ASTM D-6351)	Pass
Flash Point, COC, ^{O}C (ASTM D-92)	188
Pour Point, ^{O}C (ASTM D-97)	-60
Acid Number (ASTM D-664)	0.4
Dielectric Strength (KV)	45
Copper Corrosion (ASTM D-665)	1A
4 Ball Wear (ASTM D4172)	
1h, 167^{O} F, 1200 RPM, 40kg	.40
Demulsibility (ASTM D-1401)	40/40/0
Foam Sequence I, II, III (ASTM D-892)	0
Rust Prevention, (ASTM D-665 A&B)	Pass
Galvanic Corrosion FTM 791-5322	Pass
Oxidation Stability (ASTM D-6186)	
PDSC minutes @180 ^{O}C	25
PDSC minutes @155 ^{O}C	95

STABILIZED by Renewable Lubricants* is RLI's trademark on their proprietary and patented anti-oxidant, anti-wear, and cold flow technology. High Oleic Base Stock (HOBS) are agricultural vegetable 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. Patented Product: US Patent 6,383,992, US Patent 6,534,454 with additional Pending and Foreign Patents

Availability	**F.O.B.: Hartville, Ohio, USA**	**1 Gallon**	**5 Gallon Pail**	**Drum**	**Totes**	**Bulk**
RLI Product Item #		**81663**	**81664**	**81666**	**81667**	**81669**