Ultra Powerflow™ HE Hydraulic Oil

Ultra High-Efficiency, High VI Antiwear Hydraulic Oil for Wide Temperature Ranges

Ultra Powerflow HE is a premium quality, high viscosity index antiwear hydraulic oil developed primarily for use in mobile equipment operating in cold climates or in locations subject to wide variations in ambient temperatures. It meets the performance requirements of all major hydraulic pump manufacturers, and is recommended for use in all types of high-pressure, high-speed hydraulic pumps. It is particularly recommended for use in construction equipment manufactured by Komatsu and others.

Ultra Powerflow HE is specially formulated to have a very high viscosity index and a low pour point for use over a wider temperature range than conventional antiwear hydraulic oils. Its very high viscosity index helps maintain oil viscosity at operating temperatures and reduce energy (power) loss caused by internal oil leakage in the hydraulic system, resulting in up to 20% higher system efficiency compared to conventional single-grade hydraulic oils.

Ultra Powerflow HE provides excellent wear protection for hydraulic pumps and motors, has excellent oxidation resistance and thermal stability at high temperatures to minimize deposit formation and provide long service life, and protects hydraulic system components against rust and corrosion. It has excellent water-separating properties to minimize the formation of emulsions, and is resistant to excessive foam buildup that can cause poor or sluggish hydraulic system response. It has excellent low-temperature properties for cold start-ups.

Applications

- Mobile equipment operating in cold weather or in locations subject to wide temperature fluctuations
- Off-road construction, mining and marine equipment

Ultra Powerflow HE meets the requirements of the following industry and OEM specifications:

- DIN 51524 Part 3, Antiwear Hydraulic Oils, Type HVLP
- Eaton-Vickers I-286-S, M-2950-S
- ISO 11158:1997, Family H (Hydraulic Systems), Type HV
- Parker Hannifin (Denison) HF-0, HF-1, HF-2

CONTACT INFORMATION

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1-877-445-9198

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Features/Benefits

- Very high VI to reduce internal oil leakage and increase hydraulic system efficiency by up to 20% compared to conventional single-grade hydraulic fluids
- Excellent service over a wide temperature range
- Excellent wear protection for hydraulic pumps and motors
- Excellent oxidation resistance and thermal stability
- High shear stability
- Protects against rust and corrosion
- Excellent water-separating properties
- Good foam resistance
- Excellent low-temperature properties for cold start-ups

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Typical Properties

ISO Grade	**32**	**46/68**
Specific Gravity @ 60°F	0.860	0.870
Density, lbs/gal @ 60°F	7.16	7.24
Color, ASTM D1500	0.5	0.5
Flash Point (COC), °C (°F)	199 (390)	216 (421)
Pour Point, °C (°F)	-49 (-56)	-48 (-54)
Viscosity,		
cSt @ 40°C	31.8	56.0
cSt @ 100°C	7.4	11.3
SUS @ 100°F	161	282
SUS @ 210°F	50.9	64.8
Viscosity Index	211	200
Acid Number, ASTM D974, mg KOH/g	0.60	0.60
Copper Corrosion, ASTM D130	1a	1a
Demulsibility, ASTM D1401, minutes to pass	15	15
Dielectric Strength, ASTM D877, kv[(1)]	35	35
Foam Test, ASTM D892	Pass	Pass
Oxidation Stability,		
TOST, ASTM D943-04a, hours	>7,000	>7,000
Rust Test, ASTM D665 A&B	Pass	Pass
Zinc, wt %	0.066	0.066

[(1)] At the point of manufacture

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via *http://w3apps.phillips66.com/NetMSDS*.