METATRON™ 606

DESCRIPTION :

Metatron™ 606 is a premium quality multi-grade, anti-wear, non-detergent oil that is specially formulated for use in mobile and industrial hydraulic systems that are subjected to wide variations in ambient and system operating temperatures.

COMPOSITION AND PERFORMANCE CHARACTERISTICS:

Metatron™ 606 is blended from the finest high viscosity index severely solvent refined, severely hydrofinished 100% paraffin base stock available. These high viscosity index 100% pure paraffin base stocks provide the **Metatron™ 606** with the following performance characteristics:

1. Excellent thermal stability
2. Excellent resistance to oxidation and thermal degradation
3. A naturally high viscosity index. This results in a minimum change in viscosity that helps prevent excessive leakage, sluggish operation and lower overall efficiency and other deficiencies attributed to low viscosity index oils over wide operating temperature ranges.
4. Excellent film strength
5. Excellent operating temperature reduction
6. Superior chemical stability
7. Low volatility
8. Low carbon forming tendencies

ADDITIONAL PERFORMANCE PROPERTIES:

Blend into the 100% pure paraffin base oils is a highly specialized multi-functional additive package that provides the **Metatron™ 606** with the following performance properties:

1. Exceptional anti-wear protection
2. Extended pump life
3. Extended bearing life
4. Enhanced thermal and oxidative stability
5. Superior hydrolytic stability
6. Excellent demulsibility characteristics
7. Excellent rust and corrosion protection
8. Excellent anti-foaming and air release properties

9. Reduced sludge, varnish and deposit formation
10. Improved durability of non-ferrous parts
11. Reduced filter blockage
12. Enhanced filterability
13. Enhanced compatibility with existing fluids
14. Enhanced fluid life
15. Enhance seal life
16. Reduced system maintenance

HIGH VISCOSITY INDEX:

Metatron™ 606 contains an extremely shear stable polymer-type viscosity index improver. This extremely shear stable polymer-type viscosity index improver provides the **Metatron™ 606** with a viscosity index of 151. This extremely high viscosity index allows **Metatron™ 606** to exhibit low temperature properties that permit hydraulic pumps to be safely started at low ambient temperatures and to have the proper viscosity needed at operating temperature and high ambient temperatures in order to minimize internal pump leakage and wear.

ADDITIONAL ANTIWEAR PROTECTION WITH MICRO MOLY:

The trend among hydraulic pump builders is to make their units more compact by employing higher system pressure and high pump speed. This results in conditions of thin-film lubrication that can result in excessive pump wear, which can cause a loss in the efficiency of the hydraulic system.

To prevent this wear a liquid soluble type of moly known as Micro Moly™ is further blended into the **Metatron™ 606**. Micro Moly™ plates itself to metallic sliding and rubbing metallic surfaces of the hydraulic system. Once plated Micro Moly™ forms a long lasting solid lubricant film that is capable of withstanding pressures up to 500,000 pounds per square inch. Micro Moly™ also reduces friction between the moving parts. This results in less heat being generated, which in turn reduces operating temperature and downtime.

MANUFACTURERS REQUIREMENTS AND SPECIFICATIONS:

Metatron™ 606 meets and exceed the following manufacturer's requirements and specifications: Haggulands Denison HF-O, Vickers M-2950-S and I-286S, Commercial Shearing HD 2/900, Commercial Hydraulics, Cincinnati Milicron P69, DIN 51524 Part 1 &2, US Steel 126, 127 and 136, AFNOR E46-603, MIL-L-17331H.

TYPICAL PROPERTIES:

SAE Grade	**10W-30**
ISO Grade	**68**
Specific Gravity @ 15.5°C	.8762
Viscosity, cSt @ 40°C (ASTM D-445)	55.50 – 73.50
Viscosity, cSt @ 100°C (ASTM D-445)	9.5 – 12.00
Brookfield Viscosity, cP @ -18°C (0°F)	6,500
Viscosity Index (ASTM D-2270)	151
Flash Point °C (°F) (ASTM D-92)	216° (420°)
Pour Point °C (°F) (ASTM D-92)	-24° (-11°)
Rust Test (ASTM D-665)	
Procedure A (Distilled Water)	Pass
Procedure B (Salt Water)	Pass
Copper Strip Corrosion Test (ASTM D-130)	1a
Four Ball Wear Test (ASTM D-4172)	
(1hour/40kg./54°C (130°F)	
Mean Scar diameter, mm	0.45
(1hour/20kg./54°C (130°F)	
Mean Scar diameter, mm	0.27
Four Ball E.P. Test (ASTM D-2783)	
Weld Point, kgs.	126
Load Wear Index	26.2
Falex Continuous Load Procedure A (ASTM D-3233)	
Failure Load, kgs. (lbs)	567 (1250)
FZG Gear Test ASTM D-5182)	
Load Stage Failure	12^{th}
Conradson Carbon Residue (ASTM D-189)	
% Residue	0.3
Foam Test (ASTM D-892)	
Sequence I	0/0
Sequence II	0/0
Sequence III	0/0
Hydrolytic Stability (ASTM D-2619)	
Copper Wt, Loss mg/cm^2	0.01
Acidity of Water mg/KOH	0.05
TYPICAL PROPERTIES Continued:	
Demulsibility Test (ASTM D-1401)	
Oil-Water-Emulsion (Time, minutes)	40-40-0 (15minutes)
Dennison Filterability Test	
Time w/o water (seconds)	112
Time with 2% water (seconds)	146
Oxidation Stability Test (ASTM D-943)	
Hours to TAN of 2	+3,000
Oxidation Stability Test (ASTM D-4310)	
Total Sludge, mg.	36
Copper Wt, Loss, mg.	22
Iron Wt. Loss, mg.	0.1
Denison T%D-042 Pump Wear Test	
Millimeters (Inches) wear, vane	0.239mm (0.0094in)
Vickers 35VQ25 Pump Wear Test	
Total Wt. Loss, vane, mgs.	5
Total Wt. Loss cam, mg.	11

Vickers Pump Wear Test (ASTM D-2882)	
Mg. Wt. Loss	12
Dielectric Strength (ASTM D-887)	39 Kilovolts
Aniline Point °C (°F) ASTM D-611	109° (228°)