



BLACKBEAR "X" SERIES HYDRAULIC OILS

OVERVIEW

BLACK BEAR SERIES "X" HYDRAULIC OILS are superior quality hydraulic oils designed to significantly out-perform most commercially available hydraulic oils. Formulated from the high performance Group II base stocks, double-fortified with high extreme pressure additives and a potent seal conditioning agent, these oils ensure the longest trouble-free operation in most types of hydraulic pumps.

This hydraulic fluid contains a special seal conditioning agent that effectively restores elasticity to seals and O-rings. Plasticizer leaches out of seals after extended high temperature operation, causing them to shrink and crack. BLACK BEAR SERIES "X" HYDRAULIC OILS restore those lost plasticizers preventing fluid leakage and costly downtime.

BLACK BEAR SERIES "X" HYDRAULIC OILS are formulated to virtually eliminate the formation of heat related sludging in sensitive electro hydraulic servos associated with conventional zinc type additives. The premium, special performance additives incorporated in these oils perform exceptionally well even in fine filtration systems. These oils also exhibit superior hydrolytic stability in the presence of water and will not contribute to either formation of metal etching acids or corrosive reactants.

BLACK BEAR SERIES "X" HYDRAULIC OILS offer top-notch performance in any high output equipment where sustained heat is prevalent. The double compounding of performance additives give these oils optimum antiwear protection and outstanding ASTM D 943 Turbine Oxidation Test performance (5000+ hours). These oils also exhibit superb rust protection and excellent demulsibility of extraneous system moisture.

SPECIFICATIONS

For hydraulic pumps such as Commercial Shear, Denison HF-0, Hydreco, Racine, Sundstrand-Sauer BLN-9887, Tyrone, Vickers M-2950-S, etc. Passes ASTM D 2882 and the Vickers high pressure 35VQ25 pump tests. Also exceeds GM 6137-M seal life requirement (item j) and exceeds FMC & Sundstrand cleanliness standards "for longer life"

MANUFACTURERS:

- Vickers I-286-S, M-2950-S
 - Racine, variable volume vane pumps
 - DIN 51524, Part 2
 - Jeffrey No. 87
 - U.S. Steel 136, 127
 - Commercial Hydraulics*
 - General Motors LH-04-1, LH-06-1, LH-15-1
 - Denison HF-1, HF-2, HF-0 - Cincinnati Milacron P-68, P-69, P-70 - Lee - Norse 100-1
 - Ford M-6C32
 - B.F. Goodrich 0152
 - AFNOR E 48-603
 - Paper Machines
- * Except for PM-500 series silver containing pumps which require R & 0 only additive systems.

TYPICAL PROPERTIES

	No. 1X	No. 2X	No. 3X	No. 5X
Grade SAE Grade	10W	10W	20W	30W
ISO Viscosity Grade	32	46	68	100
Gravity, ° API	31.5	31.0	30	29.6
Flash Point, ° F	400	420	430	480
Pour Point, ° F	-25	-25	-20	-20
Viscosity, SUS @ 100° F	150	200	300	500
Viscosity, SUS @ 210° F	43	46.5	53	64
Viscosity Index (V.I.)	100	101	100	97
Rust Test ASTM D 665 A,B	Pass	Pass	Pass	Pass
Oxidation Test, ASTM D 943, Hrs.	5000+	5000+	5000+	4000
Foam Test ASTM D 892	Pass	Pass	Pass	Pass
Cincinnati Milacron Requirement	P-68	P-70	P-69	

DIN 51524 Part 2 Grade	NbP6X	NbP2X	NbP5X	No. 5X
Zinc, ppm.	700	700	700	700
Vickers 35VQ25 Wgt. Loss / Mg.	18	18	18	18