

Hydraulic Oils **Liberty AW Series**



**High performance
hydraulic oils for
Forging Operations**

Liberty AW Hydraulic Oils encompass a wide variety of premium quality fluids specially blended to provide superior performance in industrial forging hydraulic systems. Our line of premium products covers various viscosity ranges for anti-wear and rust and oxidation protection. By incorporating the latest new generation in additive technology Liberty AW Hydraulic Oils provide superior protection for hydraulic systems against wear and corrosion. High viscosity index paraffinic base oils are utilized to assure maximum oxidation resistance. Higher viscosity oils are available where specified.

Applications

**Machine Tools
Hydraulic Systems
Hydraulic Presses
Die Cast Machines
Non EP Gear Sets
Oil Lubricated Bearings**

**Oil Lubricated Electric Motors
Generators
Calendars
Grinders
Compressors (non-detergent)
Mining Equipment**



(502) 363-5600

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Liberty AW Hydraulic Oils

Physical Properties



TEST	METHOD	22	32	46	68	100
Specific Gravity	ASTM D-287	.86	.87	.88	.88	.89
Flash Point F	ASTM D-92	405	410	420	430	452
Pour Point F	ASTM D-97	-40	-40	-30	-30	-15
Viscosity SUS @ 100F	ASTM D-445	115.2	160	230	350	520.2
SUS @ 210F		40.6	42	49	55	66.5
cSt @ 40C		22	32	46	68	100
cSt @ 100C		4.25	5.4	6.8	8.9	11.7
Rust Test	ASTM D-665A	Pass	Pass	Pass	Pass	Pass
Viscosity Index	ASTM D-2270	95	93	95	103	105
Copper Strip Corrosion	ASTM -130	1B	1B	1B	1B	1B
Vicker's Vane Pump Test	ASTM-2882	Pass	Pass	Pass	Pass	Pass
Oxidation Test, Hours	ASTM D-943	5000+	5000+	5000+	5000+	5000+
Demulsibility ml: oil-water emulsion (m)	ASTM D-1401	Pass 40-40-0(20)	Pass 40-40-0(20)	Pass 40-40-0(20)	Pass 40-40-0(20)	Pass 40-40-0(20)
Foam Sequence I	ASTM D-892	Pass 180-0	Pass 180-0	Pass 180-0	Pass 180-0	Pass 180-0
Sequence II		Pass 15-0	Pass 15-0	Pass 15-0	Pass 15-0	Pass 15-0
Sequence III		Pass 160-0	Pass 160-0	Pass 160-0	Pass 160-0	Pass 160-0
Thermal Stability	Cincinnati Milacron	Pass	Pass	Pass	Pass	Pass
Denison T5D Vane	HF-0	Pass	Pass	Pass	Pass	Pass
P-46 Piston		Pass	Pass	Pass	Pass	Pass
Vickers 35VQ25	M-2950-S	Pass	Pass	Pass	Pass	Pass
Vickers 104C Vane	D-2882	Pass	Pass	Pass	Pass	Pass



MEETS REQUIREMENTS OF:

Eaton-Vickers 35VQ25A, Denison HF-1, HF-2, HF-0, Racine, variable volume vane pumps, AFNOR E 48-603, Cincinnati Lamb P-68, P69, P-70, DIN 51524, Part 2, Lee-Norsw 100-1, Jeffrey No. 87, Ford M6C32, US Steel 136, 127, BF Goodrich 0152, General Motors LH-04-1, 06-1, 15-1



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