



Powers-All Humble AW Hydraulic Oil

DESCRIPTION: Powers-All Humble AW Hydraulic Oil is a zinc-containing industrial anti-wear (AW) hydraulic oil formulated with premium quality base oils and carefully selected performance additives that offer full protection against oxidation degradation, rust, corrosion and wear. They are designed for use in high pressure, high speed hydraulic pumps used in industrial and certain mobile hydraulic systems.

- BENEFITS:**
- Excellent anti-wear performance results in extended pump and component life
 - Improved air release and foam control minimizes pump cavitation
 - Increased protection against rust and corrosion
 - Fast water separation

Applications: Powers-All Humble AW Hydraulic Oil is recommended for applications where a high quality anti-wear hydraulic oil is required. They meet most major pump manufacturer's requirements for both high and low pressure industrial and mobile systems that call for: Parker Hannifin (Denison) HF0, HF1 and HF2, Cincinnati Machine P-68, P-69, and P-70, U.S. Steel 127, Eaton-Vickers I-286-S and M-2950-S and other commercial hydraulic systems. Typical applications may include mobile construction equipment, air compressors, hydraulic lifts, hoists, winches and machine tools and presses.

Typical Properties:

Powers-All Premium AW Hydraulic Oils

ISO Viscosity Grade		32	46	68
Product Code	Test Method	PA583011	PA583021	PA583031
API Gravity, 60°F	ASTM D-4052	32.3	31.4	30.6
Viscosity, cSt @ 40°C	ASTM D-445	32.5	46.0	67.8
Viscosity, cSt @ 100°C	ASTM D-445	5.4	6.7	8.6
Viscosity Index	ASTM D-2270	99	98	97
Color	ASTM D-1500	L1.0	L1.5	L2.5
Pour Point, °F (°C)	ASTM D-5949	-26 (-32)	-24 (-31)	-24 (-31)
Flash Point, COC, °F (°C)	ASTM D-92	420 (216)	430 (221)	450 (232)
Rust Test, A&B	ASTM D-665	Pass	Pass	Pass
*Dielectric Strength, kV	ASTM D-877	>30	>30	NA
Oxidation Stability, hours	ASTM D-943	+5,000	+5,000	+4,000
Cincinnati Machine		P-68	P-70	P-69
DIN 51524 Part 2-HLP		Yes	Yes	Yes
AFNOR NFE 48-603		Yes	Yes	Yes
ISO 11158 HM		Yes	Yes	Yes

**Note: Values shown are typical only and do not constitute a specification. Always confirm with the original manufacturer's recommendation for proper equipment operating requirements.*

**Note: Dielectric properties are measured at the point of manufacture. Containers should be kept tightly sealed and stored in a clean, dry environment.*



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