

AWARD ZF AW Hydraulic Fluid

HIGH PERFORMANCE ZINC FREE HYDRAULIC OIL

PRODUCT LINE

AWARD Zinc Free Anti-Wear Hydraulic Fluids are high performance premium anti-wear oils designed for use in environmentally sensitive areas. The rust and oxidation preventive capabilities, including exceptional demulsibility properties, make these oils rugged, even in high-output systems. These oils also feature excellent vane pump and piston pump performance, anti-foam characteristics and superior hydrolytic stability.

APPLICATIONS

AWARD Zinc Free Anti-Wear Hydraulic Fluids are recommended for vane, piston, or gear-type hydraulic pumps in heavy duty industrial machinery, and mobile equipment.

Check your owner's manual for recommended fluid viscosity.

PERFORMANCE BENEFITS

- **Maximum Pump Life** — preventive rust and oxidation capabilities
- **Deterioration Resistance** — premium oils resist deterioration and perform at superior levels, even at high operating temperatures, pressures and speeds.
- **Low Pour Point** — low pour point ensures easy system start-up in cold conditions.
- **Inherently Biodegradable** — high performance premium anti-wear oils designed for use in environmentally sensitive areas.

Available In These Sizes



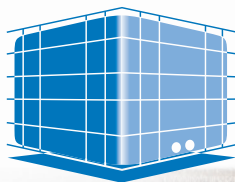
Jugs



Pails



Drums



Totes



TYPICAL PROPERTIES

ISO GRADE	AW 32	AW 46	ASTM TEST METHOD
Viscosity @ 40°C, cSt	31.20	46.07	D445
Viscosity @ 100°C, cSt	5.25	7.00	D445
Viscosity Index	98	109	D2270
Flash Point, COC, °C	210	216	D92
Flash Point, COC, °F	410	420	D92
Pour Point, °C	-39	-36	D97
Pour Point, °F	-38	-33	D97
Colour	1.0	1.0	D1500
Gravity, °API	31.5	30.5	D287
Turbine Oil Oxidation	10000+	10000+	D943
Copper Strip	1b	1b	D130
Rust Test	Pass	Pass	D665
Vane Pump, mgs wt loss	12	12	D2882
Dielectric Strength, kv	35	35	
FZG Load Stages, Pass stage	11	12	D5182
Four Ball Wear	0.52	0.46	D2266
Biodegradability, %	28.2	28.0	D5864

PERFORMANCE SUMMARY

Specifications And Approvals	AW 32	AW 46
FZG LS 11/12	YES	YES
AFNOR - NFE 48-690, NFE 48-691	YES	YES
Cincinnati Machine - P-68, P-69, P-70	YES	YES
Denison - HF-0, HF-1, HF-2	YES	YES
DIN 51524, Part I, Part II	YES	YES
General Motors - LS-2	YES	YES
Vickers - I-286-S, M-2950-S, 35VQ25	YES	YES
Bosch Rexroth - RE 90 220	YES	YES
ISO 11158 - Categories HH, HL, HM and HR	YES	YES
Hitachi - EXO 46 (MF46)	YES	YES
Inherently Biodegradable	YES	YES

Health & Safety

This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

MSDS

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed.

MSDS can be found at: <http://www.afdpetroleum.com/MSDS.aspx>

**Always consult with original equipment manufacturer's recommendations for specific performance and viscosity requirements.*

**Extending drain intervals should always be undertaken in conjunction with a regular oil analysis program.*

**Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notice.*