

SYNTHETIC AW SERIES ANTI-WEAR HYDRAULIC OILS

Product Profile

DEVOTED TO PROTECTION®

AMSOIL Synthetic AW Series Anti-Wear Hydraulic Oils are shear-stable, long-life lubricants based on high-quality synthetic oil technology. These oils are formulated with a premium additive system that inhibits oxidation to help prevent acid formation and viscosity increase and inhibit rust and foam (providing smooth hydraulic operation). AW Oils contain a very effective zinc-based anti-wear/antioxidant additive which controls wear in high-speed, high-pressure vane and gear pumps while meeting the lubrication requirements of axial piston pumps with bronze-on-steel metallurgy. Improved pump efficiency can increase hydraulic power, reduce fuel consumption and improve productivity. AW Oils are designed for long life and can typically reduce maintenance costs by extending drain intervals and reducing labor costs, repairs and downtime.

AMSOIL SYNTHETIC BASE OIL TECHNOLOGY

AMSOIL synthetic base oils resist thermal and oxidative breakdown, reducing varnish deposits. The very high viscosity indices, low pour points and lack of paraffins (wax) make these good all-season lubricants well-suited for high and low temperature extremes. At high temperatures and pressures, AMSOIL AW Series Oils provide a good lubricating film and protect components against wear. During cold-temperature operation, equipment starts easier and the need for preheating with sump heaters is reduced. The AW Series base oils also readily separate from water, preventing oil/water emulsions that inhibit lubrication and allowing for longer lubricant life and easier water drainage from the sump.

PERFORMANCE FEATURES

- Anti-wear protection for high-pressure systems.
- Recommended for gear, vane and piston pumps.
- Contain rust, oxidation and foam inhibitors.
- Designed for extreme-temperature operation.
- Hydrolytically stable and readily separate from water.

APPLICATION RECOMMENDATION

The correct viscosity grades of AMSOIL Synthetic AW Series Anti-Wear Hydraulic Oils are recommended for high- and low pressure gear, vane and piston stationary and mobile hydraulic systems. They are excellent for general-purpose use where extended drain intervals are desired and in severe-duty operations where temperature extremes are encountered. AMSOIL AW Series Oils are compatible with hydraulic system seals, petroleum hydraulic oils and most synthetic hydraulic oils*. For optimum performance, it is recommended the system be thoroughly drained and, if warranted, cleaned prior to installation. Oil analysis is recommended to maximize oil drain intervals.

** Not compatible with phosphate ester, silicone, PAG, or water-based fluids.*

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AMSOIL
The First in Synthetics®

DEVOTED TO PROTECTION®

TYPICAL TECHNICAL PROPERTIES

Synthetic AW Series Anti-Wear Hydraulic Oils

	AWG ISO 22	AWH ISO 32	AWI ISO 46
ISO VG (ASTM D2422)	22	32	46
VK 100°C cSt (ASTM D445)	5.9	7.4	9.7
VK 40°C cSt (ASTM D445)	20.7	33.1	49.1
Viscosity Index (ASTM D2270)	256	200	188
SpGr (ASTM D1298)	0.8363	0.8453	0.8463
Density – lb/gal (ASTM D1298)	6.964	7.038	7.047
Flash Point °C (°F) (ASTM D92)	174 (345)	228 (442)	230 (446)
Fire Point °C (°F) (ASTM D92)	188 (370)	248 (478)	250 (482)
Pour Point °C (°F) (ASTM D97)	<-60 (<-76)	-51 (-60)	-46 (-51)
Four-Ball Wear Test (ASTM D4172) (40 kg, 1200 rpm, 75°C, 60 min.)	0.45	0.45	0.45
Copper Strip Corrosion Test (ASTM D130)	1A	1A	1A
Foam (ASTM D892) Sequence I, II, III Test End	0/0,0/0,0/0	0/0,0/0,0/0	0/0,0/0,0/0
Dielectric Strength (ASTM D877) Voltage, kV AC	43.6	46.2	45.4
Demulsibility (ASTM D1401) Oil/Water/Cuff (min)	40/40/0 (10)	40/40/0 (10)	40/40/0 (10)
Rust Test (ASTM D665 A & B) Fresh Water and Synthetic Sea Water	Pass	Pass	Pass

APPLICATIONS

AMSOIL recommends Synthetic AW Series Anti-Wear Hydraulic Oils for use where the following specifications are required:

- Denison HF-0, HF-1 and HF-2
- Vickers M-2950-S and I-286-S
- Cincinnati Milacron P-68, P-69 and P-70
- U.S. Steel 127
- Racine, variable volume vane pumps
- DIN 51524, Parts 2 and 3 HLP22-HLP46
- ASTM D-6158 HV
- AFNOR E 48-603*
- Ford M6C32
- GM LH-04-1, LH-06-1 and LH-15-1
- Lee Norse 100-1
- Jeffrey No. 87
- BF Goodrich 0152
- Commercial Hydraulics*

* Except for PM-500 series silver-containing pumps which require R&O additive systems.

HEALTH & SAFETY INFORMATION

For recommendations on safe handling and use of these products, please refer to the Safety Data Sheet (SDS), which is available upon request through the AMSOIL Wind Group at windsalesgroup@amsoil.com or (715) 399-6305.