



Hicks Oils  
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## ASHLESS ALL WEATHER AW HYDRAULIC OILS

**Formula 500®** Ashless All Weather AW Hydraulic Fluids are zinc free anti-wear hydraulic and circulating fluids specially formulated to provide maximum performance over a wide range of temperatures. This “All Weather” approach is created by utilizing a shear stable viscosity index improver that gives the fluid a higher viscosity index and lower pour point than a traditional hydraulic fluid. In the field this translates to having the ability to run equipment at lower temperatures for winter start ups, and have higher heat tolerances when operating in hot conditions or under high loads. Field trials have also shown a significant gain in fuel economy when using an all weather hydraulic fluid in comparison to a conventional hydraulic fluid. This boost in fuel economy is due to the fluid’s ability to stay within the recommended operating viscosity over an expanded temperature range.

These ashless hydraulic oils offer: outstanding resistance to sludge formation, excellent chemical and shear stability, excellent anti-wear properties, and have an oxidation life of 4000+ hours by ASTM D-943. **Formula 500®** Ashless All Weather AW Hydraulic Fluids also contain anti-foam agents to limit air entrainment in hydraulic systems, and demulsifiers to separate water from the oil in the sump.

**Formula 500®** Ashless All Weather AW Hydraulic Fluids are zinc free hydraulic fluids which are recommended for service in vane, piston, and gear pumps in environmentally sensitive applications or where an ashless or zinc free hydraulic fluid is recommended. Always follow equipment manufacturers’ recommendations.

**Formula 500®** All Weather AW Hydraulic Fluids meet the following specifications:

- Denison HF-0, 1, and 2
- Vickers M-2950-S, I-286-S
- Cincinnati Machine P-69, P-70
- DIN 51524-1,2, 3
- GM LS-2
- ASTM D6158
- Eaton 35VQ25
- ISO 11158
- SAE MS 1004
- Bosch Rexroth RE 90200
- Conestoga pump test ISO 20763

### Typical Properties:

Product	Ashless All Weather AW 46	Ashless All Weather AW 68
Product Code	90260	90299
ISO Viscosity	46	68
Kinematic Viscosity @ 100 °C cSt (ASTM D-445)	8.3	10.6*
Kinematic Viscosity @ 40 °C cSt (ASTM D-445)	46.0	68*
Viscosity Index (ASTM D-2270)	157	145*
Pour Point C° (F°) (ASTM D97)	-41,(-42)	Not Available
Emulsion separation (min) (ASTM D-1401)	10	10*
Turbine Oxidation Test (ASTM D-943)	4000+	4000+
API Gravity (ASTM D-1298)	34.0	29.8*

\*Value is an estimation and would be verified with a blend