



Megaflow® AW HVI Hydraulic Oil

Phillips 66® Megaflow AW HVI Hydraulic Oil is a high-quality, high viscosity index anti-wear hydraulic oil developed for use in industrial and mobile equipment operating in cold climates or in locations subject to wide variations in ambient temperatures. It meets the performance requirements of all major hydraulic pump manufacturers, and is recommended for use in all types of high-pressure, high-speed hydraulic pumps. It is particularly recommended for year-round use in mobile equipment such as bucket trucks, cranes and aerial lifts.

Megaflow AW HVI Hydraulic Oil is specially formulated to have a high viscosity index and a low pour point for use over a wider temperature range than conventional anti-wear hydraulic oils. It provides excellent wear protection for hydraulic pumps and motors, has excellent oxidation resistance and thermal stability at high temperatures to minimize deposit formation and provide long service life, and protects hydraulic system components against rust and corrosion. It has excellent water-separating properties to minimize the formation of emulsions, and is resistant to excessive foam buildup that can cause poor or sluggish hydraulic system response. It has excellent low-temperature properties for cold start-ups. It also has a high dielectric strength for use as insulating oil in electrical service repair trucks.

Applications

- Industrial and mobile equipment operating in cold weather or in locations subject to wide temperature fluctuations
- Bucket trucks (cherry pickers) used for servicing electrical power lines or for tree-trimming
- Hydraulic hoists and service station lifts
- Marine cargo winches and steering systems
- Off-road construction, mining and marine equipment
- Chain drives
- Electric motor bearings

Megaflow AW Hydraulic Oil meets the requirements of the following industry and OEM specifications:

- DIN 51524 Part 3, Anti-wear Hydraulic Oils, Type HVLP
- Eaton-Vickers I-286-S, M-2950-S
- ISO 11158:1997, Family H (Hydraulic Systems), Type HV
- Parker Hannifin (Denison) HF-0, HF-1, HF-2

High VI Anti-wear Hydraulic Oil for Wide Temperature Ranges





Features/Benefits

- Excellent service over a wide temperature range
- Excellent wear protection for hydraulic pumps and motors
- Excellent oxidation resistance and thermal stability
- Protects against rust and corrosion
- Excellent water-separating properties
- Good foam resistance
- Excellent low-temperature properties for cold start-ups
- High dielectric strength for use in electrical service bucket trucks (cherry pickers)⁽¹⁾

⁽¹⁾**Note:** In order to maintain its high dielectric strength for use as electrical insulating oil, the oil must be kept clean and dry. Contamination with water will significantly decrease the dielectric strength.

Megaflow[®] AW HVI Hydraulic Oil

| Typical Properties | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| ISO Grade | 15 | 22 | 32 | 46 | 68 | 100 |
| Specific Gravity @ 60°F | 0.857 | 0.858 | 0.861 | 0.868 | 0.874 | 0.878 |
| Density, lbs/gal @ 60°F | 7.14 | 7.14 | 7.17 | 7.23 | 7.28 | 7.31 |
| Color, ASTM D1500 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Flash Point (COC), °C (°F) | 181 (358) | 193 (379) | 204 (399) | 213 (415) | 218 (425) | 218 (425) |
| Pour Point, °C (°F) | -61 (-78) | -50 (-58) | -45 (-49) | -45 (-49) | -42 (-44) | -42 (-44) |
| Viscosity | | | | | | |
| cSt @ 40 °C | 15.0 | 22.0 | 32.0 | 46.0 | 68.0 | 100 |
| cSt @ 100 °C | 3.8 | 4.7 | 6.0 | 7.7 | 10.2 | 13.5 |
| SUS @ 100 °F | 77.5 | 106 | 150 | 214 | 315 | 463 |
| SUS @ 210 °F | 37.5 | 40.6 | 45.9 | 51.5 | 60.0 | 72.2 |
| Viscosity Index | 151 | 136 | 136 | 135 | 135 | 135 |
| Acid Number, ASTM D974, mg KOH/g | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| Copper Corrosion, ASTM D130 | 1a | 1a | 1a | 1a | 1a | 1a |
| Demulsibility, ASTM D1401, minutes to pass | 15 | 15 | 15 | 15 | 15 | 15 |
| Dielectric Strength, ASTM D877, kv ⁽²⁾ | 35 | 35 | 35 | 35 | 35 | 35 |
| Foam Test, ASTM D892, Seq. I, mL | 10/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| FZG Scuffing Test, ASTM D5182 | | | | | | |
| Failure Load Stage | --- | --- | --- | 12 | 12 | 12 |
| Oxidation Stability | | | | | | |
| TOST, ASTM D943-04a, hours | >5,000 | >5,000 | >5,000 | >5,000 | >5,000 | >5,000 |
| Rust Test, ASTM D665 A&B | Pass | Pass | Pass | Pass | Pass | Pass |
| Zinc, wt % | 0.043 | 0.043 | 0.043 | 0.043 | 0.043 | 0.043 |

⁽²⁾**Note:** At the point of manufacture

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/EN/products/Pages/MSDS.aspx>.