



NATIONAL™ MULTI-VISCOSITY AW | Hydraulic Oils

Product Description

NATIONAL AW HYDRAULIC MV OILS are premium-quality anti-wear hydraulic oils with outstanding cold temperature flow properties. They are formulated with an effective anti-wear additive package with enhanced EP performance and an outstanding shear stable polymer which helps reduce wear in high-speed, high-pressure vane/ gear pumps.

NATIONAL AW HYDRAULIC MV OILS are recommended for hydraulic and fluid power transmission systems that are subjected to wide temperature variations and provides good pumpability at low temperatures. National AW Hydraulic MV Oils are compatible with most seal materials and paints normally specified for use with mineral oils and also work great in systems that require dielectric hydraulic oil.

Industry and OEM Specifications¹

- Parker Denison HF-0 (HF-1 and HF-2 are included under the HF-0 designation)
- Eaton Vickers E-FDGN-TB002-E (this specification supersedes I-286-S and M-2950-S)
- DIN 51524 Part 3
- FIVES (formerly MAG, formerly Cincinnati Milacron) P-68, P-69, P-70
- ISO 11158
- ASTM D6158-16

Features

- **Excellent water separation** (demulsibility) that facilitates water removal
- **Very low viscosity variation and quick start ups** thanks to the latest polymer technology that provides excellent low-temperature performance, and maintains precision of machinery when either hot, cold, or under high loads
- **High shear stability**, our VI improver is highly resistant to mechanical stress, the “stay-in-grade” characteristics ensure effective lubrication and long oil life
- **Reduce wear and corrosion**, strong hydrolytic stability and wear protection reduce the negative impact of unavoidable water condensation in your machinery after shutdown

The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Pinnacle Oil believes the information presented in this specification is accurate at the time written and is based upon internally generated information and information as presented by its vendors. No representation, warranty, or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.



- **Reduce oil consumption** and improve equipment protection through outstanding shear and oxidation stability
- **Excellent filterability** minimizes the tendency to cause filter blockage
- **Fast air release and antifoam properties** minimize pump cavitation in systems with high circulation rates

Technical Data

(typical values)

ISO GRADE		15	22	32	46	68
Product Number		07-122645	07-122642	07-122650	07-122646	07-122648
SDS Number		S020	S020	S021	S021	S021
Viscosity @ 40°C, cSt	D445	15.27	23.86	33.09	46.74	65.53
Viscosity @ 100°C, cSt	D445	3.93	5.35	6.3	7.99	10.71
Viscosity Index	D2770	162	169	144	143	154
Specific Gravity @ 60°F	D4052	0.8439	0.846	0.8605	0.8675	0.8714
Pour Point, °C	D5950	-54	-54	-51	-51	-51
Color ASTM	D1500	L0.5	L0.5	L0.5	L0.5	L0.5
Demulsibility	D1401	38-39-3 (15 min)	40-37-3 (10 min)	40-38-2 (20 min)	40-39-1 (5 min)	42-38-0 (10 min)
Foam characteristics	D892	PASS	PASS	PASS	PASS	PASS
Total Acid Number, mg KOH/g	D664	0.588	0.59	0.411	0.437	0.436
Dielectric Strength ³ , kV	D877	47	38	49	42	40

- 1) Consult your owner's manual regarding its suitability for use in equipment from other OEMs. These hydraulics perform in most equipment without concern for fluid-related harm.
- 2) Dielectric Strength for non-conductive measurement is valid only at shipping point

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