

AWARD HVI Hydraulic Fluid

SUPERIOR ALL SEASON HYDRAULIC PERFORMANCE

PRODUCT LINE

AWARD HVI Hydraulic Fluids have been formulated using the latest generation anti-wear hydraulic oil chemistry and AWARD's high quality HVI base stocks. AWARD HVI Hydraulic Fluid maintains an exceptional performance profile while achieving improvements in wet filterability, tolerance to contamination and frictional characteristics. These premium HVI fluids provide excellent operating and maintenance benefits across a broad temperature range for increased productivity, performance, and hydraulic pump protection.

APPLICATIONS

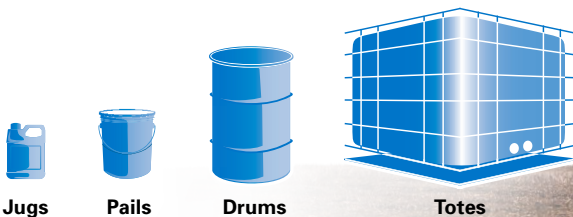
HVI Hydraulic Fluids are especially designed for use in hydraulic and fluid power transmission systems subjected to wide variations in temperature or where low viscosity change with fluctuating temperature is required.

AWARD HVI Hydraulic Fluid is recommended for use in:

- Excavators, cranes, shovels, drills, crawlers, cherry pickers, etc. operating at winter temperatures below -40°C and also at summer heats to the mid $+30^{\circ}\text{C}$ range.
- Woodland and snow removal equipment.
- Equipment manufactured by Eaton Vickers, Denison, Komatsu, Sauer-Danfoss, Oilgear, Hydreco, Dynex, and others.

In many cases, the correct viscosity grade may be used year-round eliminating the need for seasonal oil changes.

Available In These Sizes



PERFORMANCE BENEFITS

- **Low Temperature Fluidity:** Special viscosity index technology minimizes variation in viscosity with changes in temperature and provides good pumpability at low temperatures. The appropriate grade enables you to reduce non-productive warm-up time, minimize energy loss when starting equipment at low temperatures and reduce the risk of pump cavitation problems which can destroy a pump during start-up at low temperatures.
- **Outstanding Anti-Wear Protection:** Proven anti-wear additives are incorporated in AWARD's HVI to create an effective product throughout a range of operating conditions, including low and severe duty, high load conditions.
- **High Shear Stability:** AWARD's HVI Hydraulic Fluid has an excellent resistance to viscosity breakdown and coupled with a premium anti-wear package, will help ensure long pump life at high operating temperatures.
- **Superior Water Tolerance:** AWARD HVI Hydraulic Fluids exhibit excellent hydrolytic stability, providing excellent filterability. Often in the presence of water, poorer quality oils can generate insoluble materials which will result in filter plugging.
- **Oxidation Stability:** AWARD's advanced technology HVI Hydraulic Fluids resist oxidation degradation and sludge formation even when make-up rates are low as well as resists chemical breakdown and lacquer formation.
- **Excellent Air Release and Anti-foam Properties:** Careful use of additives ensures quick air release without excessive foaming.

**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.*

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>



TYPICAL PROPERTIES

ISO GRADE	22	36	ASTM TEST METHOD
Color	GREEN	GREEN	-
Flash Point, COC, °C (°F)	200 (390)	199 (390)	D92
Pour Point °C (°F)	-51 (-60)	-42 (-44)	D97
Viscosity at 40°C, cSt	22.0	37.0	D445
Viscosity at 100°C, cSt	5.2	7.7	D445
Oxidation Stability	4000+	4000+	D943
Viscosity Index	170	190	D2270
Cu Corrosion at 100°C	1a	1a	D130
Rust Test -24 hrs synthetic seawater	Pass	Pass	D665
TAN-E, mgKOH/g	0.6	0.6	D664
Demulsibility, minutes to 40/40/0	10	15	D1401
Brookfield cP at -20°C	680	1438	-
cP at -30°C	2567	6734	D2983
cP at -40°C	11480	32086	-
cP at -50°C	25236	80101	-

PERFORMANCE SUMMARY

SPECIFICATIONS & APPROVALS	AWARD HVI
Denison T6C vane pump (Wet and Dry Phases)	Pass
Denison P-46 piston pump	Pass
Eaton Vickers M-2952-S, M-2950-S, I-286-S	Meets
Eaton Vickers 25VQ25	Pass
Eaton Vickers 104 C	Pass
Cincinnati Machine P-68, P-69, P-70	Approved

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