



Hydraulic ZF 46

Zinc-Free Inherently Biodegradable Hydraulic Fluid

Features & benefits

- Zinc-free formulation
- Low ash content
- Inherently biodegradable
- Excellent oxidation stability
- Proven sludge and particulate control
- Exceptional wear protection
- Excellent separation from water



Specifications

- ✓ Meets requirements ■ Suitable for use

Specification	ZF 46
ASTM D6158 HM	✓
DIN 51524-2 HLP	✓
ISO 11158 HM	✓
SAE MS 1004 HM	✓
Parker (Denison) HF-0, HF-1, HF-2	■

Typical results

Test Method	ZF 46
ISO GRADE	46
VISCOSITY (D445) cSt @ 40°C cSt @ 100°C	45.2 6.8
VISCOSITY INDEX (D2270)	104
ASTM COLOUR (D1500)	1.0
DENSITY @ 15°C (D4052), kg/L	0.86
POUR POINT (D5949), °C	-33
FLASH POINT (D93), °C	220
OXIDATION LIFE (D943), hrs	10,000+
ZINC CONTENT (D4951), ppm	≤5
DEMULSE (D1401), Oil mL – water mL – emulsion mL (mins)	40/40/0 (15)
OECD 301B	Inherently biodegradable

Hydraulic ZF 46 is a premium, high-performance, zinc-free, inherently biodegradable hydraulic fluid developed for environmentally sensitive areas. The Hydraulic ZF 46 additive system provides superior oxidation and stability control while protecting against wear, rust, and corrosion.

Hydraulic ZF 46 performs better than traditional hydraulic additive packages in severe-duty and high-load applications. It was developed to provide a long service life while reducing environmental impact.

Hydraulic ZF 46's additive chemistry helps reduce deposits, leading to improved efficiency during the oil drain interval. It also has good sludge and particulate control, which improves the protection of critical components with strict tolerances, such as servo valves and pumps.

Hydraulic ZF 46 is formulated with anti-wear additives to maximize equipment life and reduce maintenance costs. It has excellent water separation properties, allowing the water to separate from the fluid while maintaining its fluidity during service.

Sizes & order codes

Size	ZF 46
18.9 L (5 US gal)	F0100340
1000 L (264 US gal)	F0100360
1000 L (264 US gal) Bulk Tote	F0100301

Always consult your owner's manual for verification of fluid type and grade!

Supporting data available to demonstrate acceptable performance. Check with Sales Associate for the latest product approvals.

Please note these are typical performance indicators and can change without notice.

This data sheet replaces previous versions prior to January 7, 2025.

www.irvingoil.com/lubricants 1.800.574.5823