



Hydraulic Oil ZF HVLPD 46

Product Code: 76680

Zinc Free Mineral hydraulic fluid

Hydraulic Oil ZF HVLPD 46 is heavy duty detergent type ashless anti-wear zinc free high viscosity hydraulic oil specially developed for machine-tool hydraulic systems, mobile hydraulic systems and clutch drives where minor water contamination can be expected.

Hydraulic Oil ZF HVLPD 46 is formulated with high quality mineral base oil in combination with a special additive package to ensure to following properties.

- Special detergent and dispersant properties ensure smooth functioning of hydraulic systems by minimizing formation of sticky residues and deposits.
- Excellent water emulsifying ability maintains proper functioning of hydraulic systems even in case of contamination of oil with small amounts of water .
- Superior anti-wear properties help reduce wear of mechanical components .
- High resistance to oxidation and thermal degradation controls the formation of sludge & varnish and improves oil life .
- Superior foam control and rapid air release properties ensure trouble-free operations.
- Effective corrosion inhibitors provide corrosion protection in arduous service conditions.
- Superior thermo- and oxidation stability.
- High Viscosity.

Hydraulic Oil ZF HVLPD 46 exceeds the following performance criteria:

DIN 51524/3 HVLPD ISO 6743/4-L-HV AFNOR NFE 48-603 Daimler DBL 6721

Typical Analysis

Properties	Unit	Method	Typical Value
ISO VG Grade		ISO 3448	46
Density @15°C	kg/m ³	ASTM D4052	862
Kin. Viscosity @40°C	mm ² /s	ASTM D7042	45
Kin. Viscosity @100°C	mm ² /s	ASTM D7042	8.6
Viscosity Index		ASTM D2270	174
Flash Point COC	°C	ASTM D92	>201
Pour Point	°C	ASTM D7346	-42
FZG Fail Load Stage		DIN 51354-2	12
Air Release Value @50°C	Minutes	ASTM D3427	Pass

Date Issued: 17-03-2021	Supersedes: 12-10-2015	Revision Nr.: 02
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