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Hydraulic Fluid 0 HVI

ISO 68

Very High Viscosity Index lubricant for hydraulic systems also of the last generation with antioxidant, anti-wear and antifoam additives. High filterability and excellent resistance to shear stress. (V.I. 140).

PAKELO HYDRAULIC FLUID 0 HVI ISO 68 is a very high viscosity index lubricant formulated with selected paraffinic oil base stocks, antioxidant, antirust, anti-wear and antifoam additives. The product, thanks to its chemical and physical properties, has been designed for modern hydraulic systems also operating under severe working conditions.

PAKELO HYDRAULIC FLUID 0 HVI ISO 68 transfers power with great promptness and uniformity under all working and ambient conditions lengthening life of systems operating at high pressures, and/or at high pump speed (vane pumps, gear pumps, piston pumps, etc.).

The product provides the following properties:

- **Very High Viscosity Index** that enables minimum viscosity changes, if compared to common hydraulic lubricants, when the fluid is exposed to different operating temperatures;
- **high shear stability**: viscosity index improvers guarantee high resistance to mechanical stress and, during service, allow to maintain viscosities almost equivalent to new lubricant;
- **low Pour Point** enabling easy start-ups at low temperatures;
- **high anti-wear capability** to increase efficiency, life of pumps and the operating parts in the system; furthermore, the anti-wear characteristics are confirmed by a test made in the Viscosity Grade ISO 46 on a Denison T6H20C hybrid pump (piston and vane) to pass the severe Specification Denison HF-0 (new edition);
- **high thermal stability** that allows the use in sealed hydraulic systems operating also at high temperatures and at high pressure without causing deposits and sludge;
- **good oxidative stability** that allows longer oil drain intervals and thus avoids early oil thickening;
- **high hydrolytic stability** which enables to protect the oil being used also when contaminated with small percentages of water;
- **good demulsivity**; the lubricant can easily separate from the water that could contaminate the system avoiding an accelerated process of oxidation;
- **high filterability** even with presence of water avoiding in this way obstruction of filter system and guaranteeing longer filter life;
- **anticorrosion and anti-rust capability** to provide efficiently the protection of all metallic components of the hydraulic system;
- **anti-foam properties** to avoid the presence of foam and air that reduce system efficiency due to the compressibility ratio that is different from that of the lubricant;
- **compatibility** with gaskets and metals normally used in hydraulic systems.

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Application fields

PAKELO HYDRAULIC FLUID 0 HVI ISO 68 satisfies a wide range of applications, in terms of types of pumps (vane, gear, piston pumps, etc.), metals employed in the working system and of resistance to severe working conditions (high temperatures, pressure, etc.) which they may face without causing stress and/or decomposition.
The product has been specifically developed for hydraulic systems requiring, for correct functioning, very high viscosity index lubricants with high mechanical resistance, low pour point, good anti-wear properties and thermal stability at high temperatures.
PAKELO HYDRAULIC FLUID 0 HVI ISO 68 transfers power with great promptness and uniformity lengthening life of systems even under severe working and ambient conditions.

For the correct Viscosity Grade please refer to pump's Constructor recommendation and ambient temperatures.

Performance level

ISO 6743-4 HV, **Afnor** NFE 48-602, **ISO** 11158, **DIN** 51524 Part 3 HVLP, **Afnor** NFE 48-603 HV, **ASTM** D6158, **Parker Hannifin (Denison)** HF-0 (Hybrid Pump), **Parker Hannifin (Denison)** HF-1 / HF-2, **Eaton Vickers** I-286-S / M-2950-S, **Cincinnati Machine** P-68 / P-69 / P-70, **Afnor** NFE 48-690(dry), **Afnor** NFE 48-691(wet), **U.S. Steel** 126 / 127 / 136, **JCMAS** HK, **Bosch** variable vane pumps, **Rexroth** RE 90220, **Sauer Danfoss** 520L0463, **General Motors** (LS-2) LH-03-1 / LH-04-1 / LH-06-1, **SEB** 181222.

ASTM D 6080 Classification

ISO VG 68 / L46 - 65 (140)

Chemical-Physical Characteristics

Hydraulic Fluid 0 HVI	Method analysis	Unit measure	Value ISO 68
Density at 15°C	ASTM D1298	kg/l	0,880
Kinematic Viscosity at 40°C	ASTM D445	cSt	68,2
Kinematic Viscosity at 100°C	ASTM D445	cSt	10,5
Viscosity Index	ASTM D2270	-	142
Kinematic Viscosity at 40°C after Sonic Shear	ASTM D445	cSt	65,4
Viscosity Index after Sonic Shear	ASTM D2270	-	140
Sonic Shear Stability	ASTM D5621	%(cSt/cSt)	5,6
KRL Shear Stability (Stage C - 20 Hour) at 100°C	CEC L45T93	%(cSt/cSt)	< 12
FZG Failure Load Stage	ASTM D5182	Stage	> 12
Flash Point (C.O.C.)	ASTM D92	°C	215
Pour Point	ASTM D97	°C	-33
Temperature for Brookfield Viscosity of 750cP	ASTM D2983	°C	-5

The data just above refer to average values and must not be understood as guaranteed characteristics.

Certificate n° EMS-5813/S
Certificate n. 1501/98/S