Bio-Draulic THF

Heavy Duty Biodegradable THF Fluid
No. 317

ISO 46
SAE: 20

DESCRIPTION:

Bio-Draulic THF is an environmentally responsible universal lubricant for farm equipment, off-highway machinery, and industrial tractors. This multifunctional biobased fluid is designed for equipment requiring one lubricant for the transmission, final drive, wet brakes and hydraulic systems. It meets or exceeds the performance requirements of all major brands of farm tractors and other farm equipment that utilize a common fluid reservoir. **Bio-Draulic THF** is formulated with special friction modifiers to ensure proper operation of wet brakes and transmission clutch packs. The vegetable based formulation provides superior oxidation resistance, excellent wear protection, protects against rust and corrosion, and has exceptional anti-foam characteristics.

TYPICAL APLICATIONS:

Bio-Draulic THF fluid is a premium quality, highly oxidation stable, anti-wear lubricant. This vegetable based product has been formulated to meet and exceed the requirements set forth by most manufacturers, and is stable enough to be used in both high temperature and high pressure systems. Even with these elevated performance characteristics, **Bio-Draulic THF** satisfies the criteria for ultimate biodegradability (PW1) and non-toxicity. **Bio-Draulic THF** has a unique rust and oxidation inhibiting system that assures the highest level of rust and oxidation protection available. **Bio-Draulic THF** can be used in most applications that require THF fluid, and will provide environmental safety without sacrificing performance. It is a clear choice for use in environmentally sensitive areas.

Bio-Draulic THF meets the definition of a bio-based lubricant as outlined in section 9001 of the Farm Security and Rural Investment Act (FSRIA) of 2002 and qualifies for preferred procurement by U. S. Federal Agencies as set forth in FSRIA Section 9002.

PERFORMANCE CHARACTERISTICS:

- **Ultimate biodegradability**
  Bio-Draulic THF is a ASTM D5864 PW1 rated fluid. It exhibits the highest level of biodegradability in the industry ***(ultimate >60% degraded at 28 days.)***
- **Non Toxic**
  Biodraulic THF passes the LC-50 criteria adopted by the United States EPA and the United States Fish and Wildlife Service.
- **Oxidation resistant**
  Oxidation inhibitors and premium quality vegetable base oils combine to form a product with outstanding resistance to oxidation and provide the maximum protection against varnish formation at both high and low temperatures. This feature will allow for drain intervals commensurate with conventional oils.
- **Provides excellent anti-wear protection**
  Special anti-wear, and friction reducing additives provide the highest level of protection against wear
- **Superior rust protection**
  Inhibitors protect both steel and yellow metal surfaces against rust and corrosion. Vastly outperforms other Bio-based fluids.
- **High viscosity index**
  Insures maximum operating efficiency in high and low temperature operation
- **High foam resistance**
  Foam inhibitors provide a high level of foam resistance to prevent pump cavitation and damage

SERVICE APPLICATIONS:

Bio-Draulic THF meets or exceeds the requirements for ATD Allison C-4, Caterpillar TO-2 and is recommended for use where the equipment manufacturer specifies the following:

CASE INTERNATIONAL
JIC-145/MS-1210
JIC-185/MS-1204
MS-1205, MS-1127,
MS1129-A, M1135, M1141
DEUTZ-ALLIS
FIAT-HESSTON
FORD
M2C134-D
M2C86-C, M2C86-B
FORD
M2C41-B, M2C48-B
M2C53-A, M2C134-A
M2C134-B, M2C134-C
JOHN DEERE
J20C, J14A
Quatrol™
J20D
Hygard
KUBOTA
LANDINI
MASSEY-FERGUSON
MS-1205, MS-1127,
MS1129-A, M1135, M1141
STEIGER
FORD
VERSATILE
WHITE FARM
Q-1826, Q-1802
Q-1705, Q-1766

SUMMARY:

Tractor and off road equipment transmissions and hydraulic systems are constantly subjected to adverse conditions such as water, heat, high pressures, and long operating intervals. Each of these factors affects the ability of most biobased lubricants to provide maximum output when needed. Bearing, pump, valve, gear, motor and cylinder wear are very common. Gum and varnish buildup lead to poor system performance. Deterioration of seals and O-rings lead to increased oil consumption. Oil deterioration and rapid oxidation of conventional biobased fluids results not only in excessive wear, but costly downtime and overhauls. **Bio-Draulic THF is formulated to greatly reduce these problems and provide maximum environmental safety. Classified as "ultimately biodegradable" (PW1) and non-toxic, Biodraulic THF is ideal for equipment operating in environmentally sensitive areas.**

TYPICAL SPECIFICATIONS:

Viscosity @40°C, cSt @100°C, cSt	 47.8 10.26
Brookfield Viscosity @-20°C @-35°C	 1650 11,150
Viscosity Index	210
Flash Point, °F, (°C)	484(251)
Stable Pour Point, °F, (°C)	-38(-39)
Biodegradation Classification,	Ultimate
ASTM D 5864	PW1