



THF

TRACTOR HYDRAULIC FLUID (THF) is specially formulated for use in transmissions, final drives, wet brakes and hydraulic systems of farm tractors and construction equipment that use a common fluid reservoir and that call for a combination lubricant and power transmission fluid.

Features

Irving THF meets or exceeds the following manufacturers' performance specifications:

- API GL-4
- Allison C-3, C-4 for transmission fluids
- J.I. Case MS 1204, MS 1207, MS 1210 for converters, hydraulic and transmission fluids, and can replace TFD, TCH and Hytran Plus
- John Deere JDM-14C, JDM-J20C, JDM-J20D, JDM-J27, and can replace Hy-Gard and Quatrol
- Caterpillar TO-2
- Deutz Allis Power Fluid 821 XL
- Ford-New Holland M2C41B, 48C/C2/C3, 86C, 159B, and can replace 134-D Fluid (FNHA-2-C-201) as well as Super All-Season Driveline and Hydraulic Fluid (FNHA-2-C-200)
- Komatsu-Dresser B06-0002
- Kubota
- Massey Ferguson M1110, M1127, M1129A, (Permatran), M1135 (Permatran III), M1139, M1141, M1143 and M1144
- Minneapolis-Moline
- Oliver
- Sundstrand Hydrostatic Transmission Fluid
- Vickers I-286-S, M-2950-S
- Volvo WB101
- White Farm Equipment Q-1826, Q-1802
- ZF TE-ML-06

Benefits

- Excellent wear prevention
- Excellent low temperature fluidity
- Chatter-free brake performance
- Excellent rust and corrosion protection
- Good seal and O-ring compatibility

The characteristics of this fluid are unique since the same fluid must lubricate the transmission and final drive, actuate hydraulic type disc brakes which are submerged in oil, and serve as a hydraulic fluid to operate power steering units, power take-offs, implements and attachments. Further, Irving THF has been particularly designed as a year-round multigrade fluid. It is semi-synthetic and offers excellent low temperature fluidity, which is helpful to construction equipment that must work in winter, as well as high temperature protection. It exceeds the viscosity requirements of both John Deere JDM-J20C and JDM-J20D specifications in one fluid. THF is also available in summer (3-season) and winter grades.

Irving **THF** qualifies for Denison HF-1 and HF-2 performance and passes tests for Eaton Hydraulics and Vickers. It passes ASTM* D-2882 High Pressure Vane Pump Wear test with less than 25 mg of steel weight loss. Irving **THF** is compatible with manufacturers' fluids and competitors' fluids of this type.

*ASTM: American Society for Testing and Materials.



Typical Performance Results

NAME	THF(M)	THF(W)	THF(S)
ASTM COLOR (D-4176)	4.0	4.0	4.5
DENSITY @ 15°C (kg/l)	0.869	0.869	0.878
VISCOSITY (D-445)			
cSt @ 40°C	40.9	31.6	57.5
cSt @ 100°C	9.4	7.1	9.0
BROOKFIELD VISCOSITY (D-2983)			
cP @ -40°C	19,870	19,000	—
cP @ -35°C	—	—	69,700
cP @ -20°C	1250	—	4200
VISCOSITY INDEX (D-2270)	224	198	135
TOTAL BASE NUMBER (D-2896)	7.0	7.0	7.0
POUR POINT (D-97) (°C)	-45	-45	-40
FLASH POINT (D-92) (°C)	196	190	226
USEFUL OPERATING TEMPERATURE RANGE* (°C)	-17/82	-20/73	-10/85

***USEFUL OPERATING TEMPERATURE RANGE assumes:**

- A maximum cold oil viscosity of 900 cSt (750 cP) for cavitation protection under full load and speed: Pumps can generally be started, under NO LOAD conditions, at temperatures up to 20°C lower than quoted here but the system must be allowed to warm up until the minimum Useful Operating Temperature is reached before the system is put to work.
- A minimum hot oil viscosity of 13 cSt to provide adequate wear protection under full operating condition.

Available Package Sizes

	3.78L (1 US gal)	20L Pail (5.28 US gal)	205L Drum (54.2 US gal)	210L Drum (55.5 US gal)	500L Cube (132 US gal)	1000L Cube (264 US gal)	Bulk
THF MULTI	X	X	X	X	X	X	X
THF WINTER		X	X	X	X	X	
THF SUMMER		X	X	X		X	

Check with sales representative or website for the latest product approvals.

