



**Performance Biolubricants
and Colloidal Cleaners**

**Trans-
Hydraulic
(Universal
Tractor Fluid)**

Trans-Hydraulic is a universal tractor fluid that incorporates stabilized* additive technology with biodegradable vegetable based stocks. This formulation contains special frictional modifiers for the Wet Brake's equipment design, and is compounded with detergent, dispersant, anti-wear, anti-rust, and anti-foam inhibitors. This Trans-Hydraulic Fluid is an ultimately biodegradable¹, multi-grade lubricant that can be used in agricultural, industrial, and construction equipment and has proven field performance.

Meets or exceeds all of the requirements of John Deere's Hygard (Specification J20-C); Allison C-3, Cat TO-2 and API GL-4, Low-Speed/High Torque.

Meets and exceeds universal tractor specifications for OEMS.

John Deere

J20C, J14A
Quatrol™
J20D

Case International

JIC-145/MS-1210
JIC-185/MS-1204
MS-1205, MS1127, M1129-A

Ford

M2C134-D
M2C86-C, M2C86-B
M2C41-B, M2C48-B
M2C53-A, M2C134-A
M2C134-B, M2C134-C

White Farm

Q-1826
Q-1705, Q-1766, Q-1802

Deutz-Allis

Landini

Fiat-Hesston

Massey-Ferguson

M1135, M1141
M1110, M1127, M1129-A

TRANSMISSION OEM'S

ATD Allison C-4
Caterpillar TO-2

Kubota

Steiger

Versatile

Trans-Hydraulic Fluid is an environmentally responsible hydraulic fluid that is formulated from renewable, agricultural plant resources. We believe Earth's environmental future rests in the use of renewable materials.

* This product is based on a proprietary and patented anti-oxidant, anti-wear, and cold flow technology. Base stocks are non-GMO agricultural vegetable oils. This stabilized technology provides high performance in high and low temperature applications, reducing oil thickening and deposits.

¹ Ultimate Biodegradation (Pw1) within 28 days in ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants.

To Order

Fax to 831-728-1753 or call 800-491-9473 for Customer Service
Visit www.wisesolutions.net or Email sales@wisesolutions.net

Available Size
Container

Quantity (min.)

5 gal. Pail	55 gal. Drum	330 gal. Tote



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Trans- Hydraulic Fluid (Continued)

Performance Data

Test	Typical Results	Specification Limits
Viscosity @ 100°C ASTM D-445	10.26	9.10 min.
Viscosity @ 40°C ASTM D-445	47.8	None
Viscosity Index ASTM D-2270	210	140
Shear Stability Orbahn ASTM D-6278		
Vis. @ 100°C (after shear)	9.38	9.10 min.
Brookfield Viscosity ASTM D-2983		
@-20°C	1,650	4,500 max. 5,500 per J. Deere
@-35°C	11,150	70,000 max.
Flash Point, °C	251	200 min.
Stable Pour Point, °C	-39	-37 max.
Oxidation Stability JDQ 16		
Evaporation Loss	0.65%	5.0% max.
Viscosity Increase @ 100°C	5.02%	10.0% max.
Viscosity Increase @ 40°C	4.0	-----
Sludge Formation	None	None
Additive Separation	None	None
Rust Protection JDQ 22	>100	100 hrs. min.
Copper Corrosion JDQ 32	1A	1B max.
Foaming Characteristics JDQ 33		
Sequence I	40/0	25/0 ml. max.
Foam Breaktime	82	30 sec. max.
Sequence II	0/0	50/0 ml. max.
Foam Breaktime	0	30 sec. max.
Sequence III	30/0	25/0 max.
Foam Breaktime	0	30 sec. max.
Water Sensitivity JDQ 19		
Solids	0.0	0.1 %v max.
Additive Loss	0.0	15.0% wt. max.
Extreme Pressure Properties JDQ 34		
Timken Abrasion Mass Loss	0.5 mg.	1.5 mg. max
Timken OK Load	73 N	45 N min.
Rubber Compatibility JDQ 9		
Volume Change	+1	0 to +5%
Hardness Change	-0.5	0 to -5 pts.
Precipitation	None	Trace
Rubber Compatibility		
Reference 69X311111		
Volume Change	+2.5	0 to +5
Hardness Change	-1.5	0 to -5
Precipitation	None	None
Oil Compatibility JDQ 23		
Additive Separation	None	None
Foaming Characteristics		
Sequence I	0/0	25/0 ml. max.
Foam Breaktime	0	30 sec. max.
Sequence II	0/0	50/0 ml. max.
Foam Breaktime	0	30 sec. max.
Sequence III	0/0	25/0 ml. max.
Foam Breaktime	0	30 sec. max.
Oxidation Stability		
Evaporation Loss	1.6	5.0% max.
Viscosity Increase @ 100°C	6.0	10.0% max.
Viscosity Increase @ 40°C	9.8	-----
Sludge Formation	None	None
Additive Separation	None	None



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Trans-Hydraulic Fluid	Test		Typical Results	Specification Limits	
	Performance Data (con't)	Low Temperature Fluidity JDQ 73/74			
Cold Soak @ -35°C		27 secs.	30.0 sec. max.*		
Slow Cool					
@ -30°C		30 mm in 3 sec.	30.0 sec. max.*		
@ -35°C flow in 30 sec.		30 mm in 11 sec.	10.0 mm min.**		
JDQ 94 PST Clutch Friction					
Total Cycles		2,000	2,000		
Initial Friction Coefficient		0.077	0.15 max.		
Final Friction Coefficient		0.105	0.08 min.		
Stall Time (sec.)		1.77	5.0 max.		
Disk #1 Wear (mm)		0.178	0.38 max.		
Disk #2 Wear (mm)		0.174	0.38 max.		
Disk #3 Wear (mm)		0.254	0.38 max.		
Disk #4 Wear (mm)		0.178	0.38 max.		
JDQ 102 Shear Stability					
Viscosity @ 100°C		10.51			
Viscosity @ 100°C (sheared)		9.38			
% Viscosity Loss		10.8%			
JDQ 95 Spiral Bevel/Final Drive Gear Wear					
Gear Surface Condition					
Pinion		None	No Scoring		
Ring		None	No Scoring		
Spiral Bevel Rating		9	Scale of 1-10,		
Sun Pinion Wear			10 = the best		
Left Side Average		<0.025	<0.025		
Right Side Average		<0.025	<0.025		
JDQ 84 Sundstrand Hydraulic Pump					
Flow Degradation		3.9%	Equal to or better than reference which is -2.0%.		
JDQ 96 Brake Torque Variation and Friction					
			Computer Results	Torque	SwRI
	Cycles	Relative Capacity	Variation	Variation	
	1,000	293,131	44,470	559,780	
	10,000	308,090	36,730	424,130	
	20,000	310,651	36,220	421,620	
	30,000	312,768	42,380	506,220	
	Total	1,224,640	159,800	1,911,750	
Allison C-4 Oxidation Test					
Tan Increase		10.12		7.0 max.	
Carbonyl Absorbance		10.0		0.9 max.	
Front Pump Seal		Moderate to Heavy Hardening		Moderate to Heavy Hardening	
		Light Sludge		Light to Medium Sludge	
Allison C-4 Wear Test					
Total weight loss		1.4 mg		15.0 max.	
Allison C-4 Paper Clutch Friction test					
		<=5,000	>5,000 Cycles	<=5,000	>5,000 Cycles
Slip Time, max.		0.70	0.55	0.72	0.61
Mid-Point Friction Coeff. min.		0.076	0.095	0.068	0.088
Allison C-4 Graphite Clutch Friction Test					
		1,500 Cycles		5,500 Cycles	
Slip Time, max.		0.70	0.74	0.71 max.	
Mid-Point Friction Coeff. min.		0.101	0.097	0.104 min.	

*Must flow 30 mm in a maximum of 30 seconds to pass.

**Must flow at least 10 mm in 30 seconds to pass.