

315 SIMPLEX SUPREME

Simplex Supreme is a universal, extreme pressure, para-synthetic torque converter fluid that is designed for use in most farm and industrial tractors. Simplex Supreme meets and exceeds the service make-up and refill requirements of transmissions, differentials, final drives, hydraulic, power steering and wet brake systems of this type of equipment, especially those that employ a common reservoir or sump.

Simplex Supreme is blended from the finest severely hydro-treated, polyalphaolefin (PAO) synthetic fluids, solvent refined, severely hydro-finished, high viscosity index, 100% paraffin base oils and high performance additive package available. This unique combination provides Simplex Supreme with the following advantages:

- Excellent low temperature properties
- Superior oxidation stability and excellent resistance to thermal degradation.
- Superior operating temperature reduction
- Compatibility with all types of seals and coatings.
- Reduced brake chatter and noise.
- Exceptional anti-wear and extreme pressure properties needed to prevent gear and pump wear, especially during heavily loaded conditions.
- Stable, balanced and controlled friction performance which provides smooth operation.
- Increased friction durability with various metallic and non-metallic friction materials, resulting in the elimination of problems with excessive noise, weak bindings and embrittlement of elastomeric materials.
- Frictional characteristics needed to assure the proper and decisive functioning of power take off clutches in a wet brake system.
- Excellent resistance to the formation of sludge and deposits.
- Superior protection against rust and corrosion.
- Excellent water tolerance characteristics that enhance filterability to minimize filter blockage due to water.
- Excellent anti-foaming and air release properties, to ensure smooth, efficient operation and proper lubrication of all components.
- Improved and increased operating efficiency and durability.
- Longer fluid life and reduced system maintenance which provides reduced downtime, longer equipment life and lower overall operating costs.

Simplex Supreme is suitable for use and can be used in the lubrication of Continuously Variable and Infinitely Variable Transmission installed on agricultural equipment. Simplex Supreme meets the following manufacturer's agricultural CVT and IVT specifications:

Case CVX
CNH (Case-New Holland) MAT 3540 –Suitable for Use
Deutz TTV
GIMA M 1145
JCB
John Deere Autopowr

John Deere IVT
Massey Ferguson CMS M 1145
Massey Ferguson Dyna VT
New Holland TVT
Steyr CVT
ZF TE-ML-06F

Simplex Supreme may be used in automatic and heavy duty transmission application where automatic transmission fluid type A fluid is specified.

Schaeffer Mfg.'s Simplex Supreme can be recommended in the following applications &/or specifications for current & non-current equipment

AGCO-Allis Permatran® 821XL (current)	John Deere 303 fluid
ACGO-Allis Power Fluid 821XL (current)	Kiotei
AGCO Power Fluid 821	Kubota UDT (current)
Allis Chalmers Part No. 626371	Kubota Super UDT (current)
Allis Chalmers Part No. 924282	Landini Tractor II Hydraulic Fluid
Allis Chalmers Part No. 246634	Leyland
Allis Chalmers Part No. 25741	Massey Ferguson (ACGO) M-1110
API GL-4	Massey Ferguson M-1127 A & B
Automatic Transmission Fluid Type A/Suffix A	Massey Ferguson M-1129A (Permatran)
CHN (Case-New Holland) MAT 3525 (current)	Massey Ferguson M-1135 Permatran® III (current)
CHN (Case-New Holland) MAT 3505 (current)	Massey Ferguson M-1141
Case IH MS-1204/JIC 185 (TFD)	Massey Ferguson M-1143
Case IH MS-1205 (TFD-II)	Mitsubishi
Case IH MS-1206 (Power Transmission Fluid PTF)	Minneapolis Moline Part No 10R1336
Case IH MS-1207 (Hy-Tran® Plus)	Minneapolis Moline Part No 10R1337
Case IH MS-1209 (Hy-Tran® Ultra) / CNH MAT 3505	Minneapolis Moline Part No 10P707-A
Case IH MS 1210/JIC 145 / CNH MAT	Minneapolis Moline 10P708A
Case IH MS-1230 (Poclairn) (current)	Minneapolis Moline Part No 10P3740-41
Case IH JIC 143	New Holland FNHA-2-C-200
Case IH JIC 144	New Holland FHNA-2-C-201.00
Case IH JIC 145 (TCH Fluid)	New Holland M2C-134D
Case IH JIC 146 (TFD)	New Idea (see White Farm)
Case IH JIC 185 (Hi-Vis)	Oliver Type 55
Case IH B-5	Oliver Type 5J
Case IH B-6 (Hy-Tran®)	Oliver Q182
Case-IH HTF SEMS 17001 (Steiger)	Plessy-Sunstrand
Clark Lift Truck Transmission TA 12, TA 18 (current)	Renk Doromat 873
Clark lift Truck Transmission HR 500, HR 600 (current)	Renk Doromat 874 A & B
Denison HF-O, HF-1, HF-2	Same Deutz-Fahr
Deutz Hydraulic Transmission Fluid	Saur Sunstrand Danfoss Hydrostatic Fluid
Deutz-Allis Power Fluid 821 XL (current)	Steiger HTFSEMS 17001 (obsolete)
Deutz-Allis Power Fluid 821	Universal
Deutz-Allis 246634	Valmet
Deutz-Allis 25741	Versatile (New Holland) 23M (current)
Deutz-Allis 272843 (current)	Versatile (New Holland) 24M (current)
Dresser Transmission Hydraulic Fluid (HMS B806-0002) (current)	Versatile (New Holland) Gear & Hydraulic Transmission Fluid
Ford New Holland ESN-M2C41-B	Vickers (Eaton) I-286-S, 35VQ25, M-2950-S
Ford New Holland ESN-M2C43	Volvo VME WB 101 (97303) and WB 102 (current)
Ford New Holland ESN-M2C48 A & B	White Farm Universal Hydraulic Transmission Fluid
Ford New Holland ESN-M2C53 A & B	White Farm Part No 30-310-5695
Ford New Holland ESN -M2C86 B & C	White Farm Part No 30-310-5366
Ford New Holland ESN-M2C92-A	White Farm Part No. 30-310-5709
Ford New Holland ESN-M2C41 A,B & C	White Farm Part No. 30-311-5717
Ford New Holland ESN M2C134D	White Farm Q-1705
Ford New Holland ESN-M2C-159 B & C	White Farm Q-1722
Fiat Hesston AF-87	White Farm Q-1766
IMT	White Farm Q-1766 B ((UTHF)
International Harvester (see Case IH)	White Farm Q-1802 (Type 55)
International-Hough (see Dresser)	White Farm Q-1826 (current)
JCB	Yanmar
John Deere J20A & B (Hy-gard)	Zetor OT-H
John Deere J20C (current) (Hy-gard)	ZF TE-ML-03E (current)
John Deere J14B & J14C	ZF TE-ML-05
John Deere J21A (All-Weather Hydraulic Fluid)	ZF TE-ML-05E
	ZF TE-ML-06E and ZF-T-ML-06F

Simplex Supreme is **no longer recommended** where Allison C-4 requirement is specified for use. Allison Transmission has revised its C-4 approvals to no longer include tractor hydraulic fluids. (*Refer to 239S Superlube Supreme TD sheet for C-4 equivalent*)

Do not use to replace Dexron®, Dexron® IID, Dexron® IIE, Dexron® IIIF, Dexron® IIIG, Dexron® IIIH, Dexron® VI, Ford Type F, Ford Type H, Ford Mercon®, Ford Mercon® V, Ford Mercon® SP, Mercon® LV, Chrysler ATF +3 and ATF +4, Allison TES 295, Allison TES 389, Allison TES 439 transmission fluids and automotive DCT and CVT type fluids. If Simplex is used to replace these fluids in passenger car, pickup trucks and SUV transmission applications damage may occur.

Do not use in powershift transmission applications that specify the use of a Caterpillar TO-4 type fluid. Damage may occur. (*Refer to 239S Superlube Supreme TD sheet for TO-4.*)

TYPICAL PROPERTIES

Specific Gravity @ 60°F	.8519
Viscosity @ 40°C, cSt (ASTM D445)	55.0-65.0
Viscosity @ 100°C, cSt (ASTM D445)	9.3-10.5
Brookfield Viscosity (ASTM D2983)	
@ -4°F/-20°C, cP	3,344
@ -31°F/-35°C, cP	35,635
Viscosity Index (ASTM D2270)	140
Flash Point °F/°C (ASTM D92)	445°/229.44°
Fire Point °F/°C (ASTM D92)	480°/248.89°
Pour Point °F/°C (ASTM D97)	-51°/-59.8°
Stable Pour Point °F/°C (FTM D203)	-40°/-40°
Viscosity Shear Stability (CEC L-45-A-99) (Taper Roller Bearing Test)	
Time, Hours	20
Relative Viscosity Loss, %	22.5
Copper Strip Corrosion Test (ASTM D130)	1a
I.H. BT-10 Oxidation Test:	
Weight Loss, mg:	
Aluminum	0.2
Copper	1
Iron	.01
Brass	.05
Precipitation Number	0.002
Glassware Rating	A
John Deere Oxidation Stability Test (JDQ23)	
% Evaporation Loss	0.5
Sludge Formation	None
Additive Separation	None
Humidity Cabinet Rust Test (ASTM D1748)	
Hours to Rust	+200
Rust Test (ASTM D665)	
Procedure A (Distilled Water)	Pass
Procedure B (Salt Water)	Pass
Foam Test (ASTM D892)	
Sequence I	0/0
Sequence II	20/0
Sequence III	0/0
Break Time, seconds	15
Foam Test JDQ-33	
Sequence I	0/0
Sequence II	0/0
Sequence III	0/0
Timken EP Test (ASTM D2782)	
OK Load Lbs.	30 lbs.

Four Ball Wear Test (ASTM D4172) (40 kg, 1200 RPM, 1hr)	
Scar Diameter, mm	0.31
Four Ball E.P. (ASTM D2783)	
Weld Point, kg	200
LWI, kg	62.6
Vane Pump Wear Test 1,000 psi 176°F/80°C (ASTM D2882)	
Ring and Vane Weight Loss, mg	2.6
Vickers Vane Pump Test @ 2,000 psi (IP 281)	
Ring and Vane Weight Loss, mg	40.3
Sediment, % Volume	0
Additive Wt. % Loss	0
Appearance	Clear
John Deere Spiral/Bevel Final Drive	
Gear Wear Test (JDQ 95)	
Spiral Bevel Rating	No Pitting, Rippling or Ridging
Sun Pinion Wear, mm of wear	<0.025
Gear Surface Condition	No Pitting, Rippling or Ridging
Ford 3000 Gear Wear Test	No Pitting
JDQ 94 Powershift Clutch Test	
Total Cycles	2000
Friction Coefficient	
Initial	0.084
Final	0.091
Stall Time, sec.	2.32
Wear, mm	
Disk 1	0.176
Disk 2	0.334
Disk 3	0.358
Disk 4	0.233
Modified FZG (ASTM D4998), mg weight loss	10
FZG Test (A/8.3/90) (ASTM D5182) Failure Stage	12 th
Massey Ferguson Final Gear Wear Test, Inches of wear	0.0001
John Deere Brake Performance test (JDQ 96)	Pass
John Deere Brake Chatter Test	Pass
Ford Brake Chatter Test	Pass
Allison C-4 GMOT Oxidation Test	
TAN Increase	1.04
Carbonyl Increase	0.45
% Viscosity Increase @ 40°C	9.25%
% Viscosity Increase @ 100°C	6.43%
Parts Rating	No sludge and varnish deposits
Aniline Point °F/°C (ASTM D611)	235°/113°
Total Acid Number (ASTM D664)	2.5-3.0