

7500

MONOLEC® Power Fluid

An advanced concept in the lubrication of combination gear-hydraulic (wet brake) systems.

Highly versatile, LE's 7500 Monolec Power Fluid is designed to meet the unusual operating needs of most combination gear-hydraulic systems and hydraulic transmissions in material handling, construction, manufacturing, trucks and farm equipment.

Allis-Chalmers Minneapolis-Moline Caterpillar Massey Ferguson

David BrownRenkOliverSteigerDeutzSunstrand HydraulicFordWhiteInternational HarvesterTransmissionsJ. I. CaseJohn Deere

Versatile Komatsu Kubota

Each of these manufacturers has slightly different physical characteristics and specifications for their gear-hydraulic systems. LE's 7500 Monolec Power Fluid is formulated to give maximum operating results, even under the most severe field conditions, in each of these types of units.

USER BENEFITS:

LE's 7500 Monolec Power Fluid reduces wear and gives uninterrupted protection through these features:

- Carefully selected and refined paraffinic base oils - have higher flash and fire points, tougher film strength, better oiliness or lubricity and greater water resistance and reduced wear.
- Control of rust and corrosion through special rust inhibitors in LE's 7500 Monolec Power
- Fluid which provides "plating action" on metal to prevent rust formation. Other additives control potentially damaging acid corrosion.
- Foam prevention long lasting foam suppressant breaks up foam to eliminate fading and "chatter," reduce pump cavitation and lubricant leakage.
- Seal compatibility using 100% paraffinic base oils, which have a higher aniline point, LE's 7500 Monolec Power Fluid helps protect seal and hose material against deterioration.

Extensive use in widely varying applications has proven that LE's 7500 Monolec Power Fluid:

Allows easier operation in cold temperatures
Reduces pump and gear metal wear
Decreases downtime
Eliminates foam
Lowers operating temperatures
Produces even power
Reduces corrosive wear
Reduces lubricant inventory
Reduces parts cost
Resists oxidation
Resists water

WHAT IS MONOLEC?

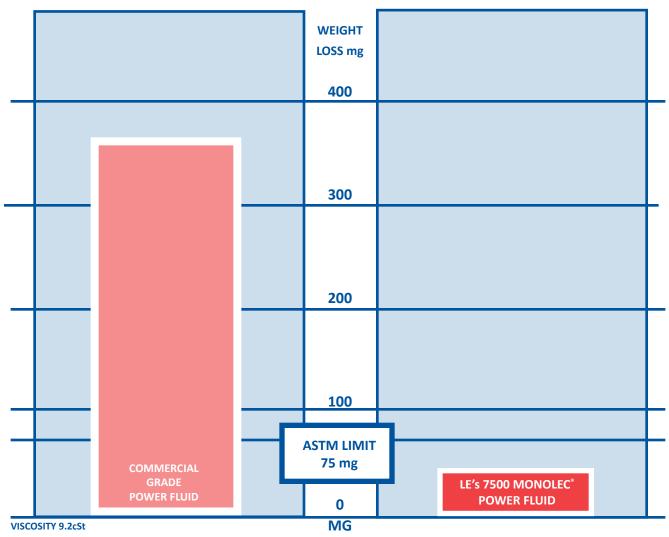
Monolec is LE's exclusive wear-reducing additive which has proven its extraordinary performance in thousands of applications. It is an invaluable component in LE's industrial oils, engine oils and other LE lubricants bearing the Monolec tradename.

Monolec creates a single molecular lubricating film on the metal surface, vastly increasing film strength without affecting tolerances. **LE's Monolec** allows opposing surfaces to slide by one another with greatly reduced friction, heat and wear.



LE operates under an ISO 9001 Certified Quality System

ASTM D4998 GEAR WEAR TEST RESULTS



TEMPERATURE 250°F

The graph above shows the results of the ASTM D4998 Gear Wear Test which utilizes a modified FZG apparatus that operates at gear loadings of 284,000 psi (10th load stage), speeds of 100 rpm, and a temperature of 121°C (250°F) for a duration of 10 hours. At the end of the test, the gears are removed, weighed and visually inspected.

This test represents a close correlation with three tractor manufacturer tests for gear wear The manufacturers are Ford, J. I. Case and International Harvester. A weight loss of 50 milligrams or less also shows excellent performance in these three major tractor OEM gear wear tests. Because of this correlation,

this Gear Wear Test was adopted as the ASTM D4998 standard test method for gear wear in tractor hydraulic fluids. The upper limit for gear weight loss in the ASTM standard is 75 milligrams. LE's 7500 Monolec Power Fluid exhibited a weight loss of only 35 milligrams. The commercial grade power fluid demonstrated a weight loss of 366 milligrams. This shows the superior protection provided by Monolec, LE's exclusive wear-reducing additive. Although this test demonstrates the benefit to tractors, similar protection of gears can be anticipated in other severe power transmission applications using LE's 7500 Monolec Power Fluid.



TECHNICAL DATA BULLETIN

7500 MONOLEC® Power Fluid

Including: International Harvester, Case-IH, Steiger, David

DESCRIPTION:

Heavy-duty fluid formulated for certain hydraulic transmissions and common sump hydraulic-gear systems as found in farm, construction and industrial tractors. Made from high quality paraffinic base oils and carefully selected additives. Contains Monolec®, LE's exclusive wear-reducing additive.

PHYSICAL CHARACTERISTICS—TYPICAL:

Gravity,	°API	29.7
Viscosity	У	
SU	S @100°F (38°C)	311.7
SU	S @210°F (99°C)	59.08
cSt	@ 40°C (104°F)	61.25
cSt	@100°C (212°F)	9.83
Viscosit	y Index	130
Flash Po	oint, °F (°C)	433 (223)
Pour Po	int, °F (°C)	-33 (-36)
Color		Red

TEST RESULTS:

John Deere

J20 C

Cooper Corrosion, ASTM D-130 1a
Rust Test, ASTM D-665, 24 hrs. Fresh Water Pass
Four Ball Wear, ASTM D-4172 Scar Dia., mm 0.34

MEETS PERFORMANCE REQUIREMENTS OF:

J20 A	Brown, McCormick Farmall
J12 B/C	MS-1204, JIC 185
J21 A	MS-1205, JIC 185
JDT 303	MS-1206
Quatrol [®]	MS-1207
Ford New Holland (Fiat)	MS-1210, JIC 145
Including: Ford, Sperry-Vickers, Versatile, New Holland	nd, Fiat JIC 143/144
ESN-M2C134-D	B-6 (International Harvester)
ESN-M2C134-A/B/C	SEMS 17001 (Steiger)
ESN-M2C86-B/C	AGCO
ESN-M2C53-A/B	Including: AGCO-Allis, Allis-Chalmers, Deutz-Allis, White
ESN-M2C48-A/B	Farm Equipment, Minneapolis-Moline, Oliver, New Idea
ESN-M2C43	Power Fluid 821XL
ESN-M2C41-B	Q-1826
ESN-M2C92-A	Q-1766 (Q-1722), Q-1766B
Specification 23M or 24M (Versatile)	Q-1705
I-286-S (Eaton/Vickers)	Q-1802

J I Case

Massey-Ferguson

M-1110 M-1127A/B M-1129A M-1135 M-1141

M-2950-S (Eaton/Vickers)

Caterpillar

TO-2

HF-1, HF-2

Type 55

Hesston & Hesston-Fiat (tractors only)

UDT

AF-87

873, 874 A/B

Renk-Doromat

Dennison

Kubota

LUBRICATION ENGINEERS, Inc.

Other Manufacturers:

Belarus Valmet
Eaton Hydraulics IMT
International Hough (Dresser) Kioto
Komatsu & Komatsu/Dresser Landini
Leyland Same
Mitsubishi Universal
Sauer-Danfoss (Sundstrand Hydraulics) Yanmar

APPLICATION:

Common sump systems calling for tractor hydraulic fluids and combining gear-hydraulic power, and/or power steering and wet brakes. Heavy duty automatic transmissions in on and off road applications.

RECOMMENDATION:

Not to be used in any gearbox for EP or straight mineral gear oils of SAE 90 or SAE 140 weight.

BENEFICIAL QUALITIES:

Even power flow.

_	ENEFICIAL QUALITIES.			
	Contains Monolec®, LE's exclusive wear-reducing additive.			
	USDA H2			
	Low pour point.			
	Keeps systems cleaner, longer.			
	Special rust inhibitors protect system.			
	One fluid for all units reduces inventory.			
	Eliminates foaming.			
	Eliminates power fade and "chatter."			
	Paraffinic base oil and special oxidation inhibitors give longer oil life.			
	Increased uptime.			