

# Product Information



## Monolec® Power Fluid (7500)

### *Long-Lasting Lubricant Provides Heavy-Duty Transmission Protection for Hard-Working Fleets*

Even in severe field conditions, Monolec® Power Fluid (7500) ensures constant, long-lasting performance for most heavy-duty transmissions, combination transmission-hydraulic (wet brake) systems, and hydraulic systems. Its unique blend provides the proven protection of the most advanced wear, friction and oxidation inhibitors, all in one complete formula that you can count on to deliver superior wear performance, consistent friction characteristics, exceptional oxidation stability and excellent foam prevention.

Monolec Power Fluid meets the requirements of a wide variety of manufacturers for systems used in construction, farming, manufacturing, material handling, mining, quarrying and trucking. Its versatility allows inventory consolidation, with just one lubricant for all of your transmission, axle and hydraulic protection needs.

#### **Beneficial Qualities**

##### **Superior Wear Prevention**

- Reduces downtime and extends service intervals
- Prolongs equipment life, including all metal parts as well as seals and hoses
- Decreases operating temperatures

##### **Consistent Friction Characteristics**

- Ensures smooth transmission performance
- Improves braking efficiency
- Reduces brake chatter

##### **Exceptional Oxidation Stability**

- Improves cleanliness
- Reduces corrosion-related problems
- Reduces thickening of oil
- Extends fluid and component life

##### **Excellent Foam Prevention**

- Improves control-valve response
- Reduces pump cavitation
- Reduces lubricant leakage
- Eliminates fading in hydraulics



#### **Proprietary Additive**

LE's proprietary additives are used exclusively in LE lubricants. Monolec Power Fluid contains Monolec.

**Monolec®** wear-reducing additive creates a single molecular lubricating film on metal surfaces, vastly increasing oil film strength without affecting clearances. An invaluable component in LE's engine oils, industrial oils and many of its other lubricants, Monolec allows opposing surfaces to slide by one another, greatly reducing friction, heat and wear.

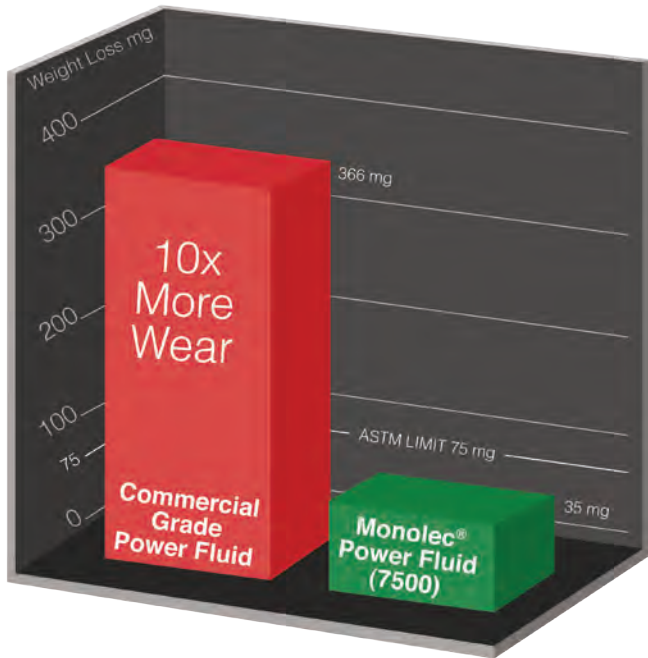




## Superior Wear Protection

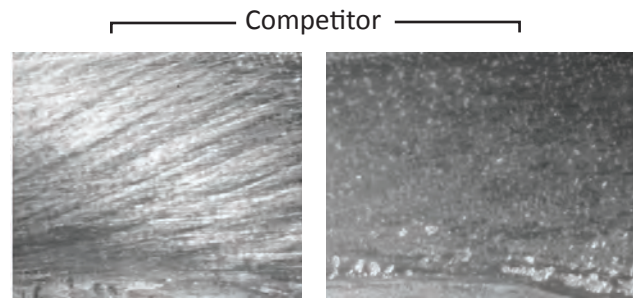
### Gear Wear Test Results

This Gear Wear Test (ASTM D4998) uses 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 10 hours. At the end of the test, the gears are removed, weighed and visually inspected. LE's Monolec Power Fluid (7500) exhibited a weight loss of only 35 mg, which shows its superior protection when compared to the commercial grade power fluid, which demonstrated a weight loss of 366 mg.



This test represents a close correlation with three tractor manufacturer gear wear tests: Ford, J. I. Case and International Harvester, all of which also show a weight loss of 50 mg or less as excellent performance. 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 mg.

### Axle Wear & EP Test



Ridging

Pitting

In this proprietary test for axle wear and extreme pressure, LE's patented additive combination provides clearly superior protection from the gear pitting and ridging that can reduce axle life.

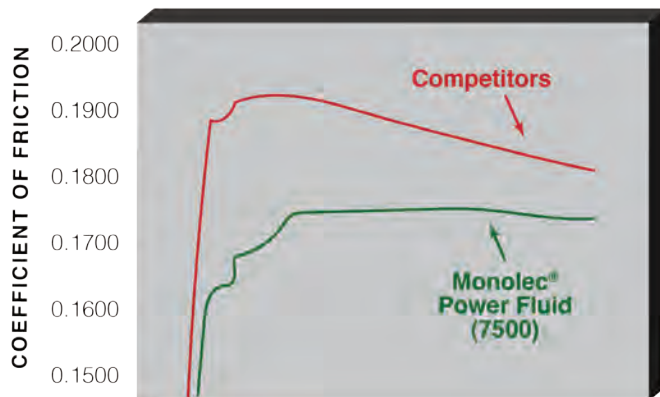


Monolec 7500



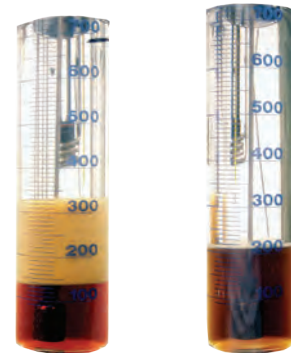
## Exceptional Oxidation Stability

Tendency for Frictional Problems as Oil Oxidizes



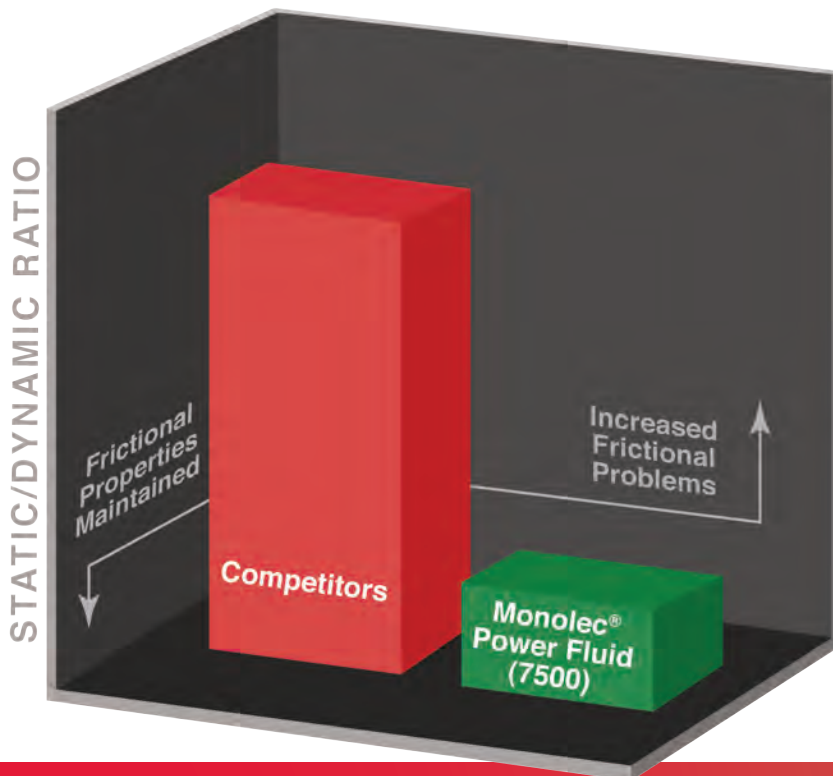
This proprietary test, using clutch material from an Allison transmission, demonstrates the ability of Monolec Power Fluid to maintain its frictional properties even when subjected to oxidation.

## Excellent Foam Prevention



Competitor Monolec 7500

Foaming of lubricants is known to cause problems with pump cavitation, inefficient control response, and even oxidation. Monolec Power Fluid has been specifically formulated to minimize the formation of foam even under more turbulent conditions in severe applications.



## Consistent Friction Characteristics

Frictional Properties Measured at Various Speeds

Monolec Power Fluid is formulated to maintain its friction profile under a variety of conditions to help promote smooth performance and extend equipment life.





## Monolec® Power Fluid

### Performance Requirements Met or Exceeded

- AGCO
  - o Deutz-Allis 272843 (obsolete)
  - o Massey Ferguson M-1145
  - o M-1143, M-1141, M-1138, M-1135 (obsolete)
  - o White Q-1826 (obsolete)
- Allison
  - o C-4 (obsolete)
- Belarus
  - o Where API CD hydraulic torque fluids are required
- CNH Global
  - o Case IH; New Holland MAT 3525
  - o Ford New Holland ESN M2C86B, FNHA-2C-201.00 (obsolete)
- Eaton Vickers
  - o Brochure 694 I-286-S & M2950S
- John Deere
  - o J-20C
- Kioti
  - o Where API CD hydraulic torque fluids are required
- Komatsu
  - o Where API CD, CE/SF fluids required
- Landini
  - o Where API CD hydraulic torque fluids are required
- Leyland Same
  - o Where hydraulic torque fluids are required
- ZF
  - o TE ML 03A, 05K, 07D
- Valmet
  - o Where API CD hydraulic torque fluids are required

### Typical Applications

- Heavy-duty transmission systems
- Combination transmission-hydraulic (wet brake) systems
- Hydraulic systems
- Power steering and power takeoff
- Sump systems that require tractor hydraulic fluids

	<b>7500</b>
<b>Color</b>	Red
<b>Relative Density @ 60°F/60°F, ASTM D1298</b>	0.878
<b>Viscosity @ 100°C, cSt, ASTM D445</b>	9.8
<b>Viscosity @ 40°C, cSt, ASTM D445</b>	61.3
<b>Viscosity Index ASTM D2270</b>	130
<b>Viscosity-Brookfield @ -20°C, cP, ASTM D2983</b>	≤ 5,500
<b>Viscosity-Brookfield @ -35°C, cP, ASTM D2983</b>	≤ 66,000
<b>Flash Point °C (°F), (COC), ASTM D92</b>	223 (433)
<b>Pour Point °C (°F), ASTM D97</b>	-36 (-33)
<b>Rust Test 4 hrs @ 60°C, DI H2O, ASTM D665A</b>	Pass
<b>Copper Corrosion 3 hrs @ 100°C, ASTM D130</b>	1a
<b>Four-Ball Wear @ 75°C, 1,200 rpm, 40 kgf, 60 minutes, mm wear, ASTM D4172</b>	0.34
<b>Ash-Sulfated %, ASTM D874</b>	1.18

