Block 4 Items (B4)
Tractor Hydraulic Fluid
B4: MOS-6 and B4:FLR-6
Block 4: Tractor Hydraulic Fluid

**B4:MOS-6** Regulation for the Uniform Method of Sale of Commodities Regulation: Section 2.XX. Tractor Hydraulic Fluid

**B4: FLR-6** Uniform Engine Fuels and Automotive Lubricants Regulation, Sections:
1.XX. Tractor Hydraulic Fluid
2.XX. Products for Use in Lubricating Tractors
3.XX. Tractor Hydraulic Fluid

Purpose: prevent product misrepresentation and equipment failure.
Tractor Hydraulic Fluid Labeling Today

- Marketed as 303 fluids, suggesting they meet John Deere’s 303 specification (obsolete since 1974)

- In reality:
  - Line wash, no performance additive
  - Down-treated fluids
  - Used oil

Poor performance, equipment failure
Consumer confusion and costly repairs
What is a THF Supposed to do?

- PTO for Implements
- Wet Brake Friction
- Transmission & Clutches
- Hydraulic System Circulation & Implements
- Final Drive Gear Reduction
- Axle & Differential
## Performance Summary of 303 Fluids

<table>
<thead>
<tr>
<th>Property</th>
<th>Result</th>
<th>Meets Performance Requirements? (√=yes or X&gt;No)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Viscosity Index</strong></td>
<td>All fluids have lower Viscosity Index.</td>
<td>X</td>
</tr>
<tr>
<td><strong>Low Temperature Performance</strong></td>
<td>Little or no fluid flow at low temperatures. Fluids do not meet minimum requirements at -35°C or -20°C</td>
<td>X</td>
</tr>
<tr>
<td><strong>Copper Corrosion</strong></td>
<td>Oils are not corrosive towards copper metal in screen testing.</td>
<td></td>
</tr>
<tr>
<td><strong>Oxidative and thermal stability</strong></td>
<td>Increased deposit formation and significant increase in oil viscosity</td>
<td>X</td>
</tr>
<tr>
<td><strong>Anti-wear performance</strong></td>
<td>High levels of wear on gear parts</td>
<td>X</td>
</tr>
</tbody>
</table>

- Deposit formation
- Bearing pitting
- Seal leaks
- Piston pump wear
- Gear Wear
- Brake Friction plate damage
Current Actions Against 303

Class Action Lawsuits:
Tractor Supply Co. & Smitty’s
Orschlen Farm and Home & Citgo
Old World Industries
Proposal Summary

• Add section defining tractor hydraulic fluids and hydraulic fluids:

  1.XX. Tractor Hydraulic Fluid. - A product intended for use in tractors with a common sump for the transmission, final drives, wet brakes, axles and hydraulic system.


• Based on:

• Key changes:

  Tractor hydraulic fluids shall meet at least one current original equipment manufacturer’s requirements for those tractors or have demonstrated performance claims to be suitable for use in those tractors.

  Any obsolete equipment manufacturer specifications should be clearly identified as “obsolete” and accompanied by the following warning: Caution: This specification is no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, final drive or axles is possible when using this product.
# Need for Current Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Tractor Hydraulic Fluid</th>
<th>Low Viscosity Version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>J20A- Obsolete replaced by J20C</td>
<td>J20C</td>
</tr>
<tr>
<td>Viscosity @ 100°C</td>
<td>9.1 cSt min.</td>
<td>9.1 cSt min.</td>
</tr>
<tr>
<td>Brookfield @ -20°C, cP</td>
<td>4,500 cP max.</td>
<td>5,500 cP max.</td>
</tr>
<tr>
<td>Brookfield @ -35°C, cP</td>
<td>70,000 cP max.</td>
<td>70,000 cP max.</td>
</tr>
<tr>
<td>Brookfield @ -40°C, cP</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pour Point, °C</td>
<td>-37C min.</td>
<td>-36C min.</td>
</tr>
</tbody>
</table>

Testing for obsolete specifications no longer available. All new specifications are backward compatible.
Block 4: THF Labeling Working Group

Current Members:

• Ron Hayes, Missouri Department of Agriculture
• David Au, Georgia Department of Agriculture
• John Hayes, Tennessee Department of Agriculture
• Kevin Ferrick, API
• Andrew Hamilton, CHS
• Doug Sackett, TOTAL

Thank you!
Questions or Comments

Lilla Voros
The Lubrizol Corp.
www.Lubrizol.com

Lilla.Voros@Lubrizol.com
Working together, achieving great things

When your company and ours combine energies, great things can happen. You bring ideas, challenges and opportunities. We’ll bring powerful additive and market expertise, unmatched testing capabilities, integrated global supply and an independent approach to help you differentiate and succeed.