

When The Going Gets Tough

The Tough **Go Further**

**WEAR  
PROTECTION**

**CORROSION  
RESISTANCE**

**SLIPPAGE  
CONTROL**

Your Challenges. Our Solutions.

**FS UNI-DRIVE TO-4 FLUID**

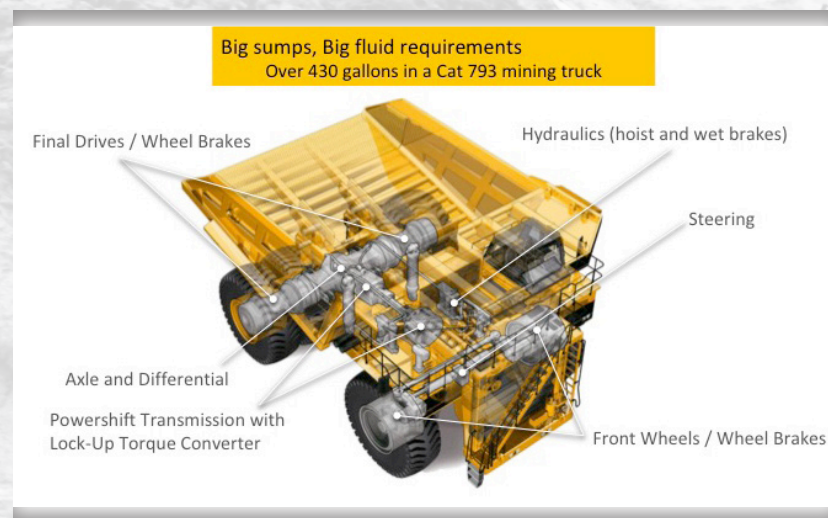


Fuels | Lubricants | Knowledge | Service

# FS UNI-DRIVE TO-4

From dusty quarries to muddy construction sites, stresses and strains of extreme environments put heavy-duty machinery to the test. Heavy loads put pressures and stresses on moving parts – especially gears and drives. Minimizing costly, unproductive downtime is a top priority.

FS Uni-Drive TO-4 Fluid possesses the required wear protection, oxidation and deposit control, frictional characteristics, and seal compatibility as set forth in the Caterpillar specification TO-4. It also provides excellent service in both new and older Caterpillar equipment and meets the Allison C-4 requirements for use in Allison powershift transmissions.



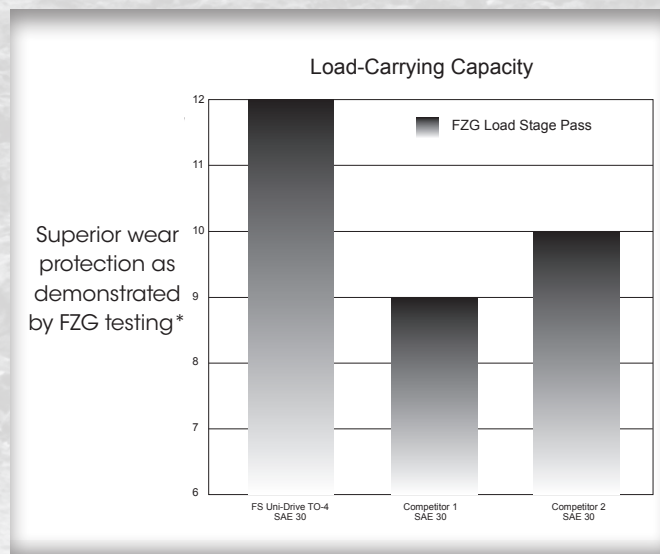
## WHERE IS FS UNI-DRIVE TO-4 FLUID USED?

## SUPERIOR WEAR PROTECTION AND LOAD-CARRYING CAPABILITY

FS Uni-Drive TO-4 Fluid is specifically formulated to minimize wear, prolong gear life, and provide protection against heavy loads. Optimized friction performance makes running powerful machines smoother and more precise for operators. The result is a significant reduction of wear on the clutch plates, less downtime, and lower overall costs.

Wear to spur gears in the final drives is one of the biggest reported problems and maintenance costs in the field. As demonstrated in the FZG Test, which evaluates fluid lubricating and wear protection properties of a loaded set of gears, FS Uni-Drive TO-4 Fluid is formulated to surpass competitive fluids specific to gear loading protection. Better protection means better performance.

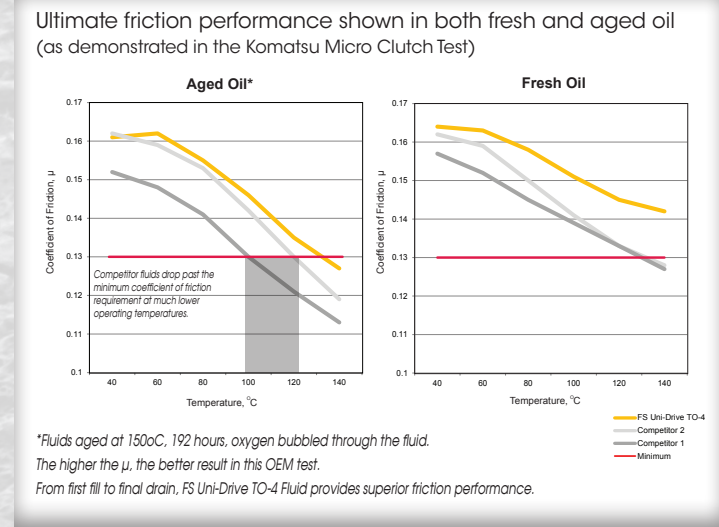
*\*The FZG Load Stage Test analyzes oil under high load conditions until wear occurs. At each stage, gears are analyzed for wear. When the oil can no longer protect the gears adequately, the stage is referred to as the failing load stage.*



## INDUSTRY-LEADING FRICTION PERFORMANCE

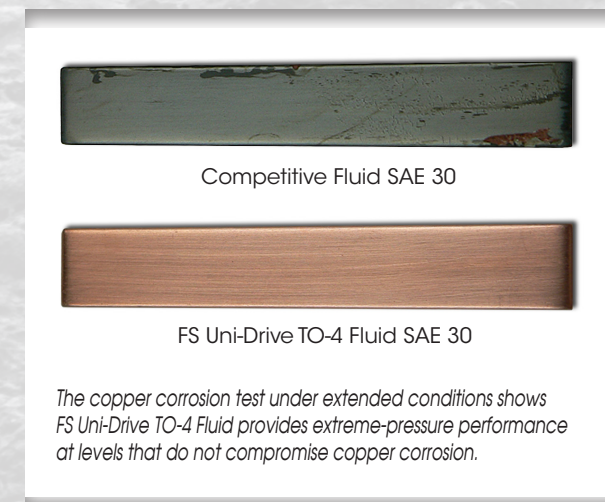
The optimized frictional properties of FS Uni-Drive TO-4 Fluid deliver outstanding performance while operating under high loads and at both low and high speeds. The improved friction durability prolongs fluid life up to twice as long as leading Original Equipment Manufacturer (OEM) requirements.

Optimum friction performance also benefits the transmission and brakes. Smoother and more precise clutch control and shudder-free wet braking provides the operator with greater confidence.



## SUPERIOR ANTI-CORROSION PERFORMANCE

Moving parts of machines are subjected to relentless wear and tear. FS Uni-Drive TO-4 Fluid has been specifically developed to provide excellent corrosion protection performance. It reduces corrosion of parts in the vane and piston pumps, steering, and hoist and also protects pressure flow and directional valves against varnish and deposits.



## OUTSTANDING YELLOW METAL PROTECTION

Yellow metals can be found in hydraulic systems, thrust washers, sintered bronze friction plates, and oil cooling systems. The yellow metal protection in FS Uni-Drive TO-4 Fluid greatly improves corrosion performance, providing protection for copper even in the most severe operating environments. This helps maintain optimum operating performance and extends component life.

## FS UNI-DRIVE TO-4 FLUID BENEFITS:

- ➔ Outstanding anti-wear, extreme-pressure, and load-carrying performance extends transmission life.
- ➔ Resistance to deposit and varnish formation provides longer seal life and the potential to safely extend drain intervals.
- ➔ Exceptional friction control provides ideal clutch-friction retention and slippage control for improved brake performance (anti-chatter), reliability, fuel economy, and lower operating costs.
- ➔ Improved low-temperature pumpability makes for easier, smoother shifting and better lubrication.
- ➔ Enhanced corrosion protection of copper and its alloys extends the life of synchronizers.
- ➔ Available as a full synthetic, multi-viscosity technology in the following grades: SAE 0W-20, 10W-30, and 15W-40.



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