

## TP STAR TRANS 80W-110



Very high performance lubricant specially developped for the lubrication of materials used in Public Works, Mines or Quarries.

TP STAR TRANS 80W-110, together with TP STAR MAX FE 10W-30, form the "TP STAR CONCEPT".

USES			
• Axles / Finals reductions	<ul> <li>TP STAR TRANS makes it possible to lubricate front or back strongly hypoid axles and loaded final reductions.</li> <li>TP STAR TRANS is usable in limited slip self-locking disc differentials.</li> <li>TP STAR TRANS permits also the cooling and the good work without vibrations of oil immersed brake systems.</li> <li>TP STAR TRANS can also be used in all types of gearboxes, with mechanical or synchronized shifting</li> <li>TP STAR TRANS is used all year round, due to its high viscosity index : <ul> <li>very fluid at cold temperature, permits a use of the final drive line, without power losses and with a break capacity immediately available and efficient.</li> <li>thick at high temperature, keeps an optimal and securized lubrication of loaded organs.</li> </ul> </li> <li>In certain application cases, TP STAR TRANS must be used in conjonction with the STAR XL additive (Refer to the Technical Data Sheet)</li> </ul>		
Limited slip differentials			
Wet brakes			
All seasons From -15°C to +40°C			
	EVELS		
API GL-5 / GL-4	<ul> <li>Its "Extreme-Pression" reinforced properties (API GL-5) give it excellent fatigue and wear resistances, specially for gears under load, shocks and high temperatures.</li> <li>Meet the main requirements of the Final Drive specification : CATERPILLAR FD-1 (SAE 50)</li> <li>TP STAR TRANS has succeed the official tests of wet brake frictions according to : CATERPILLAR TO-4 (SAE 50) KOMATSU Micro Clutch</li> <li>Its friction characteristics are also adapted for use in axles equipped with limited slip self-locking disc differentials. Contact our Technical Services in all cases.</li> </ul>		
CAT FD-1 CAT TO-4			
Wet brakes and "Limited slip" axles of major OEMs			
CUSTOMER BENEFITS			
Simplification	<ul> <li>Allows to strongly decrease the lubricant number needed for the whole vehicle park maintenance.</li> </ul>		
Performances	<ul> <li>Reaches the performance levels required by the machinery OEMs for the severe earth-moving applications.</li> </ul>		
Security	Erases all mistake possibilities of lubricant application, with security.		
CHARACTERISTIC	S		
TP STAR TRANS		Units	80W-110
Viscosity at 40°C		mm²/s	182
Viscosity at 100°C		mm²/s	18.6
Viscosity Index		°C	115
Flash point		°C	230

All values are typical values.

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TOTAL LUBRIFIANTS 562 avenue du Parc de l'Île 92029 NANTERRE FRANCE

Pour point

TP STAR TRANS 80W-110 September 2010

°C



This lubricant, when used according to our recommendations and for the purpose for which it is intended, presents no particular hazards. A safety data sheet complying with current EC legislation can be obtained from your local commercial adviser.