



STAR TRANS

80W-110



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

USES

- ❶ Axles / Finals reductions
- ❷ Limited slip differentials
- ❸ Wet brakes

All seasons
From -15°C to +40°C

- STAR TRANS makes it possible to lubricate front or back strongly hypoid axles and loaded final reductions.
- STAR TRANS is usable in limited slip self-locking disc differentials.
- STAR TRANS permits also the cooling and the good work without vibrations of oil immersed brake systems.
- STAR TRANS can also be used in all types of gearboxes, with mechanical or synchronized shifting
- STAR TRANS is used all year round, due to its high viscosity index :
 - 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.
 - thick at high temperature, keeps an optimal and securized lubrication of loaded organs.
- In certain application cases, STAR TRANS must be used in conjunction with the so-called "STAR XL" additive (Refer to the Technical Data Sheet)

PERFORMANCE LEVELS

API GL-5 / GL-4

CAT FD-1
CAT TO-4

Wet brakes and
"Limited slip"
axles of major OEMs

- Its "Extreme-Pression" reinforced properties (API GL-5) give it excellent fatigue and wear resistances, specially for gears under load, shocks and high temperatures.
- Its modified base oils provide better temperature resistance than mineral ones.
- Meet the main requirements of the Final Drive specification :
 - CATERPILLAR FD-1 (SAE 50)
 - TP STAR TRANS has succeed the official tests of wet brake frictions according to :
 - CATERPILLAR TO-4 (SAE 50)
 - KOMATSU Micro Clutch
- Its friction characteristics are also adapted for use in axles equipped with limited slip self-locking disc differentials (LIEBHEER...) Contact our Technical Services.

CUSTOMER BENEFITS

Simplification

Performances

Security

- Allows to strongly decrease the lubricant number needed for the whole vehicle park maintenance.
- Reaches the performance levels required by the machinery OEMs for the severe earth-moving applications.
- Erases all mistake possibilities of lubricant application, with security.

CHARACTERISTICS

STAR TRANS	Units	80W-110
Viscosity at 40°C	mm ² /s	182
Viscosity at 100°C	mm ² /s	18.6
Viscosity Index		115
Phosphorous minimum value	ppm	2000
Pour point	°C	- 33

All values are typical values.

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

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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.