



Ursa[®] TorqForce

Proven performance fluids for heavy-duty drive trains and transmissions

Description of the product

Ursa TorqForce products are proven performance fluids for use in transmissions, final drives and hydraulic systems installed in Allison, Caterpillar, Dana Powershift, Komatsu, Komatsu Dresser, Tremec/TTC, Vickers and ZF equipment.

Ursa TorqForce products are formulated with premium group II base oils, to which detergent and dispersant additives, oxidation and corrosion inhibitors, antiwear, antifoaming and external pressure agents, are all then added.

Ursa TorqForce replaces the Textran HD product range.

Advantages for the customer

- Additives with proven results combat wear and friction in metal surfaces in very high load and temperature conditions
- Reliable friction control prevents clutch slipping and favors an efficient and silent operation of the transmission and brakes, while minimizing wear
- Formulation with a very high quality base oil provides outstanding protection against oxidation at high operating temperatures and contributes to extending the lifetime of the oil
- Formulated to keep metal parts clean and free of sludge or lacquer deposits that result in premature malfunctions

Product highlights

- Provides protection against very high loads and temperatures
- Favors silent operation with minimal wear
- Outstanding quality increasing the lifetime of the oil
- Protects and cleans components

Among the selected specification standards are:

Allison	Caterpillar
Dana Powershift	Komatsu
Komatsu Dresser	Tremec/TTC
Vickers	ZF

Applications

- Ursa TorqForce products are proven performance lubricant oils formulated for transmissions, final drives and hydraulic systems requiring a fluid compatible with Caterpillar TO-4 or Allison C-4 requirements. They are also recommended for hydraulic transmissions and systems manufactured by Dana Powershift, Komatsu, Komatsu Dresser, Tremec/TTC, Vickers and ZF
- Ursa TorqForce products are formulated for drive train components integrated into the designs of modern machinery and older models
- They guarantee great retention to friction, wear control, seal compatibility and stability against oxidation and viscosity
- The friction liquid's friction properties are designed to last the entire lifetime of the lubricant oil
- Ursa TorqForce products are formulated to reduce wear, even in intensive operating conditions and with high loads. They protect precision parts from wear in high load conditions, helping control the formation of corrosion, lacquers and sludge
- Ursa TorqForce products are compatible with new and traditional clutch and seal materials
- To comply with Caterpillar specifications, Ursa TorqForce products are not modified by friction. They are therefore not recommended for equipment from other manufacturers that require fluids with friction modification to guarantee the smooth and silent operation of the brakes. For these applications, use Textran TDH Premium or Super Universal Tractor Oil Extra 10W-30 instead. (Keep in mind that this also holds inversely: fluids modified by friction such as these should not be used in Caterpillar TO-4 applications.)
- Ursa TorqForce SAE 10W can also be used as an alternative to Cat HYDO 10W oil in hydraulic system applications

Note: The main Caterpillar recommendation for shafts and final drives in off-road applications is the latest FD-1 lubricant oil performance specification. TO-4 type lubricant oils are still appropriate, although they require a shorter drainage interval.

Approvals, performance and recommendations

Approvals

SAE grade	10W	30	50
• ZF TE-ML 03C	X ^[2]	X ^[3]	—
• ZF TE-ML 07F	—	X ^[3]	—

Efficiency

SAE grade	10W	30	50
• Allison C-4	X	X	—
• Caterpillar TO-4 ^[1]	X	X	X

References

SAE grade	10W	30	50
• Dana Powershift	X	—	—
• Komatsu KES 07.868.1	X	X	X
• Komatsu Dresser	X	X	X
• Tremec/TTC	X	—	—
• Vickers 35VQ25	X	—	—

[1] Caterpillar does not follow a formal approval system; each supplier is responsible for the performance of its product.

[2] ZF registration number: ZF001906.

[3] ZF registration number: ZF001905.

Applications (*continuous*)

The selection of the viscosity grade will depend on the ambient temperature and intensive operation conditions. The viscosity grade recommendations are:

SAE grade	10W		30		50	
	Min.	Max.	Min.	Max.	Min.	Max.
Hydraulic systems	-20	+40	-10	+50	—	—
Hydrostatic transmissions	-20	+40	—	—	—	—
Powershift transmissions	-20	+10	0	+35	+10	+50
Final drive/differential/transmission housing (except for dumper trucks)	-30	0	-20	+25	0	+50
Final drive (dumper trucks)	-30	-10	-20	+15	0	+50

Typical test data				
Test	Test methods	Results		
Viscosity grade		SAE 10W	SAE 30	SAE 50
Shelf life: 60 months since filling date indicated in product tag.				
Density at 15°C, kg/l	ASTM D4053	0.876	0.883	0.895
Pour point, °C	ASTM D5950	-33	-27	-27
Flash point COC, °C	ASTM D92	≥ 205	≥ 225	≥ 225
Viscosity, kinematic, 100°C, mm ² /s	ASTM D445	6.8	10.9	18.5
Viscosity, kinematic, 40°C, mm ² /s	ASTM D445	44	88	199
Viscosity index	ASTM D2270	110	110	103

The information shown on the characteristic data does not constitute a specification; it is an indication based on current production and can be affected by admissible production tolerances. We reserve the right to make modifications. This replaces all previous issues and the information contained therein.

Waiver Chevron will not be liable for any losses or damage resulting from the use of this product for applications other than those specifically indicated in the product data sheets.

Health, safety, storage and environment According to currently available information, this product should not have adverse health effects if used for the anticipated application and in accordance with the recommendations indicated in the material safety data sheet (MSDS). You can request the MSDS at the nearest office or online. This product must not be used for purposes other than those intended. When disposing of the used product, protect the environment and follow local regulations.

A **Chevron** company product