



DELO[®] TORQFORCE[®]

SAE 10W, 30, 50, 60

PRODUCT DESCRIPTION

Delo[®] TorqForce[®] products are high performance lubricants designed for use in transmissions, final drives, and hydraulic systems in Allison, Caterpillar, Dana Powershift, Komatsu, Komatsu Dresser, Tremec / TTC, Vickers and ZF equipment.

CUSTOMER BENEFITS

Delo TorqForce products deliver value through:

- **Long equipment life** — Special additives help protect metal surfaces against scuffing and wear even under severe operating conditions of high temperature and high load.
- **Smooth operation** — Excellent frictional control helps prevent clutch slippage and offers quiet and efficient action of transmission and brakes while minimizing wear.
- **Minimal downtime** — Good compatibility with seals, O-rings, and packing materials maintains their good condition and keeps leakage at a minimum.
- **Improved filterability** — Delo TorqForce is formulated with special additive chemistry that allows for ultra-fine filtration which provides exceptional fluid cleanliness and equipment reliability performance.
- **Long oil life** — Outstanding ability of the base stock to withstand oxidation at high operating temperatures results in maximum service life for the oil.
- **Reliable operation** — Formulated to keep metal parts clean and free of varnish and sludge deposits that could result in premature breakdown.
- **Minimizing weather and storage concerns** — Protects against rust and corrosion of highly finished precision parts when operating in humid conditions and during seasonal shutdown periods.

- **Warranty Plus protection** — Bumper-to-bumper warranty protection from the engine to the drive train. Payment for Chevron lubricant-related damage to your equipment, including parts and labor.¹ Problem resolution and technical advice from Chevron's lubrication experts.

FEATURES

Delo TorqForce products are high performance lubricants designed for use in transmissions, final drives, and hydraulic systems requiring a fluid meeting Caterpillar TO-4 or Allison C-4 requirements. They are also recommended for transmission and hydraulic systems manufactured by Dana Powershift, Komatsu, Komatsu Dresser, Tremec/TTC, Vickers and ZF.

ISOSYN[®]
TECHNOLOGY

They are manufactured using highly refined base oils, detergents, dispersants, oxidation and corrosion inhibitors, antiwear and extreme pressure agents, and a foam suppressant.

Delo TorqForce products are designed for both newly developed and older model drive train components.

They offer excellent friction retention, wear control, seal compatibility, oxidation stability, and viscosity stability.

The frictional characteristics of the fluid are retained over the life of the lubricant.

Delo TorqForce products are formulated to help protect against wear, even in severe service conditions and under high loads. They help protect precision parts against wear under high load conditions by controlling the formation of corrosion, varnish, and sludge.

Delo TorqForce products are compatible with new and traditional seal and clutch materials.

¹ See Warranty Plus for details and restrictions.

Product(s) manufactured in the USA, Colombia and El Salvador.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

1 July 2016
TTF-31

© 2015-2016 Chevron U.S.A. Inc. All rights reserved.

Chevron, the Chevron Hallmark, Delo, ISOCLEAN, ISOSYN and the ISOSYN logo are trademarks owned by Chevron Intellectual Property LLC. All other trademarks are property of their respective owners.

APPLICATIONS

Delo® TorqForce® products are recommended for use in Caterpillar, Komatsu, transmissions, final drives, and wet brakes, and in Allison, Dana Powershift, Tremec/TTC, Vickers and ZF transmissions, torque converters, and hydraulic systems.

Under normal ambient temperatures, **hydraulic systems will use the SAE 10W** viscosity grade. SAE 10W and 30 are recommended for mobile hydraulic systems where operating requirements are severe.

Transmissions will use the SAE 30 viscosity grade. Delo TorqForce products are also recommended for heavy duty off highway automatic transmissions requiring an SAE 10W, 30, 50 or 60 fluid.

Final drives will use the SAE 50 viscosity grade at normal temperatures and the SAE 60 at high ambient temperatures.

In order to meet Caterpillar specifications, Delo TorqForce products are not friction modified. Thus, they are not recommended for equipment made by other OEMs who require friction modified fluids in order

to assure smooth and quiet brake operation. For example, many farm tractor OEMs require fluids such as Chevron 1000 THF in order to eliminate brake noise.

Delo TorqForce products are approved for:

- **ZF** TE-ML 03C (SAE 10W, 30)
- **ZF** TE-ML 07F (SAE 30)

Delo TorqForce products meet:

- requirements of **Allison** C-4 (SAE 10W, 30)
- service requirements of **Caterpillar** TO-4

Delo TorqForce products are recommended for:

- **Dana Powershift** (SAE 10W, 30)
- **Komatsu** KES 07.868.1
- **Komatsu Dresser**
- **Tremec/TTC**
- **Vickers** 35VQ25 (SAE 10W, 30)

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

TYPICAL TEST DATA

SAE Grade	10W	30	50	60
Product Number	293105	293106	293107	293108
SDS/MSDS Number				
USA	38351	38351	38351	38351
Colombia	38355	38355	38355	38355
El Salvador	39331	39331	39331	—
API Gravity	30.0	28.7	26.5	25.0
Viscosity, Kinematic				
cSt at 40°C	43.8	87.5	199	319
cSt at 100°C	6.8	10.9	18.5	25.0
Viscosity, Cold Crank, °C/Poise	-25/60	—	—	—
Viscosity Index	110	110	103	101
Flash Point, °C(°F)	238(460)	266(511)	266(511)	266(511)
Pour Point, °C(°F)	-33(-27)	-27(-17)	-27(-17)	-15(+5)

Minor variations in product typical test data are to be expected in normal manufacturing.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

