DELO® TORQFORCE®
ISOCLEAN® CERTIFIED LUBRICANT
SAE 10W, 30, 50, 60

PRODUCT DESCRIPTION
Delo® TorqForce® ISOCLEAN® Certified Lubricants 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. Chevron ISOCLEAN Certified Lubricants, which have been certified to meet specified ISO Cleanliness standards at point of delivery using industry leading filtration and testing technology. ISOCLEAN Certified products are the first step for contamination control and maximizing component life.

CUSTOMER BENEFITS
Delo TorqForce ISOCLEAN Certified Lubricants deliver value through:

- **Ready to use** — Enables users to meet stringent original equipment manufacturer’s cleanliness standards for fill lubricants.
- **Flexibility** — ISO Cleanliness targets can be customized to fit your business application needs.
- **Peace of mind** — Each delivery of Chevron ISOCLEAN Certified Lubricant includes an ISOCLEAN Certificate of Analysis.
- **OE fluid cleanliness requirements** — Customized to meet specific equipment manufacturers’ fluid cleanliness requirements.
- **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 ISOCLEAN Certified Lubricant is formulated with special additive chemistry that allows for ultra-fine filtration which provides exceptional fluid cleanliness and equipment reliability performance. Delo TorqForce ISOCLEAN Certified Lubricants can achieve cleanliness levels down to 18/16/13 and potentially cleaner with appropriate Chevron approved ISOCLEAN Programs.
- **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.

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

22 February 2017
TTF-31 ISOCLEAN

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\(^1\) See Warranty Plus for details and restrictions.
FEATURES

Delo® TorqForce® ISOCLEAN® Certified Lubricants 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.

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 ISOCLEAN Certified Lubricants 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 ISOCLEAN Certified Lubricants 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 ISOCLEAN Certified Lubricants are compatible with new and traditional seal and clutch materials.

APPLICATIONS

Delo TorqForce ISOCLEAN Certified Lubricants 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 ISOCLEAN Certified Lubricants 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 ISOCLEAN Certified Lubricants are approved for:

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

Delo TorqForce ISOCLEAN Certified Lubricants meet:

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

Delo TorqForce ISOCLEAN Certified Lubricants 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.

Consult with your Chevron Lubricant Representative or Chevron ISOCLEAN Certified Lubricants Marketer to set specific ISO Cleanliness targets for your business application.
**TYPICAL TEST DATA**

<table>
<thead>
<tr>
<th>SAE Grade</th>
<th>10W</th>
<th>30</th>
<th>50</th>
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<tr>
<td>Viscosity, Kinematic</td>
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<tr>
<td>cSt at 40°C</td>
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<td>319</td>
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<td>cSt at 100°C</td>
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<td>Flash Point, °C(°F)</td>
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<td>266(511)</td>
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<tr>
<td>Pour Point, °C(°F)</td>
<td>-33(-27)</td>
<td>-27(-17)</td>
<td>-27(-17)</td>
<td>-15(+5)</td>
</tr>
</tbody>
</table>

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.
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