



DELO[®] TORQFORCE[®] FD ISOCLEAN[®] CERTIFIED LUBRICANT SAE 60

PRODUCT DESCRIPTION

Delo[®] TorqForce[®] FD SAE 60 ISOCLEAN[®] Certified Lubricant is a premium heavy-duty gear lubricant specifically designed for use in final drives and axles of modern Caterpillar off-road equipment operating in severe service, where fluids meeting the Cat FD-1 specification are recommended. Chevron ISOCLEAN Certified Lubricants 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 FD SAE 60 ISOCLEAN Certified Lubricant delivers value through:

- **Ready to use** — Enables users to meet stringent original equipment manufacturers' 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.
- **Maximizes equipment life in severe service** — Advanced additive system minimizes wear in heavily loaded gears and bearings by forming a strong protective layer on metal surfaces under extreme service conditions.

- **Prolongs oil life** — Extremely high thermal and oxidation stability protects against viscosity increase and deposit formation. Drain interval of 4,000 hours is recommended (compare to typical 2,000 hour drain interval for Cat TO-4 fluids).
- **Minimizes unscheduled maintenance** — Effective rust and corrosion inhibitors protect final drive components. Good viscosity characteristics at low temperatures ensure rapid oil circulation on start-up, preventing premature component wear.
- **Excellent foam protection** — Works to avoid fluid loss due to foaming.
- **Long equipment life** — Fluid film with special additives helps protect metal surfaces against pitting, scuffing and wear, even under severe operating conditions of high temperature and high load.
- **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
- **Access to Chevron's lubrication and industry knowledge** — Maximizes the bottom line business results of trucking industry professionals.

¹ See Warranty Plus for details and restrictions.

Product(s) manufactured in the USA.

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

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FEATURES

Delo® TorqForce® FD SAE 60 ISOCLEAN® Certified Lubricant is designed *specifically* for heavy-duty final drives and axles in severe service. It exhibits significantly improved performance versus TO-4 fluids in the area of gear protection, resistance to macropitting, improved corrosion protection and foam stability.

For customers who have final drive applications where the fluid also lubricates oil-immersed brakes or clutches from a common sump system, please use Delo TorqForce SAE 50 (Caterpillar TO-4). Additionally, Chevron's Delo TorqForce FD SAE 60 ISOCLEAN Certified Lubricant should not be used in powershift transmissions since it doesn't contain key friction modifiers required for high friction materials found in these systems.

APPLICATIONS

- Final drives, axles, differentials and front wheels of Caterpillar equipment where Cat FD-1 performance fluid is specified. It is not suitable where a common sump is used for lubricating final drive gears, and immersed brakes or clutches.
- Caterpillar Mining and Aggregate Haul Trucks
- Caterpillar Wheel and Track Mining Loaders & Dozers
- Caterpillar Wheel Scrapers
- Caterpillar Wheel and Track Fellers
- Caterpillar Wheel and Track Skidders
- Caterpillar Knuckleboom Loaders

Delo TorqForce FD SAE 60 meets or exceeds the specification:

- **CATERPILLAR** FD-1

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

SAE Grade	60
Product Number	293112
SDS Number	41030
Density at 15 °C, kg/L	.90
Viscosity, Kinematic mm ² /s at 40°C mm ² /s at 100°C	335 25
Viscosity Index	97
Flash Point, °C(°F)	288(550)
Pour Point, °C(°F)	-25(-13)
Phosphorus, mass %	0.031
Calcium, mass %	0.028

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

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