



# DELO<sup>®</sup> 400 XLE SB ISOCLEAN<sup>®</sup> CERTIFIED LUBRICANT SAE 15W-40



## PRODUCT DESCRIPTION

"Delo. Let's go further.<sup>®</sup>"

Delo<sup>®</sup> 400 XLE SB SAE 15W-40 ISOCLEAN<sup>®</sup> Certified Lubricant with ISOSYN<sup>®</sup> Advanced Technology is a premium synblend, heavy-duty engine oil optimized with a mixture of synthetic and conventional base stocks designed for extended drains (up to 1.5x OEM standard drain interval) and mixed fleets. It is recommended for naturally aspirated and turbocharged, four-stroke diesel engines and four-stroke gasoline engines in which the API CK-4 or API SN service category and SAE 15W-40 viscosity grades are recommended. It is also approved by many of the major heavy-duty Original Equipment Manufacturers (OEM), meeting their latest engine oil specifications.

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 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is an API CK-4 heavy duty engine oil specifically formulated for on highway applications, including 2017 greenhouse gas (GHG 17) compliant diesel engines with lower CO<sub>2</sub> emissions, in addition to 2010 compliant low emission and off-highway Tier IV diesel engines with Selective Catalytic Reduction (SCR), Diesel Particulate Filter



(DPF) and Exhaust Gas Recirculation (EGR) systems calling for SAE 15W-40 premium heavy duty motor oil.

Additionally, Delo 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant has excellent performance in Allison heavy-duty transmission units requiring Allison TES-439 approval and provides excellent shear stability and component protection.

It is fully compatible with previous engine models and previous API Oil Service Categories.

Delo 400 XLE SB SAE 15W-40 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.
- **Extended Drain Performance\*** — Formulated for extended oil drain protection for both on- and off-road diesel engines. Extended oil drain potential up to 1.5x, based on the average of U.S. Class 8 engine manufacturers' recommendations.
- **Exceptional Deposit Control** — Provides high performance piston deposit control and turbocharger protection due to its superb oxidation performance. Its high performing detergent and dispersant additives provide excellent diesel engine component protection.

Product(s) manufactured in the USA and Colombia.

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

15 January 2024  
HDMO-55 ISOCLEAN

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- **Better Low Temperature Pumpability** — Improved flow rate and pumpability versus conventional SAE 15W-40 oils and similar pour point to conventional SAE 10W-30 products with better cold flow properties than conventional SAE 15W-40 products.
- **Long Drain Performance** — Formulated for long oil drain protection for both on and off-road diesel engines.
- **Minimized Operating Costs** — Exceptional soot dispersancy and wear control. Cylinders, pistons, rings, and valve train components are well protected against wear and corrosion, providing optimum service life and minimal maintenance. Contributes to maximum equipment utilization and minimal downtime.
- **Excellent Emission Control System Life** — Provides long Diesel Particulate Filter (DPF) life for minimal downtime and cleaning, thus managing your maintenance costs.
- **Managed Inventory Costs** — Backwards compatible with previous API Oil Service Categories. Provides single solution for the oil and gas industry for both heavy duty stationary engine and Allison off highway transmission performance. Suitable for use in four-stroke gasoline and naturally aspirated turbocharged and modern electronically controlled/low emission diesel engines. Allows users with a wide mix of engine brands to enjoy simplified inventory and dispensing systems that may contribute to saving money, space and handling time.
- **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.<sup>1</sup> Problem resolution and technical advice from Chevron's lubrication experts.
- **Access to Chevron's Lubrication and Industry Knowledge** — Helps maximize your bottom line business results.

## ISOSYN ADVANCED TECHNOLOGY

Delo® 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant with ISOSYN® Advanced Technology is formulated using advanced additive technology to provide outstanding protection for on highway applications including new GHG 17 compliant engines.



ISOSYN Advanced Technology is the combination of Chevron's outstanding formulating expertise, unique high performance additive chemistry and premium base oils that helps extend the durability of critical diesel engine parts.

Delo 400 products formulated with ISOSYN Advanced Technology can provide improved engine longevity, extended oil drain performance, and excellent diesel component parts protection, helping to extend vehicle life and minimize total cost of ownership when compared with previous generation Chevron HDMO formulations.

Delo 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology helps to keep rings clean and free for maximum combustion pressure and to provide minimal wear. It minimizes valve and piston crown land deposits, thus managing oil consumption. Its high level of ashless dispersants keeps fuel soot in suspension and thus helps to avoid filter plugging, heavy cylinder head sludge, abrasive polishing wear, high viscosity increase, oil gelling, and minimizes the risk of valve train wear. These problems can result in excessive engine wear and bearing failure on startup, without prior indication to the operator.

Specially selected oxidation inhibitors control oxidation, sludge, and undue thickening. Its high-quality blend of anti-wear additives protects against valve train wear and scuffing of highly loaded parts operating under boundary lubrication. A specially selected viscosity index improver ensures easy flow at low temperatures and excellent film protection in hot engine areas. A defoaming additive protects against air entrainment.

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<sup>1</sup> See Warranty Plus for details and restrictions.

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.

ISOSYN Advanced Technology benefits customers by helping to provide:

- Improved engine durability with up to 44% improved liner wear<sup>2</sup>
- Potential for 1.5x extended oil life with up to 37% improved oxidation performance<sup>2</sup>
- Better reliability with up to 56% improved viscosity control<sup>2</sup>

## APPLICATIONS

Delo 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant has a wide range of specifications and approvals. It is recommended for today's most modern on-highway low emission designs, as well as older, on-highway diesel engines. This versatile oil meets stringent emissions standards, making it an ideal choice for various industries, including oil and gas, construction, agriculture, marine, and mining.

### Delo 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant is approved for:

- **API Service Categories** CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4, SN
- **Cummins** CES 20086
- **Detroit Fluids Specification (DFS)** 93K222
- **Mack** EOS-4.5
- **Renault** RLD-3
- **Volvo** VDS-4.5

### Delo 400 XLE SB SAE 15W-40 ISOCLEAN Certified Lubricant is recommended for:

- **ACEA** E11
- **Allison** TES-439
- **Caterpillar** ECF-3
- **DEUTZ** DQC III-18 LA
- **DTFR** 15C100 (previously known as MB 228.31)
- **Ford** WSS-M2C171-F1
- **JASO** DH-2
- **MAN** M3775
- **MTU** Category 2.1

<sup>2</sup> Results will vary based on the Delo 400 product, operating conditions, and engine types. Always follow OEM recommendations and utilize used oil analysis testing when extending oil drain intervals.

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	15W-40
Product Number	278017
SDS Number	
U.S.	43380
Canada	43381
Mexico	43382
Colombia	46894
Density at 15°C, kg/L	0.87
Viscosity, Kinematic	
mm <sup>2</sup> /s at 40°C	110
mm <sup>2</sup> /s at 100°C	14.9
Viscosity, Cold Crank, °C/mPa.s	-20/5200
Viscosity, MRV, °C/mPa.s	-25/17,500
Viscosity, HTHS, mPa.s	4.2
Viscosity Index	141
Flash Point, °C(°F)	230(446)
Pour Point, °C(°F)	-39(-38)
Sulfated Ash, mass %	1.0
Base Number, mgKOH/g, ASTM D2896	8.0
Phosphorus, mass %	0.11
Sulfur, mass %	0.38
Zinc, mass %	0.12

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.



# DELO<sup>®</sup> 400 XLE ISOCLEAN<sup>®</sup> CERTIFIED LUBRICANT SAE 15W-40



## PRODUCT DESCRIPTION

"Delo. Let's go further.<sup>®</sup>"

Delo<sup>®</sup> 400 XLE SAE 15W-40 ISOCLEAN<sup>®</sup> Certified Lubricant with ISOSYN<sup>®</sup> Advanced Technology is a premium synthetic technology long drain and mixed fleet engine oil recommended for naturally aspirated and turbocharged four-stroke diesel engines and four-stroke gasoline engines in which the API CK-4, API SN or API SN PLUS service category and SAE 15W-40 viscosity grade 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 400 XLE SAE 15W-40 (Synthetic Technology) ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is an API CK-4 heavy duty engine oil specifically formulated for on highway applications, including 2017 greenhouse gas (GHG 17) compliant diesel engines with lower CO<sub>2</sub> emissions, in addition to 2010 compliant low emission diesel engines with Selective Catalytic Reduction (SCR), Diesel Particulate Filter (DPF) and Exhaust Gas Recirculation (EGR) systems calling for SAE 15W-40 premium heavy duty motor oil.

Delo 400 XLE SAE 15W-40 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology is also recommended for off highway Tier IV emission



compliant engine applications where an SAE 15W-40 viscosity grade is required. It is formulated for newer engines with Selective Catalytic Reduction (SCR), Diesel Particulate Filter (DPF) and Exhaust Gas Recirculation (EGR) systems. Additionally, Delo 400 XLE SAE 15W-40 is recommended for use with transmissions that require the Allison TES-439 specification in heavy duty off-road applications.

It is fully compatible with previous engine models and previous API Oil Service Categories.

Delo 400 XLE SAE 15W-40 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.
- **Exceptional Deposit Control** — Provides high performance piston deposit control and turbocharger protection due to its superb oxidation performance. Its high performing detergent and dispersant additives provide excellent diesel engine component protection.
- **Better Low Temperature Pumpability** — Improved flow rate and pumpability versus conventional SAE 15W-40 oils and similar pour point to conventional SAE 10W-30 products with better

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HDMO-54 ISOCLEAN

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cold flow properties than conventional SAE 15W-40 products.

- **Superb Long Drain Performance** — Formulated for exceptional long oil drain protection for both on and off-road diesel engines.
- **Minimized Operating Costs** — Exceptional soot dispersancy and wear control. Cylinders, pistons, rings, and valve train components are well protected against wear and corrosion, providing optimum service life and minimal maintenance. Contributes to maximum equipment utilization and minimal downtime.
- **Excellent Emission Control System Life** — Provides long Diesel Particulate Filter (DPF) life for minimal downtime and cleaning, thus managing your maintenance costs.
- **Managed Inventory Costs** — Backwards compatible with previous API Oil Service Categories. Provides single solution for the oil and gas industry for both heavy duty stationary engine and Allison off highway transmission performance. Suitable for use in four-stroke gasoline and naturally aspirated turbocharged and modern electronically controlled/low emission diesel engines. Allows users with a wide mix of engine brands to enjoy simplified inventory and dispensing systems that may contribute to saving money, space and handling time.
- **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.<sup>1</sup> Problem resolution and technical advice from Chevron's lubrication experts.
- **Access to Chevron's Lubrication and Industry Knowledge** — Helps maximize your bottom line business results.

## FEATURES

Delo® 400 XLE SAE 15W-40 ISOCLEAN® Certified Lubricant with ISOSYN® Advanced Technology is formulated using advanced additive technology to provide outstanding protection for on highway applications including new GHG 17 compliant engines.

Delo 400 XLE SAE 15W-40 ISOCLEAN Certified Lubricant is formulated with ISOSYN Advanced



<sup>1</sup> See Warranty Plus for details and restrictions.

Technology, which is a combination of Chevron's industry-leading formulating expertise with unique, high performance additive chemistry to help extend the durability of critical diesel engine parts.

## ISOSYN ADVANCED TECHNOLOGY

ISOSYN Advanced Technology is the combination of Chevron's outstanding formulating expertise, unique high performance additive chemistry and premium base oils that helps extend the durability of critical diesel engine parts.

Delo 400 products formulated with ISOSYN Advanced Technology can provide improved engine longevity, extended oil drain performance, and excellent diesel component parts protection, helping to extend vehicle life and minimize total cost of ownership when compared with previous generation Chevron HDMO formulations.

ISOSYN Advanced Technology benefits customers by helping to provide:

- Up to 35% improved oil oxidation control\*
- Up to 68% improved wear protection\*
- Up to 64% improved piston deposit control\*

\*Results will vary based on the Delo 400 product, operating conditions, and engine types. Always follow OEM recommendations and utilize used oil analysis testing when extending oil drain intervals.

## FUNCTIONS

Delo 400 XLE SAE 15W-40 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology helps to keep rings clean and free for maximum combustion pressure and to provide minimal wear. It minimizes valve and piston crown land deposits, thus managing oil consumption. Its high level of ashless dispersants keeps fuel soot in suspension and thus helps to avoid filter plugging, heavy cylinder head sludge, abrasive polishing wear, high viscosity increase, oil gelling, and minimizes the risk of valve train wear. These problems can result in excessive engine wear and bearing failure on startup, without prior indication to the operator.

Specially selected oxidation inhibitors control oxidation, sludge, and undue thickening. Its unique blend of extreme pressure anti-wear additives protect against valve train wear and scuffing of highly loaded parts

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operating under boundary lubrication. A specially selected viscosity index improver ensures easy flow at low temperatures and excellent film protection in hot engine areas. A defoaming additive protects against air entrainment.

## APPLICATIONS

Delo® 400 XLE SAE 15W-40 ISOCLEAN® Certified Lubricant with ISOSYN Advanced Technology is a mixed fleet engine oil recommended for naturally aspirated and turbocharged four-stroke diesel engines and four-stroke gasoline engines in which the API CK-4, API SN or API SN PLUS service categories and SAE 15W-40 viscosity grade are recommended. It is formulated for engines operating under severe service and a wide range of climatic conditions.

Delo 400 XLE SAE 15W-40 ISOCLEAN Certified Lubricant with ISOSYN Advanced Technology provides excellent performance in new advanced engines developed to meet the latest emissions and reliability standards and in engines equipped with features like four-valve heads, super-charging, turbo-charging, direct injection, higher power density, intercooling, full electronic management of fuel and emissions systems, exhaust selective catalytic reduction, exhaust gas recirculation, and exhaust particulate filters. It has excellent performance in Allison heavy duty transmission units requiring Allison TES-439 approval, and provides excellent shear stability and component protection.

This product is recommended for use in:

- Today's most modern on-highway low emission designs as well as older on-highway diesel engines.
- Modern and older off-highway engines where an SAE 15W-40 viscosity grade is recommended including those adapted for the most stringent emissions standards in oil and gas, construction, agriculture, marine, and mining applications.

### Delo 400 XLE SAE 15W-40 is approved for:

- **Allison** TES-439, approval 439-34592018
- **API Service Categories** CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4, SN, SN PLUS
- **Cummins** CES 20086
- **DTFR** 15C110 (previously known as MB Approval 228.51)
- **DTFR** 15C100 (previously known as MB Approval 228.31)
- **Detroit Fluids Specification (DFS)** 93K222
- **DEUTZ** DQC III-18 LA
- **Mack** EOS 4.5
- **MAN** M3775
- **MTU** Category 3.1
- **Renault** RLD-3
- **Volvo** VDS-4.5

### Delo 400 XLE SAE 15W-40 is recommended for:

- **ACEA** E6/E9
- **Caterpillar** ECF-3
- **JASO** DH-2
- **MAN** M 3575

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

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## TYPICAL TEST DATA

<b>SAE Grade</b>	<b>15W-40</b>
<i>Product Number</i>	<i>278017</i>
<i>SDS Number</i>	
<i>U.S.</i>	<i>43380</i>
<i>Canada</i>	<i>43381</i>
<i>Mexico</i>	<i>43382</i>
<i>Colombia</i>	<i>46894</i>
Density at 15°C, kg/L	0.873
Viscosity, Kinematic	
mm²/s at 40°C	111
mm²/s at 100°C	14.9
Viscosity, Cold Crank, °C/mPa.s	-20/4900
Viscosity, MRV, °C/mPa.s	-25/16,600
Viscosity, HTHS, mPa.s	4.2
Viscosity Index	140
Flash Point, °C(°F)	228(442)
Pour Point, °C(°F)	-47(-53)
Sulfated Ash, mass %	1.0
Base Number, mgKOH/g, ASTM D2896	10.7
Phosphorus, mass %	0.076
Sulfur, mass %	0.277
Zinc, mass %	0.083

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

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