

# Delo® Heavy-Duty Performance For the Agriculture Industry



**Delo®**  
**Let's go further.®**



# Let's Go Further in the Agricultural Business with Delo.

When your heavy-duty agricultural tractors and equipment are working reliably, your farm can achieve high productivity. At Chevron, our goal is to optimize your diesel engine performance to help minimize operating costs and maximize engine reliability.

As your trusted lubrication supplier, we strive to keep your comprehensive fleet of equipment running reliably. This includes diesel engines, tractor hydraulic systems, transmissions, differentials and wheel bearings to help minimize operating costs and maintain peak performance.

We understand the challenges facing agricultural equipment and tractors today:

- New engine technology development with Diesel Particulate Filters (DPF) and Selective Catalytic Reduction (SCR)
- Variety of fuel types (biodiesel, dual-fuel and natural gas)
- Extending oil and coolant-drain intervals
- Multiple critical component lubrication requirements
- Consolidation of lubricant products
- Energy efficiency

Count on Chevron's industry experience, technology leadership and the Delo family of premium products to help you stay ahead of these challenges and protect and maximize the life of your key equipment and vehicles.



## Reliability & Durability Are Our Priority.

Chevron lubricants stand for one thing above all else: reliability. Properly lubricating the inside of a heavy-duty diesel engine requires more than just creating a protective film. Delo heavy-duty engine oils provide excellent soot dispersancy, wear protection and sludge control to guard against loss of engine durability and help reduce oil consumption. Additionally, the Delo family of products delivers integrity and performance as proven by various bench testing results. Delo's industry-leading lubricants have logged countless hours providing superb protection to diesel engine parts and key equipment components so your agricultural equipment can go further.



# Delo® with ISOSYN® Technology Protects Engine Parts.

## The Delo difference?

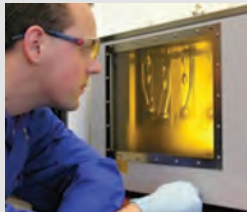
**ISOSYN Technology. It helps deliver performance, protection, and durability to help maximize equipment reliability.**

Chevron uses ISOSYN Technology to formulate its top-tier Delo products. Premium base oils with high-performance additives, combined with our formulation expertise, provide superb protection for diesel engine parts – at an outstanding value.

### ISOSYN Technology



Premium Base Oils



High Performance Additives



Chevron Formulation Expertise



## Delo with ISOSYN helps:

- Extend service protection
- Maximize engine durability and life
- Minimize operating costs

### Superb Parts Protection

Delo with ISOSYN Technology protects critical engine parts to help maximize engine and equipment life.



# Delo® Heavy-Duty Motor Oils Provide World-Class Protection.

Helping your equipment and business go further, we have the proven lubrication products to fit your needs. Count on superb quality, extended service protection, and outstanding performance.



Delo 400 oils are formulated to provide superb diesel engine parts protection and performance in severe operating conditions experienced by agriculture equipment.

For decades, Chevron has been committed to helping your vital engine parts and your business operate efficiently.

## Delo 400 LE SAE 15W-40 with ISOSYN® Technology helps:

- Provide extended service protection
- Minimize operating costs
- Maximize engine life

## Delo 400 LE SAE 15W-40 exceeds most industry and engine manufacturers' performance requirements.

- API CJ-4 / API CI-4+ / API SM
- ACEA E9
- JASO DH-2
- Cummins CES 20081
- Volvo VDS-4
- Mack EO-O Premium Plus
- Renault VI RLD-3
- CAT ECF-3 / ECF-2
- DD93K218
- Daimler MB-Approval 228.31
- MTU Category 2.1
- MAN M3575
- DEUTZ DQC III-10 LA

# Delo® 400 Products for Excellent Engine Reliability.

## Delo 400 LE Synthetic SAE 5W-40

- Full-synthetic lubricant for low-emission engines
- For use in extreme operating conditions
- Fuel economy benefits relative to SAE 15W-40 diesel engine oils
- Extended oil interval drain capability
- Superb cold-weather pumpability



## Delo 400 XLE Synblend SAE 15W-40

- Formulated with ISOSYN® Technology
- Synthetic blend formulation protects older and newer engines
- Excellent long drain performance versus conventional 15W-40 oil
- Meets latest North American and European on- and off-road specifications
- Meets Cat ECF-3 specification
- Extended oil drain performance
- Very good cold-weather pumpability



## Delo 400 SD SAE 15W-30

- Formulated with ISOSYN Technology
- Offers heavy-duty performance
- Suitable for stop-and-go applications
- Delivers excellent oil oxidation resistance
- Meets Cat ECF-3 specifications
- Provides acceptable fuel economy performance versus SAE 15W-40 engine oils



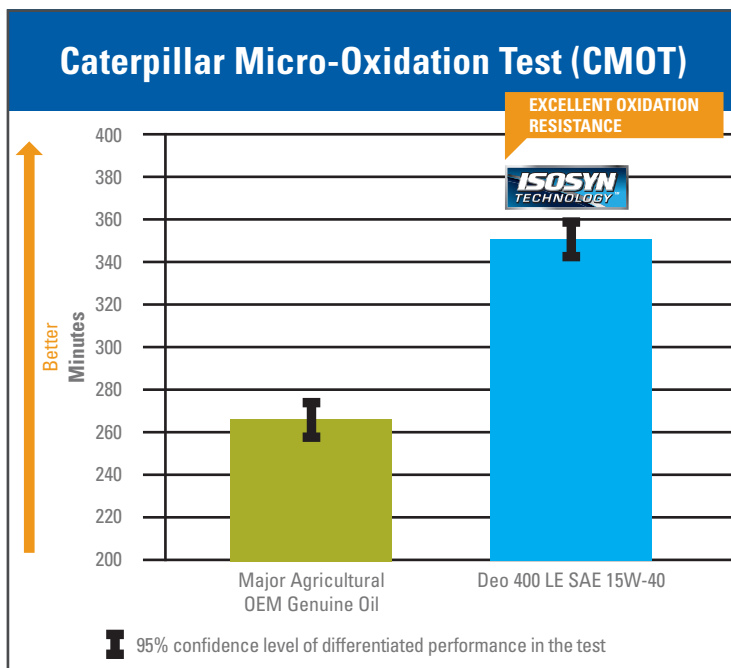
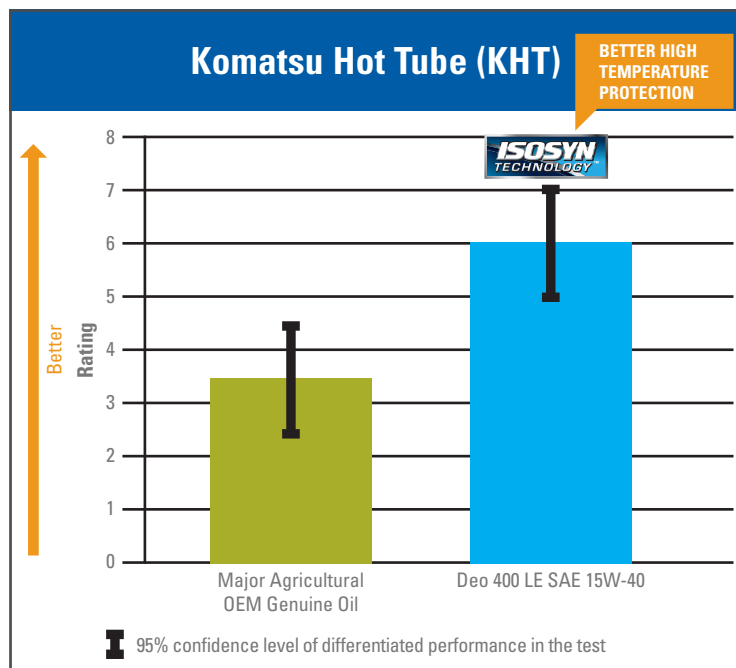
We can't afford downtime in our farming operations. In today's competitive environment, 1 day of lost harvesting can cost us up to \$25,000 in reduced profitability.

**Mike Matuska**  
Supervisor  
Zuckerman Family Farms, Inc.



# Delo® Provides Excellent Oil Oxidation Resistance Versus a Major OEM Oil.

In industry recognized benchtests, Delo 400 LE SAE 15W-40 showed superior performance at resisting oxidation compared to a leading agricultural OEM genuine oil.



Superior performance in bench testing may not necessarily correlate to superiority of performance in the field.

## Robust Bench Testing

Every day, your agricultural equipment can put heavy-duty engine oils to the test with extreme operating conditions, extended oil-drain performance and high loads to ensure on-time production work. Delo goes further to prove its value across your diesel equipment.

### Test Conditions

Komatsu Hot Tube: 290°C for 16 hours – 2 test average (tested at Southwest Research Institute)

Caterpillar Micro-Oxidation Test: Deposit formation at 230°C (tested at Southwest Research Institute)

### Results

Delo 400 LE SAE 15W-40 results indicate excellent oil-oxidation resistance in the tests conducted versus a major agricultural OEM genuine oil.

### Test Application

Indicates the oil's ability to resist oxidation that can result in Turbocharger (KHT) and Piston Deposits (CMOT).



# Delo® Products Protect Your Agricultural Equipment. BUMPER TO BUMPER.

Delo heavy-duty engine oils, extended-life coolants, greases and gear oils are specially formulated to meet the intense demands your agricultural equipment and tractors face.

Get Delo protection where you need it most. At Chevron, we have a history of heavily investing in research and development to ensure your vehicles and equipment get the utmost protection from bumper to bumper. We're so confident about the outstanding quality of Delo products that we offer a bumper-to-bumper warranty you may not find from other manufacturers.

## Coolant System



Delo ELC Antifreeze/Coolant  
Delo XLC Antifreeze/Coolant

## Engine Crankcase



Delo 400 LE Synthetic SAE 5W-40  
Delo 400 XLE Synblend SAE 15W-40  
Delo 400 XLE Synblend SAE 10W-30  
Delo 400 LE SAE 15W-40

## Hitch Pins



Delo Grease ESI®  
Delo Heavy Duty EP  
Delo Grease EP

## Bearings



Delo Grease ESI  
Delo Heavy Duty EP  
Delo Heavy Duty Moly 3% EP

## Transmissions (Manual & Automatic)



Chevron 1000 THF (For units with common THF reservoirs)  
Chevron Synthetic All Weather THF (For units with common THF reservoirs)  
Delo Torqforce MP (For TO-4 or Allison C4 Fluid Requirements)  
Delo TorqForce SAE 30 (For TO-4 or Allison C4 Fluid Requirements)  
Delo 400 SAE 30 (For TO-2 Fluid Requirements)

## Differentials & Gear Drives



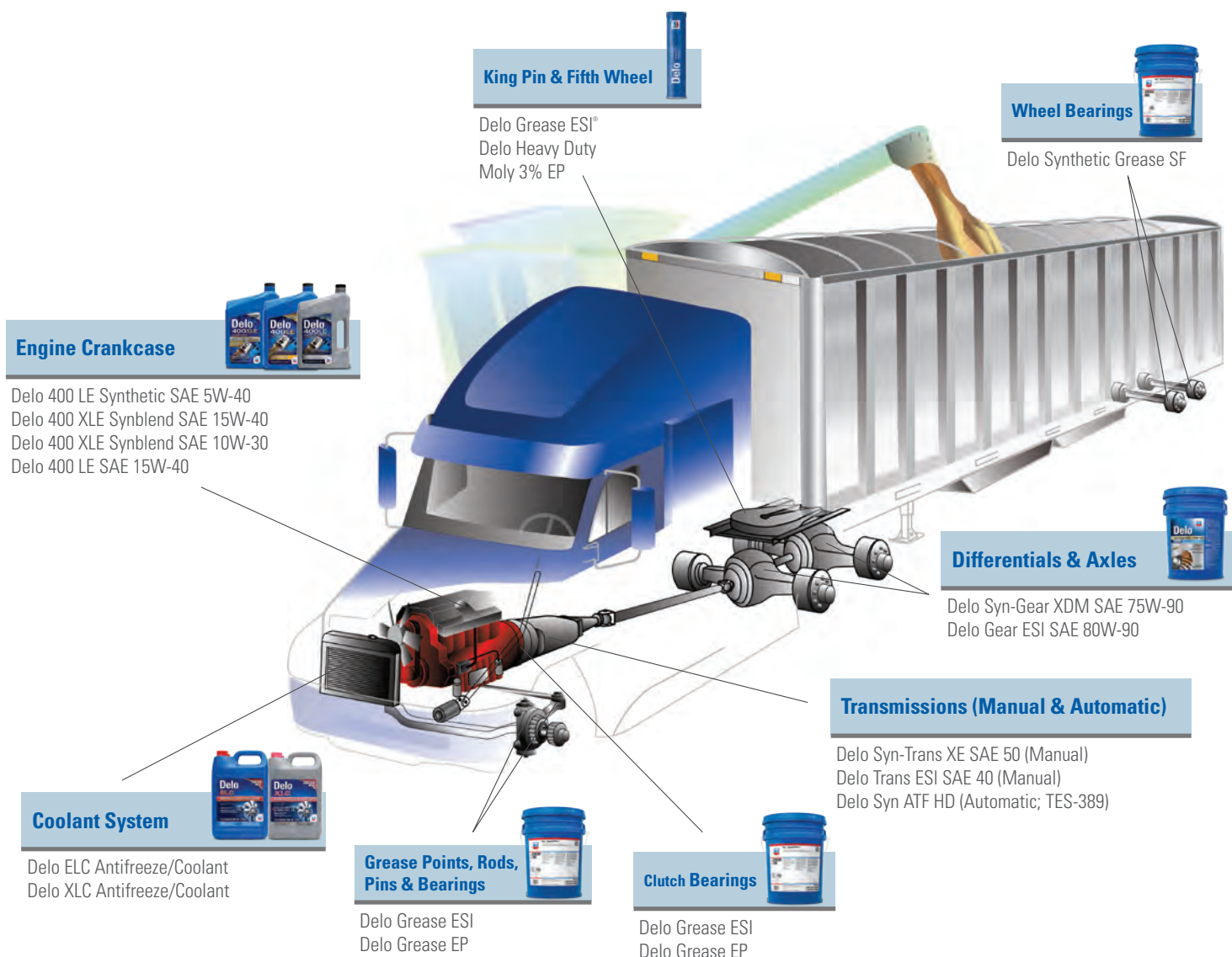
Chevron 1000 THF (For units with common THF reservoirs)  
Chevron Synthetic All Weather THF (For units with common THF reservoirs)  
Delo TorqForce SAE 50 (CAT TO-4)  
Delo Syn-Gear XDM SAE 75W-90 (API GL-5/MT-1)  
Delo Gear ESI SAE 80W-90 (API GL-5/MT-1)

# Delo® Protects Trucks Dedicated to Ag Service.

## BUMPER TO BUMPER.

Trucks used in the agricultural service need to be able to work reliably both on and off road ensuring that valuable harvests make it to their intended destination on time and in good condition. Utilizing premium lubricants and coolants to achieve high-level reliability and performance at the lowest total operating costs is critical to operating a profitable farm.

The Delo family of lubrication products has you covered with outstanding protection in diesel engines, transmissions, gears and coolant systems. Choosing the proven performance of Delo quality lubricants supports an operator's need for optimal reliability and performance under all operating conditions and for long periods of time. This could mean a higher return on investment, hour after hour.





## Delo® ELC Protects All Types of Cooling Systems.

Producing an enormous amount of heat, heavy-working diesel engines in agriculture vehicles and equipment require good cooling-system protection and maintenance.

### Delo ELC Antifreeze/Coolant Deliver High Performance and Value.

Keeping your engines operating efficiently requires a high-performing, extended life coolant — plus a good coolant maintenance program. Delo ELC Antifreeze/Coolant Premixed 50/50 has a proven track record for high performance.

Delo ELC Antifreeze/Coolants deliver optimum engine performance and dramatically simplify the way cooling systems are maintained. Our patented corrosion inhibitors maximize hardware parts performance and heat transfer over the life of your engine. That's protection that has stood the test of time through countless hours of performance.

Compared to conventional coolants, Delo ELC Antifreeze/Coolants can help minimize operation costs and maximize your engine life.



## Chevron 1000 THF Provides Excellent Protection.

Protecting transmissions, hydraulics and differentials is critical to achieving total agricultural equipment reliability.

To keep your agricultural equipment operating at high efficiency takes premium products to help ensure excellent protection. Chevron 1000 THF provides long-term performance versus low tier tractor hydraulic fluids.

Chevron 1000 THF is engineered for long life, outstanding oxidation resistance, and excellent wear performance to protect critical components. Chevron 1000 THF is recommended for use over a wide range of OEM specifications including John Deere, Case-New Holland, International Harvester, Kubota, White Farm Equipment and others.

Chevron 1000 THF offers excellent wide temperature range, wear control, seal compatibility, oxidation stability and stay-in grade viscosity performance.





# Delo® Gear Oil Delivers Performance.

For differential gears in agricultural operation, Delo's wide range of gear oils provide excellent wear protection and extended-drain performance for equipment durability and maintenance value.

Delo's range of automotive gear oils are formulated with special anti-wear compounds to protect gears and bearings of axle compartments from various modes of failure, while maintaining full-metal and seal compatibility. They are designed to provide excellent lubrication performance.



## Delo Gear ESI SAE 80W-90

Unique Chevron gear oil designed with borate technology to provide synthetic-like protection for drive axles. Product is compatible with most synthetic gear oils and provides excellent protection at a great value.

## Delo Syn-Gear XDM SAE 75W-90

Formulated with synthetic base oils for extended service operation in axle and differential lubrication under severe operating conditions. Excellent choice for power end lubrication providing extreme temperature performance and wear protection.

## Multigear EP-5 SAE 80W-90/85W-140

Formulated with Group II base oils and thermally stable additive package, Chevron's Multigear EP-5 provides very good protection and improved cleanliness performance versus standard API GL-5 gear oils. This product meets both API GL-5 and SAE J2360 specifications for a wide range of applications where a value gear oil product is required for agricultural gear set lubrication.



# Delo® Heavy-Duty Greases Are Formulated for Agricultural Operations.

To help your agricultural equipment go further, it's important that every part operate smoothly. Delo's premium grease products are formulated to provide high performance and long-life protection, no matter what your farming equipment encounters on the job.



## Delo Grease ESI

Formulated to provide extended service grease protection for both on- and off-road diesel vehicles. Delo Grease ESI provides excellent load-carrying capability, excellent water washout performance, and protects against shock loading. It has been specifically engineered to grease the entire key truck components.

## Delo Heavy Duty EP

Formulated to provide extended service grease protection for agriculture equipment that does not require moly, Delo Heavy Duty EP provides excellent load-carrying capability, superb water washout performance, and protects against shock loading. It has been specifically engineered to grease a wide range of off-road equipment and help customers consolidate to one grease throughout their operation without sacrificing protection or performance.

## Delo Heavy Duty Moly 3% EP

Engineered with a lithium complex thickener and heavy base-oil viscosity plus 3% moly, Delo Heavy Duty Moly 3% EP helps protect against severe shock load, water washout, and high-temperature applications.



# Chevron Offers Best-in-Class Tools and Services for Agriculture.

In addition to providing premium Delo® lubricants, Chevron also offers a wide range of tools, programs and services available for agricultural customers.

To help you achieve best-in-class reliability performance to extend equipment life, increase productivity, and help minimize operating costs, these items include:

## RbL™ Assessments

Chevron RbL professionals who understand farming operations conduct reliability-based lubrication assessments to help identify areas for improved performance compared to industry-best peers.



## LubeWatch Used-Oil Analysis

Chevron's premier program incorporates standardized lubricant sampling and unique online tools to help ensure optimized equipment-drain intervals and performance checks to ensure long equipment life.

# LubeWatch®

## Delo ELC Maintenance Kit

This kit helps ensure long life coolant system protection. It provides easy-to-use tools to monitor optimal Delo ELC Coolant life along with incorporating helpful coolant knowledge information.



## ISOCLEAN® Filtered Products & Filtration Services

Approved ISOCLEAN service agents provide pre-filtered Chevron-branded lubricants that meet exact fluid cleanliness standards. Additional services also include onsite fluid cleaning, reclamation and equipment-flushing services to help reduce destructive contaminants.



## SMARTFILL Labels

This system helps maintenance personnel easily identify the correct Chevron lubricants for their equipment via color coding on both the storage and fill-point labels. SMARTFILL labels are weather, heat and oil-resistant, and will apply to most metals, plastics and fiberglass materials.



# Delo® Provides Superb Engine Reliability.

## Marchini Ag achieves 10,000+ hours of engine and cooling system life using Delo 400 and Delo Extended Life Coolant.

The Marchini family has deep roots in the agricultural heartland of California's Central Valley. Since Florindo Marchini arrived in this country from Lucca, Italy a century ago, the family has grown everything from tomatoes to almonds, and even holds the heritage of introducing radicchio to American salad bowls.

Equipment plowing the company's fields includes a 300 brake horsepower (bhp) John Deere 8520T tractor that has been in operation for over nine years, accumulating more than 10,000 hours of service. Marchini was interested in how its equipment was being protected and agreed to conduct a teardown of the tractor to inspect its critical components.



We have been farming in the Central Valley for over 50 years and we have used Delo in our equipment the whole time since it has a proven track record of providing engine durability and reliability – this is critical to the profitable operation of our farm.

**Richard Marchini**  
President  
Marchini Ag



### Piston

In very good condition with minimal deposits allowing for excellent ring sealing



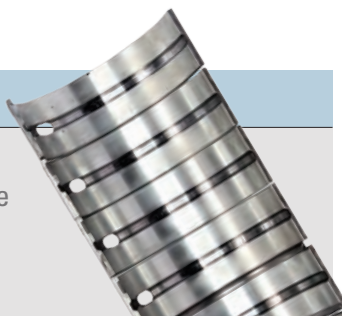
### Piston Liner Exterior

No liner pitting or silicated deposits showing – indicating excellent cavitation protection and superb heat transfer capability.



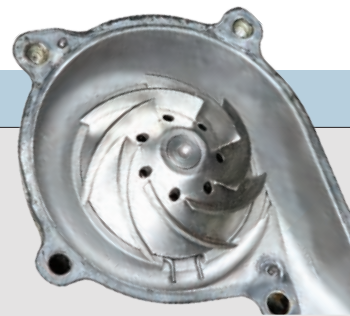
### Main Bearings

In very good condition with minimal abrasions and no visible wear areas



### Water Pump

Very clean with no cavitation or erosive wear showing the excellent protection provided by Delo ELC





# Delo® Extends Tractor Engine Rebuild Life.

## H.J. Lind & Sons achieves 16,000 hours of engine life using Delo 400 in their New Holland tractors.

H.J. Lind & Sons have been farming for 100 years and have been very successful in focusing on productivity and a top notch maintenance program to help it weather the ups and downs of the farming business.

They operate over 25 pieces of New Holland agricultural equipment and were recently interested in seeing the condition of one of their tractors that had achieved 16,000 hours of operation, which was over 6,000 hours more than typically achieved for a major overhaul by the OEM.

The teardown and inspection was conducted at their OE dealer workshop facility and it impressed not only the H.J. Lind maintenance team, but also the OE dealer technical personnel at the shop with minimal wear on engine parts and excellent cleanliness of the engine. For the H.J Lind personnel it was a visual confirmation of how Delo 400 protects their equipment.



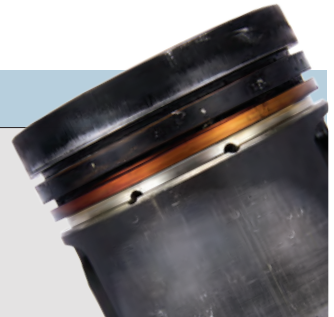
I can't always count on the rain or agricultural prices. But I can count on Delo 400 to protect the life of my engines and equipment reliability.

*Hansie Lind  
Owner & Principle  
H.J. Lind & Sons Farms*



### Piston

Clean ring grooves and minimal deposits on the crown-land at 16,000 hours of operation.



### Connecting Rod Bearings

Good overall protection even after more than 6000 hours past typical replacement.



### Main Bearings

Minimal wear and in very good condition after 16,000 hours of use. No visible copper was showing through the main bearings indicating excellent protection provided by Delo 400.



### Cam Shaft

Minimal wear, no skidding or abrasions. Cam shaft is in such good condition it could be reused again.





[www.ChevronDelo.com](http://www.ChevronDelo.com)

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