

## FREQUENTLY ASKED QUESTIONS

### 1. Why Chevron is introducing Delo<sup>®</sup> 400 MGX?

The continuous need to meet more stringent emission legislation requires development of new engine hardware, which leads to the introduction of new exhaust after-treatment technologies in diesel engines such as Exhaust Gas Recirculation (EGR), Selective Catalytic Reduction (SCR), Diesel Particulate Filter (DPF). These factors in turn drive the need for higher quality lubricants that are also compatible with the exhaust after-treatment technologies. The development of new Caltex technology that provides more effective acid neutralization capability even at lower alkalinity provided us with the ideal conditions to evolve to the new Caltex Delo<sup>®</sup> 400 MGX SAE 15W-40 API CJ-4 product, which offers technological advantages such as better dispersion of soot, significant reduction in wear rates, a decrease in deposits on the piston, as well as a better resistance to oxidation.

### 2. What is the impacts of higher sulfur content in diesel fuel?

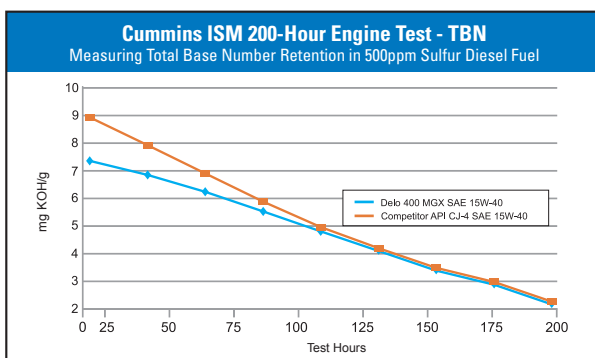
The sulfur in diesel fuels forms undesirable by-products during the combustion process, which results in increased emissions to the atmosphere as well as increased corrosive sulfuric acid in the engine. Globally, the tendency has been toward reducing sulfur levels in diesel fuels to help meet more demanding emission legislation.

### 3. What are the solutions to neutralize these acids?

The detergent additive technology in heavy-duty engine oil provides the main alkalinity which is critical for neutralizing the various corrosive acids, helping to extend drain intervals and keep engine components clean and running smoothly.

### 4. In my country, sulfur content in diesel fuel varies region by region. Can I use one product, Delo<sup>®</sup> 400 MGX, for diesel fuel with different sulfur levels?

Yes, the new formula of Caltex Delo<sup>®</sup> 400 MGX SAE 15W-40 is designed to work in diesel engines running on both ultra-low sulfur diesel (<15 ppm) and high sulfur diesel (up to 2000 ppm). The detergent additives in the formulation provide very effective neutralization of acids and retention of the Total Base Number (TBN). Delo<sup>®</sup> 400 MGX has undergone controlled testing in the Cummins ISM engine to show its ability to neutralize acids. Test results show a lower rate of Total Base Number loss (blue line - less steepness of the line) compared to a competitor API CJ-4 product. In addition, Delo<sup>®</sup> 400 MGX has been rigorously field tested to show improved performance in other areas such as wear protection and oxidation control.



**Delo<sup>®</sup>**  
Let's go further.™

**ISOSYN**  
TECHNOLOGY





### 5. What happens if I use a standard product designed for ultra-low sulfur diesel (API CJ-4 Oil) in high sulfur diesel?

Standard API CJ-4 oil will perform well when ultra-low sulfur diesel (15 ppm) is used, but if high sulfur fuel is used, oil drain intervals need to be reduced accordingly in order to protect new and expensive hardware. However, Delo® 400 MGX is a premium API CJ-4 product that can be used with both ultra-low sulfur diesel (<15 ppm) and high sulfur diesel (up to 2000 ppm) without compromising the oil drain interval. We recommend you conduct in-service oil monitoring such as the Caltex Lube Watch® used oil analysis program to determine the appropriate oil drain interval.

### 6. I am using Delo® 400 Multigrade, what are key performance differences of Delo® 400 MGX (API CJ-4) compared to my current Delo® 400 Multigrade (API CI-4 PLUS)?

- API CJ-4 service category is one of the most stringent specifications on the market. Delo® 400 MGX is designed to provide higher performance in various areas such as wear protection, engine cleanliness and soot dispersancy.
- API CJ-4 is designed to be backwards compatible, therefore meeting the requirements of API CI-4 PLUS and earlier categories. Delo® 400 MGX can be used in a wide range of diesel engines, including newest low-emission engines and in older engines, reducing complexity and chance of misapplication.
- Our formulation expertise has allowed us to develop the special TBN retention technology found in Caltex Delo® 400 MGX SAE 15W-40 that provides improved oil drain performance.

### 7. Can I mix Delo® 400 MGX SAE 15W-40 with Delo® 400 Multigrade SAE 15W-40?

Since Delo® 400 MGX SAE 15W-40 is a product with a new formulation, mixing this with other products should be avoided and we recommend complete oil drain of the engine filling it with new oil. However, accidental mixing should not be an issue and if you need to top off the engine oil, you should ensure that the quantity does not exceed 10% of the total volume of the crankcase; for example, if the engine has a 38-litre tank, the new product can reach a maximum of 3.8 litres. For storage tanks, it is recommended that the tank be drained completely before filling it with the new product in order to avoid mixing as much as possible.

### 8. What API standard and OEM approvals does Delo® 400 MGX meet?

Delo® 400 MGX SAE 15W-40 is API CJ-4 licensed and also has extensive OEM approvals such as Cummins CES 20081, Daimler MB-Approval 228.31, MAN M3575, MTU Category 2.1, Volvo VDS-4 and more. Please follow the recommendations of the OEMs and also support your operations with an oil analysis program such as Caltex Lube Watch® to determine the optimum oil change interval for your engine.

### 9. Can Delo® 400 MGX SAE 15W-40 be used in off-highway applications?

Yes, it is suitable for most modern off-highway engines including those in line with current and future emission standards in construction, agriculture, marine and mining applications.

**Delo®**  
**Let's go further.™**

