



EQUIPMENT MAKER ENDORSES NEW SHELL LUBRICANTS PORTFOLIO

TOTAL REPORTED ANNUAL CUSTOMER SAVING

US\$15,644



COMPANY: China National Heavy Duty Truck Group Co. Ltd

COUNTRY: China

APPLICATION: Hydraulic systems

SAVING: US\$15,644 total reported annual customer saving

KEY EDGE: Shell Tellus S2 M 46*, Shell LubeAnalyst

China National Heavy Duty Truck Group Co. Ltd (CNHTC) in Jinan, Shandong Province, China, is one of the country's leading manufacturers of heavy-duty trucks. CNHTC used a locally sourced lubricant for the initial fill of the hydraulic systems at one of its foundries. After four months or 2,000 hours of operation, the hydraulic pumps began to suffer frequent breakdowns. The company found that the lubricant had aged prematurely, and had discoloration and a higher viscosity and total acid number (the measure of a lubricant's acidity) than was acceptable.

The Shell Lubricants technical team audited the plant and presented the customer with recommendations for suitable Shell products. The team also offered a used-oil quality check as part of the Shell LubeAnalyst oil conditioning monitoring service. As a result of these recommendations, CNHTC decided to change its lubricant to Shell Tellus S2 M 46.

Since changing to the new lubricant, CNHTC has doubled the previous oil-drain interval of its hydraulic oil to 4,000 hours, which has resulted in reduced oil consumption and consequent cost savings. It also has experienced fewer unscheduled shutdowns and lower maintenance costs. The company has reported annual savings of US\$15,644. It also has greater reassurance that its production levels can be maintained.



HYF00041

*Shell Tellus S2 M 46 is the new name for the Shell lubricant formerly known as Shell Tellus 46.

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CHALLENGE

CNHTC used a locally sourced lubricant for the initial fill of the hydraulic systems at one of its foundries. However, the hydraulic pumps began to suffer frequent breakdowns, and the company found that the lubricant had aged prematurely, and had discolouration and a higher viscosity and total acid number than was acceptable.

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SOLUTION

The Shell technical team audited the plant and presented the customer with suitable Shell product recommendations. The team also offered a used-oil quality check as part of the Shell LubeAnalyst oil conditioning monitoring service. As a result of these recommendations, CNHTC decided to change its lubricant to Shell Tellus S2 M 46.

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OUTCOME

Since changing to the new lubricant, CNHTC has doubled the previous oil-drain interval of its hydraulic oil to 4,000 hours, which has resulted in reduced oil consumption and consequent cost savings. The company also has fewer unscheduled shutdowns and lower maintenance costs.

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VALUE

Through reduced oil consumption and maintenance costs, the company has benefited from reported annual savings of US\$15,644¹. CNHTC also has greater reassurance that its production levels can be maintained.

¹The savings indicated are specific to the calculation date and mentioned site. These calculations may vary from site to site and from time to time, depending on, for example, the application, the operating conditions, the current products being used, the condition of the equipment and the maintenance practices.



SHELL TELLUS S2 M

INDUSTRIAL HYDRAULIC FLUID

Shell Tellus S2 M fluids are high-performance hydraulic fluids that use Shell's unique patented technology to help to provide the necessary protection and performance in most manufacturing and many mobile equipment operations. They resist breakdown under heat or mechanical stress, and help to prevent the damaging deposit formation that can decrease the efficiency of hydraulic power systems.



Applications

- Industrial hydraulic systems. With an extensive range of equipment maker approvals and recommendations, Shell Tellus S2 M fluids are suitable for a wide range of the hydraulic power applications found in manufacturing and industrial environments.
- Mobile hydraulic-fluid power-transmission systems. Shell Tellus S2 M fluids can be used effectively in mobile hydraulic-power applications such as excavators and cranes, except where significant ambient temperature variations are encountered. For these applications, Shell Lubricants recommends the Shell Tellus V series.
- Marine hydraulic systems. Shell Tellus S2 M is suitable for marine applications where ISO HM-category hydraulic fluids are recommended.

Performance features and benefits

- Long fluid life – maintenance saving. Shell Tellus S2 M fluids help to extend equipment fluid-drain intervals by resisting thermal and chemical breakdown. This helps to minimise sludge formation and provides proven performance under the industry-standard ASTM Turbine Oil Stability Test to offer good reliability and system cleanliness. Shell Tellus S2 M fluids also have good stability in the presence of water, which can help to ensure long fluid life and reduce the risk of corrosion and rusting, particularly in moist or humid environments.

- Proven wear protection. Zinc-based anti-wear additives are incorporated to enable Shell Tellus S2 M to be effective throughout the range of operating conditions, including low-load and severe-duty high-load conditions. Their outstanding performance in a range of piston and vane pump tests, including Denison T6C (dry and wet versions) and Vickers 35VQ25, demonstrates how Shell Tellus S2 M fluids can help system components to last longer.
- Maintains system efficiency. Shell Tellus S2 M's enhanced cleanliness, filterability, water separation, air release and anti-foaming characteristics all contribute to maintaining or enhancing the efficiency of hydraulic systems. The unique additive system in Shell Tellus S2 M, in combination with its superior cleanliness properties (meets the requirements of ISO 4406 21/19/16 class ex-Shell plant filling lines), helps to reduce the impact of contaminants on filter blocking, which extends filter life and enables the use of finer filters for extra equipment protection. Shell Tellus S2 M fluids are formulated for fast air release without excessive foaming to help efficient hydraulic power transfer and minimise the cavitation-induced oxidation that can shorten fluid life.

Specifications and approvals

Shell Tellus S2 M is approved by Denison Hydraulics HF-0, HF-1 and HF-2; Cincinnati Machine P-68 (ISO 32), P-70 (ISO 46) and P-69 (ISO 68); and Eaton Vickers M-2950 S and I-286 S. It is listed by Bosch Rexroth Ref 17421-001 and RD 220-1/04.03. It meets the requirements of ISO 11158 (HM fluids); AFNOR NFE 48-603; ASTM 6158-05 (HM fluids); DIN: 51524 Part 2 HLP type; and Swedish Standard SS 15 54 34 AM.

Complementary products

Equipment	Lubricants
Gearboxes	Shell Omala gear oils
Compressors	Shell Corena compressor oils
Bearings	Shell Gadus greases