

SHELL TELLUS S4 ME HELPS PLASTICS MANUFACTURER EXTEND HYDRAULIC-FLUID-DRAIN INTERVAL BY 650%

TOTAL ESTIMATED ANNUAL CUSTOMER SAVING US\$10,700

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COMPANY: Amaray

COUNTRY: Germany

APPLICATION: Injection-moulding machines

SAVING: US\$10,700 total estimated annual customer saving

KEY EDGE: Shell Tellus S4 ME 46, Shell LubeAnalyst



Plastic injection moulding company Amaray produces DVD tray inlays at its production plant in Germany using two Engel Victory VC 500-150 injection-moulding machines. It needed to reduce its energy and maintenance costs and extend the machines' hydraulic-fluid-drain interval, so asked the Shell technical team for advice.

Shell recommended that the company should switch to Shell Tellus S4 ME 46 hydraulic fluid in both injection-moulding machines. It also offered the Shell LubeAnalyst oil and equipment monitoring service. As a result of changing to Shell Tellus S4 ME and monitoring the condition of the hydraulic fluid and the equipment, Amaray found that it could safely extend the drain interval to 45,000 hours from the equipment manufacturer's recommendation of 6,000 hours, i.e., by 650%. Using Shell Tellus S4 ME also improved the energy efficiency of the machines' hydraulic systems.

Since changing to Shell Tellus S4 ME, the company has benefited from reduced energy, hydraulic fluid consumption and maintenance costs, and has minimised production losses from equipment downtime during maintenance. As a result of extending its fluid-drain interval, reducing costs and increasing equipment availability, Amaray has reported total annual savings of US\$10,700.



SHELL TELLUS S4 ME

TOTAL ESTIMATED ANNUAL SAVING
US\$10,700

1 CHALLENGE

Amaray needed to reduce its energy and maintenance costs and extend the hydraulic-fluid-drain interval of its two Engel Victory VC 500–150 injection-moulding machines.

2 SOLUTION

Shell recommended that the company should switch to Shell Tellus S4 ME 46 hydraulic fluid in both machines, and also offered the Shell LubeAnalyst oil and equipment monitoring service.

3 OUTCOME

Amaray found that it could safely extend its fluid-drain interval to 45,000 hours from the equipment manufacturer’s recommendation of 6,000 hours. Using Shell Tellus S4 ME also improved the energy efficiency of the machines’ hydraulic systems.



4 VALUE

Since changing to Shell Tellus S4 ME, the company has benefited from reduced energy, fluid consumption and maintenance costs, and has minimised production losses from equipment downtime during maintenance. As a result of extending its hydraulic-fluid-drain interval, reducing costs and increasing equipment availability, Amaray has reported total annual savings of US\$10,700.¹

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 S4 ME

ADVANCED SYNTHETIC INDUSTRIAL HYDRAULIC FLUID

Shell Tellus S4 ME hydraulic fluids are designed to help users to improve the energy efficiency of their hydraulic systems without compromising the system protection or the maintenance procedures of their equipment and operations. Shell Tellus S4 ME has been found to improve energy efficiency in applications such as plastic injection moulding and metal pressing.² In addition, the fluid also uses an advanced ashless additive system designed to help prolong equipment service life and lower maintenance costs by providing outstanding wear protection and long fluid life.

Applications

- Industrial hydraulic systems. Shell Tellus S4 ME is particularly suitable for those systems with high-intensity hydraulic power use, such as injection-moulding and high-pressure metal-pressing operations, and where resistance to high temperatures or long fluid life is required.
- Mobile hydraulic systems. The product is also suitable for use in certain mobile hydraulic-fluid power-transmission systems and in marine applications. It provides superior low-temperature fluidity compared with most conventional ISO HM type fluids.
- Environmental impact. Because they use ashless, anti-wear technology and low-sulphur base oils, Shell Tellus S4 ME fluids have reduced environmental impact from leaks or accidental spills compared with conventional zinc-based hydraulic fluids. For even less environmental impact, Shell Lubricants offers the Shell Naturelle range of reduced environmental impact lubricants.

Performance features and benefits

- Energy efficiency. With the help of sophisticated system modelling, Shell Tellus S4 ME has been designed to improve the energy efficiency of hydraulic systems through a specially developed formulation that balances the flow, frictional and power-transmission characteristics of the fluid.²

- Reduces maintenance costs. Shell Tellus S4 ME offers outstanding performance in all the properties relevant to a hydraulic fluid, such as hydraulic pump wear and resistance to breakdown in contact with water or other contaminants.
- With a life that exceeds the 10,000 hours maximum duration that can be measured under the industry-standard ASTM Turbine Oil Stability Test, Shell Tellus S4 ME hydraulic fluid offers significantly extended fluid-drain intervals, which can help to reduce overall maintenance costs.
- Greater equipment protection. In addition to meeting standard-industry and equipment manufacturer specification requirements, Shell Tellus S4 ME provides exceptional additional protection. For example, using Shell Tellus S4 ME results in up to 68% less wear in the Vickers V104C pump wear test than the 50-mg pass/fail limits for many equipment manufacturers, such as Cincinnati Machine (P-specification), Bosch-Rexroth (RD 90220-1) and Eaton (Vickers). Through its outstanding protection against sludge build-up, valve sticking and corrosion, Shell Tellus S4 ME can help to prolong the life of your hydraulic equipment.

Specifications and approvals

Shell Tellus S4 ME fluid is approved by Engel (injection-moulding applications); Denison Hydraulics HF-0, HF-1 and HF-2; Cincinnati Machine P-68 (ISO 32), P-70 (ISO 46) and P-69 (ISO 68); Eaton Vickers M-2950 S and I-286 S; Bosch-Rexroth; and ARBURG (injection-moulding applications). It meets or exceeds the requirements of ASTM D6158 (HM fluids); ISO 11158 (HM fluids); DIN 51524 Part 2 HLP type; Swedish Standard SS 15 54 34 AM; AFNOR NF-E 48-60; and KraussMaffei.

Complementary products

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

²Actual energy savings may vary depending on the application, the current oil used, the maintenance procedures, the condition of the equipment, the operating conditions and the intensity of hydraulic power use.

"Shell Lubricants" refers to the various Shell companies engaged in the lubricants business. The information contained in this leaflet is correct as at 29 June 2015.