



# Shell Lubricants

## GENERAL MANUFACTURING

Shell Omala gear oil generates US\$337,500 by cutting maintenance and increasing production

Total annual customer saving

**US\$337,500**



**Country:** Thailand  
**Application:** Gearbox  
**Saving:** US\$337,500  
**Key edge:** Shell Omala HD 220

**Phoenix Pulp & Paper Public Company Limited (PPPC) is a pioneering Thai company producing pulp from bamboo, eucalyptus and kenaf harvested from local farmers' plantations. When operating continuously, the company's plant can produce over 200,000 t of pulp a year. However, production was having to stop for 12 hours every six months to change the gearbox oil in the pulper.**

Shell Omala HD 220 oil, an advanced, synthetic, heavy-duty, industrial gear oil that offers outstanding lubrication performance under severe operating conditions, is approved by the pulper's manufacturer, Flender, for 12 months' continuous gearbox protection. PPPC unlocked a reported US\$337,500 in additional revenue by switching to the Shell gear oil. Through the extended oil-drain interval, production has increased by 12 hours a year and scheduled maintenance labour costs are reduced.

The company also uses the Shell LubeAnalyst service, a state-of-the-art health check for oils and equipment. This service provides oil condition monitoring that helps PPPC to keep its pulper running smoothly by identifying potential equipment failures before they become critical.

In addition, technical support and training from Shell Lubricants is helping PPPC to make its increased revenue and reduced maintenance benefits sustainable.

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DESIGNED TO MEET CHALLENGES



## 1 Challenge

The need to interrupt production for 12 hours every six months for a gearbox oil change was limiting PPPC's production capability and incurring excessive maintenance costs.

## 3 Outcome

Shell Omala HD 220 oil's extended oil-drain interval has increased production time by a valuable 12 hours a year and reduced scheduled maintenance labour costs. Additionally, the Shell LubeAnalyst service is helping to reduce unplanned maintenance by providing oil condition monitoring, which can identify potential equipment failures before they become critical.

## 2 Solution

The gearbox vendor approves Shell Omala HD 220 oil, which has twice the oil-drain interval of the original oil. PPPC switched to the Shell oil and adopted the Shell LubeAnalyst preventive maintenance service.

## 4 Value

Phoenix Pulp & Paper reported an increase in its revenue of US\$337,500 a year associated with changing its pulper gearbox oil to Shell Omala HD 220, which has cut maintenance costs and increased production.

### Shell Omala HD

#### Synthetic, heavy-duty, industrial gear oils

Shell Omala HD is an advanced, polyalphaolefin-based, heavy-duty, industrial oil for gearboxes operating under extreme pressures, at high temperatures or with heavy loads. It is designed to lower running costs by offering:

- extended equipment life through outstanding lubrication performance, excellent wear protection and resistance to micro-pitting (grey staining);
- an oil-drain interval up to four times longer than conventional mineral oils; and
- up to 25% less energy loss than mineral oils.



#### Applications

Shell Omala HD is formulated for enclosed, industrial, reduction gear systems operating under severe conditions such as high load, extreme temperatures and wide temperature variations. It is also recommended for certain lubricated-for-life systems, plain and rolling element bearings, and oil circulation systems.

#### Performance features and benefits

- Excellent load-carrying capacity, even under shock-loading conditions, and high resistance to micro-pitting to provide long component life
- Excellent oxidation and thermal stability to extend lubricant life. Shell Omala HD resists the formation of harmful oxidation products at high

operating temperatures for improved system cleanliness and, therefore, equipment reliability. Flender approves Shell Omala HD for at least 20,000 h or four years, assuming an average operating temperature of 80°C.

- Extended component and lubricant life for longer service intervals and reduced maintenance and disposal costs
- Superior lubricant performance that improves gear efficiency. Shell Omala HD offers improved lubrication at low start-up temperatures and a lower viscosity change with increased temperature compared with mineral-oil-based products. Its viscosity can be adapted for the operating conditions to save energy.
- Outstanding rust and corrosion protection
- Rapid water shedding and air-release performance

#### Specifications and approvals

ISO 12925-1 Type CKD  
ANSI/AGMA 9005-D94  
US Steel 224  
Flender  
David Brown S1.53.101  
DIN 51517-3

#### Seal and paint compatibility

Shell Omala HD is compatible with all the seal materials and paints normally specified for use with mineral oils.



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