



ELIMINATING THE CAUSE OF EARLY BEARING FAILURE BY ENSURING RELIABLE, REGULAR LUBRICATION

POTENTIAL ANNUAL CUSTOMER SAVING

US\$ 167,000



COMPANY: Barrick

COUNTRY: Peru

APPLICATION: Opencast mining – bearings

SAVING: US\$167,000 potential annual customer saving

KEY EDGE: Shell Gadus S3 T220 2, Shell Tactic EMV, Shell LubeAdvisor and Shell LubeCoach

The Lagunas Norte mine is an open-pit, crush, valley-fill heap leach operation run by Barrick in Peru. It is now one of the few gold mines in the world with the ability to produce over one million ounces per year.

Lagunas Norte wanted to reduce operational costs and plant stoppages by increasing the life of its production belt bearings.

Premature wear as a result of irregular greasing was causing the critical equipment to become unreliable. After assessing the bearings' size and speed, Shell recommended the Shell Tactic EMV automated greasing system pre-filled with Shell Gadus S3 T220 2 grease for the best results.



1

CHALLENGE

Lagunas Norte was previously using Shell Gadus S2 V220 2 grease for manual lubrication. The greasing schedule was not always completed, and irregular lubrication, together with contamination by dirt, dust and water, was causing the production belt bearings to wear. Consequently, the company experienced unscheduled stoppages and production losses.

2

SOLUTION

Shell Lubricants recommended the installation of a Shell Tactic EMV automated grease dispensing unit pre-filled with Shell Gadus S3 T220 2 grease, and staff training using the Shell LubeCoach service. Shell Tactic EMV lubricating units were installed at two critical production points to supply precise, reliable and regular amounts of grease to the machines.

3

OUTCOME

After implementing the recommended solution, Lagunas Norte experienced

- a decrease in manual lubrication time that enabled technical staff to attend previously neglected areas
- the elimination of premature bearing failures through reliable and regular lubrication
- peace of mind from knowing that the greasing was automated and set specifically for the machines' requirements.

4

VALUE

By identifying the mine's need for greasing support and a premium grease to perform well in a high-contamination environment, Shell was able to recommend a solution that met both requirements. Lagunas Norte reported a potential annual saving of US\$167,417 as a result of implementing the solution.¹

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



SHELL TACTIC EMV FILLED WITH SHELL GADUS S3 T220 2

Shell Gadus S3 T220

Premium-performance, extreme-pressure (EP) polyurea grease

Shell Gadus S3 T220 is a premium-performance EP grease that uses Shell polyurea thickener technology to extend the life of the grease and resist melting and leaking.

Reduced maintenance costs with anti-wear properties

Lower bearing replacement rates can be achieved through the excellent anti-wear properties of Shell Gadus S3 T220 and its polyurea thickener.

Health and safety considerations

Shell Gadus S3 T220 grease is free from lead and nitrites, and does not require special labelling.

Shell Tactic EMV

For peace of mind through precise and reliable lubrication

Shell Tactic EMV automatic lubricators are designed to significantly reduce the most common causes of bearing failure by delivering precise and reliable lubrication. The lubricator reliably delivers the exact amount of grease required at regular intervals.

How does it work?

Shell Tactic EMV comprises two primary components: a small, battery-operated electromechanical drive unit and a replaceable grease canister. The drive unit, with its simple-to-adjust settings, pumps precise, small quantities of grease from the canister at timed regular intervals.



Benefits

- Reliable design and operating principle
- Improved reliability and reduced maintenance costs
- Reduced manual lubrication labour costs
- Improved safety
- Adaptable
- Easy to inspect

Complementary products

Equipment	Lubricants
Draglines	Shell Gadus, Shell Malleus, Shell Omala
Shovels and extractors	Shell Gadus, Shell Malleus, Shell Omala, Shell Tellus
Mills	Shell Gadus, Shell Malleus, Shell Omala
Crushers and conveyors	Shell Omala
Ore processors	Shell Omala, Shell Tellus, Shell Corena
Haul trucks	Shell Rimula, Shell Spirax
Power plant	Shell Argina, Shell Gardina, Shell Turbo