FROM EXTENDING COMPONENT LIFE TO SUPPLYING THE WORLD’S INDUSTRIES WITH RAW MATERIALS

TOGETHER IT’S POSSIBLE

SHLL LUBRICANTS
TOGETHER ANYTHING IS POSSIBLE
Lubricants can play a surprisingly large part in helping to push your assets towards maximum production.

Decades of working with mining industry customers has helped Shell Lubricants to understand the importance of remaining competitive in the face of tough commodity prices and demand uncertainties. We appreciate that you need to push your assets to maximise production and drive down production costs. Total cost of ownership (TCO) evaluations are used by many mining companies to help extract the best possible value from machinery over its lifetime.¹

Lubricants can have a surprisingly large effect on the TCO. In an industry study, 40% of the companies surveyed estimated that they had incurred costs of at least $250,000 over the last three years caused by breakdowns due to ineffective lubrication.² This shows the potential for companies to achieve a significant boost in profits by working closely with Shell Lubricants to improve equipment lubrication practices.

Over five years, Shell Lubricants has helped mining companies to save over $43 million.³

¹The total cost of ownership is defined by Shell as the total expenditure on industrial equipment, including the cost of acquisition and operation, and of lost production during equipment downtime, over its entire working life.
²This survey, commissioned by Shell Lubricants and conducted by independent research firm Edelman Intelligence, is based on 181 interviews with mining sector staff who purchased, influenced the purchase of or used lubricants or greases as part of their job across eight countries (Brazil, Canada, China, Germany, India, Russia, the UK and the USA) from November to December 2015.
³Documented customer savings from 2011 to October 2015. More information available on request.
Lubrication can unlock significant value, particularly when you consider the costs related to lost production from equipment downtime.

By adopting the right approach to lubrication, mining companies working with our experienced experts at their mines have achieved savings equalling their total lubricants expenditure (about 5% of total maintenance costs).\(^3\) We also believe that selecting the right oils and greases, and adopting effective lubrication management strategies can help to reduce maintenance budgets by up to 30%,\(^4\) primarily through lower maintenance costs, reduced equipment downtime and productivity improvements.

Shell has one of the world’s largest lubricant expert teams (260 lubricant specialists) and a team of distributor partners, all passionate about their industry knowledge, and having strong industry relationships built on trust, who work with mining companies to achieve TCO savings and more equipment uptime.

### REDUCING LUBRICATION COSTS

A Russian gold mining company operates in Arctic conditions. Its dump truck fleet was using three transmission lubricants depending on the temperature, which ranges from –40 to +30°C. This complexity led to product-selection errors and oil-drain intervals of half the recommended time. Working with our experts, the company trialled a new all-season, synthetic transmission oil, Shell Spirax S6 CXME. The company reported oil-drain intervals four times longer, which meant fewer oil changes and lower lubricant consumption for an estimated **annual saving of US$100,000.**\(^5\)

### ENHANCING RELIABILITY

A South African mining company experienced frequent component failures in its underground mining fleet. Our experts worked with the company to identify grease removal through pressure washing as the cause. After switching to a grease with excellent water washout properties, Shell Gadus S3 V460D 2,\(^6\) the company reported an annual reduction of 77% in component failures, thereby **saving US$189,800 a year** in parts and maintenance costs.\(^5\)

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\(^{\text{3}}\)Costs include maintenance, labour and fuel.

\(^{\text{4}}\)Case study savings/benefits were reported by one customer. Actual savings/benefits will vary. More details available on request.

\(^{\text{5}}\)Less than 10% washout after 1 h at 79°C in the ASTM D1264 water-washout test.
DELIVERING VALUE THROUGH LUBRICATION SERVICES

The best products cannot perform effectively if they do not reach the right surfaces at the right time and in the right volumes without being contaminated or degraded.

Through our technical services, we can advise on every aspect of product selection and lubrication management to help you unlock TCO savings.

The Shell LubeAdvisor service provides specialist Shell Lubricant technical advisors who conduct site surveys to help you identify areas for improvement, including in product selection, distribution, delivery, storage and application, and used-lubricant disposal. Changes are implemented and measured through value improvement projects.

The Shell LubeExpert service gives you dedicated, highly trained lubricants service experts, working at your sites to inspect critical machinery such as excavators and draglines to identify potential lubrication issues. This can alert you to the need for preventive maintenance, which can lead to savings of millions of dollars by helping to avoid major breakdowns.

Shell LubeCoach is a customised training programme led by Shell technical experts with substantial in-field experience that offers practical lubricant-management coaching for your staff.

Shell LubeAnalyst is a global oil and equipment monitoring service that helps you to assess lubricant condition, identify potential problems and benchmark equipment performance. It is available in 95 countries and 28 languages. The service enables you to monitor equipment without interrupting operations and provides guidance on interpreting the results.

Shell LubeAnalyst Lite on-site analysers deliver fast, comprehensive test results for lubricants, including engine and gearbox oils, hydraulic fluids and transmission fluids. Your staff can test lubricants at remote locations and get the results within 15 minutes. The service can help to limit downtime and reduce maintenance costs by capturing early signs of abnormal wear and helping to extend oil-drain intervals.

The Shell LubeAnalyst Sensors service complements our oil condition monitoring service. Its sensors can be fitted to engines, gearboxes, axles and hydraulic systems to provide real-time alerts while the equipment is working, so there is no need for a service stop. This constant stream of diagnostic information can help your staff to prevent minor issues becoming major problems.

To find out more visit www.shell.co.uk/mining

7The Shell LubeExpert service is not currently available in all regions.
8Shell LubeAnalyst Lite complements the off-site, laboratory-based service offered by Shell LubeAnalyst. Shell LubeAnalyst remains the recommended analysis service when extreme precision is more important than fast results. Shell LubeAnalyst Lite is not currently available in all regions.
9The Shell Lube Analyst Sensors service provides real-time alerts to prevent imminent catastrophic failures. It does not replace periodic oil condition monitoring analysis. The Shell Lube Analyst Sensors service is not currently available in all regions.