



KAWASAKI WHEEL LOADERS MINE THROUGHOUT THE WORLD



Above: Zingaro Trade 51 (Pty) Limited uses five Kawasaki loaders at the Black Wattle Colliery in Middelburg, Mpumalanga.

Right: Kawasaki Model 115ZV at work in the Northwest Province in a granite quarry dumping waste rock. The unit is fitted with an L-shape rock bucket. This particular machine has an additional rake boom which is used to drag the cut blocks of granite away from the quarry face, plus a set of granite forks. The wheel loader is fitted with a quick-hitch coupler system, enabling attachments to be changed quickly and easily.

When you think of mining in South Africa, two commodities immediately spring to mind — diamonds and gold. But it turns out that's just the tip of the country's vast mineral wealth. South Africa is home to many other important minerals like titanium, manganese, and various grades of coal. In fact, South Africa, with its 28.6 billion tons of recoverable coal reserves, is the seventh-largest holder of coal reserves and the fifth largest coal exporter in the world.

COAL IS KING

With little oil or natural gas to call its own, coal has become the nation's predominant energy source. The vast majority of South Africa's coal is used for electricity generation of the national power grid (built and managed by Eskom) through coal-furnaced power stations. Several neighboring countries — Botswana, Lesotho, Mozambique, Namibia, Swaziland, and Zimbabwe — also benefit from the power generated in South Africa. Another sizeable chunk of the nation's coal is used by the petrochemical industry (see sidebar). South Africa also exports about a quarter of what it mines, primarily to Europe and the Far East.

The province of Mpumalanga is where most of the collieries (coal mines) are located. Situated in the eastern region of the country bordering Mozambique, coal mined in this area accounts for approximately 82 percent of the national coal production. Other mining activities in the region include asbestos, magnetite, altopalgitite, and silica.

Coal production generally is concentrated in large mines owned by a handful of companies. About half of the coal mining is



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underground, the other half open pit, or open cast as the practice is called in South Africa.

THE KAWASAKI CHOICE

The South African distributor, ELB Equipment Limited, added Kawasaki wheel loaders to its portfolio in 2002. ELB is recognized as a distributor of world-renowned earthmoving and mining process equipment in South Africa. Thanks to ELB's hard work and the excellent value and durability of the company's wheel loader line-up, Kawasaki wheel loaders equipped with 8.5-cubic-yard (6.5 m³) buckets are becoming the wheel loader of choice among mining contractors and operators in Mpumalanga.

Approximately 130 Kawasaki loaders operate on open-cast coal mines, working in extremely dusty and abrasive conditions where the temperatures range from sub-zero levels in winter up to more than 113° F (45°C) in summer. They have established



COAL: MORE THAN ELECTRICITY

Did you know that synthetic fuel can be made from coal? And that "petrochemicals" can be coal-based and not just made from oil or natural gas? Petrochemicals dramatically impact our food, clothing, shelter, and leisure. They are used in plastic adhesives, paper and textile sizing, solvents, cosmetics, pharmaceuticals, plastics, urethane foam, and tires — just to name a few.

Since the 1920s, scientists have known how to convert coal into a liquid that could be refined into gasoline or diesel fuel. But everyone thought it was too expensive to be practical, especially with crude oil being so cheap. Then along came Sasol.

Sasol, the South African petrochemicals group, was born in 1950. Utilizing the abundant but relatively poor grade of coal, they set up shop and haven't looked back. Today the company is the world leader in and the world's largest producer of liquid fuel from coal. Their CTL (coal to liquid) plant in Mpumalanga produces around 150,000 barrels of synthetic fuel a day. To date, only South Africa uses this technology, but talks are underway to bring it to China, and possibly to India and three western states in the United States. Soaring crude oil prices and the great abundance of coal reserves worldwide have made CTL technology very attractive.

Besides synthetic fuel, other products can be made from the CTL process. These include cleaners and degreasers, automotive lubricants, greases, fuel oils, and industrial lubricants. Petrochemicals that can be made include olefins and surfactants, polymers, solvents, wax, and nitro.

About 24 percent of the coal mined in South Africa is used for the production of petrochemicals. Sasol also has technology to turn natural gas into liquid fuel.



Mr. Craig Smith, Commercial Director, ELB Equipment, Ms. Nancey Peters, Sales Administrator, ELB Equipment, Mr. Peter Blunden, Managing Director, ELB Equipment, and Mr. Satoru Takagi of Kawasaki, Japan.

an enviable reputation for their reliability and ruggedness. Kawasakis with 20,000 hours without any major repairs are not uncommon. The 95ZV in particular is becoming the machine of choice to load coal trains.

BLACK WATTLE COLLIERY AND ZINGARO TRADE

Supplying Eskom with coal to light up the national grid takes two forms: coal that is freshly mined and coal from low-grade coal dumps that have been reclaimed. Four major companies in the Mpumalanga area reclaim roughly 500,000-600,000 long tons of lower grade coal every month from discarded coal dumps. Black Wattle Colliery in Middelburg, operated by Zingaro Trade 51 (Pty) Limited, is one such operation.

Zingaro Trade was established two years ago. Because of the good reputation of the 14 Kawasakis (mainly 85s and 90s) in use by its sister companies, managing director Mike Bate opted for five for Black Wattle — two 90ZIV-2s and three 85ZIV-2s.

“In the dump we screen out a -1.57-inch (-40 mm) product with Powerscreen mobile screens,” says Bate. “The oversize is then transported to the washing plant where it is crushed and processed through a cyclone coal washing plant where another 50 percent of material is reclaimed. This material is then blended with the -1.57-inch (-40 mm) product to achieve a grade acceptable to Eskom. We produce approximately 3,000 final-product long tons a day which equates to 75,000 tons a month.”

Since the wheel loaders came on board, they’ve handled well over 6.4 million long tons of material.

HARD WORKERS

Most South African wheel loaders are used 24 hours a day, seven days a week. Operating hours add up fast and end-users can ill afford any down time. Basic maintenance is generally handled by the customer while major services and repairs

are done by ELB — either on site or in the workshop.

While many of the Kawasaki loaders have achieved up to 18-20,000 operating hours trouble-free, some of the older Kawasaki machines have in excess of 24,000 operating hours without the need for any major overhauls. In this respect Kawasaki distinguishes itself among well-known brands such as Komatsu, Caterpillar, Volvo, etc.

THE DEALER-FACTORY CONNECTION

ELB Equipment’s engineering and sales departments have a close relationship with their counterparts at Kawasaki Heavy Industries, Japan. This partnership has been a major reason why the acceptance of Kawasaki wheel loaders in South Africa has been so successful. It ensures the heavy demands of the South African market are catered to by both the equipment supplier and the manufacturer. Also, Kawasaki fleet owners are taken to visit the Banshu factory in Kobe, Japan, where their wheel loaders are made. A visit to the Kawasaki Museum in Kobe also introduces them to the many high-tech products the many divisions of Kawasaki manufactures. End users find the tours intriguing and reassuring.

