



## CUSTOMER CASE: ENGEN PETROLEUM

### ADVANTAGES OF TRANSPORTING LUBRICANTS AND GREASES IN FLUID-BAGS TO AFRICAN MINING SITES

Engen Petroleum has actively introduced Fluid-Bag Flexi containers for lubricants, greases and transformer oils that are shipped to mining sites in South Africa, Moçambique, Angola, DRC and Ghana.

Transport of lubricants in Africa is challenging due to the long distances and in some cases limited infrastructure. With Fluid-Bag, Engen Petroleum is able to offer a mini-bulk solution to manage challenges experienced with long distance transportation, on-site inventory management, contamination control and disposal. Expensive return transport of empty containers can also be avoided.

#### Clean lubricants in harsh environments

In dusty and challenging mining environments there is always a risk of dirt or particles contaminating the greases or lubricants. When using the most common solution, metal drums for lubricants and greases, temperature fluctuations create condensation in the drums, causing rust. The rust deteriorates the quality of the lubricants and greases, reducing the life cycle of the machines and vehicles. Fluid-Bag avoids these problems altogether, thanks to the closed container system and the excellent protective qualities.

Fluid-Bag is a closed system with high-barrier layers that maintain the characteristics and quality of the lubricants. The grease and lubricants are pumped directly from the bag to the vehicle so there is no need to open the containers or let in air and therefore no risk for contamination. This solution also avoids any pump over spills and others costs associated with drums.

*Images from a lubricant station with Fluid-Bags in the maintenance workshop at Catoca diamond mine.*





*Example of a set-up at a mine where a multiple product dispensing station was installed. There are different types of oils in separate bags that are connected directly to a metered nozzle.*



## Dispensing Solutions

A dispensing station can also be used in conjunction with the Fluid-Bag to provide further benefits. This unit includes a spill tray, meter, extended hose reel and multi-adaptable pump that uses either 24 V or 220 V power. The advantage of the dispensing station is that it can be used in a stationary position in a workshop environment or in a mobile position on the back of a truck or light delivery vehicle to do “milk run” top ups of equipment.

Mining companies and equipment operators have come to value the benefits associated with the use of Fluid-Bags. Due to the unique flexibility of the Fluid-Bag, product residues are reduced to a minimum since the container can be stretched and squeezed so the discharge is complete. Equally with grease products the residue level is as low as 0.5% when discharged in conjunction with Fluid-Bag handling equipment.

## Waste Management

Handling of waste oil is increasingly an environmental concern especially in the early phases of a mining operation. Some sites use emptied Fluid-Bags for temporary waste storage pending disposal via the correct authorities. Used Fluid-Bags are foldable which allows scanning in high security areas such as diamond mines.

### About Fluid-Bag Ltd

Fluid-Bag Ltd manufactures a unique range of 900 and 1000 liter flexible one trip containers for storage and transportation of liquids and semi-solids. The container is a sealed system avoiding air ingress during filling or discharge, maximising product protection against, amongst other things, moisture, UV, air born bacteria and contaminants. The Fluid-Bag ensures consistency and cleanliness of product, reducing down time and maintenance, especially important where machinery is operated in harsh mining environments.

### About Engen Petroleum Ltd

Engen is an Africa-based energy company focusing on the downstream refined petroleum products market and related businesses. The company's core functions are the refining of crude oil, the marketing of primary refined petroleum products and the provision of convenience services via their extensive retail network.

For more information, visit [www.fluid-bag.com](http://www.fluid-bag.com) and [www.engenoil.com](http://www.engenoil.com)