

NEW

**Shell**  
**FuelSave** Diesel



## MAKING A DIFFERENCE IN MINING WITH MORE TORQUE

**Pens Industries Sdn Bhd is a wholly owned subsidiary of the Perlis State Economic Development Corporation, which started its operations in 1991. Pens Industries carries out activities in the field of quarry stone mining, pre-mix production and road paving, where its day-to-day operations are closely linked to the infrastructure development of the northern state of Perlis. For Pens Industries, optimum equipment performance and reliability are vital in contributing to common social-economic advancement of Perlis.**

As most mining operators know, torque from machinery and vehicles is essential to carry out the heavy workloads that the mining industry demands. For Pens Industries, this is especially true for its routine activities round the clock, from crushing and loading rocks and aggregates, to transporting the product to work sites. Heavy-duty engines of machines such as wheel loader shovels, excavators, bulldozers, and tipper trucks are required to run efficiently. This is exactly what Pens Industries achieved by converting to New **Shell FuelSave Diesel** with Shell's exclusive dual detergent DYNAFLEX Technology<sup>1</sup>.

*"We made a wise decision to convert to **Shell FuelSave Diesel** with DYNAFLEX Technology. Within a short period, we experienced how this advanced fuel could help our old machines recover torque compared with the regular diesel we used before; at the same time, helping our new machines to continue operating at their full potential. This has greatly improved our turnaround time."*

**MR. RIDZUAN ISHAK, GENERAL MANAGER**



Shovels are mainly used to manage stockpiles and load aggregates for consignments. The efficiency of these shovels is vital to the turnaround of Pens' operations. Recently, when demand spiked, inefficient shovel operation caused congestion at Pens' facilities, which led to delays and, in turn, loss of sales. This situation, helped persuade Pens Industries to purchase three new Caterpillar 950L shovels. At the same time, Pens continued to run a 14-year-old shovel Caterpillar 938G series II. In order to protect and make the most of its new and old investments, Pens Industries sought advice from Shell.

A Pens Industries operator, Mr. Azhar Baharom, claimed that in the past, the 938G shovel's engine had hesitated to start-up, especially during cold weather, emitting excessive black smoke from the exhaust. In addition, he had needed to use the lowest gear ratio in order to shove and lift loads. This stressed the engine and caused even higher emissions of black smoke. **After using Shell FuelSave Diesel with DYNAFLEX Technology, the operator experienced a noticeable improvement in torque compared to the regular diesel used before. He no longer needed to drop to the lowest gear ratio while executing routine activities. Now, second gear was reported to deliver smoothly the pulling power required. Black smoke has also been noticeably reduced, whilst cold start is much more prompt<sup>2</sup>.**

**“The shovel is an old machine, but after Shell FuelSave Diesel with DYNAFLEX Technology, the engine feels like it is running as good as new!”**

Mr. Azhar Baharom, *Caterpillar 938G Series II Operator*

**New Shell FuelSave Diesel is designed to help lower operating costs and increase equipment efficiency<sup>3</sup>. Its new and most advanced cleaning formula<sup>4</sup> helps provide more load-pulling power when needed<sup>5</sup>.**



**SHELL COMMERCIAL FUELS**  
TOGETHER ANYTHING IS POSSIBLE

[www.shell.com/commercialfuels](http://www.shell.com/commercialfuels)

1. DYNAFLEX technology or DYNAFLEX formulation are our names for our latest generation of advanced formulations for gasoline and diesel fuels. See [www.shell.com/commercialfuels](http://www.shell.com/commercialfuels) for more information. 2. Compared with regular diesel as experienced by some customers rather than Shell protocols. Benefits will vary according to type of operation, vehicle, driving conditions and driving style. 3. New Shell FuelSave Diesel is designed to help provide better fuel economy and therefore helps lower operating costs. It helps improve oxidation stability and keep fuel more stable in presence of bio components. It is designed to help you use fuels with bio components and reduce risk of fuel degradation and sludge build-up – therefore helping improve equipment reliability. As experienced by some customers rather than Shell protocols. Benefits will vary according to type of operation, vehicle, driving conditions and driving style. 4. Compared to our previous formulation. 5. Compared to regular diesel without fuel economy formula. Actual savings may vary according to vehicle, driving conditions and driving style. Internal Shell tests and with our customers have shown a range of fuel savings depending on age of vehicle and type of operations.