27,000 HOUR SERVICE ON GENERATOR NO. 2

The four diesel generators at the Power Station in Ruperts currently supply around 81% of the Island's electrical power. Each of the generators is subject to an ongoing maintenance programme. Most recently No. 2 Generator, one of the three larger Caterpillar 3516B series generators, was scheduled for a major overhaul at 27,000 hours.

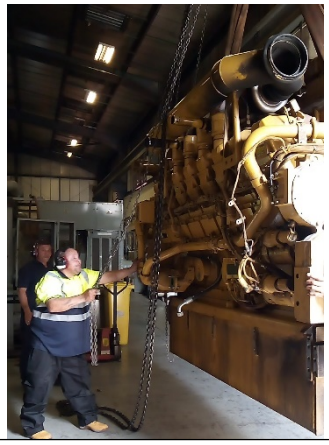
Service technicians Mornay Bothma and Deon Claasen of Barloworld Power are back on island to complete this service with assistance from the team at the Power Station. Mornay and Deon previously visited St Helena in 2021 and 2022 to support the 27,000 hours services for No. 1 and No. 3 Generators.

The 27,000 hours service follows guidance from the manufacturer. It is a major operation that requires the complete engine to be dismantled and all components checked. All of the bearings, seals, gaskets and components that wear are disassembled, cleaned and inspected.

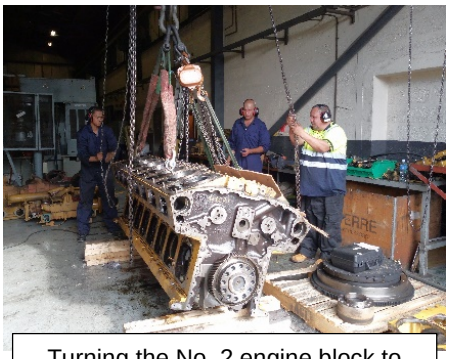
Work commenced on the 5th September. After all components were dismantled, the necessary checks were completed to see if the main engine block was still within the manufacturer's limits before being reassembled. The crankshaft was polished and measured for wear and was found to be within the recommended tolerance limits.

The team then started the rebuild process. All new bearings, crankshaft, cam shafts, cylinder liners, pistons, connecting rods and cylinder heads were fitted. This work was completed at the end of September and testing commenced. This engine has been online for the past 3 weeks, and is running smoothly.

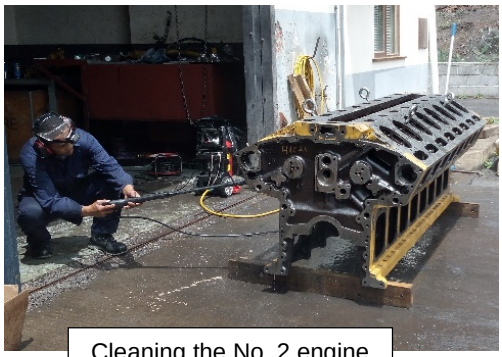
Whilst on island, the Barloworld engineers also undertook the 9,000 hour service on the No 1. Generator with assistance from the team at the Power Station. The successful completion of this maintenance work will mean that all specified maintenance checks are up to date, ensuring that power generation remains resilient for the Island.



No. 2 Generator being moved to the front of the Power Station in readiness for disassembly



Turning the No. 2 engine block to remove pistons and liners



Cleaning the No. 2 engine block

Installing cylinder liners

"Being a part of the maintenance on the No. 2 Generator and seeing it going to plan is a real plus for both Connect and the Island because it ensures a reliable electricity supply to our micro-grid. Our diesel generators are the primary power generation source within our hybrid system and provide the inertia and stability for electricity to be supplied reliably to our customers as renewable energy alone does not achieve this.
Once the works to the No. 1 Generator are complete, we will move onto servicing and improving the renewable energy systems. Taking this approach to our maintenance reduces the risk of load shedding and allows us to efficiently maintain our generation systems."– Merril Lawrence, Electricity Generation Manager

18 October 2023