

Success Story: Brightwater Manufacturing Ltd.

Market Served:

Quarrying, mining, construction, waste recycling



Eaton products give oomph to world's largest mobile cone rock crusher

Location:

Christchurch, New Zealand

Segment:

Mining

Challenge:

Replacing a competitive electrohydraulics package.

Solution:

Eaton EFX 1624 and 1640 electrohydraulic controllers and accompanying CONTROL F(x)™ programming software.

Results:

Brightwater moves closer to standardizing on Eaton components and a single-source hydraulics provider.

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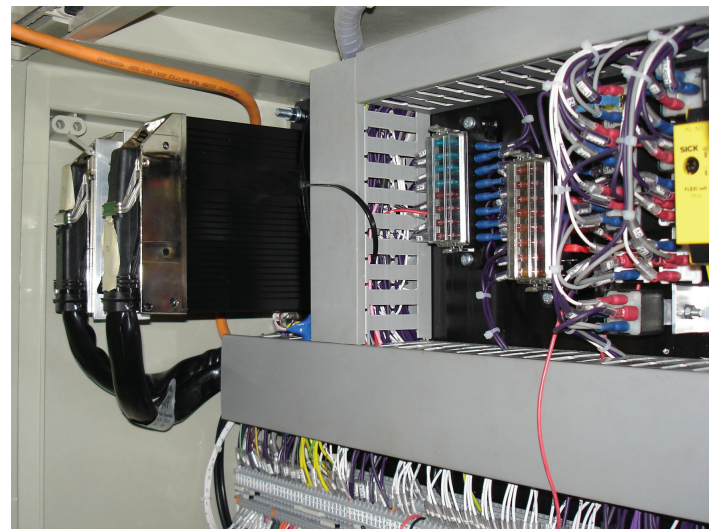
Eaton's electrohydraulic architecture will be equipped on all Brightwater TC1885C mobile crushers requiring advanced electronic controls.

Background

The world's largest mobile cone-type rock crusher is performing its job function with the help of Eaton products.

Weighing in at 140 tons and stretching up more than 23 feet, the colossal TC1885C

mobile crusher, made by Brightwater Manufacturing Ltd. of Christchurch, New Zealand, requires a lot of hydraulics muscle to turn 12-inch rocks into pebbles. The new machine gets its might from a hydraulic system designed and supplied by Scarlett Hydraulics Ltd., New



Eaton EFX controllers are mounted inside the mobile crusher's control panel.



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Onboard the quarry machine are Eaton® heavy-duty Series 1 pumps that power track drive and conveyors, Vickers® screw-in cartridge valves for conveyor controls, and Aeroquip® hose and fittings for all fluid-conveying arteries. At the heart of the beast is a sophisticated control system equipped with two Eaton EFX 1624 and 1640 electrohydraulic controllers and accompanying CONTROL F(x) programming software.

Challenge

A long time Eaton and Scarlett Hydraulics customer, Brightwater traditionally used Eaton pumps, motors, valves, and fluid conveyance products, along with a competitive controller and software package, for its mobile crushing equipment that is primarily exported. But when issues began to arise with the competitive controller, Brightwater turned to Scarlett Hydraulics and Eaton for an alternative control solution.

Eaton's Mike Grooby, senior sales engineer, and Scarlett Hydraulics' Owen Little, OEM manager, immediately recommended Eaton's EFX controller for the rock crusher. Although Brightwater personnel were quick to give a listening ear, they were also quick to question the EFX's capabilities. Would the Eaton controller be able to effectively communicate with the crusher's Caterpillar engine via the CAN network? Would it offer a flexible solution that could be implemented on other machines? Would it be able to operate with the radio control equipment?

Solution

Before the customer had time to fuss, Grooby and Little went to work to define the strengths of Eaton's EFX controller.

"We explained that the EFX controllers would 'sniff' diagnostic information from the engine's CAN network, enabling the CONTROL F(x) software to monitor and protect the crusher's engine and hydraulics, plus ensure operator safety due to its internal diagnostics.

"We also stressed the EFX's capabilities to communicate with all existing sensors, and, unlike the competitive controller, the EFX would enable Brightwater's programmer to use a language that was already familiar."

Results

Impressed with the features and ruggedness of the EFX controllers, Brightwater made the decision to use Eaton's electrohydraulic solution on all TC1885C mobile crushers requiring advanced electronic controls.

In addition to being able to continuously monitor system functions with the Eaton EFX controllers, Brightwater also likes the fact that purchasing controllers from Scarlett Hydraulics enables it to move closer to standardizing on Eaton components and a single-source hydraulics provider.



The screen on the control panel "talks" to the EFX controllers.



Eaton's Mike Grooby is dwarfed by Brightwater's massive rock crusher.

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