

# Bell and Matriarch take forestry conversions to a new level

While the fitment of forestry processing heads to excavators is not a new development, Matriarch Equipment differentiates itself by offering a complete package - from the full fabrication of the guarding to the installation of the guarding and head - and has set a new industry benchmark in the process.

Ashley Bell says that the first Kobelco conversions were carried out on three 26-ton SK260LCs to make them suitable for a mill yard application where they are used to feed the lines to the mill as well as off-loading trucks to stockpile. To enhance the carrier's mobility and reduce long term running costs, the customer requested that the excavator tracks be replaced with custom-built wheeled chassis.

Since the excavators did not need to comply with road legislation, Matriarch designed a wider wheeled chassis configuration to provide sufficient stability for the machine to handle timber 'on the move' without the need for hydraulic stabilisers, as is the case with a standard road-going wheeled excavator. Oscillation lock cylinders were incorporated into the design of the rear axle to lock up when the upper structure slews off centre at 90 degrees. This offers a more stable platform by preventing movement in the chassis when picking up a load over the side.

"The wheeled conversion raises the upper structure of the machine, which provides the operator with a higher seating position for improved visibility when handling timber. Steps were installed to

**One of three Kobelco SK260LC excavators that have been converted into MTL260 timber loaders by Matriarch Equipment. This involved replacing the tracks with a custom-built wheeled chassis and installing a steering wheel and related hydraulic valving to the cab as well as replacing the bucket with a nose cone and a MT1000 grab. Cab and windshield guarding completed the conversion.**



**Matriarch Equipment's first complete forestry conversion to a fully functioning forestry processor fitted with Waratah's H215E harvesting head.**

enable safe and easy ingress and egress of the cab. The steered rear axle also necessitated the installation of a steering wheel and related hydraulic valving to the cab," said Ashley.

To complete the conversion, the bucket was removed to make way for a nose cone and grab. These machines were fitted with Matriarch's MT1000 grab with a 1m<sup>2</sup> capacity and a XR400i Indexator rotator from Sweden with a static load rating of 55 tons. Cab and windshield guarding completed the conversion.

Since then a number of nose cone, grab and cab guarding installations have been carried out on SK260LC units and the smaller 21-ton SK210LC.

Kobelco is strong in the forestry industry elsewhere in the world and takes a keen interest in timber applications. A Kobelco delegation visited the Matriarch workshop in KwaZulu-Natal earlier in 2018 to see how the local conversions are being done.

More recently Matriarch has carried out a conversion to fit a Waratah H215E processing head to a SK210LC. "The installation of a processing head, as a more complex attachment compared to a grab, is a more complicated fitment as there are additional controls that are installed to the machine, some auto-electrical work required along with additional hydraulic valving, plumbing and an auxiliary hydraulic cooler," explains Ashley. In addition to fitting the head, Matriarch can also extend the track grousers for additional ground clearance and traction. Machine structural guarding is more comprehensive in line with the

operating environment and heavy-duty belly plates have been fitted along with forestry guarding to the entire upper structure for protection guarding against falling trees. Cab protection includes a bullet proof windshield to guard against chain shot and polycarbonate windows on the side of the cab.

"A great deal of thought has gone into service accessibility. We've tried to think of everything, so steps and handles have been added for ease of access and the guarding serves as hand railings for safety while working on top of the machine. The additional hydraulic cooler is easy to access to clean and is also well protected while the guarding on the windshield unlatches and pivots with gas-struts for easy cleaning or replacement of the windshield. Eight additional LED lights have also been positioned on the machine for night-time operation."

A thorough and professional approach to the design, installation and support means that a standard excavator is converted and delivered to the customer as a fully functioning forestry processor, complete with an illustrated parts manual for the Matriarch kit.