

Updated Bell Stump Grinder hits the mark

Since the founding of Bell Equipment the company has listened to customers' needs and developed appropriate solutions. So, when an independent contractor turned to Bell to develop a machine to enable him to de-stump for a major forestry company, the OEM delivered a product that met the needs of both the customer and his client.

Bell Equipment, Chief Engineer: Application Equipment, Dawid Ras takes up the story: "Various imported machines have been trialled in recent years but it was found that they were not designed for South African conditions and after-sales support was also an issue. We've previously had success with a Stump Grinder so we updated our machine to meet the requirements of today's forestry operations."

"We worked together with foresters and engineers from Mondi to achieve the key objectives of improving operator comfort and ergonomics, visibility, stability and serviceability," adds Bell Equipment Product Designer, Sphamandla Ndwandwe.

Bell retained the standard E-series Tri-Wheeler driveline, which was found to be the most feasible in order to accommodate the larger, air-conditioned cab, which was a prerequisite for operator comfort. "In terms of ergonomics we changed the driver position and seat to improve comfort, stability and serviceability of the machine. The new driver position ensures the operator's hands and feet are correctly positioned for the controls and pedals while providing great visibility to the front of the machine," explains Dawid.

"Inside the cab the standard control levers have been updated to an electronically operated joystick for ease of operation of the grinding head. We've piggy-backed on the Bell basket of approved parts and used our Bell CCU2 control system, which has been used extensively on our Articulated Dump Trucks."

Bell chose the Bellaco head with its narrow blade disc with teeth to pulverise the stump, unlike the alternatives on the market that have a rotating drum. This gives the Stump Grinder the advantage of being able to de-stump even if the stump is recessed. "The operator is able to swivel the head to point the disc at the stump for direct application while the rotation of the disc aims debris away from the operation to promote safety," says Sphamandla. Another plus is that the narrow blade disc is fitted with replaceable tungsten tips.

According to Sphamandla the fuel tank has been positioned at the front of the Bell Stump Grinder for optimal weight distribution. "We've also fitted an extra hydraulic tank so that the head has its own, dedicated tank and wider wheels on the rear have improved ground pressure."

Ground level maintenance has been achieved to improve safety while hydraulic coolers have been positioned upright for easier maintenance and unhindered access to the engine.

Currently the Stump Grinder works three shifts for the independent contractor and has therefore been fitted with four forward lights and two rear lights with a total of 3 500 lumens. Lights have also been installed in the engine and pump bays should access be required during night shift.

The upgraded Bell Stump Grinder is capable of handling more than 100 stumps per hour depending on the type of trees.

