

Bell provides PDS/CAS flexibility and options

Following the introduction of new mining regulations that came into effect in December 2022, we spoke to Bell Equipment OEM Product Manager, Jeremiah Mokhomo, about what the regulations entail and how Bell has positioned its new and older Articulated Dump Trucks (ADTs) to provide customers with flexibility and options when deciding how best to comply with these requirements.



In terms of the regulations, diesel-powered, trackless mobile machines must be able to automatically detect the presence of pedestrians and other diesel-powered, trackless mobile machines in the vicinity, and provide an effective warning. Where no action is taken to prevent a potential collision, the machine must be able to “fail to safe” without human intervention by means of a system that has the means to retard the machine to a safe speed whereafter the brakes are autonomically applied.

Jeremiah says: “Our Pin 3 E-series ADTs, introduced towards the end of 2020, are built ready to integrate with a wide range of proximity detection systems (PDS) or collision avoidance systems (CAS) up to level 9. This was a natural progression for Bell because our earlier E-series trucks introduced huge advances in automation to offer industry-leading levels of driver and machine protection. Standard features such as starting, daily checks, bin tipping, and switch off/turn spin down have been automated, and the horn is automated to sound upon vehicle start-up and when selecting forward or reverse. In addition to automatic speed control and retardation, the ADTs are fitted with automatic traction control.”

Explaining the difference between PDS and CAS, and how a Bell ADT integrates with a third-party system, he says: “PDS improves the operator’s awareness by detecting potential collision threats and warning the operator visually and audibly, whereas CAS intervenes by either slowing the vehicle down or stopping it to

prevent or at least reduce the severity of collisions between equipped vehicles and equipped pedestrians.

“Bell provides a PDS gateway controller (ISO 21815-2) for a PDS/CAS to connect to a Bell ADT. The third-party PDS/CAS then does the detection and gives commands while the execution of these commands and the control of the truck is Bell Equipment’s responsibility.”

According to Jeremiah, because Bell Equipment’s ADT innovation has been steadily moving towards PDS/CAS, older trucks from the D-series Pin 4 can be retrofitted with a PDS aftermarket kit. This enables customers to fit a PDS or CAS into an existing truck at a fraction of the cost of a new PDS/CAS-ready machine.

Bell ADT owners can outfit their trucks with the latest and most advanced safety technology on the market to comply with regulations and ensure the safety of their operators, pedestrians, and other mobile equipment on the job site. At the same time, they have the flexibility to choose a PDS/CAS solution that best suits their needs and budget, and the option of fitting this solution to a new PDS/CAS-ready Bell ADT, or an older Bell ADT retrofitted with a PDS kit.

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