Serco's new trailer for SPAR will reduce CO^2 emissions

Serco and SPAR SA have worked together to develop a prototype of a new concept trailer designed to help reduce fuel costs and carbon dioxide emissions while at the same time being highly practical to load.

Clinton Holcroft, MD of Serco credits SPAR for innovatively pushing the envelope and incorporating bold green features into their vehicles. "The key issue was to optimise the aerodynamic efficiency of the trailer which was achieved by focusing on the three major sources of aerodynamic drag in the typical tractor-trailer application - the tractor-trailer gap, trailer side and trailer wake. A number of variants were evaluated to determine the most practical and suitable for the project."

Improved air flow

The tractor is fitted with aerodynamic truck fairings provided by Aerotruck which improves air flow and minimises the tractor-trailer gap. The trailer has under body side skirts manufactured from a flexible, durable polyprop plastic, which improves the trailer's aerodynamics, particularly in the presence of crosswinds to reduce wind drag. The rear section of the trailer's roof is tapered to help keep airflow attached to the trailer body and effectively reduces the trailer's wake, contributing to reduced drag and improved economy.

Using EBS brakes with Ecas, it is possible to reduce the ride height of the trailer to that of the truck to reduce overall height which contributes to a reduction in frontal area, while the air suspension allows the trailer to adjust to a normal dock height for loading and unloading. The trailer makes use of disc braked axles for improved vehicle safety and single tyres with aluminium rims to reduce weight and rolling resistance.

Charles Davidson, national transport manager for SPAR says the project was born out of SPAR's company-wide initiative to reduce its carbon footprint. "We approached Serco to come up with a green concept trailer, but one which would be practical and not have an adverse impact on the normal loading operations at SPAR."