



Firsts in the underground

FOR A NEW CONTRACT SERVICING AN UNDERGROUND MINE, **LOWES PETROLEUM SERVICE** REQUIRED A UNIQUE FUEL TANKER DESIGN BUILT BY **HOLMWOOD HIGHGATE (AUST)** UTILISING A PNEUMATIC ROCKINGER RO 500 COUPLING FROM **JOST AUSTRALIA**.

In a deep, dark mine site three kilometres underneath the Parkes region of New South Wales, a rigid tanker winds its way through the narrow shaft to make a crucial fuel delivery. The daily mission not only sees the vehicle navigate down a 16 per cent incline, but also a tight cul-de-sac reminiscent of a rabbit's warren.

At least that's how Gavin Nielsen, Transport & Logistics Specialist at Lowes Petroleum Service, describes the tanker's task. To carry out the complicated delivery, Lowes Petroleum, tanker specialist Holmwood Highgate, Kenworth dealer Brown & Hurley Kyogle and component specialist JOST Australia put their heads together to create a unique tanker combination design. Gavin says the mine work is part of an existing contract that Lowes Petroleum Service was carrying out. With the expansion of the mine's underground

operation, the hauler was asked to adapt and find a viable and cost-effective way to maintain a fuel delivery supply to the site. After 11 months of 'trial and error' in the group design process, January 2017 saw the resulting Performance-Based Standards (PBS) approved truck and four-axle dog completed. "The design was definitely a group effort to include a number of firsts, from the components used to their placements," says Ian Williamson, Tanker Sales, Holmwood Highgate. "The wheel base and chassis space, for example, raised a few challenges to arrange AdBlue tanks and filters in new positions so the rigid tanker could physically get in and out of the mine."

The 'Mine Spec' tanker required a number of WH&S features to keep the driver safe underground, such as flashing blue lights to bring extra illumination to the otherwise

encapsulating darkness, as well as fire suppression and breathing apparatus in case of emergency.

But, the underground delivery is only part of the unique PBS tanker combination's journey. First, it must be loaded out of Sydney, then travel over the Blue Mountains, getting a taste of the mine's winding route with the twists and turns of manoeuvring a 57.1 tonne combination on the Concessional Mass Limit (CML) approved route.

Then, once the vehicle arrives on site, it uncouples the 36,000-litre dog tanker for an aboveground fuelling task before the 17,500-litre rigid tanker heads into the darkness. "Because the truck and dog are being coupled and uncoupled every day, we chose to have the Rockinger RO 500 pneumatic coupling fitted to the combination," Gavin explains. "The

pneumatic release system is much simpler for the driver to operate than manual equipment, and it features an in-cab alarm system to indicate the coupling's status – whether it is locked, unlocked or in a jack-knife position."

The tanks make their fuel deliveries using the PreciPURE pump and metering system from Haar Australia, another first for Lowes Petroleum Service. Then, once recoupled, the combination heads back along the picturesque mountain road to start all over again.

Now, Gavin says the tanker design is working just as it should, adding that he has the peace of mind that his suppliers share the same commitment to keeping the combination on the road.

"Backup and aftersales service were integral parts of the decision-making process when bringing suppliers on board this tanker project, because managing downtime is a priority for our fleet.

"We need to rely on our suppliers and JOST Australia gives outstanding support through its national network, so we use its couplings, turntables and landing legs throughout the fleet."

As part of Gavin's aim to minimise vehicle downtime, he requested the team at Briskair in Brisbane to supply and install



one of our trailers. Holmwood Highgate is known for producing special designs, and allowed me to work closely on the specification of this truck and four-axle dog."

Now navigating the narrow, steep and twisting mine with ease, Gavin says it was only by working together with the tanker builder, component suppliers and truck dealer that the unique tanker went from concept to reality. "There are a lot of firsts on this design, so of course there have been little teething issues, but all of our suppliers are just as invested in this combination's success as we are and have helped us every step of the way," Gavin says.

"It's fantastic to have close relationships with our suppliers so we have the ability to develop agile solutions for our customer base. This project is by far the most complex logistics solution the organisation has completed, and it paves the way for a successful long-term commercial relationship between Lowes Petroleum Service and North Parkes Mine."

its Lubecore Automatic Lubrication. The system fully lubricates the truck-and-dog combination, including 28 greaseable points on the tanker's axles, drum brakes and ballrace turntable. "We have a strong relationship with Briskair and currently run the lube core system on all our prime movers and rigids," Gavin says. "However, this is a first for us to complete a fitout on

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