Remote Grease Pressure Release System

Downer EDI Mining

The Problem or Initiative

In January 2013, a serviceperson at a Downer Mining project sustained a serious high-pressure grease injection injury while greasing the blade assembly on a dozer. The grease gun became stuck on the grease nipple due to a blocked hose. As the serviceman wiggled the line to free it, the nipple sheared off. Grease shot out under pressure, dislodging his safety glasses and hard hat, and hitting him near his right eye. On investigation, it became apparent that the industry standard for removing the grease gun in these instances was to wiggle it in a circular direction until it came off. With such high pressure in the grease system, it was clear that this was a hazardous practice that regularly put servicepeople at risk.

The Solution

The challenge was to find a simple, cost-effective solution that would eliminate the hazard without adding any additional steps to the greasing task. The result was the Remote Grease Pressure Release System. This unique engineering solution comprises an electrical-operated control unit, mounted on top of the service truck near the grease pumps, and operated (from as far away as 50 metres) by a simple garage-door-style remote control. In the case of the grease gun becoming struck, the remote control activates the system, which relieves the grease pressure back to the tank via a solenoid valve. A set of LED lamps in the lube cabinet indicates when the grease pressure has been released. Following extensive testing, the system has also been applied to the bulk grease systems, and is now being installed on all Downer Mining-owned service trucks nationally.

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