B&D SUPER JACK:
A KEY COMPONENT TO THE BEST TOOLING PACKAGE FOR HAUL TRUCKS IN THE WORLD.

SITE
Copper mine in Chile that is currently operating 18 Komatsu 830Es and 14 Komatsu 930Es with an indoor maintenance shop that houses 4 bays.

OBJECTIVES
- Improve safety for service technicians
- Increase truck utilization

OUTCOME
- No reported worker injuries as a result of maintenance and repairs on the component
- 815 hours or over 3000% increased truck utilization
- Significant expectations for reducing long-term operating costs

CHALLENGE:
With pressure to increase safety when lifting trucks and to lift the trucks faster, mine management was seeking a solution that could replace the typical single hydraulic cylinder/ram. By picking up at one corner of the truck it was challenging to secure the load with either a mechanical lock on the cylinder or ram or separate safety stand. It was apparent that this method was unstable and the service technicians were subjected to an unsafe load while lifting and securing. In addition the Cylinder/rams were heavy to move and must be manually maneuvered around the shop. The cylinders were driven by air and malfunctioning often in the cold weather.

SOLUTION:
Searching on the Internet, the procurement manager came across the B&D Super Jack and after viewing the movie demonstrations, the purchase process began. The B&D Super Jack is the only certified two point lift Jacking System for 300 to 400 ton trucks in the world. It enables workers to perform the required maintenance to vehicles in a secure and safe environment. Easy to operate, requiring only one individual, the Super Jack can double as a safety stand while the work is being performed on the truck. When required to lift another vehicle, the workers can simply replace it with a pair of custom engineered B&D Safety Stands. The Super Jack is a fully computer controlled, hydraulically driven vehicle. It can sense the characteristics of the lift with a feedback screen that enables the operator to visually monitor the vehicle tonnage, tilt and limits. **Within 48 months the mine had gained 815 hours in truck utilization with the implementation of the Super Jack.**

Lifting truck required for:	Recommended frequency for maintenance	Maintenance hrs without B&D SJ	Maintenance hrs using B&D SJ	Increased truck utilization (Frq x Hrs)
Front Tire change*	2,000 = 3 months***	1 hour	2 mins	16 x 58 m = 15.5 hours
830E Wheel Motor	22,000 hrs = 33 months***	1 hour	2 mins	1.5 x 58 m = 1.5 hours
830E Front Strut	14,000 hrs = 21 months***	1 hour	2 mins	2.5 x 58 m = 2.5 hours
830E Rear Strut	16,000 hrs = 24 months***	1 hour	2 mins	2 x 58 m = 2 hours
830E Hoist Cylinder	18,000 hrs = 27 months***	1 hour	2 mins	2 x 58 m = 2 hours
930E Wheel Motor	18,000 hrs = 27 months***	1 hour	2 mins	2 x 58 m = 2 hours
930E Front Strut	10,000 hrs = 15 months ***	1 hour	2 mins	3 x 58 m = 3 hours
930E Rear Strut	16,000 hrs = 24 months***	1 hour	2 mins	2 x 58 m = 2 hours
930E Hoist Cylinder	16,000 hrs = 24 months***	1 hour	2 mins	2 x 58 m = 2 hours

Every 48 months this mine site gained 815 hours truck utilization based on applying the hourly savings to eighteen 830Es and fourteen 930Es.

**Back tire change frequency varies with site requirements and standards. The Super Jack will increase truck utilization even more once this is taken into account.*
***Standard hours recommended from OEM Rate Book.*
****Based on trucks being used 657 hours per month (90% utilization).*