

Improve Reliability–Truck Shock Absorbers

Chesterton Fluid Power Equipment Sealing Solutions

Mining Chesterton 16K, 21K, 22K, AWC640, AWC800 Case Study 031 FP

Challenge

Issue

A large surface copper mine experienced pre-mature seal failure on the suspension cylinders of heavy-duty, off-road haul trucks.

The suspension system was exposed to severe operating conditions including a heavy payload, shock load, and high frequency.

Cylinders with an OEM seal repair kit lasted only 6,000 to 8,000 hours.

The challenge was to extend the operating hours between maintenence intervals of the shock absorbers. Another goal was to use existing metallic components for repair/ upgrade of the cylinders.

Solution

Recommendation

The local Chesterton specialist recommended a cylinder upgrade solution—a complete system with high-performance components.

Seal Materials: Propietary thermoset polymer (*AWC800*) provided outstanding wear, abrasion and extrusion resistance. *AWC640* is a high-load capacity, non-metallic, bearing composite material.

Seal Kit: Included wiper, primary rod seal (cap seal), secondary rod seal (u-cup), and rod bearing bands.

Results

Improved Performance and Reliability

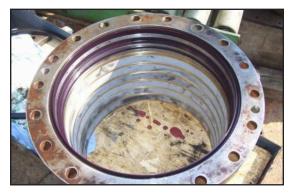
 Rebuild cycle: Extended from 6,000 to 8,000 working hours up to 12,000 hours.

MTBR Improvements: 1.5-2X

 Immediate cost saving by using existing metallic components for upgrade of the cylinders.



Reliable haul truck suspension systems are crucial to reliability in a mining operation.



New Chesterton rod sealing system: Using 21K wiper, 22K rod seal, and 16K cut-to-size bearing bands.



Upgraded shock absorber in operation.

Technical data reflects results of laboratory tests and is intended to indicate general characteristics only.

A.W. Chesterton Company disclaims all warranties expressed or implied, including warranties of merchantability and fitness for a particular purpose. Liability, if any, is limited to product replacement only. Any images contained herein are for general illustrative or aesthetic purposes only and are not intended to convey any instructional, safety, handling or usage information or advice respecting any product or equipment. Please refer to relevant Safety Data Sheets, and/or Product Labels for safe use, storage, handling, and disposal of products, or consult with your local Chesterton sales representative. A.W. Chesterton Company 860 Salem Street, Groveland, MA 01834 USA © 2017 A.W. Chesterton Company. ® Registered trademark owned and licensed by A.W. Chesterton Company in USA and other countries, unless otherwise noted. WWW.CHESTERTONFLUIDPOWER.COM

EN24620 10/17