

Challenge

Issue

A major mine owner was experiencing premature failure of the arm cylinder on a Demag excavator leading to unplanned downtime and lost production.

The OEM rubber seals were leaking shortly after installation. Severe leakage led to replacement, on average, after only 48 days.

Upon inspection, the wiper and rod seals were found to be damaged and could not withstand the severe hocking loading this equipment was exposed to.



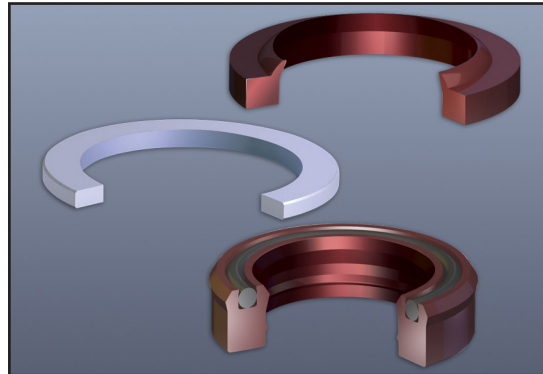
Demag excavator – Model H485.

Solution

Products

Chesterton's local specialist recommended a cylinder upgrade solution that included a high-performance wiper used in combination with a rod seal and anti-extrusion ring.

- **21K** - Positive-rake profile effectively wipes away contaminants and protects the equipment
- **22KE** - Energized dual component seal for added stability withstands shock loads
- **9K** - Anti-extrusion ring protects seal from extruding while under pressure
- **AWC 800** - Thermoset polymer, durable wear, and ultra-violet ray-resistant material



21K - 150 x 167 x 159 x .9 mm red polymer.

22KE - 150 x 168 x 14,80 mm w/ 9K back up ring.

Results

Improved Performance & Reliability

The Chesterton sealing solution extended the rebuild cycle from 48 days up to 160 days during the evaluation period by the mine.

The sealing solution was specified as the standard offering for all future rebuilds of this equipment based on its performance.

MTBR increased: 3.3x and counting



Arm cylinder was in excellent condition upon inspection.