

Proof of Performance





Shovel Ring Gear – Success Story

Application: P&H 2800 XPA Shovel Ring Gear

Length of Time in Service: 79,473 Hrs

P&H Recommended Change-out Interval for Ring Gear: 50,000 Hrs

Lubricant: 595 NC Open Gear Lubricant

Petron 595 NC was used at normal time cycles of every 20 minutes on all open gear areas. During the scheduled change-out of house rollers at 50,000 hours, the ring gear was inspected and found to be in good condition. The ring gear was rotated 180 degrees and the shovel continued in production at the mine. In April 2001 the shovel was shut down for an overhaul of the lower works @ 79,473 hours. At this time the ring gear was replaced, not because of cracking or abnormal wear, but because the gear had far exceeded its expected life. The mine thought it best to replace the ring gear at this time since the shovel was undecked and most cost effective to do the job while the shovel was down. Photos were taken of the ring gear condition at change-out along with a gear mold and are provided with this case history of Petron's outstanding success. Contacts at this mine in the Southwest will be provided to support the validity of the report upon request.

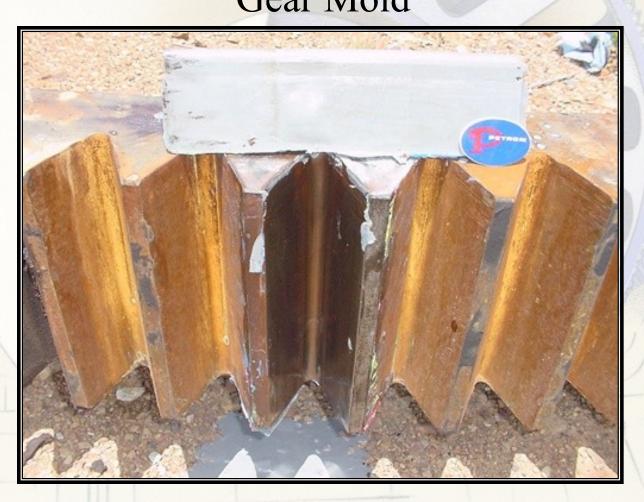


P&H 2800 XPA Shovel Ring Gear





P&H 2800 XPA Shovel Ring Gear Gear Mold







P&H 2800 XPA Shovel Ring Gear

Gear Tooth Closeup





Petron Earns Business Through Proven Performance

Petron's 595 NC is a proven winner. This copper mining operation, the largest in the U.S. Southwest, experienced first-hand how 595 NC can improve a company's bottom line. As a result of the cost savings realized by extending the useful life of the ring gear from an expected 50,000 hours to 79,000 hours, Petron's 595 NC was chosen as the exclusive open gear lubricant for their entire fleet of 14 P&H shovels.