

Challenge

Issue

A major supplier to a number of automobile manufacturers was having difficulty with the performance of the main press used in their production line.

Root Cause

The primary piston seals rolled in the grooves during operation leading to premature failure.

Goal

Eliminate leakage, reduce downtime, and improve production.



Main hot forming press and close up of damaged seals (size - 230 mm bore).

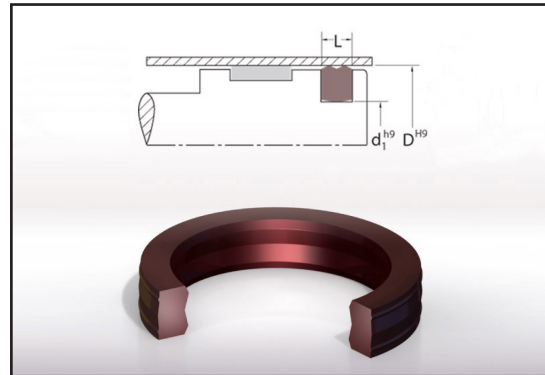
Solution

Recommendation

A unique sealing solution combined a heavy-duty, bi-directional **Chesterton 20K** with a **19K** split replaceable bearing band.

Products & Materials

- **20K**: Unique thermoset material, (**AWC 800**) offers excellent wear and tear resistance
- **19K**: 40% glass-filled nylon (**AWC 660**) eliminates metal-to-metal contacts and offers similar carrying load as bronze



Double-acting, high-pressure hydraulic applications

Results

Improved Performance & Reliability

This sealing solution eliminated leakage of the cylinders on the main press and minimized scoring of the piston barrel and rod.

- Improved reliability
- Eliminated leakage
- Reduced downtime
- Improved production

MTBR improvements: 28X



Modified piston design.