

CASE STUDY

BIRRANA™ ENHANCED 930E WHEEL GROUP PERFORMANCE

H-E PARTS INTERNATIONAL (H-E PARTS) PROVIDES SOLUTIONS FOR THE ENTIRE DRIVETRAIN, SPECIALIZES IN THE RE-MANUFACTURE OF MAJOR MOBILE EQUIPMENT COMPONENTS, AND OFFERS INDUSTRY LEADING BIRRANA™ PRODUCTS. THE ENHANCED DESIGN FEATURES OF THE BIRRANA™ PRODUCTS DELIVER EXTENDED LIFE, EASE OF MAINTENANCE, AND SUPERIOR PERFORMANCE.

Anglo American, Los Bronces (Los Bronces) operates one of the largest copper mines in the world and is located in the Andean Mountains, 65km north-east of Chile’s capital, Santiago. Los Bronces runs a fleet of Komatsu 930E haul trucks and wanted to increase their reliability, while lowering the total cost of ownership.

Los Bronces has a unique application in which their haul trucks descend under loaded conditions, which was maximizing the stress on the front axle and leading to lower than expected life from their front wheel groups. H-E Parts approached Los Bronces with a solution to extend service life, while also providing superior performance. This involved re-manufacturing the 930E wheel groups incorporating H-E Parts proprietary Birrana™ enhancements, such as:

- The Birrana™ control fit wheel bearing system, which includes flexible spacer, hardened spacer, custom bearing design and specifications, and preload adjustment
- Birrana™ contamination control which includes isolation seals, contamination guards, and contamination kits.

In addition to these enhancements that are inherent in every H-E Parts re-manufactured wheel group, application specific environmental concerns were taken into account. This saw the lower bearing retainer seals optimized to avoid humidity ingest and customized upper and lower bearings used to suit specific environmental conditions.

Since the first install, over 20 front corners have been put into service with dramatic life increases experienced in excess of 81%. Due to this success and on-going performance demonstrated by the Birrana™ enhanced front wheel groups, Los Bronces has now engaged H-E Parts to re-manufacture their 930E rear wheel groups.

H-E PARTS PERFORMANCE TABLE

| | LIFE (HOURS) |
|---|---------------------|
| Competitor wheel groups (average) | ~8,000 - 11,000 |
| H-E Parts supplied wheel groups (average) | ~18,500 - 20,000 |
| H-E Parts increased life (%) | 81%+ |

| | |
|--------------------|------------------------------|
| CUSTOMER | Anglo American - Los Bronces |
| LOCATION | Chile |
| APPLICATION | Komatsu 930E-3 and 930E-4 |
| PRODUCT | Front Wheel Groups |



H-E Parts re-manufactured 930E front wheel group

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