

CASE STUDY

MAINTENANCE FREE BEARINGS PROVIDE SUPERIOR LOAD CAPACITIES

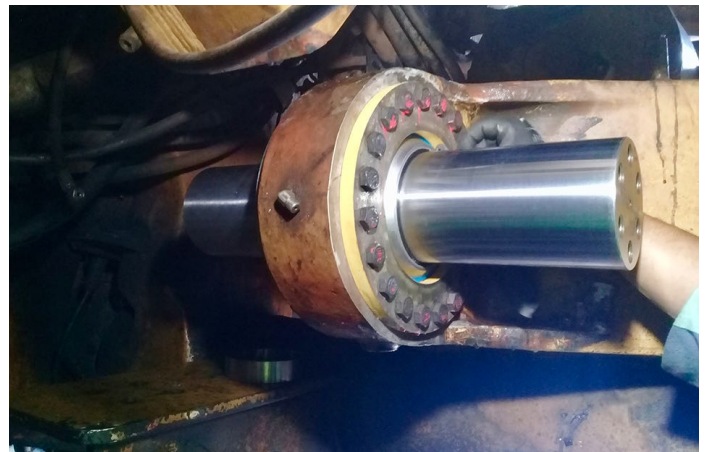
H-E PARTS INTERNATIONAL (H-E PARTS) PROVIDES SOLUTIONS FOR THE ENTIRE DRIVETRAIN, SPECIALIZES IN THE RE-MANUFACTURE OF MAJOR MOBILE EQUIPMENT COMPONENTS, AND OFFERS INDUSTRY LEADING BIRRANA™ PRODUCTS. THE ENHANCED DESIGN FEATURES OF THE BIRRANA™ PRODUCTS DELIVER EXTENDED LIFE, EASE OF MAINTENANCE AND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

NEW SOLUTIONS FOR SPHERICAL BEARINGS

Spherical bearings play a pivotal role in mining equipment. They operate in demanding environments with dust, water, mud, limited lubrication, over lubrication, severe impact, and a limited range of motion. Over time these issues result in metal-on-metal contact, damage to mating components, and seized pins, a widely recognizable issue occurring in haul trucks. To address such issues, the H-E Parts engineering team partnered with a bearing company to develop the maintenance free bearing for haul truck applications, an alternative to conventional lubricated spherical bearings. The resulting bearing provides customers with an easier to use product, extended life, and lower total cost of ownership. These benefits gained the attention of a Brazilian iron ore mine.

H-E Parts partnered with the customer to test the maintenance free bearings as an alternative to the conventional bearing. The maintenance free bearings were tested on CAT 793D haul trucks at the hitch pin location. The results showed that the maintenance free bearing lasted twice as long as the conventional bearing. Further tests concluded it could have lasted as long as three times the life of the conventional. With results like these, the customer plans to adopt the maintenance free bearings across all of the applicable equipment.

| | |
|--------------------|--------------------------|
| CUSTOMER | Iron Ore Mine |
| LOCATION | Brazil |
| APPLICATION | CAT 793D Haul Trucks |
| PRODUCT | Maintenance Free Bearing |



Maintenance Free Bearing Being Installed

| CRITICAL PERFORMANCE MEASURES | CONVENTIONAL BEARING | H-E PARTS MAINTENANCE FREE BEARING | PERCENT IMPROVEMENT |
|-------------------------------|----------------------|------------------------------------|---------------------|
| STATIC RADIAL LOAD LIMIT | 5,600 kN | 9,994 kN | +78% |
| DYNAMIC RADIAL LOAD LIMIT | 1,120 kN | 7,495 kN | +569% |

H-E Parts International replacement parts are compatible with the makes and/or models of the third-party equipment described. H-E Parts International is not an authorized repair facility of these third parties and it does not have an affiliation with any manufacturers of these third-party products. All brands, original equipment manufacturer (OEM) part numbers or references are owned by the respective OEM entities or their affiliates. These terms are used by H-E Parts International for identification and cross reference purposes only and are not intended to indicate affiliation with, or approval by the OEM, of H-E Parts International or its products.



MINING SOLUTIONS

HEPI08JUNE20