ELECTRIC ROPE SHOVEL
PARTS & SERVICES
• CATERPILLAR/BUCYRUS/MARION
• KOMATSU/P&H

Hofmann Engineering offers a wide range of replacement parts for Electric Rope Shovels which are interchangeable with parts from Caterpillar (Bucyrus/Marion) & Komatsu (P&H). Major components include: dipper handles, all transmission (hoist, crowd, swing & propel), complete undercarriages, swing racks, swing shafts, propel shafts, boom sheaves, rope drums & padlocks.

CATERCILLAR/BUCYRUS PLANETARY GEARBOXES
• Product improved Hoist, Swing, Crowd and Propel for 495BI/BII/HR/HF/HD.
• New, overhauled or service exchange gearboxes.
• Like for like replacement internal gearing, or upgraded to lastest technology of case hardening by carburising or induction hardening & precision form grinding to AGMA 12 (min).
• Full gear quality inspection to AGMA or ISO of all gearing using the latest gear testing technology.
• Test run prior to despatch.

KOMATSU/P&H PLANETARY GEARBOXES
• Product improved Swing and Propel gearboxes to suit all 2800 XPB/XPC and 4100 A/C/XPB/ XPC machines.
• New, overhauled or service exchange.
• Upgraded, carburised and precision ground internal gearing complying to AGMA 12 (min).
• Full gear quality inspection to AGMA or ISO of all gearing using the latest gear testing technology.
• Test run prior to despatch.

ROPE DRUMS & GEARS
• Forged alloy steel rope drums
• Full contour induction hardened rope grooves.
• New, refurbished or service exchange.
• Forged alloy steel drum gears.
• Induction hardened precision ground or hard cut gear teeth.

©Copyright 2019, Hofmann Engineering Pty Ltd.
HOFMANN BOLTED SPLIT LINE DESIGN

The solution to split line tooth cracking for Komatsu/P&H shovels.

NEW IMPROVED SWING RACK FOR 7495 SHOVELS

- AS1444 forged alloy steel ring rolled rack quench & tempered to 345-375 BHN.
- Ring rolled forging offers superior mechanical properties, more homogenous grain flow in the direction of the applied principal stresses, and increased forging reduction ratio.
- Vertical tool mark striations are removed by polishing the roots to improve the fatigue life of the gear.
- Shot-peened roots to -600Mpa residual compression to improve the fatigue life of the swing gear.
- Improved cast segmented high strength alloy hub welded to the rack. Optional improvement: mechanically attached rack.
**HOFMANN UPGRADED PLANETARY TRANSMISSIONS**

New or service exchange.

- To suit Komatsu/P&H shovels 2800XPB, 2800XPC, 4100, 4100A, 4100C, 4100XPB & 4100 XPC.
- To suit Caterpillar/Bucyrus shovels 495, 495B, 495HR, 495HD, 495HF & 7495.
- Upgraded materials for improved service life.
- Upgraded HofCarb heat treatment for increased service life on case hardened components.
- Completely re-engineered.
- Fully interchangeable.
- To maximise service life, only high quality bearings are used.
- Precision form ground planet sets to AGMA 12 minimum quality.
- Accurately cut internal ring gears to AGMA 10 minimum quality.
- Fully tested prior to despatch.
- Fully supplied complete with transport frame and anti-brinelling devices fitted.

---

**SWING**

- Hofmann swing shaft assemblies can be upgraded with HofCarb pinions.

**PROPEL**

- Hofmann improved propel shaft and assemblies.
- As an additional product improvement, splines can be induction hardened to increase the fatigue strength and wear resistance.

**HOIST**

- Improved hoist drums and drum gears available.
- Upgraded input coupling using cardan shaft arrangement available.

**CROWD**

- Hofmann improved crowd drums and drum gears available.
- Both drum designs: using bearings or Toughmet bushes, can be offered.
**SWING PINIONS**

**Product improvement:**
- Original pinion was induction hardened and failed due to excessive wear and case cracking.
- Upgraded 18CrNiMo7-6 pinion material, case hardened to 60 – 62 HRC and precision form ground to AGMA 12 minimum quality.

**SWING GEAR & SHAFT ASSEMBLIES**
- Swing gear assemblies in one or two piece designs for P&H, Bucyrus and Marion shovels.
- Replaceable thrust rails for increased life
- Improved swing shaft assemblies in induction hardened pinion or one piece carburised designs.

**LOAD ROLLERS, REAR & FRONT IDLERS**
- Load rollers: forged from high alloy steel with quench and tempered core and surface hardened to 52 HRC (min) providing up to 25-30% increase in life.
- Rear idler rollers: forged high alloy steel quench and tempered with increase of up to 20% life.
- Front idler: standard or upgraded with external gearing providing up to 30% life increase.

**TRACK PADS**
- Manganese steel up to 18% Mn.
- Alloy steel quench and tempered.
- Induction hardened alloy steel, quench and tempered, followed by deep case induction hardening in the pin bores. Optional induction hardening on the interfacing drive and running surfaces.

**DRIVE TUMBLERS**
- New: cast alloy steel quench and tempered
- Refurbished: by weld repairing splines and drive lugs.
- Over pitched drive tumblers available to allow for stretching of the tracks.
- Optional induction hardening on the interfacing drive or running surfaces
- Thrust washers and seals.

**CROWD PINIONS & RACKS**
- Forged alloy steel dipper racks with finish machined tooth profile.
- Full range for all makes and models.
- New or repaired padlock assemblies are available.
- All welding to internationally recognised standards followed by full thermal stress relieving.
- Fabricated new to internationally recognised standards.
- Full or partial rebuilds.
- NDT inspection on repairs.
- On-site boring & welding repairs with Hofmann line boring machine.
- Pins, bushes & link replacements.
- Machined alloy racks can be offered as a product improvement.

**BOOMS, DIPPERS & DIPPER HANDLES**
- New forged steel fabricated rope sheaves
- Full contour induction hardened rope grooves.
- Repaired and re-profiled.
- New or repaired padlock assemblies are available.
- All welding to internationally recognised standards followed by full thermal stress relieving.

**ATTACHMENTS: ROPE SHEAVES & PADLOCKS**
- Pinion shaft quenched and tempered.
- Induction hardened gear teeth and spline before finally shot peening the stressed shaft area. The F.E.A. performed on this re-design confirms a 50 x life improvement.
- Pinion can also be supplied fully assembled with bearing and cartridge ready to install.

**UPGRADED SWING PINIONS**
- Pinion shaft quenched and tempered.
- Induction hardened gear teeth and spline before finally shot peening the stressed shaft area. The F.E.A. performed on this re-design confirms a 50 x life improvement.
- Pinion can also be supplied fully assembled with bearing and cartridge ready to install.