

ENERPAC 

**BOGIE &
WHEELSET
OVERHAUL
SOLUTIONS**



THE RIGHT TOOL MAKES ALL THE DIFFERENCE



BOGIE OVERHAUL CHALLENGES AND SOLUTIONS

To successfully navigate the challenges associated with bogie maintenance, operators need effective and reliable equipment to keep them safe, on schedule, and on budget. Fortunately, the power and precision offered by hydraulic equipment can be used to solve the most demanding maintenance challenges.

Disassembling wheelsets, axles, bearings, and suspension systems can be difficult due to their complexity, condition, weight, and the need for specialized tools and expertise.

Over time, bogie components may experience corrosion and wear, making disassembly more difficult. Removing corroded or seized fasteners, wheels and bearings requires considerable force and care to ensure parts aren't damaged, and limited accessibility to some components can also complicate the disassembly process.



REMOVING LARGE WHEELS AND BEARINGS

During a bogie overhaul, the substantial weight of railcar wheels and bearings presents difficult challenges. Considerable force is needed during the removal process, but at the same time, operators need to ensure careful and precise handling to prevent safety incidents and component damage. Unlike practices such as torching and hammering, using purpose-designed hydraulic pulling equipment ensures a safe removal process and avoids expensive damage to components. Using a 100-ton capacity puller mounted onto a stable trolley can allow a single operator to remove large wheels and bearings efficiently, and safely captures removed components.



- ◀ *Recommended Equipment:* The Enerpac LGH3100 Puller
This large capacity puller is supplied as a complete ergonomically designed unit that includes a trolley, a smooth action scissor lift, synchronized grip jaws, and an intuitive operator station. It can also convert into a 2-jaw puller for use in tight spaces.

LIFTING A BOGIE IN-SITU TO REPLACE COMPONENTS

When conducting trackside maintenance, specifically when replacing bearing adapters or shear pads, the bogies will need to be lifted. This task can be accomplished using a hydraulic cylinder and pump provided there is a secure and level footing for the cylinder. The use of a tilt saddle is recommended to alleviate side loads, and the inclusion of a base plate enhances stability during the lifting process. This approach ensures a secure and controlled method for bogie lifting, facilitating efficient maintenance activities trackside.

Recommended equipment:
XC2202ME, Cordless Hydraulic Battery Pump, RC2512, 25T Single-Acting Cylinder, HC7206C, 1,8 m Hose, GA45GC, Gauge and Adapter, CATS52, Tilt Saddle, JBI25, 25T Cylinder Base.



REMOVING WHEELS FROM ON-TRACK MAINTENANCE EQUIPMENT

The removal of wheels from on-track maintenance equipment is essential for addressing various issues, including visible damage, the need for resurfacing the rolling surface, and damaged or worn-out bearings. Whether due to wear and tear or impacts, this proactive maintenance ensures continued safe and efficient equipment operation, allowing for close inspection and necessary repairs or replacements to maintain optimal performance and safety in railway operations.



Recommended Equipment: LGH253, 50T hydraulic puller, ZC3308JE, Cordless Hydraulic Pump, HC7210, 3 m hose.



REPLACING BOGIE COUPLERS

The primary purpose of a bogie coupler is to facilitate the coupling and uncoupling of railcars, allowing trains to be joined together or separated as needed. The bogie coupler absorbs shocks and forces generated during railcar acceleration, deceleration, and changes in speed, so it is therefore subject to wear and tear and the need for lubrication and alignment. Replacing coupler involves the use of hydraulic bolting tools and several accessories.

Recommended Equipment: Enerpac S3000PX Square Drive Hydraulic Torque Wrench, Reaction Arms, ZU4 Torque Pump, Hydraulic Hoses.



HYDRAULIC TOOLS FOR BOGIE MAINTENANCE

- Hydraulic pullers are effective tools for exerting controlled force when removing shaft mounted items. They're generally safer to use than torching or hammering, and the precise and synchronized jaw movement helps to avoid damage caused by off centre pulling.
- Hydraulic cylinders and accessories are versatile tools that offer an ideal solution for lifting bogies and railcars either in situ or in a maintenance depot.
- Hydraulic torque wrenches are incredibly effective tools for heavy-duty fastening applications that require high torque output. They reduce physical effort, deliver consistent results, and are built for durability and reliability in harsh industrial environments.
- Nut splitting with hydraulic nut splitters is the safest method. It takes less time than alternative methods and avoids costly damage to joint components. The head design fitted with heavy duty chisels permits the splitting of nuts on a wide variety of rail applications.
- Electric and cordless hydraulic pumps deliver the power needed for hydraulic tools when working either in a workshop or if working remotely.
- POW'R Riser Jacks provide a safe, efficient, and mobile load lifting solution and are available as electric and pneumatic powered types.

