

Precision Hydraulic Engineers

# PRECISION HYDRAULIC ENGINEERS



## SERVICES OFFERED

**REPAIR AND  
OVERHAUL**

**AFTERMARKET  
HYDRAULIC  
MAINTENANCE**

**FIELD SERVICE  
CONTRACT  
AND A.M.C.**

**INSTALLATION AND  
COMMISSIONING**

**RE-ENGINEERED  
RECON UNITS**

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# REPAIR AND OVERHAUL

Hydraulic systems constantly experience stress, leading to inevitable wear and tear on their components. If not identified early, this wear can result in total system failure. With PHE's expert repairs and maintenance, your machines and systems are swiftly back in operation. We also offer system analysis to identify potential damage early, helping to prevent unexpected downtime.

## HYDRAULIC VALVE BANKS

In a hydraulic system, valve banks are mainly used to control the direction of the flow. Along with direction, these valves also regulate or adjust the flow rate of the hydraulic fluid. They typically feature a mechanism to modify the flow rate, usually through an opening or port that can change the flow area. By adjusting this flow area, the flow rate is subsequently controlled.



## HYDRAULIC MOTORS

Hydraulic motors typically need to function at low speeds and high pressures, enduring significant fluctuations in temperature and speed during normal use. These motors are mechanical actuators that transform fluid power into the mechanical energy required to operate a machine.



## HYDRAULIC PUMPS

Hydraulic pumps are crucial for the proper functioning of hydraulic systems, as they propel and circulate the hydraulic fluid throughout the system. They are indispensable components for all hydraulic drives.





# AFTERMARKET HYDRAULIC MAINTENANCE

**At PHE, our goal is to reduce the need for frequent replacements.**

## ASSESS

Evaluating hydraulic components requires a comprehensive review of their condition and functionality. This includes visual checks, performance testing, and inspecting for wear, corrosion, or damage. PHE employs diagnostic tools to monitor pressure, flow rates, and temperature changes, which are essential for early detection of issues, preventing system failures and reducing downtime. Regular evaluations are vital for sustaining the efficiency and lifespan of hydraulic systems, aiding in maintenance scheduling and prioritising necessary repairs or replacements to ensure smooth operation.

## DIAGNOSE

Diagnosing helps in identifying the fundamental causes of performance problems or system failures. At PHE, we utilise sophisticated diagnostic tools and methods, including pressure tests, fluid analysis, and thermal imaging, to uncover issues, by investigating symptoms such as unusual noises, leaks, or irregular movements to pinpoint the faults. Our accurate diagnosis ensures cost-effective repairs, by targeting specific problems without needless part replacements. This approach reduces downtime and ensures the hydraulic system functions reliably and efficiently.

## PROCURE

Procuring hydraulic components includes determining the correct specifications, ensuring compatibility with your equipment, and choosing dependable yet cost-efficient suppliers. Prioritising quality and durability is essential at PHE to avoid any failures and to uphold your system's efficiency. Efficient procurement also entails managing lead times, costs, and inventory levels to ensure critical components are readily available. This ethos helps us at PHE in minimising downtime and maintaining the continuous operation of the hydraulic systems.

## REPAIR OR OVERHAUL

Repairing hydraulic components and overhauling your hydraulic machinery involves bringing them back to their original working condition. Skilled technicians at PHE employ specialised tools and techniques to achieve accurate repairs. After reassembly, thorough in-house testing is performed to ensure the components meet the desired performance standards. PHE's effective repair/overhaul capability not only prolongs the lifespan of your hydraulic components but also improves the overall efficiency and reliability of the hydraulic system.



# MAINTENANCE SERVICES

An Annual Maintenance Contract (AMC) with PHE ensures regular and systematic maintenance, preventing unexpected breakdowns and enhancing system longevity. Under an AMC, skilled technicians conduct routine inspections, performance checks, and necessary adjustments or replacements of hydraulic components. This proactive approach helps identify and resolve issues early, reducing downtime and repair costs.



**PRIORITY  
SERVICE**



**DISCOUNTED  
PARTS**



**EMERGENCY  
SUPPORT**



**COMPREHENSIVE CARE  
FOR HYDRAULIC SYSTEMS**

**BY MAINTAINING OPTIMAL PERFORMANCE AND RELIABILITY, OUR AMC IS A COST-EFFECTIVE SOLUTION TO KEEP YOUR OPERATIONS RUNNING SMOOTHLY AND EFFICIENTLY THROUGHOUT THE YEAR.**



A photograph of industrial machinery, specifically a pump assembly with various pipes and a control panel featuring several analog gauges. The image is partially obscured by a dark blue circular overlay that serves as a background for the title.

# INSTALLATION AND COMMISSIONING

When you choose PHE, our commitment extends beyond repair and overhaul. We ensure your pumps are installed properly, perform reliably, and meet stringent safety and efficiency standards. Our installation and commissioning services offer several benefits:

Access to our engineering expertise, with on-site engineers who often also handle your pump's repair and overhaul.

Assignment of a senior engineer to supervise or fully manage the project, ensuring meticulous task completion.

Thorough post-delivery inspection of pumps and components to identify and fix any shipping defects or damages.

Expert assembly, positioning, and integration of pumps, piping, fittings, and auxiliary equipment.

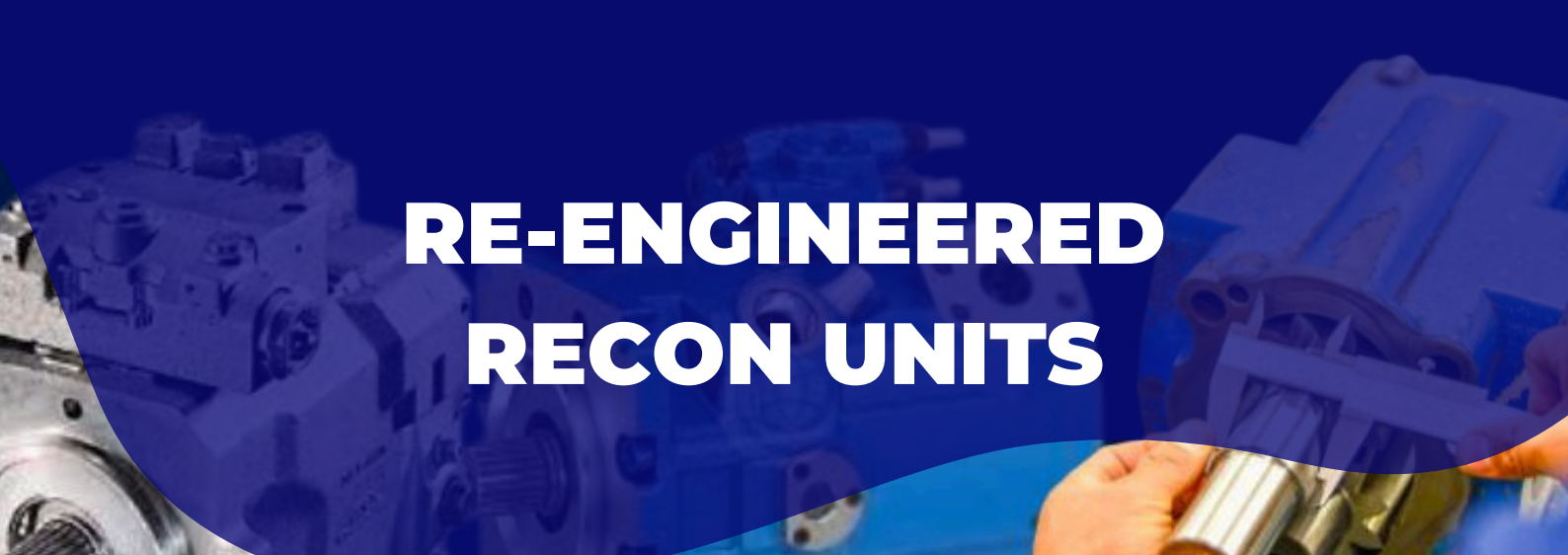
Precise alignment and levelling of pump and motor for optimal performance and longevity.

Safe and compliant electrical connections.

Comprehensive testing, including functional, flow, pressure, and vibration checks.

Final adjustments, control parameter calibration, and performance validation during commissioning.

Approved site acceptance testing (SAT) and final sign-off.



# RE-ENGINEERED RECON UNITS

We provide fully refurbished and tested Recon Units for a variety of hydraulic pumps from major OEM brands used in construction, material handling, shipping, and port operation equipment. Our Recon Units are built with genuine parts from top brands and meet factory standards. They undergo rigorous dynamic testing under real load conditions thus ensuring that the rebuilt unit has the same engineering specifications — in terms of flow, pressure, and leakage as a new one.

**At PHE, our expertise lies in recon and refurbishing of the below types of hydraulic components.**

**Dynamic Products**, like hydraulic pumps, are designed for continuous operation, often running at idle speed even when not under load. This constant use leads to more frequent wear and tear compared to other hydraulic components. Consequently, pumps tend to fail more often within and beyond their designed lifespan. The pump's duty cycle, design, and application determine its lifespan, whether it is a piston, vane, or gear pump.

**Intermittent-Dynamic Hydraulic Units**, like hydraulic motors, directional valves, and servo proportional valves, do not run continuously in a system and typically operate only during specific periods within the machine's cycle, remaining idle most of the time. Consequently, these motors and valves experience less wear and tear compared to hydraulic pumps, resulting in lower natural failure rates over a given time period or duty cycle.

**Static Hydraulic Products**, such as pressure, flow, sequence, and check valves, operate in an "open-close" manner. Their internal components experience minimal wear and tear, resulting in a longer life expectancy compared to dynamic and intermittent-dynamic products.

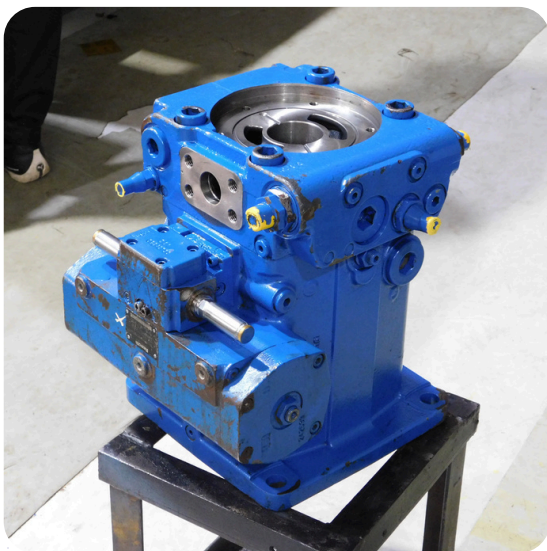




**Serviced India's biggest hydraulic motor MB2400, Hagglunds Dhampur Sugar Mills.**



**Serviced paper mill drive power pack & drive motor supplied by Metso for Silverton Paper, Muzaffarnagar UP.**



**Serving Indian Railways by repairing hydraulic pumps of railway track machines.**



**Customized training program was conducted for DP World - UAE region.**

## OUR PARTNERS



# OUR CUSTOMERS



Border Road Organisation (BRO)

**TATA HITACHI**

Reliable solutions



**LARSEN & TOUBRO**



Dhampur Bio Organics Ltd.



# BRANDS WE SERVE



***DYNAPAC***

Part of the Atlas Copco Group



**LARSEN & TOUBRO**



**WIRTGEN**



**TATA HITACHI**

Reliable solutions



**KOMATSU**



**LIEBHERR**

