

FIELD MAINTENANCE SERVICE

About Servicing The Patterson Group Products

Patterson Pump Company is one of America's leading pump companies. Our roots are deep and our commitment to quality and service is strong.

Dating back to the 1800's, the following companies influenced the design of Patterson Pumps as they exist today:

Baldwin-Lima-Hamilton
Barr Pump Company
Economy Pumping Machinery
Economy Pumps
Patterson Industries

Dean Hill Pump Company
C.H. Wheeler Mfg. Company
Thomas & Smith Inc.
Midwest Engine Company
Wheeler-Economy Pumps

About Servicing Equipment From Other Manufacturers

Our technicians, engineers and parts specialists have upgraded, redesigned, and/or rebuilt equipment manufactured by many O.E.M.s. Following is a partial list of manufacturers whose equipment the Patterson service group has rebuilt through the years.

AC Pumps
Aurora
Baldwin-Lima-Hamilton
Barr Pump Company
Bingham (Sulzer Bingham)
Bryon Jackson (BWIP)
Cascade
C.H. Wheeler Mfg. Company
Dean Hill Pump Company
DeLaval
Economy Pumping Machinery
Economy Pumps
Fairbanks-Morse
Goulds (Morris)
Grundfos

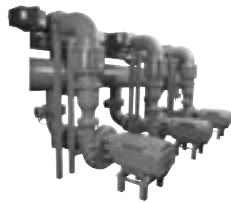
Ingersol Rand
Johnston
KSB
Layne-Bowler
Midwest Engine Company
PACO
Patterson Industries
Pacific
Peabody Floway
Peerless
Thomas & Smith Inc.
United
Wheeler-Economy Pumps
Worthington



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Service on Patterson pumps and valves, and any other manufacturer's equipment

Patterson Pump Company—one of America's leading designers, engineers and manufacturers of valves, axial and mixed flow, sewage, vertical in-line, vertical turbine, split case and end suction pumps, and Flo-Pak® HVAC, plumbing, commercial and industrial package pumping systems, noted for their performance and dependability—offers unparalleled field maintenance service. Its service group has over 100 combined years of experience in equipment repair.



SERVICE We provide personal training to keep your equipment in Tip Top condition. Our service group is devoted to your specific needs—from a single part requirement to a complete rebuild.



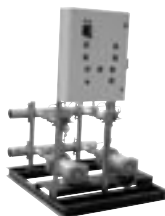
O.E.M. Parts and service can give your equipment an extended life.

SAVINGS With lower maintenance costs, less down time, and parts that you can be sure of. Patterson offers the highest quality parts and workmanship available...at a competitive price.



Plus...prompt delivery of spare parts for any equipment

Return your Patterson equipment to its original specifications with genuine O.E.M. parts. You'll save in the long run. We guarantee it!



For prompt, no-obligation quotes, call, write, fax or e-mail your nearest Patterson representative, or, call our service group at 706-886-2101, fax us at 706-886-0023, or e-mail us at service@pattersonpumps.com.



Maintenance Service Options

SCHEDULED PREVENTIVE MAINTENANCE SERVICE

Scheduled Maintenance Service provides the first step in extending the life of your equipment. Maintenance needs, as identified by the manufacturer and past experience, are addressed on a regular schedule. As a result the equipment in the facility lasts longer with fewer unexpected breakdowns.

We will go a step beyond the basic maintenance and incorporate field data such as vibration analysis, performance data, electrical data, etc. Routine preventive maintenance service is considered a foundation for building predictive maintenance service. Further maintenance needs would be addressed on time and materials basis.

Initial inspection of equipment, identification of equipment needs and materials required would be performed prior to instituting this basic Preventive Maintenance Service.

Quarterly Service and Inspection

- A. Obtain vibration data for comparison trending.
- B. Obtain power readings for evaluation.
- C. Adjust packing as required.
- D. Lubricate pumps and motors as required.
- E. Operational test of all equipment.
- F. Identify and advise customer of anticipated maintenance issues.
- G. Provide requested mechanical and electrical repairs as identified.

Semi-annual Inspection Service

- A. Obtain vibration data for comparison to base line data.
- B. Obtain power readings for evaluation.
- C. Mechanical and electrical overview.
- D. Install and adjust new packing.
- E. Change oil in motors and pumps, if required due to operational hours.
- F. Add lubrication, grease, etc., as recommended by manufacturer.
- G. Identify and advise customer of anticipated maintenance issues.
- H. Provide requested mechanical and electrical repairs as identified.

Annual Inspection Service

- A. Develop/define/refine routine maintenance needs.
- B. Identify auxiliary items needed, i.e., gauges, hand tools, etc.
- C. Field performance testing of all equipment.
- D. Obtain vibration data for base line comparison in the future.
- E. Obtain power readings (amps, volts) for evaluation.
- F. Mechanical and electrical overview.
- G. Install and adjust new packing.
- H. Inspect for safety issues.
- I. Identify and advise customer of anticipated maintenance issues.
- J. Provide requested mechanical and electrical repairs as identified.
- K. Change oil in motors and/or pumps, grease, etc. as recommended by manufacturer.

PREDICTIVE MAINTENANCE SERVICE

Predictive Maintenance Service uses technology available to predict when primary equipment will need maintenance. As a result, savings in down time, labor and lost income are realized. When combined with a good preventive maintenance program definite savings can be realized. Predictive Maintenance Service can save money in the following ways:

- A. Reduction in repair costs.
- B. Reduction in lost production.
- C. Reduction in time required for maintenance on equipment.
- D. Reduction in overtime costs.
- E. Reduction in manpower needs.
- F. Improvement in scheduling manpower needs.
- G. Increase the Mean Time Between Failure (MTBF).
- H. Increase equipment reliability, life and safety.
- I. Reduction in spare parts inventory.
- J. Increase PM intervals.
- K. Prevent environmental damages and fines.

The incorporation of the required technology such as vibration analysis, oil analysis, thermography, motor analysis, along with preventive maintenance, creates the predictive maintenance environment. (Within this environment equipment can be monitored, failures typically predicted thus avoided with less expense for repairs.) In addition, there will be fewer late night emergencies to disrupt the overall demands on people and equipment.

LASER ALIGNMENT (OPTIONAL)

Alignment services are offered on all new equipment as well as existing installations. With laser alignment there is a more accurate shaft-to-shaft alignment, which in turn reduces errors in the alignment process, and increases Mean Time Between Failure (MTBF). Proper alignment can also reduce energy costs, which means overall cost savings, and could increase the life of the equipment up to 30%.

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Service on Patterson pumps & valves, and any other manufacturer's equipment

- Laser Alignment •
- On-site vibration analysis •
- On-site tear down of equipment •
 - Inspection •
- Trouble-shooting, testing & evaluation •
- On-site maintenance lube, packing & flow problems •
- Complete rebuild of equipment •
- Field engineering of pumping equipment •
 - Equipment upgrades •
 - Preventive maintenance •
 - On-site Training •

Prompt spare parts delivery for any equipment



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