

PHILADELPHIA GEAR

POWER SYSTEMS BY TIMKEN



Timken Power Systems
OTSSM — Onsite Technical Services



A large industrial crane with "VEMCO" written on its boom is lifting a heavy, cylindrical component. The scene is set in a snowy industrial environment with workers in hard hats and heavy clothing visible in the foreground. The sky is overcast.

Mission Statement

To provide customers with a solution to gearing and powertrain problems that offer a one-stop-shopping option for their technical service needs. This lets customers stay focused on their core business, while we seamlessly handle projects that they may not have in-house expertise or resources to accomplish themselves. At the end of the day our goal is the same as our customers: to bring their plants back online as fast as possible, whether it's an emergency situation or a planned outage.

Philadelphia Gear Onsite Technical Services (OTSSM)



With more than a century of gear design, manufacturing and repair behind us, we understand your mission critical gearbox applications better than anyone. Our OTS aftermarket service is prepared to meet all your gearbox needs. And now, as part of Timken Power Systems, Philadelphia Gear has never been better positioned to offer a comprehensive on-site powertrain solution.

Since 1892, we've provided our customers with the added value and peace of mind that comes with a Philadelphia Gear brand drive. But by and large we left it up to them to install the gearboxes, then, decades later, get them out for overhaul, put them back in, align them, change and analyze the oil, and so on. Now they have the option of letting experts do that work.

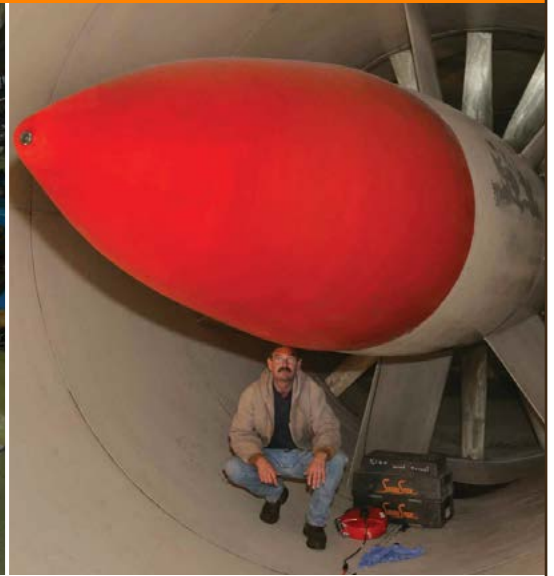
With one phone call we can define a scope of work that includes not only removing the gearboxes and reinstalling them, but also rebuilding them in-place, re-boring housings, providing rigging operations, tooling, fixtures and more.

A single P.O. for an agreed upon scope of work means the project management and everything necessary to complete the project on-time, on-spec and on-budget is included and accomplished on a fixed-price basis. No surprises. No hidden costs. No nickel-and-diming.

Budgeting for the outage is not only easier, it's far less risky because the OEM for this critical equipment, Philadelphia Gear, takes full responsibility. We know our customers have shrinking resources, and more than ever they need to minimize or avoid downtime. We are there to ensure that happens.



Onsite Technical Services Capabilities from A to Z



Virtually anything you'll run into that's related to any brand or type of gearbox can be handled by our OTS program. Additionally, since we've become part of Timken Power Systems, we now offer complete drivetrain services that include motors, bearings, and other ancillary equipment. We do what we are expert in so that you can focus on what you are expert in. By entrusting your rotating equipment to our OTS team you are taking a significant step toward reducing unplanned downtime.

- Alignment (laser, optical, reverse)
- Balancing of rotating elements
- Complete in-place overhauls
- Diagnostic services
- Engineering and reverse engineering
- Failure analysis
- Grouting of machines
- Housing re-boring
- In-place machining
- Journal and gear hardness checks
- Keyway cutting
- Line boring
- Millwright services
- Non-destructive testing
- Oil sampling and analysis
- Predictive maintenance
- Quality and safety certified
- Removal and reinstallation
- Spare parts stocking
- Temperature monitoring
- Ultrasonic testing
- Vibration analysis
- Welding (hot and cold techniques)
- Xylan® coated hardware as necessary
- Yard equipment management
- Zero defect philosophy



Features and Benefits of OTS... and Why You Should Care



Our OTS program offers a solution to customers who no longer have their own expertise or resources to make arrangements for the removal, shipping, overhaul, reinstallation and alignment of motors, gearboxes and related drivetrain equipment at their facilities.

The Features of OTS

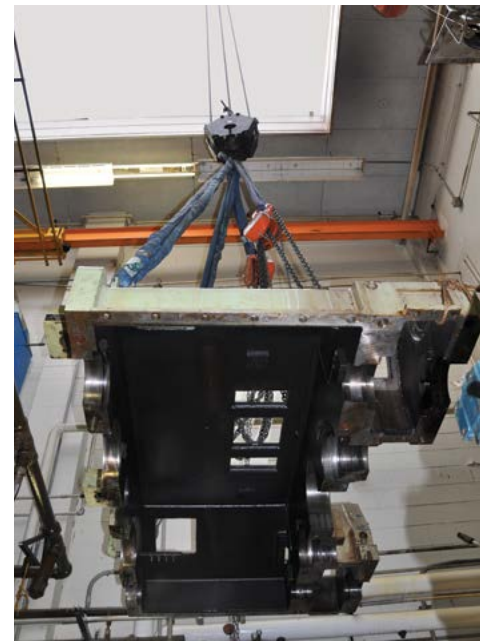
1. Convenience of one-stop-shopping
2. Unsurpassed expertise of world-renowned OEM
3. Projects managed by industry experts
4. Available 24/7/365
5. Fixed-price contracts

The Benefits of OTS

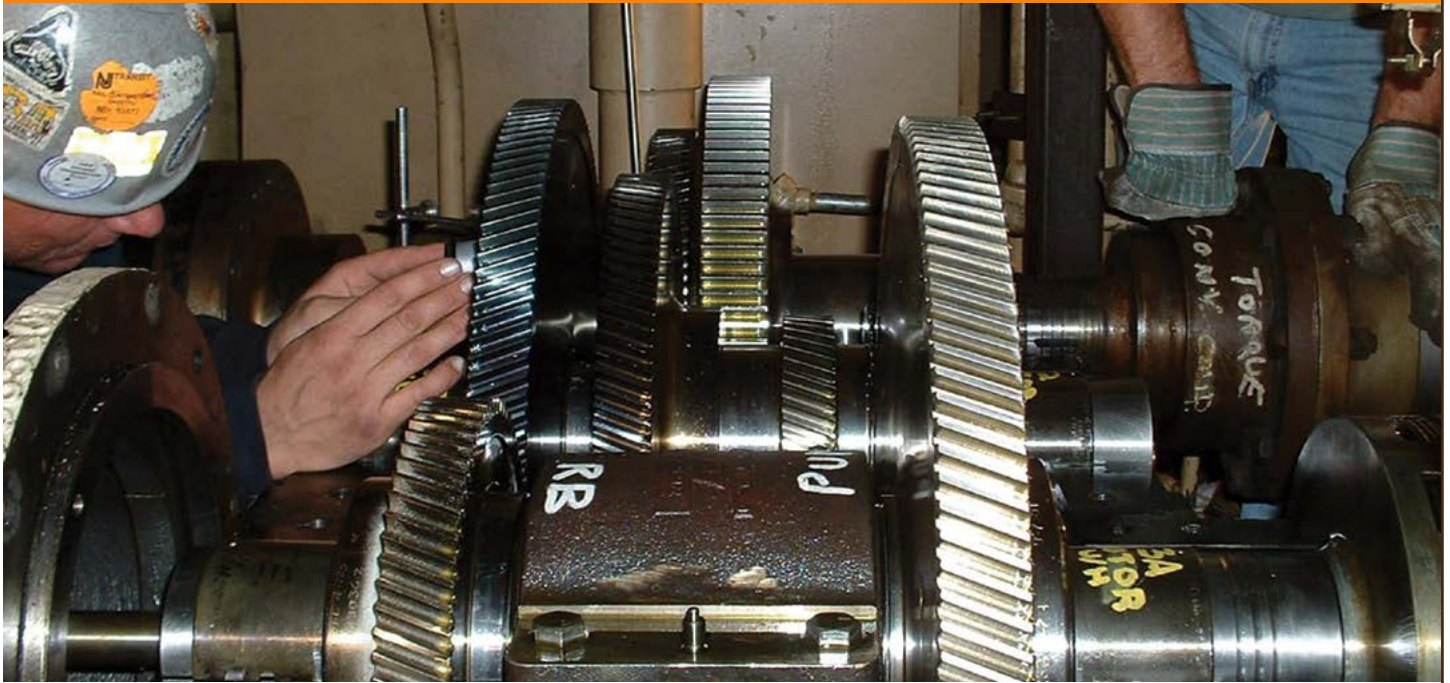
1. One call and one P.O. is all that's required
2. Rotating equipment is complex
3. The work must be done right the first time
4. We keep the same hours as our customers
5. Budgeting is easier

Why OTS is Important to You

1. You need technical vendors who can respond fast
2. You don't have time to school unqualified suppliers
3. You may have less resources than in the past
4. You will have emergency breakdowns at some point
5. You don't get nicked-and-dimed for T&M



Onsite Technical Service Case Study



A gas-fired power plant in the Northeast Region of the United States had an unexpected problem. The accessory drive on one of its GE Frame 7 gas turbines had developed an oil leak. However, because of the turbulence in the compartment while the turbine was running, it was impossible to determine the location of the leak with any certainty.

Enter Philadelphia Gear's OTS team. During a scheduled 14-day outage on the turbine, the team was charged with identifying the leak, correcting it, changing out all existing bearings and seals, disassembling and reassembling the entire unit as well as auxiliary equipment mounted to it, metalizing and machining scored shafts to OEM spec, and checking the housing bores for concentricity and parallelism. All of this was to be accomplished in the field in time for the unit's restart.

Just 10 days later and four days ahead of schedule, the OTS team finished its scope of work, documented "as found" and "as left" conditions and brought the unit back online. With the turbine running at full speed, the compartment remained safe and dry, and the gearbox ran as smoothly as when it was first installed more than a decade earlier.



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Quality. Commitment. Reliability.

Philadelphia Gear products are backed by a Quality Management System designed to provide consistently high levels of service to our customers, and is fully compliant with the world standard quality systems of ANSI/ISO/ASQ Q9001-2008.

Our commitment to a quality process is evidenced by the fact that each one of our regional service centers, as well as our Engineering and Technical Center in King of Prussia, Pennsylvania, have all been independently audited and ISO certified. This multi-site quality certification assures our customers that their mission critical equipment is in good hands.

Simply put, our unwavering goal is to achieve complete satisfaction as our customers define it – by delivering 100% TSB: 100% ON-TIME, ON-SPEC AND ON-BUDGET.

ISO 9001
Quality Certified

**PHILADELPHIA
GEAR**

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Corporate Technical Center

Philadelphia Gear, King of Prussia, PA / 800.766.5120

United States Sales, Service and Manufacturing

New England – Schulz Group, New Haven, CT / 203.562.5811

Northeast – Philadelphia Gear, New Castle, DE / 800.388.1824

Mid-Atlantic – Smith Services, Princeton, WV / 304.431.2446

Southeast – Philadelphia Gear, Birmingham, AL / 888.742.2476

Midwest – Philadelphia Gear, Mokena, IL / 800.833.4429

Gulf Coast US – Philadelphia Gear, Houston, TX / 800.874.0270

Rocky Mountain – Wazee Electric, Denver, CO / 800.299.8658

Pacific Northwest US – H&N Electric, Pasco, WA / 800.795.3537

West – Philadelphia Gear, Santa Fe Springs, CA / 800.605.1002

International Sales and Service

Africa – Philadelphia Gear, Oswald, France / +33 (0) 6 20 14 08 02

Asia – Philadelphia Gear, Singapore / +65 98227804

Canada – Standard Machine, Saskatoon / 306.931.3343

Europe – Philadelphia Gear, Oswald, France / +33 (0) 6 20 14 08 02

India – Timken India Limited, Raipur, India / +91 0788.3065000

Latin America – Philadelphia Gear, Queretaro, Mexico / +52.442.2239774

Middle East – Philadelphia Gear, Dubai, UAE / +971 4 8815427

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Refining
Steel and Metals
Transportation
Water Management
Wind

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, belts, chain and related mechanical power transmission products and services.

Stronger. **Commitment.** Stronger. **Value.** Stronger. **Worldwide.** Stronger. **Together.** | Stronger. **By Design.**

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