# HONESTLY BETTER



## 50 YEARS SERVICING HEAVY MACHINERY HAS GIVEN US INNOVATIVE INSIGHTS.



A global leader in field services and enhanced components for massive equipment in the mining, oil & gas, railroad, and other heavy industries, L&H Industrial helps operations teams reduce maintenance costs, extend machine life, and increase fleet-wide productivity.

Because our experienced field crews and engineers work shoulder-to-shoulder with yours—troubleshooting, repairing, and rebuilding heavy equipment—we see firsthand what wears, what tears, and what fails. Then we design, engineer, and manufacture parts and assemblies that do the job better.

Our innovations, state-of-the-art equipment expert field services, and thorough approach are why many customers have partnered with us for decades.



## IMPROVING THE BIGGEST MACHINES ON EARTH

FIELD SERVICES • DESIGN & ENGINEERING • MANUFACTURING & REPAIR

We earned our stripes responding to the parts and service needs of the mining and oil & gas industries, but our advanced design and manufacturing expertise spans a wide spectrum of industrial applications and equipment—from railroad machinery to the NASA Crawler Transporter 2. If it's big, heavy, subject to abuse, and requires innovative engineering and precision manufacturing, chances are L&H can improve it.





L&H works across industries to get better performance from your assets, so they last longer, and run better and more efficiently. We also have an extensive parts inventory, mobile 40- and 60-ton-capacity cranes, field welding and machining, plus state-of-the-art manufacturing and repair equipment at every location. These, and our expert tradesmen, ensure the fastest turnaround on repairs for your fleet.

## MINING

## Improving massive mining equipment: bearings to booms

Shovels, draglines, drills, crushers, grinders, mills, loaders, haul trucks, bucket wheels... regardless of make or model, if it's a big machine working hard at a mine, we can improve it. L&H's deep mining expertise, and 50 years of experience cover field services, design, engineering, manufacturing, and rebuilds, so we know how to improve lifetime machine performance

across your entire fleet.

## OIL & GAS

## Field experts with the best tools for the toughest jobs

The oil economy is built on machines, and our expert technicians—who serve oil & gas operations around the world— have been keeping oilfield machines in top condition since the 1960s' Wyoming boom. From proactive maintenance and inspections to total rebuilds and equipment relocations, L&H offers turnkey services to keep the machines in your fleet at peak performance.

## POWER GENERATION

## Keeping your critical assets out of critical condition

You can't afford for your major assets to go offline when they've got a job to do. L&H has over 50 years of experience offering 24/7 field services, design and engineering, and manufacturing and repair for the world's biggest industrial solutions. Our specialized engineers and expert field team use state-of-the-art equipment to work at the forefront of evolving power generation field technology.

## RAILROAD

## Advancing technologies that maintain the rails

L&H launched railroad maintenance and operations equipment services in 1997.

At our production center, we design, engineer, rebuild, and manufacture improved railroad components and machines. We upgraded the design of our tie-crane booms to last more than 2x longer than OEM designs—reducing operational costs in replacement parts and downtime.

### CUSTOM SOLUTIONS

## Want a better, stronger assembly or a one-of- a-kind machine?

When it comes to custom solutions, you benefit tremendously from our cross-industry expertise in the design, engineering, prototyping, testing, manufacturing, and maintenance of heavy-duty machines for different kinds of high-demand conditions. What's our sweet spot? Mechanical precision, performance, and strength at a massive scale. L&H can make heavy machines better for any industry or application.



**CUSTOM SOLUTIONS** 

## THE TACONITE BUCKET WHEEL

#### A total machine upgrade—from design improvement to custom manufacturing and rebuild

For one of our largest custom projects for BNSF Railway, L&H upgraded every major assembly—ladder boom, mast, gantry, discharge booms, side frames, and car body on a 1960s bucket wheel excavator used for loading taconite at an inland port.

The L&H team used advanced re-engineering, custom manufacturing, and the latest technology to restore and upgrade the machine to better-than-new condition, which in this case was more cost-effective than replacing the classic earth mover with a new machine.

Bring us your biggest whole-machine challenges: whether it's a vintage machine rebuild, customizing a recent model, or building you an entirely new machine, we're ready to take them on.



### THE NASA CRAWLER-TRANSPORTER 2

#### Retrofitting the largest land-transport vehicle on earth

Our upgrading the NASA Crawler-Transporter 2 required removing, manufacturing, machining, and installing more than 1,300 parts with absolute precision. Retrofit upgrades increased the Crawler-Transporter payload by 6 million pounds, enabling it to carry larger spacecraft for traveling farther into space.

The crawler doesn't move dirt; it carries space vehicles from assembly to launch pad. But NASA chose L&H for the job because of our demonstrated ability to improve massive machines.

The project exemplifies how our expertise and capabilities transcend industry. We were up to the NASA challenge, and if we can upgrade the largest land transport vehicle on earth, you can be sure we'll tackle your next project successfully.

## INNOVATIONS BORN IN THE FIELD

The road to superior heavy machines

Our field crews keep our design, engineering, and manufacturing teams informed about what really works—or doesn't—in the field. That's led us to develop technology improvements both great and small that collectively can make a big difference for your fleet.





#### Field insights for innovation

Anything and everything is open for consideration:

- Challenges unique to a geographic region
- Modifications that could reduce maintenance times
- Wear patterns on an assembly
- Efficiencies to be gained from a better process
- Technologies to update or adapt from other heavy industries
- A better tool or machine for the job

We frequently collaborate with our customers and partners to innovate and develop the best long-term solution.

L&H has the right people and manufacturing capabilities to bring heavy machinery innovations into the real world.





#### FIELD SERVICES



#### Innovative, safe, skilled, and efficient

At L&H, we do a lot more than just keep your machines up and running. We make them better machines and make it easier—and safer—to service them faster.

L&H field services for heavy equipment—available 24/7 worldwide—include inspections, routine maintenance, machining, welding, assembly installation, alignments, structural modifications, teardowns, and even equipment relocation. We make sure that our experienced, safety-conscious, certified field crews always have the best tools for the job.

Another advantage of working with L&H: we can service your entire fleet. We work on all brands of heavy equipment: Cat®/Bucyrus®, P&H®, Atlas Copco®, LeTourneau®, Komatsu®, Liebherr®, Hitachi®—even modified, custom, or vintage machines.

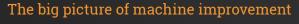
If it's a massive machine doing high-demand work, we can maintain it, fix it, rebuild it, improve it, or make it safer. No matter the machine, no matter the brand.

L&H: First-rate field support for your entire fleet.





DESIGN & ENGINEERING



There's no part or assembly too big, too small, or too complicated for L&H to handle. We have veteran in-house designers and engineers specialized in mechanical systems for heavy equipment.

Sure, we can design and engineer a standard replacement part to OEM—or more often—better-than-OEM standards. But where we really excel is improving major and minor assemblies for ease and speed of maintenance and better lifetime performance under harsh conditions. That pays off in lower total cost of ownership for you.

Because L&H's integrated services extend all the way to installation, repair, and long-term maintenance for all major equipment brands, our team has exceptional long-range insights for improving designs with the big picture of machine maintenance in mind.

Here's just one example: L&H developed a high-drive propel modification for shovels that reduces the time to access the final drive shaft and tumbler by half. That can mean up to 18 hours of recovered production time; huge gains for a huge machine with a big payoff for your operation.

Improved design and engineering—the data shows the difference.





#### Unmatched expertise, state-of-the-art equipment

We can repair, rebuild, or newly manufacture any heavy equipment assembly or component that you have in your operation.

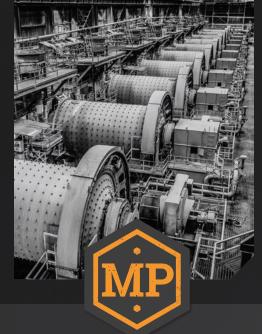
With advanced in-house engineering capabilities supporting our state-of-the-art manufacturing centers, L&H routinely takes on the biggest and most challenging industrial manufacturing projects.

Machining, welding, gear grinding, fabrication, hard chrome plating, heat treating, testing...our in-house capabilities allow us to control every aspect of the manufacturing process and produce the highest quality, longest lasting premium components.

L&H: Better assemblies mean lower total operations costs.







#### SHOVELS

L&H engineers, manufactures, troubleshoots, and rebuilds major assemblies for electric rope shovels and hydraulic excavators: systems for propel, swing, hoist, and crowd, as well as dippers and attachments.

#### Results

Our innovative L&H Omega shovel undercarriages last 30% longer than OEM undercarriages, radically reducing maintenance costs and delivering the lowest total cost of ownership around.

#### **DRAGLINES**

From designing better assemblies to on-site welding of structural booms, L&H provides complete services and components for dragline maintenance and performance improvement.

#### Results

An industry first, the selfadjusting L&H Omega R3 Dragline Swing System moves and flexes with your dragline, extending the life of your system.

#### **DRILLS**

L&H supplies premiumquality mechanical parts for blasthole drills and offers full field services and rebuilds for everything from drill steel to masts.

#### Results

L&H Omega Trackpads for blasthole drills—designed for hard rock conditions—reduce steering loads with a beveled contact face and counter bores; they also improve flotation by reducing chain link stress and ground-bearing pressure.

#### MINERAL PROCESSING

We repair all major mineral processing equipment components used in crushing, milling, screening, concentration, and dewatering. We also offer full gearbox rebuilds.

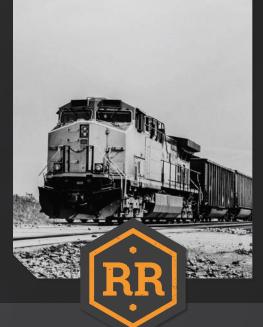
#### Results

Our massive Höfler RAPID 6000 gear grinder—one of only four in North America—enables L&H to do the most sophisticated, precise large gear and pinion manufacturing in the world, grinding gears up to six meters in diameter.









#### MOBILE EQUIPMENT

We offer full electrical, hydraulic, and mechanical troubleshooting, and onsite repair for haul trucks, wheel loaders, and other heavy mobile equipment. We also provide complete repairs, rebuilds, and manufacturing of heavy structural components.

#### Results

Thye L&H Omega hydraulic gearbox for loaders is designed and modified to increase the overall lifespan of the component with improved contact to the main gear and increased stabilization to the input shaft.

## POWER GENERATION EQUIPMENT

Our highly experienced, safe, reliable, and capable field crew can service all industrial solutions and are on call anywhere, anytime to repair, rebuild, upgrade, or relocate your field equipment.

#### Results

We have the most advanced field machining technology for milling, turning, boring, drilling, and threading.
We've also provisioned our custom manufacturing and repair facilities for exceptional precision in building the world's most advanced industrial assets and components, with top CNC machining centers, lathes, and horizontal milling machines.

## OIL & GAS EQUIPMENT

From gearbox rebuilds to brake repairs to unit teardowns, L&H responds right away to your in-field repair needs with experienced crews ready with the right talent, equipment, and parts.

#### Results

For unbeatable precision and quality, L&H has master tradesmen operating today's most advanced technologies, including state-of-the-art field machining equipment and the largest-scale CNC machining for precision components.

#### RAILROAD EOUIPMENT

Our custom engineered and manufactured railroad maintenance support products, such as autopregaugers and our L&H Omega SuperSport Tie Knockout Workarm assembly provide safer, more robust technologies for difficult tasks.

#### Results

L&H developed—from design to manufacture—tie-crane booms that are completely interchangeable with OEM components, have 300%–50% reduced stress concentrations, and last more than 2x longer than OEM designs.



Highly skilled. Well equipped. 100% invested.



We believe top-quality services and products depend, first and foremost, on hiring the right people and giving them the right tools for the job. We hire experts—masters at their craft. We hire people who love taking on new challenges, learning every day, and doing exceptional work.

Our designers, engineers, machinists, mechanics, welders, project managers, logistics specialists, administrators, managers, and everyone else at L&H pull together to do premium work, because we want to feel genuinely proud of the work we do for you.





#### WE MAKE IT SAFER

IT'S OUR TOP PRIORITY IN THE SHOP AND IN THE FIELD

Manufacturing, servicing, repairing, and operating heavy machinery leaves no room for error. We take safety seriously—not because it's regulated, but because it's right. Keeping our employees and our customers' employees safe on the job is our top priority. Our exceptional safety record—for more than 500 employees worldwide—proves the strength of our commitment and the quality of our safety program.



#### WE BUILD IT BETTER

QUALITY COMES FROM KNOWING WHAT YOU'RE DOING AND CARING THAT IT'S DONE RIGHT

"Good enough" just isn't good enough for L&H. Our quality assurance testing ranges from laser tracking, vibration, and thermal analysis to spectrographic examination and destructive tests for impact, hardness, and tensile strength. And nothing leaves the shop until it passes every L&H test with high marks.



#### WE GO THE EXTRA MILE

THINKING AHEAD. TAKING ACTION. DOING WHAT'S RIGHT.

If there's a way to make it better, stronger, more durable, or more functional, we do. If it means working double shifts to get it to you fast, we do. The things that matter most to us are people, integrity, and a job well done, so you can count on L&H to go above and beyond.

# 24/7 SERVICE & FACILITIES WORLDWIDE

Keeping your fleet at peak performance

We have expert field crews ready to deploy anywhere at anytime when you need heavy equipment troubleshooting, repairs, rebuilds, or relocations. Our cutting-edge manufacturing and repair facilities also operate 24/7 to ensure the fastest possible turnaround on any repairs that can't be done in the field. Additionally, we keep a full inventory of new, rebuilt, and return-and-exchange components to keep your machines in operation.

Thanks to L&H teams and facilities around the world, and our extensive international network of field service, manufacturing, and distribution partners, you're never far from L&H parts and services.











CANADA

TUCSON / ARIZONA

HEADQUARTERS: GILLETTE / W

HERMOSA / SOUTH DAKOTA

TEMPE / ARIZONA

CANANEA / SONORA (MEXICO)

SALTILLO / COAHUILA (MEXICO)

COLUMBIA

BRAZIL

L&H INDUSTRIAL

L&H DISTRIBUTORS

**AUSTRALIA** 

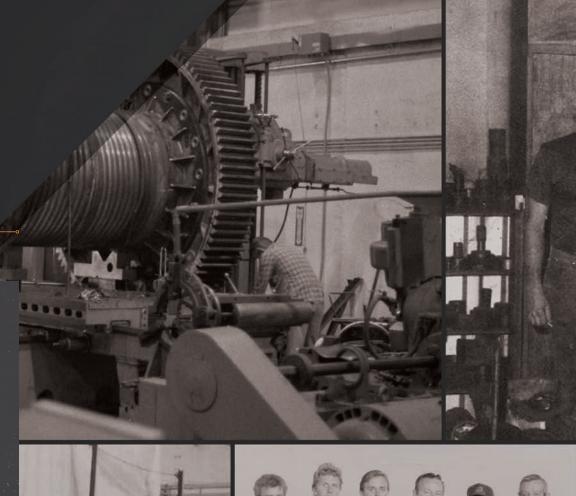
# FAMILY. INTEGRITY. INNOVATION.

FIVE DECADES AND COUNTING

#### The foundation of L&H: family business values

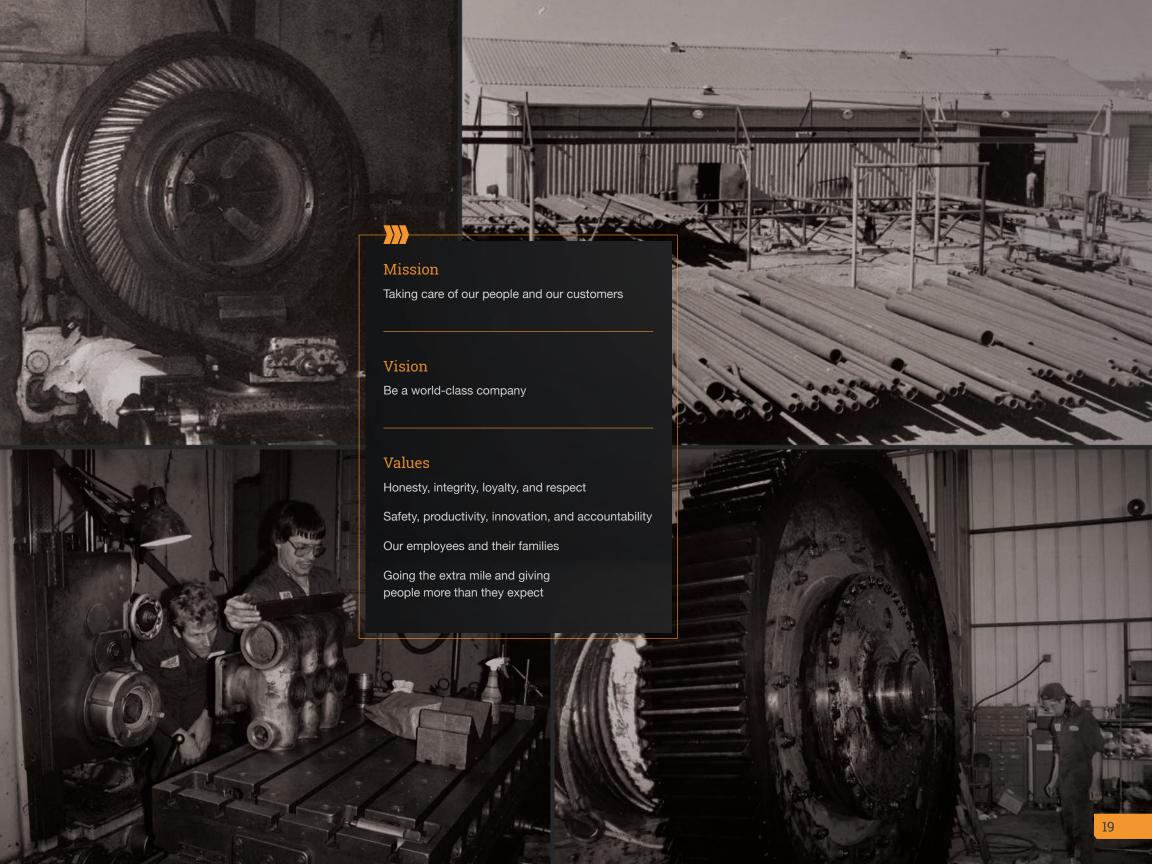
Founded in 1964, L&H Industrial is a third-generation family business that has grown from a six-person shop into a global enterprise by thinking big-picture and long term. We think generations ahead, asking "What kind of business do we want to be, both in today's world and in 50 years? What will be our legacy for the sixth generation of people working at L&H?"

The answer is simple: one that is honestly better. So, we ground our business in integrity, focus it on quality, and drive it by innovation. Our company's culture is honest, hard-working, and proactive. And that's why we always do what's right and go above-and-beyond for our customers—because we believe relationships transcend transactions.











Visit LNH.net to learn more about how L&H Industrial can help you improve your field services, machines, and fleet performance.

#### HEADQUARTERS

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www.LNH.net

## L&H AND PARTNER FACILITIES WORLDWIDE

North America
South America
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