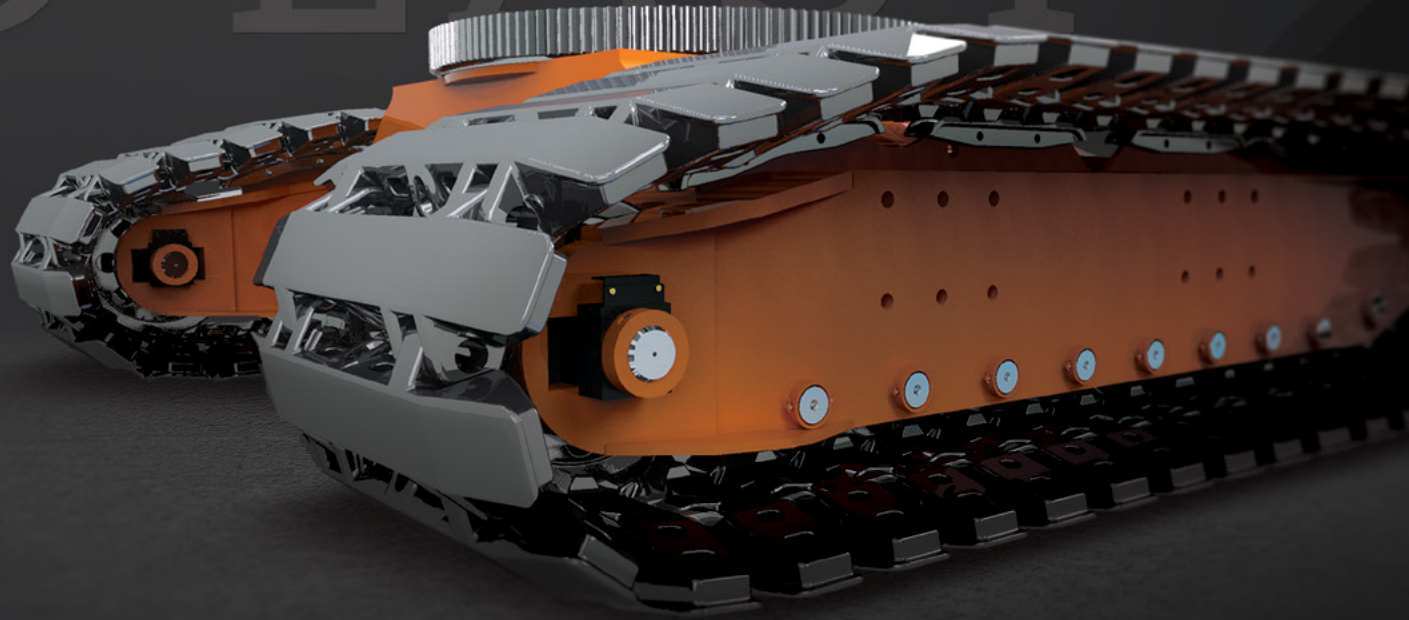




BUILT TO LAST



OMEGA
UNDERCARRIAGES



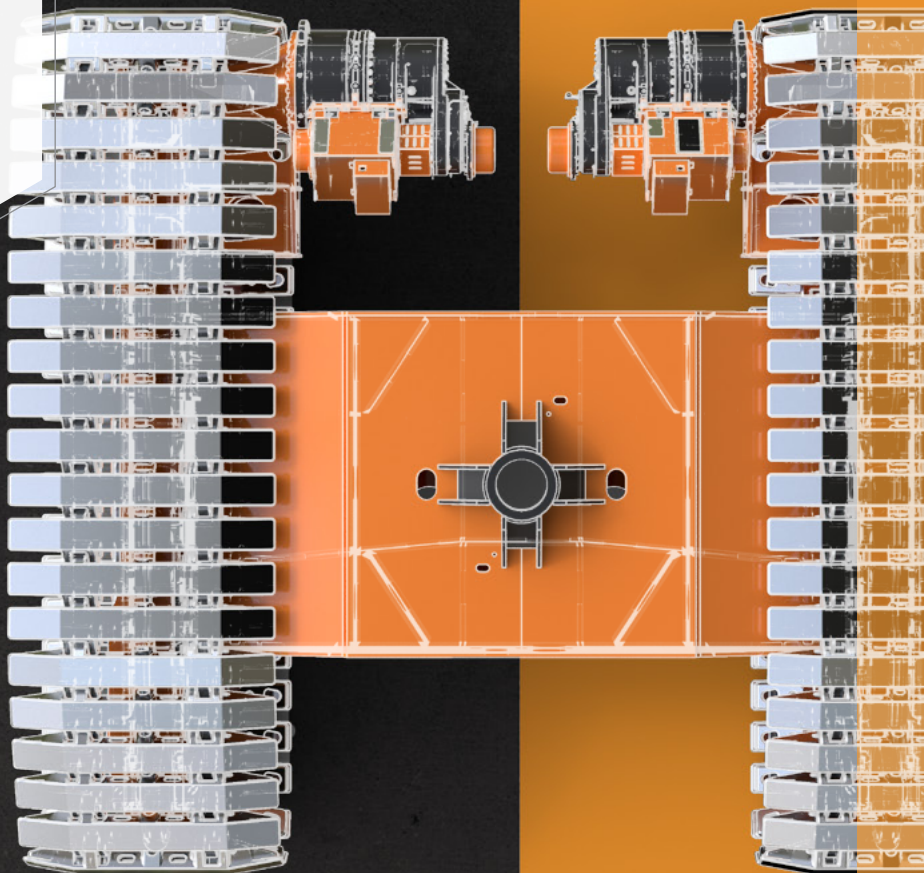
Honestly better UNDERCARRIAGES

L&H Industrial started more than 50 years ago as an equipment repair shop for the industry's toughest challenges. In the process, we discovered ways to build it better. We are true craftsmen with an innovator's mindset, and we won't settle for anything less than the best.

When we started developing our undercarriages, our focus was on the pitfalls of current designs, and since then we have been continuously improving those designs. The result is an honestly better undercarriage unrivaled in the market today.



PROVEN
TO LAST
AT LEAST
30%
LONGER



Innovation

Better Performance

Our innovative shoe system, with deep engagement and a stable pitch, grips drive tines to create a larger contact area which reduces wear on tumblers.

Service

Rock-Solid Commitment

A life-long business relationship comes standard with every L&H Omega Undercarriage we deliver. We are always available, 24/7.

Safety

Safety First

Every component of our undercarriage is built with your people in mind. Less time in the field servicing shovels means increased safety for your team.

Quality

Lower Cost of Ownership

Our proactive design innovations—fully guaranteed and 100% OEM compatible—significantly reduce structural wear and machine downtime, reducing the overall cost of ownership of an L&H Omega Undercarriage.

WE
BUILD IT
BETTER

WE
MAKE IT
SAFER

WE GO
THE EXTRA
MILE

L&H

Honestly better UNDERCARRIAGES

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PROVEN
TO LAST
AT LEAST
30%
LONGER

When L&H designed, engineered, and manufactured the first L&H Omega undercarriage, our goal was to provide our customers with an assembly that would dramatically decrease downtime and total cost of ownership. Now with undercarriages running across the globe, L&H has proven that the current L&H Omega system lasts at least 30% longer than conventional models.

L&H Omega Undercarriage

36,162 HOURS

OEM Undercarriage

23,396 HOURS

35% Longer

In a head-to-head test in a coal mine in Wyoming's Powder River Basin, L&H's 4100A outperformed an OEM undercarriage by 12,766 hours.

That's equal to **1.5 years** or **531 days**

Innovative solutions
FOR ALL MAKES
AND MODELS



P&H® / JOY GLOBAL®

Models Serviced

2300MKII, XP, XPA, XPB

2800MKII, XP, XPA, XPB, XPC

4100, 4100A, XPB, XPC

4100TS BOSS, 4100C BOSS

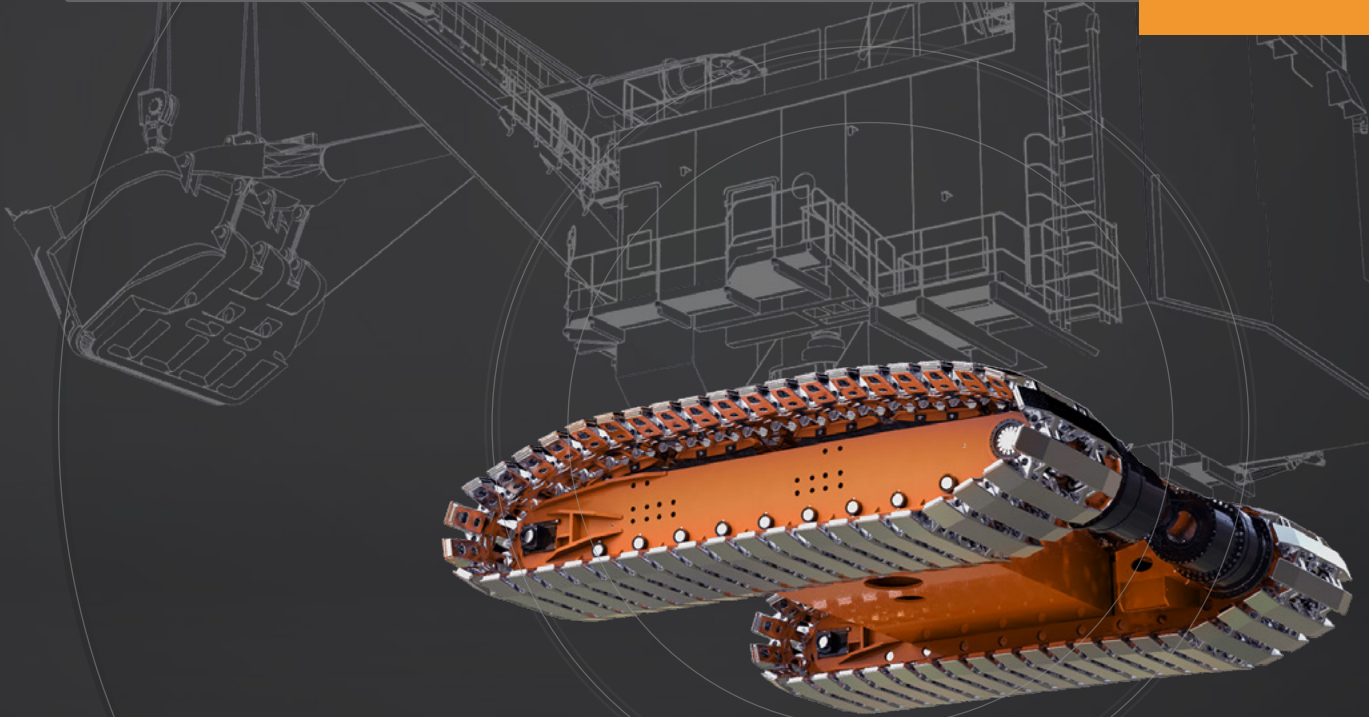


Straddle Mount Improvements

Our straddle mount front idler provides full outboard access to thrust surfaces, making it easier to perform maintenance checks on wear parts. We also fitted new bearings into the outer support blocks, helping disperse weight between both bearings.

Universal Innovations

We've re-engineered the undercarriage from top to bottom for nearly every major machine in operation today.



Manganese Steel Shoes

This work-hardened material is optimized to slow wear and resist ongoing impact.



High Hardened Rollers

Lower rollers have been deep-hardened to prevent spalling and extend your machine's lifetime.



Reduced Pitch Growth

Deep-hardened pins slow pin wear, while an upsized hinge clevis reduces contact loading.

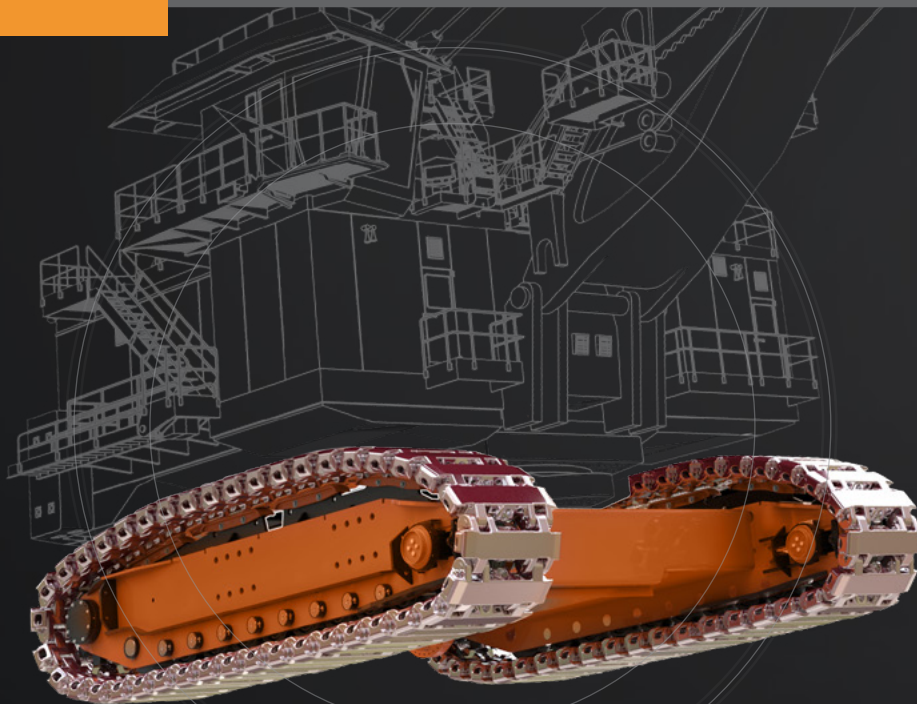
Comprehensive Upgrades

Stronger materials, structural enhancements, maintenance improvements; the list goes on and on.



Improved Sideframes

Adding a thicker inboard side plate reduces stress and cracking in original high-stress areas, making it easy to access internal components.



Enhanced Drive Tumbler

Added material extends the life of the tumbler, taking the design from under pitched to perfect pitch.



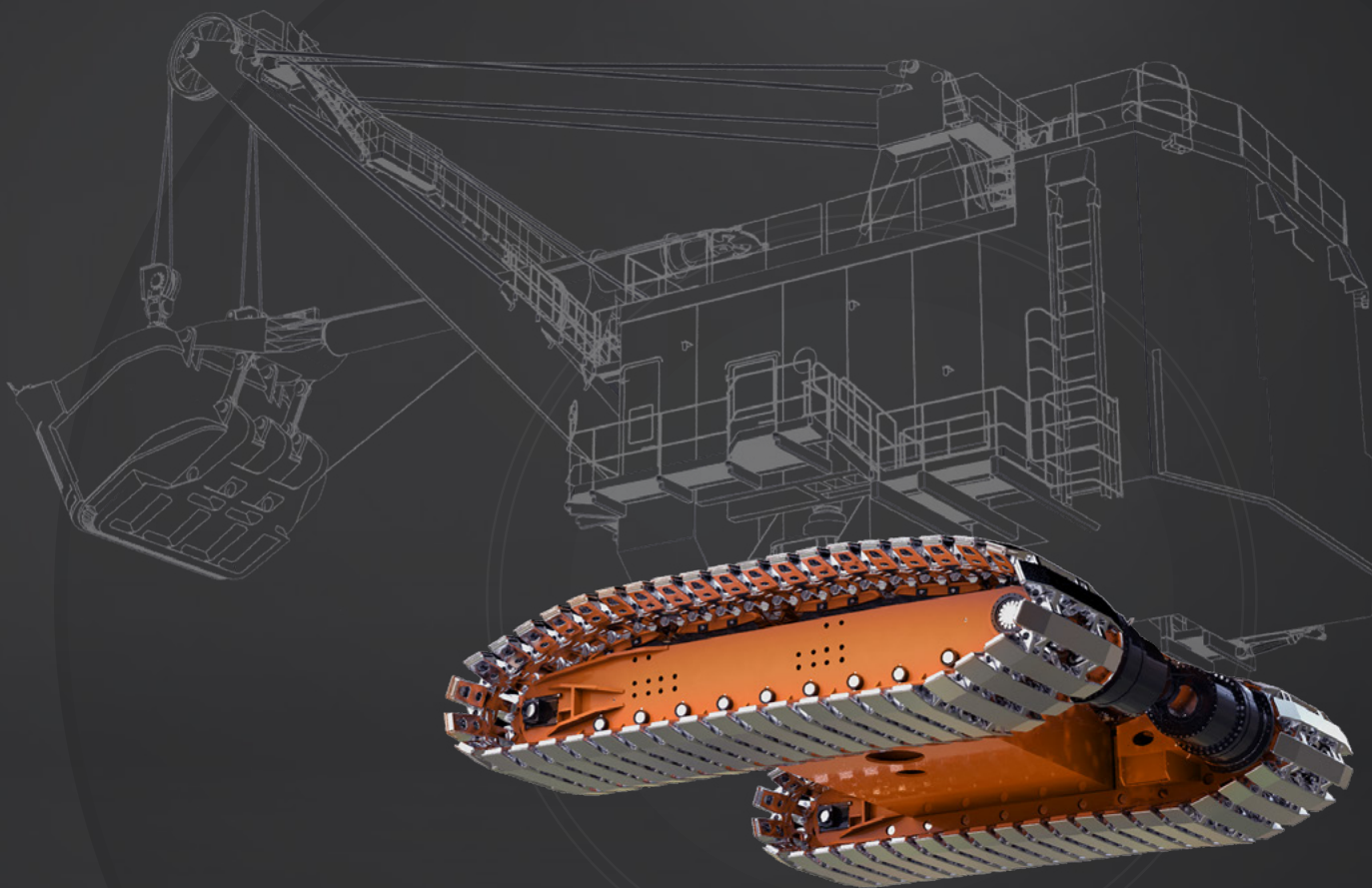
Elevated Roller Path

We've added additional clearance to our roller path, extending shoe life.



Distinctive Link Pitch

The L&H Omega offering requires only 42 links per side, compared to 47 per side on the OEM, reducing spares needed in half.



CAT® / BUCYRUS®

Models Serviced

7295, 7395

7495HD, 7495, 7495HF

GROUNDBREAKING SHOE DESIGN

Fine-tuned to perfection



OMEGA SHOE



Our third-generation shoe design is the best in the industry, no question.

In all our years of business, we've been able to maintain an unprecedented 0.001% failure rate, making our shoes the most reliable option available.

0.001%
FAILURE RATE

What makes our shoes unique?

Impact-Resistant Manganese Steel

We've also upped the proportion of impact-resistant manganese steel in our shoes and slowing propagations of wear into a very predictable linear wear rate. As such, our shoes exceed the performance of conventional shoes by more than 30%, providing abrasion resistance in even the most extreme environments.

Advanced Design

We've tested the strength and performance of our shoes from every angle, running sophisticated analysis to identify stressed areas and strengthen them. You won't find a more advanced option on the market.

Deep Engagement System

Our innovative shoe system features a stable pitch and deep engagement that fits deep into drive tines. This helps to create a larger contact area, which reduces wear on tumblers and other key components.

We've also improved the internal core of our shoe system to prevent cracking on track pads, and integrated larger pins and a wider clevis to extend track life.

PROVEN IN EVERY TERRAIN

When you choose an L&H Omega Undercarriage, you can trust that it will be powerful enough to excel in your mine's conditions, whatever the terrain.

Oil sands

Our Omega shoe design improvements reduce ground-bearing pressure on your assembly, while providing superior traction and flotation in shifting underfoot conditions.

Hard rock

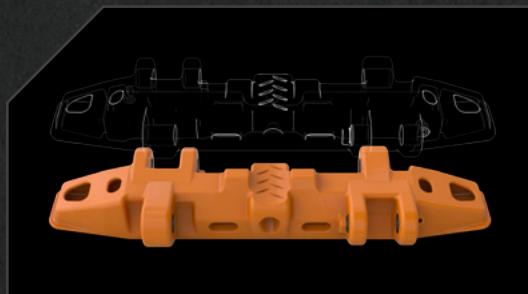
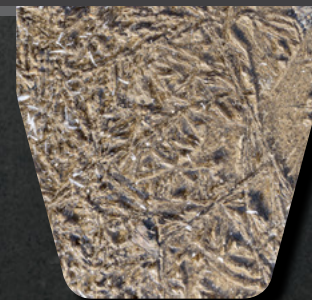
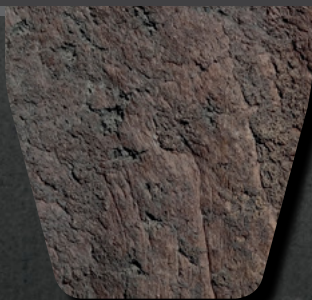
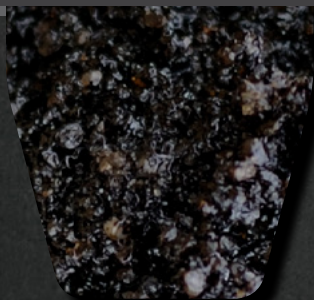
Our wear surfaces are made exclusively from materials that have a very high level of hardness. This ensures that our machines stay tough, even in the most aggressive environments.

Dirt and Coal

The additional operating ground clearance we've added to our Omega shoe provides more maneuverability in difficult operating conditions with soft pit floors.

Extreme conditions

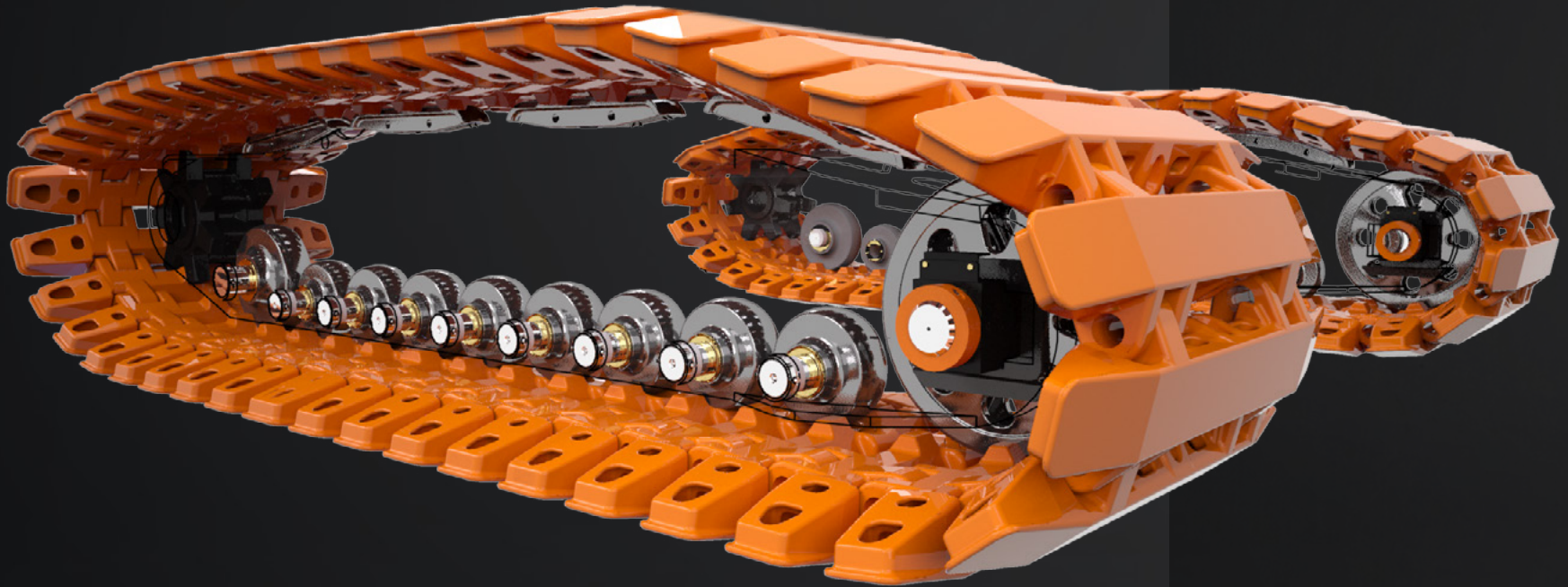
Whether it's harsh weather or brutal surface conditions, our undercarriages are up for the challenge. We're confident in our ability to customize for any terrain. If we haven't designed for it, we will.



A Unique One-Piece Shoe Design for High Flotation Shovels

We designed a broad, 138-inch, one-piece shoe, specially crafted for high flotation shovels. These shoes have no welded-on wings to ensure there is less breakage due to impact strikes.

Innovations leading to GREATER PRODUCTIVITY

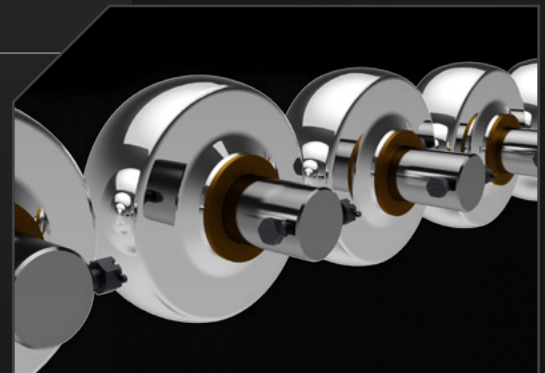


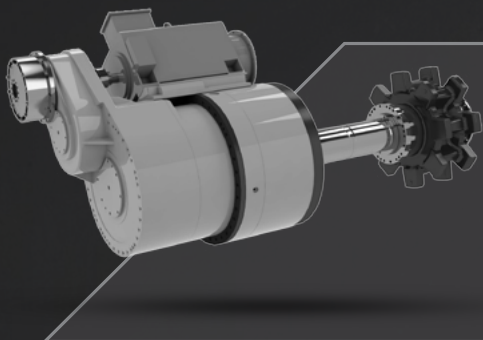
Elevated Roller Path

We've given additional clearance to our undercarriage by creating an elevated roller path. This provides more maneuverability in poor operating conditions and helps better distribute the weight of the machine, reducing any risk of collapse.

Rollers Built to Last

Our forged, lower rollers last 30% longer than other conventional brands, thanks to our innovative heat treatment process. Choose from two bushing options: manganese bronze or ToughMet®.

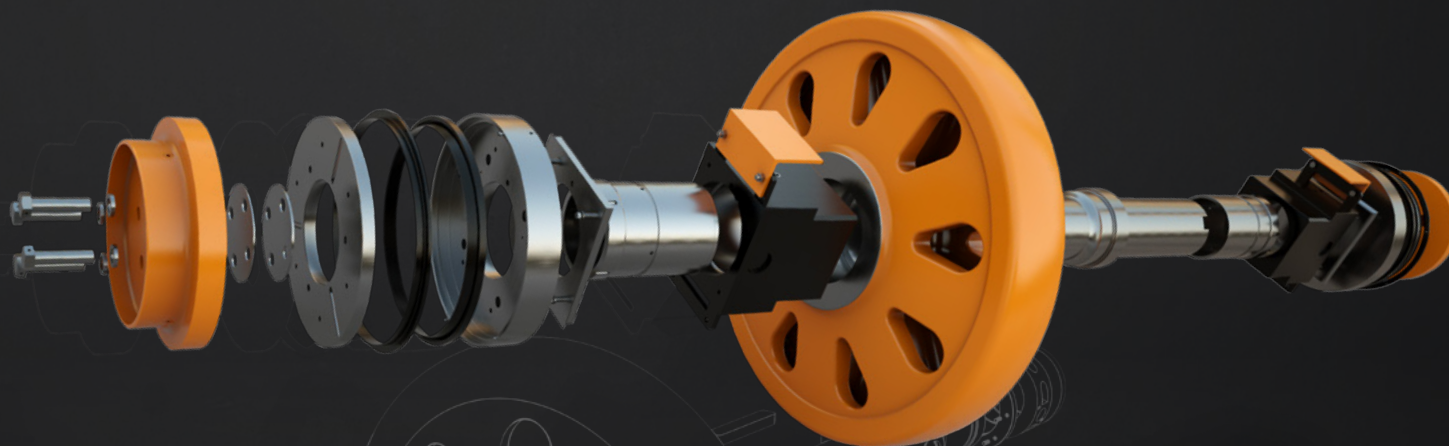




Propel Transmission

Thanks to our updated gear ratio and removal of the bevel gear, the L&H Omega propel transmission increases torque by 50-65%, enabling your machine to move through soft ground conditions and withstand the added weight of larger shovel models.

50% - 65%
MORE TORQUE



Increased Bushing Life

By moving the bushings to the outer bearing blocks, the bearing area is doubled. The innovative material in the Toughmet® bushings triples the bearing life.

Want to save on costs? We can also modify your existing idler instead.

Sealed Design

A sealed and lubricated thrust washer eliminates contaminants, reduces wear, and extends overall life of the assembly.

Simplified Maintenance

Our straddle mount design simplifies inspections and maintenance and extends the typical maintenance interval.

This innovation eliminates the need to split the tracks to replace the inner thrust washer.

Truly simple MACHINE MAINTENANCE

The L&H Omega Undercarriage has raised the bar in the industry by making design improvements that lengthen maintenance intervals and decrease total cost-per-hour.

SAVE UP TO
50%
OF DOWNTIME



Final Drive Modification

Our final drive modification design has been improved in two distinct ways: First, we eliminated the need to realign the motor.

Second, all final drive components can now be removed from the outboard side of the crawler frame.

These modifications mean you no longer need to remove the transmission and motor to replace the final drive shaft, tumbler, and bearings. These innovations alone save up to 50% of hours on service downtime.

01

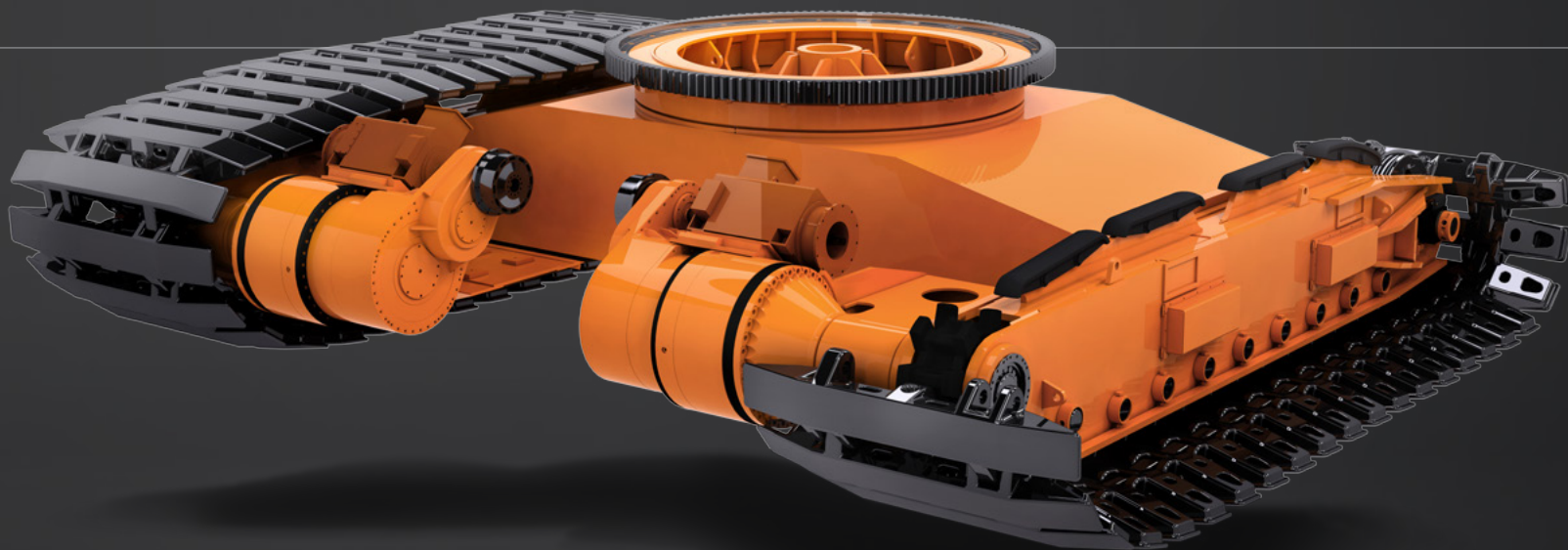
02

03



"L&H works hard to design undercarriages that suit both the environment they will be used in, and the weight of the machine itself. Before deciding upon the materials and geometry that meet these needs, we go through a variety of design tools including analytical calculations, Finite Element Analysis, and casting design. L&H is small enough to be nimble in every circumstance, which means we can make design and manufacturing changes quickly, giving us an edge over our larger competitors."

BILL SCHROYER, ENGINEERING MANAGER



"Great materials, combined with high impact and tensile properties, are critical to the success of the undercarriage in different environments. We are diligent in making sure that the materials we source from our forging and casting suppliers meet every design specification, without exception. The suppliers we use for our materials are the best in the industry."

PHILIP MOOREN, PRODUCT LINE DIRECTOR

A rock-solid COMMITMENT TO SERVICE



"We're big enough to do the job, and small enough to have a really great relationship."

JEFF WANDLER, OWNER & VP



A lifelong business relationship comes standard with every L&H Omega Undercarriage we deliver. We are proud to offer complimentary audits of L&H undercarriages as well as worldwide, 24/7 field services to all our customers. So that when you choose L&H, you can rest easy, knowing we have your back in every regard.

24/7
FIELD SERVICE

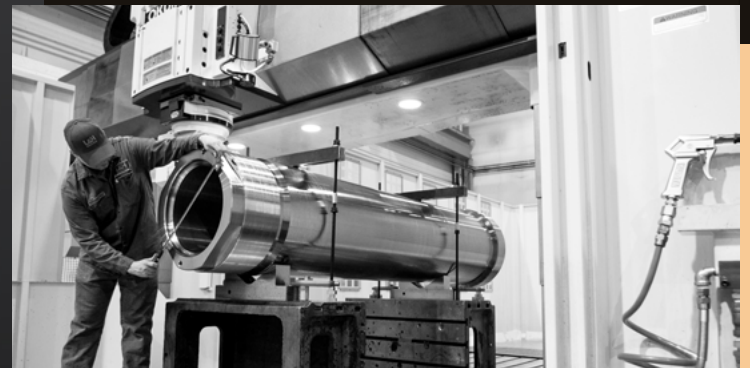
Complimentary Audits

We audit the machinery we sell to our customers every three months. This helps us ensure that L&H components are operating smoothly, and gives us an opportunity to better predict their expected life in your particular mine environment.

An unbeatable COMMITMENT TO SAFETY



Our people-first attitude, commitment to open communication, and proactive, do-the-right-thing approach are the true foundation of our exceptional safety record. See, we take safety seriously – not because it's regulated, but because it's right – so that you can rest assured knowing your people are safe.





"NASA's tolerance for error is zero. Every single part and every single bore has to be perfect. And L&H did the whole job just like that, with no imperfections. I believe if we can do a job like that, we can do anything, really."

JEFF WANDLER, OWNER & VP

Testing our metal

THE NASA CRAWLER TRANSPORTER



"L&H comes through. They deliver. Their quality, their dedication to getting the job done correctly the first time is there."

DAVE CUNNEEN, PROJECT MANAGER – CT-2
UPGRADE, QINETIQ – NORTH AMERICA

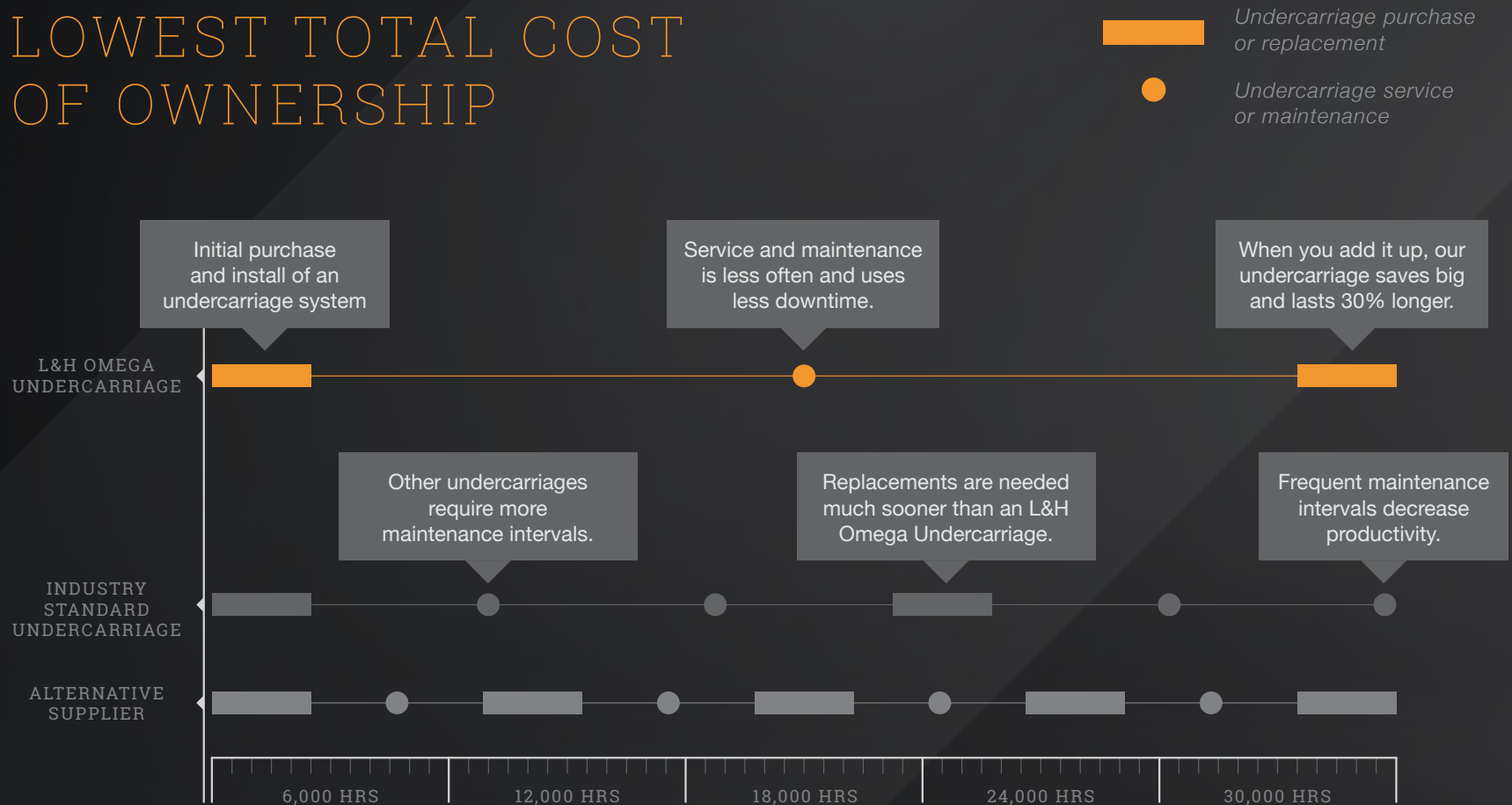


Proven results on the largest undercarriage on earth

In the ultimate test of our precision manufacturing and field machining capabilities, L&H completed the retrofit upgrade of the massive NASA Crawler-Transporter 2 undercarriages ahead of schedule, within budget, and with quality surpassing the original project specifications, successfully increasing the payload of the world's largest self-powered land transport vehicle by 6 million pounds, a 30% increase.

Highest quality undercarriages

LOWEST TOTAL COST OF OWNERSHIP



Always the right solution

Maximizing the production and profitability of your mining operation is a complex equation with multiple variables that often differ at each mine site: geology, geography, ground conditions, season, maintenance practices, production costs.

Yet on the ground and in the field, one thing remains the same - the need for a machine with reliable components. Anything less costs you safety, time, productivity, and money. We understand what's at stake and can guarantee our undercarriage is the right choice, every time.

With advanced materials, forged components, and cutting-edge, field-tested design innovations we can extend the life of your undercarriage by more than 30%, reducing overall lifetime maintenance and total cost of ownership.



A PROVEN SYSTEM AROUND THE WORLD



Put our innovations to the test.

With hundreds of L&H undercarriages working around the world, our proven system has set a new standard. We're looking for the right partners, we're not just here to sell you parts. Whether it's just one machine or the optimization of your entire fleet, put our innovations to the test.



Honestly Better[®]

CORPORATE HEADQUARTERS

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LNH.NET