

CAT® DRIVETRAIN FOR MINING

**SYSTEM BUILT.
MINING TOUGH.**

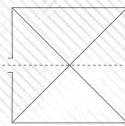


CAT® DRIVETRAIN FOR CAT MACHINES

THE ONLY WAY TO GO

There are good reasons to take a closer look at Cat® drivetrain. They may be mostly hidden, but the impact they make can quickly become easy to see.

Substandard or prematurely-worn drivetrain components can rob a machine of its performance before an operator notices. And component failures can take a key piece of equipment down fast.



DESIGNED AS A SYSTEM FOR CAT EQUIPMENT

Cat drivetrain components are part of an always-improving system design, built by Caterpillar for use in Cat mining equipment. They're made to handle the **stresses, operating speeds and temperature ranges** of specific Cat machines working in demanding mining applications.

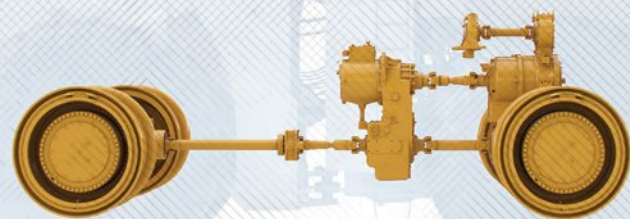
Because they're designed with **proprietary materials** to work and wear as a system, you get **better performance and more hours between rebuilds** — giving you lower cost of production.

The comprehensive system design means that when it's time for replacement, your dealer can change out your essential piece parts all at one time — **saving time, labor and money**.

LOWER COST OF OWNERSHIP

Ultimately, repairing or replacing your Cat drivetrain with your dealer results in **more drivetrain uptime, greater machine availability and lower ownership costs** throughout the life of your equipment.

THAT'S WORTH A CLOSER LOOK.



DEALER SUPPORT AND SOLUTIONS

When you need repairs or rebuilds for your components, you can trust your Cat dealer to get you the best. In fact, studies show that drivetrain components replaced by Cat dealers deliver **up to 25% longer life**.

Along with top-notch components, Cat dealers deliver **24/7/365 drivetrain support** around the world with the largest dealer network in the industry. Your Cat dealer offers flexible solutions such as proactive condition monitoring, repair options, rebuilds and Powertrain Guarantee CVAs.

Condition monitoring allows you to monitor machine health through the full lifecycle of your equipment. This allows you and your dealer to work together to catch minor issues before they become major problems and schedule **preventative maintenance and repairs**.

Unlike any third-party service provider, Cat dealers uphold all **mandatory Caterpillar updates and standards**. That means you always get the benefits of the latest technology advancements and product updates.

Cat drivetrain comes with **unrivaled support** from your Cat dealer — ensuring increased productivity, maximum uptime and **lower total cost of ownership**.



SUPERIOR PART DESIGN EXCLUSIVE TO CATERPILLAR

TAKE A CLOSER LOOK

BEARINGS, GEARS, FRICTION MATERIAL OR SEALS ACCOUNT FOR UP TO 40% **DRIVETRAIN COSTS**, SO CHOOSING THE RIGHT ONES FOR YOUR MACHINES IS CRITICAL. THE GOOD NEWS — YOUR CAT DEALER OFFERS EXPERTISE AND ACCESS TO CAT DRIVETRAIN PARTS, DESIGNED TO WORK TOGETHER AND GET YOU SUPERIOR PERFORMANCE.

BEARINGS



GEARS



FRICTION MATERIAL



SEALS



BEARINGS

HIGHLY-SPECIALIZED DESIGN

- Purpose-built for specific applications based on load, operating speed, temperature range, size and performance requirements
- Specialized roller profile minimizes stresses on the roller in multiple loading conditions
- Precisely designed to ensure proper alignment and precise fit

INDUSTRY-LEADING COMPONENT LIFE

- High debris resistance provides up to twice the life of competitive bearings
- High-strength surface reduces stress and prevents breakage
- Special surface finishes reduce friction and heat build-up, and provide better lubrication for longer life

CONVENIENT, AFFORDABLE MAINTENANCE

- Available bearing kits include all the parts for scheduled maintenance with corresponding part numbers
- Bearing kits save money compared to buying parts individually

FRICTION MATERIAL

LOWER MAINTENANCE COSTS

- Cooler running allows friction material to last thousands of hours with minimal maintenance
- Proprietary heat treatment processes help eliminate premature wear and damage
- Built to align with drivetrain component life and minimize downtime from unplanned repairs

LONGER LIFE

- Built for reusability within recommended maintenance guidelines
- Synthetic fiber extended-life friction material for brakes provide 2-4 times the life and double the heat resistance
- Elastomeric clutch materials absorb high energy from clutch engagement to extend transmission life

SAFETY & RELIABILITY

- Groove patterns balance engagement, cooling and durability for optimum performance
- Extensive quality assurance and real-world validation ensure longer life with consistently high performance
- Wear-resistant materials ensure improved and longer-lasting reliability



GEARS

TOTAL SYSTEM DESIGN

- Unique metallurgy compositions meet the demands of specific applications
- Regular design updates deliver service life improvements
- Built to work and wear together with other drivetrain components to reduce repair/replacement downtime

BUILT IN STRENGTH

- Proprietary heat treatment processes help to resist failures from bending and pitting
- Special tooth profile and root shape reduce pressures that can lead to early tooth spalling, cracking or breakage
- Higher optimized surface hardness designed to withstand contact stress

LOWER OWNING & OPERATING COSTS

- Designed to be reusable at first overhaul, saving on lifetime replacement costs
- Industry-leading power density translates to higher durability, less frequent repair and lower lifetime operating costs

SEALS

SEALS FOR EVERY APPLICATION

- Different rubber materials available to tolerate various temperatures and oils
- A wide range of metal ring materials allows tailoring to your sealing system/group by application and environment – helping ensure a life that aligns with planned component maintenance and rebuilds

WORLD-CLASS PERFORMANCE

- C6 is the industry's leading corrosion-resistant seal material — outperforming all other worldwide offerings by offering 45% superior wear life.
- Cat NiHard seals offer 35% superior performance in aggressive system pressures and motions compared with the leading competitor
- Cat seals provide lubricant retention and protection from damaging surroundings in extreme applications

HISTORY OF EXCELLENCE

- Decades of experience with the original Duo-Cone™ seal patented by Caterpillar in 1965
- Deep, technical expertise in rubber and metallic components, while also leveraging world-class tribology and metrology resources internal to Caterpillar
- Unmatched engineering expertise, design and quality with extensive testing to ensure Cat seals can handle the motions, speeds and pressures of heavy equipment

DRIVETRAIN SOLUTIONS THROUGH YOUR CAT DEALER

REPAIR OPTIONS

The repair and rebuild options you choose can make a huge difference in machine availability and total ownership costs. Your Cat dealer offers a range of flexible solutions for the entire lifecycle of any mining machine, including repairs, rebuilds, retrofits and upgrades.

- Repairing your components before they fail is crucial to cost savings. Restoring a transmission after failure can cost an average of 2.5 times more. Planned repairs or maintenance with your dealer can save you costs and increase your production.
- You can tailor expenses by taking advantage of price tiers across various repairs while implementing a proactive equipment management plan.
- To save even more time and money, discuss options for on-site repairs with your Cat dealer. Eliminating transportation costs can help you get more uptime and even better overall availability.

POWERTRAIN GUARANTEE CVA

With Cat Powertrain Guarantee Customer Value Agreements (CVAs), you don't just hope for a target component life — it's guaranteed.

- Powertrain Guarantee CVAs offer valuable protection and assurance after the standard machine warranty expires.
- Your CVA is tailored to your specific needs, with options for do-it-yourself service or trained dealer labor.
- With timely parts supply, maintenance support and Condition Monitoring plus Alert & Advice services, your CVA can help extend drivetrain component life by up to 25% — preventing costly unplanned downtime and enabling repairs before failure.

REBUILDS

Gears, bearings and other essential parts begin to wear around the target hours of overhaul. The best time to rebuild is at the hour intervals recommended by your dealer or at the earliest signs of wear & other performance issues.

Because Cat components are designed to be rebuilt, your Cat dealer can offer a number of rebuild options — from drivetrain component, engine and hydraulic system rebuilds to comprehensive powertrain and full-machine rebuilds.

- Rebuilding is a smart repair option to return your drivetrain and its components to like-new condition at a fraction of the cost for maximum return on your original machine investment.
- All Cat drivetrain components are eligible for multiple rebuild options and upgrade features that can give your machine an improved, second life.
- When you choose to rebuild you get same-as-new support and services through your dealer as well as financing options through Cat Financial.



CONTACT YOUR CAT DEALER FOR COMPLETE DETAILS ON ALL CAT DRIVETRAIN PARTS, SERVICES, SOLUTIONS AND SUPPORT.

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