

REMANUFACTURED PRODUCTS

Cat® Reman Coverage for Earthmoving Equipment

CAT® Reman





Cat® Reman Parts—Maximum Productivity and Lower Costs

Cat® machines are designed for demanding work. We recognize that keeping your machines up and running is essential to your business. So when you buy Cat® equipment, you buy a lifetime of value. Cat Reman parts and components provide same-as-new performance and reliability at fraction-of-new costs—while reducing the impact on the environment. And over the counter availability gives you more options at repair and overhaul time. The results are maximum productivity and lower costs.

GOOD FOR CUSTOMERS

REMANUFACTURING PROCESS





Cat Reman parts are factory remanufactured—with Cat parts—to their original specifications so they deliver good-as-new performance and long life. The remanufacturing process incorporates the latest engineering design changes, ensuring your remanufactured components meet the latest performance specifications. Plus, Reman parts carry a same-as-new parts warranty.









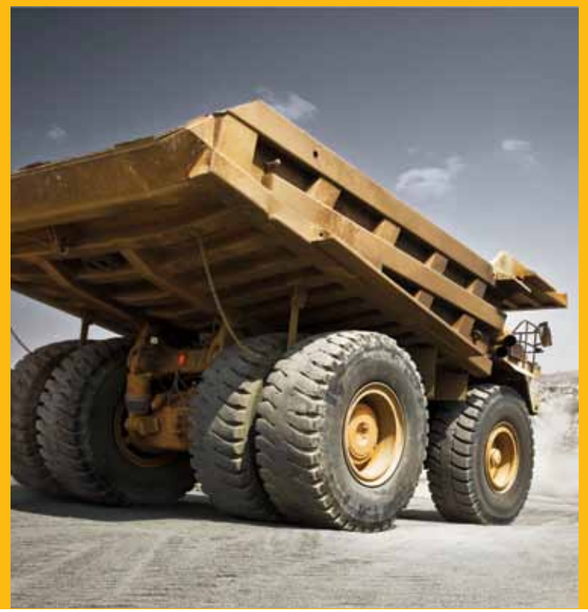
Delivering Good-as-New Performance and Long Life

Remanufacturing is more extensive than rebuilding. Our technicians return end-of-life components to original factory-fresh performance standards, including engineering changes. We use state-of-the-art salvage techniques, strict reuse guidelines, advanced manufacturing systems and unequalled quality control systems to deliver good-as-new products and exceptional value. And by reusing much of the original component, remanufacturing conserves most of the energy consumed in the original manufacturing process, further helping to lower owning and operating costs and contributing to the environment at the same time.

CORE ACCEPTANCE PROGRAM

Good for Business

The remanufacturing program is based on an exchange system whereby you return a used component (core) in return for our remanufactured products. Reman options are one more way we support your equipment and help you lower owning and operating costs. Because we are in the business of returning end-of-life components to same-as-new condition, we reduce waste and minimize the need for raw material to produce new parts. Through remanufacturing, we make one of the greatest contributions to sustainable development—keeping nonrenewable resources in circulation for multiple lifetimes.



Generous core acceptance reduces costs, reduces waste

Our simple core acceptance criteria allow a quick determination of core credit. Cat Dealer specialists are factory trained to visually inspect a core on the spot, providing an immediate decision on core condition and credit. You don't have to wait for—or guess about—repair costs.

GOOD FOR THE ENVIRONMENT



Basic Core Criteria[1]

- *Component not visibly cracked, broken or welded*
- *No non-operational damage (mishandling, excessive rust, corrosion or pitting)*
- *Acceptable part number—Cat part*
- *Fully assembled and complete*

[1] Core refund criteria vary by component and are subject to change. Partial core refunds are available for some Cat Reman components. See your Cat Dealer for specific information.







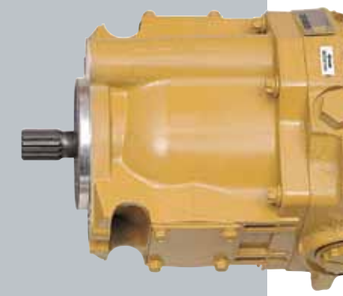
COMPREHENSIVE REMAN COVERAGE

Keeping You Up and Running

When your equipment requires service, you need options that get you back to work quickly, affordably and reliably. Our extensive Reman coverage provides reliable, lower-cost solutions. We stock the broadest line of remanufactured parts and components in the industry, so we can get you back to work quickly.







Coverage and availability reduces downtime

Reman parts and components are available off-the-shelf so when the old part comes off, the reman goes on. Our inventories are further supported by the Caterpillar worldwide inventory and distribution system. Engines and components are ready to install so you can minimize downtime and maintain productivity.



KEEPING YOU UP AND RUNNING

Cat Reman Components



Brake Bands and Shoes

Brake band shoe cores are disassembled, thoroughly cleaned and inspected for damage. Asbestos-free lining is bonded and riveted to add dependability to the product and your equipment. In addition, all rollers, bushings and band springs are replaced with new parts; and hardware is replaced wherever required.



Drive Shafts

Remanufactured drive lines are balanced with new spider bearings and tubes installed. State-of-the-art Cat Reman salvage technologies, strict reuse guidelines and unequalled quality control systems guarantee the precision and quality originally specified are fully preserved to help deliver a lifetime of performance and value.



Final Drive Groups

Cat Reman Final Drive Groups come fully assembled and ready to install. Planet gears are 100% magnaflux tested for cracks. All bearings, seals, gaskets and O-rings are replaced with new Cat parts. Damaged splines, keyways, threads and other wear surfaces are restored to new-part specifications. Planetary shafts, bearing cups and bushings are frozen and pressed into place. And finally, all final drives are 100% tested.



Final Drive/Spindles/Hubs/Housings

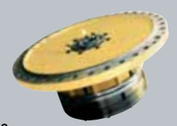
Final drive hubs and housing cores are dye-checked for cracks. Splines are removed and worn surfaces are built back up using submerged arc welding or laser cladding for same-as-new durability. All surfaces are machined to new dimensions and tested with a mating gauge.



Hydraulic Cylinders and Rods

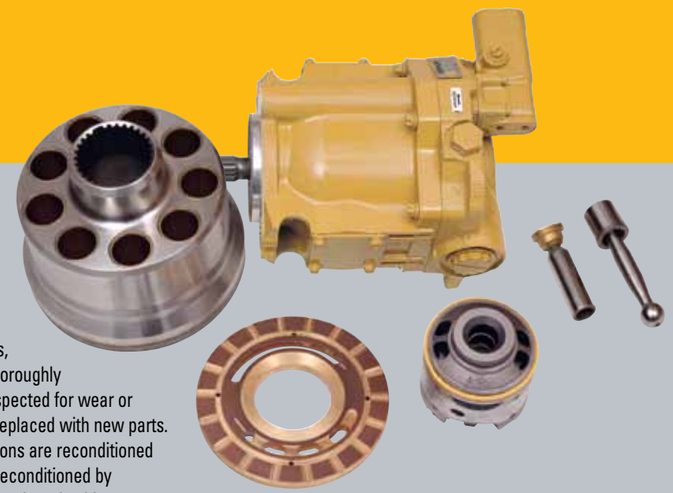
All Reman Cylinders are rehoned or the tubes are replaced, bore skived and roller burnished, depending on the extent of wear or damage. All retubed cylinders are tested for weld integrity; all new bearings are installed; and flanges, caps and trunnions are replaced with Cat parts if needed.

All Reman Rods are straightened, ground, chrome plated and polished; or they are replaced (re-rodded), depending on the extent of wear or damage. All re-rods are induction hardened, improving resistance to nicks and dents to extend seal life. Most feature inertia-welded eyes for superior strength. All new bearings are installed and eyes replaced with Cat parts if needed.



Steering Clutch Brake Groups

All cores are completely disassembled, cleaned and inspected for damage. All seals, friction disks, races and bearings are replaced with new parts, as are other parts that cannot be restored to same-as-new condition – including hubs, shafts and carriers.



Hydraulic Pumps, Motors and Components

With Cat Reman Piston Pumps and Motors, the difference is in the detail. Cores are thoroughly cleaned and inspected. Port plates are inspected for wear or damage and reconditioned by lapping or replaced with new parts. New piston slippers are installed, and pistons are reconditioned or replaced. Worn barrel assemblies are reconditioned by grinding or replaced with new, and all piston bore bushings are replaced with new and machined to new specifications. Vane pump cartridges are assembled with the latest design features. Rotors, cams and vanes are reconditioned or replaced with new components. All pump and motor groups are filled with premium oil, adjusted and performance tested to new specifications.



Transmissions and Torque Converters

Cat Reman Transmissions and Torque Converters include the latest engineering updates and design improvements and are 100% tested to factory specifications. All seals, cups and bearings are replaced. All parts that cannot be restored to same-as-new condition are replaced with new parts.

Caterpillar checks transmission clutch plates for flatness, then precisely grinds both sides to original surface finish specs for same-as-new performance.

After reassembly, transmissions undergo a multi-step test that includes a run-through of all forward and reverse gears at low and high idle, setting of valve pressure, check for leaks and proper shift timing.



Cat Advanced Surface Technology Rods

Cat Advanced Surface Technology (AST) coated rods offer several advantages over traditional chromeplated rods. AST can last up to three times as long in the same application, offer better wear resistance, and are more environmentally friendly. Superior wear characteristics and improved component durability mean longer seal life, reduced downtime, and improved machine availability and productivity.

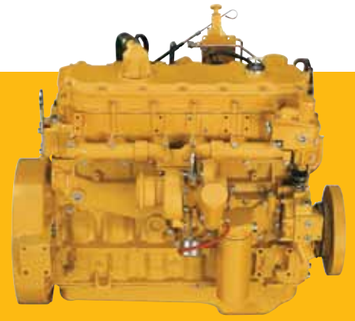
Here's how the Reman AST process works:

1. Salvaged components undergo straightening.
2. New and salvaged components undergo grit-blasting to prepare and clean the surface for the thermal spray.
3. Hot combustion gases near 5,000° F (2,760° C) are channeled and combined with a fine metal powder, and accelerated through a nozzle at more than three times the speed of sound. This forms a stronger mechanical bond than chrome plating.
4. The surface is ground to specification.
5. A final grinding operation gives the surface a super-fine polish.

The Reman AST rod offering is available for Large Off-Highway Truck Suspension and Hoist Cylinders.

KEEPING YOU UP AND RUNNING

Cat Reman Engines and Engine Components



Cat Reman Engines are remanufactured using only Cat parts, many of them new. Engines are upgraded to include critical design improvements. Plus, each engine is dynamometer tested for operational and performance indicators to ensure that Cat Reman Engines meet the same performance specifications as new Cat Engines. All blocks are tested electronically to ensure consistent quality and long life.

Alternators/Starters

To ensure same-as-new performance, all alternator and starter gaskets, seals, O-rings, bearings and boots are replaced.



Air Compressors

Crankshaft and journal surfaces are reground and polished and cylinder bores rehoned to exact dimensions. Each unit has new piston rings, rubber parts, springs, seals, gaskets and washers to help deliver same-as-new performance.



Crankshafts

Crankshafts are 100% magnafluxed to detect cracks. Crankshaft journals are machined to the same surface finish roundness and location tolerance of new crankshafts to extend service life.



Fuel Injection Pumps and Governor Groups

All gaskets, seals and worn parts are replaced with new. Each unit is computer tested for 20 critical quality points to ensure maximum performance and fuel economy.



Cylinder Heads



Reman Cylinder Heads are updated to include the latest engineering changes, and are 100% magna- fluxed to detect cracks, and inspected for other damage. The bottom deck is resurfaced to ensure a tight seal between the cylinder head and engine block to help prevent combustion gas and coolant leaks. All critical wear and sealing components are replaced with new Cat parts. Cat Reman Cylinder Heads are pressure tested for leaks before they leave the factory.

Cylinder Packs



Cat Reman Cylinder Packs ensure your engine is overhauled using performance-matched, Cat parts. Only Caterpillar preassembles the connecting rod, liner, piston, piston rings and piston pin as a unit, cutting overhaul time by as much as 25%.

ECUs



Cat Reman has developed its own line of remanufactured ECUs. This ensures electronic control units are thoroughly diagnosed and remanufactured, and critical engineering updates are completed. When the remanufacturing process is complete, the units pass through rigorous durability test requirements.

Long Blocks



Cat Reman Long Blocks are long on value, short on repair time. Blocks are disassembled, cleaned to meet rigid standards and are 100% inspected for cracks, erosion or other damage. Every block is updated to include critical design improvements and checked electronically to ensure consistent quality and long life. Metal spraying thermally bonds to block and cylinder head faces for same-as-new durability. Crankshafts are reground, polished and checked for bearing fit and end play. All bearings, seals, gaskets, and piston rings are replaced with new Cat parts.

Flywheels



Cat Reman Flywheels are balanced to factory specifications with factory surface finish, which means smoother engine operation and better clutch break-in. Cat Reman also inspects all ring gears and replaces when necessary.

Oil Coolers



Unlike other rebuilders who clean and reuse bundles, Cat Rubber End Sheet Reman Oil Coolers use only new tube bundles and end sheets, which increase reliability and performance levels. Oil coolers are 100% tested, same as new.

Turbochargers



Center housings are tested for seal integrity. All thrust and anti-friction bearings are replaced to ensure long life and performance. All rotating assemblies are dynamically balanced using the same equipment as new units.

Unit Injectors and Fuel Nozzles

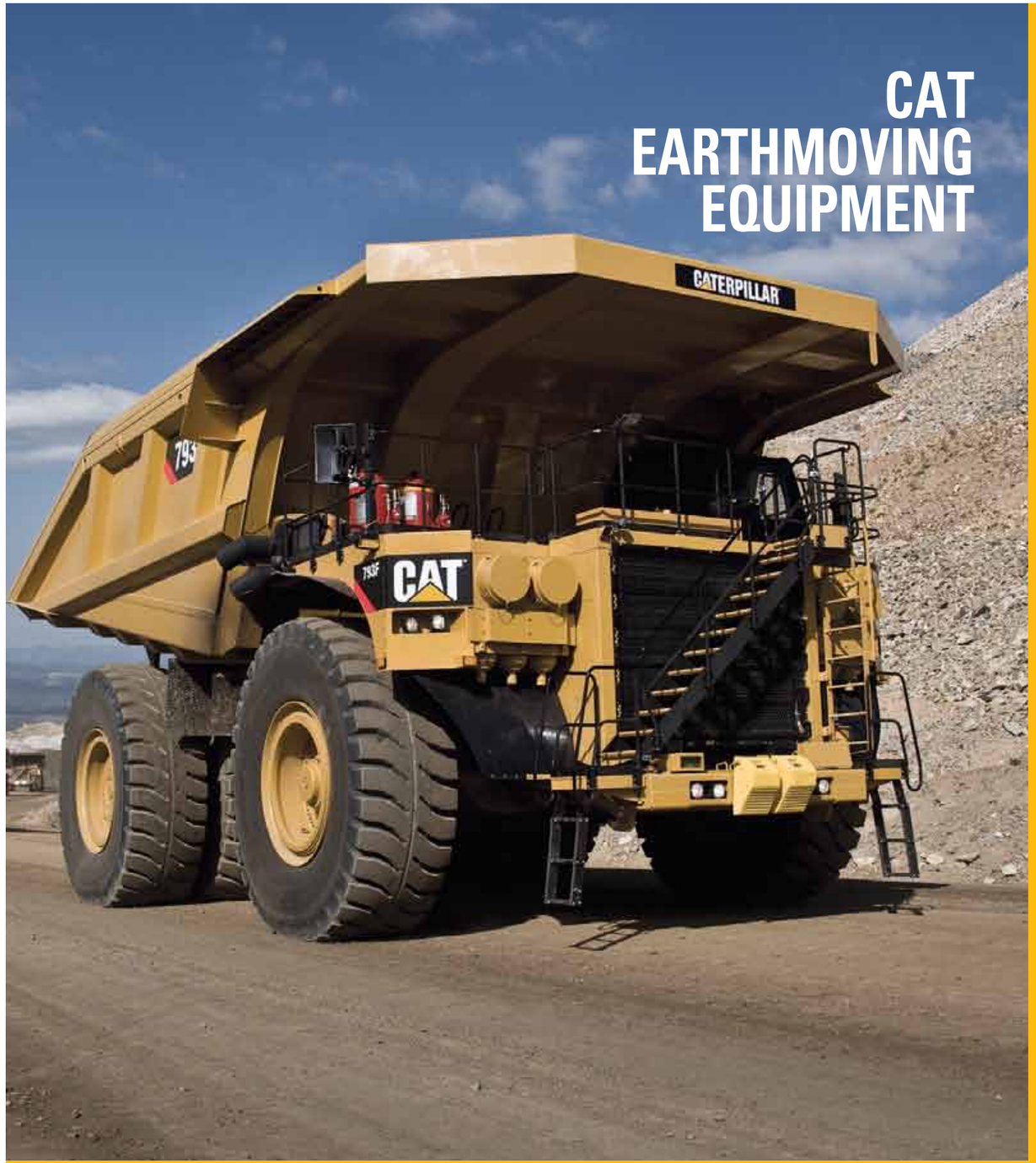


Every component is completely disassembled, cleaned, and extensively inspected to ensure same-as-new quality and reliability. Advanced salvage techniques are applied to ensure components meet specifications. All seals and O-rings are replaced. Fully assembled injectors are tested on the same equipment and to the same specs as new injectors.

Water Pumps and Oil Pumps



Cat Reman Water and Oil Pumps are updated to meet the latest design standards and feature 100% replacement of bearings and seals. Reman water and oil pumps are 100% tested, same as new.



CAT EARTHMOVING EQUIPMENT

Support with Cat Reman Products



Track-type Tractors

Brake Bands
Clutch Plates
Final Drive Groups, Spindles & Hubs
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders and Rods
Steering Clutch & Brake Groups
Torque Converters
Transmissions
Engines & Engine Components



Motor Graders

Brake Shoes
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders & Rods
Transmissions
Engine Components



Backhoe Loaders

Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders & Rods
Engine Components



Excavators

Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders & Rods
Engines and Engine Components



Skidders & Pipe-layers

Clutch Plates
Final Drive Housings & Hubs
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders & Rods
Engine Components

Scrapers

Brake Shoes
Clutch Plates
Final Drive Housings
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders and Rods
Transmissions
Engine Components



Off-highway Trucks

Brake Shoes
Clutch Plates
Final Drive Groups
Axle Housings
Reaction Hubs
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders and Rods
Torque Converters
Transmissions
Engines & Engine Components



Wheel Tractors

Brake Shoes
Clutch Plates
Final Drive Housings
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders & Rods
Transmissions
Engine Components



Wheel Loaders & Integrated Toolcarriers

Brake Shoes
Clutch Plates
Final Drive Groups & Housings
Hydraulic Pumps, Motors & Parts
Torque Converters
Transmissions
Engines & Engine Components



Track-type Loaders

Brake Bands
Final Drive Hubs
Hydraulic Pumps, Motors & Parts
Hydraulic Cylinders & Rods
Engine Components

Not all parts listed are available for every machine model. However, our remanufactured product line is continually expanding. Consult your Cat dealer to see if the specific part for your machine is available.



YES, YOU CAN HAVE IT ALL.

Best-built Cat parts with the same warranty as new, when and where you need them - all at a fraction of the price.

CAT REMAN PRODUCTS

For more information, please visit the Caterpillar website at www.cat.com.

CAT Reman

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