



Cummins

Parts Professional 31



INVEST IN THE BEST

Parts Professional 31 Cummins ReCon® Components

CUMMINS RECON® vs REPAIR

What's the difference between a Cummins ReCon® and a non-genuine repaired or rebuilt part? The answer is a single word. QUALITY.

Cummins ReCon® products are 100% factory remanufactured, not simply repaired or rebuilt. This means that the ReCon® process restores every single component to Cummins specifications. In fact, Cummins ReCon® components are just as durable and perform just as reliably as new.

Compare this with the local repair shops that tend to operate on a "fix-what's-broken" philosophy, which can send customers down the road with hidden problems just waiting to happen.

What can a customer expect from Cummins ReCon® that they can't at the local non-genuine repair shop? With Cummins ReCon® you can expect:

- **Continued support even if your customer leaves the local area.**
- **Consistent warranty policy.**
- **No surprise core charges after core return.**
- **No extended downtime due to a lack of resources.**
- **Warranty coverage including 100% parts, labor, progressive damage, and consumables (most non-genuine rebuilders can't afford it).**
- **No hassles prior to claim settlement on cores, or warranty.**

As you can see, it can get ugly in the aftermarket. The truth is, most local rebuilders do not have the facilities, manpower or resources to properly support their customers. But there is a genuine solution—Cummins ReCon®.



Cummins ReCon® midrange components

After more than three decades in the business, the Cummins ReCon® brand is recognized as the industry leader—both for product quality and customer support. Cummins ReCon® components offer the highest value with the best Quality, Performance, Durability, Core Acceptance and Warranty Support.

QUALITY

Every Cummins ReCon® component is totally disassembled down to the last nut and bolt and factory remanufactured to the latest Cummins specifications. To assure consistent quality, all critical machining operations are computer controlled. Any part that cannot be restored is scrapped and replaced with a brand new genuine Cummins part.

We address all quality issues before the product leaves our door. Our Total Quality System (TQS) focuses on ensuring top quality at every step in the process.

PERFORMANCE

Cummins ReCon® products have earned a reputation in the marketplace for performing as reliably as new Cummins parts. In some cases, ReCon®

Cummins ReCon® Components

Parts Professional 31 Cummins ReCon® Components

components actually perform better than when they were new. How is this possible? By using information supplied by Cummins engineering, ReCon® is able to upgrade older cores to the latest Cummins design. This gives our customers the performance advantages of newer technologies without the expected price tag.

DURABILITY

All Cummins ReCon® components and engines are completely disassembled, thoroughly cleaned, carefully inspected and factory remanufactured to original specifications. No short cuts. That's why Cummins ReCon® components give our customers like-new performance and durability day after day.

On the other hand, it's easy to understand why a rebuilt or repaired part has a shorter life cycle than a Cummins ReCon® part. With a non-genuine rebuilt part, only the obviously worn parts are repaired or replaced, and the rebuilt component is not brought back to OEM specs. All too often, the service life of a rebuild is shortened by inferior materials, antiquated processes and out-of-date

specifications.

CORE ACCEPTANCE

With a ReCon® exchange there are no surprises. The customer knows the total cost at the time of exchange and will not get hit with some unexpected charge after the sale. Many cores qualify for the Cummins ReCon® Full Core Acceptance Program, which accepts core for exchange at full core value regardless of condition. The only exceptions are rust, rough handling and fire damage.

Non-genuine rebuilders cannot afford to offer customers the generous benefits of the Cummins ReCon® core exchange program.

WARRANTY SUPPORT

Cummins ReCon® remanufactured parts and engines are known for their superior product quality. And this quality is backed in writing by the best warranty support in the business. Coverage includes 100% parts, labor, progressive damage, and consumables such as oil, filters and coolant. Another key advantage of the ReCon® program that sets it apart from the competition is our distribution system. Cummins offers the largest and best independent service network in the world—with more than 4,000 locations. The competition just can't match this kind of warranty protection and service support.



Run Hard. Dream Big.

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CUMMINS RECON® CYLINDER HEADS

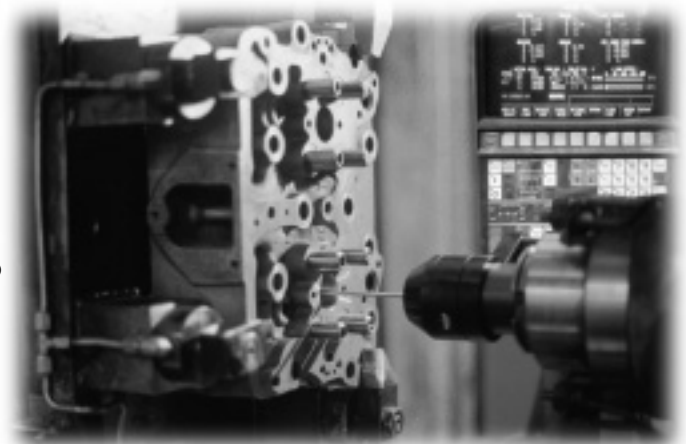
Cummins ReCon® cylinder heads offer your customers a value package of performance, durability and warranty second to none. Many non-genuine after-market suppliers do not meet the high standards set by Cummins. This explains why ReCon® cylinder heads are in a class of their own.

QUALITY AT EVERY STEP

The Cummins ReCon® cylinder head remanufacturing process has evolved during the past 30 years and has been refined by stringent quality standards. It would be impossible for even the best local rebuilder to deliver the consistent high quality found in every ReCon® cylinder head. If you witnessed the ReCon® remanufacturing process, you would be astounded by the relentless attention to detail.

The cleaning process, for example, takes a full 2½ hours from start to finish. Each casting is then carefully examined to meet Cummins specifications before it is considered for assembly. Any casting not up to spec is either remanufactured to Cummins specs or discarded.

Experienced technicians use computer controlled equipment to restore critical tolerances on Cummins ReCon® cylinder heads. For example, the combustion surface on every head is precision ground to assure proper sealing.



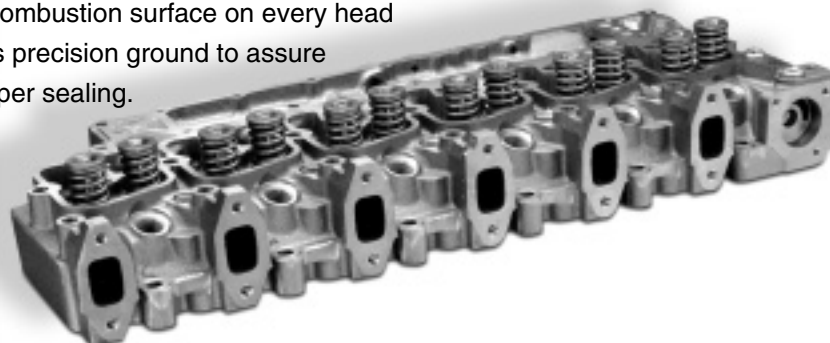
Valves that do not meet specifications are replaced with brand new genuine Cummins valves.

Injector sleeves are installed metal-to-metal using an automated process that eliminates human error while guaranteeing precise injector protrusion.

To further assure quality and durability, many parts are replaced 100% regardless of condition using brand new genuine Cummins parts. This includes all valve guides, injector sleeves, collets and spring retainers.

EXTENSIVE TESTING

Extensive testing helps ensure superior product quality. For example, every Cummins ReCon® NH cylinder head is pressure tested twice to make sure there are no internal casting defects in the water jackets or fuel line jackets. Automated vacuum testing on every valve assures proper seating to eliminate leaks. These testing procedures help us set the reliability and durability standard for the industry.



Cummins ReCon® Components

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CUMMINS RECON® TURBOCHARGERS

Cummins ReCon® offers the most complete line of turbochargers for Cummins heavy duty and midrange engines. Our latest additions to the ReCon® turbo family include the new HX models. These new products offer performance and emission benefits to Cummins customers.

TIGHTER TOLERANCES

The new HX Series wastegate design incorporates a one piece housing that allows tighter clearance between the compressor housing and compressor wheel. The resulting air flow improvement delivers greater efficiency and performance without sacrificing durability. A new thrust system handles higher loads and provides superior turbo lubrication. This not only improves performance – it actually extends the life of the turbo.

WHY WASTEGATE?

Engine emission legislation has led manufacturers to improve engine efficiency—particularly at low speeds where low air: fuel ratios cause high smoke.

To obtain an optimum air: fuel ratio and reduce emissions, the turbo must deliver

more boost at low engine speeds.

This is easily accomplished by using a smaller turbine housing, but this solution causes other problems. With a smaller housing the turbo spins faster at each engine speed. As the load increases, the turbo speed rises to a point where it will overspeed and deliver excess boost to the engine. This dramatically reduces the life span of both the turbocharger and engine.

A wastegate turbo offers a great solution. With a wastegate turbo, when the engine speed increases and compressor boost becomes too high, a valve opens allowing some of the exhaust gas to by-pass the turbine housing. This prevents the turbo from delivering excess boost which dangerously increases the air: fuel ratio causing poor performance and engine destruction.

With a wastegate turbo, boost is increased at low engine speeds due to the smaller housing, and turbine rotor speed is optimized by the wastegate valve.

HX/HT SERIES TURBOCHARGER TO ENGINE FAMILY APPLICATION MATRIX

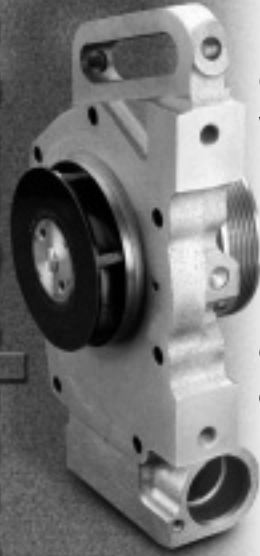
	4B	6B ISB	6C ISC	ISL	M11 ISM	N14	V903	ISX	Sig 600	K19 QSK19	K38	K50	QST30	QSK60
HX25	X													
HX30	X													
HX35	X	X	X											
HX40			X	X										
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HT80							X							
HX80										X	X	X		
HX82										X			X	
HX83														X
HX85												X		
HT100												X		

Note: Wastegate turbochargers are designated with a "W" at the end of the model number, for example "HX35W".



Cummins ReCon® Components

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CUMMINS RECON® WATER PUMPS

The water pump is the heart of the cooling system in your customer's vehicle. If it fails to do the job properly, the engine can run too hot or too cold – and that can lead to decreased fuel efficiency, poor performance and reduced life. So, when the water pump needs to be replaced, this is not the place to cut corners.



Cummins ReCon® water pumps are totally disassembled down to the bare casting. To assure consistent quality all critical machining operations are computer controlled. Any part that cannot be restored to Cummins exact specifications is scrapped and replaced with a brand new genuine Cummins part. After final assembly every water pump is functionally tested to assure optimum performance and reliability.

Non-genuine water pumps may cost less but that's because they are often



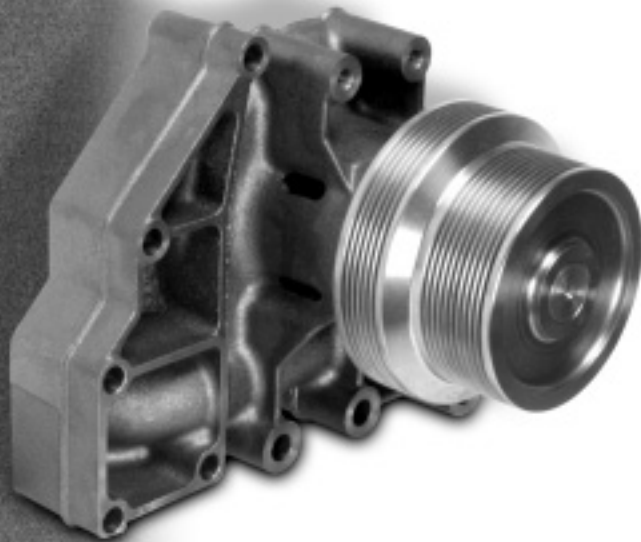
rebuilt using inadequate processes and inferior materials that can give way to premature failure and leave a customer stranded.

LATEST SEAL TECHNOLOGY

The seal is the most critical component of a water pump and also the most common point of failure. Extensive research and analysis by Cummins engineering has yielded the best heavy duty, unitized seals available.

The top grades of facing materials are used to resist wear and maximize seal durability. Spring tension between the seal and seat is optimized to reduce friction. These seals lead the industry in durability and allow your engine to keep cool under even the most extreme operating conditions.

In many cases, our competition uses lower quality seals typically found in passenger car applications. These inferior parts cannot match the durability standard set by Cummins.



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CUMMINS RECON® AIR COMPRESSORS

We stated earlier that some Cummins ReCon® components actually perform better than when they were new. Air compressors provide the perfect example to illustrate this point.

BETTER THAN NEW

By using information supplied by Cummins engineering, ReCon® is able to upgrade all NT air compressors to the latest rod and head design. This gives our customers the benefits of improved performance and durability at no extra charge.

Like other ReCon® components, air compressor cores are totally disassembled and restored to Cummins specifications. Every unit is re-bored and assembled with 100% new pistons and bushings.

QE = BOLT-ON SAVINGS

Cummins ReCon® is especially pleased to offer our customers the latest QE air compressor models. This new Quiet and

Efficient design improves fuel economy by .05% to 3%.

These seemingly small percentages translate into big savings for our customers – thousands of dollars per year!

The QE models not only save fuel, they also cut operating costs. In fact, service intervals are extended by about 1/3, and oil carryover is reduced because the new design creates a positive pressure differential on the piston which helps contain the oil.

Durability is also improved because QE air compressors deliver a greater volumetric output. Simply stated, this means more air is delivered in less working time.

Our customers really appreciate the fuel and maintenance savings from Cummins ReCon® QE air compressors.



Run Hard. Dream Big.



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SUMMARY

Legendary performance and cutting edge technology have long made Cummins the preferred choice for a wide variety of heavy duty, midrange and HHP diesel engine applications. Cummins customers know they can depend on their Cummins power to get the job done, and they know they can depend on Cummins ReCon® components to support their investment over the entire engine life cycle.

Over the years, Cummins customers have grown to appreciate the value of Cummins ReCon® products. These customers understand the substantial quality difference between a factory remanufactured Cummins ReCon® component and a non-genuine rebuilt or repaired component.

Cummins ReCon® remanufactured parts and engines have earned a reputation for superior product quality. And our quality is backed in writing with the best warranty support in the business. Coverage includes 100% parts, labor, progressive damage, and consumables such as oil, filters and coolant.

Another key advantage of the ReCon® program that sets it apart from the competition is our distribution system. Cummins offers the largest and best independent service network in the world...with more than 4,000 locations.

We are confident that Cummins ReCon® components and engines offer the best value for our customers. Value means the best quality, the best performance, the best durability, the best core acceptance and the best warranty in the business. And that's exactly what you get when you choose Cummins ReCon®.



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Bulletin 3401947
Printed in U.S.A. 08/01
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