



Thank you for your interest in Capital Reman. We appreciate the opportunity to serve you. Please take time to read the enclosed materials that include break-in procedures, our reman process and warranty.

Capital Reman is a full service machine shop and remanufacturing facility. We are staffed by precision machinists and engine builders who take pride in every engine and component that leaves our facility. Every reman long block engine or component remanufactured by Capital Reman is specific to an engine serial number to ensure compatibility and likeness of its replacement. We maintain "birth records" of every engine and component we produce that includes all measurements, specifications and supplier sources if applicable.

Capital Reman does not install, work on, or remove engines from trucks or heavy equipment. Every wear part used in our reman engines is brand new and all other major components are new or have been remanufactured according to original specifications. With all newly remanufactured engines and components it is important to work with a qualified shop, mechanic, or technician during the installation of the engine or components. This will help to prevent any unnecessary engine or engine component damage. It is also critically important a qualified mechanic or technician thoroughly inspects and/or replaces any accessory items that could potentially cause damage to the engine or components. Should you find any accessory items that need replacing please call Capital Reman so we can help provide the necessary accessory items for you. As with any new or remanufactured engine or component, product installation and break-in is critical. Should anything appear out of the ordinary please speak to your mechanic or technician to obtain proper information or diagnosis. We look forward to working with you.

Sincerely,
Capital Reman Exchange



Break-In Instructions for new or reman diesel engines

All engines, new or reman, need to be broken in properly to ensure optimum performance. The break-in procedure allows engine parts from different machined surfaces to conform to each other and form a tighter seal.

To properly break-in your new or reman engine, please follow the below procedures. Failure to do so can impact the quality and life of your engine, and can void the warranty.

- 1. Your new or reman engine is specific to your original engine serial number, however applications may vary. Please verify all freeze plugs are in place prior to installation.**
- 2. PRE LUBE engine prior to start up.**
- 3. Do not use synthetic oil.**
- 4. On initial start up the engine should be run for only 5-10 minutes; the length of time to determine the engine has no leaks and parts are torqued properly.**
- 5. The engine should be placed under moderate to heavy load immediately at variable RPM for the first 200 miles or 3-4 hours. Revving the engine on a stationary truck will NOT build load pressure required for break-in.**
- 6. After break-in It is recommended to drain oil, install new filters and fill with new oil.**

Never allow your engine to idle for an extended period of time during break-in. A new or reman engine left to idle or operate under low or no load conditions will contribute to glazed cylinders. When this happens the rings will not properly seat and will contribute to oil consumption, low engine power, and decreased fuel economy. The remedy for correction will be to replace cylinder liners and rings.

It is the responsibility of the mechanic or technician to ensure the correct installation of the new or reman engine. **Additionally, all other components/parts/systems that complete the long block during installation should be thoroughly inspected, cleaned, and be deemed suitable for use so the long block engine is not adversely impacted.**



Remanufactured Engines

Capital Reman Exchange Engine Process

THOROUGH CLEANING

Every engine is completely disassembled. Blocks, heads, rods, crankshafts and camshafts are thoroughly cleaned to remove all contaminants which can lead to early component and engine failure.

CRANKSHAFTS

Crankshafts are precision machined to exact tolerances, polished & magnafluxed, then inspected by our quality control department.

CYLINDER HEADS

Heads are resurfaced to assure a proper sealing surface with the block and a finish compatible with today's new gasket materials. Valve height is mic-d and every head is vacuum tested to assure correct valve seating.

CYLINDER BLOCKS

Blocks are magnetic particle inspected for cracks or imperfections. Cylinders are bored and honed and inspected to precise tolerances. Torque plate honing is performed on specific engines to eliminate cylinder head distortion after the head is bolted and torqued to the block. This process eliminates a major cause of engine blow-by. Block surfaces are machined and then inspected to ensure proper finish.

CAMSHAFTS

Camshafts are inspected and precisely machined to provide correct lift.

CONNECTING RODS

Connecting rods are cleaned, then machined to O.E.M. specifications and honed to the standard diameter of original equipment for even distribution of stress on the bearings. New bushings are installed and machined in all bushed rods. Every rod is carefully inspected for bend and twist.

NEW PARTS

Capital Reman Exchange's engines receive a standard set of new parts such as pistons and rings, bearings, gaskets and seals, liners. New parts assure consistent performance and reliability throughout the life of your engine.

REMANUFACTURED ENGINES

To remanufacture is to make as close to new as possible. Wearable parts are automatically replaced. All core material is closely inspected and checked against original equipment specifications for correct dimensional tolerances. Replacement parts are new or requalified. If new, parts are made in the same production processes as original equipment. Testing is performed to manufacturer specifications and original production standards.



LONG BLOCK ENGINES

Capital Reman Exchange's Long Block Engines include the following components: Cylinder Block, Complete Cylinder Head, Crankshaft, Pistons, Liners, Rings, Connecting Rods, Camshaft, Followers/Lifters, Intermediate cover and timed Front Gear Group.

Repair & Return Engines

REPAIR & RETURN ENGINES

Repair and Return Engines will follow the same process as remanufactured engines, however Capital Reman Exchange will work with the engine and components that have been provided by the customer. From time to time there can be instances where parts or components are not able to be remanufactured. In instances where parts or components cannot be remanufactured the cost of replacement for such parts or components will become the responsibility of the customer if they elect to replace them. Failure to replace recommended parts or components will void warranty.

WARRANTY POLICY AND CLAIM PROCEDURE CONTAINING ARBITRATION PROVISION

Long Block Warranty Coverage:

This limited warranty covers the remanufactured long block engine as it pertains to workmanship, parts and components used for, and in the long block engine. The warranty covers defects in materials or workmanship on the part of the remanufacturer. Warranty coverage begins at the time of shipment and does not renew if replaced during the warranty period. The warranty coverage may not exceed the original purchase price paid for the remanufactured engine.

Excluded Long Block Warranty Coverage:

This warranty does not cover damage or loss due to the following:

- Parts and products produced through another manufacturer or remanufacturer. Coverage for any such parts and products shall be limited to the warranty offered by that manufacturer.
- Damage caused by installation or related vehicle problems is not covered, as well as installation in a vehicle for which it was not designed or purchased for.
- Misuse, maintenance neglect, abuse, vandalism, abnormal operation, environmental conditions, accidents or modifications of the engine outside of original specifications.
- Overheating engine voids any warranty for labor or replacement.
- Damage caused by lack of lubricants or fluids that lead to engine failure will void the warranty.
- Failure caused by components or parts not furnished by the remanufacturer.
- Damage to the engine caused by detonation or pre-ignition.
- Damage caused to engine thrust bearing from defective torque converters, clutch assemblies, engine or transmission mounts.
- Any repairs not authorized or approved by the remanufacturer will void the warranty.



Term of Warranty Coverage:

Your warranty begins on the original date of shipment and expires in 12 months subject to the limitations set forth below.

Warranty Transferability:

This warranty is extended only to the original purchaser and cannot be transferred to anyone at any time without prior written permission of Capital Reman Exchange, LLC.

Warranty Terms:

For remanufactured parts and components, and in the event of failure, Capital Reman Exchange, LLC provides a 12 month parts and components warranty and will, at its sole discretion, pay for parts replacement at Capital Reman Exchange, LLC's cost, or replace the parts or components to the condition prior to the failure if the failure was attributed to workmanship or parts defect and excludes any progressive or consequential damages.

For remanufactured engines, Capital Reman Exchange, LLC provides a 12 month unlimited miles warranty. The first 6 months includes a parts and labor, and the second 6 months includes parts replacement specific to the remanufactured engine and its components. Labor is paid at a pro-rated labor rate of thirty dollars U.S. per hour and excludes any progressive or consequential damages.

Warranty Claim Procedure:

Immediately after discovery of any problem, and prior to the expiration of the warranty period, you must follow the procedures listed below. Failure to do so will void your warranty.

- All failed parts and components should be returned and accompanied by (1) copies of any work orders and receipts for parts used for the repair; and (2) a completed warranty claim form provided by Capital Reman Exchange, LLC.
- The failed parts and components, along with the warranty material identified above, must be sent to Capital Reman Exchange, LLC freight prepaid.
- If a claim is settled, the parts and components involved shall become property of Capital Reman Exchange, LLC. If a claim is denied, the parts will be returned at your expense.

Limit on Remedies; Time to Bring Action; Choice of Law and Venue:

TO THE FULLEST EXTENT OF THE LAW, THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BUYER EXPRESSLY WAIVES ANY AND ALL RIGHTS TO RECOVERY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. SHOULD ANY DISCLAIMER OR REMEDY LIMIT IN THIS WARRANTY BE DECLARED OR BECOME INVALID OR UNENFORCEABLE FOR ANY REASONS, THE REMAINING TERMS AND CONDITIONS SHALL REMAIN IN FULL FORCE AND EFFECT. UNDER NO CIRCUMSTANCES SHALL CAPITAL REMAN EXCHANGE, LLC'S LIABILITY UNDER THIS WARRANTY OR OTHERWISE EXCEED THE PRICE PAID OR INVOICED FOR THE REMANUFACTURED ENGINE. ANY ACTION AGAINST CAPITAL REMAN EXCHANGE, LLC MUST BE COMMENCED WITHIN 12 MONTHS FOLLOWING THE TIME THE BREACH IS DISCOVERED OR SHOULD HAVE BEEN DISCOVERED. THIS AGREEMENT IS GOVERNED BY THE LAWS OF THE STATE OF COLORADO, THE PRINCIPAL PLACE OF BUSINESS OF CAPITAL REMAN EXCHANGE, LLC, WITHOUT REGARD TO CHOICE OF LAW PRINCIPLES. ANY CONTROVERSY OR CLAIM ARISING OUT OF OR RELATING TO THIS LIMITED WARRANTY SHALL BE SETTLED BY ARBITRATION ADMINISTERED BY THE AMERICAN ARBITRATION ASSOCIATION ("AAA") IN ACCORDANCE WITH ITS COMMERCIAL ARBITRATION RULES. THE ARBITRATION HEARING SHALL TAKE PLACE IN DENVER, COLORADO BEFORE A SINGLE ARBITRATOR, SELECTED BY THE AAA, EXPERIENCED WITH MANUFACTURER WARRANTY DISPUTES.