

## WHY CHOOSE REPAIR OPTIONS?

- Maintenance schedule designed around Cat recommended service intervals.
- Planned scheduled maintenance proven to reduce lifetime cost of ownership.
- Maximizes on reusability guidelines to achieve full component value.
- 12 Month parts and labor warranty and approved for extended coverages.
- Flat rated, firm price for top end, in frame, and major overhaul intervals.

## WHY REPAIR BEFORE FAILURE?

When you repair before failure, you're taking advantage of the value built into Cat parts, which are designed to last multiple lives. If you let parts progress to failure, you could be spending as much as **2.5 times more for the cost of your repair**. Another problem is potential contingent damage that could be caused to other parts, that don't typically need replacing.

When you do let parts progress to failure, Caterpillar studies show that nearly 90% of the time, those failures could have been prevented -- and that's money out of your pocket.

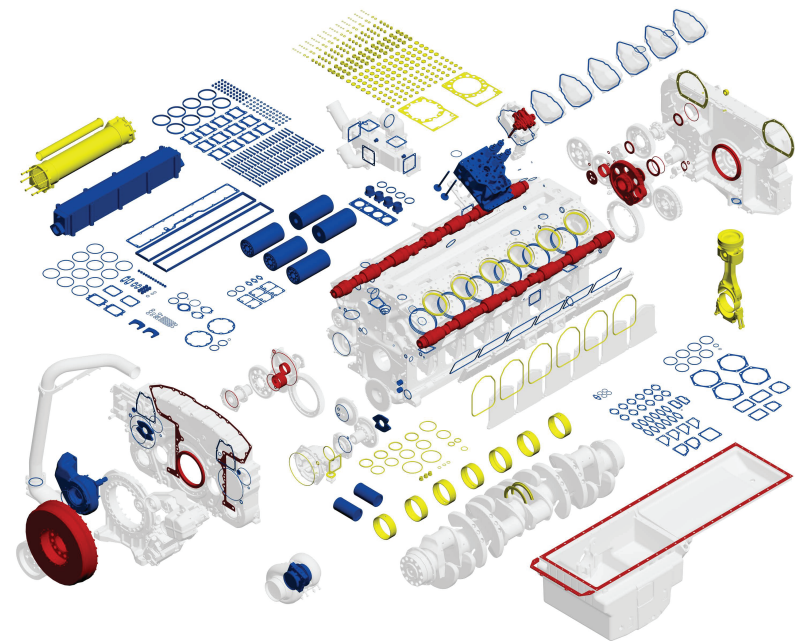
# OVERHAUL UP TO A MAJOR

## TOP END

- Disassemble, inspect, clean, assemble
- Cylinder heads
- Turbo cartridges
- Injectors
- Water pumps
- JW coolant thermostats
- Aftercooler core/clean and test
- Oil & fuel filters
- All gaskets, seals, o-rings as required
- Tune/adjust to factory specs. Run to operating temp
- Test safeties and shutdowns
- Paint bare components to prevent rusting

## IN-FRAME

- Pistons, rings, liners, rods
- Engine oil pump and oil cooler bypass valve
- Aftercooler core/oil cooler core replace
- Fuel transfer pump
- Crankcase breathers & clamps
- Crankshaft main bearings, rod bearings, and thrust plates
- Recondition intake, exhaust, and injector rocker assemblies
- Air cleaner elements
- SOS coolant sample
- Operational testing to full load/torque



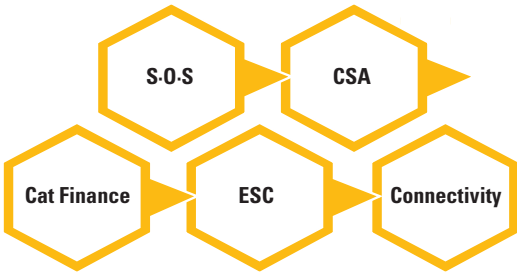
## MAJOR

- Camshafts & bearings
- Gear train bushings/bearings front & rear
- Cluster gear & shaft
- Front & rear main seals
- Damper
- Piston cooling jets
- Spacer plates
- Replace all coolant hoses
- Replace oil, coolant temp, and pressure sensors

All In-Frame overhauls include Top End components. All Major overhauls include In-Frame and Top End Components.

All overhauls include a 12-month Standard Parts & Labor warranty.  
PLUS: 36 month/10,000 hour Component ESC.  
(See list for covered components)

### EXPANDING YOUR OPTIONS



	Platinum Overhaul ESC	Platinum Plus Overhaul ESC	
COST	Allows required replacement parts to be reused during the overhaul if the part meets Caterpillar Salvage & Reuse Guidelines	All of the features of Platinum Overhaul ESC with additional allowances for travel time, overtime and emergency freight	VALUE
	Allowances for travel time, overtime and emergency freight		
	Customized coverage for top end and major overhauls		





Repairs	Component ESC Coverage	Top End	In-Frame	Major
*Disassemble, inspect, clean, assemble		X	X	X
Cylinder heads	X	X	X	X
Turbo cartridges (reman or kit as required)	X	X	X	X
Injectors (includes harnesses as required)	X	X	X	X
Water pumps (main & auxiliary)	X	X	X	X
JW coolant thermostats		X	X	X
**Aftercooler core/clean and test		X	X	X
Oil & fuel filters (includes oil sample/SOS)		X	X	X
All gaskets, seals, o-rings as required		X	X	X
Tune/adjust to factory specs. Run to operating temperature		X	X	X
Test safeties and shutdowns		X	X	X
Paint bare components to prevent rusting		X	X	X
***12-month warranty		X	X	X
Pistons, rings, liners, rods (pack kits)	X		X	X
Engine oil pump (reman) and oil cooler bypass valve	X		X	X
Aftercooler core/oil cooler core (replace with reman or new)	X		X	X
Fuel transfer pump	X		X	X
Crankcase breathers & clamps			X	X
Crankshaft main bearings, rod bearings, and thrust plates			X	X
Recondition intake, exhaust, and injector rocker assemblies			X	X
Air cleaner elements (soot filters where applicable)			X	X
SOS coolant sample			X	X
Operational testing to full load/torque (as applicable)			X	X
Camshafts & bearings	X			X
Gear train bushings/bearings front & rear (includes accessory drives)				X
Cluster gear & shaft				X
Front & rear main seals				X
Damper				X
Piston cooling jets (as required)				X
Spacer plates				X
Replace all coolant hoses				X
Replace oil, coolant temp, and pressure sensors/switches				X

Caterpillar Platinum Overhaul ESC (Extended Service Coverage) from 24 to 60 months can be added to any overhaul option for an additional fee. Ask your PSSR (Parts and Service Sales Rep) for details.

Firm price for defined scope of work, in hull/on site, assumes full core credit;

Does NOT include: removal or installation of ancillary or structural items that are not Caterpillar engine components or part of the original engine configuration, coolant, oil, the engine or block group, machine work, missing parts, or parts not meeting re-usability. Additional standard rate charges will be added for items not included in work scope, or for progress delays that are outside of N C Power Systems' control or authority.

\*Additional estimates will be provided and will require approval for items found during inspection not meeting re-usability

\*\*Cleaned and tested aftercooler cores have NO warranty through N C or Caterpillar.

\*\*\*Warranty: All N C Power Systems overhauls include a 12-month parts and labor warranty against defects in materials and/or workmanship.



## TOTAL SOLUTIONS

### CATERPILLAR COMPETITIVE ADVANTAGE

#### CATERPILLAR WARRANTY AND INSURANCE

Genuine Cat new and Reman parts are backed by our 12-month warranty. N C backs our workmanship with the same 12 months, so you can feel confident selecting a repair options through N C.

#### CAT PARTS

New Cat parts and components are built for more than one life, so you can get the most value at the lowest possible cost. Cat Reman parts carry a same-as-new Cat warranty for less than the price of new.

#### OTHER N C POWER SYSTEMS CAPABILITIES

We are dedicated to providing our customers with complete solutions for their equipment needs. As part of the Cat dealer network, we have vast product support capabilities, allowing us to offer customers worldwide support at a local level.

#### EXTENDED SERVICE COVERAGE

You count on Cat Marine power for reliability and long service life, and we offer the coverage to meet and exceed your expectations.

#### REMOTE FLEET VISION (RFV)

RFV puts our knowledge and expertise to work with the latest equipment tech and services to help you reduce operating costs and get more value from your equipment.

#### UPGRADES AND ENHANCEMENTS

The initial sale of the Cat product is only the beginning of the product's life cycle. With upgrades, you can add features that were available (but not purchased) and features introduced on newer equipment. Cat upgrade and enhancement retrofit programs allow you to update the safety, comfort, performance, and appearance of your Cat equipment, as well as extend product life and add to the resale value.

#### S-O-S

Cat S-O-S service provides information to help you proactively monitor your fluids to reduce owning and operating costs. This program can help you maximize engine life, reduce downtime, and deliver the value of your investment.

#### CAT INSPECT

Smart phone/tablet app, giving every customer the opportunity to perform inspections (daily, weekly, monthly, etc.) following Cat recommended guidelines. Fast, efficient way to complete your engine inspections and share as needed. Includes photo and video capture capability that can assist in remote troubleshooting when needed.

#### Please contact your PSSR/ISR for details:

PSSR Joe Gatewood  
**206.639.0147**

PSSR Mike Beach  
**206.641.6279**

PSSR Scott Dickinson  
**206.910.2813**

PSSR Jake Stubben  
**206.390.5152**

ISR Shane Patnode  
**425.251.5877 ext. 3852**



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# 3512 MARINE REPAIR OPTIONS

