



# REPAIR OPTIONS

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## **ENGINES**

# THE CAT® ENGINE DIFFERENCE

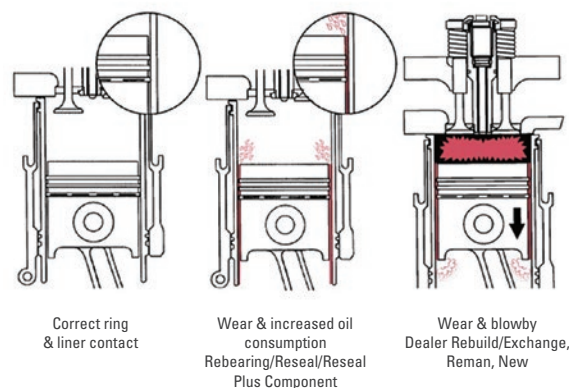
Cat® engines are **BUILT TO BE REBUILT**. All parts and components are built as a system with varying levels of wear. You will gain maximum life by taking advantage of the reusability that is built in. Only your Cat dealer offers a full range of repair solutions that are designed to match the repair to the wear. Three critical factors to consider are fuel consumption, oil consumption and maintenance.

## SAVING FUEL = LONGER LIFE

The life of an engine can be measured by number of liters of fuel burned. The more fuel that is saved, the longer the life. A focus on fuel consumption, oil consumption and maintenance is critical to achieve longer life.

<b>FUEL CONSUMPTION</b>	<p>FUEL COSTS ARE <b>40%</b> OF OVERALL COSTS</p> <p>CONTAMINATED FUEL CAN CREATE INJECTOR ISSUES THAT CAN BURN UP TO <b>12%</b> MORE FUEL ALONE</p> <p>CAPTURING FUEL SAVINGS FROM GOOD MAINTENANCE CAN LOWER OPERATING COSTS BY <b>5-10%</b></p>
<b>OIL CONSUMPTION</b>	<p>WHEN OIL CONSUMPTION INCREASES BY <b>3X</b> AN OVERHAUL IS REQUIRED</p>
<b>MAINTENANCE</b>	<p>REPAIRING YOUR ENGINE AFTER FAILURE LEADS TO AN AVERAGE INCREASE IN COST OF <b>190%</b></p> <p><b>40-60%</b> OF ALL ENGINE DOWNTIME IS ASSOCIATED WITH COOLING SYSTEM PROBLEMS</p>

Every engine experiences wear as the result of three things—contact, pressure and relative motion—but Caterpillar components are engineered for reuse. This advantage ensures the right repair is performed at the right time in the lifecycle, giving you control to plan and schedule your repairs.



# INDICATORS & SOLUTIONS

Regular maintenance intervals and proper inspections are critical to predicting the right time for a repair. There are both visual and non-visual problem indicators that may be causing a loss in productivity and resulting in a higher cost.

PLANNED INDICATORS		PROBLEM INDICATORS		
<input type="radio"/> S•O•S <sup>SM</sup>	<input type="radio"/> Fuel consumed	<input type="radio"/> Dramatic fuel consumption increase	<input type="radio"/> Overheating	<input type="radio"/> Lack of power
<input type="radio"/> Machine SMUs	<input type="radio"/> Increased oil consumption	<input type="radio"/> Unusual noises	<input type="radio"/> Leaks	<input type="radio"/> Hesitation
<input type="radio"/> Service history	<input type="radio"/> Inspections	<input type="radio"/> Vibration	<input type="radio"/> Burning oil/smoke	<input type="radio"/> Hard starting
<input type="radio"/> Engine hours			<input type="radio"/> Debris in filter	



## CHOOSE THE BEST OPTION FOR YOUR REPAIR

Every repair starts with four key questions:



### OWNERSHIP

How long do you plan to own the machine?



### UTILIZATION

How much/often do you use the machine?



### AFFORDABILITY

What is your expectation with regard to price?



### TURNAROUND

How quickly does your machine need to get back to work?

	REBEARING/RESEAL	REBEARING/RESEAL PLUS COMPONENT	DEALER REBUILD/ EXCHANGE	REMAN	NEW
<b>OWNERSHIP</b>	< 2 years			> 2 years	
<b>UTILIZATION</b>	< 1000 hours			> 1000 hours	
<b>AFFORDABILITY</b>	< 50% of new			> 50% of new	
<b>TURNAROUND</b>	Flexible			Urgent	

COMPONENT LIFE	Extend	Extend	Extend/Restore	Restore	Restore
INDICATORS	Planned	Planned	Planned/Problem	Problem	Problem
UPGRADE OPTIONS			●	●	●
CAT ADVANTAGE	Reseal fluid leaks Decrease oil consumption Restore friction Free rotation of metal components / friction-free metal-on-metal movement Seal components from contaminants Refill with new fluids	<b>Rebearing/Reseal Plus*</b> Extend up to 50% component life Recover fuel economy Improve fuel combustion for improved power (injectors) Restore turbo performance Readjust timing and replace timing belt Inspect and re-use to gain full life of reusable parts	<b>Rebearing/Reseal Plus Component Plus*</b> Restores 100% component life and performance Option to rebuild your core component or off-the shelf exchange with store credit Latest engineering updates Inspect and re-use to gain full life of reusable parts Flexible rebuild options including Cat Certified	Restores 100% of component life and like-new performance Off-the shelf exchange Value for your core Latest engineering updates Quick turnaround	Cat original new component Built to be rebuilt Latest engineering updates Quick turnaround

<b>CAT BRAND PROMISE</b>	← <b>Cat genuine parts carry a 12-months warranty that covers resultant damage</b> <b>Cat factory-trained technicians</b> <b>Cat specified testing, tuning and tooling</b> →
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\* Options determined based on condition

## GUARANTEED TO LAST

Genuine Cat new and Reman parts are backed by our **12-MONTH WARRANTY**, so you can feel confident selecting a repair option through your Cat dealer.

Additionally, if one of the genuine Cat new or Reman parts used in your repair is proven to be defective and the cause of any resultant damage, not only would the Cat new or Reman part be replaced, but any resultant damage to other Cat parts would also be covered. Competitors typically only warranty the part they replace regardless of whether or not the part has caused resultant damage.

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**CONTACT YOUR CAT DEALER  
TO DISCUSS A RANGE OF SOLUTIONS  
THAT CAN BE TAILORED TO MEET  
YOUR NEEDS.**

