



OPTIMAX/Series 9000 Case Study

Title: Cat 345BL Excavator operating in Coal Mine

Summary: A Cat 345BL excavator loading coal haulers in a coal mine in Colombia South America was experiencing early engine rebuilds and 60 hour filter changes with the factory intake system. Installation of the Sy-Klone KT0008 Series 9000 Kit has extended filter life by 6-10x and reduced maintenance cost.

Company Information	
Company Type:	Mining open pit
Location:	north of Colombia

Test Criteria	
What would constitute successful test completion?	Go more than 200 between filter changes
Environment(s):	<input checked="" type="checkbox"/> Humid <input checked="" type="checkbox"/> Dry Dust
	<input type="checkbox"/> Muddy <input type="checkbox"/> Mixed Debris
	<input type="checkbox"/> Heavy Debris <input type="checkbox"/> Snow
	<input checked="" type="checkbox"/> Extreme Heat <input type="checkbox"/> Extreme Cold
Other Environment:	Coal loading procedure
Application:	<input checked="" type="checkbox"/> Mining <input type="checkbox"/> Construction
	<input type="checkbox"/> Agriculture <input type="checkbox"/> Forestry
	<input type="checkbox"/> Waste Industry - Landfill <input type="checkbox"/> Waste Industry - Recycling
	<input type="checkbox"/> Waste Industry - Transfer Station
Other Application:	
Notes:	

Machine: Before OPTIMAX Installation	
Manufacturer:	Caterpillar
Model:	345BL
Precleaning/Filtration Equipment Currently Installed:	None, factory standard intake system
Filter Changed when Level of Restriction Reaches:	25" of H2O
Primary Air Filter Replacement Interval:	60
Secondary Air Filter Replacement Interval:	60
Maintenance Includes Blowing Out Filter:	yes
Operator's Comments on Current Machine Performance:	Low reliability, we need to have a maintenance crew all the time changing the filters.
Notes:	3 engines had abnormally low life and had to be rebuilt due to dust intrusion

OPTIMAX Installation	
OPTIMAX Installation Part Number:	KT0008, KT0009,9003

Performance Results

Test Period 1

Machine Hours:	250 hours run time with Sy-Klone Kit installed
Restriction Indicator Reading:	none
Filter Changed:	yes
Operator's Comments:	filter changed because the goal was reached, the filter minder in the machine was broken.

Test Period 2

Machine Hours:	561 hours run time with Sy-Klone Kit installed
Restriction Indicator Reading:	8
Filter Changed:	no
Operator's Comments:	New filter minder installed after 311 hours with Sy-Klone System installed. only 8 inches of restriction. Machine is still running with current filter.

Test Period 3

Machine Hours:	
Restriction Indicator Reading:	
Filter Changed:	
Operator's Comments:	

Test Period 4

Machine Hours:	
Restriction Indicator Reading:	
Filter Changed:	
Operator's Comments:	

Testimonials

Job Title:	Maintenaice Director
Comments on Product Performance:	
<p>These excavators are used to pile coal and load the coal haulers in the mine. The shovels do not have any factory fitted precleaning system so the filter life was too short, between 50 and 60 hours. We had big problems also with the engine reliability because the air filters that to bear with everything in the environment so their durability was really low.</p>	
Job Title:	Workshop Supervisor
Comments on Product Performance:	

The installation was really easy, we didn't have to move anything in the housing or plumbing, the performance of the machine is basically the same with the advantage of extended filter life. GAF did a great job doing the installation during our planned maintenance procedures. With these results we will be upgrading gradually the 16 shovels we have with the Sy-Klone system.

9003 Sy-Klone 9003 precleaner mounted on back deck of 345DL Excavator



KT0008 intalled on 345BL Excavator