



**FILTER  
TECHNOLOGY**

cleaner fluids mean better business

**CASE STUDY**

**Quarrying**

Case No : 7 - 6 - 9

## Bowser Fuel Filtration Systems : Transport Companies

### Hanson Kilmore

Hanson fitted a Filter Technology Australia FMO440 fuel delivery system to their bowser at the Kilmore Quarry. It was pointed out prior to fitting the unit that the site was an extremely dusty environment and that every 100 litres of fuel drawn from the Diesel tank was replaced with 100 litres of dusty air.

We took some fuel sample before and after the fitting the fuel delivery system and found the fuel particulate count reduced from ISO 22/17 to 16/13, which is 96% cleaner. The particulate that would pass through the OEM filter element reduced as follows.



Micron	Before	After	Difference
>4	52,989	3,354	93.6 %
>6	32,322	569	98.2 %
>10	6,188	136	97.8 %

The site had a 775E CAT dump truck, which was experiencing trouble with fuel injectors prior to fitting the fuel delivery system. The service company fitted a reconditioned set of injectors about the same time as FTA fitted the fuel delivery system.

A month after fitting the fuel delivery system Kilmore Quarry again experienced trouble with failing fuel injectors on the 775 dump truck, the service company suggested that the fuel was dirty which caused the fuel injectors to fail, and that the injectors would have to be replaced at \$1,200 each or \$ 15,000 for the set.

The site manager pointed out that they had fitted a fuel filter to the bowser about the same time as the injectors were fitted and provided them with a copy of the fuel analysis report that proved the fuel was at ISO 16/13 which was CAT's recommendation.

The company fitted a new set of fuel injectors under warrantee which saved Hanson \$15,000.

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Singleton NSW 2335  
Phone : (02) 6671-1444  
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Web : www.oiltest.com.au

**Oil Test**

This Report No:

Date  
Report No.  
Meter Reading  
Oil Hrs.  
Oil Changed

238,604		24-Apr-05	25-Apr-05
-	-	238,605	238,504
-	-	0hrs	0hrs
-	-	-	-
-	-	No	No

Client  
Attention To:  
Machine:  
Sample Location:  
Oil Type:

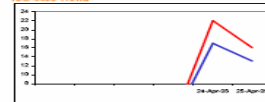
Filter Technology Australia Pty Ltd  
800 MIDDLETON - 71 Racecourse Road, Rutherglen  
VIC  
Hanson Kilmore Fuel  
DIESEL FUEL

Particulate Analysis

> 4 um Count  
> 6 um Count  
> 10 um Count  
> 14 um Count  
> 21 um Count  
> 25 um Count  
> 38 um Count  
> 70 um Count

Limit	24-Apr-05	25-Apr-05
> 4 um Count	52989	3354
> 6 um Count	32322	569
> 10 um Count	6188	136
> 14 um Count	892	59
> 21 um Count	51	25
> 25 um Count	23	10
> 38 um Count	4	7
> 70 um Count	-	1

ISO 4406 Trend

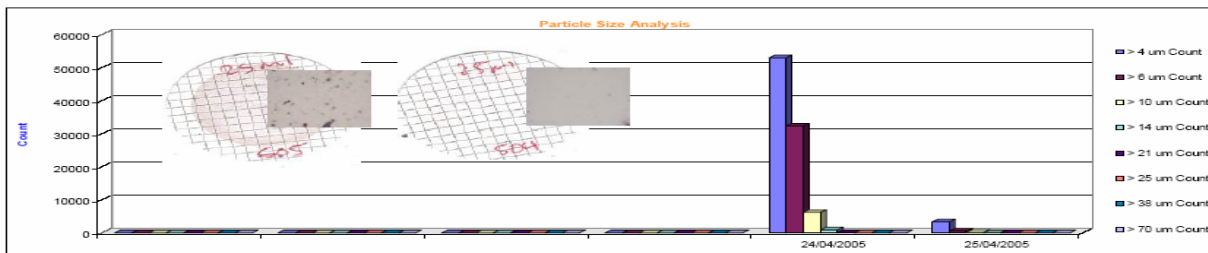


Comment

Solid particle contamination has improved significantly after filtration

Cleanliness Analysis  
ISO 4406 Sum 1/14um  
Water Content ppm

Limit	24-Apr-05	25-Apr-05
ISO 4406 Sum 1/14um	22/17	16/13
Water Content ppm	39	32



Due to the success of the fuel delivery system, the Quarry have now fitted breathers to all the Fuel Oil and Bulk Oil tank