



## CASE STUDY

CUSTOMER

COAL MINE

LOCATION

BOWEN BASIN, AUSTRALIA / OCT 2009

EQUIPMENT

CAT D10 AND D11 DOZER FINAL DRIVES

APPLICATION

LUBE OIL

PROVEN  
RESULTSREDUCED  
TRANSPORT  
COSTSSAVINGS  
IN EXCESS OF  
1.5 MILLION USD

## 18 MONTH UPDATE

*It has now been 18 months since the entire fleet was fitted with OEI magnetic filter plugs, and to-date, there have been no unscheduled final drive failures. The weekly, magnetic filter plug inspection is a major component of the mine's proactive maintenance program. When removed for inspection, the magnetic filter plugs will have varying quantities of contamination. Abnormally high quantities of contamination indicate component failure, and the composition of contamination will identify which components are stressed, worn, or failing.*

## CHALLENGE

A leading coal producer in Australia's Bowen basin wanted to extend the service intervals of their dozer fleet from 250 hours to 330 hours.

The OEM CAT magnetic filter plugs were unable to remove enough wear contamination from the dozer's final drives to protect them from premature failure, and the mine required a more effective magnetic technology.

If the service extension could be achieved, the cost savings would be significant in terms of reducing transport (float hire), unscheduled downtime, equipment replacement, and maintenance.

## SOLUTION

On 4 of the final drives, replace the OEM ceramic magnetic plugs with OEI rare earth magnetic filter plugs. Perform weekly inspections to evaluate their performance in removing wear contamination and debris.

## RESULTS

The OEI magnetic filter plugs collected substantially more ferrous debris than the OEM plugs. Oil condition was improved and maintained at an "A" level for all equipment in the fleet. The effectiveness of OEI magnetic filter plugs allowed the service intervals to be extended to the target 330 hours. After 18 months, there were no unscheduled failures of the final drives resulting in increased dozer availability and cost savings in the six figures.

PRODUCT  
RECOMMENDATION**MAGNETIC  
FILTER PLUG**

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