

Case Study

Fluid & Condition Monitoring Services

REPAIR AFTER FAILURE!

On a recent sampling exercise for a regular Fluid and Condition Monitoring Services (F&CMS) customer, iron particulate was found in a sample belonging to a Cat 988G wheel loader.

The machine underwent regular sampling but at 8,000 hours iron particles were found in samples taken from the front axles. Highlighted on the analysis report, the customer was advised to investigate and repair now. After a brief inspection, where nothing was visible, the customer chose to ignore the advice of the laboratory and continued to run the machine.

At 11,100 hours the machine had failed. Another inspection revealed liquid metal lining the inside of the front axle. With further investigation, it became apparent that a shaft had come loose and was continuously rubbing against the hub; causing excessive wear and scoring.

If the customer had chosen to repair when advised it would have been a relatively cheap repair. The cost of replacing the seals and bearings at 8,000 hours would have worked out at £1.39 per hour.

As the customer chose to repair after failure rather than before – as recommended,

the cost of repair at 11,100 hours worked out at £2.22 per hour due to additional work to repair the hub.

If left, this issue would have inevitably caused damage to the gear surfaces necessitating replacement of the gears. If this was the case, in addition to replacing the seals and bearings, repairing/replacing the hub, the total repair cost for the customer would have been £3.30 per hour.

This is a perfect example of the excessive repair costs that can be saved by heeding and acting on the advice of the Fluid and Condition Monitoring team.

