Focus on Maintenance

Persil have got it wrong

PERSIL HAVE SPENT A LOT OF MONEY TRYING TO CONVINCE US THAT "DIRT IS GOOD". AND IF YOU'RE A DETERGENT MANUFACTURER WHO'D BE OUT OF BUSINESS WITHOUT IT, MAYBE IT IS. BUT IF YOU'RE A MAINTENANCE ENGINEER, DIRT IS BAD – AND NOWHERE MORE SO THAN IN YOUR HYDRAULIC AND LUBRICATION SYSTEMS.

Research has shown that 70% of failures of hydraulic systems, and up to 45% of all bearing failures, are caused by contamination. The hydraulic system contains the most expensive set of components, and costs the most to replace in terms of downtime and materials. So anything which can be done to reduce contamination and consequently reduce the level of failure must be worth considering.

Some system contamination is external – despite all the efforts made to keep it out with seals and filters. Some is generated internally through wear and tear. And some is simply the result of poor general housekeeping or maintenance.

Surprisingly perhaps, some contamination can even already be present in new oil. And even more surprisingly, with the help of MP Filtri, oil which has been in your system for thousands of operating hours can be made cleaner than the new oil you were going to change it for.

MP Filtri offers a number of different filtration options to clean the oil in your systems – and to keep it clean. However, to know which type of filtration will be most effective in any particular application, it's important first to know and understand the type of contamination it will have to cope with.

Whilst monitoring of vibration and temperature, for example, are nowadays fairly standard practice, monitoring of the condition of the oil within the hydraulic and lubrication systems is often overlooked. Yet it not only identifies the type of contamination – enabling the fitting of the most appropriate and effective filtration methods – but also functions as highly-effective condition monitoring, with the cleanliness or contamination of the oil providing a clear guide to the correct performance (or otherwise) of equipment, and also acting as early warning of other problems.

A high level of steel particles within the oil, for instance, might indicate a bearing beginning to break down. A higher than normal level of water contamination could mean there's a seal somewhere that's failing. And a rise in oil temperature is a valuable alert that something, somewhere, is not functioning as it should.

MP Filtri contamination monitoring equipment measures the cleanliness, quality and temperature of oil as it flows through the hydraulic or lubrication system, to give you a complete picture of the condition of the lifeblood of your equipment.

The monitoring equipment tests for and identifies contamination by solid particulates or by water, and also measures the fluid temperature. The data can then be made available in a variety of ways – downloaded to a PC, for example, networked via MODBUS or Ethernet, or even sent via GPRS direct to the maintenance engineer's mobile phone.

In the case of critical applications, if contamination or temperature measurements fall outside pre-set parameters, rather than waiting for a maintenance engineer to react – when it may be too late – offline filtration equipment can be triggered automatically to begin cleaning the oil immediately, or alternatively an automatic shutdown can be instigated.

The monitoring equipment from MP Filtri is available both as a permanent installation and as a portable unit, with both being quickly and easily connected to the system via the Minimess Test Point.

Units within the range offer up to 8 measuring channels, and operate in a viscosity range of 1-1000mm2/S and a pressure range of 2-400 bar. Operation is unaffected by system flow, pressure or temperature fluctuations, and naturally both the portable and permanent units meet all the relevant industry standards.

The portable unit is ideal for maintenance engineers who may want to test several items of non-critical equipment at different times, perhaps as part of a regular maintenance schedule. The permanent unit is particularly suited to critical equipment, where it can monitor 24/7, and provide alerts, emergency filtration or precautionary shutdowns as required.

Once contamination monitoring and filtering is in place you can expect multiple benefits in terms of maintenance, equipment performance, reliability, component life, productivity, and cost savings.

Firstly, the oil itself benefits. Effective filtering means you can expect it to last longer, enabling extended oil change intervals which reduces downtime and maintenance and oil costs. Oil which remains cleaner for longer also remains more effective for longer, which in turn helps to reduce component wear, prolong component life, reduce equipment maintenance costs and enhance equipment performance. In addition, an accurate understanding of the condition of the oil, and of whereabouts in a system contamination is occurring, provides valuable predictive maintenance data, which helps to eliminate costly breakdowns and unscheduled downtime.

And who knows? If it means you're spending less time changing oil or repairing equipment, MP Filtri filtration and condition monitoring equipment might also help to keep your overalls cleaner. Which is good news for you, but bad news for Persil.