



PREVENT ENGINE, TURBINE AND COMPRESSOR FAILURE

One major failure can shut down operations for days or weeks. Equipment failure is often linked to abrasive particles in the lubrication oil causing it to lose some of its anti-wear characteristics. Installing filters will minimize the number of particles prior to entering the equipment, but if the moving parts are sustaining damage, it may not be detected before a total failure occurs.



CASE STUDY

Early Detection Prevents Massive Damage in a Compressor Station

At a Compressor Station in the Southern United States, the AMOT MPD was installed on a large integral engine/compressor. With less than 3000 hours since the last engine overhaul, the MPD initiated an alarm, alerting plant personnel. They shut down the engine and checked the MPD grid where they observed metal particles. This led to an inspection of the power cylinder liner where damage was discovered.

Thanks to the early AMOT MPD alarm and positive plant personnel follow-up, damage only occurred to one cylinder and piston – no crankshaft or bearing damage was found. Maintenance crews repaired the damage and had the engine back in service in 2 days. The early notice provided by the MPD prevented costly damage to the large integral engine/compressor and saved hundreds of thousands of dollars in repairs and potential downtime.



Metal Particle Detector (MPD)

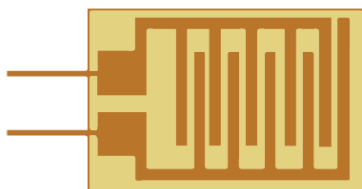
The AMOT Metal Particle Detector (MPD) is a proven, low-cost device that helps prevent equipment failure due to lube oil contamination. It is an in-line continuous wear debris monitor that detects the presence of metal particles in lubricating oils and alerts operators to perform maintenance before significant, costly damage occurs.

Lube oil enters at the top of the MPD's body and travels through a perforated board containing a plated electrical grid on the board's top and bottom sides. Fluid exits through the bottom of the MPD body. Activation of the MPD switch occurs when metal particles become trapped by differential pressure and bridge the gaps on its electrical grid completing a normally open (N.O.) Electrical circuit to sound an alarm.

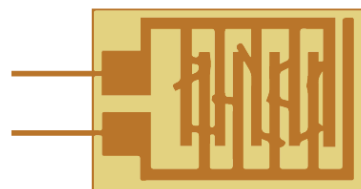
The MPD is safe to use on gas and diesel engines, compressors, gearboxes, transmissions, turbines, and pumps. It should be installed in the side stream of the main oil supply line, after the pump, but before the filter. Whenever possible, install the device above the crankcase. The unique sensing technology detects all conductive (magnetic or non-magnetic) particles, shavings, chips, and dust that can bridge the gap between the MPD's grid. This includes steel, aluminum, stainless steel, bronze, and tin.

Easy Maintenance

Performing maintenance shouldn't be time intensive



Circuit open
(No Particles on Grid)



Circuit closed
(Particles on Grid)

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