

Turbine Oil Analysis



WearCheck's Turbine Oil Analysis kits have been designed to measure the core functions of the oil and give you the ability to monitor the operating condition of the oil and hence conduct scheduled proactive maintenance procedures.

In today's world companies rely on turbines and compressors to provide power and gas transportation for core processes. Turbines and compressors already have demanding lubrication requirements and those demands are increasing. More demands are being put on these fluids as reservoir size and working clearances decrease and system power outputs, pressures, temperatures and oil service life increase. Lubricants must be highly oxidative and thermally stable to be able to handle operating temperatures. Additionally the lubricant must remain contaminant free to properly lubricate bearings and gears, and to act as a favourable hydraulic medium for governors and valving control systems.

Oil oxidation and sludge will lead to sticking servo valves, meaning control valves will not open on demand. Oil contamination will accelerate wear, cause governors and valves to operate erratically and plug system filters. Unmonitored, poor oil condition leads to unplanned outages which are extremely expensive.

In order to achieve peace of mind on the operating condition of your turbine and compressor you need the comprehensive testing that WearCheck provides. Specifically designed for industrial turbines and compressors, WearCheck's Turbine Oil Analysis kit combines well established industrial tests with more recent advances in industry testing to provide an unparalleled view of the operating condition of your critical lubricants.

WearCheck's Turbine Oil Analysis kit determines the levels of remaining antioxidants in the oil, detects unwanted oil contamination and will accurately determine the suitability of the lubricant for continued use. A comprehensive diagnosis will warn you of any potential for damaging varnish build up and include recommendations for any necessary maintenance actions to remove contamination and restore the lubricant to optimum operating condition.

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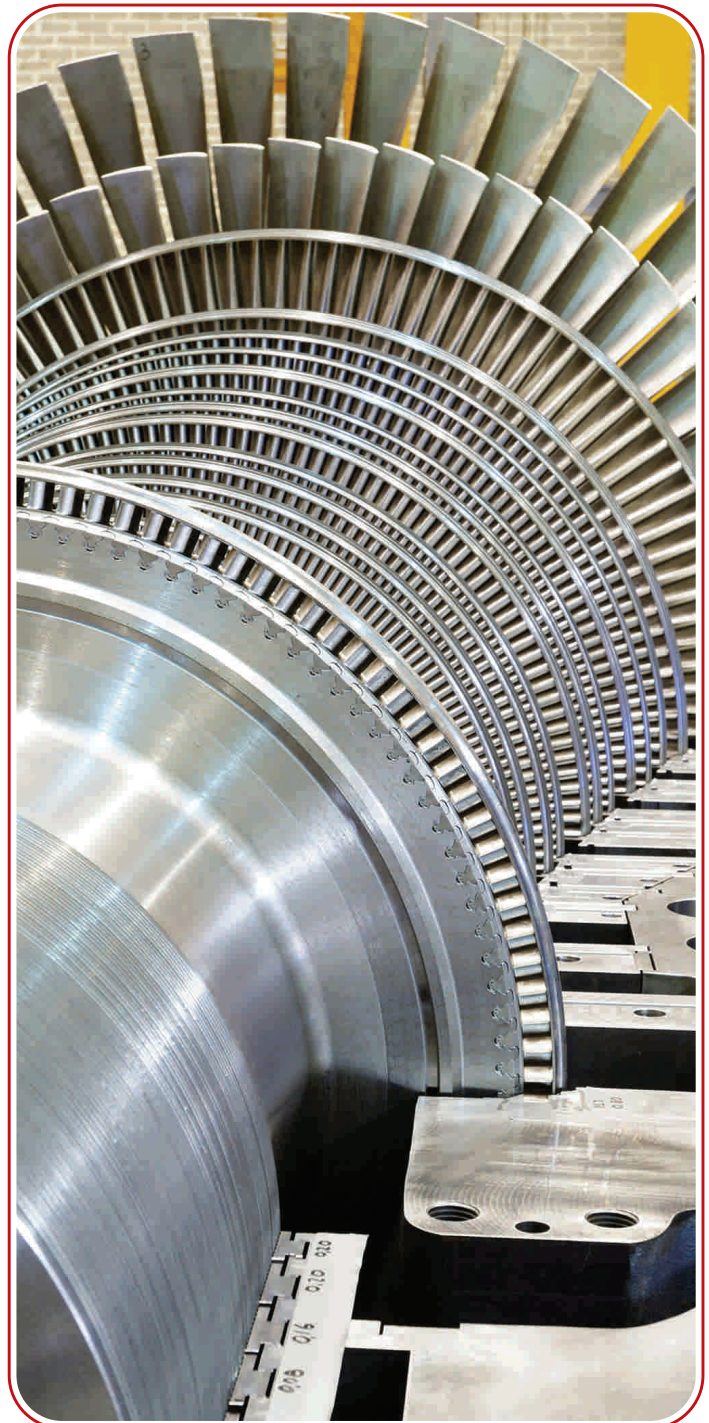
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SABS | ISO 9001 | ISO 14001

Quality Form w175 | Revision Date: August 2011



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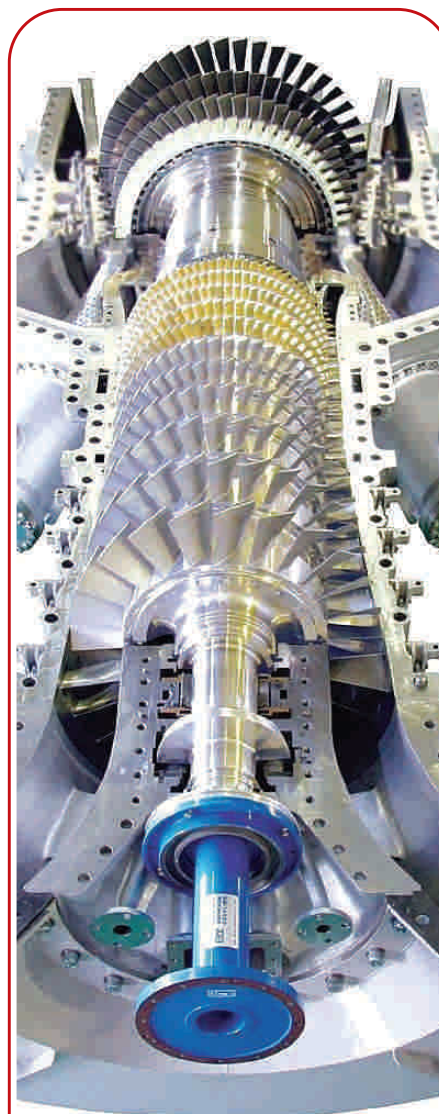
Turbine Oil Analysis Tests

WEAR[®] CHECK

Test	Method	Benefit	Standard	
			Kit	Advanced Kit
• Viscosity at 40°C	ASTM D7279	Indication of the lubricants resistant to flow at 40°C	4	4
• Viscosity at 100°C	ASTM D7279	Indication of the lubricants resistant to flow at 100°C	4	4
• Elemental Analysis	ASTM D5185*	Concentrations of various elements present in the lubricant	4	4
• Water content	ASTM D6304	Presence of moisture in parts per million (ppm)	4	4
• Total Acid Number	ASTM D974	Acidity of the lubricant	4	4
• Particle Quantification		Indication of magnetic particles in the lubricant	4	4
• Particle Count	ISO4406:99	Size and distribution of particles	4	4
• Remaining Useful Life	ASTM D6971*	Concentration of antioxidants present as compared to new oil	4	4
• Varnish Potential Rating		Presence of insolubles that may lead to varnish build up	4	4
• Foaming Characteristics	ASTM D892	Tendency of the lubricant to produce foam and the stability of the foam produced		4
• Air Release	ASTM 3427	Ability of the lubricant to release entrained air		4
• Water Separability	ASTM D1401	The lubricant's ability to separate from water		4
• Rotating Pressure Vessel Oxidation Test	ASTM D2272	Oxidative stability of the lubricant		<i>Available on request</i>

Typical Applications

- Gas turbines
- Steam turbines
- Hydro-electric turbines
- Rotary compressors



* Variances to the method are applied

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