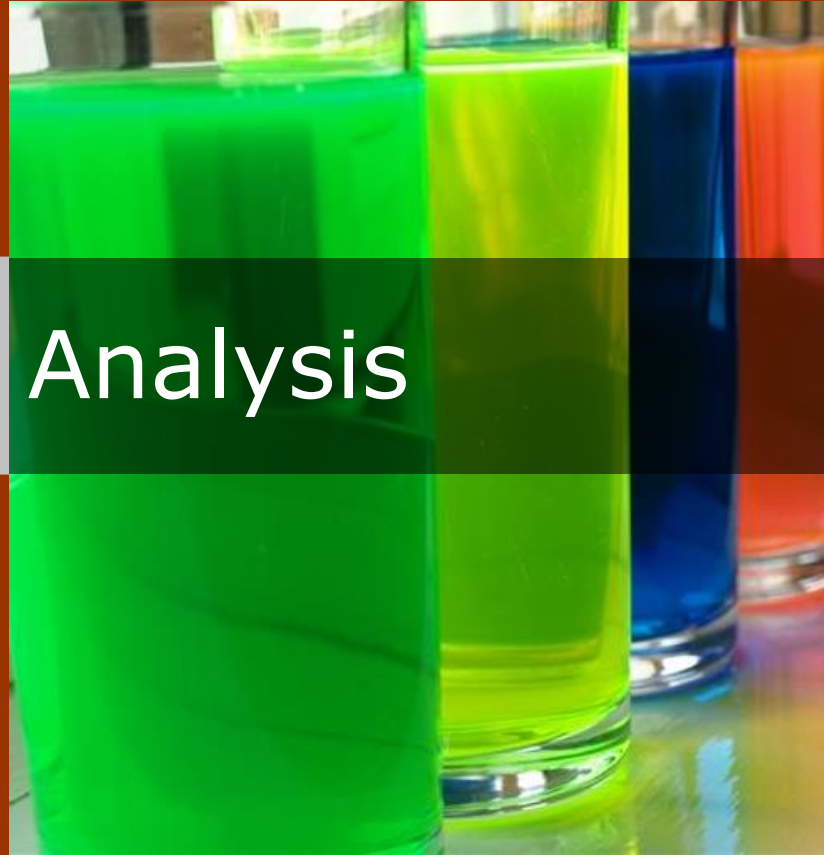


Coolant Analysis

Predictive Analysis for Cooling Systems

Coolant Analysis

WEARCHECK COOLANT ANALYSIS PROVIDES A COMPREHENSIVE VIEW OF THE STATE OF YOUR COOLANT AND COOLING SYSTEM.



OVERVIEW

- Avoid engine over-heating
- Prevent costly cooling system repairs
- Ensure optimum freeze protection
- Determine proper coolant treatment levels to prevent cooling system plugging and leaks
- Detect and correct corrosion and liner-pitting issues
- Alerts you to possible mixing of incompatible coolant technologies

BENEFITS

Oftentimes the predictive maintenance on cooling systems is overlooked.

The failure of the cooling system, however, will likely cause a failure in the component that is being cooled (i.e. the diesel engine). Coolant analysis is an integral part of every oil analysis monitoring program, and these neglected systems require WearCheck's Coolant Analysis to monitor the cooling fluid so that the system is properly maintained and cooling system failure is mitigated.

Coolants today are more complicated than ever and are formulated with a variety of additive packages. Mixing of coolant additive technologies leads to additive drop-out (precipitate) and leaves your cooling system exposed to corrosion, cavitation and plugging, ultimately leading to a dramatic increase in operating temperatures and potential system failure. WearCheck's Coolant Analysis program determines the type of coolant in use, and monitors for corrosion and determines when the coolant properties will cause cavitation or system plugging.

WearCheck's Coolant Analysis program will ensure that the coolant properties are within specification to optimize low temperature usage, minimize system corrosion, and prevent system cavitation. WearCheck's Coolant Analysis program ensures that Supplemental Coolant Additives (SCAs) are added in the proper concentration and that cooling water top-ups are using water within the required hardness levels preventing high levels of dissolved solids that can lead to additive drop-out and cooling system plugging.

A WearCheck Technical Representative will recommend the proper test kits for your equipment. WearCheck provides you with clear and concise directions, forms and sample bottles required to submit samples to the WearCheck laboratory. After you have taken the appropriate samples of coolant from the cooling system, simply fill out the information sheet and submit the form along with your sample to the laboratory.

WearCheck's Coolant Analysis is effectively used today for a complete range of coolants including Extended Life Coolants (ELC), hybrid coolants and conventional coolants used in cooling systems for engines, hydraulic systems and other systems requiring aqueous-based cooling fluids.



**WEAR
CHECK**

THE LEADER IN OIL ANALYSIS



























Coolant Analysis

Predictive Analysis for Cooling Systems



TESTING METHODS

COOL1 COOL2

	ICP Analysis ASTM D5185	Measures the parts per million (ppm) concentration of all elements present in the coolant which detects corrosion, contamination, and verifies the type of additive package.		
	Color / Appearance Visual	Pictures of color/clarity and visual debris (bottom of sample) are taken and coolant color, levels of contamination and visual problems are recorded.		
	pH Level ASTM D1287	Measures the pH of the coolant. Too low of a pH can cause corrosion, while too high of a pH can cause damage to gaskets and softer metal components in the cooling system.		
	% Glycol ASTM D3321	Determine the percentage of glycol present in the coolant by measuring the refractive index. Optimum freeze protection is achieved when the glycol percentage is between 45 and 60% of the total coolant mix.		
	Freeze Point ASTM D3321	The freeze point of the coolant is calculated based on the percent glycol and the type of coolant (ethylene / propylene) base in use. The freeze point determines the lowest temperature use of the coolant.		
	TDS In-house Method	Determination of the Total Dissolved Solids (TDS) present in the coolant. High TDS can cause corrosion, additive drop-out and increase bacterial growth in the coolant.		
	Nitrites Test Kit	Measures the amount of remaining supplemental coolant additives (SCAs) present in a conventional coolant. SCAs provide corrosion protection to the cooling system.		
	Reserve Alkalinity ASTM D1121	A determination of the remaining alkalinity reserve in a conventional coolant. The reserve alkalinity is an indication of the coolants ability to maintain an optimal pH level.		
	Carboxylates Test Kit	Test kit method for determination of carboxylates in Extended Life Coolant (ELC). Carboxylates provide protection against corrosion and cavitation so their concentration level must be monitored.		

1 – Nitrites & Reserve Alkalinity tested on conventional coolant, Carboxylates tested on Extended Life Coolant (ELC).



WearCheck Coolant Analysis includes everything to set-up a complete coolant analysis program. When you purchase a WearCheck Coolant analysis program you will receive the necessary sample kits. All WearCheck coolant analysis programs include laboratory testing, sample diagnosis and recommendations, sample report, and access to our patented WebCheck™ system to manage your coolant analysis program.

WearCheck offers additional programs for lubricated industrial machinery, mobile equipment, aviation, mining, fuels and Advanced Oil Monitoring for turbines.



THE LEADER IN OIL & COOLANT ANALYSIS

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WC-COOLANT-ANALYSIS-2020-10-22