

Fuel Analysis

Analysis for Diesel, Aviation & Marine Fuels

Fuel Analysis



WEARCHECK FUEL TESTING PROVIDES A COMPREHENSIVE ANALYSIS TO ENSURE OPTIMUM FUEL USAGE EFFICIENCY AND ADHERENCE TO REGULATORY AND INSURANCE REQUIREMENTS.

OVERVIEW

- Suitable for diesel fuel, aviation and marine fuels, and gas turbine fuel oils
- Test packages available for both cold / warm weather operation, as well as contamination and fuel quality assessment
- Ensure fuel meets all federal specifications and flammability and insurance requirements
- Assess the suitability of use of fuels stored for extended periods
- Ensure optimum fuel pump and injector performance and prevent power loss
- Prevent the growth of bio-films that lead to filter plugging and fuel system fouling



BENEFITS

In many industries fuel is the largest single on-going operating cost. Maximizing fuel usage efficiency is key to reducing operating costs, and a WearCheck fuel analysis program is essential to achieving this efficiency. WearCheck's fuel analysis packages offer you a range of testing to ensure fuel quality and adherence to federal specifications, detect fuel contamination and degradation, and where a flammability hazard exists requiring fire risk assessment, that your fuel meets regulatory and insurance requirements.

WearCheck's fuel test packages cover all areas of analysis. An assessment of fuel quality and volatility assists to prevent power loss, carbon deposits and smoke formation and ensure optimum fuel performance for your machinery. Fuel stored in bulk tanks or standby equipment/generators are subject to the formation of degradation by-products and contamination. WearCheck's Fuel Analysis program is designed to monitor for degradation and contamination including water, sediment, and microbial growth that lead to corrosion, filter-plugging, and the deterioration of fuel performance and fuel system fouling.

Kit	Fuel Package	Volume Req'd
DF1	Warm Weather	1 liter
DF2	Ignition Quality (Default Package)	1 liter
DF3	Cold Weather	1 liter
DF5	Basic Contamination	100 ml

WearCheck provides you with clear and concise directions, forms and sample bottles needed to submit fuel samples to the WearCheck laboratory. After you have taken fuel samples, from storage, delivery of machinery, simply fill out the information sheets and submit these forms with your samples to the laboratory.

WearCheck's fuel analysis is effectively used today for a broad range of fuels operating in a wide variety of industries including diesel fuel, aviation and marine fuels, and gas turbine fuel oils.

WearCheck's fuel analysis kits are NOT suitable for gasoline or Avgas samples.

**WEAR
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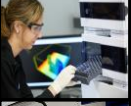







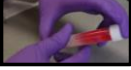
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TESTING METHODS*

		DF1	DF2	DF3	DF5
	ICP Analysis ASTM D5185	Determination of part per million (ppm) of 25 trace elements potentially present in the fuel (Aluminum to Zinc).		●	●
	Cetane Index ASTM D4737	Standard test method for calculated cetane index by four variable equation. Cetane index provides a measure of fuel ignition quality.		●	●
	Sulfur Content ASTM D5185/5453	Measurement of the sulfur content in the fuel by dispersive X-ray Spectrometry or Inductively Couple Plasma (ICP) Spectrometry to verify S15, S500 or S5000 specification.		●	●
	Viscosity ASTM D7279	Determination of kinematic viscosity of the fuel at 40°C in cSt. Fuel viscosity is important in preventing power loss due to injection pump or injector leakage.		●	●
	Particle Count ASTM D7647	Determination of fuel cleanliness to the ISO 4406:1999 reporting standard. High levels of particulate can cause excessive injector wear.		●	●
	Distillation/SimDis ASTM D86/D2887	Determines quantitatively the boiling range characteristics of the fuel. Assists in the determination of the cetane index and closed-cup flash point and can identify impurities in the fuel.		●	●
	API Gravity/Density ASTM D7777	Standard test method for density, relative density and/or API gravity of liquid petroleum by portable digital density meter.		●	●
	Flash Point ASTM D93/D7215	Determination of the Pensky-Martens closed cup flash point by closed-cup testing apparatus or calculated from SimDis. Low flash points can present a flammability hazard.		●	●
	Cloud/Pour Point ASTM D5771/D5950	Determination of the cloud point and/or pour point of the fuel to determine the low temperature operating range of the fuel.		●	●
	Water & Sediment ASTM D1796/D2709	Determination of the amount of free water and sediment present in the fuel by centrifugal method. Excessive water causes corrosion and sediment can lead to fuel system fouling.		● ¹	● ¹
	Microbial Content ASTM D6469	Multi-day test wherein agar is inoculated with the fuel sample and the amount of bacteria, fungi and/or mold colonies developed are counted and reported.		● ¹	● ¹

1 – Water & Sediment and Microbial Content testing is only performed when other tests warrant or by special request.

* - Karl Fischer (ASTM D6304), Gasoline / Bio-diesel content (GC Method), and ASTM Color (ASTM D1500) available upon request.



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

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



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WC-FUEL-ANALYSIS-2021-09-22