



PowerLabs Oil, Fuel & Chemical Testing Capabilities

Last Updated:
August 1, 2024

Program	Standard	Test	Sample
Conductivity of Water	ASTM D859	Silica	
Contaminant Analysis		% Assay	
Contaminant Analysis	GE Specification NEDC/NEDE	Nuclear Safety-Related Testing for BWR Plants	
Contaminant Analysis	US NRC Regulatory Guide 1.36	Testing Of Insulation	
Contaminant Analysis	EN-EV-112	EN-EV-112	
Contaminant Analysis	ASME N45.2.2	ASME N45.2.2	
Contaminant Analysis	ASME-NQA-1	ASME-NQA-1	
Contaminant Analysis	DOD MIL-STD-2041D	DOD MIL-STD-2041D	
Contaminant Analysis	US NRC Regulatory Guide 1.38	US NRC Regulatory Guide 1.38	
Contaminant Analysis	Westinghouse-GW-ZO-606	Westinghouse Contaminant Testing	
Contaminant Analysis	ASTM D501	Alkaline Detergent Testing	
Contaminant Analysis	ASTM C562	Moisture In Graphite	
Contaminant Analysis	ASTM C561	Ash In Graphite	
Contaminant Analysis	ASTM E202	Analysis Of Ethylene & Propylene Glycols	
Contaminant Analysis	ASTM D7348	Loss On Ignition	
Contaminant Analysis	Call for information	Client Specific Contaminant Testing Procedures	
Diesel Fuel Testing	ASTM 4176	Free Water and Particulate Contamination- Visual	
Diesel Fuel Testing	ASTM D129	Sulfur Content In Petroleum Products: General Bomb	
Diesel Fuel Testing	ASTM D1298/287	Density/Specific Gravity/API Gravity	
Diesel Fuel Testing	ASTM D130	Copper Strip Corrosion	
Diesel Fuel Testing	ASTM D1401	Water Content	
Diesel Fuel Testing	ASTM D1500	Color	
Diesel Fuel Testing	ASTM D1533	Water In Oil (Outside Vendor)	
Diesel Fuel Testing	ASTM D1744	Water Content (Outside Vendor)	
Diesel Fuel Testing	ASTM D1796	Water And Sediment	
Diesel Fuel Testing	ASTM D2274	Oxidation Stability	
Diesel Fuel Testing	ASTM D2276	Particulate Contamination	
Diesel Fuel Testing	ASTM D240	Heat Of Combustion By Bomb Calorimeter – Gross Hhv	
Diesel Fuel Testing	ASTM D2500	Cloud Point	
Diesel Fuel Testing	ASTM D2622	Sulfur By X-Ray Fluorescence	
Diesel Fuel Testing	ASTM D2709	Water And Sediment	
Diesel Fuel Testing	ASTM D4176	Free Water and Particulate Contamination- Visual	
Diesel Fuel Testing	ASTM D4294	Sulfur By X-Ray	
Diesel Fuel Testing	ASTM D445	Kinematic Viscosity	
Diesel Fuel Testing	ASTM D4629	Fuel Bound Nitrogen In Diesel Fuel	
Diesel Fuel Testing	ASTM D4737	Cetane- Four Point Method	
Diesel Fuel Testing	ASTM D4809	Heat Of Combustion By Bomb Calorimeter–Precision Lhv & Hhv	
Diesel Fuel Testing	ASTM D482	Ash Content	
Diesel Fuel Testing	ASTM D524	Ramsbottom Carbon Residue	
Diesel Fuel Testing	ASTM D5453	Sulfur Content By Ultraviolet Fluorescence	
Diesel Fuel Testing	ASTM D6079	Lubricity	
Diesel Fuel Testing	ASTM D613	Cetane Number	
Diesel Fuel Testing	ASTM D6304	Water In Oil	
Diesel Fuel Testing	ASTM D6371	Cold Filter Plugging Point	
Diesel Fuel Testing	ASTM D7978	Microbiological Testing	
Diesel Fuel Testing	ASTM D86	Distillation	
Diesel Fuel Testing	ASTM D88	Saybolt Viscosity	
Diesel Fuel Testing	ASTM D893	Pentane	
Diesel Fuel Testing	ASTM D93	Flash Point - Closed Cup	
Diesel Fuel Testing	ASTM D95	Water In Petroleum	
Diesel Fuel Testing	ASTM D96	Contaminants	
Diesel Fuel Testing	ASTM D97	Pour Point	
Diesel Fuel Testing	ASTM D975	Standard Specification For Diesel Fuel Oil Analysis	
Diesel Fuel Testing	ASTM D976	Cetane Index	
Diesel Fuel Testing	EMD 102	Filtration Cleanliness	

Diesel Fuel Testing		Ftir Analysis –Biodiesel In Diesel Fuel	
Diesel Fuel Testing		Microorganism Testing	
Diesel Fuel Testing		Red Dye Concentration	
Elastomers		Material Verification of non-metallic materials and products by FTIR	Material analysis and identification
Elastomers	Specific Gravity	Solids (O-rings)	
Elastomers	Shore Hardness	Shore A and M. Assuming test ready samples	
Elastomers	Compression/Deflection	Per ASTM D1056	
Fuel Dilution	ASTM D2982	Glycol	Call for Pricing
Fuel Dilution		Water by Pops	
Fuel Oil Package	ASTM D975	`	
Fuel Oil Package	ASTM D93	Flash Point	
Fuel Oil Package	ASTM D1796	Water and Sediment	
Fuel Oil Package	ASTM D86	Distillation	
Fuel Oil Package	ASTM D524	Ramsbottom Carbon Residue	
Fuel Oil Package	ASTM D482	Ash Content	
Fuel Oil Package	ASTM D2622-98	Sulfur	*MWE onsite sampling
Fuel Oil Package	ASTM D4294	Sulfur	
Fuel Oil Package	ASTM D2500	Cloud Point	
Fuel Oil Package	ASTM D976	Cetane	
Grease Testing	ASTM D1403	¼ Or ½ Scale Cone Penetration	
Grease Testing	ASTM D217	Full Scale Cone Penetration	
Grease Testing	ASTM D2265/566	Dropping Point	
Grease Testing	ASTM E168	FTIR Analysis – Identification Of Greases	
Grease Testing	ASTM D127	Melting Point of Greases	
Grease Testing	ASTM D792	Density and Specific Gravity by Displacement	
Insulating/Transformer Oil	ASTM D3612	Dissolved Gas Analysis	
Insulating/Transformer Oil	ASTM D1500	Color	
Insulating/Transformer Oil	ASTM D971	Interfacial Tension	
Insulating/Transformer Oil	ASTM D1298	Specific Gravity	
Insulating/Transformer Oil	ASTM D1524	Visual Examination	
Insulating/Transformer Oil	ASTM D1816	Dielectric Breakdown	
Insulating/Transformer Oil	ASTM D924	Dissipation Factor (25C and 100C)	
Insulating/Transformer Oil	ASTM D974	Total Acid Number	
Insulating/Transformer Oil	ASTM D1533	Moisture Content (Karl Fischer)	
Insulating/Transformer Oil	ASTM D6786	Particle Count	
Insulating/Transformer Oil	ASTM D4059	PCB	
Insulating/Transformer Oil	ASTM D7151	Metal Elements in Oil	
Lube Oil Package	ASTM D92	Flash Point (open cup)	
Lube Oil Package	ASTM D93	Flash Point (closed cup)	
Lube Oil Package	ASTM D1796	Water & Sediment	
Lube Oil Package	ASTM D445	Kinematic Viscosity or Saybolt Viscosity	
Lube Oil Package	ASTM D974	Neutralization or	
Lube Oil Package	ASTM D664	Total Acid or	
Lube Oil Package	ASTM D2896	Total Base Number	
Lubricating Oil Testing	ASTM D2273	Trace Elements In Lube Oils	
Lubricating Oil Testing	ASTM D2896	Total Base Number	
Lubricating Oil Testing	ASTM D445	Kinematic Viscosity	
Lubricating Oil Testing	ASTM D664/D974	Neutralization Number (Acid/Base Number)	
Lubricating Oil Testing	ASTM D665	Rust	
Lubricating Oil Testing	ASTM D874	Sulfated Ash	
Lubricating Oil Testing	ASTM D88	Saybolt Viscosity	
Lubricating Oil Testing	ASTM D892	Foaming Characteristics	
Lubricating Oil Testing	ASTM D92	Flash Point - Open Cup	
Lubricating Oil Testing	ASTM D4951	Additives In Lubricating Oils By Icp Spectrometry	
Lubricating Oil Testing	ASTM D5185	Additives In Lubricating Oils By Icp Spectrometry	
Lubricating Oil Testing	ASTM D6595	Spectrochemical Analysis	
Lubricating Oil Testing	ASTM E168	FTIR Analysis – Identification Of Oil	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D445	Viscosity (40C and 100C)	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D4739	Total Base Number	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D664	Total Acid Number	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D4055, D4807& D4312	Solids	

Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM E2412	Soot	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM E2412	Oxidation	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM E2412	Nitration	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D7647 & D7596; ISO 4406	Particle Count	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D4176	Free Water	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D6304	Total Water (Karl Fischer)	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D5185	Elemental Analysis	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D4176	Appearance	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	Performed w/ DR-7 Ferrograph	Wear Particle Concentration	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D1169	Electrical Resistivity	
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D2272		
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D7843		
Lubricating Oil/Electro-Hydraulic Control (EHC) Fluid	ASTM D93		
Metallurgical Testing/Analysis		Sample Size: 1/8" to 1" thick, 3/8" to 1" wide	
Metallurgical Testing/Analysis	Chemistry by OES	Assuming no disassembly or sample prep necessary.	
Metallurgical Testing/Analysis	Chemistry by EDS	Assuming no disassembly or sample prep necessary.	
Metallurgical Testing/Analysis	Physical - Hardness	Assuming no disassembly or sample prep necessary.	
Metallurgical Testing/Analysis	Micro-Hardness Profile	Includes metallurgical preparation	
Oil & Lubricant Analysis	ASTM D1121	Reserve Alkalinity	
Oil & Lubricant Analysis	ASTM D129	Sulfur Content in Petroleum Products	
Oil & Lubricant Analysis	ASTM D1293	pH	
Oil & Lubricant Analysis	ASTM D1298	API Gravity	
Oil & Lubricant Analysis	ASTM D130	Copper Strip Corrosion	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D1401	Water Separability	
Oil & Lubricant Analysis	ASTM D1403/D217	Unworked Cone Penetration	Sample size: 1 tube or 1 pint
Oil & Lubricant Analysis	ASTM D1403/D217	Worked Cone Penetration	Sample size: 1 tube or 1 pint
Oil & Lubricant Analysis	ASTM D1426	Ammonia in Water	
Oil & Lubricant Analysis	ASTM D1500	Color	
Oil & Lubricant Analysis	ASTM D1533	Water in Oil	Sample size: 1 tube or 1 pint
Oil & Lubricant Analysis	ASTM D1744	Water Content	
Oil & Lubricant Analysis	ASTM D1796/2709	Water & Sediment	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D1889/7315	Turbidity	
Oil & Lubricant Analysis	ASTM D1976	Metals by ICP	3 elements min
Oil & Lubricant Analysis	ASTM D2265/566	Dropping Point	Sample size: 1 tube or 1 pint
Oil & Lubricant Analysis	ASTM D2272	Oxidation Stability RPVOT Method	
Oil & Lubricant Analysis	ASTM D2274	Oxidation Stability	
Oil & Lubricant Analysis	ASTM D2276/6217	Particulate Contamination	Sample size: 1 liter
Oil & Lubricant Analysis	ASTM D240	Heat of Combustion of Diesel (BTU)	
Oil & Lubricant Analysis	ASTM D2500	Cloud Point	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D2622-82	Sulfur	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D287 API	Gravity	
Oil & Lubricant Analysis	ASTM D2896	Total Base Number	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D4176	Appearance - Visual Inspection	
Oil & Lubricant Analysis	ASTM D4294	Sulfur by X-Ray	Sample size: ½ liter

Oil & Lubricant Analysis	ASTM D4327	Anions by Ion Chromatography – F, Cl, Br, NO ₂ , NO ₃ , SO ₄	Additional sample prep may be required
Oil & Lubricant Analysis	ASTM D445	Kinematic Viscosity of Diesel Fuel Oils	
Oil & Lubricant Analysis	ASTM D445	Kinematic Viscosity of Lube Oils (Reverse Flow)	
Oil & Lubricant Analysis	ASTM D4809	Heat Value of Diesel Fuel (Precision Method)	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D482	Ash Content	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D524	Ramsbottom Carbon Residue	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D5453	Total Sulfur by UV Fluorescence	
Oil & Lubricant Analysis	ASTM D6079	Lubricity of Diesel Fuel	Sample size: 1/4 liter
Oil & Lubricant Analysis	ASTM D613	Cetane Number	
Oil & Lubricant Analysis	ASTM D644	Total Acid No.	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D6304	Water in Oils	
Oil & Lubricant Analysis	ASTM D665	Rust	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D86	Distillation	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D874	Sulfated Ash	
Oil & Lubricant Analysis	ASTM D88	Saybolt Viscosity	
Oil & Lubricant Analysis	ASTM D892	Foaming Characteristics	
Oil & Lubricant Analysis	ASTM D893	Pentane	Sample size: ½ liter
Oil & Lubricant Analysis	ASTM D92	Flash Point Open Cup	
Oil & Lubricant Analysis	ASTM D93	Flash Point Closed Cup	
Oil & Lubricant Analysis	ASTM D97	Pour Point	Sample size: 1 liter
Oil & Lubricant Analysis	ASTM D664/D974	Total Acid Number	
Oil & Lubricant Analysis	ASTM D976	Cetane	
Oil & Lubricant Analysis	ASTM E202	Percent Ethylene	
Oil & Lubricant Analysis		Micro-Organism Testing	
Oil & Lubricant Analysis		% Assay	Sample size: 1 liter
Oil & Lubricant Analysis		Red Dye Concentration	
Oil & Lubricant Analysis	ASTM D5907	Total Desolved Solids	
Oil & Lubricant Analysis	ASTM D5907	Suspended Solids	
Oil & Lubricant Analysis	ASTM D4951/5185/6595	Spectrochemical Analysis	
Oil & Lubricant Analysis	ASTM D7348/Standard Method 2540	Loss on Ignition	
Water Testing	ANSI N45.2.1	Water Purity Testing	
Water Testing	ASTM D1121	Alkalinity	
Water Testing	ASTM D1125	Conductivity Of Water	
Water Testing	ASTM D1293	pH of Water	
Water Testing	ASTM D1426	Ammonia	
Water Testing	ASTM D1889	Turbidity	
Water Testing	ASTM D1976	Metals By Inductively Coupled Plasma Spectrometry	
Water Testing	ASTM D4327	Anions By Ion Chromatography	
Water Testing	ASTM D7315	Turbidity Of Water	
Water Testing	Standard Method 4500-S2	Sulfide	
Water Testing	ASTM D859	Silica	
Water Testing	ASTM D5907	Filterable and Non-Filterable Matter in Water Samples (TDS and TSS)	
Water Testing	HACH DR3900	Iron Analysis By Hach Dr3900 Method	