

## PRUEBAS DE ACEITES EN LABORATORIO DE COATZACOALCOS

Método	Descripción
Visual	Apariencia
ASTM D4052	Densidad
ASTM D7279	Viscosidad a 40°C
ASTM D7279	Viscosidad a 100°C
1 + 2 (sumar)	Índice de viscosidad
ASTM D93	Temperatura de inflamación
ASTM E2412	Contenido de hollín
ASTM E2412	Oxidación, nitración y sulfatación
ASTM E2412	Dilución por combustible
ASTM D5185	Elementos de desgaste, aditivos y desglose de contaminantes (estándar)
ASTM D5185	Elementos de desgaste, aditivos y desglose de contaminantes (máxima sensibilidad)
ASTM D4739	Número básico total
ASTM D664	Número ácido total
ASTM E203	Contenido de agua por Karl Fisher
Crepitación	Contenido de agua (cualitativo)
ASTM D4007	Agua y sedimentos
ISO 4406	Códigos de partículas
ASTM D1401	Índice de separabilidad
ASTM D7946	Índice pH
ASTM D97	Temperatura de escurrimiento
ASTM D1500	Color ASTM

## PRUEBAS DE ACEITES Y ANTICONGELANTES EN LABORATORIO DE VALLEJO

Method	Description
ARI-700	Refrigerant Sampling
ARP 598A	Contamination by Particle Count (mod)
ASTM D1121	Alkalinity Reserve of Engine Coolants
ASTM D1218	Refractive Index
ASTM D1264	Water Washout of Grease
ASTM D1287	pH of Engine Coolant
ASTM D1298	Density, Relative Density (Specific Gravity
ASTM D1298	Density/SG/API by Hydrometer, 1980 method
ASTM D1298	Density Calculated from 60 F to 75 F
ASTM D130	Copper Corrosion by Copper Strip
ASTM D1331	Surface Tension
ASTM D1401	Water Separability of Oils
ASTM D1403	Cone Penetration (1/4) Worked
ASTM D1403	Cone Penetration (1/4) Unworked
ASTM D1403	Cone Penetration unworked & worked
ASTM D1403	NLGI Rating
ASTM D1404	Deleterious Particles in Grease
ASTM D1500	Color ASTM
ASTM D1533	Water by Karl Fischer (Insulating Oils)
ASTM D1533	Water by Karl Fischer (Evaporated)
ASTM D156	Color (Saybolt)
ASTM D1662	Sulfur, Active
ASTM D1742	Oil Separation from Greases
ASTM D1743	Corrosion Properties of Grease
ASTM D1796	Sediment & Water in Fuel by Centrifuge
ASTM D1816	Dielectric Strength of Insulating Oils
ASTM D189	Conradson Carbon Residue
ASTM D189	Conradson Carbon Residue on 10% Bottoms
ASTM D1903	Coefficient of Thermal Expansion of Oil
ASTM D1976	Metals by ICP, Aqueous
ASTM D1976	Filter Spectroscopy Wear Metals Aqueous
ASTM D1976	Single Element Calibration, Low Level
ASTM D1976	Aqueous Metals with Microwave Digestion
ASTM D1976	Aqueous Metals with Ash Digestion
ASTM D1976	Aqueous Metals with Digilab Digest
ASTM D2070	Thermal Stability of Hydraulic Oils
ASTM D2112	Oxid. Stability of Insul. Oil by RBOT(mod)
ASTM D2161	Viscosity, Kinematic to SUS Conversion
ASTM D217	Cone Penetration, Full Scale Worked
ASTM D217	Cone Penetration Full Scale (Unworked)
ASTM D217	Penetration 10,000 Strokes
ASTM D217	Penetration 100,000 Strokes
ASTM D217	NLGI Number Calculation
ASTM D2265	Dropping Point
ASTM D2270	Viscosity Index (Calculated)
ASTM D2270	Viscosity Index w/ Tests
ASTM D2270	Viscosity Index w/o Tests
ASTM D2272	Oxidation Stability (RPVOT Dups)
ASTM D2272	Oxidation Stability (RPVOT Method A)
ASTM D2274	Oxidation Stability Fuel Oil
ASTM D2276	Particulates Contamination in Av. Fuel
ASTM D2276	Particulates Contamination, -93 "A"

ASTM D2276	Contamination, Method B 1978
ASTM D2276	Particulates Contamination, -83 "A"
ASTM D240	Heat of Combustion by Bomb
ASTM D2500	Cloud Point
ASTM D2668	Oxidation Inhibitor by IR
ASTM D2670	Wear Properties of Fluids by Pin and Vee
ASTM D2709	Water & Sediment by Centrifuge
ASTM D2711	Demulsibility Characteristics of Lube Oil
ASTM D287	Gravity, API (Hydrometer Method)
ASTM D2896	Base Number (Potentiometric)
ASTM D2982	Glycol in Petroleum
ASTM D3120	Sulfur by Microcoul. (light liquid petrol.)
ASTM D3120	Sulfur by Micro. (Mod)(solids, grease, etc.)
ASTM D322	Gasoline Dilution in Oil by Distillation
ASTM D3321	Freezing Point and Glycol Concentration
ASTM D3339	Acid No. by SMC
ASTM D3427	Gas Bubble Separation
ASTM D3524	Fuel Dilution in Oils by GC(mod)
ASTM D3524	Fuel Dilution by G.C., (Mod)
ASTM D3525	Gasoline Diluent in Engine Oil by GC
ASTM D3612	Dissolved Gas Analysis
ASTM D381	Existent Gum in Turbine Fuel
ASTM D3828	Flash Point by Setaflash Closed Cup
ASTM D4048	Copper Corrosion of Lubricating Grease
ASTM D4048M	Corrosion Properties of Grease Modified
ASTM D4052	Density by Digital Density Meter
ASTM D4055	Pentane Insolubles by Membrane Filtration
ASTM D4176	Free Water & Particulates in Distill. Fuels
ASTM D4294	Sulfur By X-Ray Fluorescence
ASTM D4310	Sludging and Corrosion Tendencies in Oils
ASTM D445	Viscosity, Kinematic 40C, 100C, 100F, 210F
ASTM D445	Viscosity Calculations
ASTM D445	Viscosity at Temp. 50C, and 25C
ASTM D445	Viscosity at Special Temp. (Other)
ASTM D445	Viscosity at 100F and 210F in SUS
ASTM D445	Viscosity @ 40C, 100C, 100 F, 210 F (cSt)
ASTM D4530	Determination of Carbon Residue
ASTM D473	Sediment in Crude Oils and Fuel Oils by Extraction
ASTM D4737	Cetane Index (Calculated)
ASTM D4737	Cetane Index w/ Distill, Dens. and Sulfur
ASTM D4739	Base Number by Potentiometric Titration
ASTM D4807	Sediment in Crude Oil by Filtration
ASTM D4809	Heat of Combustion by Bomb (Precision)
ASTM D482	Ash Content
ASTM D4928	Water in Crude Oil by Coulometric Karl Fisher Titration
ASTM D4951	Additives in Oils by ICP
ASTM D5002	Density & Relative Density of Crude Oils by Digital Analyzer
ASTM D5185	Metals and Contaminants by ICP
ASTM D5185	Metals and Contaminants by ICP, w/sulfur
ASTM D524	Ramsbottom Carbon Residue 10% Bottoms
ASTM D524	Ramsbottom Carbon Residue
ASTM D5452	Particulate Contamination in Av. Fuel
ASTM D5483	Oxidation Induction Time of Grease
ASTM D56	Flash Point by Tag Closed Cup

ASTM D5620	Pin-on-Vee Block
ASTM D5854	Mixing & Handling of Liquid Samples of Petroleum Products
ASTM D6079	Lubricity of Diesel Fuel by HFRR at 60°C
ASTM D611	Aniline Point
ASTM D6186	Oxidation Induction Time of Oils by PDSC
ASTM D6217	Particulate Cont. in Middle Dist. Fuels
ASTM D6304	Water in Petrol. Prod. by Coul. Titration
ASTM D6371	Cold Filter Plugging Point
ASTM D6468	High Temp. Stability of Mid. Dist. Fuels
ASTM D664	Total Acid Number, ASTM D664
ASTM D664	Initial pH (Mod)
ASTM D665	Rust Preventative Characteristics 4 hrs.
ASTM D665	Rust Preventative Characteristics Extended
ASTM D6810	Antioxidant in HL Turb. Oil by RULER
ASTM D6971	Antioxidant in Non-Zn Turb. Oil by RULER
ASTM D808	Chlorine in Petroleum by IC/Bomb (Mod)
ASTM D808	Sample Preparation by Bomb
ASTM D86	Distillation of Petroleum Products
ASTM D874	Sulfated Ash of Lube Oils
ASTM D877	Dielectric Strength of Insulating Oils
ASTM D892	Foaming Characteristics
ASTM D893	Pentane/Coagulated Insolubles
ASTM D893	Toluene/Coagulated Insolubles
ASTM D91	Precipitation Number of Lube Oils
ASTM D92	Flash or Fire Point by Cleveland Open Cup
ASTM D92	Flash & Fire Point by Cleveland Open Cup
ASTM D93	Flash Point Pensky Martin Closed Tester
ASTM D938	Congealing Point of Petroleum Waxes
ASTM D943	TOST Oxidation Characteristics Of Inhibited
ASTM D95	Water in Petroleum Prod. And Bituminous Mat
ASTM D97	Pour Point
ASTM D971	Interfacial Tension
ASTM D974	Acid Number by Color Indicator
ASTM D975	D975 No. 2 Diesel w/D613 Cetane
ASTM D975	D975 No. 2 Diesel w/D976 Cetane (Pkg)
ASTM D976	Cetane Index (Calculation Only)
ASTM D976	Cetane Index (Includes tests)
ASTM E1269	Specific Heat Capacity by DSC
ASTM E1868	Loss-On-Drying by Thermogravimetry
ASTM E794	Melting And Crystallization Temperatures B
ASTM F312	Microscopical Sizing/Count on Filters (mod)
ASTM G99	Wear by Pin-on-Disc
ASTM G99	Static & Kinetic Friction
ASTM G99	ECR by Pin-on-Disk
EMD 102	Contamination by Filtration
HL-0015	Contamination of Brake Fluid with Oil
HL-0021	Accelerated Fuel Oil Stability
HL-0033	Bleed & Evaporation of Grease Like Material
HL-0871	Water Leachables Extraction Procedure
HL-1101	Debris Evaluation by Microscope
HL-1102	Rheology
HL-1103	Scanning Electron Microscope
HL-1103	Scanning Electron Microscope/AFA
HL-1103	SEM/Microscopic Evaluation

HL-1104	Varnish Potential
HL-1116	Particle Contamination by Filter Residue
HL-1116	Filter Residue with Metals
HL-1120	Asphaltenes in Heavy Fuel Oil
HL-1121	Appearance
HL-1124	Sugar Test
HL-1126	Microbial Growth
HL-1131	Ferrography, Direct Reading (DR)
HL-1132	Ferrography, Analytical W/DR
HL-1132	Ferrography, Analytical
HL-1137	Chlorides in Lubricants
HL-1140	FTIR
HL-1141	FTIR (IR Scan)
HL-1141	FTIR Scan with Interpretation
HL-1141	FTIR Scan by ATR (Attenuated Reflectance)
HL-1141A	Percent Bio-diesel by FTIR
HL-1142	Filter Patch Test
HL-1145	Appearance of Grease
HL-1147	PCB Screen (A)
HL-1151	Total Halogens by IC (with bomb prep)
HL-1151	Total Leachable Halogens by IC (with prep)
HL-1152	Conductivity of Fluids
HL-1154	Phosphate Esters by GC (Av. Hydr. Fl.) Low MW
HL-1154	Phosphate Esters by GC (Av. Hydr. Fl.)
HL-1157	Oxyrane Oxygen by Perchloric Acid
HL-1158	Metals by ICP AES Organic
HL-1158	Metals by ICP, 10% Bottoms
HL-1158	Low Level Silver Organic
HL-1158	Metals by ICP AES Organic, with sulfur
HL-1161	HMB Biomass Culture Study
HL-1165	Thermogravimetric Analysis (TGA)
HL-1165	Soot Percent by TGA, ASTM D5967 Appendix A4
HL-1168	Chloride by Microcoulometry(solids,grs,wtr)
HL-1171	Nitrogen Spurge
HL-1178	Particulate Contamination of Grease
HL-1182	RULER Analysis
HL-1184	Particle Count by HIAC
HL-1185	HIAC Particle Count ISO 11171 SDS
HL-1187	Total Dissolved Solids in Coolant
HL-1188	SCA, Nitrites and Molybdates in Coolant
HL-1189	Mineral Oil Content in EHC Fluid (Proc. A)
HL-1189	Mineral Oil Content in EHC Fluid (Proc. B)
HL-1191	Ferrous Wear Debris by PQ Index
HL-1193	Compatibility of Oils and Concentrates
HL-1194	Evaporation Residue
HL-1196	Microscopic Evaluation of Debris
HL-1196	Microscopic Evaluation of Debris
HL-1197	SIMDIS (Simulated Distillation Process)
HL-1198	Evaluation of Grease Degradation by Thin Film
HL-1199	Evaluation Of Grease Degradation By Thin F
HL-1200	Particle Contamination, Opticle Examination
HL-1201	Sludging tendency by RPVOT
HL-1202	Grease Compatibility
HL-1204	EHC Filter Patch with Hexane
HL-1205	Pin and Vee Block Testing
HL-1205	Pin and Vee Block Testing
HL-1206	Pore Blockage Particle Count
HL-1213	Lurbricating Oil Air Stability Test (LOAST)
SAE AS4059	Cleanliness Classification-Hydraulic Fluids

