

CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Bureau Veritas 2450 Hassell Road Hoffman Estates, IL 60195

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field of

TESTING

Refer to the accompanying Scope of Accreditation for information regarding the types of tests to which this accreditation applies.

L2264.03
Certificate Number

ANAB Approval

Certificate Valid: 03/19/2018-12/23/2019 Version No. 001 Issued: 03/19/2018





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Bureau Veritas

2450 Hassell Road Hoffman Estates, IL 60195 Michael Mayers 847-884-7877

TESTING

Valid to: December 23, 2019 Certificate Number: L2264.03

Chemical

| Specific Tests and/or Properties Measured | Specification, Standard, Method, or Test Technique | Items, Materials or Product Tested | Key Equipment or Technology |
|--|---|---------------------------------------|--------------------------------|
| Accelerated Stability | OCM – Accelerated Stability | Fuel | |
| Total Acid Number | ASTM D664 Mod | Oil | Titration |
| Total Acid Number | ASTM D974 Mod | Oil, Fuel | Titration |
| API Gravity | ASTM D287 | Oil, Fuel | Hydrometer |
| Appearance | ASTM D4176 | Fuel | |
| Physical Properties of Coolants | OCM – Physical Properties of Coolants | Coolant | Physical |
| Ash Content | ASTM D482 | Fuel | Oven |
| Microorganisms | OCM - Microorganisms | Any Fluid | Oven |
| Total Base Number | ASTM D4739 Mod | Oil | Titration |
| Total Base Number | OCM-TBN | Oil | Titration |
| Biodiesel Content by FTIR | IL-BioDiesel | Fuel | |
| Carbon Residue | ASTM D524 | Fuel | Oven |
| Cetane Index, Calculated | ASTM D976 ASTM D4737 | Fuel | Calculation |
| Chlorides | IL-MWF-2011 | MWF | |
| Cloud Point | ASTM D2500 | Fuel | Physical |





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|--|---|---------------------------------------|--------------------------------|
| Cold Flow Plug Point | ASTM D6371 | Fuel | |
| Color, ASTM | ASTM D1500 | Any Fluid | Physical |
| Color, Gardner and Sayboldt | ASTM D1500 | Oil | By Conversion |
| Conductivity | IL-MWF-Conductivity | MWF | |
| Copper Strip Corrosion | ASTM D130 | Oil, Fuel | |
| Density Specific Gravity | ASTM D1298 | Oil, Fuel | Hydrometer |
| Dielectric Breakdown | ASTM D877 | Oil | |
| Distillation | ASTM D86 | Fuel | |
| Ferrography, Analytical | ASTM D7690 | Any Fluid | Microscope |
| Ferrography DR | OCM – DR3 | Oil | |
| Ferrography DR | OCM – DR7 | Oil | |
| ELC Coolant Inhibitor | OCM – ELC Test Strip | Coolant | Titration |
| Flash Point Closed Cup | ASTM D93 | Oil, Fuel | Flash |
| Flash, Fire Point Open Cup | ASTM D92 | Oil, Fuel | Flash |
| Freeze Point of Coolant | IL-Coolants-FZPT | Coolant | Physical |
| FTIR Infrared Analysis | OCM - FTIR | Any Fluid | |
| Fuel Dilution by GC | IL-FDD by GC | Oil | GC |
| Glycol | ASTM D2982 | Oil | Titration |
| Glycol | OCM – BP Glycol | Oil | Positive/Negative |
| Estimate of Net & Gross Heat of Combustion Fuel | ASTM D4868 | Fuel | Calculation |
| Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter | ASTM D4809 | Fuel | Thermal Analysis |
| Karl Fischer Water | ASTM D6304 | Oil | Titration |
| Lubricity by HFRR | ASTM D6079 | Fuel | Physical |





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|---|---|---|--------------------------------|
| Metals by ICP | ASTM D5185 Mod | Any Fluid | ICP |
| MWF-Brix | IL-MWF-2011 | Aqueo <mark>us</mark> fluids & Metal w <mark>ork</mark> ing fluids | Physical |
| MWF- Iron Chip Corrosion | IL-MWF-CICC | Metal working fluids | Gravimetric |
| MWF- Dirt by Filtration | IL-MWF -DIRT | Metal working fluids | Gravimetric |
| MWF- Free Oil | IL-MWF-Free oil | Metal working fluids | Volumetric |
| MWF- pH & Alkalinity | IL-MWF- pH & ALK | Metal working fluids | Titration |
| MWF-Tramp Oil | IL-MWF-Tramp oil | Metal working fluids | Volumetric |
| Nitrites | OCM - Nitrites | Coolant | Titration |
| Particle Count, Laser | ISO 11500 | Oil | Particle count |
| Particulate Contamination | ASTM D5452 ASTM D6217 | Fuel | Physical |
| Pentane & Toluene Insolubles | ASTM D893 | Oil, Fuel | |
| pH of Coolants | ASTM D1287 | Coolant | |
| Pour Point | ASTM D97 | Fuel | Physical |
| Refrigerants, Testing of Low & High Pressure | II-Refrig | Refrigerant | |
| Reserve Alkalinity | ASTM D1121 | Coolant | Titration |
| Sulfated Ash | ASTM D874 | Oil, Fuel | Titration |
| Sulfur in Petroleum by XRF Spectrometer | ASTM D4294 | Oil, Fuel | Spectroscopy XRF Visible |
| Sulfur, Total by UV Fluorescence | ASTM D5453 | Fuel | Spectroscopy UV Visible |
| Total Hardness (CaCO3) | IL-MWF-2011 | MWF | |
| Varnish by Quantitative Spectrophotometric Analysis (QSA) | IL 2005-QSA | Oil | |
| Viscosity | ASTM D445 | Oil, Fuel | |
| Viscosity | ASTM D7279 Mod | Oil, Fuel | |





Chemical

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|--|---|---------------------------------------|--------------------------------|
| Viscosity Index | ASTM D2270 | Oil | Calculation |
| Viscosity, SUS Calculated | ASTM D2161 | Any Fluid | Calculation |
| Water and Sediment | ASTM D2709 ASTM D4007 Mod ASTM D1796 Mod | Oil, Fuel | Centrifuge |
| Water Percent Estimate by Hotplate | OCM – Water by Hotplate | Oil | Physical |

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. L2264.03



