

Machine Id **GENERATOR 2** Component Genset DIESEL ENGINE OIL SAE 15W40 (--- GAL)

| | | | | | $\langle \rangle$ | | |
|---|------------------|----------|------------------------|-----------|-------------------|-----------------|-----------------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. | Sample Number | | Client Info | | WC0746146 | | WC0746161 |
| | Sample Date | 1 | Client Info | | 21 May 2024 | 05 Mar 2024 | 13 Jan 2024 |
| | Machine Age | hrs | Client Info | | 4024 | 3544 | 2897 |
| | Oil Age | hrs | Client Info | | 480 | 500 | 500 |
| | Filter Age | hrs | Client Info | | 480 | 500 Observed | 500 Observed |
| | Oil Changed | | Client Info | _ | Changed | Changed | Changed |
| | Filter Changed | | Client Info | | Changed | Changed | Changed |
| | Sample Status | | | | ATTENTION | NORMAL | ATTENTION |
| WEAR All component wear rates are normal. | Iron | ppm | ASTM D5185m | >50 | 9 | 34 | 9 |
| | Chromium | ppm | ASTM D5185m | | <1 | 1 | 0 |
| | Nickel | ppm | ASTM D5185m | | 0 | 0 | 0 |
| | Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | Silver | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| | Aluminum | ppm | ASTM D5185m | >12 | 3 | 2 | 2 |
| | Lead | ppm | ASTM D5185m | >17 | 12 | 2 | 4 |
| | Copper | ppm | ASTM D5185m | >70 | <1 | 1 | <1 |
| | Tin | ppm | ASTM D5185m | >15 | <1 | 5 | 0 |
| | Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | | | | | _ | ~ | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | | 7 | 6 | 5 |
| There is no indication of any contamination in the oil. | Potassium | ppm | ASTM D5185m | | 1 | 1 | 0 |
| | Fuel | % | | >4.0 | <1.0 | <1.0 | <1.0 |
| | Water | | WC Method WC Method | >0.1 | NEG NEG | NEG NEG | NEG NEG |
| | Glycol Soot % | % | *ASTM D7844 | | 0.1 | 0.9 | 0.1 |
| | Nitration | Abs/cm | *ASTM D7644 | >20 | 8.7 | 6.0 | 7.7 |
| | Sulfation | Abs/.1mm | *ASTM D7024 | | 23.6 | 16.2 | 23.7 |
| | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | NEG |
| | | | | | | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 3 | 16 | 2 |
| The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type. | Boron | ppm | ASTM D5185m | | 276 | 88 | 345 |
| | Barium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | Molybdenum | ppm | ASTM D5185m | 100 | 120 | 46 | 123 |
| | Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| | Magnesium | ppm | ASTM D5185m | | 607 | 1284 | 648 |
| | Calcium | ppm | ASTM D5185m | 3000 | 1652 | 560 | 1614 |
| | Phosphorus | ppm | ASTM D5185m | | 736 | 1031 | 716 |
| | Zinc | ppm | ASTM D5185m | | 810 | 1210 | 832 |
| | Sulfur | ppm | ASTM D5185m | | 2702 | 3312 | 2460 |
| | Oxidation | Abs/.1mm | *ASTM D7414 | | 18.9 | 8.4 | 18.0 |
| | Base Number (BN) | ng KUH/g | ASTM D2896 | 0.0 | 8.3 | 7.2 | 8.7 |

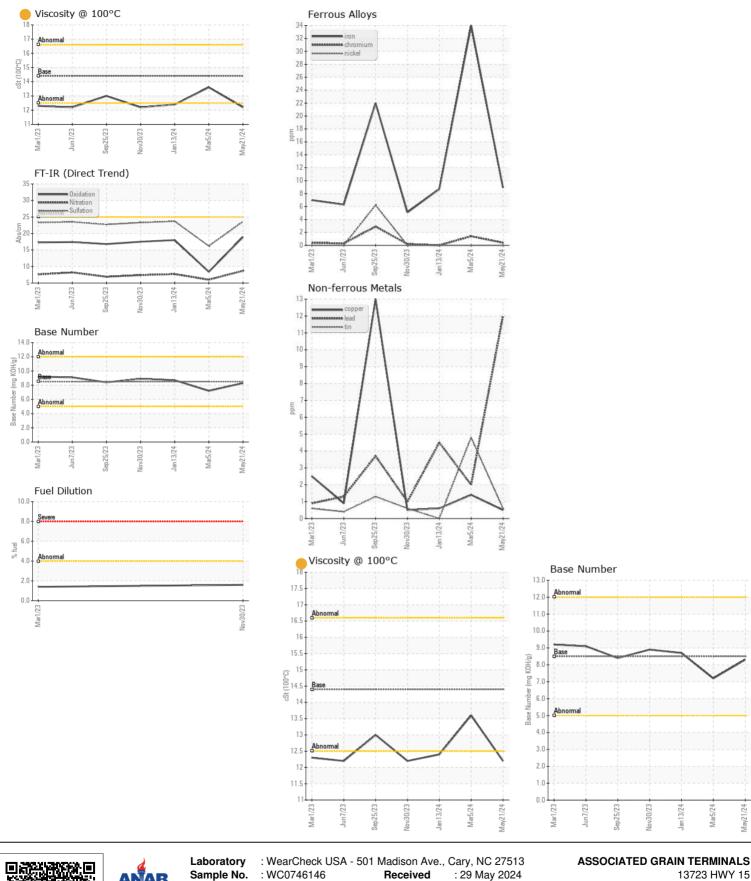
Visc @ 100°C cSt

ASTM D445 14.4

13.6

12.2

12.4



13723 HWY 15 : 31 May 2024 Lab Number : 06194751 Tested BRAITHWAITE, LA Unique Number : 11056874 Diagnosed : 31 May 2024 - Jonathan Hester US 70040 Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel) Contact: Service Manager Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Contact/Location: Service Manager - ASSBRA Page 2 of 2