

Machine Id **12952** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--|-------------------|------------|--------------------------|-----------|-------------|-------------|-------------|
| Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. | Sample Number | | Client Info | | WC0841841 | WC0842157 | WC0841817 |
| | Sample Date | | Client Info | | 03 Feb 2024 | 22 Oct 2023 | 14 Aug 2023 |
| | Machine Age | mls | Client Info | | 220930 | 208235 | 198060 |
| | Oil Age | mls | Client Info | | 0 | 0 | 0 |
| | Filter Age | mls | Client Info | | 0 | 0 | 0 |
| | Oil Changed | | Client Info | | Changed | Changed | Changed |
| | Filter Changed | | Client Info | | Changed | Changed | Changed |
| | Sample Status | | | | NORMAL | NORMAL | NORMAL |
| WEAR All component wear rates are normal. | Iron | ppm | ASTM D5185m | >100 | 27 | 22 | 25 |
| | Chromium | ppm | ASTM D5185m | >20 | 2 | 1 | 2 |
| | Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| | Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| | Aluminum | ppm | ASTM D5185m | >20 | 3 | 4 | 3 |
| | Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| | Copper | ppm | ASTM D5185m | >330 | 6 | 7 | 6 |
| | Tin | ppm | ASTM D5185m | >15 | 0 | <1 | 0 |
| | Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | | | | | | ~ | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | | 6 | 5 | 9 |
| There is no indication of any contamination in the oil. | Potassium Fuel | ppm | ASTM D5185m WC Method | | <1 | 2 | 5 <1.0 |
| · | | | | | <1.0 NEG | NEG | |
| | Water | | WC Method WC Method | >0.2 | | NEG | NEG |
| | Glycol Soot % | % | *ASTM D7844 | . 2 | NEG 0.5 | 0.4 | 0.4 |
| | Nitration | Abs/cm | *ASTM D7624 | | 8.9 | 8.3 | 7.8 |
| | Sulfation | Abs/.1mm | *ASTM D7024 | | 20.0 | 19.6 | 18.9 |
| | 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 | >0.2 | NEG | NEG | NEG |
| FLUID CONDITION | Sodium | | ASTM D5185m | <158 | 3 | 0 | <1 |
| FLOID CONDITION | Boron | ppm ppm | ASTM D5185m | | 2 | 6 | 0 |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. | Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| | Molybdenum | ppm | ASTM D5185m | | 64 | 60 | 65 |
| | Manganese | ppm | ASTM D5185m | 100 | <1 | <1 | <1 |
| | Magnesium | ppm | ASTM D5185m | 450 | 934 | 881 | 959 |
| | Calcium | ppm | ASTM D5185m | | 1047 | 1008 | 1110 |
| | Phosphorus | ppm | ASTM D5185m | | 974 | 968 | 1011 |
| | Zinc | ppm | ASTM D5185m | | 1155 | 1179 | 1247 |
| | | In In | | | | | |

Sulfur

Oxidation

Visc @ 100°C cSt

ppm ASTM D5185m 4250

ASTM D445 14.4

Abs/.1mm *ASTM D7414 >25

Base Number (BN) mg KOH/g ASTM D2896 8.5

2848

15.7

8.8

12.2

2798

16.1

8.4

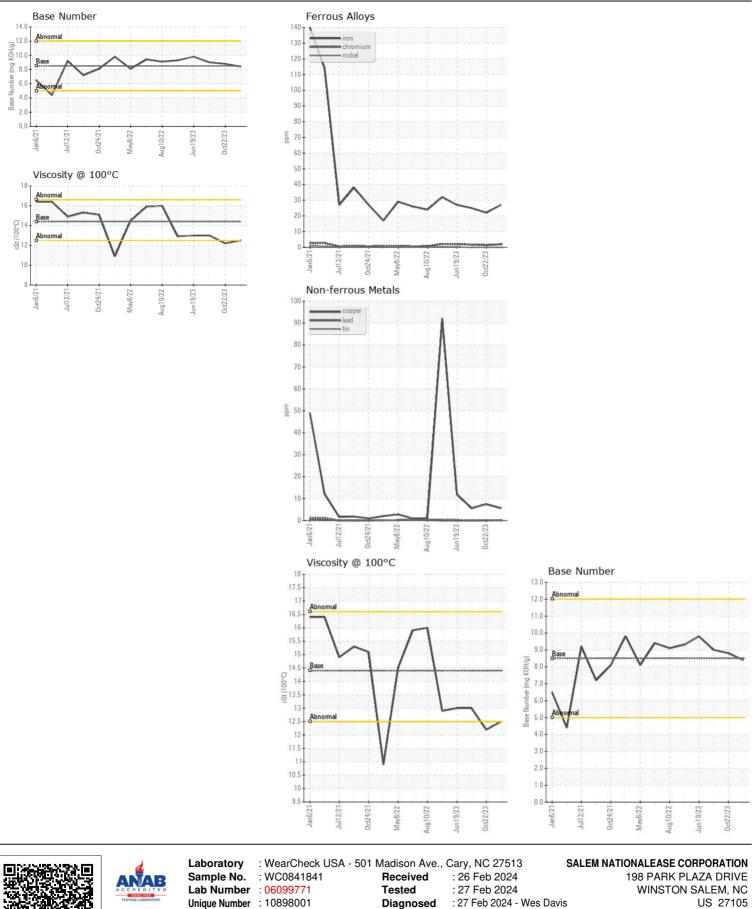
12.5

3329

9.0

14.3

13.0



Test Package : FLEET **Contact: Audrey Hopkins** Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. Audrey.Hopkins@salemcorp.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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