

Machine Id INTERNATIONAL 3555 Component Diesel Engine

DIESEL ENGINE OIL SAE 10W30 (19 QTS)

| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|--------------------|------------------|--------------------|-----------|--------------|----------------|--------------|
| Resample at the next service interval to monitor. | Sample Number | | Client Info | | WC0916540 | WC0878575 | WC0822924 |
| | Sample Date | | Client Info | | 21 May 2024 | 19 Nov 2023 | 09 Aug 2023 |
| | Machine Age | mls | Client Info | | 218703 | 203373 | 194724 |
| | Oil Age | mls | Client Info | | 15308 | 8649 | 9087 |
| | Filter Age | mls | Client Info | | 15308 | 8649 | 9087 |
| | Oil Changed | | Client Info | | Changed | N/A | Changed |
| | Filter Changed | | Client Info | | Changed | N/A | Changed |
| | Sample Status | | | | NORMAL | ATTENTION | NORMAL |
| WEAR | Iron | ppm | ASTM D5185m | >90 | 18 | 11 | 12 |
| | Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| All component wear rates are normal. | Nickel | ppm | ASTM D5185m | >2 | <1 | <1 | <1 |
| | Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| | Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| | Aluminum | ppm | ASTM D5185m | >20 | 4 | 3 | 6 |
| | Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| | Copper | ppm | ASTM D5185m | | 2 | <1 | <1 |
| | Tin | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| | 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 | >25 | 6 | 5 | 7 |
| There is no indication of any contamination in the oil. | Potassium | ppm | ASTM D5185m | >20 | 7 | 4 | 5 |
| | Fuel | % | ASTM D3524 | >3.0 | <1.0 | 0.9 | <1.0 |
| | Water | | WC Method | >0.2 | NEG | NEG | NEG |
| | Glycol | | WC Method | | NEG | NEG | NEG |
| | Soot % | % | *ASTM D7844 | >6 | 0.6 | 0.4 | 0.4 |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 11.7 | 9.6 | 9.9 |
| | Sulfation | Abs/.1mm | *ASTM D7415 | | 22.4 | 20.6 | 21.2 |
| | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Appearance Odor | scalar | *Visual | NORML | NORML | NORML NORML | NORML |
| | Emulsified Water | scalar scalar | *Visual *Visual | NORML | NORML NEG | NEG | NORML NEG |
| | | Scalai | visuai | 20.2 | | NLG | NLG |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 3 | 2 | 2 |
| The DN regult indicates that there is suitable alkelinity remaining in the | Boron | ppm | ASTM D5185m | 250 | 4 | 3 | 17 |
| 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 | 10 | 0 | 3 | 0 |
| | Molybdenum | ppm | ASTM D5185m | 100 | 62 | 55 | 23 |
| | Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| | Magnesium | ppm | ASTM D5185m | | 986 | 836 | 147 |
| | Calcium | ppm | ASTM D5185m | | 1207 | 1299 | 2559 |
| | Phosphorus | ppm | ASTM D5185m | | 1143 | 1051 | 1096 |
| | Zinc | ppm | ASTM D5185m | | 1363 | 1273 | 1326 |
| | Sulfur | ppm | ASTM D5185m | | 3724 | 3443 | 4672 |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.8 | 17.7 | 16.0 |

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

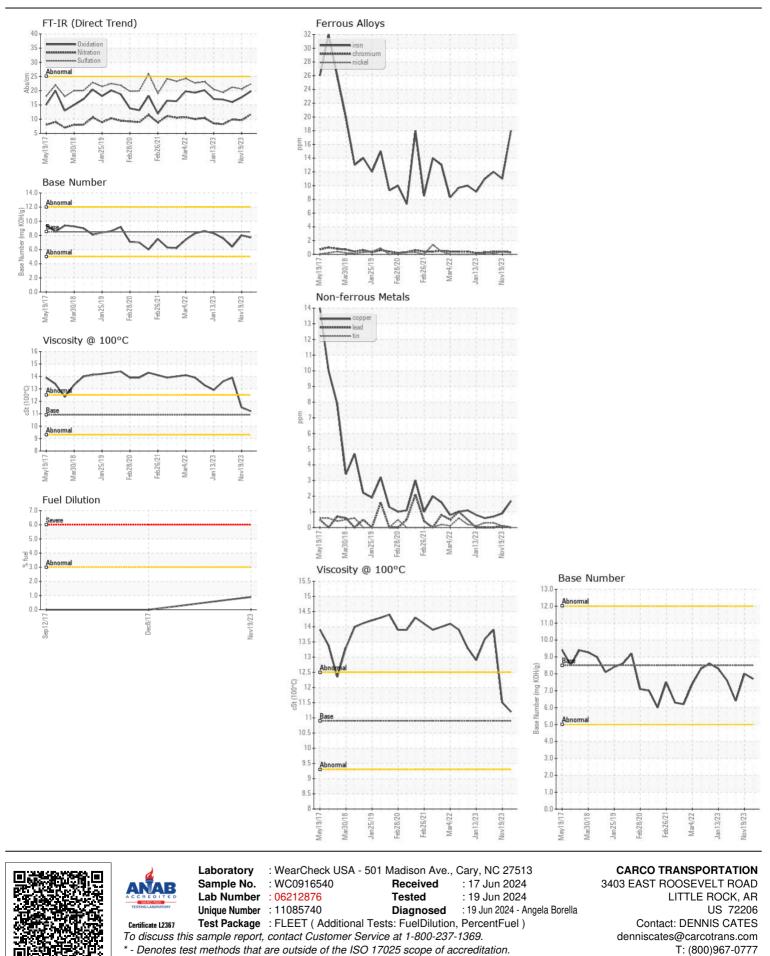
ASTM D445 10.9

Visc @ 100°C cSt

11.5

7.7 11.2 8.0 6.4

13.9



* - 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)

Contact/Location: DENNIS CATES - CARLIT Page 2 of 2

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