



# OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Machine Id  
**TRACKMOBILE 4250TM F-57 (S/N LGN97757-0303)**

Component  
**Diesel Engine**

Fluid  
**CONOCO PHILLIPS GUARDOL ECT 15W40 (4 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0920347</b>   | WC0899764   | WC0833574   |
| Sample Date    |     | Client Info |           | <b>22 May 2024</b> | 16 Feb 2024 | 03 Nov 2023 |
| Machine Age    | hrs | Client Info |           | <b>29413</b>       | 29073       | 1430        |
| Oil Age        | hrs | Client Info |           | <b>781</b>         | 266         | 1430        |
| Filter Age     | hrs | Client Info |           | <b>781</b>         | 266         | 1430        |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>15</b>    | 14   | 23   |
| Chromium     | ppm    | ASTM D5185m | >15  | <b>2</b>     | 1    | 2    |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>94</b>    | 90   | 88   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >15  | <b>2</b>     | 2    | 2    |
| Lead         | ppm    | ASTM D5185m | >50  | <b>2</b>     | <1   | 3    |
| Copper       | ppm    | ASTM D5185m | >170 | <b>&lt;1</b> | <1   | 0    |
| Tin          | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 0    | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>1</b>     | <1   | 1    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

There is no indication of any contamination in the oil.

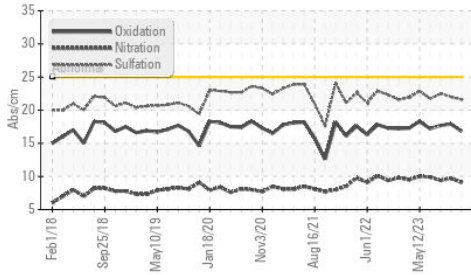
|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>9</b>       | 5     | 8     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>4</b>       | 2     | 2     |
| Fuel             |          | WC Method   | >3.0  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >6    | <b>0.2</b>     | 0.4   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.1</b>     | 9.7   | 9.4   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>21.6</b>    | 22.0  | 22.5  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

## FLUID CONDITION

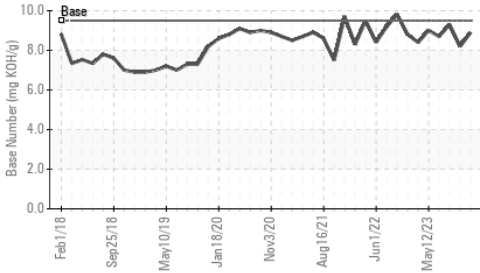
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>3</b>     | 2    | 2    |
| Boron            | ppm      | ASTM D5185m | 85   | <b>137</b>   | 132  | 125  |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>3</b>     | 1    | 10   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 350  | <b>452</b>   | 460  | 563  |
| Calcium          | ppm      | ASTM D5185m | 1800 | <b>2195</b>  | 1988 | 1947 |
| Phosphorus       | ppm      | ASTM D5185m | 1000 | <b>1119</b>  | 1123 | 1081 |
| Zinc             | ppm      | ASTM D5185m | 1100 | <b>1318</b>  | 1308 | 1376 |
| Sulfur           | ppm      | ASTM D5185m | 3500 | <b>4509</b>  | 4016 | 3783 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>16.8</b>  | 17.9 | 17.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.5  | <b>8.9</b>   | 8.2  | 9.3  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.3 | <b>15.1</b>  | 15.0 | 15.5 |

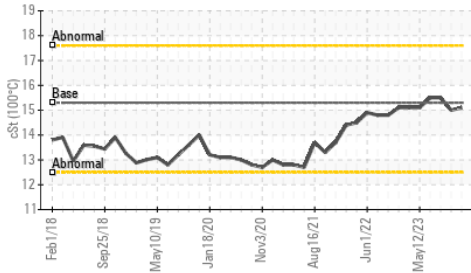
**FT-IR (Direct Trend)**



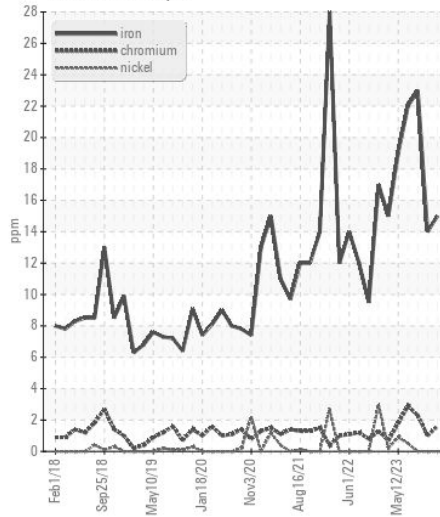
**Base Number**



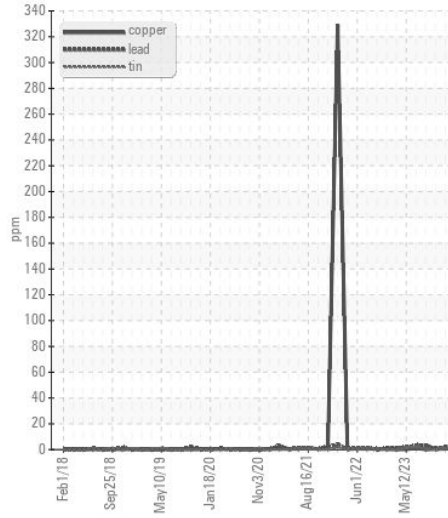
**Viscosity @ 100°C**



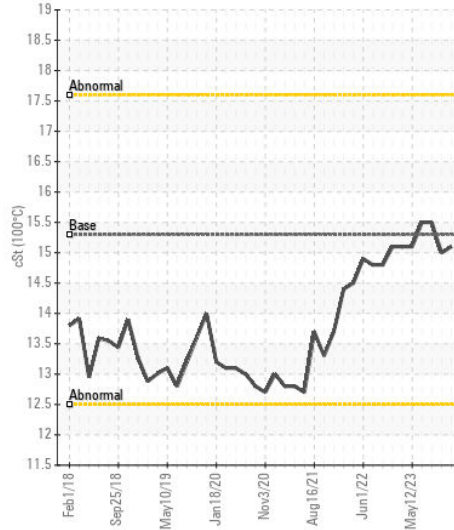
**Ferrous Alloys**



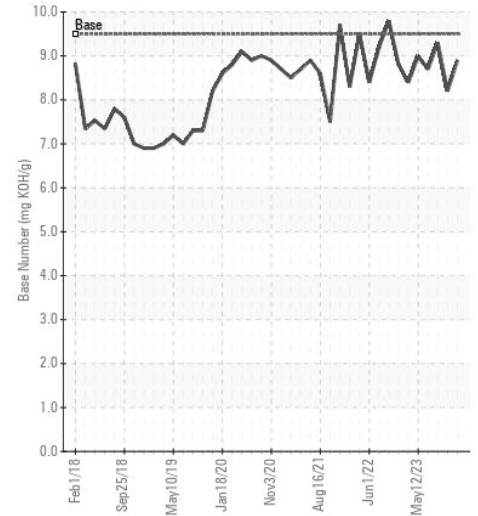
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0920347 **Received** : 29 May 2024  
**Lab Number** : 06194811 **Tested** : 30 May 2024  
**Unique Number** : 11056934 **Diagnosed** : 30 May 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)