



# OIL ANALYSIS REPORT

|                 |        |
|-----------------|--------|
| WEAR            | NORMAL |
| CONTAMINATION   | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id  
**KENWORTH T880 RO-10 (S/N 259573)**

Component  
**Diesel Engine**

Fluid  
**VALVOLINE PREMIUM BLUE (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0849042</b>   | WC0793094   | WC0731587   |
| Sample Date    |     | Client Info |           | <b>04 Jan 2024</b> | 21 Jul 2023 | 16 Feb 2023 |
| Machine Age    | hrs | Client Info |           | <b>12725</b>       | 11707       | 10701       |
| Oil Age        | hrs | Client Info |           | <b>1018</b>        | 1006        | 1028        |
| Filter Age     | hrs | Client Info |           | <b>1018</b>        | 1006        | 1028        |
| 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 | >165 | <b>18</b>    | 18   | 21   |
| Chromium     | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | 1    | 1    |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>4</b>     | 3    | 4    |
| Lead         | ppm    | ASTM D5185m | >150 | <b>5</b>     | 2    | 2    |
| Copper       | ppm    | ASTM D5185m | >90  | <b>1</b>     | <1   | 2    |
| Tin          | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | 0    | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

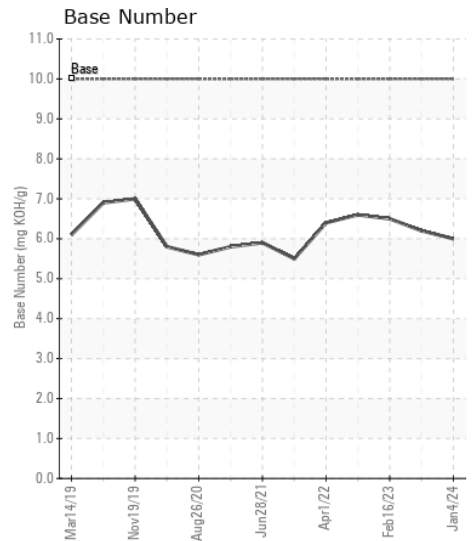
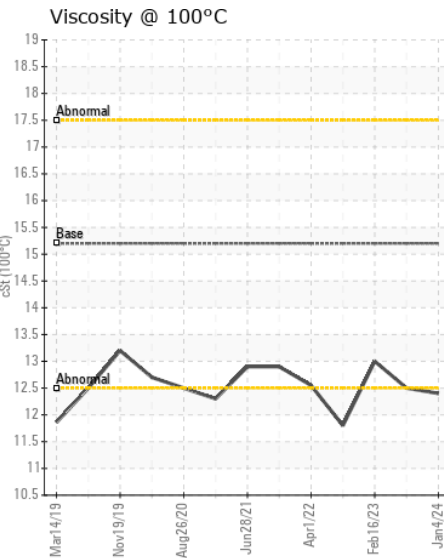
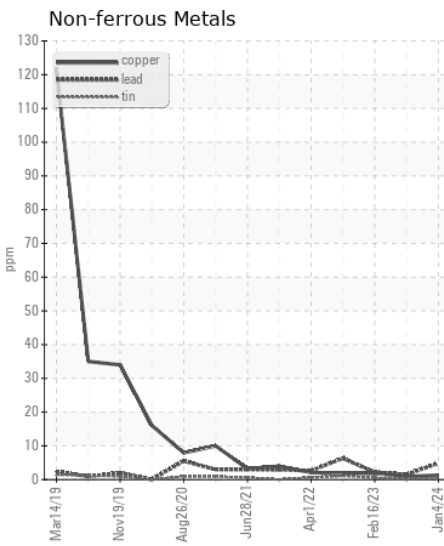
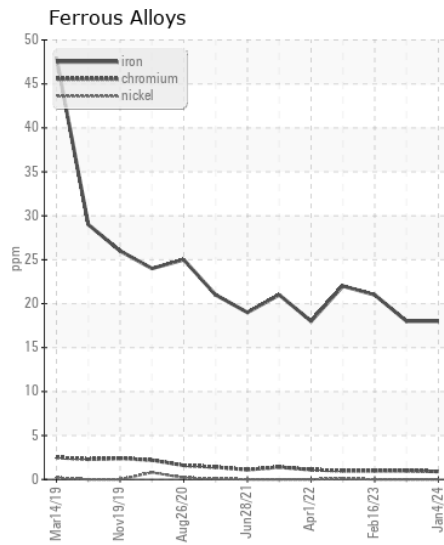
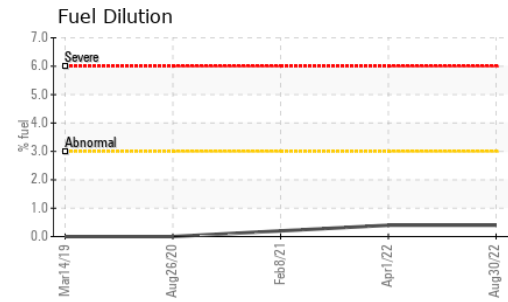
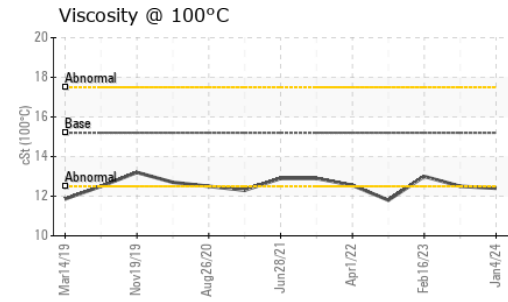
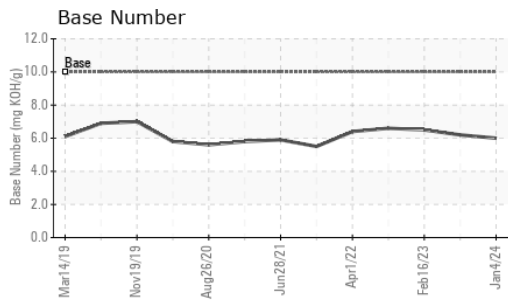
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >35   | <b>6</b>       | 5     | 6     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>13</b>      | 6     | 9     |
| Fuel             | %        | ASTM D3524  | >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 | >7.5  | <b>0.7</b>     | 0.6   | 0.6   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>10.9</b>    | 11.2  | 11.7  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>22.3</b>    | 22.2  | 22.8  |
| 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>0</b>     | 4    | 4    |
| Boron            | ppm      | ASTM D5185m | 2.9  | <b>27</b>    | 28   | 33   |
| Barium           | ppm      | ASTM D5185m | 0.1  | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 0.0  | <b>96</b>    | 66   | 62   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 18   | <b>686</b>   | 714  | 685  |
| Calcium          | ppm      | ASTM D5185m | 2936 | <b>1168</b>  | 1264 | 1328 |
| Phosphorus       | ppm      | ASTM D5185m | 998  | <b>709</b>   | 700  | 655  |
| Zinc             | ppm      | ASTM D5185m | 1095 | <b>846</b>   | 921  | 911  |
| Sulfur           | ppm      | ASTM D5185m | 5469 | <b>2167</b>  | 2856 | 2566 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>20.3</b>  | 20.1 | 20.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.0 | <b>6.0</b>   | 6.2  | 6.5  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.2 | <b>12.4</b>  | 12.5 | 13.0 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0849042 **Received** : 11 Jan 2024  
**Lab Number** : 06058680 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830062 **Diagnostician** : Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FUELDILUTION, TBN )

**TULLY CONSTRUCTION BOULEVARD**  
 127-50 NORTHERN BLVD  
 FLUSHING, NY  
 US 11368  
 Contact: MATT FLYNN  
 Mflynn@tullyconstruction.com  
 T: (917)299-4960  
 F:

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)