



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

Machine Id  
**TEREX MIXER 223**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>PCA0109570</b>  | LP0000979   | WC0721061   |
| Sample Date    |     | Client Info |           | <b>05 Mar 2024</b> | 23 Oct 2023 | 17 Jul 2023 |
| Machine Age    | hrs | Client Info |           | <b>32402</b>       | 40000       | 0           |
| Oil Age        | hrs | Client Info |           | <b>500</b>         | 500         | 0           |
| Filter Age     | hrs | Client Info |           | <b>500</b>         | 500         | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | N/A         |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >90  | <b>16</b>    | 14   | 13   |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>0</b>     | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >15  | <b>3</b>     | <1   | 2    |
| Lead         | ppm    | ASTM D5185m | >50  | <b>12</b>    | 13   | 3    |
| Copper       | ppm    | ASTM D5185m | >55  | <b>2</b>     | 1    | <1   |
| Tin          | ppm    | ASTM D5185m | >4   | <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**

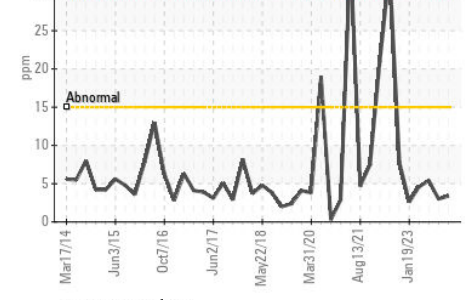
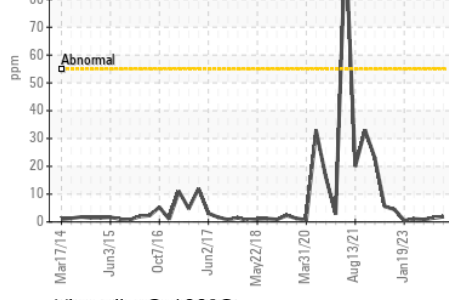
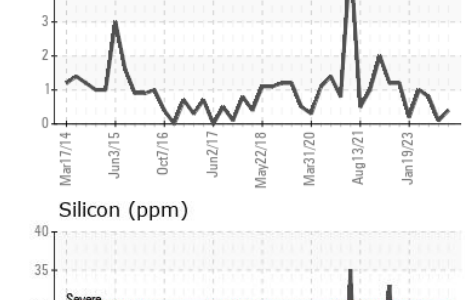
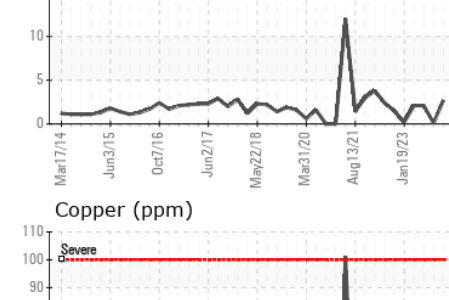
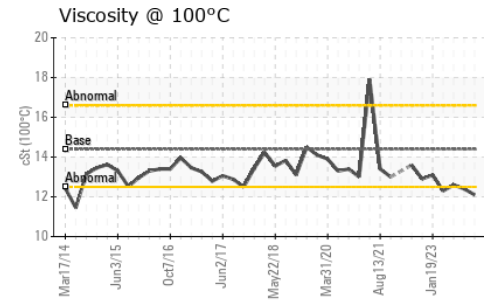
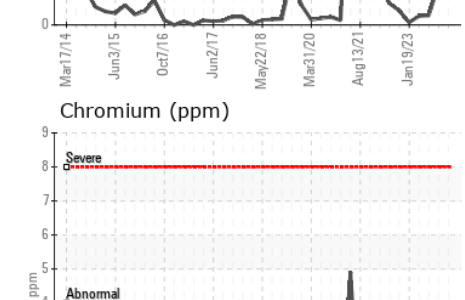
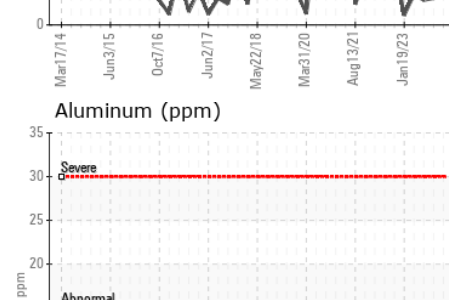
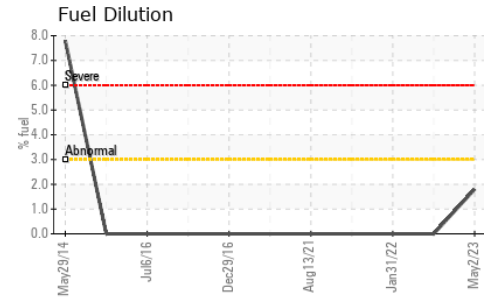
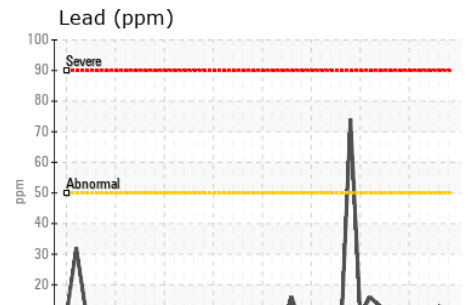
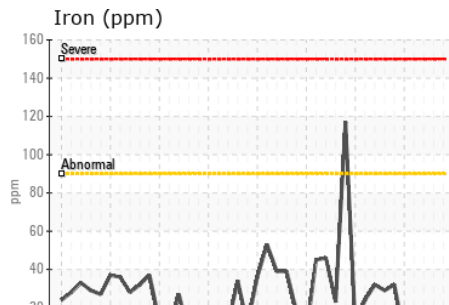
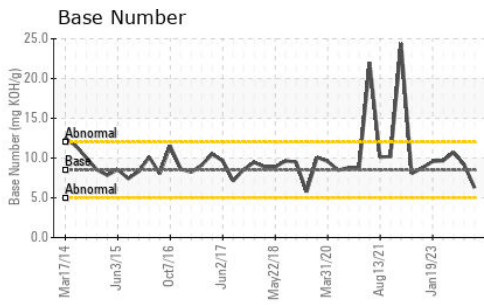
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >15   | <b>3</b>       | 3     | 5     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>2</b>       | <1    | 2     |
| 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 | >6    | <b>0.4</b>     | 0.5   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>8.9</b>     | 9.2   | 8.8   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.5</b>    | 20.6  | 20.3  |
| 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 | >158 | <b>&lt;1</b> | 5    | 4     |
| Boron            | ppm      | ASTM D5185m | 250  | <b>17</b>    | 4    | 14    |
| Barium           | ppm      | ASTM D5185m | 10   | <b>0</b>     | 0    | 0     |
| Molybdenum       | ppm      | ASTM D5185m | 100  | <b>35</b>    | 60   | 70    |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | <1    |
| Magnesium        | ppm      | ASTM D5185m | 450  | <b>101</b>   | 936  | 835   |
| Calcium          | ppm      | ASTM D5185m | 3000 | <b>2119</b>  | 1168 | 1401  |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1031</b>  | 1108 | 1143  |
| Zinc             | ppm      | ASTM D5185m | 1350 | <b>1113</b>  | 1344 | 1392  |
| Sulfur           | ppm      | ASTM D5185m | 4250 | <b>3762</b>  | 3345 | 4226  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>14.3</b>  | 17.7 | 16.9  |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | <b>6.26</b>  | 9.19 | 10.71 |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>12.1</b>  | 12.4 | 12.6  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109570  
**Lab Number** : 06121746  
**Unique Number** : 10930579  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution )

**TRESCA BROS SAND & GRAVEL INC**  
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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)