



WEAR **NORMAL**

CONTAMINATION **NORMAL**

FLUID CONDITION **NORMAL**

# OIL ANALYSIS REPORT

Area  
**[44820744]**

Machine Id  
**PETERBILT 9571931 Southwaste**

Component  
**Diesel Engine**

Fluid  
**MOBIL DELVAC MX 15W40 (48 QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number  |     | Client Info |           | <b>RPL0016509</b>  | RPL0013633  | ---      |
| Sample Date    |     | Client Info |           | <b>03 Jun 2024</b> | 20 Sep 2023 | ---      |
| Machine Age    | mls | Client Info |           | <b>46433</b>       | 10850       | ---      |
| Oil Age        | mls | Client Info |           | <b>46433</b>       | 10850       | ---      |
| Filter Age     | mls | Client Info |           | <b>46433</b>       | 10850       | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Not Changed | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Not Changed | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ATTENTION   | ---      |

## WEAR

Metal levels are typical for a new component breaking in.

|              |        |             |      |              |      |     |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron         | ppm    | ASTM D5185m | >100 | <b>112</b>   | 43   | --- |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>1</b>     | <1   | --- |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 0    | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | --- |
| Silver       | ppm    | ASTM D5185m | >3   | <b>1</b>     | <1   | --- |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>28</b>    | 17   | --- |
| Lead         | ppm    | ASTM D5185m | >40  | <b>1</b>     | 0    | --- |
| Copper       | ppm    | ASTM D5185m | >330 | <b>25</b>    | 13   | --- |
| Tin          | ppm    | ASTM D5185m | >15  | <b>3</b>     | 1    | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | --- |

## CONTAMINATION

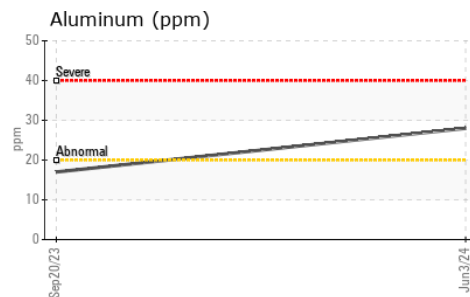
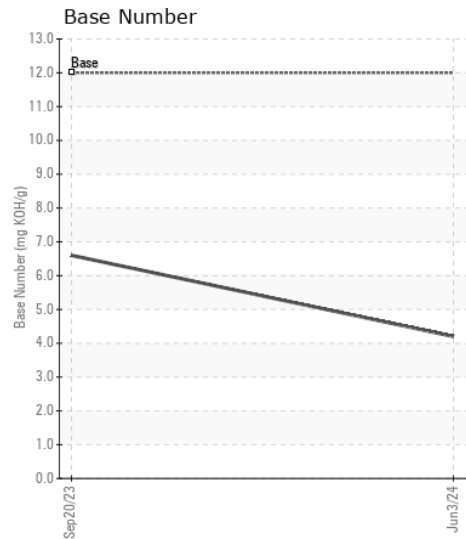
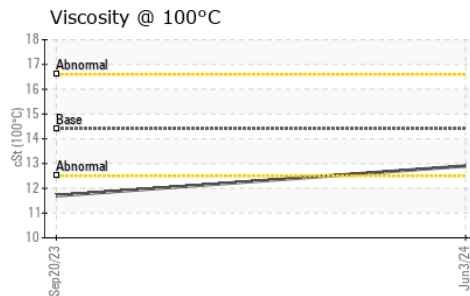
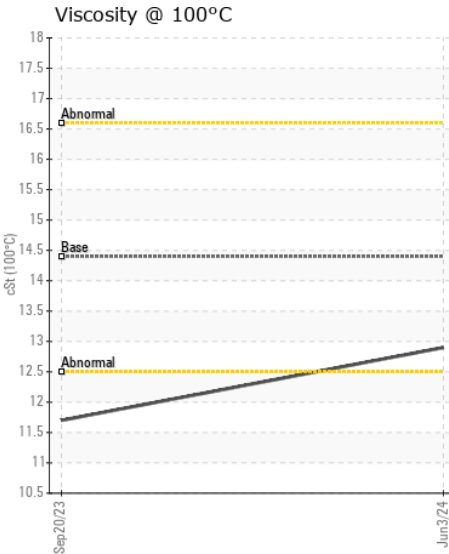
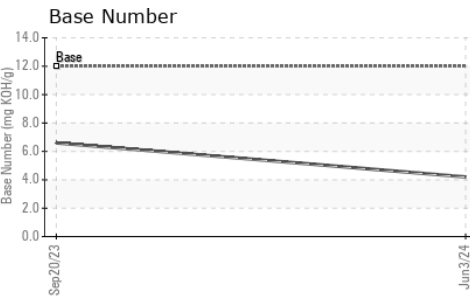
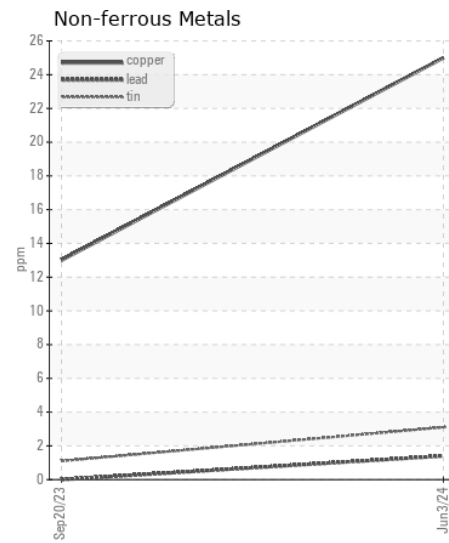
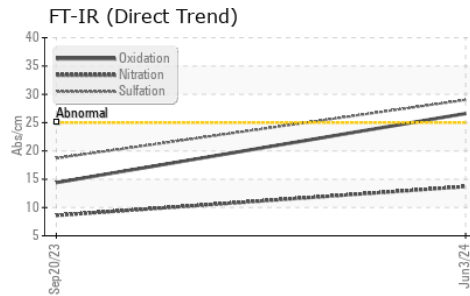
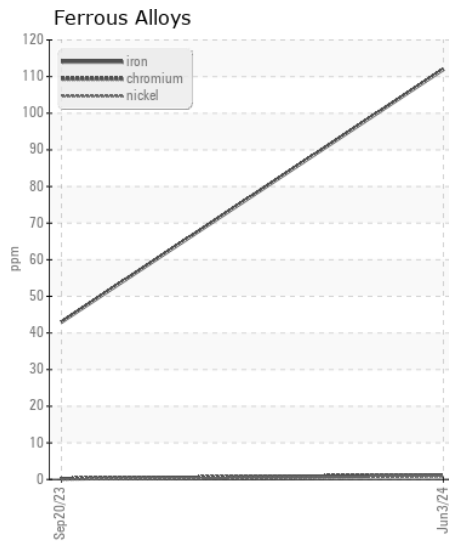
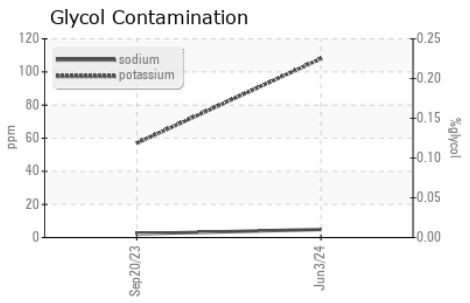
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

|                  |          |             |       |                |       |     |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>17</b>      | 12    | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>108</b>     | 57    | --- |
| Fuel             |          | WC Method   | >5    | <b>&lt;1.0</b> | 0.3   | --- |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | --- |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | --- |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.5</b>     | 0.1   | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>13.7</b>    | 8.6   | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>29.0</b>    | 18.7  | --- |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | --- |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | --- |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | --- |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | --- |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | --- |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | --- |

## FLUID CONDITION

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

|                  |          |             |      |             |      |     |
|------------------|----------|-------------|------|-------------|------|-----|
| Sodium           | ppm      | ASTM D5185m |      | <b>5</b>    | 2    | --- |
| Boron            | ppm      | ASTM D5185m |      | <b>13</b>   | 50   | --- |
| Barium           | ppm      | ASTM D5185m |      | <b>3</b>    | 2    | --- |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>15</b>   | 6    | --- |
| Manganese        | ppm      | ASTM D5185m |      | <b>4</b>    | 2    | --- |
| Magnesium        | ppm      | ASTM D5185m |      | <b>730</b>  | 829  | --- |
| Calcium          | ppm      | ASTM D5185m |      | <b>1442</b> | 1356 | --- |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>811</b>  | 759  | --- |
| Zinc             | ppm      | ASTM D5185m |      | <b>990</b>  | 900  | --- |
| Sulfur           | ppm      | ASTM D5185m |      | <b>2999</b> | 3082 | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>26.6</b> | 14.4 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 12   | <b>4.2</b>  | 6.6  | --- |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>12.9</b> | 11.7 | --- |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RPL0016509 **Received** : 25 Jun 2024  
**Lab Number** : 06219331 **Tested** : 25 Jun 2024  
**Unique Number** : 11097528 **Diagnosed** : 26 Jun 2024 - Don Baldrige  
**Test Package** : FLEET

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Certificate L2367  
 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)