



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

Machine Id  
**2353**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 5W30 (--- GAL)**

### 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>HRE000218</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>09 Jun 2024</b> | ---      | ---      |
| Machine Age    | mls | Client Info |           | <b>108662</b>      | ---      | ---      |
| Oil Age        | mls | Client Info |           | <b>50000</b>       | ---      | ---      |
| Filter Age     | mls | Client Info |           | <b>50000</b>       | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ---      | ---      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |     |     |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron         | ppm    | ASTM D5185m | >100 | <b>80</b>    | --- | --- |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | --- | --- |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | --- | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | --- | --- |
| Silver       | ppm    | ASTM D5185m | >3   | <b>&lt;1</b> | --- | --- |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>31</b>    | --- | --- |
| Lead         | ppm    | ASTM D5185m | >40  | <b>&lt;1</b> | --- | --- |
| Copper       | ppm    | ASTM D5185m | >330 | <b>13</b>    | --- | --- |
| Tin          | ppm    | ASTM D5185m | >15  | <b>2</b>     | --- | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | --- | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |

### CONTAMINATION

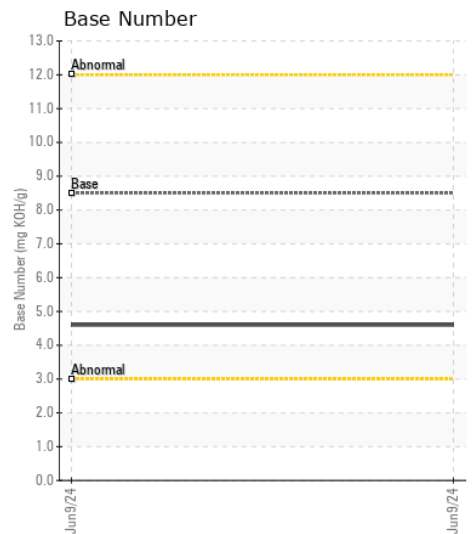
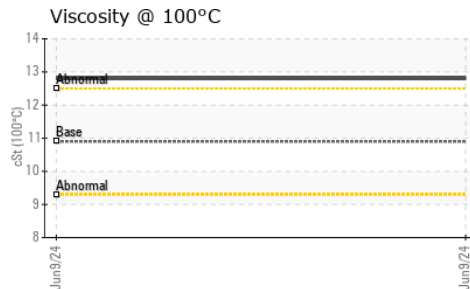
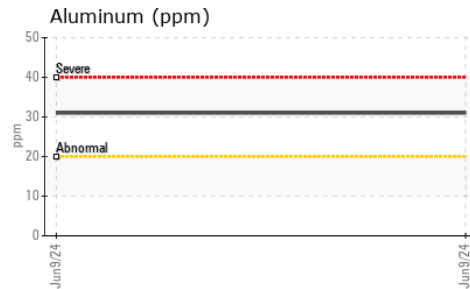
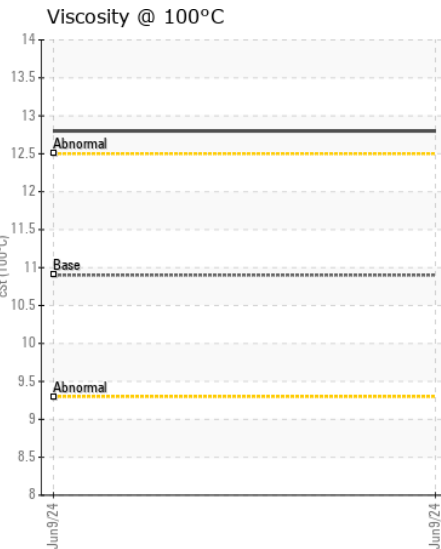
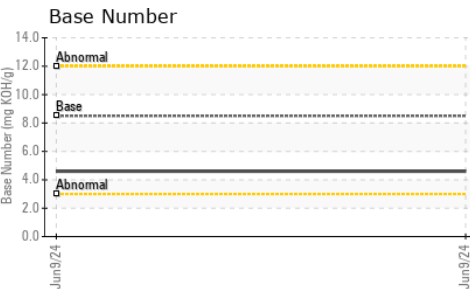
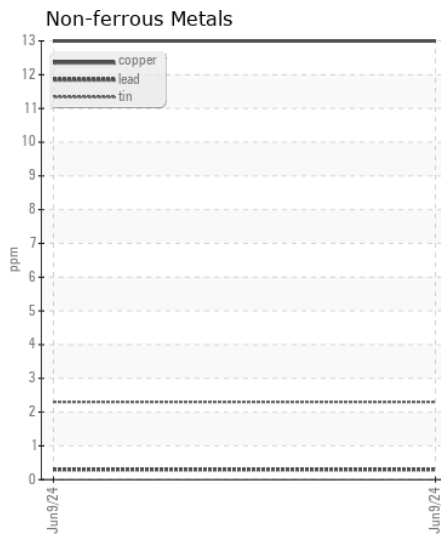
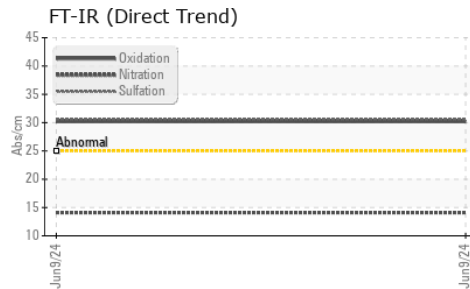
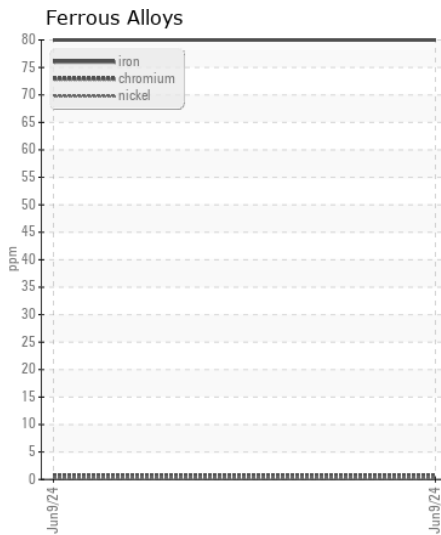
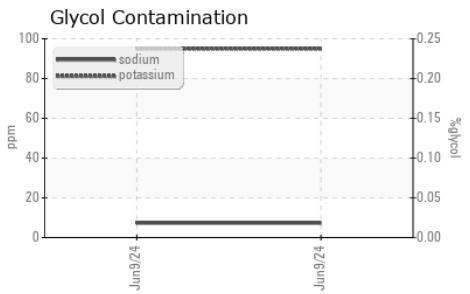
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

|                  |          |             |       |                |     |     |
|------------------|----------|-------------|-------|----------------|-----|-----|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>15</b>      | --- | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>95</b>      | --- | --- |
| Fuel             |          | WC Method   | >5    | <b>&lt;1.0</b> | --- | --- |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | --- | --- |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | --- | --- |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.6</b>     | --- | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>14.1</b>    | --- | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>30.6</b>    | --- | --- |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | --- | --- |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | --- | --- |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | --- | --- |

### 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>7</b>    | --- | --- |
| Boron            | ppm      | ASTM D5185m | 250  | <b>23</b>   | --- | --- |
| Barium           | ppm      | ASTM D5185m | 10   | <b>0</b>    | --- | --- |
| Molybdenum       | ppm      | ASTM D5185m | 100  | <b>33</b>   | --- | --- |
| Manganese        | ppm      | ASTM D5185m |      | <b>3</b>    | --- | --- |
| Magnesium        | ppm      | ASTM D5185m | 450  | <b>1029</b> | --- | --- |
| Calcium          | ppm      | ASTM D5185m | 3000 | <b>1278</b> | --- | --- |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1015</b> | --- | --- |
| Zinc             | ppm      | ASTM D5185m | 1350 | <b>1225</b> | --- | --- |
| Sulfur           | ppm      | ASTM D5185m | 4250 | <b>3867</b> | --- | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>30.2</b> | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | <b>4.6</b>  | --- | --- |
| Visc @ 100°C     | cSt      | ASTM D445   | 10.9 | <b>12.8</b> | --- | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HRE0000218  
**Lab Number** : 06217557  
**Unique Number** : 11090421  
**Test Package** : FLEET

**Received** : 21 Jun 2024  
**Tested** : 25 Jun 2024  
**Diagnosed** : 25 Jun 2024 - Don Baldrige

**MABE TRUCKING**  
 PO BOX 1081  
 EDEN, NC  
 US 27289

Contact: MAINTENANCE  
 maintenancemanager@mabetrucking.com

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)

F: (336)635-1791