



# OIL ANALYSIS REPORT

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

Machine Id  
**093106**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 10W30 (10 LTR)**

## RECOMMENDATION

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current            | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number  |     | Client Info |           | <b>WC105094</b>    | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>12 Jan 2024</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>3093</b>        | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | ---      | ---      |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR

Light concentration of visible metal present.

|              |        |               |      |                |     |     |
|--------------|--------|---------------|------|----------------|-----|-----|
| Iron         | ppm    | ASTM D5185(m) | >50  | <b>15</b>      | --- | --- |
| Chromium     | ppm    | ASTM D5185(m) | >20  | <b>&lt;1</b>   | --- | --- |
| Nickel       | ppm    | ASTM D5185(m) | >5   | <b>&lt;1</b>   | --- | --- |
| Titanium     | ppm    | ASTM D5185(m) |      | <b>0</b>       | --- | --- |
| Silver       | ppm    | ASTM D5185(m) | >3   | <b>0</b>       | --- | --- |
| Aluminum     | ppm    | ASTM D5185(m) | >20  | <b>4</b>       | --- | --- |
| Lead         | ppm    | ASTM D5185(m) | >40  | <b>&lt;1</b>   | --- | --- |
| Copper       | ppm    | ASTM D5185(m) | >30  | <b>2</b>       | --- | --- |
| Tin          | ppm    | ASTM D5185(m) | >15  | <b>0</b>       | --- | --- |
| Vanadium     | ppm    | ASTM D5185(m) |      | <b>0</b>       | --- | --- |
| White Metal  | scalar | Visual*       | NONE | <b>NONE</b>    | --- | --- |
| Yellow Metal | scalar | Visual*       | NONE | <b>▲ VLITE</b> | --- | --- |

## CONTAMINATION

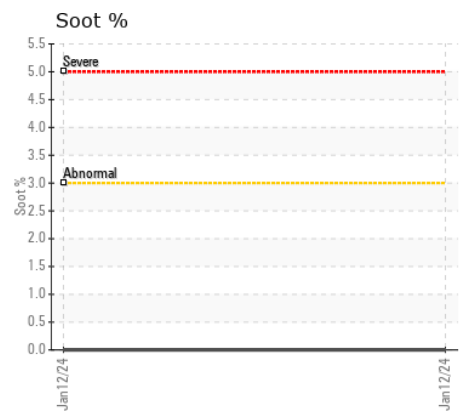
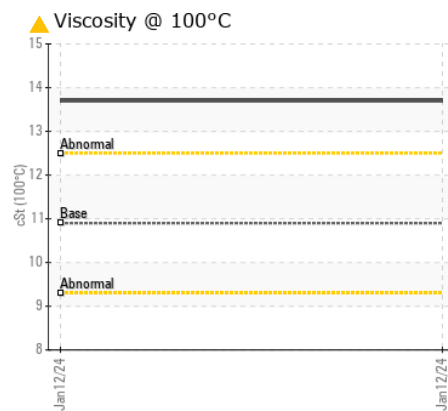
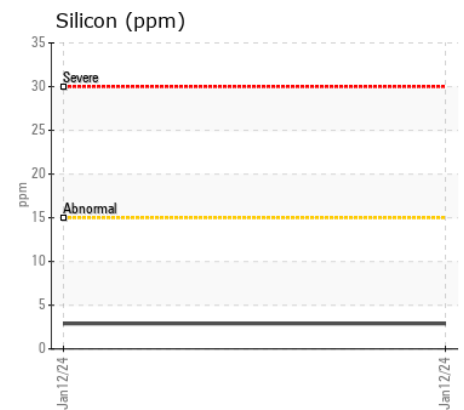
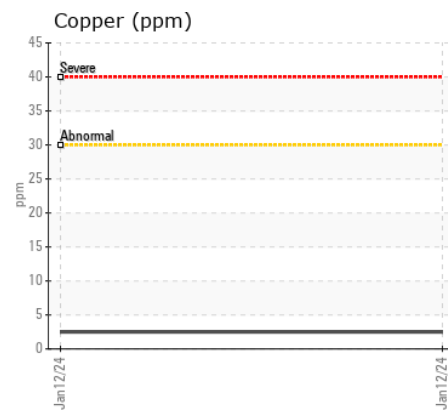
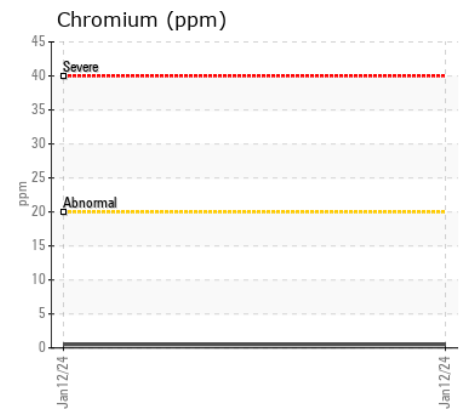
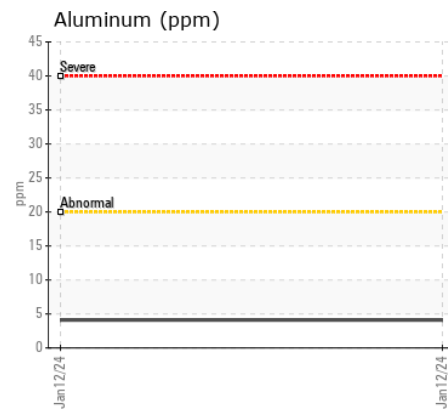
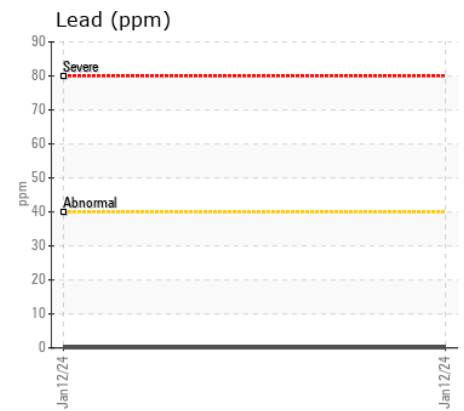
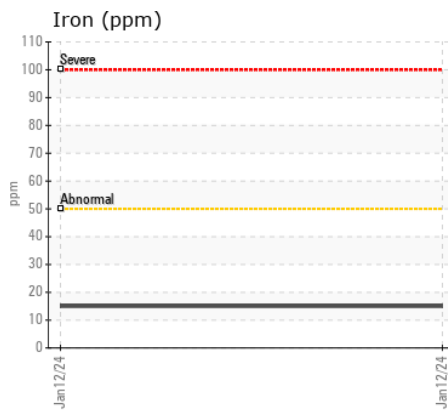
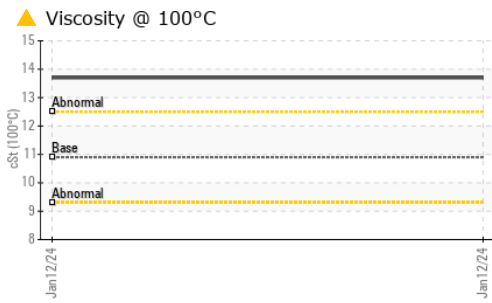
There is no indication of any contamination in the oil.

|                  |          |               |       |                |     |     |
|------------------|----------|---------------|-------|----------------|-----|-----|
| Silicon          | ppm      | ASTM D5185(m) | >15   | <b>3</b>       | --- | --- |
| Potassium        | ppm      | ASTM D5185(m) | >20   | <b>6</b>       | --- | --- |
| Fuel             |          | WC Method     | >3.0  | <b>&lt;1.0</b> | --- | --- |
| Water            |          | WC Method     | >0.1  | <b>NEG</b>     | --- | --- |
| Glycol           |          | WC Method     |       | <b>NEG</b>     | --- | --- |
| Soot %           | %        | ASTM D7844*   | >3    | <b>0</b>       | --- | --- |
| Nitration        | Abs/cm   | ASTM D7624*   | >20   | <b>8.0</b>     | --- | --- |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30   | <b>19.2</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*       | >0.1  | <b>NEG</b>     | --- | --- |

## FLUID CONDITION

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

|              |          |               |      |               |     |     |
|--------------|----------|---------------|------|---------------|-----|-----|
| Sodium       | ppm      | ASTM D5185(m) |      | <b>2</b>      | --- | --- |
| Boron        | ppm      | ASTM D5185(m) | 250  | <b>1</b>      | --- | --- |
| Barium       | ppm      | ASTM D5185(m) | 10   | <b>0</b>      | --- | --- |
| Molybdenum   | ppm      | ASTM D5185(m) | 100  | <b>59</b>     | --- | --- |
| Manganese    | ppm      | ASTM D5185(m) |      | <b>0</b>      | --- | --- |
| Magnesium    | ppm      | ASTM D5185(m) | 450  | <b>975</b>    | --- | --- |
| Calcium      | ppm      | ASTM D5185(m) | 3000 | <b>1079</b>   | --- | --- |
| Phosphorus   | ppm      | ASTM D5185(m) | 1150 | <b>1022</b>   | --- | --- |
| Zinc         | ppm      | ASTM D5185(m) | 1350 | <b>1194</b>   | --- | --- |
| Sulfur       | ppm      | ASTM D5185(m) | 4250 | <b>2691</b>   | --- | --- |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>15.4</b>   | --- | --- |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 10.9 | <b>▲ 13.7</b> | --- | --- |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC105094 **Received** : 16 Jan 2024  
**Lab Number** : 02608859 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 5709945 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: BottomAnalysis, FILTERPATCH, Visual)

**C.G. EQUIPMENT**  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.