



# OIL ANALYSIS REPORT

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

Machine Id  
**L1413**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number  |     | Client Info |           | <b>WC0553684</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>12 Jun 2023</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>1835</b>        | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR

All component wear rates are normal.

|          |     |               |      |              |     |     |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron     | ppm | ASTM D5185(m) | >90  | <b>15</b>    | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20  | <b>&lt;1</b> | --- | --- |
| Nickel   | ppm | ASTM D5185(m) | >2   | <b>&lt;1</b> | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2   | <b>0</b>     | --- | --- |
| Silver   | ppm | ASTM D5185(m) | >2   | <b>0</b>     | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20  | <b>12</b>    | --- | --- |
| Lead     | ppm | ASTM D5185(m) | >40  | <b>0</b>     | --- | --- |
| Copper   | ppm | ASTM D5185(m) | >330 | <b>&lt;1</b> | --- | --- |
| Tin      | ppm | ASTM D5185(m) | >15  | <b>0</b>     | --- | --- |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</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. Light fuel dilution occurring.

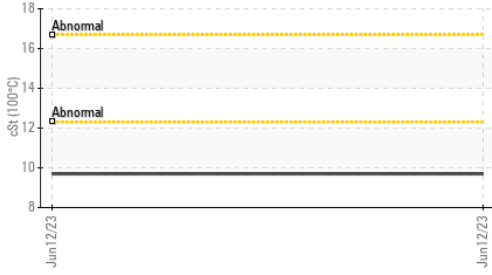
|                  |          |               |      |              |     |     |
|------------------|----------|---------------|------|--------------|-----|-----|
| Silicon          | ppm      | ASTM D5185(m) | >25  | <b>5</b>     | --- | --- |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>19</b>    | --- | --- |
| Fuel             | %        | ASTM D7593*   | >3.0 | <b>▲ 2.5</b> | --- | --- |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>   | --- | --- |
| Glycol           |          | WC Method     |      | <b>NEG</b>   | --- | --- |
| Soot %           | %        | ASTM D7844*   | >6   | <b>0.2</b>   | --- | --- |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>8.1</b>   | --- | --- |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>20.2</b>  | --- | --- |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>   | --- | --- |

## FLUID CONDITION

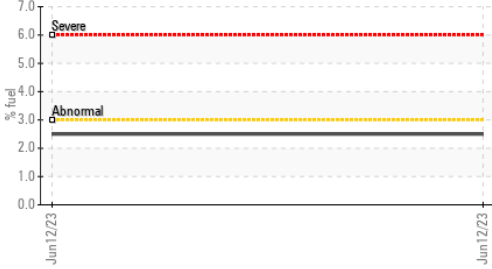
Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

|              |          |               |     |              |     |     |
|--------------|----------|---------------|-----|--------------|-----|-----|
| Sodium       | ppm      | ASTM D5185(m) |     | <b>2</b>     | --- | --- |
| Boron        | ppm      | ASTM D5185(m) |     | <b>54</b>    | --- | --- |
| Barium       | ppm      | ASTM D5185(m) |     | <b>0</b>     | --- | --- |
| Molybdenum   | ppm      | ASTM D5185(m) |     | <b>69</b>    | --- | --- |
| Manganese    | ppm      | ASTM D5185(m) |     | <b>&lt;1</b> | --- | --- |
| Magnesium    | ppm      | ASTM D5185(m) |     | <b>518</b>   | --- | --- |
| Calcium      | ppm      | ASTM D5185(m) |     | <b>1481</b>  | --- | --- |
| Phosphorus   | ppm      | ASTM D5185(m) |     | <b>769</b>   | --- | --- |
| Zinc         | ppm      | ASTM D5185(m) |     | <b>842</b>   | --- | --- |
| Sulfur       | ppm      | ASTM D5185(m) |     | <b>2011</b>  | --- | --- |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25 | <b>18.3</b>  | --- | --- |
| Visc @ 100°C | cSt      | ASTM D7279(m) |     | <b>▲ 9.7</b> | --- | --- |

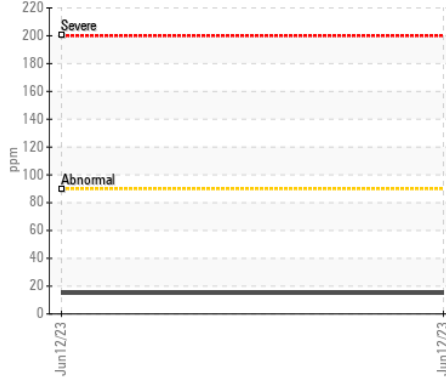
▲ Viscosity @ 100°C



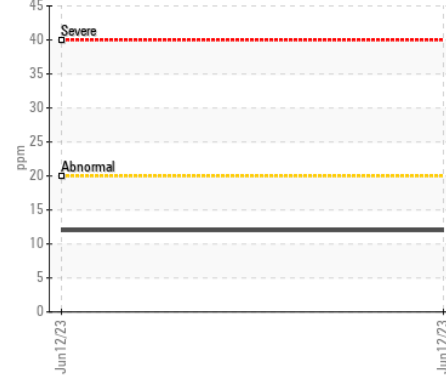
▲ Fuel Dilution



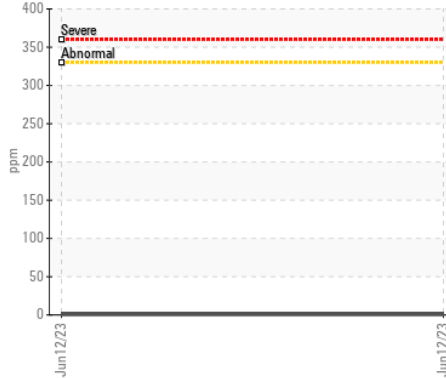
Iron (ppm)



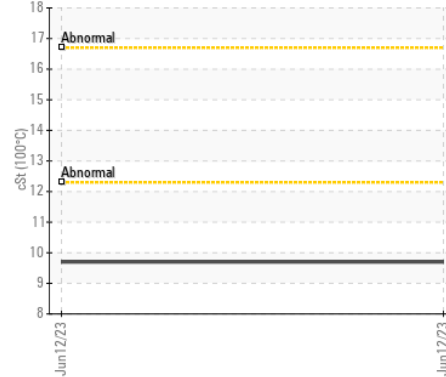
Aluminum (ppm)



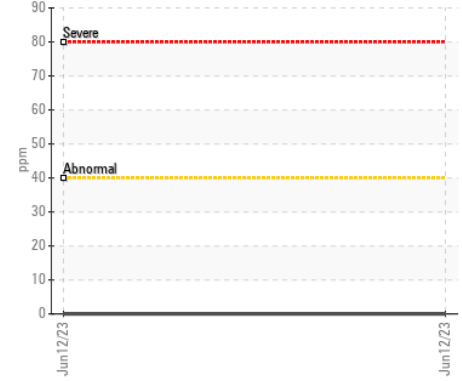
Copper (ppm)



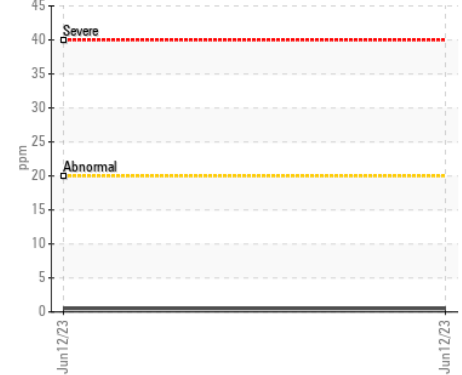
▲ Viscosity @ 100°C



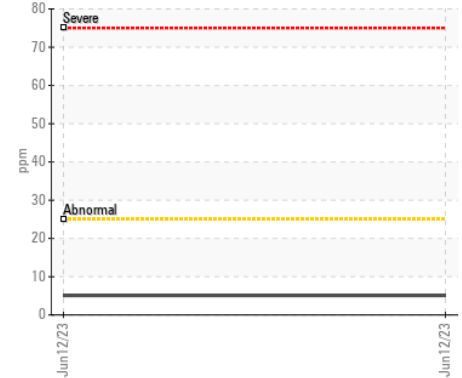
Lead (ppm)



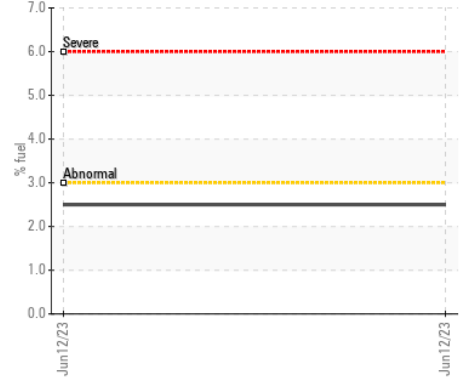
Chromium (ppm)



Silicon (ppm)



▲ Fuel Dilution



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0553684 **Received** : 23 Jun 2023  
**Lab Number** : 02566125 **Diagnosed** : 26 Jun 2023  
**Unique Number** : 5603171 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

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.

**RUSH TRUCK CENTRES**

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