



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

Machine Id  
**200 BAY ST TORONTO COLLIERS UNIT #1**

Component  
**Left Diesel Engine**

Fluid  
**ESSO XD-3 EXTRA 15W40 (--- LTR)**

**RECOMMENDATION**

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>PN0005797</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>22 Feb 2024</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>0</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**

All component wear rates are normal.

|          |     |               |      |              |     |     |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron     | ppm | ASTM D5185(m) | >200 | <b>6</b>     | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20  | <b>0</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>&lt;1</b> | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >30  | <b>2</b>     | --- | --- |
| Lead     | ppm | ASTM D5185(m) | >30  | <b>6</b>     | --- | --- |
| Copper   | ppm | ASTM D5185(m) | >30  | <b>5</b>     | --- | --- |
| Tin      | ppm | ASTM D5185(m) | >15  | <b>1</b>     | --- | --- |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | --- | --- |

**CONTAMINATION**

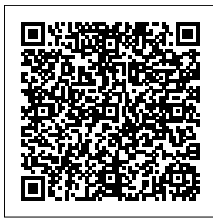
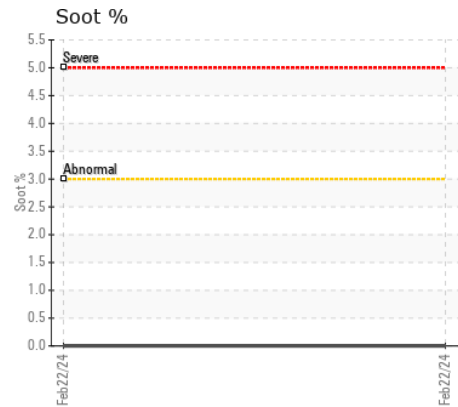
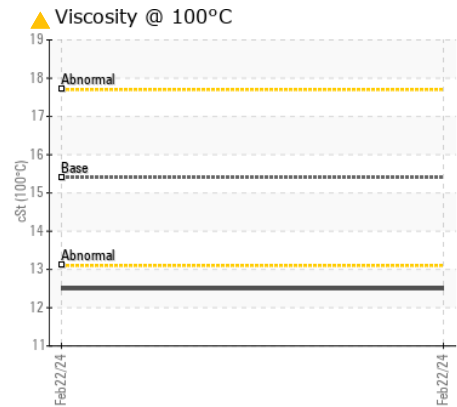
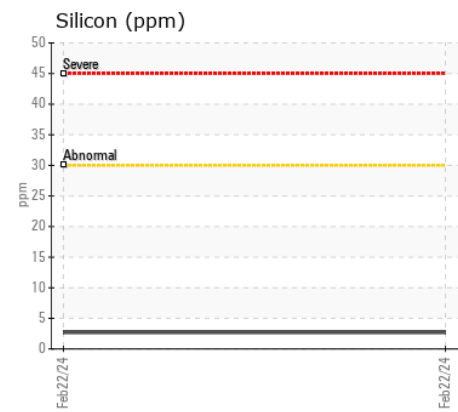
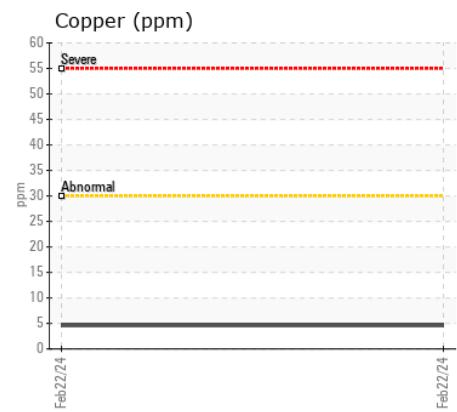
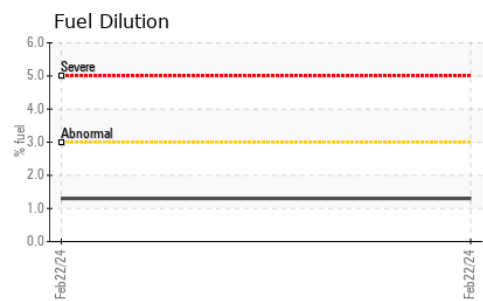
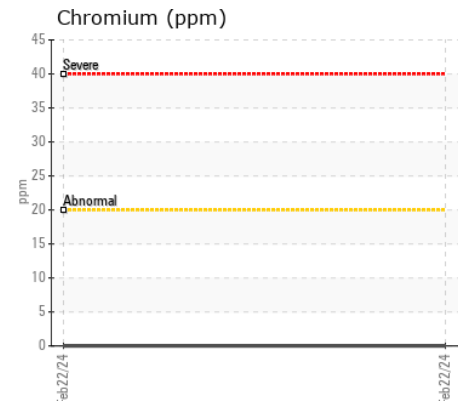
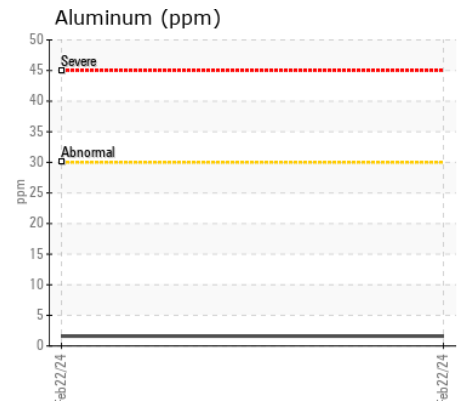
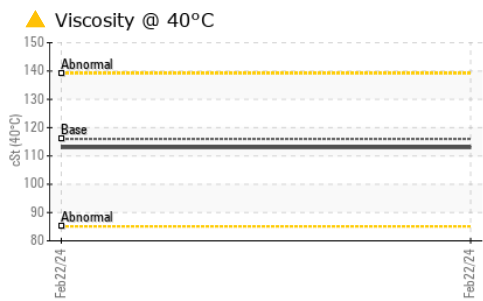
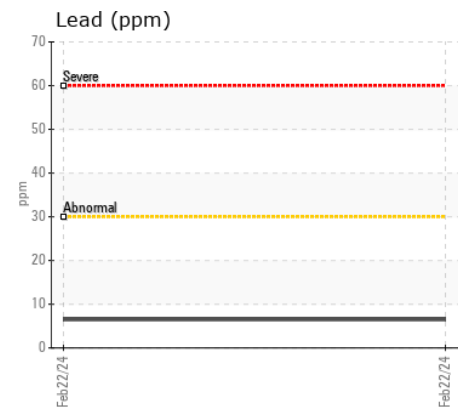
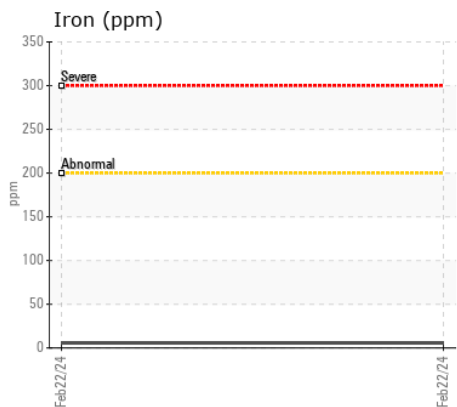
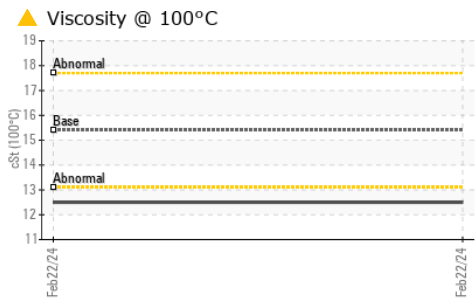
Light fuel dilution occurring. No other contaminants were detected in the oil.

|                  |          |               |      |             |     |     |
|------------------|----------|---------------|------|-------------|-----|-----|
| Silicon          | ppm      | ASTM D5185(m) | >30  | <b>3</b>    | --- | --- |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>3</b>    | --- | --- |
| Fuel             | %        | ASTM D7593*   | >3.0 | <b>1.3</b>  | --- | --- |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>  | --- | --- |
| Glycol           |          | WC Method     |      | <b>NEG</b>  | --- | --- |
| Soot %           | %        | ASTM D7844*   | >3   | <b>0</b>    | --- | --- |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>4.1</b>  | --- | --- |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>13.6</b> | --- | --- |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>  | --- | --- |

**FLUID CONDITION**

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

|                      |          |               |      |               |     |     |
|----------------------|----------|---------------|------|---------------|-----|-----|
| Sodium               | ppm      | ASTM D5185(m) | >192 | <b>12</b>     | --- | --- |
| Boron                | ppm      | ASTM D5185(m) |      | <b>3</b>      | --- | --- |
| Barium               | ppm      | ASTM D5185(m) |      | <b>0</b>      | --- | --- |
| Molybdenum           | ppm      | ASTM D5185(m) |      | <b>93</b>     | --- | --- |
| Manganese            | ppm      | ASTM D5185(m) |      | <b>0</b>      | --- | --- |
| Magnesium            | ppm      | ASTM D5185(m) |      | <b>155</b>    | --- | --- |
| Calcium              | ppm      | ASTM D5185(m) | 3780 | <b>2254</b>   | --- | --- |
| Phosphorus           | ppm      | ASTM D5185(m) | 1370 | <b>877</b>    | --- | --- |
| Zinc                 | ppm      | ASTM D5185(m) | 1500 | <b>950</b>    | --- | --- |
| Sulfur               | ppm      | ASTM D5185(m) | 3800 | <b>4064</b>   | --- | --- |
| Oxidation            | Abs/.1mm | ASTM D7414*   | >25  | <b>6.1</b>    | --- | --- |
| Visc @ 40°C          | cSt      | ASTM D7279(m) | 116  | <b>▲ 113</b>  | --- | --- |
| Visc @ 100°C         | cSt      | ASTM D7279(m) | 15.4 | <b>▲ 12.5</b> | --- | --- |
| Viscosity Index (VI) | Scale    | ASTM D2270*   | 140  | <b>101</b>    | --- | --- |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PN0005797 **Received** : 29 Feb 2024  
**Lab Number** : 02618926 **Tested** : 01 Mar 2024  
**Unique Number** : 5736036 **Diagnosed** : 01 Mar 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, KV40, PercentFuel, VI )

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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.