



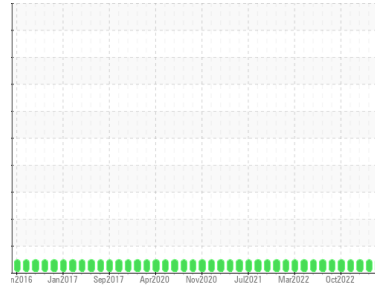
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**NEW FLYER 0710**  
 Component  
**Diesel Engine**  
 Fluid  
**SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (--- LTR)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0849886</b>   | WC0811404   | WC0748298   |
| Sample Date   | Client Info |             | <b>11 Dec 2023</b> | 15 Jun 2023 | 23 Jan 2023 |
| Machine Age   | kms         | Client Info | <b>0</b>           | 75941       | 72222       |
| Oil Age       | kms         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>N/A</b>         | N/A         | N/A         |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >3.0       | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Water  | WC Method | >0.2       | <b>NEG</b>     | NEG      | NEG      |
| Glycol | WC Method |            | <b>NEG</b>     | NEG      | NEG      |

## WEAR METALS

|           | method | limit/base    | current | history1     | history2 |    |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron      | ppm    | ASTM D5185(m) | >75     | <b>3</b>     | 8        | 14 |
| Chromium  | ppm    | ASTM D5185(m) | >5      | <b>0</b>     | <1       | <1 |
| Nickel    | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | 0        | <1 |
| Titanium  | ppm    | ASTM D5185(m) | >2      | <b>0</b>     | 0        | 0  |
| Silver    | ppm    | ASTM D5185(m) | >2      | <b>&lt;1</b> | 3        | 0  |
| Aluminum  | ppm    | ASTM D5185(m) | >15     | <b>1</b>     | 1        | 2  |
| Lead      | ppm    | ASTM D5185(m) | >25     | <b>0</b>     | 0        | 1  |
| Copper    | ppm    | ASTM D5185(m) | >100    | <b>&lt;1</b> | <1       | <1 |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | 0        | 0  |
| Antimony  | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | 0  |
| Vanadium  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Beryllium | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Cadmium   | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |

## ADDITIVES

|            | method | limit/base    | current | history1     | history2 |      |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron      | ppm    | ASTM D5185(m) |         | <b>1</b>     | 2        | <1   |
| Barium     | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) |         | <b>60</b>    | 60       | 62   |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | <1   |
| Magnesium  | ppm    | ASTM D5185(m) |         | <b>981</b>   | 1008     | 1023 |
| Calcium    | ppm    | ASTM D5185(m) |         | <b>1063</b>  | 1076     | 1174 |
| Phosphorus | ppm    | ASTM D5185(m) |         | <b>1040</b>  | 1118     | 1154 |
| Zinc       | ppm    | ASTM D5185(m) |         | <b>1219</b>  | 1226     | 1277 |
| Sulfur     | ppm    | ASTM D5185(m) |         | <b>2700</b>  | 2617     | 2727 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

## CONTAMINANTS

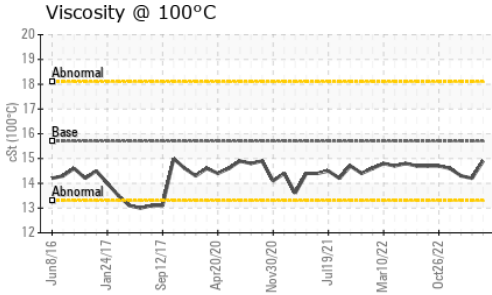
|           | method | limit/base    | current | history1 | history2 |    |
|-----------|--------|---------------|---------|----------|----------|----|
| Silicon   | ppm    | ASTM D5185(m) | >25     | <b>3</b> | 4        | 12 |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>1</b> | 1        | <1 |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>0</b> | <1       | 0  |

## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* | >6      | <b>0</b>    | 0.2      | 0.3  |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>4.9</b>  | 6.7      | 8.1  |
| Sulfation | Abs./1mm | ASTM D7415* | >30     | <b>18.2</b> | 19.2     | 21.5 |



# OIL ANALYSIS REPORT



## FLUID DEGRADATION

| method   | limit/base  | current | history1 | history2 |
|----------|-------------|---------|----------|----------|
| Abs./1mm | ASTM D7414* | >25     | 14.9     | 16.5     |

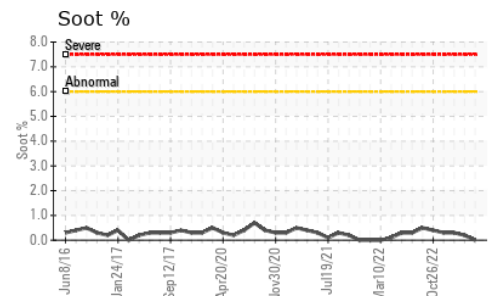
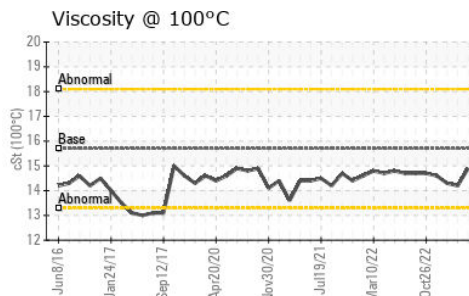
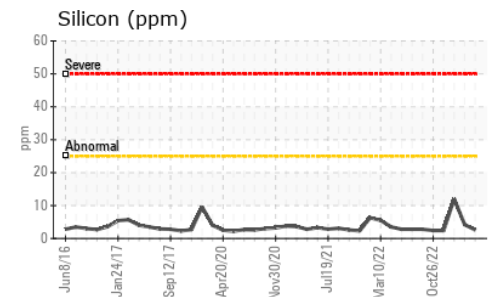
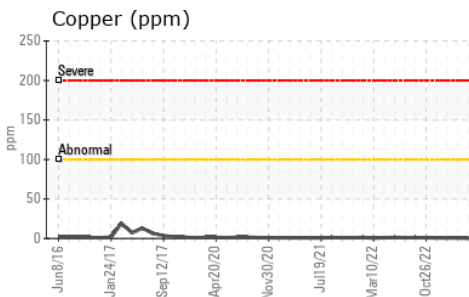
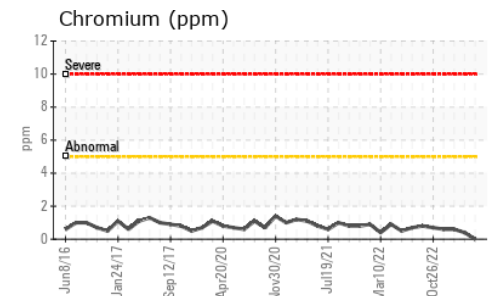
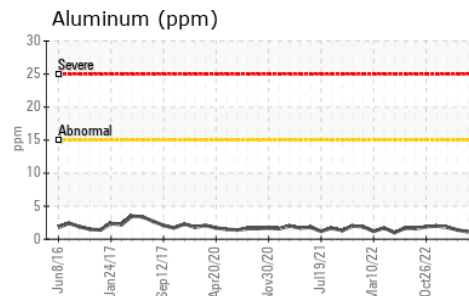
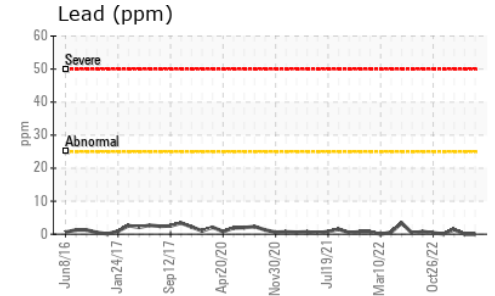
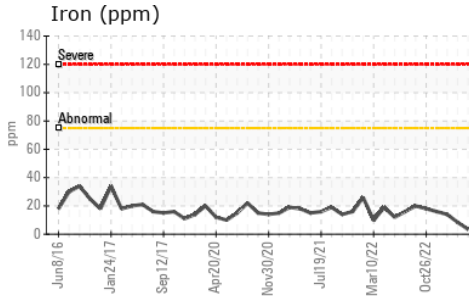
## VISUAL

| method | limit/base | current | history1 | history2 |
|--------|------------|---------|----------|----------|
| scalar | Visual*    | >0.2    | NEG      | NEG      |
| scalar | Visual*    | NEG     | NEG      | NEG      |

## FLUID PROPERTIES

| method | limit/base    | current | history1 | history2 |
|--------|---------------|---------|----------|----------|
| cSt    | ASTM D7279(m) | 15.7    | 14.2     | 14.3     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0849886 **Received** : 12 Dec 2023  
**Lab Number** : 02602503 **Diagnosed** : 12 Dec 2023  
**Unique Number** : 5695588 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

**CITY OF HAMILTON**  
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 Contact: Jeff Parr  
 jeff.parr@hamilton.ca  
 T: (905)546-2424  
 F: (905)679-4502

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.