



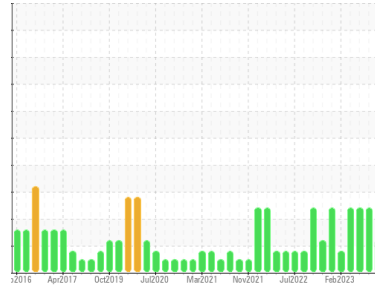
# OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id  
**NEW FLYER 0901**  
 Component  
**Diesel Engine**  
 Fluid  
**SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

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.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0830325</b>   | WC0811343   | WC0811527   |
| Sample Date   | Client Info |             | <b>21 Aug 2023</b> | 07 Jul 2023 | 31 May 2023 |
| Machine Age   | kms         | Client Info | <b>106819</b>      | 0           | 0           |
| 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>ABNORMAL</b>    | SEVERE      | SEVERE      |

## CONTAMINATION

|        | method    | limit/base | current    | history1 | history2 |
|--------|-----------|------------|------------|----------|----------|
| Glycol | WC Method |            | <b>NEG</b> | NEG      | NEG      |

## WEAR METALS

|           | method | limit/base         | current      | history1 | history2 |
|-----------|--------|--------------------|--------------|----------|----------|
| Iron      | ppm    | ASTM D5185(m) >75  | <b>16</b>    | 14       | 19       |
| Chromium  | ppm    | ASTM D5185(m) >5   | <b>&lt;1</b> | <1       | <1       |
| Nickel    | ppm    | ASTM D5185(m) >4   | <b>0</b>     | <1       | 0        |
| Titanium  | ppm    | ASTM D5185(m) >2   | <b>0</b>     | 0        | 0        |
| Silver    | ppm    | ASTM D5185(m) >2   | <b>0</b>     | 0        | 0        |
| Aluminum  | ppm    | ASTM D5185(m) >15  | <b>2</b>     | 1        | 2        |
| Lead      | ppm    | ASTM D5185(m) >25  | <b>3</b>     | <1       | <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>     | 0        | <1       |
| 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>     | <1       | <1       |
| Barium     | ppm    | ASTM D5185(m) | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185(m) | <b>55</b>    | 54       | 57       |
| Manganese  | ppm    | ASTM D5185(m) | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185(m) | <b>900</b>   | 896      | 913      |
| Calcium    | ppm    | ASTM D5185(m) | <b>962</b>   | 959      | 999      |
| Phosphorus | ppm    | ASTM D5185(m) | <b>961</b>   | 982      | 1012     |
| Zinc       | ppm    | ASTM D5185(m) | <b>1089</b>  | 1111     | 1131     |
| Sulfur     | ppm    | ASTM D5185(m) | <b>2347</b>  | 2306     | 2343     |
| 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>     | 3        | 3        |
| Sodium    | ppm    | ASTM D5185(m)     | <b>2</b>     | 5        | 7        |
| Potassium | ppm    | ASTM D5185(m) >20 | <b>0</b>     | 3        | 3        |
| Fuel      | %      | ASTM D7593* >3.0  | <b>▲ 5.4</b> | ◆ 7.5    | ◆ 8      |

## INFRA-RED

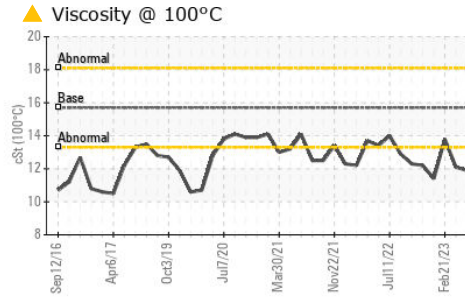
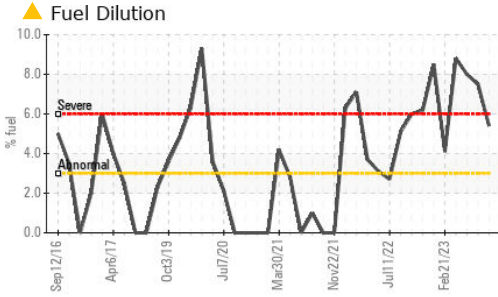
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* >6  | <b>0.5</b>  | 0.6      | 0.7      |
| Nitration | Abs/cm   | ASTM D7624* >20 | <b>10.0</b> | 10.6     | 10.6     |
| Sulfation | Abs/.1mm | ASTM D7415* >30 | <b>24.2</b> | 24.7     | 25.0     |

## FLUID DEGRADATION

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | ASTM D7414* >25 | <b>23.2</b> | 25.7     | 25.4     |



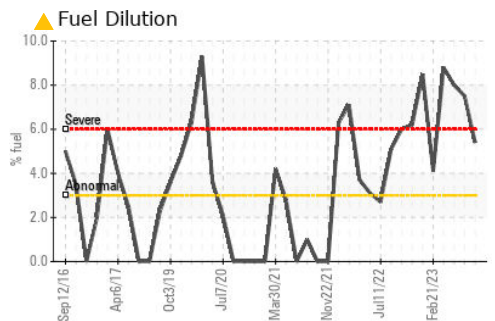
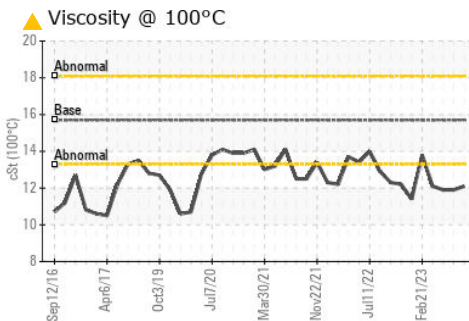
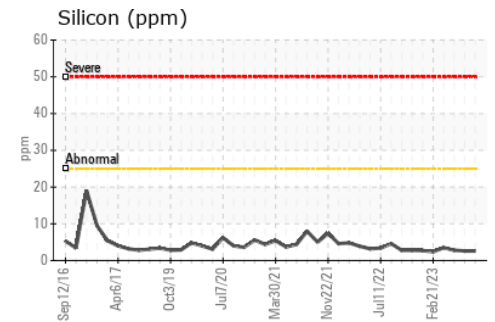
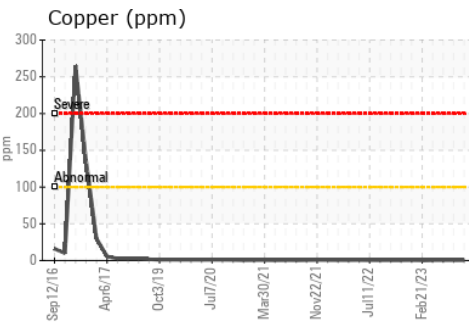
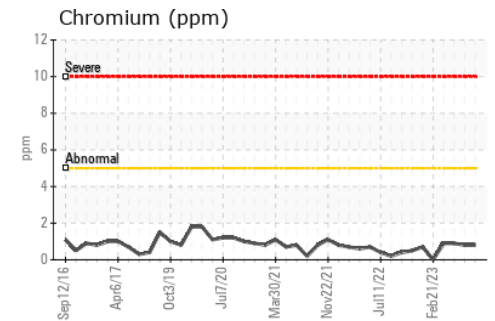
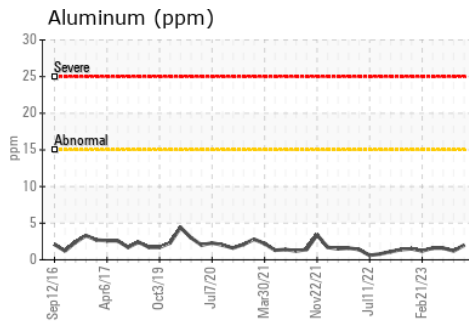
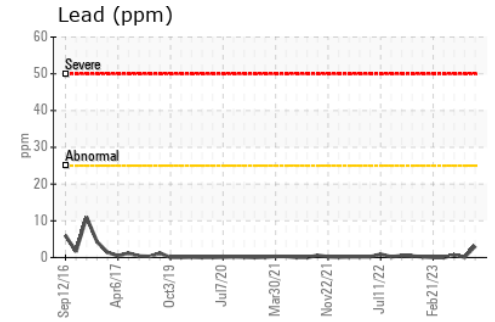
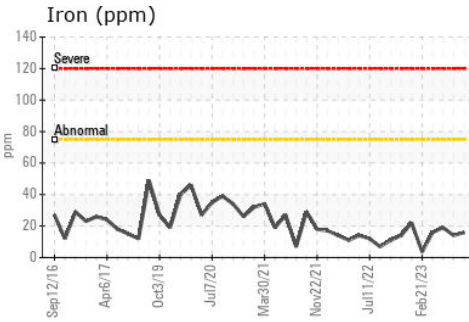
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Emulsified Water | scalar | Visual*    | >0.2    | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D7279(m) | 15.7    | ▲ 12.1   | ▲ 11.9   |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0830325 **Received** : 24 Aug 2023  
**Lab Number** : 02577989 **Diagnosed** : 25 Aug 2023  
**Unique Number** : 5631049 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

**CITY OF HAMILTON**  
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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.