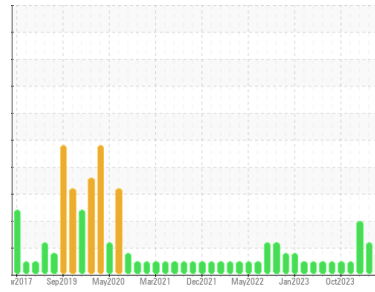




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**NEW FLYER 1209**  
 Component  
**Diesel Engine**  
 Fluid  
**SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected 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>WC0917429</b>   | WC0937334   | WC0917620   |
| Sample Date   | Client Info |             | <b>08 Jul 2024</b> | 15 May 2024 | 27 Mar 2024 |
| Machine Age   | kms         | Client Info | <b>869879</b>      | 358309      | 847998      |
| Oil Age       | kms         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>N/A</b>         | Changed     | N/A         |
| Sample Status |             |             | <b>MARGINAL</b>    | ABNORMAL    | ABNORMAL    |

## CONTAMINATION

|        | method    | limit/base | current    | history1 | history2 |
|--------|-----------|------------|------------|----------|----------|
| Water  | WC Method | >0.2       | <b>NEG</b> | NEG      | NEG      |
| Glycol | WC Method |            | <b>NEG</b> | 0.0      | NEG      |

## WEAR METALS

|           | method | limit/base    | current | history1     | history2 |       |
|-----------|--------|---------------|---------|--------------|----------|-------|
| Iron      | ppm    | ASTM D5185(m) | >75     | <b>26</b>    | 24       | 21    |
| Chromium  | ppm    | ASTM D5185(m) | >5      | <b>1</b>     | <1       | <1    |
| Nickel    | ppm    | ASTM D5185(m) | >4      | <b>&lt;1</b> | 0        | 0     |
| Titanium  | ppm    | ASTM D5185(m) | >2      | <b>0</b>     | 0        | 0     |
| Silver    | ppm    | ASTM D5185(m) | >2      | <b>&lt;1</b> | 0        | 0     |
| Aluminum  | ppm    | ASTM D5185(m) | >15     | <b>5</b>     | 3        | 2     |
| Lead      | ppm    | ASTM D5185(m) | >25     | <b>2</b>     | 8        | 3     |
| Copper    | ppm    | ASTM D5185(m) | >100    | <b>55</b>    | 334      | ▲ 122 |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>&lt;1</b> | 0        | 0     |
| Antimony  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 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>&lt;1</b> | <1       | <1   |
| Barium     | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | 1    |
| Molybdenum | ppm    | ASTM D5185(m) |         | <b>59</b>    | 57       | 56   |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | 0    |
| Magnesium  | ppm    | ASTM D5185(m) |         | <b>944</b>   | 949      | 939  |
| Calcium    | ppm    | ASTM D5185(m) |         | <b>993</b>   | 1007     | 993  |
| Phosphorus | ppm    | ASTM D5185(m) |         | <b>925</b>   | 919      | 942  |
| Zinc       | ppm    | ASTM D5185(m) |         | <b>1180</b>  | 1159     | 1129 |
| Sulfur     | ppm    | ASTM D5185(m) |         | <b>2012</b>  | 2027     | 2276 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

## CONTAMINANTS

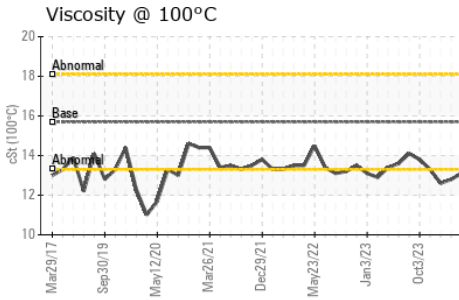
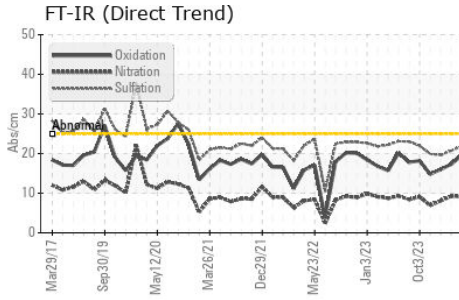
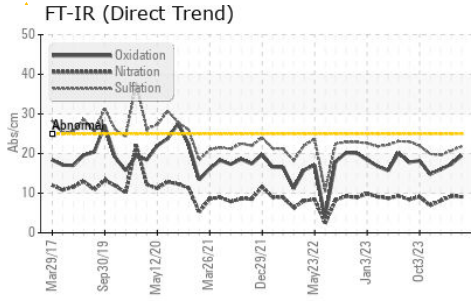
|           | method | limit/base    | current | history1     | history2 |       |
|-----------|--------|---------------|---------|--------------|----------|-------|
| Silicon   | ppm    | ASTM D5185(m) | >25     | <b>4</b>     | 4        | 4     |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>4</b>     | 4        | 4     |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>&lt;1</b> | 0        | <1    |
| Fuel      | %      | ASTM D7593*   | >3.0    | ▲ <b>2</b>   | ▲ 3.6    | ▲ 4.5 |

## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* | >6      | <b>0.6</b>  | 0.4      | 0.3  |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>9.1</b>  | 9.2      | 8.1  |
| Sulfation | Abs./1mm | ASTM D7415* | >30     | <b>21.8</b> | 20.7     | 19.6 |



# OIL ANALYSIS REPORT

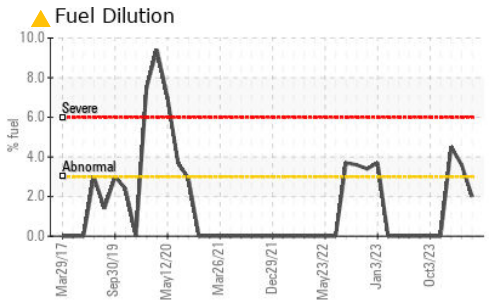
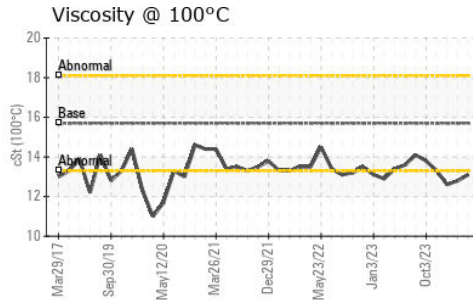
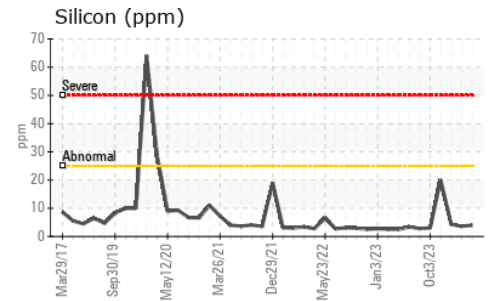
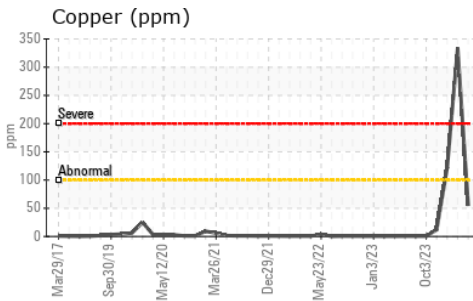
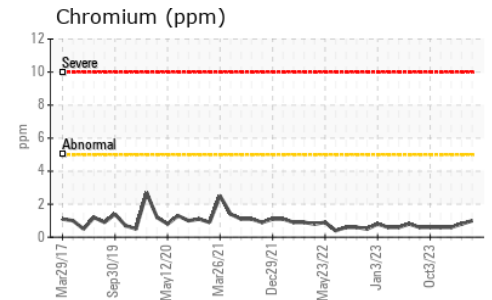
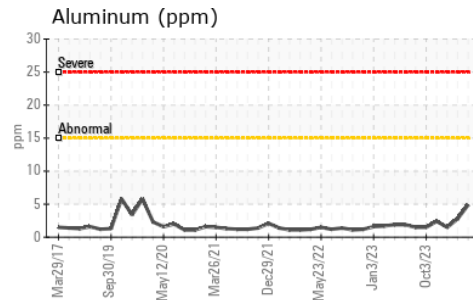
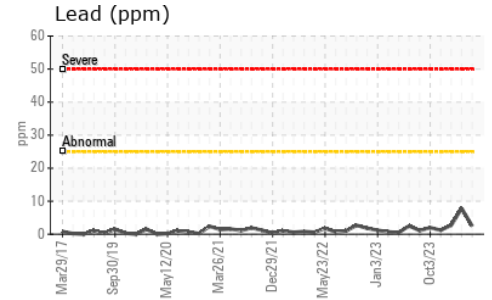
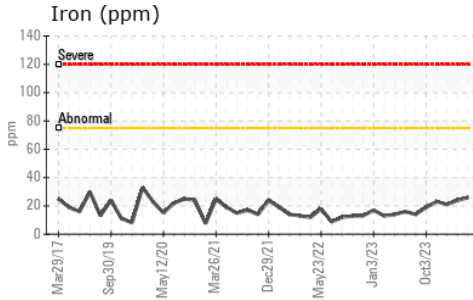


| FLUID DEGRADATION | method   | limit/base  | current | history1 | history2 |      |
|-------------------|----------|-------------|---------|----------|----------|------|
| Oxidation         | Abs./1mm | ASTM D7414* | >25     | 19.5     | 17.3     | 16.0 |

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

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |        |
|------------------|--------|---------------|---------|----------|----------|--------|
| Visc @ 100°C     | cSt    | ASTM D7279(m) | 15.7    | 13.1     | ▲ 12.8   | ▲ 12.6 |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0917429  
**Lab Number** : 02647282  
**Unique Number** : 5812834  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

**Received** : 11 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Wes Davis

**CITY OF HAMILTON**  
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 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.