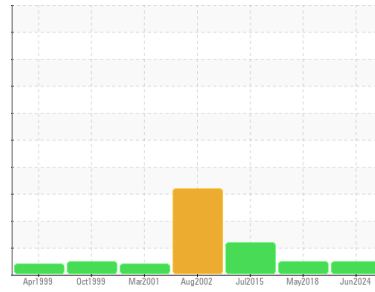




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**2**  
Machine Id  
**02-0040-000-010 HOPPER 4 GRP 1 (2M47) (S/N R122084)**

Component

**2 Gearbox**

Fluid

**SHELL OMALA S4 GXV 220 (6 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1    | history2    |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | <b>WC0945379</b>   | WC986916    | WC937466    |
| Sample Date   | Client Info | <b>26 Jun 2024</b> | 03 May 2018 | 17 Jul 2015 |
| Machine Age   | hrs         | Client Info        | <b>0</b>    | 0           |
| Oil Age       | hrs         | Client Info        | <b>0</b>    | 0           |
| Oil Changed   | Client Info | <b>Not Chngd</b>   | N/A         | N/A         |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

## CONTAMINATION

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

## WEAR METALS

| method    | limit/base             | current      | history1 | history2 |
|-----------|------------------------|--------------|----------|----------|
| PQ        | ASTM D8184*            | <b>197</b>   | 78       | 117      |
| Iron      | ppm ASTM D5185(m) >200 | <b>341</b>   | 201      | 372      |
| Chromium  | ppm ASTM D5185(m) >15  | <b>3</b>     | 1        | 2        |
| Nickel    | ppm ASTM D5185(m) >15  | <b>&lt;1</b> | <1       | 0        |
| Titanium  | ppm ASTM D5185(m)      | <b>0</b>     | 0        | <1       |
| Silver    | ppm ASTM D5185(m)      | <b>0</b>     | 0        | 0        |
| Aluminum  | ppm ASTM D5185(m) >25  | <b>&lt;1</b> | 0        | <1       |
| Lead      | ppm ASTM D5185(m) >100 | <b>0</b>     | <1       | 2        |
| Copper    | ppm ASTM D5185(m) >200 | <b>&lt;1</b> | <1       | <1       |
| Tin       | ppm ASTM D5185(m) >25  | <b>0</b>     | 0        | 0        |
| Antimony  | ppm ASTM D5185(m) >5   | <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>10</b>    | 6        | 7        |
| Barium     | ppm ASTM D5185(m) | <b>&lt;1</b> | <1       | 4        |
| Molybdenum | ppm ASTM D5185(m) | <b>0</b>     | 0        | 0        |
| Manganese  | ppm ASTM D5185(m) | <b>3</b>     | 1        | 4        |
| Magnesium  | ppm ASTM D5185(m) | <b>&lt;1</b> | <1       | <1       |
| Calcium    | ppm ASTM D5185(m) | <b>2</b>     | 3        | 5        |
| Phosphorus | ppm ASTM D5185(m) | <b>334</b>   | 438      | 400      |
| Zinc       | ppm ASTM D5185(m) | <b>4</b>     | 4        | 12       |
| Sulfur     | ppm ASTM D5185(m) | <b>5185</b>  | 2709     | 4618     |
| Lithium    | ppm ASTM D5185(m) | <b>&lt;1</b> | <1       | <1       |

## CONTAMINANTS

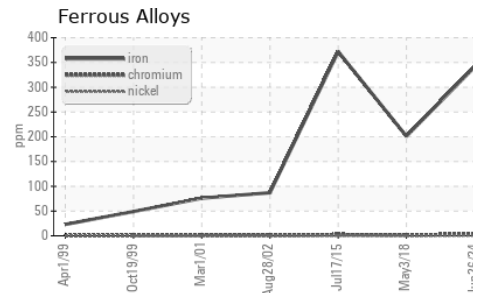
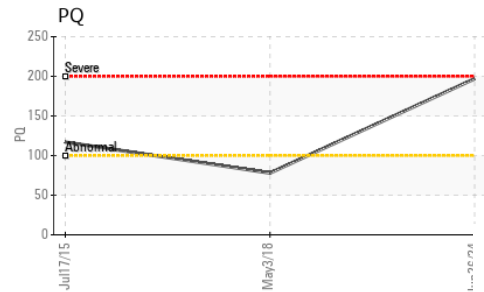
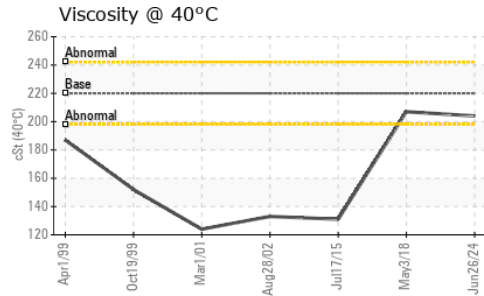
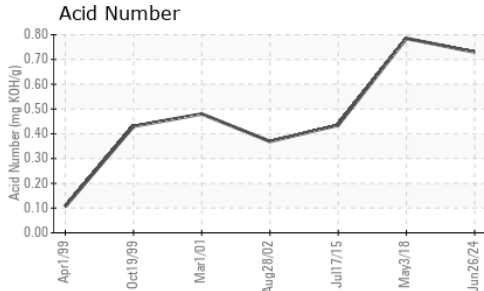
| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Silicon   | ppm ASTM D5185(m) >50 | <b>4</b>     | 13       | 5        |
| Sodium    | ppm ASTM D5185(m)     | <b>&lt;1</b> | <1       | 2        |
| Potassium | ppm ASTM D5185(m) >20 | <b>&lt;1</b> | 1        | 4        |

## FLUID DEGRADATION

| method           | limit/base          | current     | history1 | history2 |
|------------------|---------------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g ASTM D974* | <b>0.73</b> | 0.785    | 0.435    |



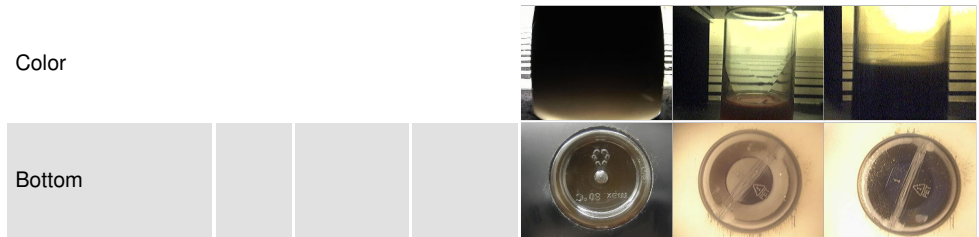
# OIL ANALYSIS REPORT



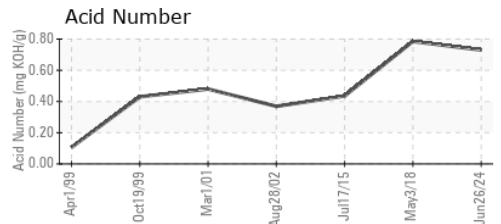
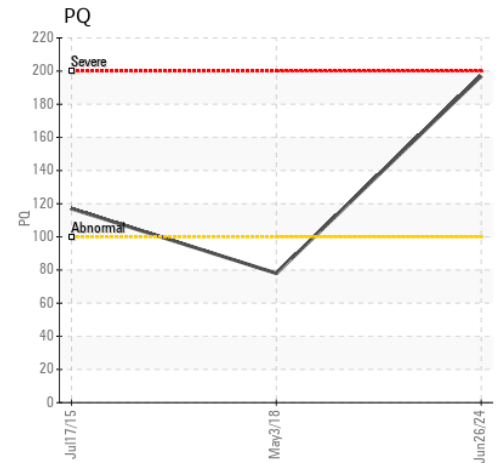
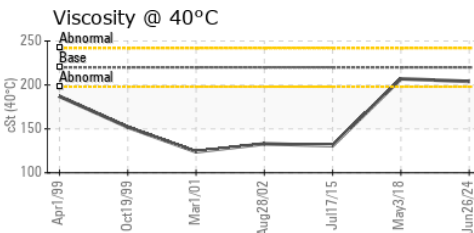
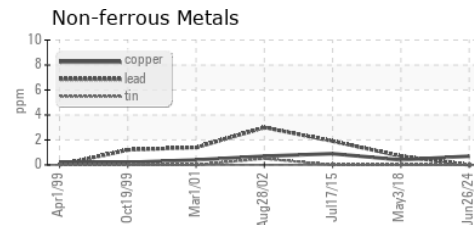
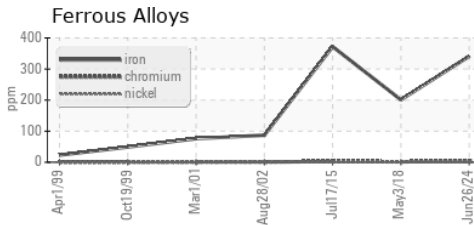
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | VLITE    | NONE     |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Silt             | scalar | Visual*    | NONE    | VLITE    | NONE     |
| Debris           | scalar | Visual*    | NONE    | VLITE    | NONE     |
| Sand/Dirt        | scalar | Visual*    | NONE    | NONE     | NONE     |
| Appearance       | scalar | Visual*    | NORML   | NORML    | NORML    |
| Odor             | scalar | Visual*    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | Visual*    | >0.2    | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2  |
|------------------|--------|---------------|---------|----------|-----------|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 220     | 204      | 207 ▲ 131 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0945379 **Received** : 02 Jul 2024  
**Lab Number** : 02644991 **Tested** : 03 Jul 2024  
**Unique Number** : 5802530 **Diagnosed** : 03 Jul 2024 - Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**Roseburg Pembroke MDF Inc.**  
 777 Fibreboard Drive  
 Pembroke, ON  
 CA K8A 6W5  
 Contact: Dan Havis  
 danielh@rfpco.com  
 T: (613)732-3939  
 F: (613)732-2869

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.