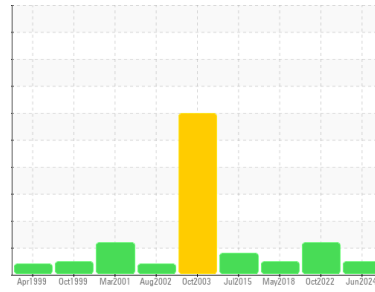




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

2

Machine Id

02-0050-000-020

Component

2 Gearbox

Fluid

SHELL OMALA S4 GXV 220 (6 LTR)

HOPPER 5 GRP 2 (2M54) (S/N R122081)

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 | | WC0945382 | WC0744653 | WC117166 |
| Sample Date | Client Info | | 26 Jun 2024 | 21 Oct 2022 | 03 May 2018 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | Not Chngd | N/A | N/A |
| Sample Status | | | NORMAL | ABNORMAL | NORMAL |

CONTAMINATION

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

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|-------------|--------------------|--------------|----------|----------|
| PQ | ASTM D8184* | | 200 | 241 | 67 |
| Iron | ppm | ASTM D5185(m) >200 | 388 | 313 | 125 |
| Chromium | ppm | ASTM D5185(m) >15 | 3 | 3 | <1 |
| Nickel | ppm | ASTM D5185(m) >15 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) >25 | <1 | <1 | 0 |
| Lead | ppm | ASTM D5185(m) >100 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185(m) >200 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) >25 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) >5 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|---------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) | 11 | 13 | 8 |
| Barium | ppm | ASTM D5185(m) | 4 | 5 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 4 | 3 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 1 | 0 | <1 |
| Calcium | ppm | ASTM D5185(m) | 6 | 4 | 2 |
| Phosphorus | ppm | ASTM D5185(m) | 333 | 404 | 434 |
| Zinc | ppm | ASTM D5185(m) | 7 | 6 | 2 |
| Sulfur | ppm | ASTM D5185(m) | 4939 | 5368 | 2757 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

CONTAMINANTS

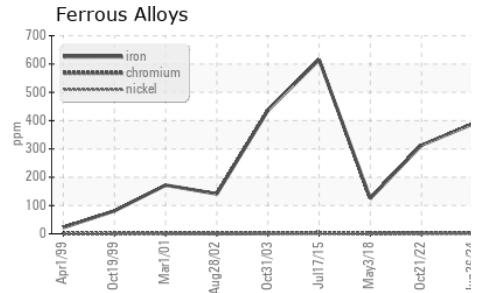
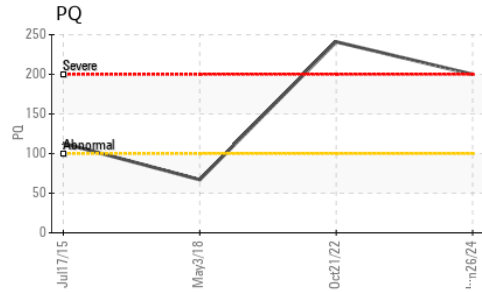
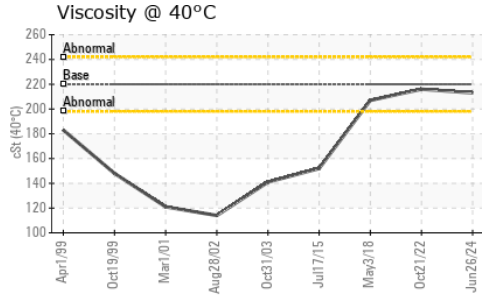
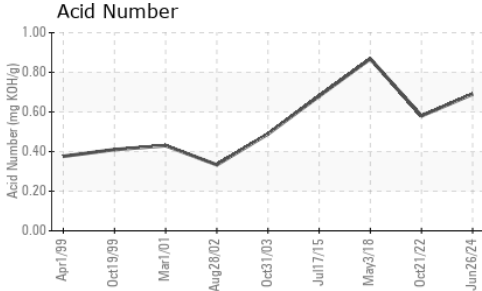
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >50 | 11 | 6 | 12 |
| Sodium | ppm | ASTM D5185(m) | 1 | 1 | 0 |
| Potassium | ppm | ASTM D5185(m) >20 | 1 | 1 | 1 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.69 | 0.58 | 0.868 |



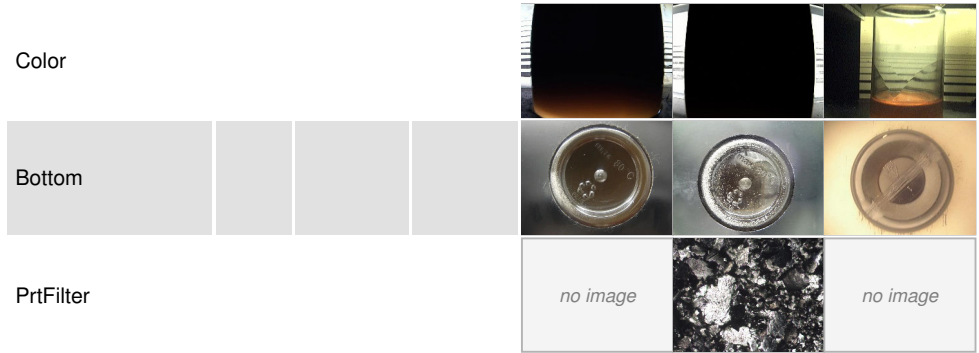
OIL ANALYSIS REPORT



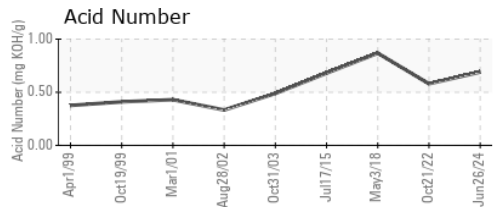
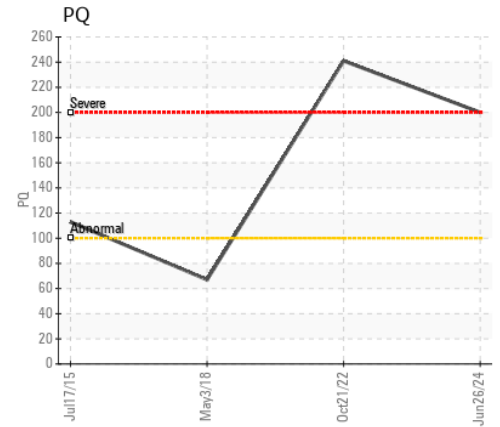
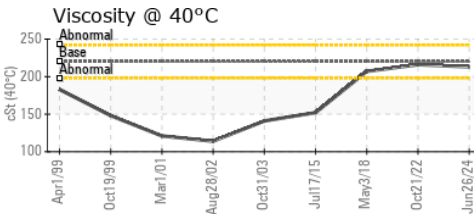
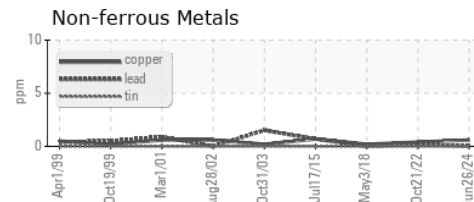
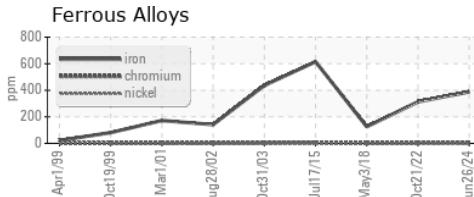
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|--------------|----------|-------|
| White Metal | scalar | Visual* | NONE | LIGHT | ▲ LTMOD | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | VLITE | NONE | NONE |
| Debris | scalar | Visual* | NONE | VLITE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| 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 @ 40°C | cSt | ASTM D7279(m) | 220 | 213 | 216 | 207 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0945382 **Received** : 02 Jul 2024
Lab Number : **02644988** **Tested** : 03 Jul 2024
Unique Number : 5802527 **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.