



OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

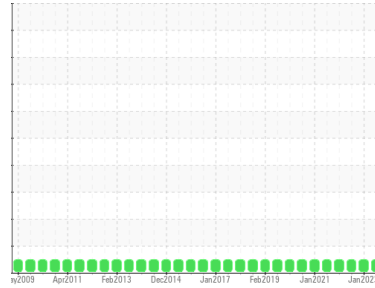


Area
OPF1/BATCH OFF

Machine Id
101743 Mill

Component
Gearbox

Fluid
MOBIL MOBILGEAR 600 XP 320 (80 LTR)



DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. 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 | | WC0799503 | WC0763669 | WC0688604 |
| Sample Date | Client Info | | 18 Jul 2023 | 31 Jan 2023 | 27 Jul 2022 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|-------------|--------------------|--------------|----------|----------|
| PQ | ASTM D8184* | | 0 | 1 | 0 |
| Iron | ppm | ASTM D5185(m) >200 | 74 | 74 | 65 |
| Chromium | ppm | ASTM D5185(m) >15 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) >15 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) >25 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) >100 | 1 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) >200 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) >25 | 0 | 0 | <1 |
| Antimony | ppm | ASTM D5185(m) >5 | 0 | <1 | <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 | 11 | 11 |
| Barium | ppm | ASTM D5185(m) | 4 | 3 | 3 |
| Molybdenum | ppm | ASTM D5185(m) | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185(m) | 2 | 2 | 2 |
| Magnesium | ppm | ASTM D5185(m) | <1 | <1 | <1 |
| Calcium | ppm | ASTM D5185(m) | 17 | 16 | 16 |
| Phosphorus | ppm | ASTM D5185(m) | 255 | 259 | 237 |
| Zinc | ppm | ASTM D5185(m) | 173 | 168 | 159 |
| Sulfur | ppm | ASTM D5185(m) | 8790 | 8752 | 8646 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

CONTAMINANTS

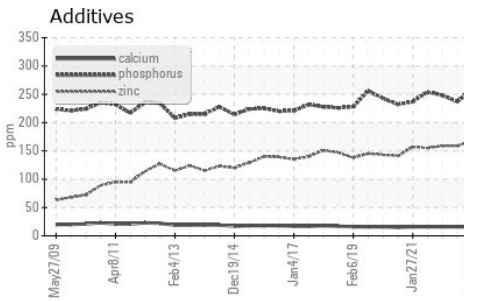
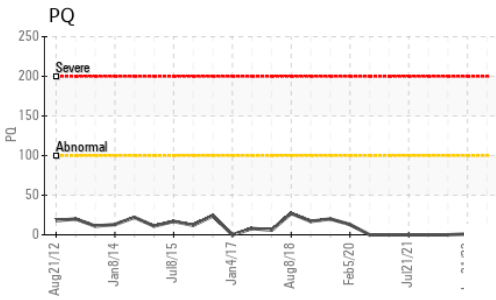
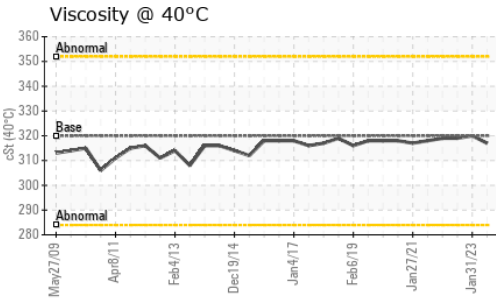
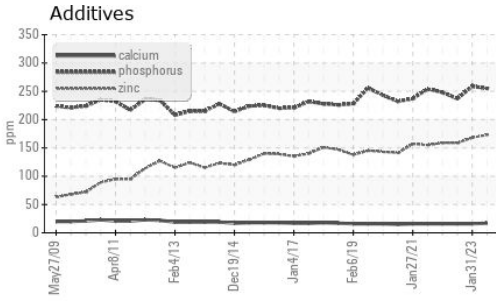
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >50 | 3 | 6 | 3 |
| Sodium | ppm | ASTM D5185(m) | 2 | 2 | 1 |
| Potassium | ppm | ASTM D5185(m) >20 | 1 | <1 | <1 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.95 | 0.96 | 0.92 |



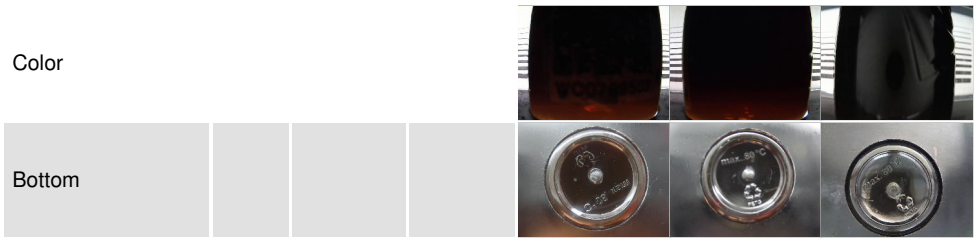
OIL ANALYSIS REPORT



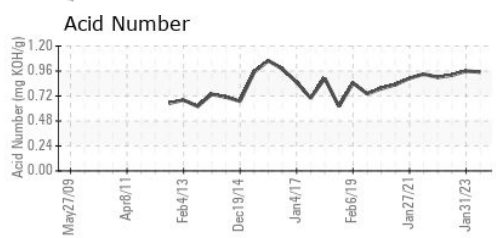
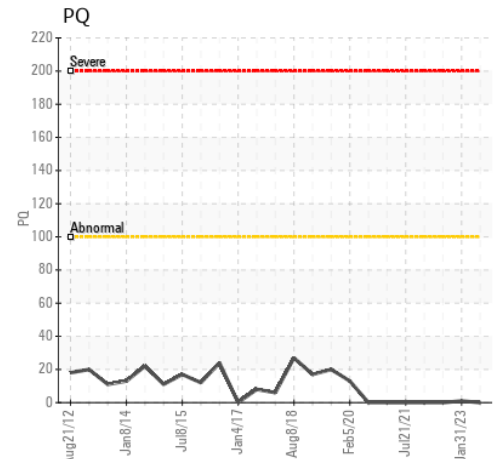
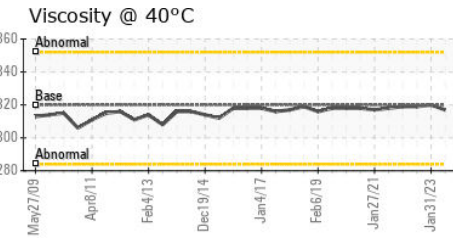
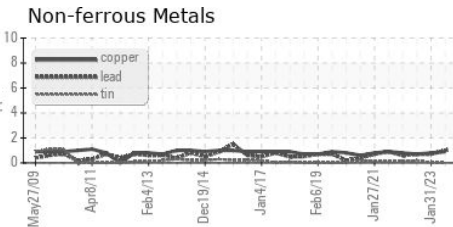
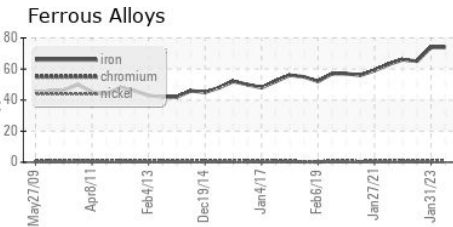
| PARAMETER | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | 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) | 320 | 317 | 320 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0799503
Lab Number : 02576918
Unique Number : 5629978
Test Package : IND 2 (Additional Tests: TAN Man)

MICHELIN TIRE
 866 RANDOLPH RD
 WATERVILLE, NS
 CA B0P 1V0
 Contact: Alan Davies
 alan.davies@michelin.com
 T: (902)534-3590
 F: x:

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.