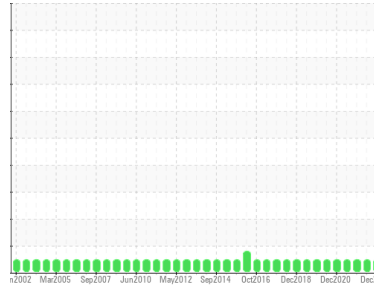




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
scellement
 Machine Id
55-1004-02 TREUIL

Component
Reduction Gear
 Fluid
MOBIL MOBILGEAR SHC 220 (--- LTR)

DIAGNOSIS

Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin de surveiller la condition. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration.

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

Il n'y a aucun indice de contamination dans l'huile.

Fluid Condition

L'état de l'huile est acceptable pour la durée de service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | WC0884590 | WC0833050 | WC0756908 |
| Sample Date | Client Info | | | 13 Dec 2023 | 02 Aug 2023 | 09 Nov 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 |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.1 | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) | >117 | 12 | 11 | 11 |
| Chromium | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >11 | 4 | 4 | 4 |
| Lead | ppm | ASTM D5185(m) | >10 | 2 | 1 | 1 |
| Copper | ppm | ASTM D5185(m) | >55 | 41 | 37 | 37 |
| Tin | ppm | ASTM D5185(m) | >15 | 2 | 2 | 2 |
| 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) | | 21 | 16 | 19 |
| Barium | ppm | ASTM D5185(m) | | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | <1 | <1 | 0 |
| Calcium | ppm | ASTM D5185(m) | | 4 | 3 | 2 |
| Phosphorus | ppm | ASTM D5185(m) | | 321 | 329 | 341 |
| Zinc | ppm | ASTM D5185(m) | | 10 | 9 | 7 |
| Sulfur | ppm | ASTM D5185(m) | | 15715 | 15105 | 15486 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

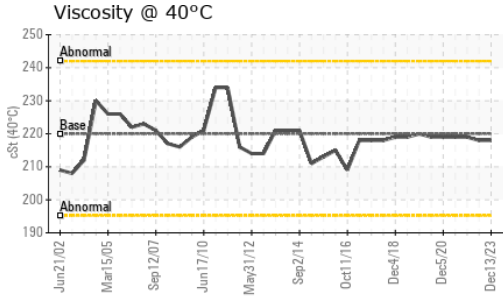
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|---------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) | >50 | 6 | 6 | 7 |
| Sodium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | <1 | <1 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot % | % | ASTM D7844* | | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | | 3.4 | 3.5 | 3.8 |
| Sulfation | Abs/.1mm | ASTM D7415* | | 14.8 | 15.7 | 16.1 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|------------|----------|----------|
| Oxidation | Abs/.1mm | ASTM D7414* | | 8.2 | 8.2 | 8.6 |



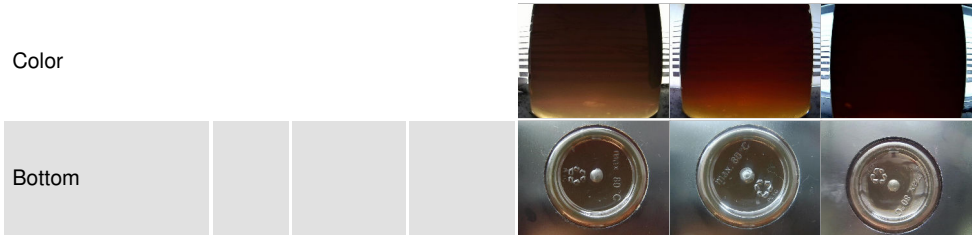
OIL ANALYSIS REPORT



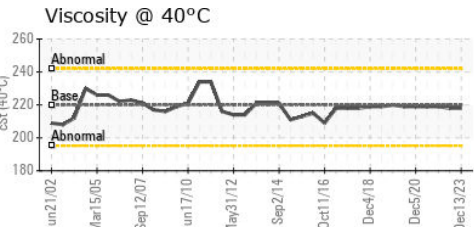
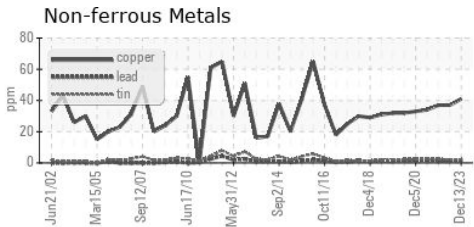
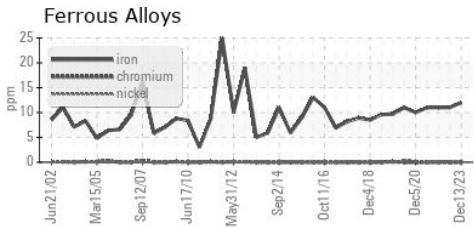
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | 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* | >0.1 | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|---------------|---------|------------|----------|-----|
| Visc @ 40°C | cSt | ASTM D7279(m) | 220 | 218 | 218 | 219 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0884590 **Received** : 18 Dec 2023
Lab Number : **02603921** **Diagnosed** : 18 Dec 2023
Unique Number : 5697006 **Diagnostician** : Wes Davis
Test Package : IND 1 (Additional Tests: FT-IR)

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.

RTA - UGB
 C.P. 900
 Ville de la Baie, QC
 CA G7B 4G9
 Contact: Alcan Epc
 mathieu.tremblay2@riotinto.com
 T: (418)697-9568
 F: (418)697-9550