



PROBLEM SUMMARY

Sample Rating Trend

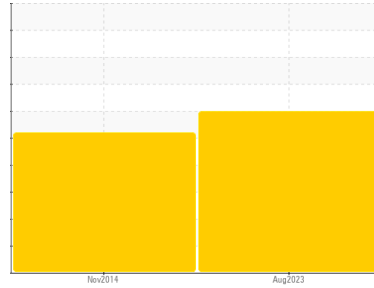
WEAR



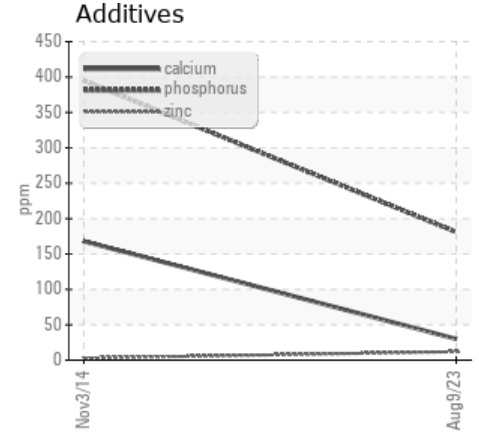
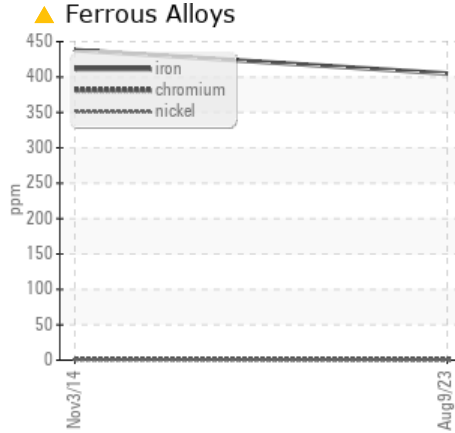
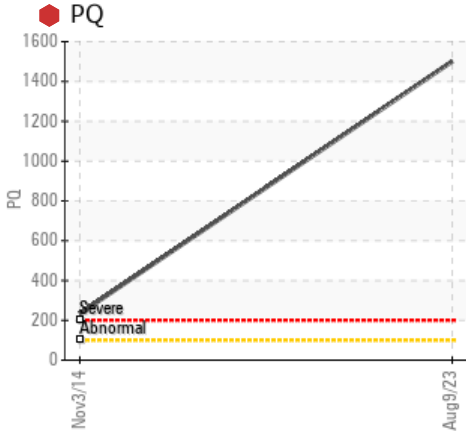
Machine Id
BROWNING 215 25:1 #11 SCREW (S/N 525611)

Component
Gearbox

Fluid
MOBIL MOBILGEAR SHC 220 (9 LTR)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | ABNORMAL | --- |
|---------------|--------|---------------|------|--------|----------|-----|
| PQ | | ASTM D8184* | | 1501 | 233 | --- |
| Iron | ppm | ASTM D5185(m) | >200 | 405 | 438 | --- |
| White Metal | scalar | Visual* | NONE | LTMOD | VLITE | --- |

Customer Id: REIBLI
Sample No.: WC0750566
Lab Number: 02575500
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|------------------------|--------|------|---------|---|
| Change Fluid | --- | --- | ? | We recommend that you drain the oil from the component if this has not already been done. |
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Check Fluid Source | --- | --- | ? | Confirm the source of the lubricant being utilized for top-up/fill. |
| Check For Visual Metal | --- | --- | ? | We advise that you check for visible metal particles in the oil. |

HISTORICAL DIAGNOSIS

WEAR



03 Nov 2014 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. PQ levels are abnormal. Iron ppm levels are abnormal. Gear wear is indicated. The high ferrous density (PQ) index indicates that abnormal wear is occurring. Calcium and/or magnesium levels higher than normal indicating possible lime contamination, advise investigate. There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report





OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



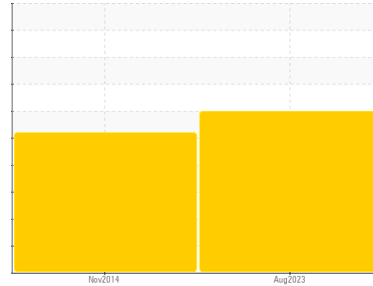
Machine Id
BROWNING 215 25:1 #11 SCREW (S/N 525611)

Component

Gearbox

Fluid

MOBIL MOBILGEAR SHC 220 (9 LTR)



DIAGNOSIS

Recommendation

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear

PQ PQ levels are severe. Iron ppm levels are abnormal. Moderate concentration of visible metal present. Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | | WC0750566 | WC925157 | --- |
| Sample Date | Client Info | | 09 Aug 2023 | 03 Nov 2014 | --- |
| Machine Age | hrs | Client Info | 0 | 39401 | --- |
| Oil Age | hrs | Client Info | 0 | 14453 | --- |
| Oil Changed | Client Info | | Not Chngd | Not Chngd | --- |
| Sample Status | | | SEVERE | ABNORMAL | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|-------------|--------------------|--------------|----------|----------|
| PQ | ASTM D8184* | | 1501 | 233 | --- |
| Iron | ppm | ASTM D5185(m) >200 | 405 | 438 | --- |
| Chromium | ppm | ASTM D5185(m) >15 | 1 | 2 | --- |
| Nickel | ppm | ASTM D5185(m) >15 | <1 | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | 0 | <1 | --- |
| Silver | ppm | ASTM D5185(m) | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) >25 | <1 | 1 | --- |
| Lead | ppm | ASTM D5185(m) >100 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185(m) >200 | 2 | 3 | --- |
| Tin | ppm | ASTM D5185(m) >25 | 0 | 0 | --- |
| Antimony | ppm | ASTM D5185(m) >5 | 0 | <1 | --- |
| Vanadium | ppm | ASTM D5185(m) | 0 | 0 | --- |
| Beryllium | ppm | ASTM D5185(m) | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185(m) | 0 | 0 | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|---------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) | 3 | 2 | --- |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | <1 | <1 | --- |
| Manganese | ppm | ASTM D5185(m) | 5 | 3 | --- |
| Magnesium | ppm | ASTM D5185(m) | 5 | 6 | --- |
| Calcium | ppm | ASTM D5185(m) | 30 | 168 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 181 | 395 | --- |
| Zinc | ppm | ASTM D5185(m) | 12 | 3 | --- |
| Sulfur | ppm | ASTM D5185(m) | 3715 | 2513 | --- |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | --- |

CONTAMINANTS

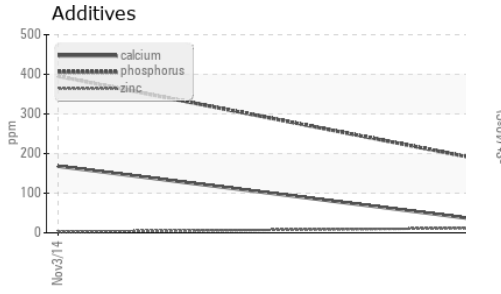
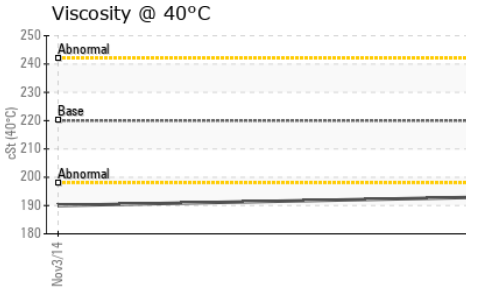
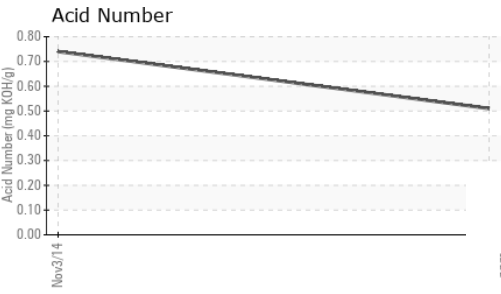
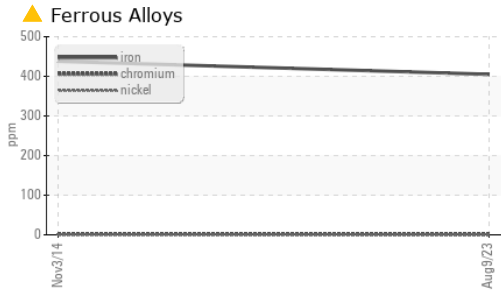
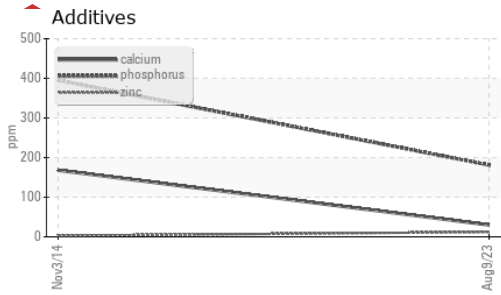
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >50 | 62 | 88 | --- |
| Sodium | ppm | ASTM D5185(m) | 0 | 0 | --- |
| Potassium | ppm | ASTM D5185(m) >20 | 0 | <1 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.51 | 0.74 | --- |



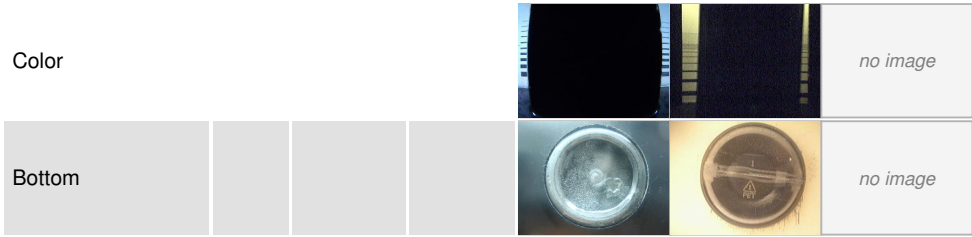
OIL ANALYSIS REPORT



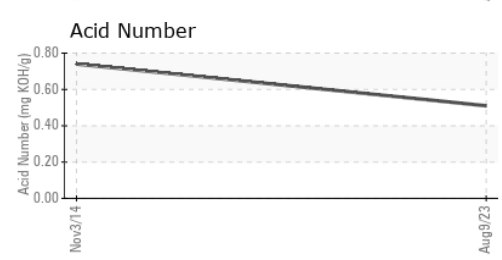
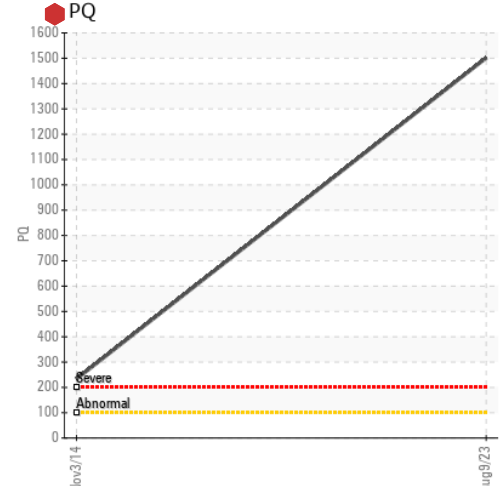
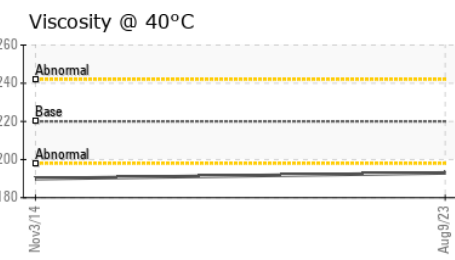
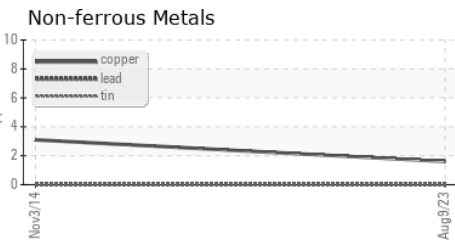
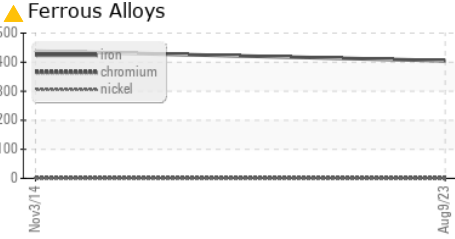
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------------|----------|
| White Metal | scalar | Visual* | NONE | ▲ LTMOD | VLITE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | VLITE | VLITE |
| Debris | scalar | Visual* | NONE | NONE | VLITE |
| 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 | 193 | 190 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : WC0750566 Received : 11 Aug 2023
 Lab Number : 02575500 Diagnosed : 12 Aug 2023
 Unique Number : 5620551 Diagnostician : Kevin Marson
 Test Package : IND 2 (Additional Tests: TAN Man)

CARMEUSE LIME CANADA LTD.
 BOX 1690,, HWY 17 EAST
 BLIND RIVER, ON
 CA P0R 1B0
 Contact: Rejean Baillargeon
 rejean.baillargeon@carmeusena.com
 T: (705)849-2201
 F: (705)849-2355

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.