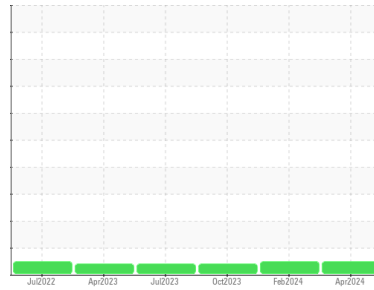




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Preparation-Prep CBL MILL

Machine Id

[Preparation-Prep CBL MILL] 360006002 - CBL MILL BULL GEAR RIGHT

Component

Right Gearbox

Fluid

SHELL OMALA S2 G 680 (18 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 | | | TLC0001758 | TLC0001383 | TLC0001089 |
| Sample Date | Client Info | | | 11 Apr 2024 | 01 Feb 2024 | 19 Oct 2023 |
| 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 | ABNORMAL |

| 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 | | 208 | 142 | 123 |
| Iron | ppm | ASTM D5185m | >200 | 162 | 121 | 142 |
| Chromium | ppm | ASTM D5185m | >15 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 1 | <1 | 2 |
| Lead | ppm | ASTM D5185m | >100 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >200 | 1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >25 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

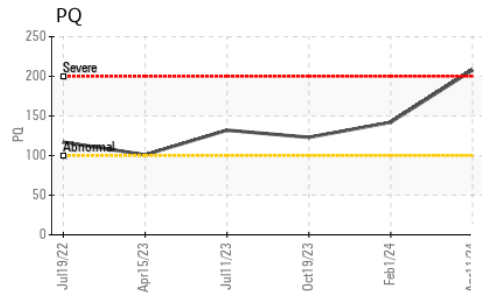
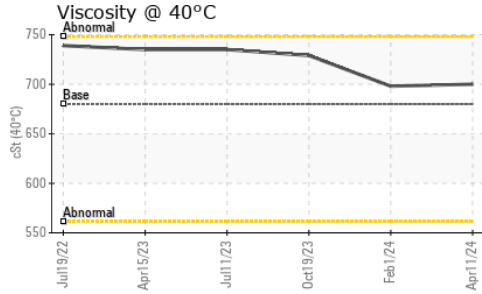
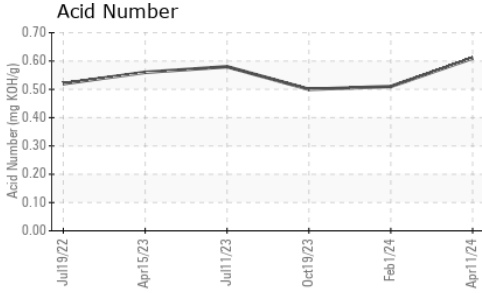
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 19 |
| Molybdenum | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | 2 | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | | 2 | 0 | 1 |
| Calcium | ppm | ASTM D5185m | | 140 | 124 | 135 |
| Phosphorus | ppm | ASTM D5185m | | 262 | 185 | 270 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 13 |
| Sulfur | ppm | ASTM D5185m | | 11981 | 9735 | 10397 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >50 | 5 | <1 | 4 |
| Sodium | ppm | ASTM D5185m | | 12 | 11 | 12 |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 2 | 3 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.61 | 0.51 | 0.50 |



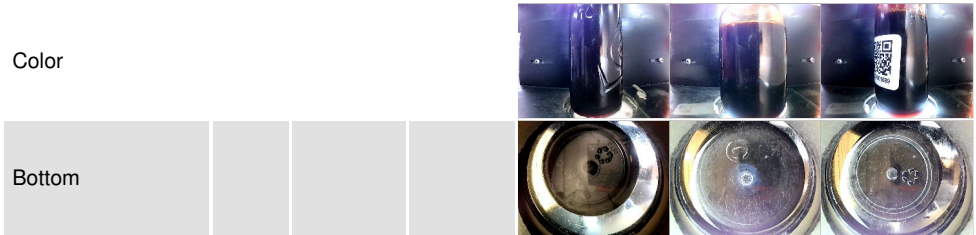
OIL ANALYSIS REPORT



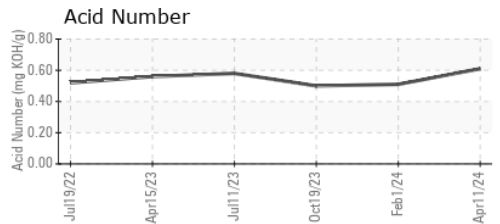
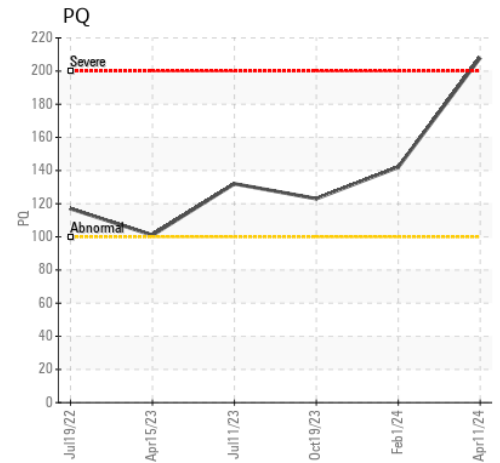
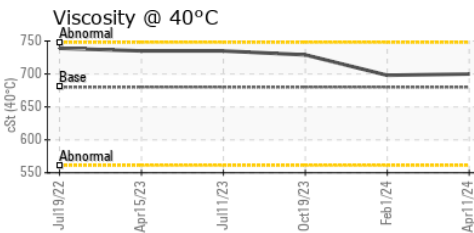
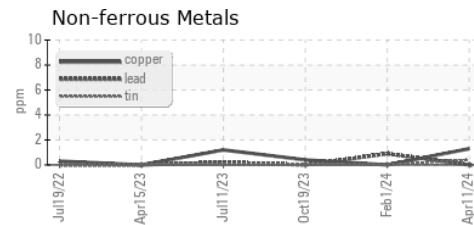
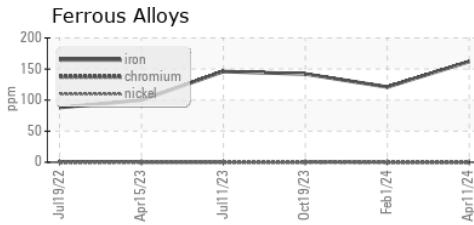
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | ▲ MODER |
| 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 D445 | 680 | 700 | 698 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TLC0001758 **Received** : 17 Apr 2024
Lab Number : 06152156 **Tested** : 18 Apr 2024
Unique Number : 10982234 **Diagnosed** : 22 Apr 2024 - Don Baldrige
Test Package : PLANT

MICHELIN US 10
 16 BIBB WAY
 ANDERSON, SC
 US 29626

Contact: TERRICK PRESLEY
 terrick.presley@michelin.com
 T: (803)761-8053
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)