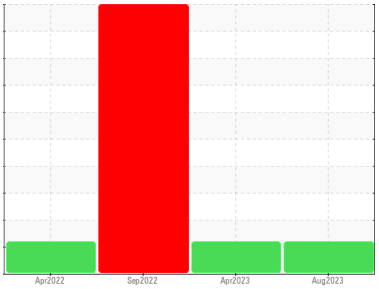
# PROBLEM SUMMARY

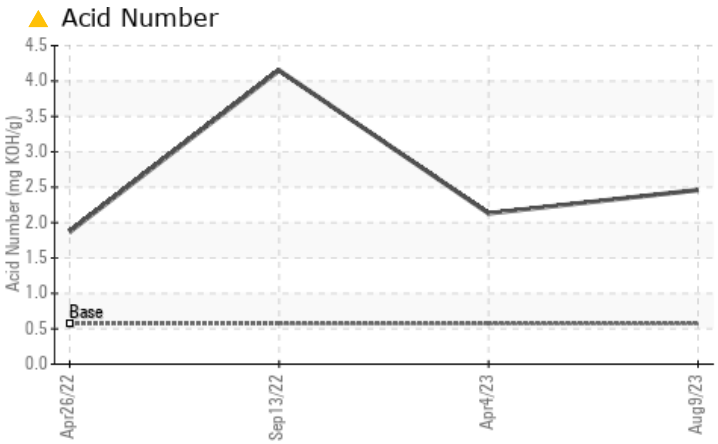
Sample Rating Trend




**DEGRADATION**

Area
**PO-4010**
Machine Id
**ELGI MSLL061014 - CBRE BATTERY PLANT**
Component
**Compressor**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | **ABNORMAL** | ABNORMAL | SEVERE |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.573 | ▲ **2.46** | ▲ 2.13 | ⬢ 4.15 |

**Customer Id:** UCELGCHA
**Sample No.:** UCP05923483
**Lab Number:** 05923483
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

*To change component or sample information:*
Customer Service +1 1-800-237-1369
customerservice@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. |

## HISTORICAL DIAGNOSIS

**04 Apr 2023 Diag: Jonathan Hester**

DEGRADATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is above the recommended limit.

view report

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**13 Sep 2022 Diag: Angela Borella**

WATER

We advise that you check for a possible overheat condition. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.All component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material. Excessive free water present. There is a moderate amount of visible silt present in the sample. The AN level is above the recommended limit.

view report

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**26 Apr 2022 Diag: Doug Bogart**

DEGRADATION

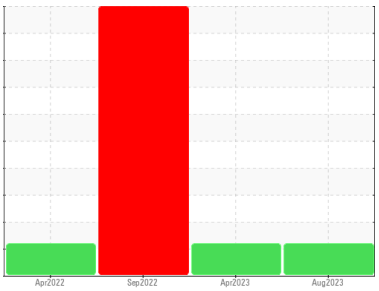
The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is at the top-end of the recommended limit.

view report

Pattons

# OIL ANALYSIS REPORT

Sample Rating Trend




**DEGRADATION**

Area
**PO-4010**
Machine Id
**ELGI MSLL061014 - CBRE BATTERY PLANT**
Component
**Compressor**

## DIAGNOSIS

**▲ Recommendation**
We recommend that you drain the oil from the component if this has not already been done. 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 above the recommended limit.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **UCP05923483** | UCP05824145 | UCP05644963 |
| Sample Date | | Client Info | | **09 Aug 2023** | 04 Apr 2023 | 13 Sep 2022 |
| Machine Age | hrs | Client Info | | **13476** | 12587 | 8132 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | SEVERE |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **21** | 18 | 8 |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | 0 | <1 |
| Nickel | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **4** | 3 | 2 |
| Lead | ppm | ASTM D5185m | >25 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **9** | 7 | 2 |
| Tin | ppm | ASTM D5185m | >15 | **0** | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | <1 |

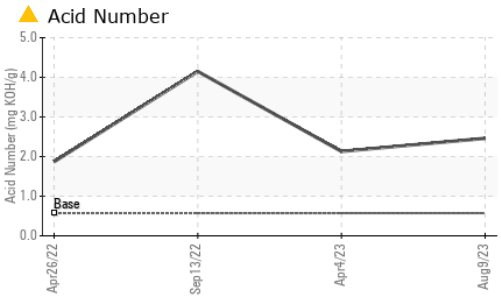
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 0 | **0** | 0 | 1 |
| Barium | ppm | ASTM D5185m | 0.4 | **1** | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0.5 | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0.4 | **1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | **18** | 17 | <1 |
| Calcium | ppm | ASTM D5185m | 0.3 | **574** | 814 | 0 |
| Phosphorus | ppm | ASTM D5185m | 1376 | **560** | 609 | 612 |
| Zinc | ppm | ASTM D5185m | 0 | **707** | 413 | 0 |
| Sulfur | ppm | ASTM D5185m | 320 | **2574** | 2788 | 1089 |

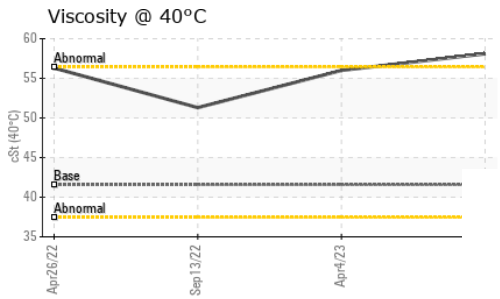
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **3** | 2 | ⬢ 354 |
| Sodium | ppm | ASTM D5185m | | **20** | 18 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **13** | 14 | <1 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.573 | ▲ **2.46** | ▲ 2.13 | ⬢ 4.15 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | ▲ MODER |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | ▲ SOLID |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | ⬢ >10% |

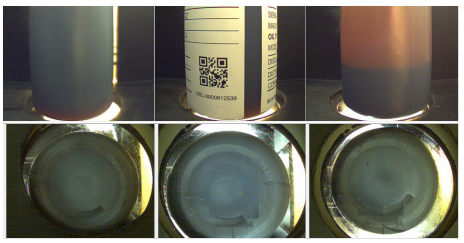
# OIL ANALYSIS REPORT



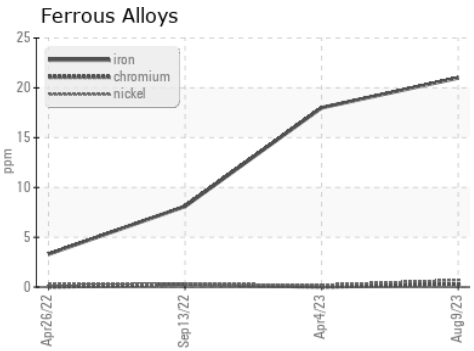



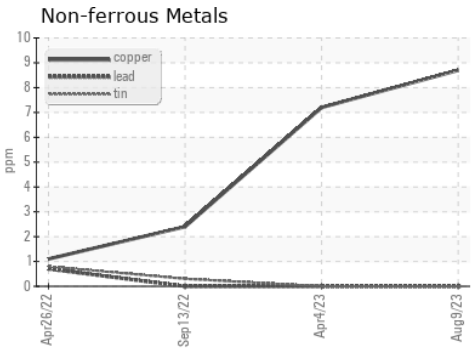

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 41.57 | **58.1** | 56.0 | 51.3 |

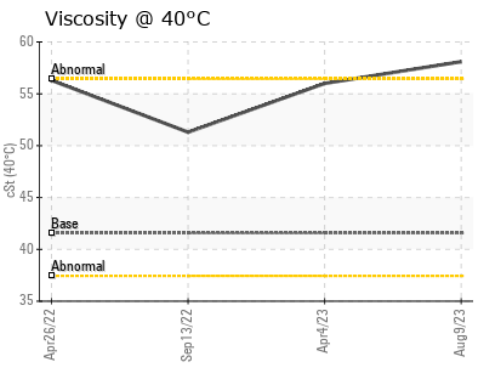
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | | | |
| Bottom | | | | | |

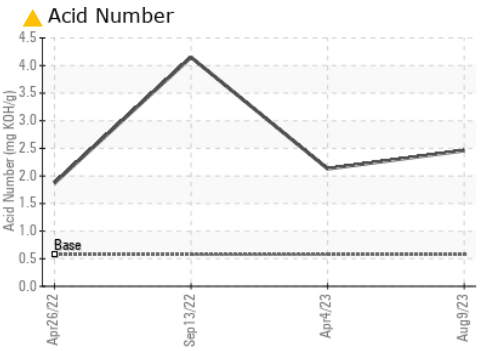


## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : UCP05923483
**Lab Number** : 05923483
**Unique Number** : 10603430
**Test Package** : IND 2

**Received** : 14 Aug 2023
**Diagnosed** : 15 Aug 2023
**Diagnostician** : Doug Bogart

*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)*

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