



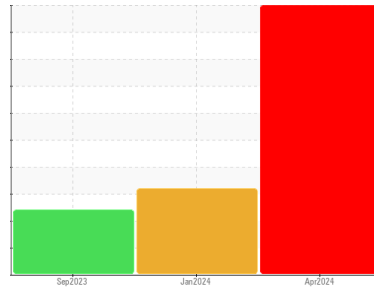
# PROBLEM SUMMARY

Area  
**NOT GIVEN**

Machine Id  
**ATLAS COPCO AIF060613 - TULSA CEMENT PLANT AIR 3**

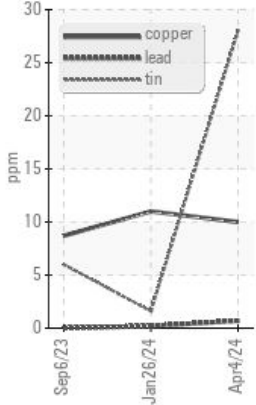
Component  
**Compressor**

Sample Rating Trend

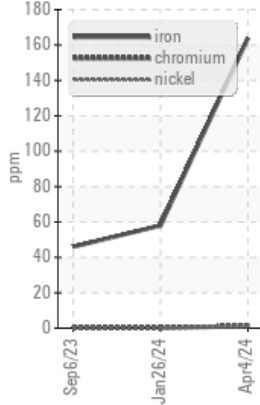


## COMPONENT CONDITION SUMMARY

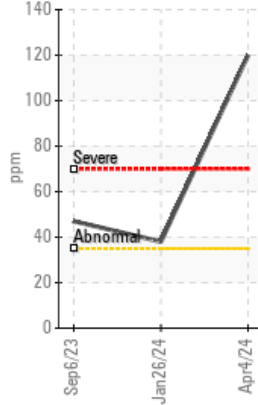
▲ Non-ferrous Metals



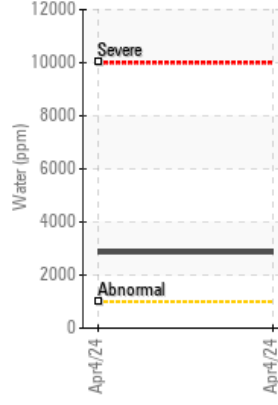
▲ Ferrous Alloys



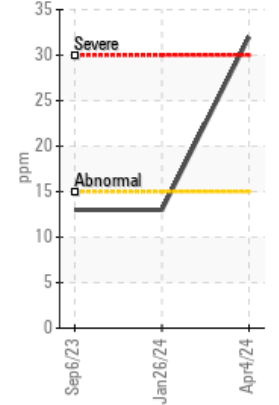
▲ Silicon (ppm)



▲ Water (KF)



● Aluminum (ppm)



## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

| Sample Status |     |             |       | SEVERE  | ABNORMAL | ABNORMAL |
|---------------|-----|-------------|-------|---------|----------|----------|
| Iron          | ppm | ASTM D5185m | >50   | ▲ 164   | ● 58     | 46       |
| Tin           | ppm | ASTM D5185m | >10   | ▲ 28    | 2        | 6        |
| Silicon       | ppm | ASTM D5185m | >35   | ▲ 120   | ▲ 38     | ▲ 47     |
| Water         | %   | ASTM D6304  | >0.1  | ▲ 0.286 | ---      | ---      |
| ppm Water     | ppm | ASTM D6304  | >1000 | ▲ 2860  | ---      | ---      |

Customer Id: UCGRECLA  
Sample No.: UCH06155216  
Lab Number: 06155216  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

| Action              | Status | Date | Done By | Description   |
|---------------------|--------|------|---------|---|
| Inspect Wear Source | ---    | ---  | ?       | We advise that you inspect for the source(s) of wear.               |
| Change Fluid        | ---    | ---  | ?       | Oil and filter change at the time of sampling has been noted.       |
| Change Filter       | ---    | ---  | ?       | Oil and filter change at the time of sampling has been noted.       |
| Resample            | ---    | ---  | ?       | We recommend an early resample to monitor this condition.           |
| Check Dirt Access   | ---    | ---  | ?       | We advise that you check all areas where dirt can enter the system. |

## HISTORICAL DIAGNOSIS

DIRT



### 26 Jan 2024 Diag: Don Baldrige

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



DIRT



### 06 Sep 2023 Diag: Don Baldrige

We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

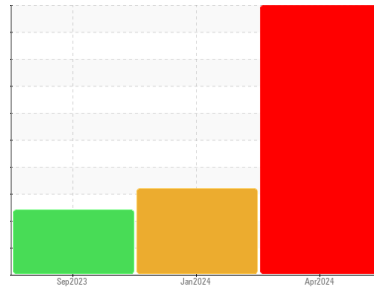
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area

**NOT GIVEN**

Machine Id

**ATLAS COPCO AIF060613 - TULSA CEMENT PLANT AIR 3**

Component

**Compressor**

## DIAGNOSIS

### ▲ Recommendation

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### ▲ Wear

The iron level is severe. The tin level is severe.

### ▲ Contamination

Appearance is hazy. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a light concentration of water present in the oil.

### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>UCH06155216</b> | UCH06077013 | UCH05948146 |
| Sample Date   | Client Info |             | <b>04 Apr 2024</b> | 26 Jan 2024 | 06 Sep 2023 |
| Machine Age   | hrs         | Client Info | <b>111071</b>      | 109961      | 108678      |
| Oil Age       | hrs         | Client Info | <b>8000</b>        | 8000        | 0           |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Changed     | N/A         |
| Sample Status |             |             | <b>SEVERE</b>      | ABNORMAL    | ABNORMAL    |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <b>▲ 164</b> | 58       | 46       |
| Chromium | ppm    | ASTM D5185m >5  | <b>1</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m     | <b>&lt;1</b> | <1       | <1       |
| Titanium | ppm    | ASTM D5185m     | <b>2</b>     | <1       | <1       |
| Silver   | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >15 | <b>32</b>    | 13       | 13       |
| Lead     | ppm    | ASTM D5185m >65 | <b>&lt;1</b> | <1       | 0        |
| Copper   | ppm    | ASTM D5185m >65 | <b>10</b>    | 11       | 9        |
| Tin      | ppm    | ASTM D5185m >10 | <b>▲ 28</b>  | 2        | 6        |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <b>&lt;1</b> | 0        | 0        |

## ADDITIVES

|            | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>0</b>     | 0        | 0        |
| Barium     | ppm    | ASTM D5185m | <b>421</b>   | 469      | 593      |
| Molybdenum | ppm    | ASTM D5185m | <b>&lt;1</b> | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m | <b>2</b>     | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m | <b>14</b>    | 7        | 7        |
| Calcium    | ppm    | ASTM D5185m | <b>667</b>   | 324      | 404      |
| Phosphorus | ppm    | ASTM D5185m | <b>98</b>    | 155      | 43       |
| Zinc       | ppm    | ASTM D5185m | <b>6</b>     | 12       | 0        |
| Sulfur     | ppm    | ASTM D5185m | <b>596</b>   | 693      | 679      |

## CONTAMINANTS

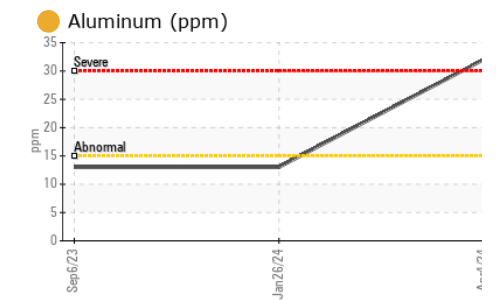
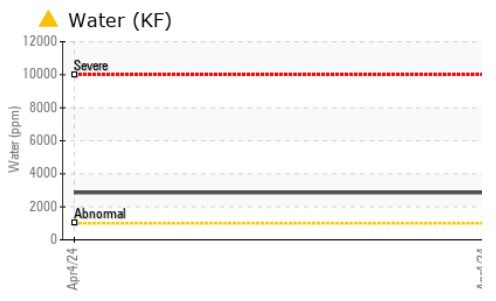
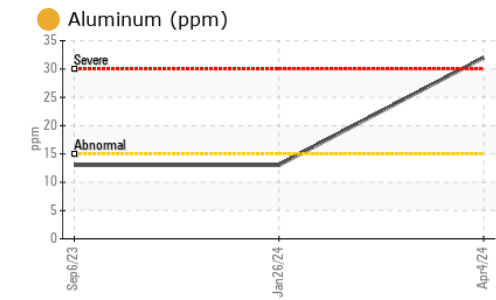
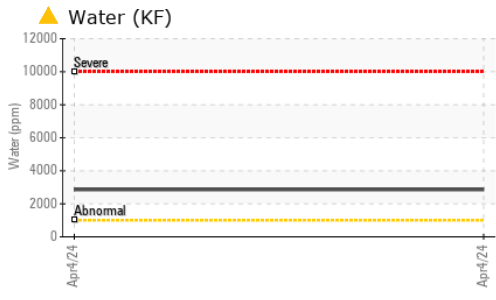
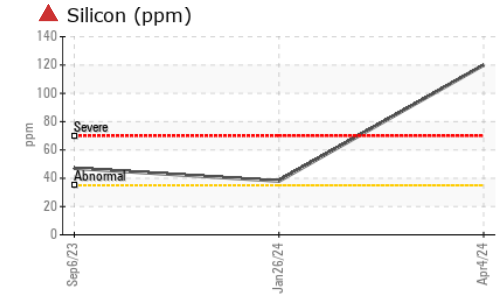
|           | method | limit/base       | current        | history1 | history2 |
|-----------|--------|------------------|----------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >35  | <b>▲ 120</b>   | 38       | 47       |
| Sodium    | ppm    | ASTM D5185m      | <b>14</b>      | 16       | 18       |
| Potassium | ppm    | ASTM D5185m >20  | <b>15</b>      | 11       | 13       |
| Water     | %      | ASTM D6304 >0.1  | <b>▲ 0.286</b> | ---      | ---      |
| ppm Water | ppm    | ASTM D6304 >1000 | <b>▲ 2860</b>  | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base | current      | history1 | history2 |
|------------------|----------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>0.176</b> | 0.34     | 0.19     |



# OIL ANALYSIS REPORT



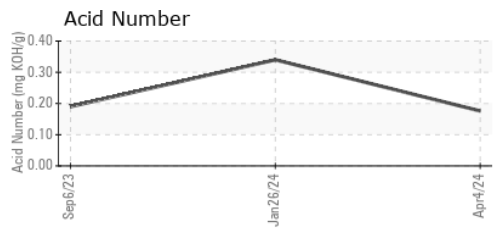
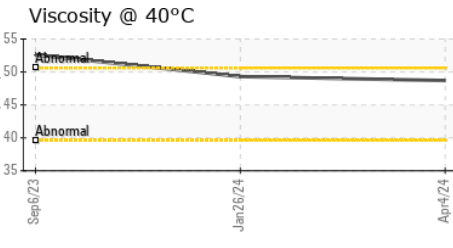
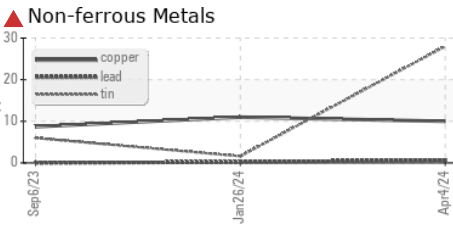
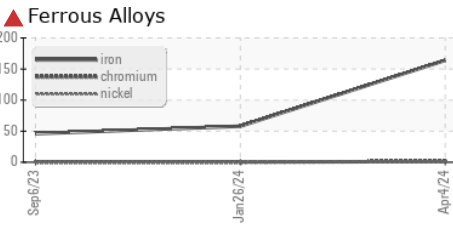
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | MODER    |
| Debris           | scalar | *Visual    | NONE    | NONE     | NONE     |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | HAZY     | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | *Visual    | >0.1    | 0.2%     | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 48.7    | 49.3     | 52.6     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : UCH06155216      **Received** : 19 Apr 2024  
**Lab Number** : 06155216      **Tested** : 24 Apr 2024  
**Unique Number** : 10990639      **Diagnosed** : 24 Apr 2024 - Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF )

**GREEN COUNTY COMPRESSOR SERVICE**  
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 US 74019  
 Contact: ASHLEY PIGUET  
 ashley@gccs.us.com  
 T: (918)906-6343  
 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)