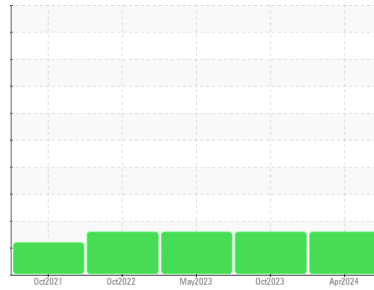




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**7520674 (S/N 1362)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates present 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 |             | <b>KC121260</b>    | KC108230    | KC107784    |
| Sample Date   | Client Info |             | <b>04 Apr 2024</b> | 23 Oct 2023 | 17 May 2023 |
| Machine Age   | hrs         | Client Info | <b>8035</b>        | 6441        | 5363        |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 2340        | 1262        |
| Oil Changed   | Client Info |             | <b>N/A</b>         | Changed     | Not Changed |
| Sample Status |             |             | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >50 | <b>0</b>     | 0        | <1       |
| Chromium | ppm    | ASTM D5185m >10 | <b>0</b>     | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >3  | <b>0</b>     | <1       | 0        |
| Titanium | ppm    | ASTM D5185m >3  | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >2  | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >10 | <b>0</b>     | 0        | 0        |
| Lead     | ppm    | ASTM D5185m >10 | <b>0</b>     | <1       | <1       |
| Copper   | ppm    | ASTM D5185m >50 | <b>6</b>     | 11       | 6        |
| Tin      | ppm    | ASTM D5185m >10 | <b>&lt;1</b> | 0        | 0        |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base     | current      | history1 | history2 |
|------------|--------|----------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m    | <b>0</b>     | 0        | 0        |
| Barium     | ppm    | ASTM D5185m 90 | <b>18</b>    | 0        | 8        |
| Molybdenum | ppm    | ASTM D5185m    | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m    | <b>0</b>     | <1       | 0        |
| Magnesium  | ppm    | ASTM D5185m 90 | <b>35</b>    | 30       | 62       |
| Calcium    | ppm    | ASTM D5185m 2  | <b>0</b>     | <1       | 3        |
| Phosphorus | ppm    | ASTM D5185m    | <b>&lt;1</b> | 2        | 1        |
| Zinc       | ppm    | ASTM D5185m    | <b>&lt;1</b> | 0        | 7        |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25  | <b>&lt;1</b> | 0        | <1       |
| Sodium    | ppm    | ASTM D5185m      | <b>13</b>    | 11       | 15       |
| Potassium | ppm    | ASTM D5185m >20  | <b>1</b>     | 2        | 3        |
| Water     | %      | ASTM D6304 >0.05 | <b>0.010</b> | 0.013    | 0.020    |
| ppm Water | ppm    | ASTM D6304 >500  | <b>101</b>   | 136.0    | 202.1    |

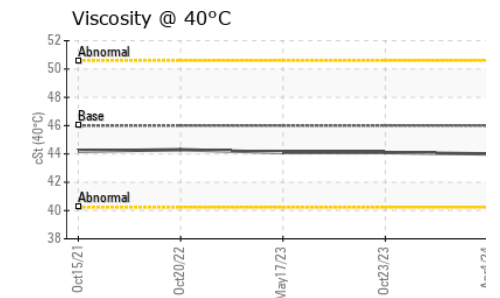
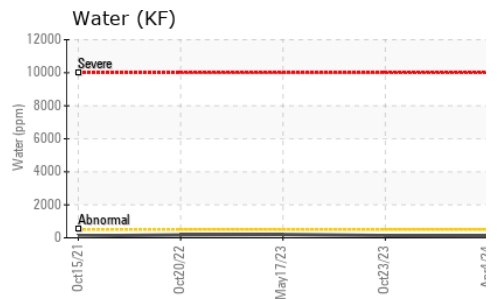
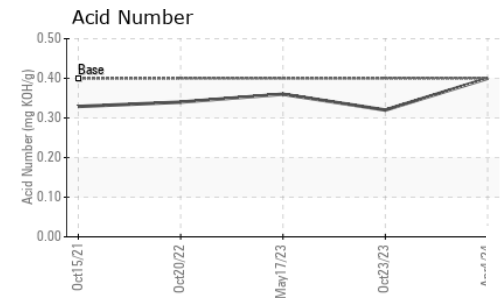
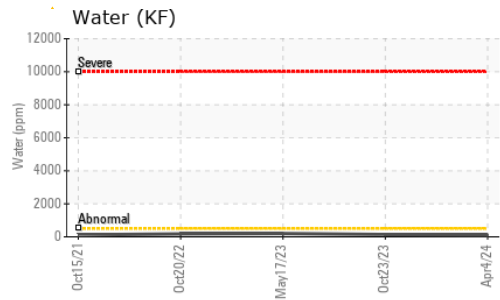
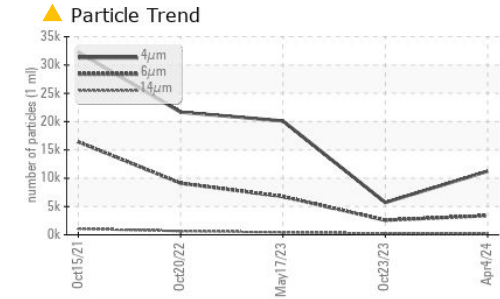
## FLUID CLEANLINESS

|                 | method                 | limit/base | current           | history1   | history2   |
|-----------------|------------------------|------------|-------------------|------------|------------|
| Particles >4µm  | ASTM D7647             |            | <b>11228</b>      | 5707       | 20114      |
| Particles >6µm  | ASTM D7647 >1300       |            | <b>▲ 3379</b>     | ▲ 2580     | ▲ 6758     |
| Particles >14µm | ASTM D7647 >80         |            | <b>▲ 205</b>      | ▲ 239      | ▲ 423      |
| Particles >21µm | ASTM D7647 >20         |            | <b>▲ 34</b>       | ▲ 54       | ▲ 100      |
| Particles >38µm | ASTM D7647 >4          |            | <b>0</b>          | 1          | 2          |
| Particles >71µm | ASTM D7647 >3          |            | <b>0</b>          | 0          | 0          |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 |            | <b>▲ 21/19/15</b> | ▲ 20/19/15 | ▲ 22/20/16 |

## FLUID DEGRADATION

|                  | method   | limit/base     | current     | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | <b>0.40</b> | 0.32     | 0.36     |

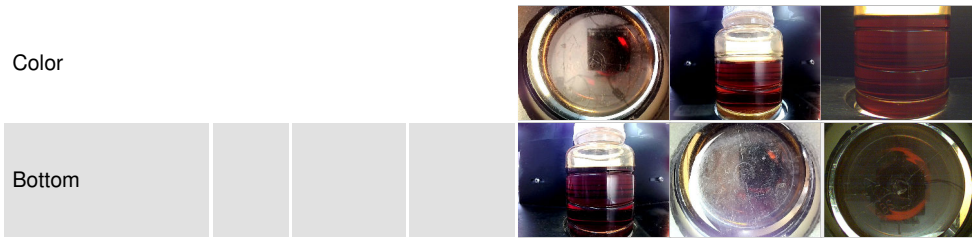
# OIL ANALYSIS REPORT



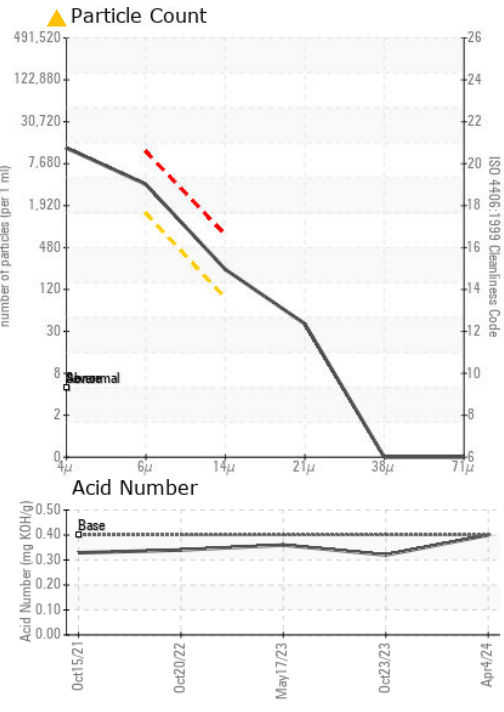
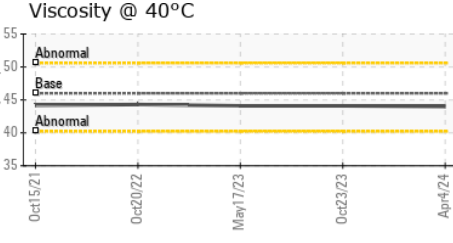
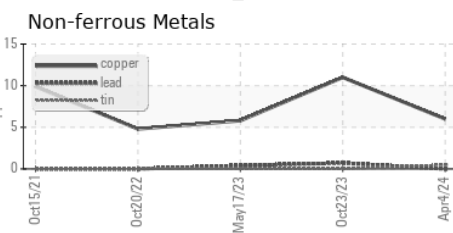
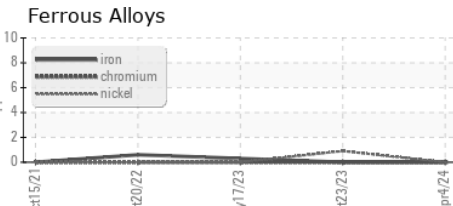
| PARAMETER        | method | limit/base | current | history1     | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal      | scalar | *Visual    | NONE    | <b>LIGHT</b> | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Silt             | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Debris           | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Sand/Dirt        | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Appearance       | scalar | *Visual    | NORML   | <b>NORML</b> | NORML    |
| Odor             | scalar | *Visual    | NORML   | <b>NORML</b> | NORML    |
| Emulsified Water | scalar | *Visual    | >0.05   | <b>NEG</b>   | NEG      |
| Free Water       | scalar | *Visual    |         | <b>NEG</b>   | NEG      |

| FLUID PROPERTIES | method | limit/base   | current     | history1 | history2 |
|------------------|--------|--------------|-------------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 46 | <b>44.0</b> | 44.1     | 44.1     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC121260  
**Lab Number** : 06150340  
**Unique Number** : 10980418  
**Test Package** : IND 2  
**Received** : 16 Apr 2024  
**Tested** : 17 Apr 2024  
**Diagnosed** : 18 Apr 2024 - Don Baldrige

**MENASHA/KELLOGS**  
 400 NESTLE WAY  
 BREINIGSVILLE, PA  
 US 18031  
 Contact: Service Manager

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)