



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**5283617 (S/N 1021)**

Component  
**Compressor**

Fluid  
**KAESER SIGMA (OEM) M-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>KCPA010864</b>  | ---      | ---      |
| Sample Date        | Client Info |             | <b>03 Jan 2024</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info | <b>44889</b>       | ---      | ---      |
| Oil Age            | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed        | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status      |             |             | <b>ABNORMAL</b>    | ---      | ---      |

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

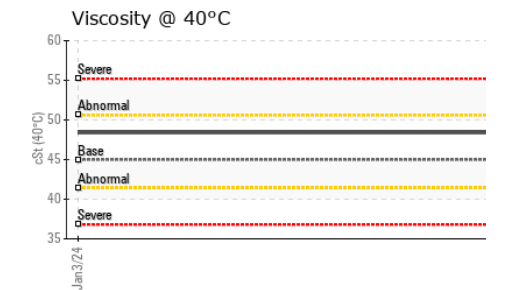
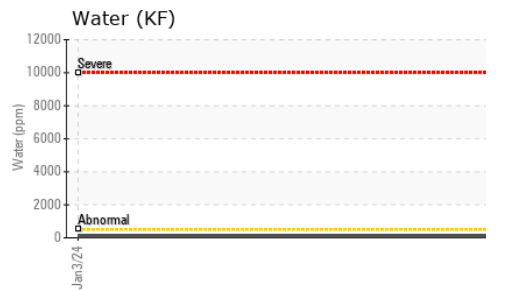
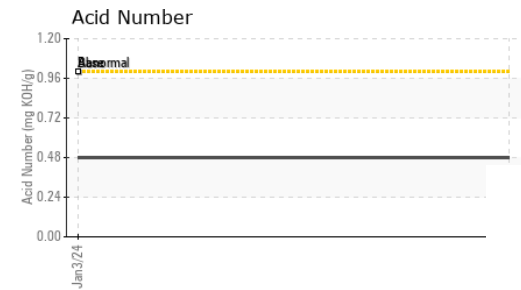
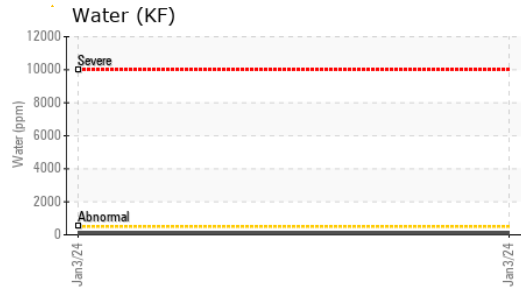
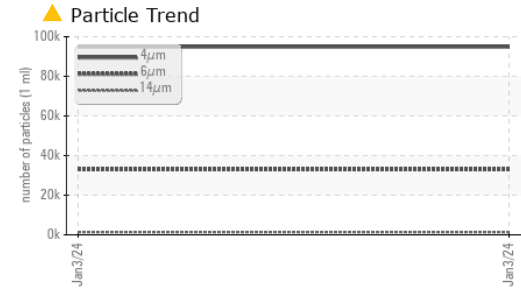
| ADDITIVES  | method | limit/base        | current      | history1 | history2 |
|------------|--------|-------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0     | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m 90    | <b>3</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m 0     | <b>0</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m       | <b>0</b>     | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m 100   | <b>0</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m 0     | <b>1</b>     | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m 0     | <b>48</b>    | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m 0     | <b>0</b>     | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m 23500 | <b>18362</b> | ---      | ---      |

| CONTAMINANTS | method | limit/base       | current      | history1 | history2 |
|--------------|--------|------------------|--------------|----------|----------|
| Silicon      | ppm    | ASTM D5185m >25  | <b>0</b>     | ---      | ---      |
| Sodium       | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Potassium    | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | ---      | ---      |
| Water        | %      | ASTM D6304 >0.05 | <b>0.009</b> | ---      | ---      |
| ppm Water    | ppm    | ASTM D6304 >500  | <b>94</b>    | ---      | ---      |

| FLUID CLEANLINESS | method       | limit/base | current           | history1 | history2 |
|-------------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm    | ASTM D7647   |            | <b>94874</b>      | ---      | ---      |
| Particles >6µm    | ASTM D7647   | >1300      | <b>▲ 32943</b>    | ---      | ---      |
| Particles >14µm   | ASTM D7647   | >80        | <b>▲ 1338</b>     | ---      | ---      |
| Particles >21µm   | ASTM D7647   | >20        | <b>▲ 307</b>      | ---      | ---      |
| Particles >38µm   | ASTM D7647   | >4         | <b>▲ 13</b>       | ---      | ---      |
| Particles >71µm   | ASTM D7647   | >3         | <b>1</b>          | ---      | ---      |
| Oil Cleanliness   | ISO 4406 (c) | >--/17/13  | <b>▲ 24/22/18</b> | ---      | ---      |

| FLUID DEGRADATION | method   | limit/base     | current     | history1 | history2 |
|-------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 1.0 | <b>0.48</b> | ---      | ---      |

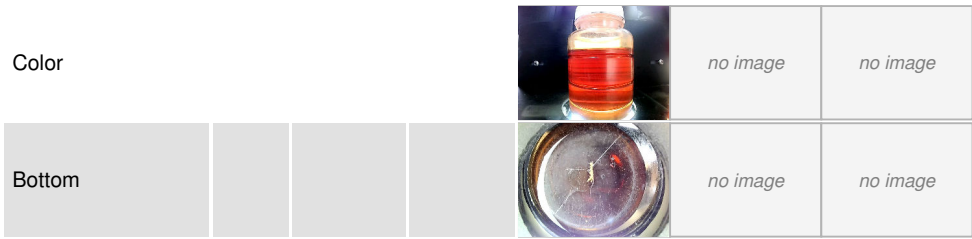
# OIL ANALYSIS REPORT



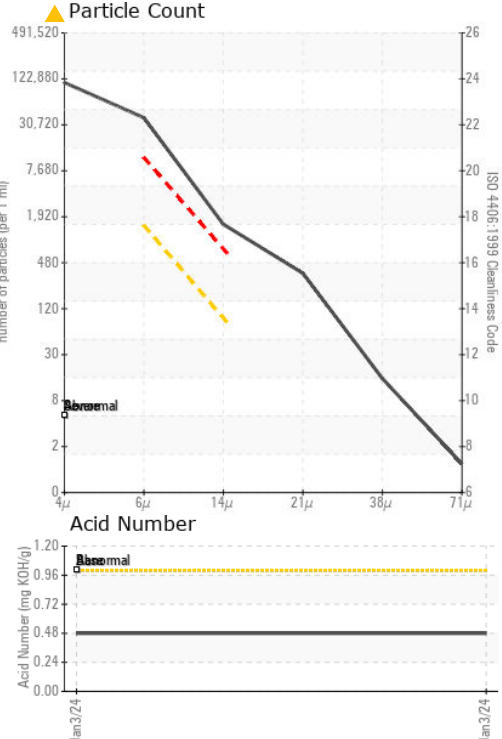
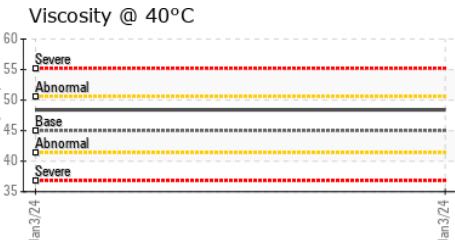
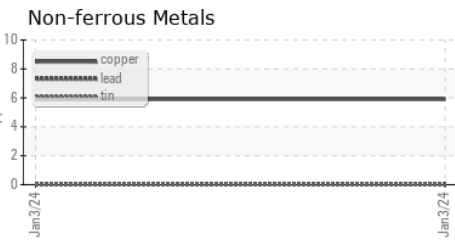
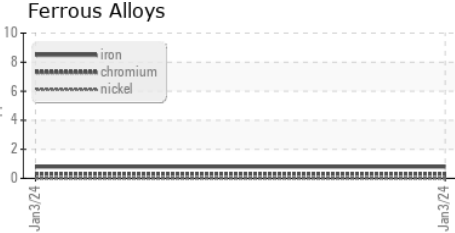
| PARAMETER        | VISUAL | method  | limit/base | current      | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal      | scalar | *Visual | NONE       | <b>NONE</b>  | ---      | ---      |
| Yellow Metal     | scalar | *Visual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

| PARAMETER        | method | limit/base   | current     | history1 | history2 |
|------------------|--------|--------------|-------------|----------|----------|
| FLUID PROPERTIES |        |              |             |          |          |
| Visc @ 40°C      | cSt    | ASTM D445 45 | <b>48.4</b> | ---      | ---      |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA010864 **Received** : 17 Jan 2024  
**Lab Number** : 06062697 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834079 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**COSMETIC SPECIALTIES**  
 550 E 3RD ST  
 OXNARD, CA  
 US 93030  
 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)

T:  
F: